

# **Annex 2 B**

**Data exchange in the Fixed Service**

## **DATA EXCHANGE**

### **1 Procedures**

#### **1.1 Overall list**

According to point 1.4 and 4.9 of the Agreement, frequency registers (overall list) have to be exchanged twice a year using disc or CD-ROM or other mutually agreed media.

#### **1.2 Co-ordination or notification**

Co-ordination requests, answers to co-ordination requests or notifications may be exchanged on disc or CD-ROM or other mutually agreed media.

Data to be exchanged during the co-ordination procedure may be of the following type:

- new entries
- modifications
- deletions
- answers

#### **1.3 Common to 1.1 and 1.2**

Each list is to be included in a separate data file. A list can be divided into several files. Each file consists of the following data subgroups:

- a file header as described in Appendix 2
- the data records as described in Appendix 3.

It is possible to transmit several files on a single carrier.

Because the file structure for the Fixed Service and the Land Mobile Service differs, a unique code is required to determine the content of the file in case of electronic data exchange.

Therefore parts of the filename are fixed:  
For the Fixed Service all filenames start with 'F\_'.

The corresponding structure is described in Appendix 1.

### **2 Transmission media**

The following transmission media may be agreed bilaterally:

- E-mail
- Common Disc Formats
- FTP
- HTTPS

For co-ordination procedures other media, such as printed paper transmission or data links, can be used.

## 2.2 Common Disc Formats

The following specifications have to be met when discs are used:

- MS-DOS format
- IBM-PC 8-bit ASCII character code
- For the Fixed Service:
  - variable length of data record
  - data items are separated with semicolons
  - the end of each record is marked with a carriage return

Details of the file structure are given in Appendix 1. The record format is defined in Appendix 3.

## 2.3 E-Mail

The following specifications are recommended when e-Mail is used:

- Correspond via a separate e-mail address only e.g. `coordination@administration.landcode`.
- The most important part of the e-mail is a data file as defined in this Annex
- State reference number (s) in the e-mail subject field (field 13X)
- If the coordination file contains more reference numbers as fit in the subject field, the message body of the e-mail may be used
- For documentation reasons and error identification, the coordination request (s) may be annexed in txt, Word or PDF format additionally
- Agree the name (s) of the data file (s) on a bi- or multilateral basis and start it with 'F\_'.
- Formulate additional text in English, other languages are subject to bilateral agreements
- Mark the requests with a person responsible for questions
- Confirm incoming electronic coordination requests by email
- Report errors or problems via the "reply function" to the original message
- Send answers to coordination requests by fax (legal aspects) or if it was adopted bi- or multilaterally, by e-mail.

Details of the file structure are given in Appendix 1. The record format is defined in Appendix 3.

## 2.4 FTP

The following specifications are recommended when FTP is used between two countries:

- Each affected country puts in service an FTP space in which is defined an entry point for the requesting countries (by an account). In that entry point, two subdivisions are made, one for the requests from the other country and one for the replies on those requests by the affected country.
- The request folder is writeable (no modify nor delete permission) for the requesting country and readable for the affected country. The reply folder is readable for the requesting country and writeable for the affected country.
- The requesting country puts up his requests by using filenames indicating date, time and administration of the request (format F\_YYYYMMDD-HHMM-ADM.TXT). For documentation reasons and clarifications, additional Word or PDF documents may be added by using the same filename with different extension.
- The requesting country can send corrections to the original file by using the same filename and adding \_CORRECTION to the name.
- Replies are put up by using filenames consisting of the original filename and adding date, time and administration of the reply in the same way as for the request. As such multiple replies are possible on one complex request.
- When the affected country detects errors in the format of the file or has other problems with the files received, the affected country puts up a reply textfile in the reply folder describing the problem and with the filename in the format F\_YYYYMMDD-HHMM-ADM\_ERROR.TXT)

Details of the file structure are given in Appendix 1. The record format is defined in Appendix 3.

## 2.5 https

The following specifications are recommended when https is used between two countries:

Using this method the system can exchange information within an encrypted communication channel, while the authentication of users is carried out by digital certificates. The system can be accessed from simple web browsers, as well as by automated systems.

This method has server-client architecture, in which the central web server provides the services for the users of different administrations. The information exchange is carried out over https protocol, which provides an encrypted tunnel between the user and the web server.

### 2.5.1 Web interface (manual access)

The users of different administrations access the system by an URL via a web page. After a successful user authentication they may choose from three different menu items:

- Submit coordination information  
In this menu item the user can select an Annex 2A file on the computer and upload it onto the server. During the upload process the system checks syntactically and semantically the data. In case of error(s), the user receives an error message giving the description of the found problem. In case the upload is finished successfully, the system requests a digital signature from the user for the data that is currently stored in a temporary area. The user creates the digital signature utilizing the key pair and associated certificate (provided by a recognized Certificate Authority) stored in the web browser or in a smart card. The successful digital signature generates the transaction which will be processed by the system.
- Download coordination information  
In this menu item the user can download the coordination answers received from different administrations into a single file onto the computer.
- (Own) User Activity  
In this menu point the user can check log entries regarding own activity.

The user administration of the system is carried out by administrative web pages available only for the IT personnel that operate the system (Centralized user management). Through these web pages the system administrator can register the different administrations into the system, can define the users of the administrations and associates the public key of the user to the login name of the user.

### 2.5.2 Machine to machine (automated) interface based on SOAP/XML (SOAP = Simple Object Access Protocol)

The same information exchange as through the manual interface is available through SOAP messages. The SOAP messages carry all information as well as the digital signature referring to the information.

In case of error free SOAP message submission, the system generates a digitally signed SOAP response which contains the transaction IDs, and other parameters of the submitted SOAP message (e.g., transaction ID, name of station).

The system generates the SOAP messages containing the coordination responses on a daily base. The automated system of the member administrations downloads the message, checks the trustworthiness of the message while the central system logs the successful download.

Details of the file structure are given in Appendix 1. The record format is defined in Appendix 3.

### 3 Description of format character explanation of the appendices

|        |  |
|--------|--|
| X      | alphanumeric   |
| 9      | numeric, leading zeros and trailing zeros after the decimal point may be left blank                |
| V      | explicit decimal point   |
| S      | indicates a signed numeric value, missing sign means +, the sign is right justified to the number. |
| DD     | day (numerical; range: 01-31)  |
| MM     | month (numerical; range: 01-12)  |
| YYYY   | year (numerical; range: >1900)   |
| CCC    | country code according to the Appendix 1 of Section 9 of the Radiocommunication Data Dictionary    |
| ZZ     | year of initial co-ordination (numerical; last two digits of the year only)                        |
| PPPPPP | process identification (alphanumeric)  |
| FF     | frequency order number or link order number (numeric)  |
| R      | number of associated records (numeric)   |
| O      | order number of record (numeric)   |

#### 3.1 Alphanumeric fields

Text fields are left justified. The character set is ASCII. Allowed are:

- A...Z
- 0...9
- +, -, /, \*, ., (, ), = and blank

#### 3.2 Numerical fields

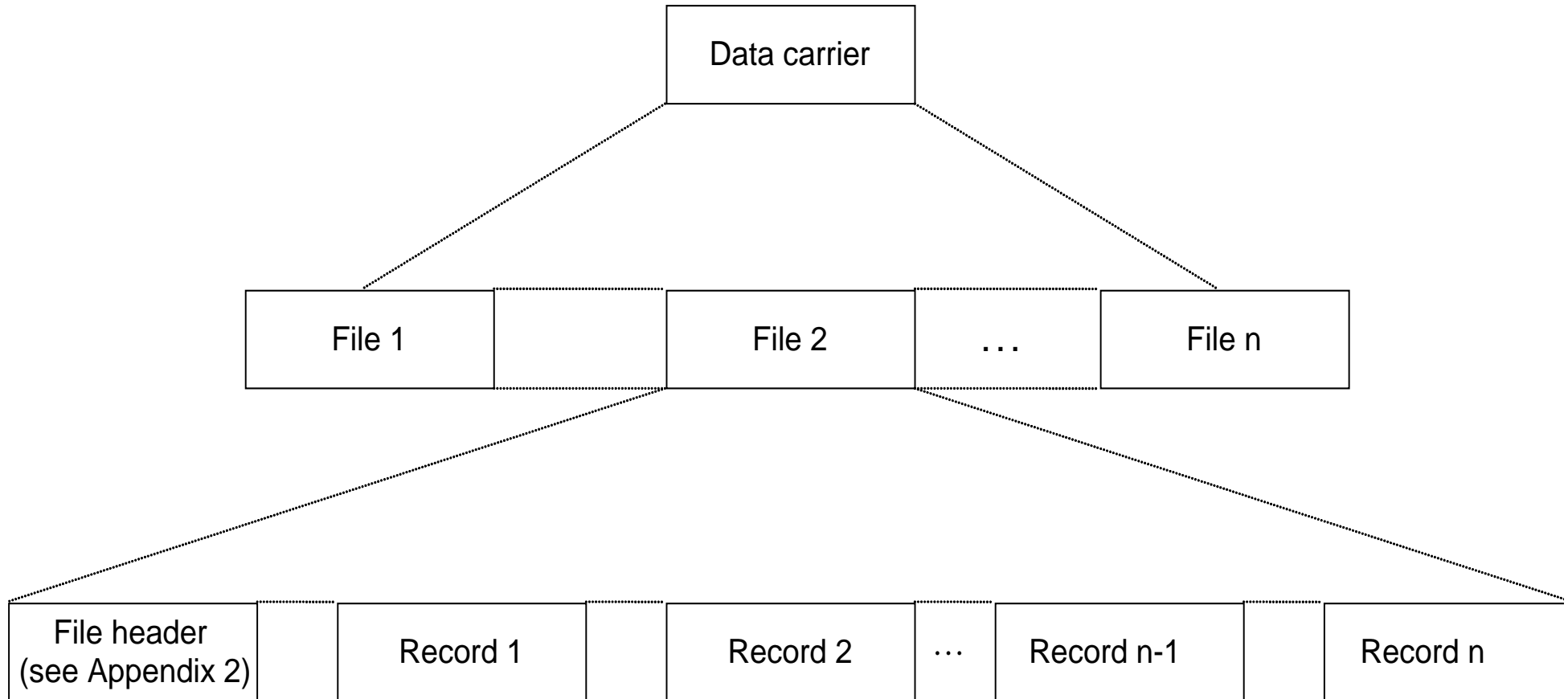
Numerical fields are right justified. In numerical fields missing zeros or trailing zeros behind the decimal point may be omitted. The character set is ASCII. Allowed are:

- 0...9
- +, -, . and blank

**List of Appendices to Annex 2 B**

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**Appendix 1 to Annex 2 B**



**CR (or CR/LF) shall terminate the file header and each record.**



**Appendix 2 to Annex 2 B****RECORD DESCRIPTION FILE HEADER**

| DATA ITEM                         | STORAGE<br>FORMAT<br>(maximum length) | REMARKS  |
|-----------------------------------|---------------------------------------|--|
| File number                       | 99                                    |  |
| File contents                     | X(80)                                 |  |
| File contents code 1)             | X                                     |  |
| Country                           | X(3)                                  | As given in Appendix 1<br>of Section 1 of the<br>Radiocommunication<br>Data Dictionary |
| Name of the<br>responsible person | X(40)                                 |  |
| Phone                             | X(20)                                 |  |
| Telefax                           | X(20)                                 |  |
| E-Mail                            | X(40)                                 |  |
| Number of records                 | 9(6)                                  |  |
| Writing date                      | DDMMYYYY                              |  |

- 1)    O    overall list                    D    deletions  
       N    new entries                    A    answer  
       M    modifications

Semicolon is used as separator between data fields in both the file header and the record,

The end of a record and of the file header contains a carriage return (CR or CR/LF).

**Appendix 3 to Annex 2 B****DATA TABLE DESCRIPTION**

| column-number | column-name                        |
|---------------|------------------------------------|
| 1             | Field identification               |
| 2             | Field name (characteristic)        |
| 3             | Storage format                     |
| 4             | Definition (possible values)       |
| 5             | Remarks                            |
| 6             | Maximum length of the data element |
| 7             | Validation                         |
| 8             | Related information                |

General remark: An administration with which co-ordination is sought is not allowed to change the content of any field except of field 13Y which must be changed and field 13Z which can be changed e.g. to notify the reason(s) for disagreement (indication of a co-ordination reference etc.). If comments need more characters than provided in 13Z, paper or another medium has to be used.

## Data exchange record format for the Fixed Service

| 1   | 2                         | 3         | 4  | 5             | 6  | 7                                      | 8 |
|-----|---------------------------|-----------|--|---------------|----|--|---|
| 0A  | Type of entry             | X(3)      | Tx=transmitter<br>Rx=receiver<br>Ptx=passive transmitter<br>Prx=passive receiver |               | 3  | mandatory                              |   |
| 1A  | Frequency                 | 9(5)V9(5) |  |               | 11 | mandatory                              |   |
| 1A1 | Frequency unit            | X         | k: kHz, M: MHz, G: GHz   |               | 1  | mandatory                              |   |
| 1Z  | Frequency category        | X         | see Appendix 4   |               | 1  | mandatory                              |   |
| 6A  | Class of station          | X(2)      | see Appendix 5   |               | 2  |  |   |
| 6B  | Nature of service         | X(2)      | see Appendix 6   |               | 2  |  |   |
| 6Z  | Category of use           | X(2)      | see Appendix 7   |               | 2  |  |   |
| 2C  | Date of bringing into use | DDMMYYYY  |  |               | 8  |  |   |
| 4A  | Name of station           | X(40)     | for abbreviations see Appendix 8   |               | 40 | in computer programs 4A is not checked |   |
| 4B  | Country                   | X(3)      |  | Country of 4C | 3  | mandatory                              |   |

| 1  | 2   | 3                              | 4  | 5   | 6  | 7                                   | 8 |
|----|---|--------------------------------|--|---|----|-------------------------------------|---|
| 4C | Geographical co-ordinates                     | 9(3)X9(2)9(2)<br>9(2)X9(2)9(2) | 3 characters : degrees longitude<br>1 character : E(East) or<br>W(West)<br>2 characters : minutes<br>longitude<br>2 characters : seconds<br>longitude<br>2 characters : degrees<br>latitude<br>1 character : N(North)<br>or S(South)<br>2 characters : minutes<br>latitude<br>2 characters : seconds<br>latitude | co-ordinates are to be<br>indicated with seconds<br>and based on WGS 84 | 15 | mandatory                           |   |
| 4Z | Height of the station site above<br>sea level | 9(4) or S9(3)                  | in meters  |   | 4  | mandatory                           |   |
| 7A | Designation of emission                       | X(9)                           | first 4 characters: necessary<br>bandwidth following 5<br>characters: class of emission<br>(see Art.2 and Appendix 1 of the<br>RR  |   | 9  | first 7 characters are<br>mandatory |   |
| 7H | Equipment manufacturer name                   | X(20)                          |  |   | 20 | mandatory *                         |   |
| 7I | Equipment type                                | X(20)                          |  |   | 20 | mandatory *                         |   |
| 7K | Max. capacity of the link                     | X(10)                          |  | see Appendix 11<br>If missing, value is set<br>to "X"                   | 10 |                                     |   |

| 1   | 2  | 3  | 4  | 5  | 6   | 7   | 8 |
|-----|--|--|--|--|---|---|---|
| 7G  | Transmitter spectrum mask or receiver selectivity mask<br>frequency<br>attenuation<br>frequency<br>attenuation<br>frequency<br>attenuation<br>frequency<br>attenuation<br>frequency<br>attenuation | 9(5)V9(5)<br>9(2)V9<br>9(5)V9(5)<br>9(2)V9<br>9(5)V9(5)<br>9(2)V9<br>9(5)V9(5)<br>9(2)V9<br>9(5)V9(5)<br>9(2)V9<br>9(5)V9(5)<br>9(2)V9 | see Annex 3B figure 7<br><br>all frequencies in MHz.<br>all attenuations in dB.<br><br><br>The HCM-SW generates a 7th element in accordance with EN 302 217-2-2 V1.4.1 | If missing, data is taken from Appendix 12.<br><br><br><br><br><br>If both fields 7G and 7G1 are missing the default values for the equipment with lowest class number is used | 11<br>4<br>11<br>4<br>11<br>4<br>11<br>4<br>11<br>4 | If not missing, at least two pairs of frequencies and attenuations are mandatory; the last attenuation has to be $\geq 40$ dB |   |
| 7G1 | Equipment Class  | X(2)   | see Appendix 12 to Annex 2B  | (old field NFD 1)  | 4   | See EN 302 217-2-2 V1.4.1   |   |
| 7G2 | Free, for future use   |  |  | (Old field NFD 2)  | 4   |   |   |
| 7G3 | Channel spacing  | 9(3)V9(3)  | in MHz   | If not known, administrations can derive it from the designation of emission, see Appendix 12  | 7   | mandatory   |   |
| 8B  | Maximum permitted transmitter power  | S9(3)V9  | in dBW   |  | 6   | mandatory for transmitter   |   |
| 8B3 | ATPC   | 9(2)   | dynamic range in dB  | If missing, default value is "0"   | 2   |   |   |
| 9A  | Azimuth  | 9(3)V9   | in degrees with one decimal from 000.0 – 360.0   |  | 5   | mandatory   |   |
| 9B  | Elevation  | S9(2)V9  | in degrees with one decimal  | negative elevation points towards the ground   | 5   | mandatory   |   |

| 1    | 2                                     | 3                                       | 4  | 5   | 6  | 7  | 8 |
|------|---------------------------------------|---|--|---|----|--|---|
| 9D   | Polarization                          | X(1)                                    | only 'H' or 'V' is permissible   |   | 1  | mandatory  |   |
| 9H   | Receiver noise power level (FkTB)     | S9(3)                                   | in dBW   |   | 4  | mandatory for receiver   |   |
| 9L   | Branches and line losses              | 9(2)V9                                  | in dB  | If missing, default value is „0“  | 4  |  |   |
| 9Y   | Height of antenna above ground        | 9(4) or S9(3)                           | in meters  |   | 4  | mandatory  |   |
| 13Z  | Remarks                               | X(50)                                   |  | data necessary for calculations are not allowed                                   | 50 |  |   |
| 13Y  | Status of co-ordination               | X                                       | see Appendix 9   |   | 1  |  |   |
| 2W   | Date of co-ordination request         | DDMMYYYY                                | empty or filled in according to 1Z, 13Y  | in overall list not needed  | 8  |  |   |
| 2Z   | Final date of achieving co-ordination | DDMMYYYY                                | empty or filled in according to 1Z, 13Y  |   | 8  |  |   |
| 13X  | Co-ordination reference               | CCC<br>YYYY<br>PPPPPP<br>FF<br>RR<br>OO | C: country code as given in App.1 Sect.9 of the RDD<br>Y: year of initial co-ordination<br>P: process identification<br>F: link order number<br>R: number of associated records<br>O: order number of record | C: country requesting co-ordination<br><br>F: several co-ordinations for one link | 20 | mandatory<br><br>the co-ordination reference is unique F,O and R are numerical values greater than 0<br>O less/equal R |   |
| 9XM  | Antenna manufacturer name             | X(20)                                   |  |   | 20 | mandatory *  |   |
| 9XT  | Antenna type                          | X(20)                                   |  |   | 20 | mandatory *  |   |
| 9XFL | Lower antenna frequency               | 9(2)V9(3)                               | in GHz   |   | 6  |  |   |
| 9XFU | Upper antenna frequency               | 9(2)V9(3)                               | in GHz   |   | 6  |  |   |

| 1   | 2                                | 3             | 4  | 5  | 6 | 7         | 8   |
|-----|----------------------------------|---------------|--|--|---|-----------|---|
| 9X1 | Antenna gain                     | 9(2)V9        | in dB  | Can be calculated from antenna diameter ** | 4 | mandatory |   |
| 9X  | Antenna data                     |               |  | If missing, data is taken from Appendix 13 |   |           |   |
|     | Copolar radiation pattern        | X(2)          | If 9D = "V": VV or CP<br>If 9D = "H": HH or CP |  | 2 |           | depending on the polarization in 9D   |
|     | Number of mask data              | 9(3)          |  |  | 3 |           |   |
|     | Table of angles and attenuations | 9(3)V9;9(2)V9 | angles in degrees, attenuation in dB           |  | 9 |           | Starting with the attenuation value for 0 degree, all remarkable intermediate values, at least up to 180 degrees, have to be supplied. If values between 180 degrees and 360 degrees (or negative degree values) are missing, the antenna pattern is symmetric. |
|     | Crosspolar radiation pattern     | X(2)          | If 9D = "V": VH or XP<br>If 9D = "H": HV or XP |  | 2 |           | depending on the polarization in 9D   |
|     | Number of mask data              | 9(3)          |  |  | 3 |           |   |
|     | Table of angles and attenuations | 9(3)V9;9(2)V9 | angles in degrees, attenuation in dB           |  | 9 |           | Starting with the attenuation value for 0 degree, all remarkable intermediate values, at least up to 180 degrees, have to be supplied. If values between 180 degrees and 360 degrees (or negative degree values) are missing, the antenna pattern is symmetric. |

\* Manufacturer and type have to be unique identifier. In case of default data, these data items are marked with "DEFAULT". It is not necessary that unique identifier have to be real names of manufacturer or type.

\*\* Using formula: 
$$G = 10 * \log\left(\frac{(D\pi f)^2 * 0.55}{c^2}\right)$$
 D = diameter [m], f = frequency [Hz], c = speed of light [3\*10<sup>8</sup> m/s]

## Additional explanation of field 13X in the Fixed Service

|        |   |
|--------|---|
| CCC    | Country requesting co-ordination  |
| YYYY   | 4 digits of the year of initial co-ordination   |
| PPPPPP | Process identification<br>The only constraint for PPPPPP is to obtain a unique co-ordination reference  |
| FF     | Assignment order number in the process<br>Used with "01" in the case the process number differs for each channel assignment.<br>If the process number is always the same it numbers the different assignments of the same process |
| RR     | Number of the associated records.   |
| OO     | Order number of the record in the assignment  |

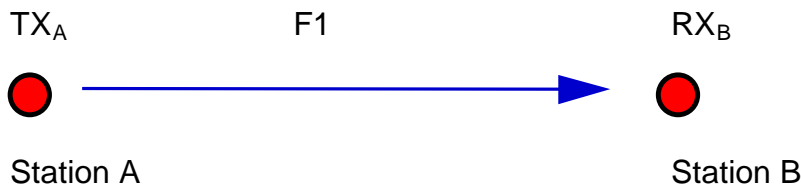


Examples :

These examples will be used as guidelines for the filling of the Field 13X.

## 1/ Unidirectional link

country : D  
 Year : 2005  
 Process Identification : 1234567  
 FF : 01  
 RR : 02



There are 2 records :

TX<sub>A</sub> record 1 :

| 0A | ... | 1A      | ... | 4C   | ... | 13X |      |         |    |    |    |      |
|----|-----|---------|-----|------|-----|-----|------|---------|----|----|----|------|
|    |     |         |     |      |     | CCC | YYYY | PPPPPP  | FF | RR | OO | Rem. |
| TX |     | 17540.0 |     | Pt A |     | D   | 2005 | 1234567 | 01 | 02 | 01 |      |

RX<sub>B</sub> record 2 :

| 0A | ... | 1A      | ... | 4C   | ... | 13X |      |         |    |    |    |      |
|----|-----|---------|-----|------|-----|-----|------|---------|----|----|----|------|
|    |     |         |     |      |     | CCC | YYYY | PPPPPP  | FF | RR | OO | Rem. |
| RX |     | 17540.0 |     | Pt B |     | D   | 2005 | 1234567 | 01 | 02 | 02 |      |

For this link, the 2 records may neither be in the same file nor successive in the same file. That means that the process identification shall not be reused by one administration during the same year.

For those administrations willing to develop a link policy management, this link shall be identified by these 2 records.

How to select these 2 records?

- Identify the records with the same CCCYYYYPPPPPP in field 13X : you should have an even number of such records ;
- If there are only 2 records : these 2 records shall have the same 1A
- If there are more than 2 records: each links shall be identified by the pair of records having the same 1A. If, by chance, there are more than 2 records having the same 1A (the frequency is reused), the combinations of FF, RR and OO will be used to identify the corresponding links. The selections may be cross-checked with 0A : the pair shall have 1 TX and 1 RX.

If the administration ask many frequencies for this link in a same time, FF will be used to identified each frequency, for instance:

Link between station A and station B with F1 :

D 20051234567010201 for TX<sub>A</sub> on F1

D 20051234567010202 for RX<sub>B</sub> on F1

Link between Station A and Station B with F2 :

D 20051234567020201 for TX<sub>A</sub> on F2

D 20051234567020202 for RX<sub>B</sub> on F2

Link between Pt A and Pt B with F3 :

D 20051234567030201 for TX<sub>A</sub> on F3

D 20051234567030202 for RX<sub>B</sub> on F3





**Fixed Service records:**

TX:17540.0;M:2;FX;CV;X;;GLEWITZ-A;D;  
 012E554053N5530;60;28M0D7W;BAPT;D34/28-- --BAPT-9;E3;  
 11.0;2.0;19.0;23.0;25.0;23.0;45.0;45.0;;;  
 ;;28.0;+34.0;0;348.6;-0.1;V;;0.0;43;TEST DATA;  
 B;28042005;;D | 20051234567010201;CCIR;CCIR28000-1.20/43.0;  
 ;;43.0;CP;9;0.0;0.0;0.6;3.0;2.0;16.2;5.0;26.1;  
 10.0;33.7;15.0;38.1;20.0;41.2;48.0;50.7;180.0;50.7;  
 XP;6;0.0;15.0;2.0;31.0;5.0;41.0;10.0;48.0;  
 15.0;51.0;180.0;51.0 CR

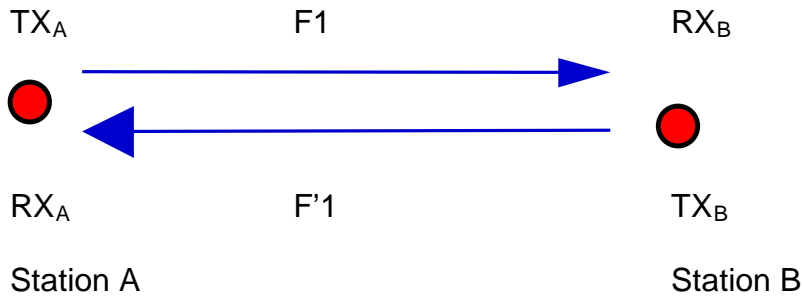
RX:17540.0;M:2;FX;CV;X;;GRASEBIET-A;D;  
 012E524454N0402;75;28M0D7W;BAPT;D34/28-- --BAPT-9;E3;  
 11.0;2.0;19.0;23.0;25.0;23.0;45.0;45.0;;;  
 ;;28.0;;;168.6;+0.1;V;-95;0.0;43;TEST DATA;  
 B;28042005;;D | 20051234567010202;CCIR;CCIR28000-1.20/43.0;  
 ;;43.0;CP;9;0.0;0.0;0.6;3.0;2.0;16.2;5.0;26.1;  
 10.0;33.7;15.0;38.1;20.0;41.2;48.0;50.7;180.0;50.7;  
 XP;6;0.0;15.0;2.0;31.0;5.0;41.0;10.0;48.0;  
 15.0;51.0;180.0;51.0 CR

↑  
 carriage return

**Remark:** Because of missing space on the paper, all 4 records are broken into several lines. In the data exchange, each record is only one line!

## 2/ Bidirectional link

country : D  
 Year : 2005  
 Process Identification : 1234568  
 FF : 01  
 RR : 04



There are 4 records :

TX<sub>A</sub> record 1 :

| 0A | ... | 1A      | ... | 4C   | ... | 13X |      |         |    |    |    |     |
|----|-----|---------|-----|------|-----|-----|------|---------|----|----|----|-----|
|    |     |         |     |      |     | CCC | YYYY | PPPPPPP | FF | RR | OO | Rem |
| TX |     | 27562.5 |     | Pt A |     | D   | 2005 | 1234568 | 01 | 04 | 01 | .   |

RX<sub>B</sub> record 2 :

| 0A | ... | 1A      | ... | 4C   | ... | 13X |      |         |    |    |    |     |
|----|-----|---------|-----|------|-----|-----|------|---------|----|----|----|-----|
|    |     |         |     |      |     | CCC | YYYY | PPPPPPP | FF | RR | OO | Rem |
| RX |     | 27562.5 |     | Pt B |     | D   | 2005 | 1234568 | 01 | 04 | 02 | .   |

TX<sub>B</sub> record 3 :

| 0A | ... | 1A      | ... | 4C   | ... | 13X |      |         |    |    |    |     |
|----|-----|---------|-----|------|-----|-----|------|---------|----|----|----|-----|
|    |     |         |     |      |     | CCC | YYYY | PPPPPPP | FF | RR | OO | Rem |
| TX |     | 28570.5 |     | Pt B |     | D   | 2005 | 1234568 | 01 | 04 | 03 | .   |

RX<sub>A</sub> record 4 :

| 0A | ... | 1A      | ... | 4C   | ... | 13X |      |         |    |    |    |     |
|----|-----|---------|-----|------|-----|-----|------|---------|----|----|----|-----|
|    |     |         |     |      |     | CCC | YYYY | PPPPPPP | FF | RR | OO | Rem |
| RX |     | 28570.5 |     | Pt A |     | D   | 2005 | 1234568 | 01 | 04 | 04 | .   |

For the link management purpose, this bidirectional link shall be identified by these 4 records.

The selection of these 4 records will follow the same process as mentioned above in §2 as far as the identification of pairs of records is concerned. Then the 2 pairs representing the bidirectional link are associated using the parameter 4C.

If the administration ask many frequencies for this link in a same time, FF will be used to identified each frequency, for instance :

Link between PtA and PtB with F1/ F'1 :

D 20051234568010401 for TX<sub>A</sub> on F1  
D 20051234568010402 for RX<sub>B</sub> on F1  
D 20051234568010403 for TX<sub>B</sub> on F'1  
D 20051234568010404 for RX<sub>A</sub> on F'1

Link between PtA and PtB with F2/ F'2 :

D 20051234568020401 for TX<sub>A</sub> on F2  
D 20051234568020402 for RX<sub>B</sub> on F2  
D 20051234568020403 for TX<sub>B</sub> on F'2  
D 20051234568020404 for RX<sub>A</sub> on F'2

Link between PtA and PtB with F3/ F'3 :

D 20051234568030401 for TX<sub>A</sub> on F3  
D 20051234568030402 for RX<sub>B</sub> on F3  
D 20051234568030403 for TX<sub>B</sub> on F'3  
D 20051234568030404 for RX<sub>A</sub> on F'3

# Station TX<sub>A</sub>

0A : TX  
 1A : 27562.50000  
 1A1 : M  
 1Z : 2  
 6A : FX  
 6B : CV  
 6Z : X  
 2C :  
 4A : GLEWITZ-A  
 4B : D  
 4C : 012E554053N5530  
 4Z : 60  
 7A : 28M0D7W  
 7H : BAPT  
 7I : D34/28-- --BAPT-9  
 7K : E3  
 7G :  
   11.00000  
   2.0  
   19.00000  
   23.0  
   25.00000  
   23.0  
   45.00000  
   45.0  
     
     
     
     
 7G1 :  
 7G2 :  
 7G3 : 28.000  
 8B : +34.0  
 8B3 : 0  
 9A : 348.6

9B : -0.1  
 9D : V  
 9H :  
 9L : 0.0  
 9Y : 43  
 13Z : TEST DATA  
 13Y : B  
 2W : 28042005  
 2Z :  
 13X : D20051234568010401  
 9XM : CIR  
 9XT : CIR28000-1.20/43.0  
 9XFL :  
 9XFU :  
 9X1 : 43.0  
 9X : CP  
   9  
   0.0 0.0  
   0.6 3.0  
   2.0 16.2  
   5.0 26.1  
   10.0 33.7  
   15.0 38.1  
   20.0 41.2  
   48.0 50.7  
   180.0 50.7  
 XP  
   6  
   0.0 15.0  
   2.0 31.0  
   5.0 41.0  
   10.0 48.0  
   15.0 51.0  
   180.0 51.0





# Station TX<sub>B</sub>

0A : TX  
 1A : 28570.50000  
 1A1 : M  
 1Z : 2  
 6A : FX  
 6B : CV  
 6Z : X  
 2C :  
 4A : GRASEBIETH-A  
 4B : D  
 4C : 012E524454N0402  
 4Z : 75  
 7A : 28M0D7W  
 7H : BAPT  
 7I : D34/28-- --BAPT-9  
 7K : E3  
 7G :  
 11.00000  
 2.0  
 19.00000  
 23.0  
 25.00000  
 23.0  
 45.00000  
 45.0  
 7G1 :  
 7G2 :  
 7G3 : 28.000  
 8B : +34.0  
 8B3 : 0  
 9A : 168.6

9B : +0.1  
 9D : V  
 9H :  
 9L : 0.0  
 9Y : 43  
 13Z : TEST DATA  
 13Y : B  
 2W : 28042005  
 2Z :  
 13X : D20051234568010403  
 9XM : CCIR  
 9XT : CCIR28000-1.20/43.0  
 9XFL :  
 9XFU :  
 9X1 : 43.0  
 9X : CP  
 9  

|       |      |
|-------|------|
| 0.0   | 0.0  |
| 0.6   | 3.0  |
| 2.0   | 16.2 |
| 5.0   | 26.1 |
| 10.0  | 33.7 |
| 15.0  | 38.1 |
| 20.0  | 41.2 |
| 48.0  | 50.7 |
| 180.0 | 50.7 |

 XP  
 6  

|       |      |
|-------|------|
| 0.0   | 15.0 |
| 2.0   | 31.0 |
| 5.0   | 41.0 |
| 10.0  | 48.0 |
| 15.0  | 51.0 |
| 180.0 | 51.0 |



**Fixed Service records:**

TX;27562.5;M;2;FX;CV;X;;GLEWITZ-A;D;  
 012E554053N5530;60;28MOD7W;BAPT;D34/28-- -- --BAPT-9;E3;  
 11.0;2.0;19.0;23.0;25.0;23.0;45.0;45.0;;;;  
 ;;28.0;+34.0;0;348.6;-0.1;V;;0.0;43;TEST DATA;  
 B;28042005;;D | 20051234568010401;CCIR;CCIR28000-1.20/43.0;  
 ;;43.0;CP;9;0.0;0.0;0.6;3.0;2.0;16.2;5.0;26.1;  
 10.0;33.7;15.0;38.1;20.0;41.2;48.0;50.7;180.0;50.7;  
 XP;6;0.0;15.0;2.0;31.0;5.0;41.0;10.0;48.0;  
 15.0;51.0;180.0;51.0 CR

RX;27562.5;M;2;FX;CV;X;;GRASEBIET-A;D;  
 012E524454N0402;75;28MOD7W;BAPT;D34/28-- -- --BAPT-9;E3;  
 11.0;2.0;19.0;23.0;25.0;23.0;45.0;45.0;;;;  
 ;;28.0;;;168.6;+0.1;V;-95;0.0;43;TEST DATA;  
 B;28042005;;D | 20051234568010402;CCIR;CCIR28000-1.20/43.0;  
 ;;43.0;CP;9;0.0;0.0;0.6;3.0;2.0;16.2;5.0;26.1;  
 10.0;33.7;15.0;38.1;20.0;41.2;48.0;50.7;180.0;50.7;  
 XP;6;0.0;15.0;2.0;31.0;5.0;41.0;10.0;48.0;  
 15.0;51.0;180.0;51.0 CR

TX;28570.5;M;2;FX;CV;X;;GRASEBIET-A;D;  
 012E524454N0402;75;28MOD7W;BAPT;D34/28-- -- --BAPT-9;E3;  
 11.0;2.0;19.0;23.0;25.0;23.0;45.0;45.0;;;;

```

:;28.0;+34.0;0;168.6;+0.1;V;;0.0;43;TEST DATA;
B;28042005;;D|20051234568010403;CCIR;CCIR28000-1.20/43.0;
:;43.0;CP;9;0.0;0.0;0.6;3.0;2.0;16.2;5.0;26.1;
10.0;33.7;15.0;38.1;20.0;41.2;48.0;50.7;180.0;50.7;
XP;6;0.0;15.0;2.0;31.0;5.0;41.0;10.0;48.0;
15.0;51.0;180.0;51.0CR
RX;28570.5;M;2;FX;CV;X;;GLEWITZ-A;D;
012E554053N5530;60;28MOD7W;BAPT;D34/28-- --BAPT-9;E3;
11.0;2.0;19.0;23.0;25.0;23.0;45.0;45.0;;;
:;28.0;;;348.6;-0.1;V;-95;0.0;43;TEST DATA;
B;28042005;;D|20051234568010404;CCIR;CCIR28000-1.20/43.0;
:;43.0;CP;9;0.0;0.0;0.6;3.0;2.0;16.2;5.0;26.1;
10.0;33.7;15.0;38.1;20.0;41.2;48.0;50.7;180.0;50.7;
XP;6;0.0;15.0;2.0;31.0;5.0;41.0;10.0;48.0;
15.0;51.0;180.0;51.0CR

```

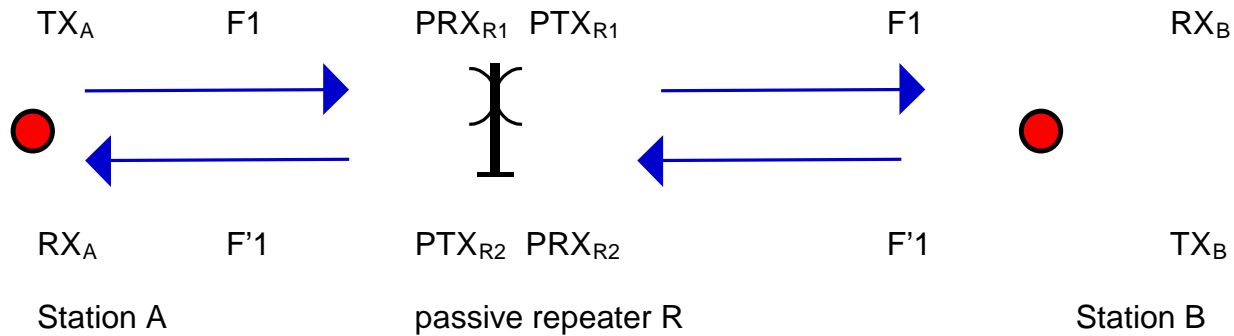
↑  
carriage return

**Remark:** Because of missing space on the paper, all 4 records are broken into several lines. In the data exchange, each record is only one line!

### 3/ Bidirectional link with passive repeater

country :           POL  
Year :               2005

Process Identification : 1234569  
 FF : 01  
 RR : 08



TX<sub>A</sub> record 1 :

|    |     |         |     |      |     |     |      |         |    |    |    |      |
|----|-----|---------|-----|------|-----|-----|------|---------|----|----|----|------|
| 0A | ... | 1A      | ... | 4C   | ... | 13X |      |         |    |    |    |      |
|    |     |         |     |      |     | CCC | YYYY | PPPPPP  | FF | RR | OO | Rem. |
| TX |     | 14431.0 |     | Pt A |     | F   | 2005 | 0001251 | 01 | 08 | 01 |      |

PRX<sub>R1</sub> record 2 :

|     |     |         |     |      |     |     |      |         |    |    |    |      |
|-----|-----|---------|-----|------|-----|-----|------|---------|----|----|----|------|
| 0A  | ... | 1A      | ... | 4C   | ... | 13X |      |         |    |    |    |      |
|     |     |         |     |      |     | CCC | YYYY | PPPPPP  | FF | RR | OO | Rem. |
| PRX |     | 14431.0 |     | Pt R |     | F   | 2005 | 0001251 | 01 | 08 | 02 |      |

PTX<sub>R1</sub> record 3 :

|     |     |         |     |      |     |     |      |         |    |    |    |      |
|-----|-----|---------|-----|------|-----|-----|------|---------|----|----|----|------|
| 0A  | ... | 1A      | ... | 4C   | ... | 13X |      |         |    |    |    |      |
|     |     |         |     |      |     | CCC | YYYY | PPPPPP  | FF | RR | OO | Rem. |
| PTX |     | 14431.0 |     | Pt R |     | F   | 2005 | 0001251 | 01 | 08 | 03 |      |

RX<sub>B</sub> record 4 :

|    |     |    |     |    |     |     |  |  |  |  |  |
|----|-----|----|-----|----|-----|-----|--|--|--|--|--|
| 0A | ... | 1A | ... | 4C | ... | 13X |  |  |  |  |  |
|----|-----|----|-----|----|-----|-----|--|--|--|--|--|

|    |  |         |  |      |     |      |         |    |    |    |      |
|----|--|---------|--|------|-----|------|---------|----|----|----|------|
|    |  |         |  |      | CCC | YYYY | PPPPPPP | FF | RR | OO | Rem. |
| RX |  | 14431.0 |  | Pt B | F   | 2005 | 0001251 | 01 | 08 | 04 |      |

TX<sub>B</sub> record 5 :

|    |     |         |     |      |     |     |      |         |    |    |    |      |
|----|-----|---------|-----|------|-----|-----|------|---------|----|----|----|------|
| 0A | ... | 1A      | ... | 4C   | ... | 13X |      |         |    |    |    |      |
|    |     |         |     |      |     | CCC | YYYY | PPPPPPP | FF | RR | OO | Rem. |
| TX |     | 14291.0 |     | Pt B |     | F   | 2005 | 0001251 | 01 | 08 | 05 |      |

PRX<sub>R2</sub> record 6 :

|     |    |         |    |      |     |     |      |         |    |    |    |      |
|-----|----|---------|----|------|-----|-----|------|---------|----|----|----|------|
| 0A  | .. | 1A      | .. | 4C   | ... | 13X |      |         |    |    |    |      |
|     |    |         |    |      |     | CCC | YYYY | PPPPPPP | FF | RR | OO | Rem. |
| PRX |    | 14291.0 |    | Pt R |     | F   | 2005 | 0001251 | 01 | 08 | 06 |      |

PTX<sub>R2</sub> record 7 :

|     |     |         |     |      |     |     |      |         |    |    |    |      |
|-----|-----|---------|-----|------|-----|-----|------|---------|----|----|----|------|
| 0A  | ... | 1A      | ... | 4C   | ... | 13X |      |         |    |    |    |      |
|     |     |         |     |      |     | CCC | YYYY | PPPPPPP | FF | RR | OO | Rem. |
| PTX |     | 14291.0 |     | Pt R |     | F   | 2005 | 0001251 | 01 | 08 | 07 |      |

RX<sub>A</sub> record 8 :

|    |     |         |     |      |     |     |      |         |    |    |    |      |
|----|-----|---------|-----|------|-----|-----|------|---------|----|----|----|------|
| 0A | ... | 1A      | ... | 4C   | ... | 13X |      |         |    |    |    |      |
|    |     |         |     |      |     | CCC | YYYY | PPPPPPP | FF | RR | OO | Rem. |
| RX |     | 14291.0 |     | Pt A |     | F   | 2005 | 0001251 | 01 | 08 | 08 |      |

This bidirectional link with passive repeater shall be identified by these 8 records.

If the administration ask many frequencies for this link in a same time, FF will be used to identified each frequency, for instance:

Link between PtA and PtB with F1/ F'1 :

F 20050001251010801 for TX<sub>A</sub> on F1

F 20050001251010802 for PRX<sub>R1</sub> on F1

F 20050001251010803 for PTX<sub>R1</sub> on F1

F 20050001251010804 for RX<sub>B</sub> on F1  
F 20050001251010805 for TX<sub>B</sub> on F'1  
F 20050001251010806 for PRX<sub>R2</sub> on F'1  
F 20050001251010807 for PTX<sub>R2</sub> on F'1  
F 20050001251010808 for RX<sub>A</sub> on F'1

Link between PtA and PtB with F2/ F'2 :

F 20050001251020801 for TX<sub>A</sub> on F2  
F 20050001251020802 for PRX<sub>R1</sub> on F2  
F 20050001251020803 for PTX<sub>R1</sub> on F2  
F 20050001251020804 for RX<sub>B</sub> on F2  
F 20050001251020805 for TX<sub>B</sub> on F'2  
F 20050001251020806 for PRX<sub>R2</sub> on F'2  
F 20050001251020807 for PTX<sub>R2</sub> on F'2  
F 20050001251020808 for RX<sub>A</sub> on F'2

Link between PtA and PtB with F3/ F'3 :

F 20050001251030801 for TX<sub>A</sub> on F3  
F 20050001251030802 for PRX<sub>R1</sub> on F3  
F 20050001251030803 for PTX<sub>R1</sub> on F3  
F 20050001251030804 for RX<sub>B</sub> on F3  
F 20050001251030805 for TX<sub>B</sub> on F'3  
F 20050001251030806 for PRX<sub>R2</sub> on F'3  
F 20050001251030807 for PTX<sub>R2</sub> on F'3  
F 20050001251030808 for RX<sub>A</sub> on F'3



## **Appendix 4 to Annex 2 B**

### **FIELD 1Z : FREQUENCY CATEGORIES**

- 1 Preferential frequencies
- 2 Frequencies requiring co-ordination
- 3 Frequencies used on the basis of geographical network plans
- 4 Frequencies for a planned radiocommunications network
- 5 Shared frequencies
- 6 not used
- 7 Frequencies using preferential codes
- 8 Frequencies used on the basis of arrangements between operators

**Appendix 5 to Annex 2 B**

**FIELD 6A : CLASS OF STATION**

FX Fixed station

If other codes are required, use the codes listed in Appendix 5 of Section 9 of the Radiocommunication Data Dictionary

## **Appendix 6 to Annex 2 B**

### **FIELD 6B : NATURE OF THE SERVICE**

- CO Station open to official correspondence exclusively
- CP Station open to public correspondence
- CR Station open to limited public correspondence
- CV Station open exclusively to correspondence of a private agency
- OT Station open exclusively to operational traffic of the service concerned

If other codes are required, use the codes listed in Appendix 13 of Section 9 of the Radiocommunication Data Dictionary

**Appendix 7 to Annex 2 B****FIELD 6Z : CATEGORY OF USE**

|    |   |
|----|---|
| A  | Airport services  |
| B  | Railways (excluding mountain railways)  |
| C  | Diplomatic corps  |
| D  | Mountain railways   |
| E  | Production, transport and distribution of energy (electricity, gas, water)            |
| F  | Fire services   |
| G  | Military  |
| H  | Radio relay networks  |
| HH | Local call  |
| I  | Demonstration   |
| K  | Public transport  |
| L  | Subscriber installations, public mobile services, stand-by links                      |
| M  | Navigation (in ports, on the Rhine, etc.)   |
| N  | Tests and research  |
| O  | Not allocated   |
| P  | Public security services (Police, customs, etc.)                                      |
| Q  | Entries not falling within other categories on this list (cordless microphones, etc.) |
| R  | Ancillary broadcasting services (studio, news reporting)                              |
| S  | Rescue services (ambulances, doctors, water and mountain rescue)                      |
| T  | Other services provided by telecommunications administrations                         |
| U  | Industrial operators  |
| V  | Road traffic service  |
| W  | Taxi and car hire firms   |
| X  | Other private services  |
| Y  | Reserved specific applications, not allocated   |
| Z  | Other private multiple-use networks   |

These codes can be combined (maximum two characters):  
 e.g. XP- private police service

**Appendix 8 to Annex 2 B****FIELD 4A : ABBREVIATIONS NORMALLY USED WHEN THE NAME OF THE STATION EXCEEDS 20 CHARACTERS AND CODES**

| <u>Abbreviations</u> | <u>Explanation</u>         |
|----------------------|----------------------------|
| B                    | Bay                        |
| BRDG                 | Bridge                     |
| C                    | Cape                       |
| CL                   | Central                    |
| CP                   | Camp                       |
| CY                   | City                       |
| DPT                  | Department                 |
| E                    | East                       |
| ET                   | State                      |
| FT                   | Fort                       |
| FIR                  | Fire Tower                 |
| GF                   | Gulf                       |
| GR                   | Great                      |
| HLL                  | Hill                       |
| HR                   | Harbour                    |
| I                    | Island(s)                  |
| INTR                 | Usage in the whole country |
| JN                   | Junction                   |
| L                    | Lake                       |
| LSTN                 | Light station              |
| MT                   | Mount                      |
| MTN                  | Mountain(s)                |
| N                    | New                        |
| NO                   | North                      |
| NTL                  | National                   |
| PK                   | Peak                       |
| PMSTN                | Pump station               |
| PT                   | Port (see HR)              |
| RV                   | River                      |
| S                    | Saint                      |
| STN                  | Station                    |
| SO                   | South                      |
| TR                   | Tower                      |
| V                    | Town (see CY)              |
| VLV                  | Valley                     |
| W                    | West                       |

If additional abbreviations are required, use those listed in Appendix 7 of Section 9 of the Radiocommunication Data Dictionary

**Appendix 9 to Annex 2 B****FIELD 13Y : STATUS OF CO-ORDINATION**

- A For information : the assignment described is not submitted to a co-ordination procedure and to any protection requirement.
- B Request for agreement.
- C Agreed without reservation.
- D Agreed subject to operational tests to show that coexistence is possible.
- E Agreement on a non-interference basis (NIB); revocation of the agreement and any request to cease the emissions in question requires proof that harmful interference has been caused to assignments whose status has already been established, which should normally be described in an associated notice.
- F Agreed, subject to a requirement identical or analogous to the requirement of RR 4.4.
- G Agreed, without any reservation as to interference which may be caused by the assignment described; the applicant is, however, informed that there is a risk of interference from assignments whose status has already been established, and that the responsibility for any such risk is his; one or more associated notices may be sent.
- H E+G
- M Request for agreement following a modified co-ordination after an answer coded E, G, H, Y or Z.
- P Assignment according to preferential frequency agreements (1.3.2 of the Agreement) or geographical network plans (1.3.5 of the Agreement) or shared frequency agreements (1.3.3 of the Agreement) or frequencies using preferential codes (1.3.6 of the Agreement) or frequencies used on the basis of arrangements between operators (1.3.7 of the Agreement).
- R Deletion of co-ordination.
- W Withdrawal of the co-ordination request.
- Y Request for agreement refused, but an alternative suggestion is formulated in column 13Z.
- Z Request for agreement refused.

**Appendix 10 to Annex 2 B****FIELD 9D : POLARIZATION****SYMBOLS USED TO INDICATE POLARIZATION**

| Polarization      | Symbol | Definition  |
|-------------------|--------|---|
| Horizontal linear | H      | The electric field intensity vector is in the horizontal plane. |
| Vertical linear   | V      | The magnetic field intensity vector is in the horizontal plane. |

**Appendix 11 to Annex 2 B****FIELD 7K: MAX. CAPACITY OF THE LINK**

| <b>Contents of the field 7K</b> |                |
|---------------------------------|----------------|
| E1                              | 2 Mbit/s       |
| 2E1                             | 2 x 2 Mbit/s   |
| 4E1                             | 4 x 2 Mbit/s   |
| 8E1                             | 8 x 2 Mbit/s   |
| 16E1                            | 16 x 2 Mbit/s  |
| 17E1                            | 17 x 2 Mbit/s  |
| E2                              | 8 Mbit/s       |
| 2E2                             | 2 x 8 Mbit/s   |
| E3                              | 34 Mbit/s      |
| 2E3                             | 2 x 34 Mbit/s  |
| E3 + E1                         | 34 + 2 Mbit/s  |
| E4                              | 140 Mbit/s     |
| 2E4                             | 2 x 140 Mbit/s |
| STM1                            | 155 Mbit/s     |
| 2STM1                           | 2 x 155 Mbit/s |
| X                               | Unknown        |

Other capacities should be derived accordingly.



## Appendix 12 to Annex 2 B

## FIELD 7G: TABLE OF DEFAULT VALUES OF TRANSMITTER SPECTRUM MASKS AND RECEIVER SELECTIVITY MASKS

| Frequency band, system and class |        |                 |                    | TX MASKS      |          |         |          |         |          |         |          |         |          |         |          |         |
|----------------------------------|--------|-----------------|--------------------|---------------|----------|---------|----------|---------|----------|---------|----------|---------|----------|---------|----------|---------|
| Band                             | System | Equipment Class | Channel Separation | Netto-Bitrate | f1 (MHz) | a1 (dB) | f2 (MHz) | a2 (dB) | f3 (MHz) | a3 (dB) | f4 (MHz) | a4 (dB) | f5 (MHz) | a5 (dB) | f6 (MHz) | a6 (dB) |
| MHz                              |        | Field 7G1       | MHz                | (Mbit/s)      |          |         |          |         |          |         |          |         |          |         |          |         |
| 1350 - 1517                      | A1     | 2               | 0.025              | 0.032         | 0.01102  | 0.0     | 0.01224  | 2.0     | 0.01273  | 6.9     | 0.01322  | 16.1    | 0.01371  | 28.0    | 0.040    | 48.0    |
| 1350 - 1517                      | A1     | 2               | 0.075              | 0.096         | 0.03305  | 0.0     | 0.03672  | 2.0     | 0.03819  | 6.9     | 0.03966  | 16.1    | 0.04114  | 28.0    | 0.120    | 48.0    |
| 1350 - 1517                      | A1     | 2               | 0.250              | 0.325         | 0.06280  | 0.0     | 0.10644  | 2.0     | 0.12453  | 7.1     | 0.13837  | 13.6    | 0.15258  | 28.0    | 0.400    | 48.0    |
| 1350 - 1517                      | A1     | 2               | 0.500              | 0.650         | 0.12560  | 0.0     | 0.21288  | 2.0     | 0.24906  | 7.1     | 0.27674  | 13.6    | 0.30515  | 28.0    | 0.800    | 48.0    |
| 1350 - 1517                      | A1     | 2               | 1.000              | 1.3           | 0.25119  | 0.0     | 0.42575  | 2.0     | 0.49813  | 7.1     | 0.55348  | 13.6    | 0.61031  | 28.0    | 1.600    | 48.0    |
| 1350 - 1517                      | A1     | 2               | 2.000              | 2.6           | 0.50239  | 0.0     | 0.85150  | 2.0     | 0.99626  | 7.1     | 1.10695  | 13.6    | 1.22062  | 28.0    | 3.200    | 48.0    |
| 1350 - 1517                      | UM     | 2               | 3.500              | 4.0           | 1.03180  | 0.0     | 1.54000  | 2.0     | 1.72480  | 6.4     | 1.87880  | 11.7    | 2.08320  | 24.0    | 6.000    | 46.0    |
| 1350 - 1517                      | A1     | 4L              | 0.025              | 0.064         | 0.00708  | 0.0     | 0.01056  | 2.0     | 0.01214  | 7.6     | 0.01331  | 15.6    | 0.01429  | 33.0    | 0.040    | 56.0    |
| 1350 - 1517                      | A1     | 4L              | 0.075              | 0.190         | 0.02038  | 0.0     | 0.03135  | 2.0     | 0.03637  | 7.7     | 0.04013  | 16.1    | 0.04307  | 33.0    | 0.120    | 56.0    |
| 1350 - 1517                      | A1     | 4L              | 0.250              | 0.650         | 0.07508  | 0.0     | 0.10725  | 2.0     | 0.12227  | 7.8     | 0.13299  | 16.1    | 0.14193  | 33.0    | 0.400    | 56.0    |
| 1350 - 1517                      | A1     | 4L              | 0.500              | 1.3           | 0.15015  | 0.0     | 0.21450  | 2.0     | 0.24453  | 7.8     | 0.26598  | 16.1    | 0.28385  | 33.0    | 0.800    | 56.0    |
| 1350 - 1517                      | A1     | 4L              | 1.000              | 2.6           | 0.30030  | 0.0     | 0.42900  | 2.0     | 0.48906  | 7.8     | 0.53196  | 16.1    | 0.56770  | 33.0    | 1.600    | 56.0    |
| 1350 - 1517                      | A1     | 4L              | 2.000              | 5.2           | 0.60060  | 0.0     | 0.85800  | 2.0     | 0.97812  | 7.8     | 1.06392  | 16.1    | 1.13540  | 33.0    | 3.200    | 56.0    |
| 1350 - 1517                      | UM     | 4L              | 3.500              | 8.0           | 1.45960  | 0.0     | 1.64000  | 2.0     | 1.72200  | 7.6     | 1.77120  | 13.5    | 1.85540  | 29.0    | 7.000    | 56.0    |
|                                  |        |                 |                    |               |          |         |          |         |          |         |          |         |          |         |          |         |
| 2025 - 2670                      | A2     | 2               | 0.50               | 0.65          | 0.12560  | 0.0     | 0.21288  | 2.0     | 0.24906  | 7.1     | 0.27674  | 13.6    | 0.30515  | 28.0    | 0.800    | 48.0    |
| 2025 - 2670                      | A2     | 2               | 1.00               | 1.3           | 0.25119  | 0.0     | 0.42575  | 2.0     | 0.49813  | 7.1     | 0.55348  | 13.6    | 0.61031  | 28.0    | 1.600    | 48.0    |
| 2025 - 2670                      | A2     | 2               | 2.00               | 2.6           | 0.50239  | 0.0     | 0.85150  | 2.0     | 0.99626  | 7.1     | 1.10695  | 13.6    | 1.22062  | 28.0    | 3.200    | 48.0    |

| Frequency band, system and class |        |                 |                    | TX MASKS      |          |         |          |         |          |         |          |         |          |         |          |         |
|----------------------------------|--------|-----------------|--------------------|---------------|----------|---------|----------|---------|----------|---------|----------|---------|----------|---------|----------|---------|
| Band                             | System | Equipment Class | Channel Separation | Netto-Bitrate | f1 (MHz) | a1 (dB) | f2 (MHz) | a2 (dB) | f3 (MHz) | a3 (dB) | f4 (MHz) | a4 (dB) | f5 (MHz) | a5 (dB) | f6 (MHz) | a6 (dB) |
| MHz                              |        | Field 7G1       | MHz                | (Mbit/s)      |          |         |          |         |          |         |          |         |          |         |          |         |
| 2025 - 2670                      | UM     | 2               | 1.75               | 2.0           | 0.56880  | 0.0     | 0.79000  | 2.0     | 0.86900  | 6.3     | 0.94010  | 12.0    | 1.02870  | 24.0    | 3.000    | 46.0    |
| 2025 - 2670                      | UM     | 2               | 3.50               | 4.0           | 1.03180  | 0.0     | 1.54000  | 2.0     | 1.72480  | 6.4     | 1.87880  | 11.7    | 2.08320  | 24.0    | 6.000    | 46.0    |
| 2025 - 2670                      | UM     | 2               | 7.00               | 8.0           | 2.06360  | 0.0     | 3.08000  | 2.0     | 3.44960  | 6.4     | 3.75760  | 11.7    | 4.16640  | 24.0    | 12.000   | 46.0    |
| 2025 - 2670                      | UM     | 2               | 14.00              | 16.0          | 4.12720  | 0.0     | 6.16000  | 2.0     | 6.89920  | 6.4     | 7.51520  | 11.7    | 8.33280  | 24.0    | 24.000   | 46.0    |
| 2025 - 2670                      | A2     | 4L              | 0.50               | 1.3           | 0.15015  | 0.0     | 0.21450  | 2.0     | 0.24453  | 7.8     | 0.26598  | 16.1    | 0.28385  | 33.0    | 0.800    | 56.0    |
| 2025 - 2670                      | A2     | 4L              | 1.00               | 2.6           | 0.30030  | 0.0     | 0.42900  | 2.0     | 0.48906  | 7.8     | 0.53196  | 16.1    | 0.56770  | 33.0    | 1.600    | 56.0    |
| 2025 - 2670                      | A2     | 4L              | 2.00               | 5.2           | 0.60060  | 0.0     | 0.85800  | 2.0     | 0.97812  | 7.8     | 1.06392  | 16.1    | 1.13540  | 33.0    | 3.200    | 56.0    |
| 2025 - 2670                      | UM     | 4L              | 1.75               | 4.0           | 0.72980  | 0.0     | 0.82000  | 2.0     | 0.86100  | 7.6     | 0.88560  | 13.5    | 0.92770  | 29.0    | 3.500    | 56.0    |
| 2025 - 2670                      | UM     | 4L              | 3.50               | 8.0           | 1.45960  | 0.0     | 1.64000  | 2.0     | 1.72200  | 7.6     | 1.77120  | 13.5    | 1.85540  | 29.0    | 7.000    | 56.0    |
| 2025 - 2670                      | UM     | 4L              | 7.00               | 16.0          | 2.91920  | 0.0     | 3.28000  | 2.0     | 3.44400  | 7.6     | 3.54240  | 13.5    | 3.71080  | 29.0    | 14.000   | 56.0    |
| 2025 - 2670                      | UM     | 4L              | 14.00              | 34.0          | 5.82505  | 0.0     | 6.54500  | 2.0     | 6.87225  | 7.6     | 7.06860  | 13.5    | 7.40495  | 29.0    | 28.000   | 56.0    |
|                                  |        |                 |                    |               |          |         |          |         |          |         |          |         |          |         |          |         |
| 3410 - 11700                     | UM     | 2               | 1.75               | 2             | 0.56880  | 0.0     | 0.79000  | 2.0     | 0.86900  | 6.3     | 0.94010  | 12.0    | 1.02870  | 24.0    | 3.000    | 46.0    |
| 3410 - 11700                     | UM     | 2               | 3.5                | 4             | 1.03180  | 0.0     | 1.54000  | 2.0     | 1.72480  | 6.4     | 1.87880  | 11.7    | 2.08320  | 24.0    | 6.000    | 46.0    |
| 3410 - 11700                     | UM     | 2               | 7.0 ... 11.7       | 8             | 2.06360  | 0.0     | 3.08000  | 2.0     | 3.44960  | 6.4     | 3.75760  | 11.7    | 4.16640  | 24.0    | 12.000   | 46.0    |
| 3410 - 11700                     | UM     | 2               | 14.0 ... 15.0      | 16            | 4.12720  | 0.0     | 6.16000  | 2.0     | 6.89920  | 6.4     | 7.51520  | 11.7    | 8.33280  | 24.0    | 24.000   | 46.0    |
| 3410 - 11700                     | UM     | 2               | 28.0 ... 30.0      | 34            | 9.24545  | 0.0     | 12.66500 | 2.0     | 13.93150 | 6.5     | 15.07135 | 12.7    | 16.36455 | 25.0    | 45.000   | 47.0    |
| 3410 - 11700                     | UM     | 4L              | 1.75               | 4             | 0.72980  | 0.0     | 0.82000  | 2.0     | 0.86100  | 7.6     | 0.88560  | 13.5    | 0.92770  | 29.0    | 3.500    | 56.0    |
| 3410 - 11700                     | UM     | 4L              | 3.5                | 8             | 1.45960  | 0.0     | 1.64000  | 2.0     | 1.72200  | 7.6     | 1.77120  | 13.5    | 1.85540  | 29.0    | 7.000    | 56.0    |
| 3410 - 11700                     | UM     | 4L              | 7.0 ... 11.7       | 16            | 2.91920  | 0.0     | 3.28000  | 2.0     | 3.44400  | 7.6     | 3.54240  | 13.5    | 3.71080  | 29.0    | 14.000   | 56.0    |
| 3410 - 11700                     | UM     | 4L              | 14.0 ... 15.0      | 34            | 5.82505  | 0.0     | 6.54500  | 2.0     | 6.87225  | 7.6     | 7.06860  | 13.5    | 7.40495  | 29.0    | 28.000   | 56.0    |
| 3410 - 11700                     | UM     | 4L              | 28.0 ... 30.0      | 68            | 11.51920 | 0.0     | 13.09000 | 2.0     | 13.74450 | 7.1     | 14.26810 | 14.2    | 14.94080 | 29.0    | 56.000   | 57.0    |
| 3410 - 11700                     | B1     | 4L              | 20.0               | 51            | 3.38576  | 0.0     | 7.20375  | 2.0     | 9.07673  | 8.2     | 10.30136 | 16.6    | 11.22174 | 37.0    | 30.000   | 56.0    |
| 3410 - 11700                     | UM     | 4H              | 14.0 ... 15.0      | 51            | 5.48250  | 0.0     | 6.37500  | 2.0     | 6.82125  | 8.3     | 7.07625  | 15.5    | 7.40750  | 34.0    | 27.500   | 56.0    |
| 3410 - 11700                     | UM     | 4H              | 28.0 ... 30.0      | 102           | 10.96500 | 0.0     | 12.75000 | 2.0     | 13.64250 | 8.3     | 14.28000 | 19.0    | 14.81500 | 35.0    | 55.000   | 57.0    |

| Frequency band, system and class |        |                 |                    | TX MASKS      |          |         |          |         |          |         |          |         |          |         |          |         |  |
|----------------------------------|--------|-----------------|--------------------|---------------|----------|---------|----------|---------|----------|---------|----------|---------|----------|---------|----------|---------|--|
| Band                             | System | Equipment Class | Channel Separation | Netto-Bitrate | f1 (MHz) | a1 (dB) | f2 (MHz) | a2 (dB) | f3 (MHz) | a3 (dB) | f4 (MHz) | a4 (dB) | f5 (MHz) | a5 (dB) | f6 (MHz) | a6 (dB) |  |
| MHz                              |        | Field 7G1       | MHz                | (Mbit/s)      |          |         |          |         |          |         |          |         |          |         |          |         |  |
| 3410 - 11700                     | UM     | 4H              | 56.0 ... 60.0      | 204           | 21.93000 | 0.0     | 25.50000 | 2.0     | 27.28500 | 8.3     | 28.56000 | 19.0    | 29.63000 | 35.0    | 110.000  | 57.0    |  |
| 3410 - 11700                     | UM     | 5A              | 28.0 ... 30.0      | 155           | 11.36593 | 0.0     | 13.06429 | 2.0     | 13.97879 | 9.0     | 14.50136 | 18.4    | 15.04264 | 37.0    | 54.000   | 57.0    |  |
| 3410 - 11700                     | UM     | 5A              | 56.0 ... 60.0      | 310           | 22.73186 | 0.0     | 26.12857 | 2.0     | 27.95757 | 9.0     | 29.00271 | 18.4    | 30.08529 | 37.0    | 108.000  | 57.0    |  |
| 3410 - 11700                     | UM     | 5B              | 7.0                | 34            | 2.58683  | 0.0     | 3.11667  | 2.0     | 3.39717  | 8.8     | 3.55300  | 17.2    | 3.71650  | 37.0    | 13.500   | 56.0    |  |
| 3410 - 11700                     | UM     | 5B              | 14.0 ... 15.0      | 68            | 5.17367  | 0.0     | 6.23333  | 2.0     | 6.79433  | 8.8     | 7.10600  | 17.2    | 7.43300  | 37.0    | 27.000   | 56.0    |  |
| 3410 - 11700                     | UM     | 5B              | 28.0 ... 30.0      | 155           | 10.60200 | 0.0     | 12.62143 | 2.0     | 13.63114 | 8.3     | 14.38843 | 20.2    | 14.92086 | 38.0    | 54.000   | 57.0    |  |
| 3410 - 11700                     | C1     | 5B              | 40.0               | 155           | 9.14500  | 0.0     | 15.50000 | 2.0     | 18.60000 | 8.1     | 20.61500 | 16.3    | 22.25500 | 36.0    | 67.000   | 56.0    |  |
| 3410 - 11700                     | UM     | 5B              | 56.0 ... 60.0      | 310           | 21.20400 | 0.0     | 25.24286 | 2.0     | 27.26229 | 8.3     | 28.77686 | 20.2    | 29.84171 | 38.0    | 108.000  | 57.0    |  |
| 3410 - 11700                     | UM     | 6A              | 28.0 ... 30.0      | 204           | 11.05425 | 0.0     | 13.00500 | 2.0     | 14.04540 | 8.9     | 14.69565 | 19.6    | 15.23575 | 37.0    | 54.000   | 57.0    |  |
| 3410 - 11700                     | C2     | 6A              | 40.0               | 310           | 18.19894 | 0.0     | 19.56875 | 2.0     | 20.35150 | 9.6     | 20.74288 | 19.0    | 21.33856 | 33.0    | 38.400   | 56.0    |  |
| 3410 - 11700                     | UM     | 6A              | 56.0 ... 60.0      | 408           | 21.84840 | 0.0     | 26.01000 | 2.0     | 28.09080 | 8.3     | 29.39130 | 16.7    | 30.73160 | 37.0    | 108.000  | 57.0    |  |
| 3410 - 11700                     | UM     | 6B              | 7.0                | 51            | 2.74125  | 0.0     | 3.18750  | 2.0     | 3.41063  | 8.3     | 3.57000  | 19.0    | 3.70375  | 37.0    | 13.500   | 56.0    |  |
| 3410 - 11700                     | UM     | 6B              | 14.0 ... 15.0      | 102           | 5.48250  | 0.0     | 6.37500  | 2.0     | 6.82125  | 8.3     | 7.14000  | 19.0    | 7.40750  | 37.0    | 27.000   | 56.0    |  |
| 3410 - 11700                     | UM     | 6B              | 28.0 ... 30.0      | 204           | 10.96500 | 0.0     | 12.75000 | 2.0     | 13.64250 | 8.3     | 14.28000 | 19.0    | 14.81500 | 38.0    | 54.000   | 57.0    |  |
| 3410 - 11700                     | C3     | 6B              | 40.0               | 310           | 18.40625 | 0.0     | 19.37500 | 2.0     | 19.95625 | 10.2    | 20.34375 | 41.0    | 20.74375 | 41.0    | 29.800   | 56.0    |  |
| 3410 - 11700                     | UM     | 6B              | 56.0 ... 60.0      | 408           | 21.93000 | 0.0     | 25.50000 | 2.0     | 27.28500 | 8.3     | 28.56000 | 19.0    | 29.63000 | 38.0    | 108.000  | 57.0    |  |
|                                  |        |                 |                    |               |          |         |          |         |          |         |          |         |          |         |          |         |  |
| 12750 - 15350                    | UM     | 2               | 1.75               | 2             | 0.51590  | 0.0     | 0.77000  | 2.0     | 0.86240  | 6.4     | 0.93940  | 11.7    | 1.04160  | 24.0    | 3.000    | 46.0    |  |
| 12750 - 15350                    | UM     | 2               | 3.5                | 4             | 1.03180  | 0.0     | 1.54000  | 2.0     | 1.72480  | 6.4     | 1.87880  | 11.7    | 2.08320  | 24.0    | 6.000    | 46.0    |  |
| 12750 - 15350                    | UM     | 2               | 7.0                | 8             | 2.06360  | 0.0     | 3.08000  | 2.0     | 3.44960  | 6.4     | 3.75760  | 11.7    | 4.16640  | 24.0    | 12.000   | 46.0    |  |
| 12750 - 15350                    | UM     | 2               | 14.0               | 16            | 4.12720  | 0.0     | 6.16000  | 2.0     | 6.89920  | 6.4     | 7.51520  | 11.7    | 8.33280  | 24.0    | 24.000   | 46.0    |  |
| 12750 - 15350                    | UM     | 2               | 28.0               | 34            | 9.24545  | 0.0     | 12.66500 | 2.0     | 13.93150 | 6.5     | 15.07135 | 12.7    | 16.36455 | 25.0    | 45.000   | 47.0    |  |
| 12750 - 15350                    | UM     | 2               | 56.0               | 68            | 19.89680 | 0.0     | 25.84000 | 2.0     | 28.16560 | 6.7     | 29.97440 | 12.5    | 32.34320 | 25.0    | 90.000   | 47.0    |  |
| 12750 - 15350                    | UM     | 4L              | 1.75               | 4             | 0.70090  | 0.0     | 0.81500  | 2.0     | 0.86390  | 7.3     | 0.90465  | 15.5    | 0.94660  | 29.0    | 3.500    | 56.0    |  |
| 12750 - 15350                    | UM     | 4L              | 3.5                | 8             | 1.42680  | 0.0     | 1.64000  | 2.0     | 1.73840  | 7.7     | 1.80400  | 14.9    | 1.88820  | 29.0    | 7.000    | 56.0    |  |

| Frequency band, system and class |        |                 |                    | TX MASKS      |          |         |          |         |          |         |          |         |          |         |          |         |
|----------------------------------|--------|-----------------|--------------------|---------------|----------|---------|----------|---------|----------|---------|----------|---------|----------|---------|----------|---------|
| Band                             | System | Equipment Class | Channel Separation | Netto-Bitrate | f1 (MHz) | a1 (dB) | f2 (MHz) | a2 (dB) | f3 (MHz) | a3 (dB) | f4 (MHz) | a4 (dB) | f5 (MHz) | a5 (dB) | f6 (MHz) | a6 (dB) |
| MHz                              |        | Field 7G1       | MHz                | (Mbit/s)      |          |         |          |         |          |         |          |         |          |         |          |         |
| 12750 - 15350                    | UM     | 4L              | 7.0                | 16            | 2.85360  | 0.0     | 3.28000  | 2.0     | 3.47680  | 7.7     | 3.60800  | 14.9    | 3.77640  | 29.0    | 14.000   | 56.0    |
| 12750 - 15350                    | UM     | 4L              | 14.0               | 34            | 5.69415  | 0.0     | 6.54500  | 2.0     | 6.93770  | 7.7     | 7.19950  | 14.9    | 7.53585  | 29.0    | 28.000   | 56.0    |
| 12750 - 15350                    | UM     | 4L              | 28.0               | 68            | 11.38830 | 0.0     | 13.09000 | 2.0     | 13.87540 | 7.7     | 14.39900 | 14.9    | 15.07170 | 29.0    | 56.000   | 57.0    |
| 12750 - 15350                    | UM     | 4L              | 56.0               | 155           | 22.41881 | 0.0     | 25.76875 | 2.0     | 27.31488 | 7.7     | 28.34563 | 14.9    | 29.67869 | 29.0    | 112.000  | 57.0    |
| 12750 - 15350                    | UM     | 4H              | 14.0               | 51            | 5.41875  | 0.0     | 6.37500  | 2.0     | 6.82125  | 7.8     | 7.14000  | 16.1    | 7.47125  | 34.0    | 27.500   | 56.0    |
| 12750 - 15350                    | UM     | 4H              | 28.0               | 102           | 10.71000 | 0.0     | 12.75000 | 2.0     | 13.77000 | 8.3     | 14.40750 | 16.7    | 15.07000 | 35.0    | 55.000   | 57.0    |
| 12750 - 15350                    | UM     | 4H              | 56.0               | 204           | 21.42000 | 0.0     | 25.50000 | 2.0     | 27.54000 | 8.3     | 28.81500 | 16.7    | 30.14000 | 35.0    | 110.000  | 57.0    |
| 12750 - 15350                    | UM     | 5A              | 28.0               | 155           | 11.36593 | 0.0     | 13.06429 | 2.0     | 13.97879 | 9.0     | 14.50136 | 18.4    | 15.04264 | 37.0    | 54.000   | 57.0    |
| 12750 - 15350                    | UM     | 5A              | 56.0               | 310           | 22.73186 | 0.0     | 26.12857 | 2.0     | 27.95757 | 9.0     | 29.00271 | 18.4    | 30.08529 | 37.0    | 108.000  | 57.0    |
| 12750 - 15350                    | UM     | 5B              | 7.0                | 34            | 2.61800  | 0.0     | 3.11667  | 2.0     | 3.36600  | 8.3     | 3.52183  | 16.7    | 3.68533  | 37.0    | 13.500   | 56.0    |
| 12750 - 15350                    | UM     | 5B              | 14.0               | 68            | 5.23600  | 0.0     | 6.23333  | 2.0     | 6.73200  | 8.3     | 7.04367  | 16.7    | 7.37067  | 37.0    | 27.000   | 56.0    |
| 12750 - 15350                    | UM     | 5B              | 28.0               | 155           | 10.60200 | 0.0     | 12.62143 | 2.0     | 13.63114 | 8.3     | 14.38843 | 20.2    | 14.92086 | 38.0    | 54.000   | 57.0    |
| 12750 - 15350                    | UM     | 5B              | 56.0               | 310           | 21.45643 | 0.0     | 25.24286 | 2.0     | 27.26229 | 8.9     | 28.52443 | 19.6    | 29.58929 | 38.0    | 108.000  | 57.0    |
| 12750 - 15350                    | UM     | 6A              | 28.0               | 204           | 11.05425 | 0.0     | 13.00500 | 2.0     | 14.04540 | 8.9     | 14.69565 | 19.6    | 15.23575 | 37.0    | 54.000   | 57.0    |
| 12750 - 15350                    | UM     | 6A              | 56.0               | 408           | 22.10850 | 0.0     | 26.01000 | 2.0     | 28.09080 | 8.9     | 29.39130 | 19.6    | 30.47150 | 37.0    | 108.000  | 57.0    |
| 12750 - 15350                    | UM     | 6B              | 7.0                | 51            | 2.74125  | 0.0     | 3.18750  | 2.0     | 3.41063  | 8.3     | 3.57000  | 19.0    | 3.70375  | 37.0    | 13.500   | 56.0    |
| 12750 - 15350                    | UM     | 6B              | 14.0               | 102           | 5.48250  | 0.0     | 6.37500  | 2.0     | 6.82125  | 8.3     | 7.14000  | 19.0    | 7.40750  | 37.0    | 27.000   | 56.0    |
| 12750 - 15350                    | UM     | 6B              | 28.0               | 204           | 10.96500 | 0.0     | 12.75000 | 2.0     | 13.64250 | 8.3     | 14.28000 | 19.0    | 14.81500 | 38.0    | 54.000   | 57.0    |
| 12750 - 15350                    | UM     | 6B              | 56.0               | 408           | 21.93000 | 0.0     | 25.50000 | 2.0     | 27.28500 | 8.3     | 28.56000 | 19.0    | 29.63000 | 38.0    | 108.000  | 57.0    |
|                                  |        |                 |                    |               |          |         |          |         |          |         |          |         |          |         |          |         |
| 17700 - 19700                    | UM     | 2               | 1.75               | 2             | 0.47565  | 0.0     | 0.75500  | 2.0     | 0.85315  | 6.2     | 0.94375  | 12.0    | 1.05185  | 24.0    | 3.000    | 46.0    |
| 17700 - 19700                    | UM     | 2               | 3.5                | 4             | 0.95130  | 0.0     | 1.51000  | 2.0     | 1.70630  | 6.2     | 1.88750  | 12.0    | 2.10370  | 24.0    | 6.000    | 46.0    |
| 17700 - 19700                    | UM     | 2               | 7.0                | 8             | 1.90260  | 0.0     | 3.02000  | 2.0     | 3.41260  | 6.2     | 3.77500  | 12.0    | 4.20740  | 24.0    | 12.000   | 46.0    |
| 17700 - 19700                    | UM     | 2               | 13.75 ... 14.0     | 16            | 3.80520  | 0.0     | 6.04000  | 2.0     | 6.82520  | 6.2     | 7.55000  | 12.0    | 8.41480  | 24.0    | 24.000   | 46.0    |
| 17700 - 19700                    | UM     | 2               | 27.5 ... 28.0      | 34            | 9.24545  | 0.0     | 12.66500 | 2.0     | 13.93150 | 6.5     | 15.07135 | 12.7    | 16.36455 | 25.0    | 45.000   | 47.0    |

| Frequency band, system and class |        |                 |                    | TX MASKS      |          |         |          |         |          |         |          |         |          |         |          |         |  |
|----------------------------------|--------|-----------------|--------------------|---------------|----------|---------|----------|---------|----------|---------|----------|---------|----------|---------|----------|---------|--|
| Band                             | System | Equipment Class | Channel Separation | Netto-Bitrate | f1 (MHz) | a1 (dB) | f2 (MHz) | a2 (dB) | f3 (MHz) | a3 (dB) | f4 (MHz) | a4 (dB) | f5 (MHz) | a5 (dB) | f6 (MHz) | a6 (dB) |  |
| MHz                              |        | Field 7G1       | MHz                | (Mbit/s)      |          |         |          |         |          |         |          |         |          |         |          |         |  |
| 17700 - 19700                    | UM     | 2               | 55.0 ... 56.0      | 68            | 19.89680 | 0.0     | 25.84000 | 2.0     | 28.16560 | 6.7     | 29.97440 | 12.5    | 32.34320 | 25.0    | 90.000   | 47.0    |  |
| 17700 - 19700                    | UM     | 4L              | 1.75               | 4             | 0.70090  | 0.0     | 0.81500  | 2.0     | 0.86390  | 7.3     | 0.90465  | 15.5    | 0.94660  | 29.0    | 3.100    | 51.0    |  |
| 17700 - 19700                    | UM     | 4L              | 3.5                | 8             | 1.40180  | 0.0     | 1.63000  | 2.0     | 1.72780  | 7.3     | 1.80930  | 15.5    | 1.89320  | 29.0    | 6.200    | 51.0    |  |
| 17700 - 19700                    | UM     | 4L              | 7.0                | 16            | 2.80360  | 0.0     | 3.26000  | 2.0     | 3.45560  | 7.3     | 3.61860  | 15.5    | 3.78640  | 29.0    | 12.400   | 51.0    |  |
| 17700 - 19700                    | UM     | 4L              | 13.75 ... 14.0     | 34            | 5.69415  | 0.0     | 6.54500  | 2.0     | 6.93770  | 7.7     | 7.19950  | 14.9    | 7.53585  | 29.0    | 24.800   | 51.0    |  |
| 17700 - 19700                    | UM     | 4L              | 27.5 ... 28.0      | 68            | 11.38830 | 0.0     | 13.09000 | 2.0     | 13.87540 | 7.7     | 14.39900 | 14.9    | 15.07170 | 29.0    | 49.000   | 52.0    |  |
| 17700 - 19700                    | UM     | 4L              | 55.0 ... 56.0      | 155           | 22.41881 | 0.0     | 25.76875 | 2.0     | 27.31488 | 7.7     | 28.34563 | 14.9    | 29.67869 | 29.0    | 98.000   | 52.0    |  |
| 17700 - 19700                    | UM     | 4H              | 13.75 ... 14.0     | 51            | 5.41875  | 0.0     | 6.37500  | 2.0     | 6.82125  | 7.8     | 7.14000  | 16.1    | 7.47125  | 34.0    | 24.150   | 51.0    |  |
| 17700 - 19700                    | UM     | 4H              | 27.5 ... 28.0      | 102           | 10.71000 | 0.0     | 12.75000 | 2.0     | 13.77000 | 8.3     | 14.40750 | 16.7    | 15.07000 | 35.0    | 48.300   | 52.0    |  |
| 17700 - 19700                    | UM     | 4H              | 55.0 ... 56.0      | 204           | 21.42000 | 0.0     | 25.50000 | 2.0     | 27.54000 | 8.3     | 28.81500 | 16.7    | 30.14000 | 35.0    | 96.600   | 52.0    |  |
| 17700 - 19700                    | UM     | 5A              | 27.5 ... 28.0      | 155           | 11.36593 | 0.0     | 13.06429 | 2.0     | 13.97879 | 9.0     | 14.50136 | 18.4    | 15.04264 | 37.0    | 47.000   | 52.0    |  |
| 17700 - 19700                    | UM     | 5A              | 55.0 ... 56.0      | 310           | 22.73186 | 0.0     | 26.12857 | 2.0     | 27.95757 | 9.0     | 29.00271 | 18.4    | 30.08529 | 37.0    | 94.000   | 52.0    |  |
| 17700 - 19700                    | UM     | 5B              | 7.0                | 34            | 2.61800  | 0.0     | 3.11667  | 2.0     | 3.36600  | 8.3     | 3.52183  | 16.7    | 3.68533  | 37.0    | 11.750   | 51.0    |  |
| 17700 - 19700                    | UM     | 5B              | 13.75 ... 14.0     | 68            | 5.23600  | 0.0     | 6.23333  | 2.0     | 6.73200  | 8.3     | 7.04367  | 16.7    | 7.37067  | 37.0    | 23.500   | 51.0    |  |
| 17700 - 19700                    | UM     | 5B              | 27.5 ... 28.0      | 155           | 10.60200 | 0.0     | 12.62143 | 2.0     | 13.63114 | 8.3     | 14.38843 | 20.2    | 14.92086 | 38.0    | 47.000   | 52.0    |  |
| 17700 - 19700                    | UM     | 5B              | 55.0 ... 56.0      | 310           | 21.45643 | 0.0     | 25.24286 | 2.0     | 27.26229 | 8.9     | 28.52443 | 19.6    | 29.58929 | 38.0    | 94.000   | 52.0    |  |
| 17700 - 19700                    | UM     | 6A              | 27.5 ... 28.0      | 204           | 10.92420 | 0.0     | 13.00500 | 2.0     | 14.04540 | 8.3     | 14.69565 | 16.7    | 15.36580 | 37.0    | 47.000   | 52.0    |  |
| 17700 - 19700                    | UM     | 6A              | 55.0 ... 56.0      | 408           | 22.10850 | 0.0     | 26.01000 | 2.0     | 28.09080 | 8.9     | 29.39130 | 19.6    | 30.47150 | 37.0    | 94.000   | 52.0    |  |
| 17700 - 19700                    | UM     | 6B              | 7.0                | 51            | 2.77313  | 0.0     | 3.18750  | 2.0     | 3.41063  | 9.0     | 3.53813  | 18.4    | 3.67188  | 37.0    | 11.750   | 51.0    |  |
| 17700 - 19700                    | UM     | 6B              | 13.75 ... 14.0     | 102           | 5.54625  | 0.0     | 6.37500  | 2.0     | 6.82125  | 9.0     | 7.07625  | 18.4    | 7.34375  | 37.0    | 23.500   | 51.0    |  |
| 17700 - 19700                    | UM     | 6B              | 27.5 ... 28.0      | 204           | 10.96500 | 0.0     | 12.75000 | 2.0     | 13.64250 | 8.3     | 14.28000 | 19.0    | 14.81500 | 38.0    | 47.000   | 52.0    |  |
| 17700 - 19700                    | UM     | 6B              | 55.0 ... 56.0      | 408           | 21.93000 | 0.0     | 25.50000 | 2.0     | 27.28500 | 8.3     | 28.56000 | 19.0    | 29.63000 | 38.0    | 94.000   | 52.0    |  |
|                                  |        |                 |                    |               |          |         |          |         |          |         |          |         |          |         |          |         |  |
| 22000 - 29500                    | UM     | 2               | 1.75               | 2             | 0.47565  | 0.0     | 0.75500  | 2.0     | 0.85315  | 6.2     | 0.94375  | 12.0    | 1.05185  | 24.0    | 3.000    | 46.0    |  |
| 22000 - 29500                    | UM     | 2               | 3.5                | 4             | 0.95130  | 0.0     | 1.51000  | 2.0     | 1.70630  | 6.2     | 1.88750  | 12.0    | 2.10370  | 24.0    | 6.000    | 46.0    |  |

| Frequency band, system and class |        |                 |                    | TX MASKS      |          |         |          |         |          |         |          |         |          |         |          |         |
|----------------------------------|--------|-----------------|--------------------|---------------|----------|---------|----------|---------|----------|---------|----------|---------|----------|---------|----------|---------|
| Band                             | System | Equipment Class | Channel Separation | Netto-Bitrate | f1 (MHz) | a1 (dB) | f2 (MHz) | a2 (dB) | f3 (MHz) | a3 (dB) | f4 (MHz) | a4 (dB) | f5 (MHz) | a5 (dB) | f6 (MHz) | a6 (dB) |
| MHz                              |        | Field 7G1       | MHz                | (Mbit/s)      |          |         |          |         |          |         |          |         |          |         |          |         |
| 22000 - 29500                    | UM     | 2               | 7.0                | 8             | 1.90260  | 0.0     | 3.02000  | 2.0     | 3.41260  | 6.2     | 3.77500  | 12.0    | 4.20740  | 24.0    | 12.000   | 46.0    |
| 22000 - 29500                    | UM     | 2               | 14.0               | 16            | 3.80520  | 0.0     | 6.04000  | 2.0     | 6.82520  | 6.2     | 7.55000  | 12.0    | 8.41480  | 24.0    | 24.000   | 46.0    |
| 22000 - 29500                    | UM     | 2               | 28.0               | 34            | 9.24545  | 0.0     | 12.66500 | 2.0     | 13.93150 | 6.5     | 15.07135 | 12.7    | 16.36455 | 25.0    | 45.000   | 47.0    |
| 22000 - 29500                    | UM     | 2               | 56.0               | 68            | 19.89680 | 0.0     | 25.84000 | 2.0     | 28.16560 | 6.7     | 29.97440 | 12.5    | 32.34320 | 25.0    | 90.000   | 47.0    |
| 22000 - 29500                    | UM     | 4L              | 1.75               | 4             | 0.70090  | 0.0     | 0.81500  | 2.0     | 0.86390  | 7.3     | 0.90465  | 15.5    | 0.94660  | 29.0    | 3.100    | 51.0    |
| 22000 - 29500                    | UM     | 4L              | 3.5                | 8             | 1.40180  | 0.0     | 1.63000  | 2.0     | 1.72780  | 7.3     | 1.80930  | 15.5    | 1.89320  | 29.0    | 6.200    | 51.0    |
| 22000 - 29500                    | UM     | 4L              | 7.0                | 16            | 2.80360  | 0.0     | 3.26000  | 2.0     | 3.45560  | 7.3     | 3.61860  | 15.5    | 3.78640  | 29.0    | 12.400   | 51.0    |
| 22000 - 29500                    | UM     | 4L              | 14.0               | 34            | 5.69415  | 0.0     | 6.54500  | 2.0     | 6.93770  | 7.7     | 7.19950  | 14.9    | 7.53585  | 29.0    | 24.800   | 51.0    |
| 22000 - 29500                    | UM     | 4L              | 28.0               | 68            | 11.38830 | 0.0     | 13.09000 | 2.0     | 13.87540 | 7.7     | 14.39900 | 14.9    | 15.07170 | 29.0    | 49.000   | 52.0    |
| 22000 - 29500                    | UM     | 4L              | 56.0               | 155           | 22.75594 | 0.0     | 26.15625 | 2.0     | 27.72563 | 7.7     | 28.77188 | 14.9    | 30.11656 | 29.0    | 98.000   | 52.0    |
| 22000 - 29500                    | UM     | 4H              | 14.0               | 51            | 5.41875  | 0.0     | 6.37500  | 2.0     | 6.82125  | 7.8     | 7.14000  | 16.1    | 7.47125  | 34.0    | 24.150   | 51.0    |
| 22000 - 29500                    | UM     | 4H              | 28.0               | 102           | 10.71000 | 0.0     | 12.75000 | 2.0     | 13.77000 | 8.3     | 14.40750 | 16.7    | 15.07000 | 35.0    | 48.300   | 52.0    |
| 22000 - 29500                    | UM     | 4H              | 56.0               | 204           | 21.42000 | 0.0     | 25.50000 | 2.0     | 27.54000 | 8.3     | 28.81500 | 16.7    | 30.14000 | 35.0    | 96.600   | 52.0    |
| 22000 - 29500                    | UM     | 5A              | 28.0               | 155           | 11.36593 | 0.0     | 13.06429 | 2.0     | 13.97879 | 9.0     | 14.50136 | 18.4    | 15.04264 | 37.0    | 47.000   | 52.0    |
| 22000 - 29500                    | UM     | 5A              | 56.0               | 310           | 22.28014 | 0.0     | 25.90714 | 2.0     | 27.72064 | 8.3     | 29.016   | 19.0    | 30.09414 | 37.0    | 94.000   | 52.0    |
| 22000 - 29500                    | UM     | 5B              | 7.0                | 34            | 2.618    | 0.0     | 3.11667  | 2.0     | 3.366    | 8.3     | 3.52183  | 16.7    | 3.68533  | 37.0    | 11.750   | 51.0    |
| 22000 - 29500                    | UM     | 5B              | 14.0               | 68            | 5.236    | 0.0     | 6.23333  | 2.0     | 6.732    | 8.3     | 7.04367  | 16.7    | 7.37067  | 37.0    | 23.500   | 51.0    |
| 22000 - 29500                    | UM     | 5B              | 28.0               | 155           | 10.22336 | 0.0     | 12.62143 | 2.0     | 13.88357 | 8.8     | 14.64086 | 18.2    | 15.2995  | 37.0    | 47.000   | 52.0    |
| 22000 - 29500                    | UM     | 5A              | 56.0               | 310           | 10.22336 | 0.0     | 12.62143 | 2.0     | 13.88357 | 8.8     | 14.64086 | 18.2    | 15.29950 | 37.0    | 47.000   | 52.0    |
| 22000 - 29500                    | UM     | 5B              | 7.0                | 34            | 22.28014 | 0.0     | 25.90714 | 2.0     | 27.72064 | 8.3     | 29.01600 | 19.0    | 30.09414 | 37.0    | 94.000   | 52.0    |
| 22000 - 29500                    | UM     | 5B              | 14.0               | 68            | 2.61800  | 0.0     | 3.11667  | 2.0     | 3.36600  | 8.3     | 3.52183  | 16.7    | 3.68533  | 37.0    | 11.750   | 51.0    |
| 22000 - 29500                    | UM     | 5B              | 28.0               | 155           | 5.23600  | 0.0     | 6.23333  | 2.0     | 6.73200  | 8.3     | 7.04367  | 16.7    | 7.37067  | 37.0    | 23.500   | 51.0    |
| 22000 - 29500                    | UM     | 5B              | 56.0               | 310           | 21.45643 | 0.0     | 25.24286 | 2.0     | 27.26229 | 8.9     | 28.52443 | 19.6    | 29.58929 | 38.0    | 94.000   | 52.0    |
| 22000 - 29500                    | UM     | 6A              | 28.0               | 204           | 10.92420 | 0.0     | 13.00500 | 2.0     | 14.04540 | 8.3     | 14.69565 | 16.7    | 15.36580 | 37.0    | 47.000   | 52.0    |
| 22000 - 29500                    | UM     | 6A              | 56.0               | 408           | 21.84840 | 0.0     | 26.01000 | 2.0     | 28.09080 | 8.3     | 29.39130 | 16.7    | 30.73160 | 37.0    | 94.000   | 52.0    |

| Frequency band, system and class |        |                 |                    | TX MASKS      |          |         |          |         |          |         |          |         |          |         |          |         |
|----------------------------------|--------|-----------------|--------------------|---------------|----------|---------|----------|---------|----------|---------|----------|---------|----------|---------|----------|---------|
| Band                             | System | Equipment Class | Channel Separation | Netto-Bitrate | f1 (MHz) | a1 (dB) | f2 (MHz) | a2 (dB) | f3 (MHz) | a3 (dB) | f4 (MHz) | a4 (dB) | f5 (MHz) | a5 (dB) | f6 (MHz) | a6 (dB) |
| MHz                              |        | Field 7G1       | MHz                | (Mbit/s)      |          |         |          |         |          |         |          |         |          |         |          |         |
| 22000 - 29500                    | UM     | 6B              | 7.0                | 51            | 2.77313  | 0.0     | 3.18750  | 2.0     | 3.41063  | 9.0     | 3.53813  | 18.4    | 3.67188  | 37.0    | 11.750   | 51.0    |
| 22000 - 29500                    | UM     | 6B              | 14.0               | 102           | 5.54625  | 0.0     | 6.37500  | 2.0     | 6.82125  | 9.0     | 7.07625  | 18.4    | 7.34375  | 37.0    | 23.500   | 51.0    |
| 22000 - 29500                    | UM     | 6B              | 28.0               | 204           | 10.96500 | 0.0     | 12.75000 | 2.0     | 13.64250 | 8.3     | 14.28000 | 19.0    | 14.81500 | 38.0    | 47.000   | 52.0    |
| 22000 - 29500                    | UM     | 6B              | 56.0               | 408           | 21.93000 | 0.0     | 25.50000 | 2.0     | 27.28500 | 8.3     | 28.56000 | 19.0    | 29.63000 | 38.0    | 94.000   | 52.0    |
|                                  |        |                 |                    |               |          |         |          |         |          |         |          |         |          |         |          |         |
| 31000 - 57000                    | UM     | 2               | 1.75               | 2             | 0.47565  | 0.0     | 0.75500  | 2.0     | 0.85315  | 6.2     | 0.94375  | 12.0    | 1.05185  | 24.0    | 3.000    | 46.0    |
| 31000 - 57000                    | UM     | 2               | 3.5                | 4             | 0.95130  | 0.0     | 1.51000  | 2.0     | 1.70630  | 6.2     | 1.88750  | 12.0    | 2.10370  | 24.0    | 6.000    | 46.0    |
| 31000 - 57000                    | UM     | 2               | 7.0                | 8             | 1.90260  | 0.0     | 3.02000  | 2.0     | 3.41260  | 6.2     | 3.77500  | 12.0    | 4.20740  | 24.0    | 12.000   | 46.0    |
| 31000 - 57000                    | UM     | 2               | 14.0               | 16            | 3.80520  | 0.0     | 6.04000  | 2.0     | 6.82520  | 6.2     | 7.55000  | 12.0    | 8.41480  | 24.0    | 24.000   | 46.0    |
| 31000 - 57000                    | UM     | 2               | 28.0               | 34            | 9.11880  | 0.0     | 12.66500 | 2.0     | 13.93150 | 6.3     | 15.07135 | 12.0    | 16.49120 | 25.0    | 45.000   | 47.0    |
| 31000 - 57000                    | UM     | 2               | 56.0               | 68            | 19.89680 | 0.0     | 25.84000 | 2.0     | 28.16560 | 6.7     | 29.97440 | 12.5    | 32.34320 | 25.0    | 90.000   | 47.0    |
| 31000 - 57000                    | UM     | 4L              | 1.75               | 4             | 0.70090  | 0.0     | 0.81500  | 2.0     | 0.86390  | 7.3     | 0.90465  | 15.5    | 0.94660  | 29.0    | 2.600    | 46.0    |
| 31000 - 57000                    | UM     | 4L              | 3.5                | 8             | 1.41810  | 0.0     | 1.63000  | 2.0     | 1.72780  | 7.7     | 1.79300  | 14.9    | 1.87690  | 29.0    | 6.200    | 46.0    |
| 31000 - 57000                    | UM     | 4L              | 7.0                | 16            | 2.80360  | 0.0     | 3.26000  | 2.0     | 3.45560  | 7.3     | 3.61860  | 15.5    | 3.78640  | 29.0    | 10.400   | 46.0    |
| 31000 - 57000                    | UM     | 4L              | 14.0               | 34            | 5.69415  | 0.0     | 6.54500  | 2.0     | 6.93770  | 7.7     | 7.19950  | 14.9    | 7.53585  | 29.0    | 20.800   | 46.0    |
| 31000 - 57000                    | UM     | 4L              | 28.0               | 68            | 11.38830 | 0.0     | 13.09000 | 2.0     | 13.87540 | 7.7     | 14.39900 | 14.9    | 15.07170 | 29.0    | 49.000   | 52.0    |
| 31000 - 57000                    | UM     | 4L              | 56.0               | 155           | 22.75594 | 0.0     | 26.15625 | 2.0     | 27.72563 | 7.7     | 28.77188 | 14.9    | 30.11656 | 29.0    | 84.000   | 47.0    |
| 31000 - 57000                    | UM     | 4H              | 14.0               | 51            | 5.41875  | 0.0     | 6.37500  | 2.0     | 6.82125  | 7.8     | 7.14000  | 16.1    | 7.47125  | 34.0    | 20.850   | 46.0    |
| 31000 - 57000                    | UM     | 4H              | 28.0               | 102           | 10.83750 | 0.0     | 12.75000 | 2.0     | 13.64250 | 7.8     | 14.28000 | 16.1    | 14.94250 | 35.0    | 41.700   | 47.0    |
| 31000 - 57000                    | UM     | 4H              | 56.0               | 204           | 21.67500 | 0.0     | 25.50000 | 2.0     | 27.28500 | 7.8     | 28.56000 | 16.1    | 29.88500 | 35.0    | 83.400   | 47.0    |
| 31000 - 57000                    | UM     | 5A              | 28.0               | 155           | 11.36593 | 0.0     | 13.06429 | 2.0     | 13.97879 | 9.0     | 14.50136 | 18.4    | 15.04264 | 37.0    | 40.000   | 47.0    |
| 31000 - 57000                    | UM     | 5A              | 56.0               | 310           | 22.28014 | 0.0     | 25.90714 | 2.0     | 27.72064 | 8.3     | 29.01600 | 19.0    | 30.09414 | 37.0    | 80.000   | 47.0    |
| 31000 - 57000                    | UM     | 5B              | 7.0                | 34            | 2.61800  | 0.0     | 3.11667  | 2.0     | 3.36600  | 8.3     | 3.52183  | 16.7    | 3.68533  | 37.0    | 10.000   | 46.0    |
| 31000 - 57000                    | UM     | 5B              | 14.0               | 68            | 5.29833  | 0.0     | 6.23333  | 2.0     | 6.73200  | 8.9     | 7.04367  | 19.6    | 7.30833  | 37.0    | 20.000   | 46.0    |
| 31000 - 57000                    | UM     | 5B              | 28.0               | 155           | 10.72821 | 0.0     | 12.62143 | 2.0     | 13.63114 | 8.9     | 14.26221 | 19.6    | 14.79464 | 38.0    | 40.000   | 47.0    |





| Frequency band, system and class |        |                 |                    | RX MASKS      |          |         |          |         |          |         |          |         |          |         |          |         |
|----------------------------------|--------|-----------------|--------------------|---------------|----------|---------|----------|---------|----------|---------|----------|---------|----------|---------|----------|---------|
| Band                             | System | Equipment Class | Channel Separation | Netto-Bitrate | f1 (MHz) | a1 (dB) | f2 (MHz) | a2 (dB) | f3 (MHz) | a3 (dB) | f4 (MHz) | a4 (dB) | f5 (MHz) | a5 (dB) | f6 (MHz) | a6 (dB) |
| MHz                              |        | Field 7G1       | MHz                | (Mbit/s)      |          |         |          |         |          |         |          |         |          |         |          |         |
| 1350 - 1517                      | A1     | 2               | 0.025              | 0.032         | 0.01102  | 0.0     | 0.01224  | 2.0     | 0.01285  | 8.3     | 0.01322  | 15.1    | 0.01346  | 38.0    | 0.02357  | 54.0    |
| 1350 - 1517                      | A1     | 2               | 0.075              | 0.096         | 0.03305  | 0.0     | 0.03672  | 2.0     | 0.03856  | 8.3     | 0.03966  | 15.1    | 0.04039  | 38.0    | 0.07071  | 54.0    |
| 1350 - 1517                      | A1     | 2               | 0.250              | 0.325         | 0.06280  | 0.0     | 0.10644  | 2.0     | 0.12879  | 8.5     | 0.14050  | 14.3    | 0.15008  | 38.0    | 0.22571  | 54.0    |
| 1350 - 1517                      | A1     | 2               | 0.500              | 0.650         | 0.12560  | 0.0     | 0.21288  | 2.0     | 0.25758  | 8.5     | 0.28100  | 14.3    | 0.30015  | 38.0    | 0.43179  | 54.0    |
| 1350 - 1517                      | A1     | 2               | 1.000              | 1.3           | 0.25119  | 0.0     | 0.42575  | 2.0     | 0.51516  | 8.5     | 0.56199  | 14.3    | 0.60031  | 38.0    | 0.86357  | 54.0    |
| 1350 - 1517                      | A1     | 2               | 2.000              | 2.6           | 0.50239  | 0.0     | 0.85150  | 2.0     | 1.03032  | 8.5     | 1.12398  | 14.3    | 1.20062  | 38.0    | 1.72714  | 54.0    |
| 1350 - 1517                      | UM     | 2               | 3.500              | 4.0           | 1.03180  | 0.0     | 1.54000  | 2.0     | 1.78640  | 8.1     | 1.92500  | 13.5    | 2.04820  | 35.0    | 2.56667  | 52.0    |
| 1350 - 1517                      | A1     | 4L              | 0.025              | 0.064         | 0.00708  | 0.0     | 0.01056  | 2.0     | 0.01257  | 9.7     | 0.01352  | 17.5    | 0.01404  | 44.5    | 0.02327  | 62.0    |
| 1350 - 1517                      | A1     | 4L              | 0.075              | 0.190         | 0.02038  | 0.0     | 0.03135  | 2.0     | 0.03762  | 9.6     | 0.04076  | 18.0    | 0.04232  | 44.5    | 0.06982  | 62.0    |
| 1350 - 1517                      | A1     | 4L              | 0.250              | 0.650         | 0.07508  | 0.0     | 0.10725  | 2.0     | 0.12548  | 9.5     | 0.13406  | 16.7    | 0.13943  | 44.5    | 0.22273  | 62.0    |
| 1350 - 1517                      | A1     | 4L              | 0.500              | 1.3           | 0.15015  | 0.0     | 0.21450  | 2.0     | 0.25097  | 9.5     | 0.26813  | 16.7    | 0.27885  | 44.5    | 0.42606  | 62.0    |
| 1350 - 1517                      | A1     | 4L              | 1.000              | 2.6           | 0.30030  | 0.0     | 0.42900  | 2.0     | 0.50193  | 9.5     | 0.53625  | 16.7    | 0.55770  | 44.5    | 0.85212  | 62.0    |
| 1350 - 1517                      | A1     | 4L              | 2.000              | 5.2           | 0.60060  | 0.0     | 0.85800  | 2.0     | 1.00386  | 9.5     | 1.07250  | 16.7    | 1.11540  | 44.5    | 1.70424  | 62.0    |
| 1350 - 1517                      | UM     | 4L              | 3.500              | 8.0           | 1.45960  | 0.0     | 1.64000  | 2.0     | 1.73840  | 9.1     | 1.78760  | 15.9    | 1.82040  | 42.5    | 2.88276  | 62.0    |
|                                  |        |                 |                    |               |          |         |          |         |          |         |          |         |          |         |          |         |
| 2025 - 2670                      | A2     | 2               | 0.50               | 0.65          | 0.12560  | 0.0     | 0.21288  | 2.0     | 0.25758  | 8.5     | 0.28100  | 14.3    | 0.30015  | 38.0    | 0.43179  | 54.0    |
| 2025 - 2670                      | A2     | 2               | 1.00               | 1.3           | 0.25119  | 0.0     | 0.42575  | 2.0     | 0.51516  | 8.5     | 0.56199  | 14.3    | 0.60031  | 38.0    | 0.86357  | 54.0    |
| 2025 - 2670                      | A2     | 2               | 2.00               | 2.6           | 0.50239  | 0.0     | 0.85150  | 2.0     | 1.03032  | 8.5     | 1.12398  | 14.3    | 1.20062  | 38.0    | 1.72714  | 54.0    |
| 2025 - 2670                      | UM     | 2               | 1.75               | 2.0           | 0.56880  | 0.0     | 0.79000  | 2.0     | 0.90060  | 8.3     | 0.96380  | 14.5    | 1.01120  | 35.0    | 1.28333  | 52.0    |
| 2025 - 2670                      | UM     | 2               | 3.50               | 4.0           | 1.03180  | 0.0     | 1.54000  | 2.0     | 1.78640  | 8.1     | 1.92500  | 13.5    | 2.04820  | 35.0    | 2.56667  | 52.0    |
| 2025 - 2670                      | UM     | 2               | 7.00               | 8.0           | 2.06360  | 0.0     | 3.08000  | 2.0     | 3.57280  | 8.1     | 3.85000  | 13.5    | 4.09640  | 35.0    | 5.13333  | 52.0    |
| 2025 - 2670                      | UM     | 2               | 14.00              | 16.0          | 4.12720  | 0.0     | 6.16000  | 2.0     | 7.14560  | 8.1     | 7.70000  | 13.5    | 8.19280  | 35.0    | 10.26667 | 52.0    |
| 2025 - 2670                      | A2     | 4L              | 0.50               | 1.3           | 0.15015  | 0.0     | 0.21450  | 2.0     | 0.25097  | 9.5     | 0.26813  | 16.7    | 0.27885  | 44.5    | 0.42606  | 62.0    |
| 2025 - 2670                      | A2     | 4L              | 1.00               | 2.6           | 0.30030  | 0.0     | 0.42900  | 2.0     | 0.50193  | 9.5     | 0.53625  | 16.7    | 0.55770  | 44.5    | 0.85212  | 62.0    |
| 2025 - 2670                      | A2     | 4L              | 2.00               | 5.2           | 0.60060  | 0.0     | 0.85800  | 2.0     | 1.00386  | 9.5     | 1.07250  | 16.7    | 1.11540  | 44.5    | 1.70424  | 62.0    |

| Frequency band, system and class |        |                 |                    | RX MASKS      |          |         |          |         |          |         |          |         |          |         |          |         |
|----------------------------------|--------|-----------------|--------------------|---------------|----------|---------|----------|---------|----------|---------|----------|---------|----------|---------|----------|---------|
| Band                             | System | Equipment Class | Channel Separation | Netto-Bitrate | f1 (MHz) | a1 (dB) | f2 (MHz) | a2 (dB) | f3 (MHz) | a3 (dB) | f4 (MHz) | a4 (dB) | f5 (MHz) | a5 (dB) | f6 (MHz) | a6 (dB) |
| MHz                              |        | Field 7G1       | MHz                | (Mbit/s)      |          |         |          |         |          |         |          |         |          |         |          |         |
| 2025 - 2670                      | UM     | 4L              | 1.75               | 4.0           | 0.72980  | 0.0     | 0.82000  | 2.0     | 0.86920  | 9.1     | 0.89380  | 15.9    | 0.91020  | 42.5    | 1.44138  | 62.0    |
| 2025 - 2670                      | UM     | 4L              | 3.50               | 8.0           | 1.45960  | 0.0     | 1.64000  | 2.0     | 1.73840  | 9.1     | 1.78760  | 15.9    | 1.82040  | 42.5    | 2.88276  | 62.0    |
| 2025 - 2670                      | UM     | 4L              | 7.00               | 16.0          | 2.91920  | 0.0     | 3.28000  | 2.0     | 3.47680  | 9.1     | 3.57520  | 15.9    | 3.64080  | 42.5    | 5.76552  | 62.0    |
| 2025 - 2670                      | UM     | 4L              | 14.00              | 34.0          | 5.82505  | 0.0     | 6.54500  | 2.0     | 6.93770  | 9.1     | 7.13405  | 15.9    | 7.26495  | 42.5    | 11.53103 | 62.0    |
|                                  |        |                 |                    |               |          |         |          |         |          |         |          |         |          |         |          |         |
| 3410 - 11700                     | UM     | 2               | 1.75               | 2             | 0.56880  | 0.0     | 0.79000  | 2.0     | 0.90060  | 8.3     | 0.96380  | 14.5    | 1.01120  | 35.0    | 1.28333  | 52.0    |
| 3410 - 11700                     | UM     | 2               | 3.5                | 4             | 1.03180  | 0.0     | 1.54000  | 2.0     | 1.78640  | 8.1     | 1.92500  | 13.5    | 2.04820  | 35.0    | 2.56667  | 52.0    |
| 3410 - 11700                     | UM     | 2               | 7.0 ... 11.7       | 8             | 2.06360  | 0.0     | 3.08000  | 2.0     | 3.57280  | 8.1     | 3.85000  | 13.5    | 4.09640  | 35.0    | 5.13333  | 52.0    |
| 3410 - 11700                     | UM     | 2               | 14.0 ... 15.0      | 16            | 4.12720  | 0.0     | 6.16000  | 2.0     | 7.14560  | 8.1     | 7.70000  | 13.5    | 8.19280  | 35.0    | 10.26667 | 52.0    |
| 3410 - 11700                     | UM     | 2               | 28.0 ... 30.0      | 34            | 9.24545  | 0.0     | 12.66500 | 2.0     | 14.31145 | 8.0     | 15.32465 | 14.2    | 16.08455 | 36.0    | 20.43200 | 53.0    |
| 3410 - 11700                     | UM     | 4L              | 1.75               | 4             | 0.72980  | 0.0     | 0.82000  | 2.0     | 0.86920  | 9.1     | 0.89380  | 15.9    | 0.91020  | 42.5    | 1.44138  | 62.0    |
| 3410 - 11700                     | UM     | 4L              | 3.5                | 8             | 1.45960  | 0.0     | 1.64000  | 2.0     | 1.73840  | 9.1     | 1.78760  | 15.9    | 1.82040  | 42.5    | 2.88276  | 62.0    |
| 3410 - 11700                     | UM     | 4L              | 7.0 ... 11.7       | 16            | 2.91920  | 0.0     | 3.28000  | 2.0     | 3.47680  | 9.1     | 3.57520  | 15.9    | 3.64080  | 42.5    | 5.76552  | 62.0    |
| 3410 - 11700                     | UM     | 4L              | 14.0 ... 15.0      | 34            | 5.82505  | 0.0     | 6.54500  | 2.0     | 6.93770  | 9.1     | 7.13405  | 15.9    | 7.26495  | 42.5    | 11.53103 | 62.0    |
| 3410 - 11700                     | UM     | 4L              | 28.0 ... 30.0      | 68            | 11.51920 | 0.0     | 13.09000 | 2.0     | 14.00630 | 9.9     | 14.39900 | 16.7    | 14.66080 | 43.0    | 21.92414 | 63.0    |
| 3410 - 11700                     | B1     | 4L              | 20.0               | 51            | 3.38576  | 0.0     | 7.20375  | 2.0     | 9.36488  | 9.5     | 10.44544 | 17.5    | 11.02174 | 45.0    | 18.77273 | 62.0    |
| 3410 - 11700                     | UM     | 4H              | 14.0 ... 15.0      | 51            | 5.48250  | 0.0     | 6.37500  | 2.0     | 6.88500  | 9.6     | 7.14000  | 18.0    | 7.26750  | 45.0    | 14.45455 | 62.0    |
| 3410 - 11700                     | UM     | 4H              | 28.0 ... 30.0      | 102           | 10.96500 | 0.0     | 12.75000 | 2.0     | 13.77000 | 9.6     | 14.28000 | 18.0    | 14.53500 | 46.0    | 27.75000 | 63.0    |
| 3410 - 11700                     | UM     | 4H              | 56.0 ... 60.0      | 204           | 21.93000 | 0.0     | 25.50000 | 2.0     | 27.54000 | 9.6     | 28.56000 | 18.0    | 29.07000 | 46.0    | 55.50000 | 63.0    |
| 3410 - 11700                     | UM     | 5A              | 28.0 ... 30.0      | 155           | 11.36593 | 0.0     | 13.06429 | 2.0     | 14.10943 | 10.5    | 14.63200 | 23.4    | 14.76264 | 47.0    | 26.45833 | 67.0    |
| 3410 - 11700                     | UM     | 5A              | 56.0 ... 60.0      | 310           | 22.73186 | 0.0     | 26.12857 | 2.0     | 28.21886 | 10.5    | 29.26400 | 23.4    | 29.52529 | 47.0    | 52.91667 | 67.0    |
| 3410 - 11700                     | UM     | 5B              | 7.0                | 34            | 2.58683  | 0.0     | 3.11667  | 2.0     | 3.42833  | 10.0    | 3.58417  | 19.7    | 3.64650  | 46.5    | 6.52273  | 62.0    |
| 3410 - 11700                     | UM     | 5B              | 14.0 ... 15.0      | 68            | 5.17367  | 0.0     | 6.23333  | 2.0     | 6.85667  | 10.0    | 7.16833  | 19.7    | 7.29300  | 46.5    | 13.04545 | 62.0    |
| 3410 - 11700                     | UM     | 5B              | 28.0 ... 30.0      | 155           | 10.60200 | 0.0     | 12.62143 | 2.0     | 13.88357 | 10.7    | 14.38843 | 19.2    | 14.64086 | 47.5    | 25.54167 | 65.0    |
| 3410 - 11700                     | C1     | 5B              | 40.0               | 155           | 9.14500  | 0.0     | 15.50000 | 2.0     | 19.22000 | 9.9     | 20.92500 | 17.8    | 21.85500 | 46.0    | 31.31818 | 63.0    |

| Frequency band, system and class |        |                 |                    | RX MASKS      |          |         |          |         |          |         |          |         |          |         |          |         |
|----------------------------------|--------|-----------------|--------------------|---------------|----------|---------|----------|---------|----------|---------|----------|---------|----------|---------|----------|---------|
| Band                             | System | Equipment Class | Channel Separation | Netto-Bitrate | f1 (MHz) | a1 (dB) | f2 (MHz) | a2 (dB) | f3 (MHz) | a3 (dB) | f4 (MHz) | a4 (dB) | f5 (MHz) | a5 (dB) | f6 (MHz) | a6 (dB) |
| MHz                              |        | Field 7G1       | MHz                | (Mbit/s)      |          |         |          |         |          |         |          |         |          |         |          |         |
| 3410 - 11700                     | UM     | 5B              | 56.0 ... 60.0      | 310           | 21.20400 | 0.0     | 25.24286 | 2.0     | 27.76714 | 10.7    | 28.77686 | 19.2    | 29.28171 | 47.5    | 51.08333 | 65.0    |
| 3410 - 11700                     | UM     | 6A              | 28.0 ... 30.0      | 204           | 11.05425 | 0.0     | 13.00500 | 2.0     | 14.17545 | 10.2    | 14.69565 | 18.6    | 14.95575 | 47.0    | 27.29167 | 71.0    |
| 3410 - 11700                     | C2     | 6A              | 40.0               | 310           | 18.19894 | 0.0     | 19.56875 | 2.0     | 20.35150 | 9.6     | 20.74288 | 18.0    | 20.93856 | 44.5    | 31.66667 | 73.0    |
| 3410 - 11700                     | UM     | 6A              | 56.0 ... 60.0      | 408           | 21.84840 | 0.0     | 26.01000 | 2.0     | 28.61100 | 10.7    | 29.65140 | 19.2    | 30.17160 | 47.0    | 54.58333 | 71.0    |
| 3410 - 11700                     | UM     | 6B              | 7.0                | 51            | 2.74125  | 0.0     | 3.18750  | 2.0     | 3.44250  | 9.6     | 3.57000  | 18.0    | 3.63375  | 46.5    | 6.52273  | 62.0    |
| 3410 - 11700                     | UM     | 6B              | 14.0 ... 15.0      | 102           | 5.48250  | 0.0     | 6.37500  | 2.0     | 6.88500  | 9.6     | 7.14000  | 18.0    | 7.26750  | 46.5    | 13.04545 | 62.0    |
| 3410 - 11700                     | UM     | 6B              | 28.0 ... 30.0      | 204           | 10.96500 | 0.0     | 12.75000 | 2.0     | 13.89750 | 11.2    | 14.28000 | 18.0    | 14.53500 | 47.5    | 26.58333 | 70.0    |
| 3410 - 11700                     | C3     | 6B              | 40.0               | 310           | 18.40625 | 0.0     | 19.37500 | 2.0     | 19.95625 | 10.2    | 20.34375 | 47.5    | 20.34385 | 48.5    | 24.41463 | 74.0    |
| 3410 - 11700                     | UM     | 6B              | 56.0 ... 60.0      | 408           | 21.93000 | 0.0     | 25.50000 | 2.0     | 27.79500 | 11.2    | 28.56000 | 18.0    | 29.07000 | 47.5    | 53.16667 | 70.0    |
|                                  |        |                 |                    |               |          |         |          |         |          |         |          |         |          |         |          |         |
| 12750 - 15350                    | UM     | 2               | 1.75               | 2             | 0.51590  | 0.0     | 0.77000  | 2.0     | 0.89320  | 8.1     | 0.96250  | 13.5    | 1.02410  | 35.0    | 1.28333  | 52.0    |
| 12750 - 15350                    | UM     | 2               | 3.5                | 4             | 1.03180  | 0.0     | 1.54000  | 2.0     | 1.78640  | 8.1     | 1.92500  | 13.5    | 2.04820  | 35.0    | 2.56667  | 52.0    |
| 12750 - 15350                    | UM     | 2               | 7.0                | 8             | 2.06360  | 0.0     | 3.08000  | 2.0     | 3.57280  | 8.1     | 3.85000  | 13.5    | 4.09640  | 35.0    | 5.13333  | 52.0    |
| 12750 - 15350                    | UM     | 2               | 14.0               | 16            | 4.12720  | 0.0     | 6.16000  | 2.0     | 7.14560  | 8.1     | 7.70000  | 13.5    | 8.19280  | 35.0    | 10.26667 | 52.0    |
| 12750 - 15350                    | UM     | 2               | 28.0               | 34            | 9.24545  | 0.0     | 12.66500 | 2.0     | 14.31145 | 8.0     | 15.32465 | 14.2    | 16.08455 | 36.0    | 20.43200 | 53.0    |
| 12750 - 15350                    | UM     | 2               | 56.0               | 68            | 19.89680 | 0.0     | 25.84000 | 2.0     | 28.68240 | 8.0     | 30.49120 | 14.4    | 31.78320 | 36.0    | 40.86400 | 53.0    |
| 12750 - 15350                    | UM     | 4L              | 1.75               | 4             | 0.70090  | 0.0     | 0.81500  | 2.0     | 0.88020  | 9.6     | 0.91280  | 18.0    | 0.92910  | 42.5    | 1.44138  | 62.0    |
| 12750 - 15350                    | UM     | 4L              | 3.5                | 8             | 1.42680  | 0.0     | 1.64000  | 2.0     | 1.75480  | 9.0     | 1.82040  | 17.4    | 1.85320  | 42.5    | 2.88276  | 62.0    |
| 12750 - 15350                    | UM     | 4L              | 7.0                | 16            | 2.85360  | 0.0     | 3.28000  | 2.0     | 3.50960  | 9.0     | 3.64080  | 17.4    | 3.70640  | 42.5    | 5.76552  | 62.0    |
| 12750 - 15350                    | UM     | 4L              | 14.0               | 34            | 5.69415  | 0.0     | 6.54500  | 2.0     | 7.00315  | 9.0     | 7.26495  | 17.4    | 7.39585  | 42.5    | 11.53103 | 62.0    |
| 12750 - 15350                    | UM     | 4L              | 28.0               | 68            | 11.38830 | 0.0     | 13.09000 | 2.0     | 14.00630 | 9.0     | 14.52990 | 17.4    | 14.79170 | 43.0    | 21.92414 | 63.0    |
| 12750 - 15350                    | UM     | 4L              | 56.0               | 155           | 22.41881 | 0.0     | 25.76875 | 2.0     | 27.57256 | 9.0     | 28.60331 | 17.4    | 29.11869 | 43.0    | 43.84828 | 63.0    |
| 12750 - 15350                    | UM     | 4H              | 14.0               | 51            | 5.41875  | 0.0     | 6.37500  | 2.0     | 6.94875  | 10.2    | 7.20375  | 18.6    | 7.33125  | 45.0    | 14.45455 | 62.0    |
| 12750 - 15350                    | UM     | 4H              | 28.0               | 102           | 10.71000 | 0.0     | 12.75000 | 2.0     | 13.89750 | 9.5     | 14.53500 | 19.2    | 14.79000 | 46.0    | 27.75000 | 63.0    |
| 12750 - 15350                    | UM     | 4H              | 56.0               | 204           | 21.42000 | 0.0     | 25.50000 | 2.0     | 27.79500 | 9.5     | 29.07000 | 19.2    | 29.58000 | 46.0    | 55.50000 | 63.0    |

| Frequency band, system and class |        |                 |                    | RX MASKS      |          |         |          |         |          |         |          |         |          |         |          |         |
|----------------------------------|--------|-----------------|--------------------|---------------|----------|---------|----------|---------|----------|---------|----------|---------|----------|---------|----------|---------|
| Band                             | System | Equipment Class | Channel Separation | Netto-Bitrate | f1 (MHz) | a1 (dB) | f2 (MHz) | a2 (dB) | f3 (MHz) | a3 (dB) | f4 (MHz) | a4 (dB) | f5 (MHz) | a5 (dB) | f6 (MHz) | a6 (dB) |
| MHz                              |        | Field 7G1       | MHz                | (Mbit/s)      |          |         |          |         |          |         |          |         |          |         |          |         |
| 12750 - 15350                    | UM     | 5A              | 28.0               | 155           | 11.36593 | 0.0     | 13.06429 | 2.0     | 14.10943 | 10.5    | 14.63200 | 23.4    | 14.76264 | 47.0    | 26.45833 | 67.0    |
| 12750 - 15350                    | UM     | 5A              | 56.0               | 310           | 22.73186 | 0.0     | 26.12857 | 2.0     | 28.21886 | 10.5    | 29.26400 | 23.4    | 29.52529 | 47.0    | 52.91667 | 67.0    |
| 12750 - 15350                    | UM     | 5B              | 7.0                | 34            | 2.61800  | 0.0     | 3.11667  | 2.0     | 3.42833  | 10.7    | 3.55300  | 19.2    | 3.61533  | 46.5    | 6.52273  | 62.0    |
| 12750 - 15350                    | UM     | 5B              | 14.0               | 68            | 5.23600  | 0.0     | 6.23333  | 2.0     | 6.85667  | 10.7    | 7.10600  | 19.2    | 7.23067  | 46.5    | 13.04545 | 62.0    |
| 12750 - 15350                    | UM     | 5B              | 28.0               | 155           | 10.60200 | 0.0     | 12.62143 | 2.0     | 13.88357 | 10.7    | 14.38843 | 19.2    | 14.64086 | 47.5    | 25.54167 | 65.0    |
| 12750 - 15350                    | UM     | 5B              | 56.0               | 310           | 21.45643 | 0.0     | 25.24286 | 2.0     | 27.51471 | 10.2    | 28.52443 | 18.6    | 29.02929 | 47.5    | 51.91667 | 67.0    |
| 12750 - 15350                    | UM     | 6A              | 28.0               | 204           | 11.05425 | 0.0     | 13.00500 | 2.0     | 14.17545 | 10.2    | 14.69565 | 18.6    | 14.95575 | 47.0    | 27.29167 | 71.0    |
| 12750 - 15350                    | UM     | 6A              | 56.0               | 408           | 22.10850 | 0.0     | 26.01000 | 2.0     | 28.35090 | 10.2    | 29.39130 | 18.6    | 29.91150 | 47.0    | 54.58333 | 71.0    |
| 12750 - 15350                    | UM     | 6B              | 7.0                | 51            | 2.74125  | 0.0     | 3.18750  | 2.0     | 3.44250  | 9.6     | 3.57000  | 18.0    | 3.63375  | 46.5    | 6.52273  | 62.0    |
| 12750 - 15350                    | UM     | 6B              | 14.0               | 102           | 5.48250  | 0.0     | 6.37500  | 2.0     | 6.88500  | 9.6     | 7.14000  | 18.0    | 7.26750  | 46.5    | 13.04545 | 62.0    |
| 12750 - 15350                    | UM     | 6B              | 28.0               | 204           | 10.96500 | 0.0     | 12.75000 | 2.0     | 13.89750 | 11.2    | 14.28000 | 18.0    | 14.53500 | 47.5    | 26.58333 | 70.0    |
| 12750 - 15350                    | UM     | 6B              | 56.0               | 408           | 21.93000 | 0.0     | 25.50000 | 2.0     | 27.79500 | 11.2    | 28.56000 | 18.0    | 29.07000 | 47.5    | 53.16667 | 70.0    |
|                                  |        |                 |                    |               |          |         |          |         |          |         |          |         |          |         |          |         |
| 17700 - 19700                    | UM     | 2               | 1.75               | 2             | 0.47565  | 0.0     | 0.75500  | 2.0     | 0.89090  | 8.1     | 0.96640  | 13.4    | 1.03435  | 35.0    | 1.28333  | 52.0    |
| 17700 - 19700                    | UM     | 2               | 3.5                | 4             | 0.95130  | 0.0     | 1.51000  | 2.0     | 1.78180  | 8.1     | 1.93280  | 13.4    | 2.06870  | 35.0    | 2.56667  | 52.0    |
| 17700 - 19700                    | UM     | 2               | 7.0                | 8             | 1.90260  | 0.0     | 3.02000  | 2.0     | 3.56360  | 8.1     | 3.86560  | 13.4    | 4.13740  | 35.0    | 5.13333  | 52.0    |
| 17700 - 19700                    | UM     | 2               | 13.75 ... 14.0     | 16            | 3.80520  | 0.0     | 6.04000  | 2.0     | 7.12720  | 8.1     | 7.73120  | 13.4    | 8.27480  | 35.0    | 10.26667 | 52.0    |
| 17700 - 19700                    | UM     | 2               | 27.5 ... 28.0      | 34            | 9.24545  | 0.0     | 12.66500 | 2.0     | 14.31145 | 8.0     | 15.32465 | 14.2    | 16.08455 | 36.0    | 20.43200 | 53.0    |
| 17700 - 19700                    | UM     | 2               | 55.0 ... 56.0      | 68            | 19.89680 | 0.0     | 25.84000 | 2.0     | 28.68240 | 8.0     | 30.49120 | 14.4    | 31.78320 | 36.0    | 40.86400 | 53.0    |
| 17700 - 19700                    | UM     | 4L              | 1.75               | 4             | 0.70090  | 0.0     | 0.81500  | 2.0     | 0.88020  | 9.6     | 0.91280  | 18.0    | 0.92910  | 40.0    | 1.38966  | 57.0    |
| 17700 - 19700                    | UM     | 4L              | 3.5                | 8             | 1.40180  | 0.0     | 1.63000  | 2.0     | 1.76040  | 9.6     | 1.82560  | 18.0    | 1.85820  | 40.0    | 2.77931  | 57.0    |
| 17700 - 19700                    | UM     | 4L              | 7.0                | 16            | 2.80360  | 0.0     | 3.26000  | 2.0     | 3.52080  | 9.6     | 3.65120  | 18.0    | 3.71640  | 40.0    | 5.55862  | 57.0    |
| 17700 - 19700                    | UM     | 4L              | 13.75 ... 14.0     | 34            | 5.69415  | 0.0     | 6.54500  | 2.0     | 7.00315  | 9.0     | 7.26495  | 17.4    | 7.39585  | 40.0    | 11.11724 | 57.0    |
| 17700 - 19700                    | UM     | 4L              | 27.5 ... 28.0      | 68            | 11.38830 | 0.0     | 13.09000 | 2.0     | 14.00630 | 9.0     | 14.52990 | 17.4    | 14.79170 | 40.5    | 21.48966 | 60.0    |
| 17700 - 19700                    | UM     | 4L              | 55.0 ... 56.0      | 155           | 22.41881 | 0.0     | 25.76875 | 2.0     | 27.57256 | 9.0     | 28.60331 | 17.4    | 29.11869 | 40.5    | 42.68966 | 59.0    |

| Frequency band, system and class |        |                 |                    | RX MASKS      |          |         |          |         |          |         |          |         |          |         |          |         |
|----------------------------------|--------|-----------------|--------------------|---------------|----------|---------|----------|---------|----------|---------|----------|---------|----------|---------|----------|---------|
| Band                             | System | Equipment Class | Channel Separation | Netto-Bitrate | f1 (MHz) | a1 (dB) | f2 (MHz) | a2 (dB) | f3 (MHz) | a3 (dB) | f4 (MHz) | a4 (dB) | f5 (MHz) | a5 (dB) | f6 (MHz) | a6 (dB) |
| MHz                              |        | Field 7G1       | MHz                | (Mbit/s)      |          |         |          |         |          |         |          |         |          |         |          |         |
| 17700 - 19700                    | UM     | 4H              | 13.75 ... 14.0     | 51            | 5.41875  | 0.0     | 6.37500  | 2.0     | 6.94875  | 10.2    | 7.20375  | 18.6    | 7.33125  | 42.5    | 13.77273 | 57.0    |
| 17700 - 19700                    | UM     | 4H              | 27.5 ... 28.0      | 102           | 10.71000 | 0.0     | 12.75000 | 2.0     | 13.89750 | 9.5     | 14.53500 | 19.2    | 14.79000 | 43.5    | 27.00000 | 60.0    |
| 17700 - 19700                    | UM     | 4H              | 55.0 ... 56.0      | 204           | 21.42000 | 0.0     | 25.50000 | 2.0     | 27.79500 | 9.5     | 29.07000 | 19.2    | 29.58000 | 43.5    | 54.00000 | 60.0    |
| 17700 - 19700                    | UM     | 5A              | 27.5 ... 28.0      | 155           | 11.36593 | 0.0     | 13.06429 | 2.0     | 14.10943 | 10.5    | 14.50136 | 17.4    | 14.76264 | 44.5    | 26.45833 | 67.0    |
| 17700 - 19700                    | UM     | 5A              | 55.0 ... 56.0      | 310           | 22.73186 | 0.0     | 26.12857 | 2.0     | 28.21886 | 10.5    | 29.00271 | 17.4    | 29.52529 | 44.5    | 52.91667 | 67.0    |
| 17700 - 19700                    | UM     | 5B              | 7.0                | 34            | 2.61800  | 0.0     | 3.11667  | 2.0     | 3.39717  | 9.5     | 3.55300  | 19.2    | 3.61533  | 44.0    | 6.23864  | 57.0    |
| 17700 - 19700                    | UM     | 5B              | 13.75 ... 14.0     | 68            | 5.23600  | 0.0     | 6.23333  | 2.0     | 6.79433  | 9.5     | 7.10600  | 19.2    | 7.23067  | 44.0    | 12.47727 | 57.0    |
| 17700 - 19700                    | UM     | 5B              | 27.5 ... 28.0      | 155           | 10.60200 | 0.0     | 12.62143 | 2.0     | 13.75736 | 9.5     | 14.38843 | 19.2    | 14.64086 | 45.0    | 25.54167 | 65.0    |
| 17700 - 19700                    | UM     | 5B              | 55.0 ... 56.0      | 310           | 21.45643 | 0.0     | 25.24286 | 2.0     | 27.51471 | 10.2    | 28.52443 | 18.6    | 29.02929 | 45.0    | 51.91667 | 67.0    |
| 17700 - 19700                    | UM     | 6A              | 27.5 ... 28.0      | 204           | 10.92420 | 0.0     | 13.00500 | 2.0     | 14.17545 | 9.5     | 14.82570 | 19.2    | 15.08580 | 44.5    | 27.29167 | 71.0    |
| 17700 - 19700                    | UM     | 6A              | 55.0 ... 56.0      | 408           | 22.10850 | 0.0     | 26.01000 | 2.0     | 28.35090 | 10.2    | 29.39130 | 18.6    | 29.91150 | 44.5    | 54.58333 | 71.0    |
| 17700 - 19700                    | UM     | 6B              | 7.0                | 51            | 2.77313  | 0.0     | 3.18750  | 2.0     | 3.44250  | 10.5    | 3.53813  | 17.4    | 3.60188  | 44.0    | 6.40909  | 60.0    |
| 17700 - 19700                    | UM     | 6B              | 13.75 ... 14.0     | 102           | 5.54625  | 0.0     | 6.37500  | 2.0     | 6.88500  | 10.5    | 7.07625  | 17.4    | 7.20375  | 44.0    | 12.81818 | 60.0    |
| 17700 - 19700                    | UM     | 6B              | 27.5 ... 28.0      | 204           | 10.96500 | 0.0     | 12.75000 | 2.0     | 13.77000 | 9.6     | 14.28000 | 18.0    | 14.53500 | 45.0    | 26.58333 | 70.0    |
| 17700 - 19700                    | UM     | 6B              | 55.0 ... 56.0      | 408           | 21.93000 | 0.0     | 25.50000 | 2.0     | 27.54000 | 9.6     | 28.56000 | 18.0    | 29.07000 | 45.0    | 53.16667 | 70.0    |
|                                  |        |                 |                    |               |          |         |          |         |          |         |          |         |          |         |          |         |
| 22000 - 29500                    | UM     | 2               | 1.75               | 2             | 0.47565  | 0.0     | 0.75500  | 2.0     | 0.89090  | 8.1     | 0.96640  | 13.4    | 1.03435  | 35.0    | 1.28333  | 52.0    |
| 22000 - 29500                    | UM     | 2               | 3.5                | 4             | 0.95130  | 0.0     | 1.51000  | 2.0     | 1.78180  | 8.1     | 1.93280  | 13.4    | 2.06870  | 35.0    | 2.56667  | 52.0    |
| 22000 - 29500                    | UM     | 2               | 7.0                | 8             | 1.90260  | 0.0     | 3.02000  | 2.0     | 3.56360  | 8.1     | 3.86560  | 13.4    | 4.13740  | 35.0    | 5.13333  | 52.0    |
| 22000 - 29500                    | UM     | 2               | 14.0               | 16            | 3.80520  | 0.0     | 6.04000  | 2.0     | 7.12720  | 8.1     | 7.73120  | 13.4    | 8.27480  | 35.0    | 10.26667 | 52.0    |
| 22000 - 29500                    | UM     | 2               | 28.0               | 34            | 9.24545  | 0.0     | 12.66500 | 2.0     | 14.31145 | 8.0     | 15.32465 | 14.2    | 16.08455 | 36.0    | 20.43200 | 53.0    |
| 22000 - 29500                    | UM     | 2               | 56.0               | 68            | 19.89680 | 0.0     | 25.84000 | 2.0     | 28.68240 | 8.0     | 30.49120 | 14.4    | 31.78320 | 36.0    | 40.86400 | 53.0    |
| 22000 - 29500                    | UM     | 4L              | 1.75               | 4             | 0.70090  | 0.0     | 0.81500  | 2.0     | 0.88020  | 9.6     | 0.91280  | 18.0    | 0.92910  | 40.0    | 1.38966  | 57.0    |
| 22000 - 29500                    | UM     | 4L              | 3.5                | 8             | 1.40180  | 0.0     | 1.63000  | 2.0     | 1.76040  | 9.6     | 1.82560  | 18.0    | 1.85820  | 40.0    | 2.77931  | 57.0    |
| 22000 - 29500                    | UM     | 4L              | 7.0                | 16            | 2.80360  | 0.0     | 3.26000  | 2.0     | 3.52080  | 9.6     | 3.65120  | 18.0    | 3.71640  | 40.0    | 5.55862  | 57.0    |

| Frequency band, system and class |        |                 |                    | RX MASKS      |          |         |          |         |          |         |          |         |          |         |          |         |
|----------------------------------|--------|-----------------|--------------------|---------------|----------|---------|----------|---------|----------|---------|----------|---------|----------|---------|----------|---------|
| Band                             | System | Equipment Class | Channel Separation | Netto-Bitrate | f1 (MHz) | a1 (dB) | f2 (MHz) | a2 (dB) | f3 (MHz) | a3 (dB) | f4 (MHz) | a4 (dB) | f5 (MHz) | a5 (dB) | f6 (MHz) | a6 (dB) |
| MHz                              |        | Field 7G1       | MHz                | (Mbit/s)      |          |         |          |         |          |         |          |         |          |         |          |         |
| 22000 - 29500                    | UM     | 4L              | 14.0               | 34            | 5.69415  | 0.0     | 6.54500  | 2.0     | 7.00315  | 9.0     | 7.26495  | 17.4    | 7.39585  | 40.0    | 11.11724 | 57.0    |
| 22000 - 29500                    | UM     | 4L              | 28.0               | 68            | 11.38830 | 0.0     | 13.09000 | 2.0     | 14.00630 | 9.0     | 14.52990 | 17.4    | 14.79170 | 40.5    | 21.48966 | 60.0    |
| 22000 - 29500                    | UM     | 4L              | 56.0               | 155           | 22.75594 | 0.0     | 26.15625 | 2.0     | 27.98719 | 9.0     | 29.03344 | 17.4    | 29.55656 | 40.5    | 42.97931 | 60.0    |
| 22000 - 29500                    | UM     | 4H              | 14.0               | 51            | 5.41875  | 0.0     | 6.37500  | 2.0     | 6.94875  | 10.2    | 7.20375  | 18.6    | 7.33125  | 42.5    | 13.77273 | 57.0    |
| 22000 - 29500                    | UM     | 4H              | 28.0               | 102           | 10.71000 | 0.0     | 12.75000 | 2.0     | 13.89750 | 9.5     | 14.53500 | 19.2    | 14.79000 | 43.5    | 27.00000 | 60.0    |
| 22000 - 29500                    | UM     | 4H              | 56.0               | 204           | 21.42000 | 0.0     | 25.50000 | 2.0     | 27.79500 | 9.5     | 29.07000 | 19.2    | 29.58000 | 43.5    | 54.00000 | 60.0    |
| 22000 - 29500                    | UM     | 5A              | 28.0               | 155           | 11.36593 | 0.0     | 13.06429 | 2.0     | 14.10943 | 10.5    | 14.50136 | 17.4    | 14.76264 | 44.5    | 26.45833 | 67.0    |
| 22000 - 29500                    | UM     | 5A              | 56.0               | 310           | 22.28014 | 0.0     | 25.90714 | 2.0     | 27.97971 | 9.6     | 29.016   | 18.0    | 29.53414 | 44.5    | 52.91667 | 67.0    |
| 22000 - 29500                    | UM     | 5B              | 7.0                | 34            | 2.618    | 0.0     | 3.11667  | 2.0     | 3.39717  | 9.5     | 3.553    | 19.2    | 3.61533  | 44.0    | 6.23864  | 57.0    |
| 22000 - 29500                    | UM     | 5B              | 14.0               | 68            | 5.236    | 0.0     | 6.23333  | 2.0     | 6.79433  | 9.5     | 7.106    | 19.2    | 7.23067  | 44.0    | 12.47727 | 57.0    |
| 22000 - 29500                    | UM     | 5B              | 28.0               | 155           | 10.22336 | 0.0     | 12.62143 | 2.0     | 14.00979 | 9.8     | 14.64086 | 17.2    | 15.0195  | 44.5    | 26.45833 | 67.0    |
| 22000 - 29500                    | UM     | 5A              | 56.0               | 310           | 10.22336 | 0.0     | 12.62143 | 2.0     | 14.00979 | 9.8     | 14.64086 | 17.2    | 15.01950 | 44.5    | 26.45833 | 67.0    |
| 22000 - 29500                    | UM     | 5B              | 7.0                | 34            | 22.28014 | 0.0     | 25.90714 | 2.0     | 27.97971 | 9.6     | 29.01600 | 18.0    | 29.53414 | 44.5    | 52.91667 | 67.0    |
| 22000 - 29500                    | UM     | 5B              | 14.0               | 68            | 2.61800  | 0.0     | 3.11667  | 2.0     | 3.39717  | 9.5     | 3.55300  | 19.2    | 3.61533  | 44.0    | 6.23864  | 57.0    |
| 22000 - 29500                    | UM     | 5B              | 28.0               | 155           | 5.23600  | 0.0     | 6.23333  | 2.0     | 6.79433  | 9.5     | 7.10600  | 19.2    | 7.23067  | 44.0    | 12.47727 | 57.0    |
| 22000 - 29500                    | UM     | 5B              | 56.0               | 310           | 21.45643 | 0.0     | 25.24286 | 2.0     | 27.51471 | 10.2    | 28.52443 | 18.6    | 29.02929 | 45.0    | 51.91667 | 67.0    |
| 22000 - 29500                    | UM     | 6A              | 28.0               | 204           | 10.92420 | 0.0     | 13.00500 | 2.0     | 14.17545 | 9.5     | 14.82570 | 19.2    | 15.08580 | 44.5    | 27.29167 | 71.0    |
| 22000 - 29500                    | UM     | 6A              | 56.0               | 408           | 21.84840 | 0.0     | 26.01000 | 2.0     | 28.35090 | 9.5     | 29.65140 | 19.2    | 30.17160 | 44.5    | 54.58333 | 71.0    |
| 22000 - 29500                    | UM     | 6B              | 7.0                | 51            | 2.77313  | 0.0     | 3.18750  | 2.0     | 3.44250  | 10.5    | 3.53813  | 17.4    | 3.60188  | 44.0    | 6.40909  | 60.0    |
| 22000 - 29500                    | UM     | 6B              | 14.0               | 102           | 5.54625  | 0.0     | 6.37500  | 2.0     | 6.88500  | 10.5    | 7.07625  | 17.4    | 7.20375  | 44.0    | 12.81818 | 60.0    |
| 22000 - 29500                    | UM     | 6B              | 28.0               | 204           | 10.96500 | 0.0     | 12.75000 | 2.0     | 13.77000 | 9.6     | 14.28000 | 18.0    | 14.53500 | 45.0    | 26.58333 | 70.0    |
| 22000 - 29500                    | UM     | 6B              | 56.0               | 408           | 21.93000 | 0.0     | 25.50000 | 2.0     | 27.54000 | 9.6     | 28.56000 | 18.0    | 29.07000 | 45.0    | 53.16667 | 70.0    |
|                                  |        |                 |                    |               |          |         |          |         |          |         |          |         |          |         |          |         |
| 31000 - 57000                    | UM     | 2               | 1.75               | 2             | 0.47565  | 0.0     | 0.75500  | 2.0     | 0.89090  | 8.1     | 0.96640  | 13.4    | 1.03435  | 35.0    | 1.28333  | 52.0    |
| 31000 - 57000                    | UM     | 2               | 3.5                | 4             | 0.95130  | 0.0     | 1.51000  | 2.0     | 1.78180  | 8.1     | 1.93280  | 13.4    | 2.06870  | 35.0    | 2.56667  | 52.0    |

| Frequency band, system and class |        |                 |                    | RX MASKS      |          |         |          |         |          |         |          |         |          |         |          |         |
|----------------------------------|--------|-----------------|--------------------|---------------|----------|---------|----------|---------|----------|---------|----------|---------|----------|---------|----------|---------|
| Band                             | System | Equipment Class | Channel Separation | Netto-Bitrate | f1 (MHz) | a1 (dB) | f2 (MHz) | a2 (dB) | f3 (MHz) | a3 (dB) | f4 (MHz) | a4 (dB) | f5 (MHz) | a5 (dB) | f6 (MHz) | a6 (dB) |
| MHz                              |        | Field 7G1       | MHz                | (Mbit/s)      |          |         |          |         |          |         |          |         |          |         |          |         |
| 31000 - 57000                    | UM     | 2               | 7.0                | 8             | 1.90260  | 0.0     | 3.02000  | 2.0     | 3.56360  | 8.1     | 3.86560  | 13.4    | 4.13740  | 35.0    | 5.13333  | 52.0    |
| 31000 - 57000                    | UM     | 2               | 14.0               | 16            | 3.80520  | 0.0     | 6.04000  | 2.0     | 7.12720  | 8.1     | 7.73120  | 13.4    | 8.27480  | 35.0    | 10.26667 | 52.0    |
| 31000 - 57000                    | UM     | 2               | 28.0               | 34            | 9.11880  | 0.0     | 12.66500 | 2.0     | 14.43810 | 8.3     | 15.45130 | 14.5    | 16.21120 | 36.0    | 20.43200 | 53.0    |
| 31000 - 57000                    | UM     | 2               | 56.0               | 68            | 19.89680 | 0.0     | 25.84000 | 2.0     | 28.68240 | 8.0     | 30.49120 | 14.4    | 31.78320 | 36.0    | 40.86400 | 53.0    |
| 31000 - 57000                    | UM     | 4L              | 1.75               | 4             | 0.70090  | 0.0     | 0.81500  | 2.0     | 0.87205  | 8.3     | 0.90465  | 14.5    | 0.92910  | 37.5    | 1.33793  | 52.0    |
| 31000 - 57000                    | UM     | 4L              | 3.5                | 8             | 1.41810  | 0.0     | 1.63000  | 2.0     | 1.74410  | 9.0     | 1.80930  | 17.4    | 1.84190  | 37.5    | 2.67586  | 52.0    |
| 31000 - 57000                    | UM     | 4L              | 7.0                | 16            | 2.80360  | 0.0     | 3.26000  | 2.0     | 3.48820  | 8.3     | 3.61860  | 14.5    | 3.71640  | 37.5    | 5.35172  | 52.0    |
| 31000 - 57000                    | UM     | 4L              | 14.0               | 34            | 5.69415  | 0.0     | 6.54500  | 2.0     | 7.00315  | 9.0     | 7.26495  | 17.4    | 7.39585  | 37.5    | 10.70345 | 52.0    |
| 31000 - 57000                    | UM     | 4L              | 28.0               | 68            | 11.38830 | 0.0     | 13.09000 | 2.0     | 14.00630 | 9.0     | 14.52990 | 17.4    | 14.79170 | 40.5    | 21.48966 | 60.0    |
| 31000 - 57000                    | UM     | 4L              | 56.0               | 155           | 22.75594 | 0.0     | 26.15625 | 2.0     | 27.98719 | 9.0     | 29.03344 | 17.4    | 29.55656 | 38.0    | 42.97931 | 60.0    |
| 31000 - 57000                    | UM     | 4H              | 14.0               | 51            | 5.41875  | 0.0     | 6.37500  | 2.0     | 6.88500  | 8.9     | 7.14000  | 15.1    | 7.33125  | 40.0    | 13.09091 | 52.0    |
| 31000 - 57000                    | UM     | 4H              | 28.0               | 102           | 10.83750 | 0.0     | 12.75000 | 2.0     | 13.77000 | 8.9     | 14.40750 | 18.6    | 14.66250 | 41.0    | 27.00000 | 60.0    |
| 31000 - 57000                    | UM     | 4H              | 56.0               | 204           | 21.67500 | 0.0     | 25.50000 | 2.0     | 27.54000 | 8.9     | 28.81500 | 18.6    | 29.32500 | 41.0    | 54.00000 | 60.0    |
| 31000 - 57000                    | UM     | 5A              | 28.0               | 155           | 11.36593 | 0.0     | 13.06429 | 2.0     | 13.97879 | 9.0     | 14.50136 | 17.4    | 14.76264 | 42.0    | 26.45833 | 67.0    |
| 31000 - 57000                    | UM     | 5A              | 56.0               | 310           | 22.28014 | 0.0     | 25.90714 | 2.0     | 27.97971 | 9.6     | 29.01600 | 18.0    | 29.53414 | 42.0    | 52.91667 | 67.0    |
| 31000 - 57000                    | UM     | 5B              | 7.0                | 34            | 2.61800  | 0.0     | 3.11667  | 2.0     | 3.39717  | 9.5     | 3.52183  | 15.7    | 3.61533  | 41.5    | 6.23864  | 57.0    |
| 31000 - 57000                    | UM     | 5B              | 14.0               | 68            | 5.29833  | 0.0     | 6.23333  | 2.0     | 6.73200  | 8.9     | 7.04367  | 18.6    | 7.16833  | 41.5    | 12.47727 | 57.0    |
| 31000 - 57000                    | UM     | 5B              | 28.0               | 155           | 10.72821 | 0.0     | 12.62143 | 2.0     | 13.75736 | 10.2    | 14.26221 | 18.6    | 14.51464 | 42.5    | 25.95833 | 67.0    |
| 31000 - 57000                    | UM     | 5B              | 56.0               | 310           | 21.01800 | 0.0     | 25.02143 | 2.0     | 27.27336 | 9.5     | 28.52443 | 19.2    | 29.02486 | 42.5    | 51.91667 | 67.0    |
| 31000 - 57000                    | UM     | 6A              | 28.0               | 204           | 11.05425 | 0.0     | 13.00500 | 2.0     | 14.04540 | 8.9     | 14.69565 | 18.6    | 14.95575 | 42.0    | 27.29167 | 71.0    |
| 31000 - 57000                    | UM     | 6A              | 56.0               | 408           | 22.10850 | 0.0     | 26.01000 | 2.0     | 28.09080 | 8.9     | 29.39130 | 18.6    | 29.91150 | 42.0    | 54.58333 | 71.0    |
| 31000 - 57000                    | UM     | 6B              | 7.0                | 51            | 2.80500  | 0.0     | 3.18750  | 2.0     | 3.41063  | 9.9     | 3.50625  | 16.7    | 3.57000  | 41.5    | 6.40909  | 60.0    |
| 31000 - 57000                    | UM     | 6B              | 14.0               | 102           | 5.54625  | 0.0     | 6.37500  | 2.0     | 6.82125  | 9.0     | 7.07625  | 17.4    | 7.20375  | 41.5    | 12.81818 | 60.0    |
| 31000 - 57000                    | UM     | 6B              | 28.0               | 204           | 10.96500 | 0.0     | 12.75000 | 2.0     | 13.77000 | 9.6     | 14.28000 | 18.0    | 14.53500 | 42.5    | 26.58333 | 70.0    |
| 31000 - 57000                    | UM     | 6B              | 56.0               | 408           | 21.93000 | 0.0     | 25.50000 | 2.0     | 27.54000 | 9.6     | 28.56000 | 18.0    | 29.07000 | 42.5    | 53.16667 | 70.0    |

Note :

All values are calculated according the method in ETSI TR 101 854 Annex F.

The data are taken from ETSI EN 302 217-2-2 V1.4.1 and contains all frequency bands between 1350 MHz and 57 GHz

UM designates the unified mask of EN 302 217-2-2 V1.4.1.

A1, A2, B1, C1, C2 and C3 designate the system mask in the annexes of EN 302 217-2-2 V1.4.1.



**Appendix 13 to Annex 2 B**

**FIELD 9X: TABLE OF DEFAULT VALUES FOR COPOLAR AND CROSSPOLAR ANTENNA RADIATION PATTERN**

| GAIN | ANGLE | ATTN. | ANGLE | ATTN. | ANGLE | ATTN. | ANGLE | ATTN. | ANGLE | ATTN. | ANGLE | ATTN. | ANGLE | ATTN. | ANGLE | ATTN. | ANGLE | ATTN. | ANGLE | ATTN. | ANGLE | ATTN. | ANGLE | ATTN. |       |      |
|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|
| 20   | 0.0   | 0.0   | 2.7   | 0.3   | 5.4   | 1.3   | 8.1   | 3.0   | 10.0  | 4.6   | 13.6  | 8.5   | 23.3  | 8.5   | 29.0  | 10.9  | 35.0  | 12.9  | 41.0  | 14.6  | 42.3  | 15.0  | 48.0  | 26.3  | 180.0 | 26.3 |
| 20.1 | 0.0   | 0.0   | 2.6   | 0.3   | 5.3   | 1.3   | 8.0   | 3.0   | 10.0  | 4.7   | 13.5  | 8.5   | 23.0  | 8.5   | 29.0  | 11.0  | 35.0  | 13.1  | 41.0  | 14.8  | 41.7  | 15.0  | 48.0  | 26.5  | 180.0 | 26.5 |
| 20.2 | 0.0   | 0.0   | 2.6   | 0.3   | 5.3   | 1.4   | 7.9   | 3.0   | 10.0  | 4.8   | 13.3  | 8.6   | 22.8  | 8.6   | 29.0  | 11.2  | 35.0  | 13.2  | 41.0  | 14.9  | 41.2  | 15.0  | 48.0  | 26.6  | 180.0 | 26.6 |
| 20.3 | 0.0   | 0.0   | 2.6   | 0.3   | 5.2   | 1.3   | 7.9   | 3.1   | 10.0  | 4.9   | 13.2  | 8.6   | 22.5  | 8.6   | 28.0  | 11.0  | 35.0  | 13.4  | 40.6  | 15.0  | 41.0  | 15.1  | 48.0  | 26.8  | 180.0 | 26.8 |
| 20.4 | 0.0   | 0.0   | 2.6   | 0.3   | 5.2   | 1.4   | 7.8   | 3.1   | 10.0  | 5.1   | 13.1  | 8.6   | 22.3  | 8.6   | 28.0  | 11.1  | 35.0  | 13.5  | 40.0  | 15.0  | 41.0  | 15.2  | 48.0  | 26.9  | 180.0 | 26.9 |
| 20.5 | 0.0   | 0.0   | 2.5   | 0.3   | 5.1   | 1.3   | 7.7   | 3.1   | 10.0  | 5.2   | 12.9  | 8.6   | 22.0  | 8.6   | 28.0  | 11.3  | 35.0  | 13.7  | 39.5  | 15.0  | 41.0  | 15.4  | 48.0  | 27.1  | 180.0 | 27.1 |
| 20.6 | 0.0   | 0.0   | 2.5   | 0.3   | 5.1   | 1.4   | 7.6   | 3.1   | 10.0  | 5.3   | 12.8  | 8.7   | 21.7  | 8.7   | 28.0  | 11.4  | 34.0  | 13.5  | 38.9  | 15.0  | 41.0  | 15.5  | 48.0  | 27.2  | 180.0 | 27.2 |
| 20.7 | 0.0   | 0.0   | 2.5   | 0.3   | 5.0   | 1.4   | 7.6   | 3.1   | 10.0  | 5.4   | 12.7  | 8.7   | 21.5  | 8.7   | 28.0  | 11.6  | 34.0  | 13.7  | 38.4  | 15.0  | 41.0  | 15.7  | 48.0  | 27.4  | 180.0 | 27.4 |
| 20.8 | 0.0   | 0.0   | 2.5   | 0.3   | 5.0   | 1.4   | 7.5   | 3.1   | 10.0  | 5.5   | 12.5  | 8.7   | 21.2  | 8.7   | 27.0  | 11.3  | 34.0  | 13.8  | 37.9  | 15.0  | 41.0  | 15.8  | 48.0  | 27.5  | 180.0 | 27.5 |
| 20.9 | 0.0   | 0.0   | 2.4   | 0.3   | 4.9   | 1.4   | 7.4   | 3.1   | 9.9   | 5.6   | 12.4  | 8.7   | 21.0  | 8.7   | 27.0  | 11.5  | 34.0  | 14.0  | 37.4  | 15.0  | 41.0  | 16.0  | 48.0  | 27.7  | 180.0 | 27.7 |
| 21   | 0.0   | 0.0   | 2.4   | 0.3   | 4.9   | 1.4   | 7.3   | 3.1   | 9.8   | 5.6   | 12.3  | 8.8   | 20.8  | 8.8   | 27.0  | 11.6  | 34.0  | 14.1  | 36.8  | 15.0  | 41.0  | 16.1  | 48.0  | 27.8  | 180.0 | 27.8 |
| 21.1 | 0.0   | 0.0   | 2.4   | 0.3   | 4.8   | 1.4   | 7.3   | 3.2   | 9.7   | 5.6   | 12.2  | 8.8   | 20.5  | 8.8   | 27.0  | 11.8  | 34.0  | 14.3  | 36.3  | 15.0  | 41.0  | 16.3  | 48.0  | 28.0  | 180.0 | 28.0 |
| 21.2 | 0.0   | 0.0   | 2.4   | 0.3   | 4.8   | 1.4   | 7.2   | 3.1   | 9.6   | 5.6   | 12.0  | 8.8   | 20.3  | 8.8   | 27.0  | 11.9  | 34.0  | 14.4  | 35.8  | 15.0  | 41.0  | 16.4  | 48.0  | 28.1  | 180.0 | 28.1 |
| 21.3 | 0.0   | 0.0   | 2.3   | 0.3   | 4.7   | 1.4   | 7.1   | 3.1   | 9.5   | 5.6   | 11.9  | 8.8   | 20.1  | 8.8   | 27.0  | 12.1  | 34.0  | 14.6  | 35.3  | 15.0  | 41.0  | 16.6  | 48.0  | 28.3  | 180.0 | 28.3 |
| 21.4 | 0.0   | 0.0   | 2.3   | 0.3   | 4.7   | 1.4   | 7.0   | 3.1   | 9.4   | 5.6   | 11.8  | 8.9   | 19.8  | 8.9   | 26.0  | 11.8  | 33.0  | 14.4  | 34.9  | 15.0  | 41.0  | 16.7  | 48.0  | 28.4  | 180.0 | 28.4 |
| 21.5 | 0.0   | 0.0   | 2.3   | 0.3   | 4.6   | 1.4   | 7.0   | 3.2   | 9.3   | 5.6   | 11.7  | 8.9   | 19.6  | 8.9   | 26.0  | 12.0  | 33.0  | 14.5  | 34.4  | 15.0  | 40.0  | 16.6  | 48.0  | 28.6  | 180.0 | 28.6 |
| 21.6 | 0.0   | 0.0   | 2.3   | 0.4   | 4.6   | 1.4   | 6.9   | 3.2   | 9.2   | 5.6   | 11.6  | 8.9   | 19.4  | 8.9   | 26.0  | 12.1  | 33.0  | 14.7  | 33.9  | 15.0  | 40.0  | 16.8  | 48.0  | 28.7  | 180.0 | 28.7 |
| 21.7 | 0.0   | 0.0   | 2.2   | 0.3   | 4.5   | 1.4   | 6.8   | 3.2   | 9.1   | 5.6   | 11.5  | 8.9   | 19.2  | 8.9   | 26.0  | 12.3  | 33.0  | 14.8  | 33.4  | 15.0  | 40.0  | 16.9  | 48.0  | 28.9  | 180.0 | 28.9 |
| 21.8 | 0.0   | 0.0   | 2.2   | 0.3   | 4.5   | 1.4   | 6.8   | 3.2   | 9.0   | 5.6   | 11.3  | 9.0   | 18.9  | 9.0   | 26.0  | 12.4  | 33.0  | 15.0  | 33.0  | 15.0  | 40.0  | 17.1  | 48.0  | 29.0  | 180.0 | 29.0 |
| 21.9 | 0.0   | 0.0   | 2.2   | 0.3   | 4.4   | 1.4   | 6.7   | 3.2   | 8.9   | 5.7   | 11.2  | 9.0   | 18.7  | 9.0   | 26.0  | 12.6  | 32.5  | 15.0  | 33.0  | 15.1  | 40.0  | 17.2  | 48.0  | 29.2  | 180.0 | 29.2 |
| 22   | 0.0   | 0.0   | 2.2   | 0.4   | 4.4   | 1.4   | 6.6   | 3.2   | 8.8   | 5.7   | 11.1  | 9.0   | 18.5  | 9.0   | 25.0  | 12.3  | 32.1  | 15.0  | 33.0  | 15.3  | 40.0  | 17.4  | 48.0  | 29.3  | 180.0 | 29.3 |
| 22.1 | 0.0   | 0.0   | 2.1   | 0.3   | 4.3   | 1.4   | 6.5   | 3.2   | 8.7   | 5.7   | 11.0  | 9.0   | 18.3  | 9.0   | 25.0  | 12.4  | 31.6  | 15.0  | 33.0  | 15.4  | 40.0  | 17.5  | 48.0  | 29.5  | 180.0 | 29.5 |
| 22.2 | 0.0   | 0.0   | 2.1   | 0.3   | 4.3   | 1.4   | 6.5   | 3.2   | 8.7   | 5.8   | 10.9  | 9.1   | 18.1  | 9.1   | 25.0  | 12.6  | 31.2  | 15.0  | 33.0  | 15.6  | 40.0  | 17.7  | 48.0  | 29.6  | 180.0 | 29.6 |
| 22.3 | 0.0   | 0.0   | 2.1   | 0.3   | 4.3   | 1.4   | 6.4   | 3.2   | 8.6   | 5.8   | 10.8  | 9.1   | 17.9  | 9.1   | 25.0  | 12.7  | 30.8  | 15.0  | 32.0  | 15.4  | 40.0  | 17.8  | 48.0  | 29.8  | 180.0 | 29.8 |
| 22.4 | 0.0   | 0.0   | 2.1   | 0.4   | 4.2   | 1.4   | 6.4   | 3.3   | 8.5   | 5.8   | 10.7  | 9.1   | 17.7  | 9.1   | 25.0  | 12.9  | 30.4  | 15.0  | 32.0  | 15.6  | 40.0  | 18.0  | 48.0  | 29.9  | 180.0 | 29.9 |
| 22.5 | 0.0   | 0.0   | 2.1   | 0.4   | 4.2   | 1.4   | 6.3   | 3.3   | 8.4   | 5.8   | 10.6  | 9.1   | 17.5  | 9.1   | 25.0  | 13.0  | 29.9  | 15.0  | 32.0  | 15.7  | 40.0  | 18.1  | 48.0  | 30.1  | 180.0 | 30.1 |
| 22.6 | 0.0   | 0.0   | 2.0   | 0.3   | 4.1   | 1.4   | 6.2   | 3.2   | 8.3   | 5.8   | 10.5  | 9.2   | 17.3  | 9.2   | 25.0  | 13.2  | 29.5  | 15.0  | 32.0  | 15.9  | 40.0  | 18.3  | 48.0  | 30.2  | 180.0 | 30.2 |
| 22.7 | 0.0   | 0.0   | 2.0   | 0.3   | 4.1   | 1.4   | 6.2   | 3.3   | 8.2   | 5.8   | 10.3  | 9.2   | 17.1  | 9.2   | 24.0  | 12.9  | 29.1  | 15.0  | 32.0  | 16.0  | 40.0  | 18.4  | 48.0  | 30.4  | 180.0 | 30.4 |
| 22.8 | 0.0   | 0.0   | 2.0   | 0.4   | 4.0   | 1.4   | 6.1   | 3.3   | 8.1   | 5.8   | 10.2  | 9.2   | 16.9  | 9.2   | 24.0  | 13.0  | 28.7  | 15.0  | 32.0  | 16.2  | 40.0  | 18.6  | 48.0  | 30.5  | 180.0 | 30.5 |
| 22.9 | 0.0   | 0.0   | 2.0   | 0.4   | 4.0   | 1.4   | 6.0   | 3.2   | 8.1   | 5.9   | 10.1  | 9.2   | 16.7  | 9.2   | 24.0  | 13.2  | 28.3  | 15.0  | 32.0  | 16.3  | 40.0  | 18.7  | 48.0  | 30.7  | 180.0 | 30.7 |
| 23   | 0.0   | 0.0   | 2.0   | 0.4   | 4.0   | 1.5   | 6.0   | 3.3   | 8.0   | 5.9   | 10.0  | 9.3   | 16.5  | 9.3   | 24.0  | 13.3  | 32.0  | 16.5  | 40.0  | 18.9  | 44.3  | 20.0  | 48.0  | 30.8  | 180.0 | 30.8 |
| 23.1 | 0.0   | 0.0   | 1.9   | 0.3   | 3.9   | 1.4   | 5.9   | 3.3   | 7.9   | 5.9   | 9.9   | 9.3   | 16.3  | 9.3   | 24.0  | 13.5  | 32.0  | 16.6  | 40.0  | 19.0  | 43.7  | 20.0  | 48.0  | 31.0  | 180.0 | 31.0 |

| GAIN | ANGLE | ATTN. | ANGLE | ATTN. | ANGLE | ATTN. | ANGLE | ATTN. | ANGLE | ATTN. | ANGLE | ATTN. | ANGLE | ATTN. | ANGLE | ATTN. | ANGLE | ATTN. | ANGLE | ATTN. | ANGLE | ATTN. | ANGLE | ATTN. |       |      |
|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|
| 23.2 | 0.0   | 0.0   | 1.9   | 0.3   | 3.9   | 1.5   | 5.9   | 3.4   | 7.8   | 5.9   | 9.8   | 9.3   | 16.1  | 9.3   | 24.0  | 13.6  | 32.0  | 16.8  | 40.0  | 19.2  | 43.1  | 20.0  | 48.0  | 31.1  | 180.0 | 31.1 |
| 23.3 | 0.0   | 0.0   | 1.9   | 0.4   | 3.8   | 1.4   | 5.8   | 3.3   | 7.7   | 5.8   | 9.7   | 9.3   | 15.9  | 9.3   | 24.0  | 13.8  | 32.0  | 16.9  | 40.0  | 19.3  | 42.5  | 20.0  | 48.0  | 31.3  | 180.0 | 31.3 |
| 23.4 | 0.0   | 0.0   | 1.9   | 0.4   | 3.8   | 1.5   | 5.7   | 3.3   | 7.7   | 6.0   | 9.6   | 9.4   | 15.8  | 9.4   | 23.0  | 13.5  | 31.0  | 16.7  | 39.0  | 19.2  | 41.9  | 20.0  | 48.0  | 31.4  | 180.0 | 31.4 |
| 23.5 | 0.0   | 0.0   | 1.9   | 0.4   | 3.8   | 1.5   | 5.7   | 3.4   | 7.6   | 6.0   | 9.5   | 9.4   | 15.6  | 9.4   | 23.0  | 13.6  | 31.0  | 16.9  | 39.0  | 19.4  | 41.3  | 20.0  | 48.0  | 31.6  | 180.0 | 31.6 |
| 23.6 | 0.0   | 0.0   | 1.8   | 0.3   | 3.7   | 1.4   | 5.6   | 3.3   | 7.5   | 5.9   | 9.4   | 9.4   | 15.4  | 9.4   | 23.0  | 13.8  | 31.0  | 17.0  | 39.0  | 19.5  | 40.8  | 20.0  | 48.0  | 31.7  | 180.0 | 31.7 |
| 23.7 | 0.0   | 0.0   | 1.8   | 0.3   | 3.7   | 1.5   | 5.6   | 3.4   | 7.4   | 5.9   | 9.3   | 9.4   | 15.2  | 9.4   | 23.0  | 13.9  | 31.0  | 17.2  | 39.0  | 19.7  | 40.2  | 20.0  | 48.0  | 31.9  | 180.0 | 31.9 |
| 23.8 | 0.0   | 0.0   | 1.8   | 0.4   | 3.7   | 1.5   | 5.5   | 3.3   | 7.4   | 6.1   | 9.3   | 9.5   | 15.0  | 9.5   | 23.0  | 14.1  | 31.0  | 17.3  | 39.0  | 19.8  | 39.7  | 20.0  | 48.0  | 32.0  | 180.0 | 32.0 |
| 23.9 | 0.0   | 0.0   | 1.8   | 0.4   | 3.6   | 1.5   | 5.4   | 3.3   | 7.3   | 6.0   | 9.2   | 9.5   | 14.9  | 9.5   | 23.0  | 14.2  | 31.0  | 17.5  | 39.0  | 20.0  | 39.1  | 20.0  | 48.0  | 32.2  | 180.0 | 32.2 |
| 24   | 0.0   | 0.0   | 1.8   | 0.4   | 3.6   | 1.5   | 5.4   | 3.4   | 7.2   | 6.0   | 9.1   | 9.5   | 14.7  | 9.5   | 23.0  | 14.4  | 31.0  | 17.6  | 38.6  | 20.0  | 39.0  | 20.1  | 48.0  | 32.3  | 180.0 | 32.3 |
| 24.1 | 0.0   | 0.0   | 1.7   | 0.3   | 3.5   | 1.5   | 5.3   | 3.3   | 7.1   | 6.0   | 9.0   | 9.5   | 14.5  | 9.5   | 22.0  | 14.0  | 31.0  | 17.8  | 38.1  | 20.0  | 39.0  | 20.3  | 48.0  | 32.5  | 180.0 | 32.5 |
| 24.2 | 0.0   | 0.0   | 1.7   | 0.4   | 3.5   | 1.5   | 5.3   | 3.4   | 7.1   | 6.1   | 8.9   | 9.6   | 14.4  | 9.6   | 22.0  | 14.2  | 31.0  | 17.9  | 37.5  | 20.0  | 39.0  | 20.4  | 48.0  | 32.6  | 180.0 | 32.6 |
| 24.3 | 0.0   | 0.0   | 1.7   | 0.4   | 3.5   | 1.5   | 5.2   | 3.4   | 7.0   | 6.1   | 8.8   | 9.6   | 14.2  | 9.6   | 22.0  | 14.3  | 31.0  | 18.1  | 37.0  | 20.0  | 39.0  | 20.6  | 48.0  | 32.8  | 180.0 | 32.8 |
| 24.4 | 0.0   | 0.0   | 1.7   | 0.4   | 3.4   | 1.5   | 5.2   | 3.4   | 6.9   | 6.0   | 8.7   | 9.6   | 14.0  | 9.6   | 22.0  | 14.5  | 31.0  | 18.2  | 36.5  | 20.0  | 39.0  | 20.7  | 48.0  | 32.9  | 180.0 | 32.9 |
| 24.5 | 0.0   | 0.0   | 1.7   | 0.4   | 3.4   | 1.5   | 5.1   | 3.4   | 6.8   | 6.0   | 8.6   | 9.6   | 13.9  | 9.6   | 22.0  | 14.6  | 30.0  | 18.0  | 36.0  | 20.0  | 39.0  | 20.9  | 48.0  | 33.1  | 180.0 | 33.1 |
| 24.6 | 0.0   | 0.0   | 1.7   | 0.4   | 3.4   | 1.5   | 5.1   | 3.5   | 6.8   | 6.1   | 8.5   | 9.7   | 13.7  | 9.7   | 22.0  | 14.8  | 30.0  | 18.2  | 35.5  | 20.0  | 39.0  | 21.0  | 48.0  | 33.2  | 180.0 | 33.2 |
| 24.7 | 0.0   | 0.0   | 1.6   | 0.3   | 3.3   | 1.5   | 5.0   | 3.4   | 6.7   | 6.1   | 8.4   | 9.7   | 13.6  | 9.7   | 22.0  | 14.9  | 30.0  | 18.3  | 35.0  | 20.0  | 39.0  | 21.2  | 48.0  | 33.4  | 180.0 | 33.4 |
| 24.8 | 0.0   | 0.0   | 1.6   | 0.4   | 3.3   | 1.5   | 5.0   | 3.5   | 6.6   | 6.1   | 8.4   | 9.7   | 13.4  | 9.7   | 22.0  | 15.1  | 30.0  | 18.5  | 34.5  | 20.0  | 39.0  | 21.3  | 48.0  | 33.5  | 180.0 | 33.5 |
| 24.9 | 0.0   | 0.0   | 1.6   | 0.4   | 3.3   | 1.6   | 4.9   | 3.4   | 6.6   | 6.2   | 8.3   | 9.7   | 13.3  | 9.7   | 21.0  | 14.7  | 30.0  | 18.6  | 34.1  | 20.0  | 39.0  | 21.5  | 48.0  | 33.7  | 180.0 | 33.7 |
| 25   | 0.0   | 0.0   | 1.6   | 0.4   | 3.2   | 1.5   | 4.9   | 3.5   | 6.5   | 6.2   | 8.2   | 9.8   | 13.1  | 9.8   | 21.0  | 14.9  | 30.0  | 18.8  | 33.6  | 20.0  | 39.0  | 21.6  | 48.0  | 33.8  | 180.0 | 33.8 |
| 25.1 | 0.0   | 0.0   | 1.6   | 0.4   | 3.2   | 1.5   | 4.8   | 3.4   | 6.4   | 6.1   | 8.1   | 9.8   | 13.0  | 9.8   | 21.0  | 15.0  | 30.0  | 18.9  | 33.1  | 20.0  | 39.0  | 21.8  | 48.0  | 34.0  | 180.0 | 34.0 |
| 25.2 | 0.0   | 0.0   | 1.6   | 0.4   | 3.2   | 1.6   | 4.8   | 3.5   | 6.4   | 6.2   | 8.0   | 9.8   | 12.8  | 9.8   | 21.0  | 15.2  | 30.0  | 19.1  | 32.7  | 20.0  | 39.0  | 21.9  | 48.0  | 34.1  | 180.0 | 34.1 |
| 25.3 | 0.0   | 0.0   | 1.5   | 0.4   | 3.1   | 1.5   | 4.7   | 3.4   | 6.3   | 6.2   | 7.9   | 9.8   | 12.7  | 9.8   | 21.0  | 15.3  | 30.0  | 19.2  | 32.2  | 20.0  | 39.0  | 22.1  | 48.0  | 34.3  | 180.0 | 34.3 |
| 25.4 | 0.0   | 0.0   | 1.5   | 0.4   | 3.1   | 1.5   | 4.7   | 3.5   | 6.2   | 6.1   | 7.9   | 9.9   | 12.5  | 9.9   | 21.0  | 15.5  | 30.0  | 19.4  | 31.8  | 20.0  | 39.0  | 22.2  | 48.0  | 34.4  | 180.0 | 34.4 |
| 25.5 | 0.0   | 0.0   | 1.5   | 0.4   | 3.1   | 1.6   | 4.6   | 3.5   | 6.2   | 6.3   | 7.8   | 9.9   | 12.4  | 9.9   | 21.0  | 15.6  | 30.0  | 19.5  | 31.4  | 20.0  | 39.0  | 22.4  | 48.0  | 34.6  | 180.0 | 34.6 |
| 25.6 | 0.0   | 0.0   | 1.5   | 0.4   | 3.0   | 1.5   | 4.6   | 3.5   | 6.1   | 6.2   | 7.7   | 9.9   | 12.2  | 9.9   | 21.0  | 15.8  | 30.0  | 19.7  | 30.9  | 20.0  | 39.0  | 22.5  | 48.0  | 34.7  | 180.0 | 34.7 |
| 25.7 | 0.0   | 0.0   | 1.5   | 0.4   | 3.0   | 1.5   | 4.5   | 3.5   | 6.0   | 6.2   | 7.6   | 9.9   | 12.1  | 9.9   | 21.0  | 15.9  | 30.0  | 19.8  | 30.5  | 20.0  | 39.0  | 22.7  | 48.0  | 34.9  | 180.0 | 34.9 |
| 25.8 | 0.0   | 0.0   | 1.5   | 0.4   | 3.0   | 1.6   | 4.5   | 3.5   | 6.0   | 6.3   | 7.5   | 10.0  | 11.9  | 10.0  | 21.0  | 16.1  | 30.0  | 20.0  | 30.1  | 20.0  | 39.0  | 22.8  | 48.0  | 35.0  | 180.0 | 35.0 |
| 25.9 | 0.0   | 0.0   | 1.4   | 0.4   | 2.9   | 1.5   | 4.4   | 3.5   | 5.9   | 6.2   | 7.5   | 10.0  | 11.8  | 10.0  | 20.0  | 15.7  | 29.0  | 19.7  | 29.7  | 20.0  | 39.0  | 23.0  | 48.0  | 35.2  | 180.0 | 35.2 |
| 26   | 0.0   | 0.0   | 1.4   | 0.4   | 2.9   | 1.5   | 4.4   | 3.6   | 5.9   | 6.4   | 7.4   | 10.0  | 11.7  | 10.0  | 20.0  | 15.9  | 29.0  | 19.9  | 29.3  | 20.0  | 38.0  | 22.8  | 48.0  | 35.3  | 180.0 | 35.3 |
| 26.1 | 0.0   | 0.0   | 1.4   | 0.4   | 2.9   | 1.6   | 4.3   | 3.5   | 5.8   | 6.3   | 7.3   | 10.0  | 11.5  | 10.0  | 20.0  | 16.0  | 28.9  | 20.0  | 29.0  | 20.0  | 38.0  | 23.0  | 48.0  | 35.5  | 180.0 | 35.5 |
| 26.2 | 0.0   | 0.0   | 1.4   | 0.4   | 2.8   | 1.5   | 4.3   | 3.6   | 5.7   | 6.2   | 7.2   | 10.1  | 11.4  | 10.1  | 20.0  | 16.2  | 28.5  | 20.0  | 29.0  | 20.2  | 38.0  | 23.1  | 48.0  | 35.6  | 180.0 | 35.6 |
| 26.3 | 0.0   | 0.0   | 1.4   | 0.4   | 2.8   | 1.5   | 4.2   | 3.5   | 5.7   | 6.4   | 7.2   | 10.1  | 11.3  | 10.1  | 20.0  | 16.3  | 28.1  | 20.0  | 29.0  | 20.3  | 38.0  | 23.3  | 48.0  | 35.8  | 180.0 | 35.8 |

| GAIN | ANGLE | ATTN. | ANGLE | ATTN. | ANGLE | ATTN. | ANGLE | ATTN. | ANGLE | ATTN. | ANGLE | ATTN. | ANGLE | ATTN. | ANGLE | ATTN. | ANGLE | ATTN. | ANGLE | ATTN. | ANGLE | ATTN. | ANGLE | ATTN. | ANGLE | ATTN. |
|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 26.4 | 0.0   | 0.0   | 1.4   | 0.4   | 2.8   | 1.6   | 4.2   | 3.5   | 5.6   | 6.3   | 7.1   | 10.1  | 11.2  | 10.1  | 20.0  | 16.5  | 27.7  | 20.0  | 29.0  | 20.5  | 38.0  | 23.4  | 48.0  | 35.9  | 180.0 | 35.9  |
| 26.5 | 0.0   | 0.0   | 1.4   | 0.4   | 2.8   | 1.6   | 4.2   | 3.6   | 5.6   | 6.5   | 7.0   | 10.1  | 11.0  | 10.1  | 20.0  | 16.6  | 27.3  | 20.0  | 29.0  | 20.6  | 38.0  | 23.6  | 48.0  | 36.1  | 180.0 | 36.1  |
| 26.6 | 0.0   | 0.0   | 1.3   | 0.4   | 2.7   | 1.5   | 4.1   | 3.5   | 5.5   | 6.4   | 6.9   | 10.2  | 10.9  | 10.2  | 20.0  | 16.8  | 26.9  | 20.0  | 29.0  | 20.8  | 38.0  | 23.7  | 48.0  | 36.2  | 180.0 | 36.2  |
| 26.7 | 0.0   | 0.0   | 1.3   | 0.4   | 2.7   | 1.6   | 4.1   | 3.6   | 5.5   | 6.5   | 6.9   | 10.2  | 10.8  | 10.2  | 20.0  | 16.9  | 26.6  | 20.0  | 29.0  | 20.9  | 38.0  | 23.9  | 48.0  | 36.4  | 180.0 | 36.4  |
| 26.8 | 0.0   | 0.0   | 1.3   | 0.4   | 2.7   | 1.6   | 4.0   | 3.5   | 5.4   | 6.4   | 6.8   | 10.2  | 10.6  | 10.2  | 20.0  | 17.1  | 26.2  | 20.0  | 29.0  | 21.1  | 38.0  | 24.0  | 48.0  | 36.5  | 180.0 | 36.5  |
| 26.9 | 0.0   | 0.0   | 1.3   | 0.4   | 2.6   | 1.5   | 4.0   | 3.6   | 5.3   | 6.3   | 6.7   | 10.2  | 10.5  | 10.2  | 19.0  | 16.6  | 25.8  | 20.0  | 29.0  | 21.2  | 38.0  | 24.2  | 48.0  | 36.7  | 180.0 | 36.7  |
| 27   | 0.0   | 0.0   | 1.3   | 0.4   | 2.6   | 1.6   | 4.0   | 3.7   | 5.3   | 6.5   | 6.7   | 10.3  | 10.4  | 10.3  | 19.0  | 16.8  | 29.0  | 21.4  | 38.0  | 24.3  | 40.4  | 25.0  | 48.0  | 36.8  | 180.0 | 36.8  |
| 27.1 | 0.0   | 0.0   | 1.3   | 0.4   | 2.6   | 1.6   | 3.9   | 3.6   | 5.2   | 6.4   | 6.6   | 10.3  | 10.3  | 10.3  | 19.0  | 16.9  | 29.0  | 21.5  | 38.0  | 24.5  | 39.8  | 25.0  | 48.0  | 37.0  | 180.0 | 37.0  |
| 27.2 | 0.0   | 0.0   | 1.3   | 0.4   | 2.6   | 1.6   | 3.9   | 3.7   | 5.2   | 6.5   | 6.5   | 10.3  | 10.2  | 10.3  | 19.0  | 17.1  | 29.0  | 21.7  | 38.0  | 24.6  | 39.3  | 25.0  | 48.0  | 37.1  | 180.0 | 37.1  |
| 27.3 | 0.0   | 0.0   | 1.2   | 0.4   | 2.5   | 1.5   | 3.8   | 3.6   | 5.1   | 6.4   | 6.5   | 10.3  | 10.1  | 10.3  | 19.0  | 17.2  | 29.0  | 21.8  | 38.0  | 24.8  | 38.8  | 25.0  | 48.0  | 37.3  | 180.0 | 37.3  |
| 27.4 | 0.0   | 0.0   | 1.2   | 0.4   | 2.5   | 1.6   | 3.8   | 3.7   | 5.1   | 6.6   | 6.4   | 10.4  | 9.9   | 10.4  | 19.0  | 17.4  | 29.0  | 22.0  | 38.0  | 24.9  | 38.2  | 25.0  | 48.0  | 37.4  | 180.0 | 37.4  |
| 27.5 | 0.0   | 0.0   | 1.2   | 0.4   | 2.5   | 1.6   | 3.7   | 3.5   | 5.0   | 6.5   | 6.3   | 10.4  | 9.8   | 10.4  | 19.0  | 17.5  | 28.0  | 21.8  | 37.7  | 25.0  | 38.0  | 25.1  | 48.0  | 37.6  | 180.0 | 37.6  |
| 27.6 | 0.0   | 0.0   | 1.2   | 0.4   | 2.5   | 1.7   | 3.7   | 3.6   | 5.0   | 6.6   | 6.3   | 10.4  | 9.7   | 10.4  | 19.0  | 17.7  | 28.0  | 21.9  | 37.2  | 25.0  | 38.0  | 25.2  | 48.0  | 37.7  | 180.0 | 37.7  |
| 27.7 | 0.0   | 0.0   | 1.2   | 0.4   | 2.4   | 1.6   | 3.7   | 3.7   | 4.9   | 6.5   | 6.2   | 10.4  | 9.6   | 10.4  | 19.0  | 17.8  | 28.0  | 22.1  | 36.7  | 25.0  | 38.0  | 25.4  | 48.0  | 37.9  | 180.0 | 37.9  |
| 27.8 | 0.0   | 0.0   | 1.2   | 0.4   | 2.4   | 1.6   | 3.6   | 3.6   | 4.9   | 6.7   | 6.1   | 10.5  | 9.5   | 10.5  | 19.0  | 18.0  | 28.0  | 22.2  | 36.2  | 25.0  | 38.0  | 25.5  | 48.0  | 38.0  | 180.0 | 38.0  |
| 27.9 | 0.0   | 0.0   | 1.2   | 0.4   | 2.4   | 1.6   | 3.6   | 3.7   | 4.8   | 6.5   | 6.1   | 10.5  | 9.4   | 10.5  | 19.0  | 18.1  | 28.0  | 22.4  | 35.7  | 25.0  | 38.0  | 25.7  | 48.0  | 38.2  | 180.0 | 38.2  |
| 28   | 0.0   | 0.0   | 1.2   | 0.4   | 2.4   | 1.7   | 3.6   | 3.8   | 4.8   | 6.7   | 6.0   | 10.5  | 9.3   | 10.5  | 19.0  | 18.3  | 28.0  | 22.5  | 35.2  | 25.0  | 38.0  | 25.8  | 48.0  | 38.3  | 180.0 | 38.3  |
| 28.1 | 0.0   | 0.0   | 1.1   | 0.4   | 2.3   | 1.6   | 3.5   | 3.6   | 4.7   | 6.6   | 6.0   | 10.5  | 9.2   | 10.5  | 18.0  | 17.9  | 28.0  | 22.7  | 34.7  | 25.0  | 38.0  | 26.0  | 48.0  | 38.5  | 180.0 | 38.5  |
| 28.2 | 0.0   | 0.0   | 1.1   | 0.4   | 2.3   | 1.6   | 3.5   | 3.7   | 4.7   | 6.7   | 5.9   | 10.6  | 9.1   | 10.6  | 18.0  | 18.0  | 28.0  | 22.8  | 34.2  | 25.0  | 38.0  | 26.1  | 48.0  | 38.6  | 180.0 | 38.6  |
| 28.3 | 0.0   | 0.0   | 1.1   | 0.4   | 2.3   | 1.6   | 3.4   | 3.6   | 4.6   | 6.6   | 5.8   | 10.6  | 9.0   | 10.6  | 18.0  | 18.2  | 28.0  | 23.0  | 33.8  | 25.0  | 38.0  | 26.3  | 48.0  | 38.8  | 180.0 | 38.8  |
| 28.4 | 0.0   | 0.0   | 1.1   | 0.4   | 2.3   | 1.7   | 3.4   | 3.7   | 4.6   | 6.7   | 5.8   | 10.6  | 8.9   | 10.6  | 18.0  | 18.3  | 28.0  | 23.1  | 33.3  | 25.0  | 38.0  | 26.4  | 48.0  | 38.9  | 180.0 | 38.9  |
| 28.5 | 0.0   | 0.0   | 1.1   | 0.4   | 2.2   | 1.6   | 3.4   | 3.8   | 4.5   | 6.6   | 5.7   | 10.6  | 8.8   | 10.6  | 18.0  | 18.5  | 28.0  | 23.3  | 32.8  | 25.0  | 38.0  | 26.6  | 48.0  | 39.1  | 180.0 | 39.1  |
| 28.6 | 0.0   | 0.0   | 1.1   | 0.4   | 2.2   | 1.6   | 3.3   | 3.6   | 4.5   | 6.8   | 5.7   | 10.7  | 8.7   | 10.7  | 18.0  | 18.6  | 28.0  | 23.4  | 32.4  | 25.0  | 38.0  | 26.7  | 48.0  | 39.2  | 180.0 | 39.2  |
| 28.7 | 0.0   | 0.0   | 1.1   | 0.4   | 2.2   | 1.7   | 3.3   | 3.7   | 4.4   | 6.6   | 5.6   | 10.7  | 8.6   | 10.7  | 18.0  | 18.8  | 28.0  | 23.6  | 31.9  | 25.0  | 38.0  | 26.9  | 48.0  | 39.4  | 180.0 | 39.4  |
| 28.8 | 0.0   | 0.0   | 1.1   | 0.4   | 2.2   | 1.7   | 3.3   | 3.8   | 4.4   | 6.8   | 5.5   | 10.7  | 8.5   | 10.7  | 18.0  | 18.9  | 28.0  | 23.7  | 31.5  | 25.0  | 38.0  | 27.0  | 48.0  | 39.5  | 180.0 | 39.5  |
| 28.9 | 0.0   | 0.0   | 1.0   | 0.4   | 2.1   | 1.6   | 3.2   | 3.7   | 4.3   | 6.6   | 5.5   | 10.7  | 8.4   | 10.7  | 18.0  | 19.1  | 28.0  | 23.9  | 31.1  | 25.0  | 38.0  | 27.2  | 48.0  | 39.7  | 180.0 | 39.7  |
| 29   | 0.0   | 0.0   | 1.0   | 0.4   | 2.1   | 1.6   | 3.2   | 3.7   | 4.3   | 6.8   | 5.4   | 10.8  | 8.3   | 10.8  | 18.0  | 19.2  | 28.0  | 24.0  | 30.6  | 25.0  | 38.0  | 27.3  | 48.0  | 39.8  | 180.0 | 39.8  |
| 29.1 | 0.0   | 0.0   | 1.0   | 0.4   | 2.1   | 1.7   | 3.2   | 3.8   | 4.2   | 6.6   | 5.4   | 10.8  | 8.2   | 10.8  | 18.0  | 19.4  | 28.0  | 24.2  | 30.2  | 25.0  | 38.0  | 27.5  | 48.0  | 40.0  | 180.0 | 40.0  |
| 29.2 | 0.0   | 0.0   | 1.0   | 0.4   | 2.1   | 1.7   | 3.1   | 3.7   | 4.2   | 6.8   | 5.3   | 10.8  | 8.1   | 10.8  | 18.0  | 19.5  | 28.0  | 24.3  | 29.8  | 25.0  | 38.0  | 27.6  | 48.0  | 40.1  | 180.0 | 40.1  |
| 29.3 | 0.0   | 0.0   | 1.0   | 0.4   | 2.1   | 1.7   | 3.1   | 3.8   | 4.2   | 6.9   | 5.3   | 10.8  | 8.0   | 10.8  | 18.0  | 19.7  | 28.0  | 24.5  | 29.4  | 25.0  | 38.0  | 27.8  | 48.0  | 40.3  | 180.0 | 40.3  |
| 29.4 | 0.0   | 0.0   | 1.0   | 0.4   | 2.0   | 1.6   | 3.1   | 3.9   | 4.1   | 6.7   | 5.2   | 10.9  | 7.9   | 10.9  | 17.0  | 19.2  | 27.0  | 24.2  | 29.0  | 25.0  | 38.0  | 27.9  | 48.0  | 40.4  | 180.0 | 40.4  |
| 29.5 | 0.0   | 0.0   | 1.0   | 0.4   | 2.0   | 1.6   | 3.0   | 3.7   | 4.1   | 6.9   | 5.1   | 10.9  | 7.8   | 10.9  | 17.0  | 19.3  | 27.0  | 24.4  | 28.6  | 25.0  | 38.0  | 28.1  | 48.0  | 40.6  | 180.0 | 40.6  |

| GAIN | ANGLE | ATTN. | ANGLE | ATTN. | ANGLE | ATTN. | ANGLE | ATTN. | ANGLE | ATTN. | ANGLE | ATTN. | ANGLE | ATTN. | ANGLE | ATTN. | ANGLE | ATTN. | ANGLE | ATTN. | ANGLE | ATTN. | ANGLE | ATTN. | ANGLE | ATTN. |
|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 29.6 | 0.0   | 0.0   | 1.0   | 0.4   | 2.0   | 1.7   | 3.0   | 3.8   | 4.0   | 6.7   | 5.1   | 10.9  | 7.7   | 10.9  | 17.0  | 19.5  | 27.0  | 24.5  | 28.2  | 25.0  | 37.0  | 27.9  | 48.0  | 40.7  | 180.0 | 40.7  |
| 29.7 | 0.0   | 0.0   | 1.0   | 0.4   | 2.0   | 1.7   | 3.0   | 3.9   | 4.0   | 6.9   | 5.0   | 10.9  | 7.6   | 10.9  | 17.0  | 19.6  | 27.0  | 24.7  | 27.8  | 25.0  | 37.0  | 28.1  | 48.0  | 40.9  | 180.0 | 40.9  |
| 29.8 | 0.0   | 0.0   | 0.9   | 0.4   | 1.9   | 1.6   | 2.9   | 3.7   | 3.9   | 6.7   | 5.0   | 11.0  | 7.5   | 11.0  | 17.0  | 19.8  | 27.0  | 24.8  | 27.4  | 25.0  | 37.0  | 28.2  | 48.0  | 41.0  | 180.0 | 41.0  |
| 29.9 | 0.0   | 0.0   | 0.9   | 0.4   | 1.9   | 1.6   | 2.9   | 3.8   | 3.9   | 6.8   | 4.9   | 11.0  | 7.5   | 11.0  | 17.0  | 19.9  | 27.0  | 25.0  | 27.0  | 25.0  | 37.0  | 28.4  | 48.0  | 41.2  | 180.0 | 41.2  |
| 30   | 0.0   | 0.0   | 0.9   | 0.4   | 1.9   | 1.7   | 2.9   | 3.9   | 3.9   | 7.0   | 4.9   | 11.0  | 7.4   | 11.0  | 17.0  | 20.1  | 27.0  | 25.1  | 37.0  | 28.5  | 42.3  | 30.0  | 48.0  | 41.3  | 180.0 | 41.3  |
| 30.1 | 0.0   | 0.0   | 0.9   | 0.4   | 1.9   | 1.7   | 2.9   | 4.0   | 3.8   | 6.8   | 4.8   | 11.0  | 7.3   | 11.0  | 17.0  | 20.2  | 27.0  | 25.3  | 37.0  | 28.7  | 41.7  | 30.0  | 48.0  | 41.5  | 180.0 | 41.5  |
| 30.2 | 0.0   | 0.0   | 0.9   | 0.4   | 1.9   | 1.7   | 2.8   | 3.8   | 3.8   | 7.0   | 4.8   | 11.1  | 7.2   | 11.1  | 17.0  | 20.4  | 27.0  | 25.4  | 37.0  | 28.8  | 41.2  | 30.0  | 48.0  | 41.6  | 180.0 | 41.6  |
| 30.3 | 0.0   | 0.0   | 0.9   | 0.4   | 1.8   | 1.6   | 2.8   | 3.9   | 3.7   | 6.8   | 4.7   | 11.1  | 7.1   | 11.1  | 17.0  | 20.5  | 27.0  | 25.6  | 37.0  | 29.0  | 40.6  | 30.0  | 48.0  | 41.8  | 180.0 | 41.8  |
| 30.4 | 0.0   | 0.0   | 0.9   | 0.4   | 1.8   | 1.6   | 2.8   | 4.0   | 3.7   | 6.9   | 4.7   | 11.1  | 7.0   | 11.1  | 17.0  | 20.7  | 27.0  | 25.7  | 37.0  | 29.1  | 40.0  | 30.0  | 48.0  | 41.9  | 180.0 | 41.9  |
| 30.5 | 0.0   | 0.0   | 0.9   | 0.4   | 1.8   | 1.7   | 2.7   | 3.8   | 3.7   | 7.1   | 4.6   | 11.1  | 7.0   | 11.1  | 17.0  | 20.8  | 27.0  | 25.9  | 37.0  | 29.3  | 39.5  | 30.0  | 48.0  | 42.1  | 180.0 | 42.1  |
| 30.6 | 0.0   | 0.0   | 0.9   | 0.4   | 1.8   | 1.7   | 2.7   | 3.9   | 3.6   | 6.9   | 4.6   | 11.2  | 6.9   | 11.2  | 17.0  | 21.0  | 27.0  | 26.0  | 37.0  | 29.4  | 38.9  | 30.0  | 48.0  | 42.2  | 180.0 | 42.2  |
| 30.7 | 0.0   | 0.0   | 0.9   | 0.4   | 1.8   | 1.8   | 2.7   | 3.9   | 3.6   | 7.0   | 4.5   | 11.2  | 6.8   | 11.2  | 17.0  | 21.1  | 27.0  | 26.2  | 37.0  | 29.6  | 38.4  | 30.0  | 48.0  | 42.4  | 180.0 | 42.4  |
| 30.8 | 0.0   | 0.0   | 0.8   | 0.4   | 1.7   | 1.6   | 2.6   | 3.7   | 3.5   | 6.8   | 4.5   | 11.2  | 6.7   | 11.2  | 17.0  | 21.3  | 27.0  | 26.3  | 37.0  | 29.7  | 37.9  | 30.0  | 48.0  | 42.5  | 180.0 | 42.5  |
| 30.9 | 0.0   | 0.0   | 0.8   | 0.4   | 1.7   | 1.6   | 2.6   | 3.8   | 3.5   | 6.9   | 4.5   | 11.2  | 6.6   | 11.2  | 17.0  | 21.4  | 27.0  | 26.5  | 37.0  | 29.9  | 37.4  | 30.0  | 48.0  | 42.7  | 180.0 | 42.7  |
| 31   | 0.0   | 0.0   | 0.8   | 0.4   | 1.7   | 1.7   | 2.6   | 3.9   | 3.5   | 7.1   | 4.4   | 11.3  | 6.6   | 11.3  | 16.0  | 20.9  | 27.0  | 26.6  | 36.8  | 30.0  | 37.0  | 30.0  | 48.0  | 42.8  | 180.0 | 42.8  |
| 31.1 | 0.0   | 0.0   | 0.8   | 0.4   | 1.7   | 1.7   | 2.6   | 4.0   | 3.4   | 6.9   | 4.4   | 11.3  | 6.5   | 11.3  | 16.0  | 21.1  | 27.0  | 26.8  | 36.3  | 30.0  | 37.0  | 30.2  | 48.0  | 43.0  | 180.0 | 43.0  |
| 31.2 | 0.0   | 0.0   | 0.8   | 0.4   | 1.7   | 1.8   | 2.5   | 3.8   | 3.4   | 7.0   | 4.3   | 11.3  | 6.4   | 11.3  | 16.0  | 21.2  | 27.0  | 26.9  | 35.8  | 30.0  | 37.0  | 30.3  | 48.0  | 43.1  | 180.0 | 43.1  |
| 31.3 | 0.0   | 0.0   | 0.8   | 0.4   | 1.7   | 1.8   | 2.5   | 3.9   | 3.4   | 7.2   | 4.3   | 11.3  | 6.3   | 11.3  | 16.0  | 21.4  | 27.0  | 27.1  | 35.3  | 30.0  | 37.0  | 30.5  | 48.0  | 43.3  | 180.0 | 43.3  |
| 31.4 | 0.0   | 0.0   | 0.8   | 0.4   | 1.6   | 1.6   | 2.5   | 4.0   | 3.3   | 6.9   | 4.2   | 11.4  | 6.3   | 11.4  | 16.0  | 21.5  | 27.0  | 27.2  | 34.9  | 30.0  | 37.0  | 30.6  | 48.0  | 43.4  | 180.0 | 43.4  |
| 31.5 | 0.0   | 0.0   | 0.8   | 0.4   | 1.6   | 1.7   | 2.5   | 4.1   | 3.3   | 7.1   | 4.2   | 11.4  | 6.2   | 11.4  | 16.0  | 21.7  | 27.0  | 27.4  | 34.4  | 30.0  | 37.0  | 30.8  | 48.0  | 43.6  | 180.0 | 43.6  |
| 31.6 | 0.0   | 0.0   | 0.8   | 0.4   | 1.6   | 1.7   | 2.4   | 3.8   | 3.3   | 7.3   | 4.1   | 11.4  | 6.1   | 11.4  | 16.0  | 21.8  | 27.0  | 27.5  | 33.9  | 30.0  | 37.0  | 30.9  | 48.0  | 43.7  | 180.0 | 43.7  |
| 31.7 | 0.0   | 0.0   | 0.8   | 0.4   | 1.6   | 1.7   | 2.4   | 3.9   | 3.2   | 7.0   | 4.1   | 11.4  | 6.1   | 11.4  | 16.0  | 22.0  | 27.0  | 27.7  | 33.4  | 30.0  | 37.0  | 31.1  | 48.0  | 43.9  | 180.0 | 43.9  |
| 31.8 | 0.0   | 0.0   | 0.8   | 0.4   | 1.6   | 1.8   | 2.4   | 4.0   | 3.2   | 7.1   | 4.1   | 11.5  | 6.0   | 11.5  | 16.0  | 22.1  | 27.0  | 27.8  | 33.0  | 30.0  | 37.0  | 31.2  | 48.0  | 44.0  | 180.0 | 44.0  |
| 31.9 | 0.0   | 0.0   | 0.8   | 0.5   | 1.6   | 1.8   | 2.4   | 4.1   | 3.2   | 7.3   | 4.0   | 11.5  | 5.9   | 11.5  | 16.0  | 22.3  | 27.0  | 28.0  | 32.5  | 30.0  | 37.0  | 31.4  | 48.0  | 44.2  | 180.0 | 44.2  |
| 32   | 0.0   | 0.0   | 0.7   | 0.4   | 1.5   | 1.6   | 2.3   | 3.9   | 3.1   | 7.0   | 4.0   | 11.5  | 5.9   | 11.5  | 16.0  | 22.4  | 26.0  | 27.7  | 32.1  | 30.0  | 37.0  | 31.5  | 48.0  | 44.3  | 180.0 | 44.3  |
| 32.1 | 0.0   | 0.0   | 0.7   | 0.4   | 1.5   | 1.7   | 2.3   | 4.0   | 3.1   | 7.2   | 3.9   | 11.5  | 5.8   | 11.5  | 16.0  | 22.6  | 26.0  | 27.9  | 31.6  | 30.0  | 37.0  | 31.7  | 48.0  | 44.5  | 180.0 | 44.5  |
| 32.2 | 0.0   | 0.0   | 0.7   | 0.4   | 1.5   | 1.7   | 2.3   | 4.0   | 3.1   | 7.3   | 3.9   | 11.6  | 5.7   | 11.6  | 16.0  | 22.7  | 26.0  | 28.0  | 31.2  | 30.0  | 37.0  | 31.8  | 48.0  | 44.6  | 180.0 | 44.6  |
| 32.3 | 0.0   | 0.0   | 0.7   | 0.4   | 1.5   | 1.8   | 2.3   | 4.1   | 3.0   | 7.0   | 3.8   | 11.6  | 5.7   | 11.6  | 16.0  | 22.9  | 26.0  | 28.2  | 30.8  | 30.0  | 37.0  | 32.0  | 48.0  | 44.8  | 180.0 | 44.8  |
| 32.4 | 0.0   | 0.0   | 0.7   | 0.4   | 1.5   | 1.8   | 2.2   | 3.9   | 3.0   | 7.2   | 3.8   | 11.6  | 5.6   | 11.6  | 16.0  | 23.0  | 26.0  | 28.3  | 30.4  | 30.0  | 37.0  | 32.1  | 48.0  | 44.9  | 180.0 | 44.9  |
| 32.5 | 0.0   | 0.0   | 0.7   | 0.4   | 1.5   | 1.8   | 2.2   | 4.0   | 3.0   | 7.4   | 3.8   | 11.6  | 5.5   | 11.6  | 16.0  | 23.2  | 26.0  | 28.5  | 29.9  | 30.0  | 37.0  | 32.3  | 48.0  | 45.1  | 180.0 | 45.1  |
| 32.6 | 0.0   | 0.0   | 0.7   | 0.4   | 1.4   | 1.6   | 2.2   | 4.1   | 2.9   | 7.1   | 3.7   | 11.7  | 5.5   | 11.7  | 16.0  | 23.3  | 26.0  | 28.6  | 29.5  | 30.0  | 37.0  | 32.4  | 48.0  | 45.2  | 180.0 | 45.2  |
| 32.7 | 0.0   | 0.0   | 0.7   | 0.4   | 1.4   | 1.7   | 2.2   | 4.2   | 2.9   | 7.2   | 3.7   | 11.7  | 5.4   | 11.7  | 16.0  | 23.5  | 26.0  | 28.8  | 29.1  | 30.0  | 37.0  | 32.6  | 48.0  | 45.4  | 180.0 | 45.4  |

| GAIN | ANGLE | ATTN. | ANGLE | ATTN. | ANGLE | ATTN. | ANGLE | ATTN. | ANGLE | ATTN. | ANGLE | ATTN. | ANGLE | ATTN. | ANGLE | ATTN. | ANGLE | ATTN. | ANGLE | ATTN. | ANGLE | ATTN. | ANGLE | ATTN. |       |      |
|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|
| 32.8 | 0.0   | 0.0   | 0.7   | 0.4   | 1.4   | 1.7   | 2.1   | 3.9   | 2.9   | 7.4   | 3.7   | 11.7  | 5.3   | 11.7  | 16.0  | 23.6  | 26.0  | 28.9  | 28.7  | 30.0  | 37.0  | 32.7  | 48.0  | 45.5  | 180.0 | 45.5 |
| 32.9 | 0.0   | 0.0   | 0.7   | 0.4   | 1.4   | 1.8   | 2.1   | 4.0   | 2.8   | 7.0   | 3.6   | 11.7  | 5.3   | 11.7  | 16.0  | 23.8  | 26.0  | 29.1  | 28.3  | 30.0  | 37.0  | 32.9  | 48.0  | 45.7  | 180.0 | 45.7 |
| 33   | 0.0   | 0.0   | 0.7   | 0.5   | 1.4   | 1.8   | 2.1   | 4.1   | 2.8   | 7.2   | 3.6   | 11.8  | 5.2   | 11.8  | 15.0  | 23.2  | 26.0  | 29.2  | 27.9  | 30.0  | 37.0  | 33.0  | 48.0  | 45.8  | 180.0 | 45.8 |
| 33.1 | 0.0   | 0.0   | 0.7   | 0.5   | 1.4   | 1.8   | 2.1   | 4.1   | 2.8   | 7.4   | 3.5   | 11.8  | 5.2   | 11.8  | 15.0  | 23.4  | 26.0  | 29.4  | 27.6  | 30.0  | 37.0  | 33.2  | 48.0  | 46.0  | 180.0 | 46.0 |
| 33.2 | 0.0   | 0.0   | 0.7   | 0.5   | 1.4   | 1.9   | 2.1   | 4.2   | 2.8   | 7.5   | 3.5   | 11.8  | 5.1   | 11.8  | 15.0  | 23.5  | 26.0  | 29.5  | 27.2  | 30.0  | 37.0  | 33.3  | 48.0  | 46.1  | 180.0 | 46.1 |
| 33.3 | 0.0   | 0.0   | 0.6   | 0.4   | 1.3   | 1.7   | 2.0   | 3.9   | 2.7   | 7.2   | 3.5   | 11.8  | 5.0   | 11.8  | 15.0  | 23.7  | 26.0  | 29.7  | 26.8  | 30.0  | 37.0  | 33.5  | 48.0  | 46.3  | 180.0 | 46.3 |
| 33.4 | 0.0   | 0.0   | 0.6   | 0.4   | 1.3   | 1.7   | 2.0   | 4.0   | 2.7   | 7.3   | 3.4   | 11.9  | 5.0   | 11.9  | 15.0  | 23.8  | 26.0  | 29.8  | 26.4  | 30.0  | 37.0  | 33.6  | 48.0  | 46.4  | 180.0 | 46.4 |
| 33.5 | 0.0   | 0.0   | 0.6   | 0.4   | 1.3   | 1.7   | 2.0   | 4.1   | 2.7   | 7.5   | 3.4   | 11.9  | 4.9   | 11.9  | 15.0  | 24.0  | 26.0  | 30.0  | 26.1  | 30.0  | 37.0  | 33.8  | 48.0  | 46.6  | 180.0 | 46.6 |
| 33.6 | 0.0   | 0.0   | 0.6   | 0.4   | 1.3   | 1.8   | 2.0   | 4.2   | 2.6   | 7.1   | 3.4   | 11.9  | 4.9   | 11.9  | 15.0  | 24.1  | 25.7  | 30.0  | 26.0  | 30.1  | 37.0  | 33.9  | 48.0  | 46.7  | 180.0 | 46.7 |
| 33.7 | 0.0   | 0.0   | 0.6   | 0.4   | 1.3   | 1.8   | 1.9   | 3.9   | 2.6   | 7.3   | 3.3   | 11.9  | 4.8   | 11.9  | 15.0  | 24.3  | 25.4  | 30.0  | 26.0  | 30.3  | 37.0  | 34.1  | 48.0  | 46.9  | 180.0 | 46.9 |
| 33.8 | 0.0   | 0.0   | 0.6   | 0.4   | 1.3   | 1.9   | 1.9   | 4.0   | 2.6   | 7.5   | 3.3   | 12.0  | 4.8   | 12.0  | 15.0  | 24.4  | 25.0  | 30.0  | 26.0  | 30.4  | 37.0  | 34.2  | 48.0  | 47.0  | 180.0 | 47.0 |
| 33.9 | 0.0   | 0.0   | 0.6   | 0.4   | 1.3   | 1.9   | 1.9   | 4.1   | 2.6   | 7.6   | 3.3   | 12.0  | 4.7   | 12.0  | 15.0  | 24.6  | 24.7  | 30.0  | 26.0  | 30.6  | 37.0  | 34.4  | 48.0  | 47.2  | 180.0 | 47.2 |
| 34   | 0.0   | 0.0   | 0.6   | 0.4   | 1.2   | 1.7   | 1.9   | 4.2   | 2.5   | 7.2   | 3.2   | 12.0  | 4.6   | 12.0  | 15.0  | 24.7  | 24.3  | 30.0  | 26.0  | 30.7  | 37.0  | 34.5  | 48.0  | 47.3  | 180.0 | 47.3 |
| 34.1 | 0.0   | 0.0   | 0.6   | 0.4   | 1.2   | 1.7   | 1.9   | 4.3   | 2.5   | 7.4   | 3.2   | 12.0  | 4.6   | 12.0  | 15.0  | 24.9  | 24.0  | 30.0  | 26.0  | 30.9  | 37.0  | 34.7  | 48.0  | 47.5  | 180.0 | 47.5 |
| 34.2 | 0.0   | 0.0   | 0.6   | 0.4   | 1.2   | 1.7   | 1.8   | 3.9   | 2.5   | 7.6   | 3.2   | 12.1  | 4.5   | 12.1  | 15.0  | 25.0  | 23.7  | 30.0  | 26.0  | 31.0  | 37.0  | 34.8  | 48.0  | 47.6  | 180.0 | 47.6 |
| 34.3 | 0.0   | 0.0   | 0.6   | 0.4   | 1.2   | 1.8   | 1.8   | 4.0   | 2.4   | 7.1   | 3.1   | 12.1  | 4.5   | 12.1  | 15.0  | 25.2  | 23.3  | 30.0  | 26.0  | 31.2  | 37.0  | 35.0  | 48.0  | 47.8  | 180.0 | 47.8 |
| 34.4 | 0.0   | 0.0   | 0.6   | 0.5   | 1.2   | 1.8   | 1.8   | 4.1   | 2.4   | 7.3   | 3.1   | 12.1  | 4.4   | 12.1  | 15.0  | 25.3  | 23.0  | 30.0  | 26.0  | 31.3  | 37.0  | 35.1  | 48.0  | 47.9  | 180.0 | 47.9 |
| 34.5 | 0.0   | 0.0   | 0.6   | 0.5   | 1.2   | 1.9   | 1.8   | 4.2   | 2.4   | 7.5   | 3.1   | 12.1  | 4.4   | 12.1  | 15.0  | 25.5  | 22.7  | 30.0  | 26.0  | 31.5  | 37.0  | 35.3  | 48.0  | 48.1  | 180.0 | 48.1 |
| 34.6 | 0.0   | 0.0   | 0.6   | 0.5   | 1.2   | 1.9   | 1.8   | 4.3   | 2.4   | 7.7   | 3.0   | 12.2  | 4.3   | 12.2  | 15.0  | 25.6  | 22.4  | 30.0  | 26.0  | 31.6  | 37.0  | 35.4  | 48.0  | 48.2  | 180.0 | 48.2 |
| 34.7 | 0.0   | 0.0   | 0.5   | 0.3   | 1.1   | 1.6   | 1.7   | 3.9   | 2.3   | 7.2   | 3.0   | 12.2  | 4.3   | 12.2  | 15.0  | 25.8  | 22.1  | 30.0  | 26.0  | 31.8  | 37.0  | 35.6  | 48.0  | 48.4  | 180.0 | 48.4 |
| 34.8 | 0.0   | 0.0   | 0.5   | 0.3   | 1.1   | 1.7   | 1.7   | 4.0   | 2.3   | 7.4   | 3.0   | 12.2  | 4.2   | 12.2  | 15.0  | 25.9  | 21.8  | 30.0  | 26.0  | 31.9  | 37.0  | 35.7  | 48.0  | 48.5  | 180.0 | 48.5 |
| 34.9 | 0.0   | 0.0   | 0.5   | 0.4   | 1.1   | 1.7   | 1.7   | 4.1   | 2.3   | 7.5   | 2.9   | 12.2  | 4.2   | 12.2  | 15.0  | 26.1  | 21.5  | 30.0  | 26.0  | 32.1  | 37.0  | 35.9  | 48.0  | 48.7  | 180.0 | 48.7 |
| 35   | 0.0   | 0.0   | 0.5   | 0.4   | 1.1   | 1.8   | 1.7   | 4.2   | 2.3   | 7.7   | 2.9   | 12.3  | 4.1   | 12.3  | 15.0  | 26.2  | 21.2  | 30.0  | 26.0  | 32.2  | 37.0  | 36.0  | 48.0  | 48.8  | 180.0 | 48.8 |
| 35.1 | 0.0   | 0.0   | 0.5   | 0.4   | 1.1   | 1.8   | 1.7   | 4.3   | 2.2   | 7.2   | 2.9   | 12.3  | 4.1   | 12.3  | 15.0  | 26.4  | 20.9  | 30.0  | 26.0  | 32.4  | 37.0  | 36.2  | 48.0  | 49.0  | 180.0 | 49.0 |
| 35.2 | 0.0   | 0.0   | 0.5   | 0.4   | 1.1   | 1.8   | 1.7   | 4.4   | 2.2   | 7.4   | 2.8   | 12.3  | 4.0   | 12.3  | 15.0  | 26.5  | 20.6  | 30.0  | 26.0  | 32.5  | 37.0  | 36.3  | 48.0  | 49.1  | 180.0 | 49.1 |
| 35.3 | 0.0   | 0.0   | 0.5   | 0.4   | 1.1   | 1.9   | 1.6   | 4.0   | 2.2   | 7.6   | 2.8   | 12.3  | 4.0   | 12.3  | 15.0  | 26.7  | 20.3  | 30.0  | 26.0  | 32.7  | 37.0  | 36.5  | 48.0  | 49.3  | 180.0 | 49.3 |
| 35.4 | 0.0   | 0.0   | 0.5   | 0.4   | 1.1   | 1.9   | 1.6   | 4.1   | 2.2   | 7.7   | 2.8   | 12.4  | 4.0   | 12.4  | 15.0  | 26.8  | 20.0  | 30.0  | 26.0  | 32.8  | 37.0  | 36.6  | 48.0  | 49.4  | 180.0 | 49.4 |
| 35.5 | 0.0   | 0.0   | 0.5   | 0.4   | 1.1   | 2.0   | 1.6   | 4.2   | 2.2   | 7.9   | 2.8   | 12.4  | 3.9   | 12.4  | 14.0  | 26.2  | 19.8  | 30.0  | 26.0  | 33.0  | 37.0  | 36.8  | 48.0  | 49.6  | 180.0 | 49.6 |
| 35.6 | 0.0   | 0.0   | 0.5   | 0.4   | 1.0   | 1.7   | 1.6   | 4.3   | 2.1   | 7.4   | 2.7   | 12.4  | 3.9   | 12.4  | 14.0  | 26.4  | 19.5  | 30.0  | 25.0  | 32.7  | 37.0  | 36.9  | 48.0  | 49.7  | 180.0 | 49.7 |
| 35.7 | 0.0   | 0.0   | 0.5   | 0.4   | 1.0   | 1.7   | 1.6   | 4.4   | 2.1   | 7.5   | 2.7   | 12.4  | 3.8   | 12.4  | 14.0  | 26.5  | 19.2  | 30.0  | 25.0  | 32.8  | 37.0  | 37.1  | 48.0  | 49.9  | 180.0 | 49.9 |
| 35.8 | 0.0   | 0.0   | 0.5   | 0.4   | 1.0   | 1.8   | 1.6   | 4.5   | 2.1   | 7.7   | 2.7   | 12.5  | 3.8   | 12.5  | 14.0  | 26.7  | 19.0  | 30.0  | 25.0  | 33.0  | 36.0  | 36.9  | 48.0  | 50.0  | 180.0 | 50.0 |
| 35.9 | 0.0   | 0.0   | 0.5   | 0.4   | 1.0   | 1.8   | 1.5   | 4.0   | 2.1   | 7.9   | 2.6   | 12.5  | 3.7   | 12.5  | 14.0  | 26.8  | 18.7  | 30.0  | 25.0  | 33.1  | 36.0  | 37.1  | 48.0  | 50.2  | 180.0 | 50.2 |

| GAIN | ANGLE | ATTN. | ANGLE | ATTN. | ANGLE | ATTN. | ANGLE | ATTN. | ANGLE | ATTN. | ANGLE | ATTN. | ANGLE | ATTN. | ANGLE | ATTN. | ANGLE | ATTN. | ANGLE | ATTN. | ANGLE | ATTN. | ANGLE | ATTN. | ANGLE | ATTN. |
|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 36   | 0.0   | 0.0   | 0.5   | 0.5   | 1.0   | 1.8   | 1.5   | 4.1   | 2.0   | 7.3   | 2.6   | 12.5  | 3.7   | 12.5  | 14.0  | 27.0  | 18.4  | 30.0  | 25.0  | 33.3  | 36.0  | 37.2  | 48.0  | 50.3  | 180.0 | 50.3  |
| 36.1 | 0.0   | 0.0   | 0.5   | 0.5   | 1.0   | 1.9   | 1.5   | 4.2   | 2.0   | 7.5   | 2.6   | 12.5  | 3.7   | 12.5  | 14.0  | 27.1  | 18.2  | 30.0  | 25.0  | 33.4  | 36.0  | 37.4  | 48.0  | 50.5  | 180.0 | 50.5  |
| 36.2 | 0.0   | 0.0   | 0.5   | 0.5   | 1.0   | 1.9   | 1.5   | 4.3   | 2.0   | 7.7   | 2.6   | 12.6  | 3.6   | 12.6  | 14.0  | 27.3  | 17.9  | 30.0  | 25.0  | 33.6  | 36.0  | 37.5  | 48.0  | 50.6  | 180.0 | 50.6  |
| 36.3 | 0.0   | 0.0   | 0.5   | 0.5   | 1.0   | 2.0   | 1.5   | 4.4   | 2.0   | 7.9   | 2.5   | 12.6  | 3.6   | 12.6  | 14.0  | 27.4  | 17.7  | 30.0  | 25.0  | 33.7  | 36.0  | 37.7  | 48.0  | 50.8  | 180.0 | 50.8  |
| 36.4 | 0.0   | 0.0   | 0.5   | 0.5   | 1.0   | 2.0   | 1.5   | 4.5   | 2.0   | 8.0   | 2.5   | 12.6  | 3.5   | 12.6  | 14.0  | 27.6  | 17.4  | 30.0  | 25.0  | 33.9  | 36.0  | 37.8  | 48.0  | 50.9  | 180.0 | 50.9  |
| 36.5 | 0.0   | 0.0   | 0.4   | 0.3   | 0.9   | 1.7   | 1.4   | 4.0   | 1.9   | 7.4   | 2.5   | 12.6  | 3.5   | 12.6  | 14.0  | 27.7  | 17.2  | 30.0  | 25.0  | 34.0  | 36.0  | 38.0  | 48.0  | 51.1  | 180.0 | 51.1  |
| 36.6 | 0.0   | 0.0   | 0.4   | 0.3   | 0.9   | 1.7   | 1.4   | 4.1   | 1.9   | 7.6   | 2.5   | 12.7  | 3.4   | 12.7  | 14.0  | 27.9  | 17.0  | 30.0  | 25.0  | 34.2  | 36.0  | 38.1  | 48.0  | 51.2  | 180.0 | 51.2  |
| 36.7 | 0.0   | 0.0   | 0.4   | 0.3   | 0.9   | 1.7   | 1.4   | 4.2   | 1.9   | 7.8   | 2.4   | 12.7  | 3.4   | 12.7  | 14.0  | 28.0  | 16.7  | 30.0  | 25.0  | 34.3  | 36.0  | 38.3  | 48.0  | 51.4  | 180.0 | 51.4  |
| 36.8 | 0.0   | 0.0   | 0.4   | 0.4   | 0.9   | 1.8   | 1.4   | 4.3   | 1.9   | 8.0   | 2.4   | 12.7  | 3.4   | 12.7  | 14.0  | 28.2  | 16.5  | 30.0  | 25.0  | 34.5  | 36.0  | 38.4  | 48.0  | 51.5  | 180.0 | 51.5  |
| 36.9 | 0.0   | 0.0   | 0.4   | 0.4   | 0.9   | 1.8   | 1.4   | 4.4   | 1.9   | 8.1   | 2.4   | 12.7  | 3.3   | 12.7  | 14.0  | 28.3  | 16.3  | 30.0  | 25.0  | 34.6  | 36.0  | 38.6  | 48.0  | 51.7  | 180.0 | 51.7  |
| 37   | 0.0   | 0.0   | 0.4   | 0.4   | 0.9   | 1.9   | 1.4   | 4.5   | 1.8   | 7.5   | 2.4   | 12.8  | 3.3   | 12.8  | 14.0  | 28.5  | 16.1  | 30.0  | 25.0  | 34.8  | 36.0  | 38.7  | 48.0  | 51.8  | 180.0 | 51.8  |
| 37.1 | 0.0   | 0.0   | 0.4   | 0.4   | 0.9   | 1.9   | 1.3   | 4.0   | 1.8   | 7.7   | 2.3   | 12.8  | 3.3   | 12.8  | 14.0  | 28.6  | 15.8  | 30.0  | 25.0  | 34.9  | 36.0  | 38.9  | 48.0  | 52.0  | 180.0 | 52.0  |
| 37.2 | 0.0   | 0.0   | 0.4   | 0.4   | 0.9   | 2.0   | 1.3   | 4.1   | 1.8   | 7.8   | 2.3   | 12.8  | 3.2   | 12.8  | 14.0  | 28.8  | 15.6  | 30.0  | 25.0  | 35.1  | 36.0  | 39.0  | 48.0  | 52.1  | 180.0 | 52.1  |
| 37.3 | 0.0   | 0.0   | 0.4   | 0.4   | 0.9   | 2.0   | 1.3   | 4.2   | 1.8   | 8.0   | 2.3   | 12.8  | 3.2   | 12.8  | 14.0  | 28.9  | 15.4  | 30.0  | 25.0  | 35.2  | 36.0  | 39.2  | 48.0  | 52.3  | 180.0 | 52.3  |
| 37.4 | 0.0   | 0.0   | 0.4   | 0.4   | 0.9   | 2.1   | 1.3   | 4.3   | 1.8   | 8.2   | 2.3   | 12.9  | 3.1   | 12.9  | 14.0  | 29.1  | 15.2  | 30.0  | 25.0  | 35.4  | 36.0  | 39.3  | 48.0  | 52.4  | 180.0 | 52.4  |
| 37.5 | 0.0   | 0.0   | 0.4   | 0.4   | 0.8   | 1.7   | 1.3   | 4.4   | 1.7   | 7.5   | 2.2   | 12.9  | 3.1   | 12.9  | 14.0  | 29.2  | 15.0  | 30.0  | 25.0  | 35.5  | 36.0  | 39.5  | 48.0  | 52.6  | 180.0 | 52.6  |
| 37.6 | 0.0   | 0.0   | 0.4   | 0.4   | 0.8   | 1.7   | 1.3   | 4.5   | 1.7   | 7.7   | 2.2   | 12.9  | 3.1   | 12.9  | 14.0  | 29.4  | 14.8  | 30.0  | 25.0  | 35.7  | 36.0  | 39.6  | 48.0  | 52.7  | 180.0 | 52.7  |
| 37.7 | 0.0   | 0.0   | 0.4   | 0.4   | 0.8   | 1.7   | 1.3   | 4.6   | 1.7   | 7.8   | 2.2   | 12.9  | 3.0   | 12.9  | 14.0  | 29.5  | 14.6  | 30.0  | 25.0  | 35.8  | 36.0  | 39.8  | 48.0  | 52.9  | 180.0 | 52.9  |
| 37.8 | 0.0   | 0.0   | 0.4   | 0.4   | 0.8   | 1.8   | 1.2   | 4.0   | 1.7   | 8.0   | 2.2   | 13.0  | 3.0   | 13.0  | 14.0  | 29.7  | 14.4  | 30.0  | 25.0  | 36.0  | 36.0  | 39.9  | 48.0  | 53.0  | 180.0 | 53.0  |
| 37.9 | 0.0   | 0.0   | 0.4   | 0.5   | 0.8   | 1.8   | 1.2   | 4.1   | 1.7   | 8.2   | 2.1   | 13.0  | 3.0   | 13.0  | 14.0  | 29.8  | 14.2  | 30.0  | 25.0  | 36.1  | 36.0  | 40.1  | 48.0  | 53.2  | 180.0 | 53.2  |
| 38   | 0.0   | 0.0   | 0.4   | 0.5   | 0.8   | 1.9   | 1.2   | 4.2   | 1.6   | 7.4   | 2.1   | 13.0  | 2.9   | 13.0  | 14.0  | 30.0  | 14.0  | 30.0  | 25.0  | 36.3  | 36.0  | 40.2  | 48.0  | 53.3  | 180.0 | 53.3  |
| 38.1 | 0.0   | 0.0   | 0.4   | 0.5   | 0.8   | 1.9   | 1.2   | 4.3   | 1.6   | 7.6   | 2.1   | 13.0  | 2.9   | 13.0  | 13.8  | 30.0  | 14.0  | 30.1  | 25.0  | 36.4  | 36.0  | 40.4  | 48.0  | 53.5  | 180.0 | 53.5  |
| 38.2 | 0.0   | 0.0   | 0.4   | 0.5   | 0.8   | 1.9   | 1.2   | 4.4   | 1.6   | 7.8   | 2.1   | 13.1  | 2.9   | 13.1  | 13.6  | 30.0  | 14.0  | 30.3  | 25.0  | 36.6  | 36.0  | 40.5  | 48.0  | 53.6  | 180.0 | 53.6  |
| 38.3 | 0.0   | 0.0   | 0.4   | 0.5   | 0.8   | 2.0   | 1.2   | 4.5   | 1.6   | 8.0   | 2.0   | 13.1  | 2.8   | 13.1  | 13.4  | 30.0  | 14.0  | 30.4  | 25.0  | 36.7  | 36.0  | 40.7  | 48.0  | 53.8  | 180.0 | 53.8  |
| 38.4 | 0.0   | 0.0   | 0.4   | 0.5   | 0.8   | 2.0   | 1.2   | 4.6   | 1.6   | 8.2   | 2.0   | 13.1  | 2.8   | 13.1  | 13.2  | 30.0  | 14.0  | 30.6  | 25.0  | 36.9  | 36.0  | 40.8  | 48.0  | 53.9  | 180.0 | 53.9  |
| 38.5 | 0.0   | 0.0   | 0.4   | 0.5   | 0.8   | 2.1   | 1.2   | 4.7   | 1.6   | 8.3   | 2.0   | 13.1  | 2.8   | 13.1  | 13.0  | 30.0  | 14.0  | 30.7  | 25.0  | 37.0  | 36.0  | 41.0  | 48.0  | 54.1  | 180.0 | 54.1  |
| 38.6 | 0.0   | 0.0   | 0.3   | 0.3   | 0.7   | 1.6   | 1.1   | 4.0   | 1.5   | 7.5   | 2.0   | 13.2  | 2.7   | 13.2  | 12.9  | 30.0  | 14.0  | 30.9  | 25.0  | 37.2  | 36.0  | 41.1  | 48.0  | 54.2  | 180.0 | 54.2  |
| 38.7 | 0.0   | 0.0   | 0.3   | 0.3   | 0.7   | 1.7   | 1.1   | 4.1   | 1.5   | 7.7   | 2.0   | 13.2  | 2.7   | 13.2  | 12.7  | 30.0  | 14.0  | 31.0  | 25.0  | 37.3  | 36.0  | 41.3  | 48.0  | 54.4  | 180.0 | 54.4  |
| 38.8 | 0.0   | 0.0   | 0.3   | 0.3   | 0.7   | 1.7   | 1.1   | 4.2   | 1.5   | 7.9   | 1.9   | 13.2  | 2.7   | 13.2  | 12.5  | 30.0  | 14.0  | 31.2  | 25.0  | 37.5  | 36.0  | 41.4  | 48.0  | 54.5  | 180.0 | 54.5  |
| 38.9 | 0.0   | 0.0   | 0.3   | 0.3   | 0.7   | 1.8   | 1.1   | 4.3   | 1.5   | 8.0   | 1.9   | 13.2  | 2.6   | 13.2  | 12.3  | 30.0  | 14.0  | 31.3  | 25.0  | 37.6  | 36.0  | 41.6  | 48.0  | 54.7  | 180.0 | 54.7  |
| 39   | 0.0   | 0.0   | 0.3   | 0.3   | 0.7   | 1.8   | 1.1   | 4.4   | 1.5   | 8.2   | 1.9   | 13.3  | 2.6   | 13.3  | 12.2  | 30.0  | 14.0  | 31.5  | 25.0  | 37.8  | 36.0  | 41.7  | 48.0  | 54.8  | 180.0 | 54.8  |
| 39.1 | 0.0   | 0.0   | 0.3   | 0.3   | 0.7   | 1.8   | 1.1   | 4.5   | 1.5   | 8.4   | 1.9   | 13.3  | 2.6   | 13.3  | 12.0  | 30.0  | 13.0  | 30.8  | 25.0  | 37.9  | 36.0  | 41.9  | 48.0  | 55.0  | 180.0 | 55.0  |

| GAIN | ANGLE | ATTN. | ANGLE | ATTN. | ANGLE | ATTN. | ANGLE | ATTN. | ANGLE | ATTN. | ANGLE | ATTN. | ANGLE | ATTN. | ANGLE | ATTN. | ANGLE | ATTN. | ANGLE | ATTN. | ANGLE | ATTN. | ANGLE | ATTN. |       |      |
|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|
| 39.2 | 0.0   | 0.0   | 0.3   | 0.3   | 0.7   | 1.9   | 1.1   | 4.6   | 1.4   | 7.5   | 1.9   | 13.3  | 2.6   | 13.3  | 11.8  | 30.0  | 13.0  | 31.0  | 25.0  | 38.1  | 36.0  | 42.0  | 48.0  | 55.1  | 180.0 | 55.1 |
| 39.3 | 0.0   | 0.0   | 0.3   | 0.4   | 0.7   | 1.9   | 1.1   | 4.7   | 1.4   | 7.7   | 1.8   | 13.3  | 2.5   | 13.3  | 11.7  | 30.0  | 13.0  | 31.1  | 25.0  | 38.2  | 36.0  | 42.2  | 48.0  | 55.3  | 180.0 | 55.3 |
| 39.4 | 0.0   | 0.0   | 0.3   | 0.4   | 0.7   | 2.0   | 1.0   | 4.0   | 1.4   | 7.9   | 1.8   | 13.4  | 2.5   | 13.4  | 11.5  | 30.0  | 13.0  | 31.3  | 25.0  | 38.4  | 36.0  | 42.3  | 48.0  | 55.4  | 180.0 | 55.4 |
| 39.5 | 0.0   | 0.0   | 0.3   | 0.4   | 0.7   | 2.0   | 1.0   | 4.1   | 1.4   | 8.0   | 1.8   | 13.4  | 2.5   | 13.4  | 11.4  | 30.0  | 13.0  | 31.4  | 25.0  | 38.5  | 36.0  | 42.5  | 48.0  | 55.6  | 180.0 | 55.6 |
| 39.6 | 0.0   | 0.0   | 0.3   | 0.4   | 0.7   | 2.1   | 1.0   | 4.2   | 1.4   | 8.2   | 1.8   | 13.4  | 2.4   | 13.4  | 11.2  | 30.0  | 13.0  | 31.6  | 25.0  | 38.7  | 36.0  | 42.6  | 48.0  | 55.7  | 180.0 | 55.7 |
| 39.7 | 0.0   | 0.0   | 0.3   | 0.4   | 0.7   | 2.1   | 1.0   | 4.3   | 1.4   | 8.4   | 1.8   | 13.4  | 2.4   | 13.4  | 11.0  | 30.0  | 13.0  | 31.7  | 25.0  | 38.8  | 36.0  | 42.8  | 48.0  | 55.9  | 180.0 | 55.9 |
| 39.8 | 0.0   | 0.0   | 0.3   | 0.4   | 0.6   | 1.6   | 1.0   | 4.4   | 1.3   | 7.4   | 1.7   | 13.5  | 2.4   | 13.5  | 10.9  | 30.0  | 13.0  | 31.9  | 25.0  | 39.0  | 36.0  | 42.9  | 48.0  | 56.0  | 180.0 | 56.0 |
| 39.9 | 0.0   | 0.0   | 0.3   | 0.4   | 0.6   | 1.6   | 1.0   | 4.5   | 1.3   | 7.6   | 1.7   | 13.5  | 2.4   | 13.5  | 10.7  | 30.0  | 13.0  | 32.0  | 25.0  | 39.1  | 36.0  | 43.1  | 48.0  | 56.2  | 180.0 | 56.2 |
| 40   | 0.0   | 0.0   | 0.3   | 0.4   | 0.6   | 1.7   | 1.0   | 4.6   | 1.3   | 7.8   | 1.7   | 13.5  | 2.3   | 13.5  | 10.6  | 30.0  | 13.0  | 32.2  | 25.0  | 39.3  | 36.0  | 43.2  | 48.0  | 56.3  | 180.0 | 56.3 |
| 40.1 | 0.0   | 0.0   | 0.3   | 0.4   | 0.6   | 1.7   | 1.0   | 4.7   | 1.3   | 8.0   | 1.7   | 13.5  | 2.3   | 13.5  | 10.4  | 30.0  | 13.0  | 32.3  | 25.0  | 39.4  | 36.0  | 43.4  | 48.0  | 56.5  | 180.0 | 56.5 |
| 40.2 | 0.0   | 0.0   | 0.3   | 0.4   | 0.6   | 1.7   | 1.0   | 4.8   | 1.3   | 8.2   | 1.7   | 13.6  | 2.3   | 13.6  | 10.3  | 30.0  | 13.0  | 32.5  | 25.0  | 39.6  | 36.0  | 43.5  | 48.0  | 56.6  | 180.0 | 56.6 |
| 40.3 | 0.0   | 0.0   | 0.3   | 0.4   | 0.6   | 1.8   | 0.9   | 4.0   | 1.3   | 8.3   | 1.7   | 13.6  | 2.3   | 13.6  | 10.2  | 30.0  | 13.0  | 32.6  | 25.0  | 39.7  | 36.0  | 43.7  | 48.0  | 56.8  | 180.0 | 56.8 |
| 40.4 | 0.0   | 0.0   | 0.3   | 0.5   | 0.6   | 1.8   | 0.9   | 4.1   | 1.3   | 8.5   | 1.6   | 13.6  | 2.2   | 13.6  | 10.0  | 30.0  | 13.0  | 32.8  | 25.0  | 39.9  | 36.0  | 43.8  | 48.0  | 56.9  | 180.0 | 56.9 |
| 40.5 | 0.0   | 0.0   | 0.3   | 0.5   | 0.6   | 1.9   | 0.9   | 4.2   | 1.2   | 7.4   | 1.6   | 13.6  | 2.2   | 13.6  | 9.9   | 30.0  | 13.0  | 32.9  | 25.0  | 40.0  | 36.0  | 44.0  | 48.0  | 57.1  | 180.0 | 57.1 |
| 40.6 | 0.0   | 0.0   | 0.3   | 0.5   | 0.6   | 1.9   | 0.9   | 4.3   | 1.2   | 7.6   | 1.6   | 13.7  | 2.2   | 13.7  | 9.7   | 30.0  | 13.0  | 33.1  | 25.0  | 40.2  | 36.0  | 44.1  | 48.0  | 57.2  | 180.0 | 57.2 |
| 40.7 | 0.0   | 0.0   | 0.3   | 0.5   | 0.6   | 1.9   | 0.9   | 4.4   | 1.2   | 7.8   | 1.6   | 13.7  | 2.1   | 13.7  | 9.6   | 30.0  | 13.0  | 33.2  | 25.0  | 40.3  | 36.0  | 44.3  | 48.0  | 57.4  | 180.0 | 57.4 |
| 40.8 | 0.0   | 0.0   | 0.3   | 0.5   | 0.6   | 2.0   | 0.9   | 4.5   | 1.2   | 8.0   | 1.6   | 13.7  | 2.1   | 13.7  | 9.5   | 30.0  | 13.0  | 33.4  | 25.0  | 40.5  | 36.0  | 44.4  | 48.0  | 57.5  | 180.0 | 57.5 |
| 40.9 | 0.0   | 0.0   | 0.3   | 0.5   | 0.6   | 2.0   | 0.9   | 4.6   | 1.2   | 8.2   | 1.6   | 13.7  | 2.1   | 13.7  | 9.3   | 30.0  | 13.0  | 33.5  | 25.0  | 40.6  | 36.0  | 44.6  | 48.0  | 57.7  | 180.0 | 57.7 |
| 41   | 0.0   | 0.0   | 0.3   | 0.5   | 0.6   | 2.1   | 0.9   | 4.7   | 1.2   | 8.4   | 1.5   | 13.8  | 2.1   | 13.8  | 9.2   | 30.0  | 13.0  | 33.7  | 25.0  | 40.8  | 36.0  | 44.7  | 48.0  | 57.8  | 180.0 | 57.8 |
| 41.1 | 0.0   | 0.0   | 0.3   | 0.5   | 0.6   | 2.1   | 0.9   | 4.8   | 1.2   | 8.5   | 1.5   | 13.8  | 2.1   | 13.8  | 9.1   | 30.0  | 13.0  | 33.8  | 25.0  | 40.9  | 36.0  | 44.9  | 48.0  | 58.0  | 180.0 | 58.0 |
| 41.2 | 0.0   | 0.0   | 0.3   | 0.5   | 0.6   | 2.2   | 0.9   | 4.9   | 1.2   | 8.7   | 1.5   | 13.8  | 2.0   | 13.8  | 9.0   | 30.0  | 13.0  | 34.0  | 25.0  | 41.1  | 36.0  | 45.0  | 48.0  | 58.1  | 180.0 | 58.1 |
| 41.3 | 0.0   | 0.0   | 0.2   | 0.2   | 0.5   | 1.6   | 0.8   | 4.0   | 1.1   | 7.5   | 1.5   | 13.8  | 2.0   | 13.8  | 8.8   | 30.0  | 13.0  | 34.1  | 25.0  | 41.2  | 36.0  | 45.2  | 48.0  | 58.3  | 180.0 | 58.3 |
| 41.4 | 0.0   | 0.0   | 0.2   | 0.3   | 0.5   | 1.6   | 0.8   | 4.1   | 1.1   | 7.7   | 1.5   | 13.9  | 2.0   | 13.9  | 8.7   | 30.0  | 13.0  | 34.3  | 25.0  | 41.4  | 36.0  | 45.3  | 48.0  | 58.4  | 180.0 | 58.4 |
| 41.5 | 0.0   | 0.0   | 0.2   | 0.3   | 0.5   | 1.6   | 0.8   | 4.2   | 1.1   | 7.9   | 1.5   | 13.9  | 2.0   | 13.9  | 8.6   | 30.0  | 13.0  | 34.4  | 25.0  | 41.5  | 36.0  | 45.5  | 48.0  | 58.6  | 180.0 | 58.6 |
| 41.6 | 0.0   | 0.0   | 0.2   | 0.3   | 0.5   | 1.7   | 0.8   | 4.3   | 1.1   | 8.1   | 1.4   | 13.9  | 1.9   | 13.9  | 8.5   | 30.0  | 13.0  | 34.6  | 25.0  | 41.7  | 36.0  | 45.6  | 48.0  | 58.7  | 180.0 | 58.7 |
| 41.7 | 0.0   | 0.0   | 0.2   | 0.3   | 0.5   | 1.7   | 0.8   | 4.4   | 1.1   | 8.2   | 1.4   | 13.9  | 1.9   | 13.9  | 8.4   | 30.0  | 13.0  | 34.7  | 25.0  | 41.8  | 36.0  | 45.8  | 48.0  | 58.9  | 180.0 | 58.9 |
| 41.8 | 0.0   | 0.0   | 0.2   | 0.3   | 0.5   | 1.7   | 0.8   | 4.5   | 1.1   | 8.4   | 1.4   | 14.0  | 1.9   | 14.0  | 8.2   | 30.0  | 13.0  | 34.9  | 24.0  | 41.5  | 36.0  | 45.9  | 48.0  | 59.0  | 180.0 | 59.0 |
| 41.9 | 0.0   | 0.0   | 0.2   | 0.3   | 0.5   | 1.8   | 0.8   | 4.6   | 1.1   | 8.6   | 1.4   | 14.0  | 1.9   | 14.0  | 8.1   | 30.0  | 13.0  | 35.0  | 24.0  | 41.7  | 36.0  | 46.1  | 48.0  | 59.2  | 180.0 | 59.2 |
| 42   | 0.0   | 0.0   | 0.2   | 0.3   | 0.5   | 1.8   | 0.8   | 4.7   | 1.1   | 8.8   | 1.4   | 14.0  | 1.9   | 14.0  | 8.0   | 30.0  | 13.0  | 35.2  | 24.0  | 41.8  | 36.0  | 46.2  | 48.0  | 59.3  | 180.0 | 59.3 |
| 42.1 | 0.0   | 0.0   | 0.2   | 0.3   | 0.5   | 1.9   | 0.8   | 4.8   | 1.0   | 7.5   | 1.4   | 14.0  | 1.8   | 14.0  | 7.9   | 30.0  | 13.0  | 35.3  | 24.0  | 42.0  | 36.0  | 46.4  | 48.0  | 59.5  | 180.0 | 59.5 |
| 42.2 | 0.0   | 0.0   | 0.2   | 0.3   | 0.5   | 1.9   | 0.8   | 4.9   | 1.0   | 7.6   | 1.4   | 14.1  | 1.8   | 14.1  | 7.8   | 30.0  | 13.0  | 35.5  | 24.0  | 42.1  | 36.0  | 46.5  | 48.0  | 59.6  | 180.0 | 59.6 |
| 42.3 | 0.0   | 0.0   | 0.2   | 0.3   | 0.5   | 2.0   | 0.8   | 5.0   | 1.0   | 7.8   | 1.3   | 14.1  | 1.8   | 14.1  | 7.7   | 30.0  | 13.0  | 35.6  | 24.0  | 42.3  | 36.0  | 46.7  | 48.0  | 59.8  | 180.0 | 59.8 |

| GAIN | ANGLE | ATTN. | ANGLE | ATTN. | ANGLE | ATTN. | ANGLE | ATTN. | ANGLE | ATTN. | ANGLE | ATTN. | ANGLE | ATTN. | ANGLE | ATTN. | ANGLE | ATTN. | ANGLE | ATTN. | ANGLE | ATTN. | ANGLE | ATTN. | ANGLE | ATTN. |
|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 42.4 | 0.0   | 0.0   | 0.2   | 0.3   | 0.5   | 2.0   | 0.7   | 3.9   | 1.0   | 8.0   | 1.3   | 14.1  | 1.8   | 14.1  | 7.6   | 30.0  | 13.0  | 35.8  | 24.0  | 42.4  | 36.0  | 46.8  | 48.0  | 59.9  | 180.0 | 59.9  |
| 42.5 | 0.0   | 0.0   | 0.2   | 0.3   | 0.5   | 2.0   | 0.7   | 4.0   | 1.0   | 8.2   | 1.3   | 14.1  | 1.7   | 14.1  | 7.5   | 30.0  | 13.0  | 35.9  | 24.0  | 42.6  | 36.0  | 47.0  | 48.0  | 60.1  | 180.0 | 60.1  |
| 42.6 | 0.0   | 0.0   | 0.2   | 0.3   | 0.5   | 2.1   | 0.7   | 4.1   | 1.0   | 8.4   | 1.3   | 14.2  | 1.7   | 14.2  | 7.4   | 30.0  | 13.0  | 36.1  | 24.0  | 42.7  | 36.0  | 47.1  | 48.0  | 60.2  | 180.0 | 60.2  |
| 42.7 | 0.0   | 0.0   | 0.2   | 0.3   | 0.5   | 2.1   | 0.7   | 4.2   | 1.0   | 8.6   | 1.3   | 14.2  | 1.7   | 14.2  | 7.3   | 30.0  | 13.0  | 36.2  | 24.0  | 42.9  | 36.0  | 47.3  | 48.0  | 60.4  | 180.0 | 60.4  |
| 42.8 | 0.0   | 0.0   | 0.2   | 0.4   | 0.5   | 2.2   | 0.7   | 4.3   | 1.0   | 8.8   | 1.3   | 14.2  | 1.7   | 14.2  | 7.2   | 30.0  | 13.0  | 36.4  | 24.0  | 43.0  | 36.0  | 47.4  | 48.0  | 60.5  | 180.0 | 60.5  |
| 42.9 | 0.0   | 0.0   | 0.2   | 0.4   | 0.5   | 2.2   | 0.7   | 4.4   | 1.0   | 9.0   | 1.3   | 14.2  | 1.7   | 14.2  | 7.1   | 30.0  | 13.0  | 36.5  | 24.0  | 43.2  | 36.0  | 47.6  | 48.0  | 60.7  | 180.0 | 60.7  |
| 43   | 0.0   | 0.0   | 0.2   | 0.4   | 0.4   | 1.5   | 0.7   | 4.5   | 0.9   | 7.4   | 1.2   | 14.3  | 1.6   | 14.3  | 7.0   | 30.0  | 13.0  | 36.7  | 24.0  | 43.3  | 36.0  | 47.7  | 48.0  | 60.8  | 180.0 | 60.8  |
| 43.1 | 0.0   | 0.0   | 0.2   | 0.4   | 0.4   | 1.5   | 0.7   | 4.6   | 0.9   | 7.6   | 1.2   | 14.3  | 1.6   | 14.3  | 6.9   | 30.0  | 13.0  | 36.8  | 24.0  | 43.5  | 36.0  | 47.9  | 48.0  | 61.0  | 180.0 | 61.0  |
| 43.2 | 0.0   | 0.0   | 0.2   | 0.4   | 0.4   | 1.5   | 0.7   | 4.7   | 0.9   | 7.8   | 1.2   | 14.3  | 1.6   | 14.3  | 6.8   | 30.0  | 13.0  | 37.0  | 24.0  | 43.6  | 36.0  | 48.0  | 48.0  | 61.1  | 180.0 | 61.1  |
| 43.3 | 0.0   | 0.0   | 0.2   | 0.4   | 0.4   | 1.6   | 0.7   | 4.8   | 0.9   | 8.0   | 1.2   | 14.3  | 1.6   | 14.3  | 6.7   | 30.0  | 13.0  | 37.1  | 24.0  | 43.8  | 36.0  | 48.2  | 48.0  | 61.3  | 180.0 | 61.3  |
| 43.4 | 0.0   | 0.0   | 0.2   | 0.4   | 0.4   | 1.6   | 0.7   | 4.9   | 0.9   | 8.2   | 1.2   | 14.4  | 1.6   | 14.4  | 6.6   | 30.0  | 13.0  | 37.3  | 24.0  | 43.9  | 36.0  | 48.3  | 48.0  | 61.4  | 180.0 | 61.4  |
| 43.5 | 0.0   | 0.0   | 0.2   | 0.4   | 0.4   | 1.7   | 0.7   | 5.1   | 0.9   | 8.4   | 1.2   | 14.4  | 1.6   | 14.4  | 6.5   | 30.0  | 13.0  | 37.4  | 24.0  | 44.1  | 36.0  | 48.5  | 48.0  | 61.6  | 180.0 | 61.6  |
| 43.6 | 0.0   | 0.0   | 0.2   | 0.4   | 0.4   | 1.7   | 0.7   | 5.2   | 0.9   | 8.5   | 1.2   | 14.4  | 1.5   | 14.4  | 6.4   | 30.0  | 13.0  | 37.6  | 24.0  | 44.2  | 36.0  | 48.6  | 48.0  | 61.7  | 180.0 | 61.7  |
| 43.7 | 0.0   | 0.0   | 0.2   | 0.4   | 0.4   | 1.7   | 0.6   | 3.9   | 0.9   | 8.7   | 1.2   | 14.4  | 1.5   | 14.4  | 6.3   | 30.0  | 13.0  | 37.7  | 24.0  | 44.4  | 36.0  | 48.8  | 48.0  | 61.9  | 180.0 | 61.9  |
| 43.8 | 0.0   | 0.0   | 0.2   | 0.4   | 0.4   | 1.8   | 0.6   | 4.0   | 0.9   | 9.0   | 1.1   | 14.5  | 1.5   | 14.5  | 6.2   | 30.0  | 13.0  | 37.9  | 24.0  | 44.5  | 36.0  | 48.9  | 48.0  | 62.0  | 180.0 | 62.0  |
| 43.9 | 0.0   | 0.0   | 0.2   | 0.5   | 0.4   | 1.8   | 0.6   | 4.1   | 0.9   | 9.2   | 1.1   | 14.5  | 1.5   | 14.5  | 6.2   | 30.0  | 13.0  | 38.0  | 24.0  | 44.7  | 36.0  | 49.1  | 48.0  | 62.2  | 180.0 | 62.2  |
| 44   | 0.0   | 0.0   | 0.2   | 0.5   | 0.4   | 1.9   | 0.6   | 4.2   | 0.8   | 7.4   | 1.1   | 14.5  | 1.5   | 14.5  | 6.1   | 30.0  | 13.0  | 38.2  | 24.0  | 44.8  | 36.0  | 49.2  | 48.0  | 62.3  | 180.0 | 62.3  |
| 44.1 | 0.0   | 0.0   | 0.2   | 0.5   | 0.4   | 1.9   | 0.6   | 4.3   | 0.8   | 7.6   | 1.1   | 14.5  | 1.5   | 14.5  | 6.0   | 30.0  | 13.0  | 38.3  | 24.0  | 45.0  | 36.0  | 49.4  | 48.0  | 62.5  | 180.0 | 62.5  |
| 44.2 | 0.0   | 0.0   | 0.2   | 0.5   | 0.4   | 1.9   | 0.6   | 4.4   | 0.8   | 7.8   | 1.1   | 14.6  | 1.4   | 14.6  | 5.9   | 30.0  | 13.0  | 38.5  | 24.0  | 45.1  | 36.0  | 49.5  | 48.0  | 62.6  | 180.0 | 62.6  |
| 44.3 | 0.0   | 0.0   | 0.2   | 0.5   | 0.4   | 2.0   | 0.6   | 4.5   | 0.8   | 7.9   | 1.1   | 14.6  | 1.4   | 14.6  | 5.8   | 30.0  | 13.0  | 38.6  | 24.0  | 45.3  | 36.0  | 49.7  | 48.0  | 62.8  | 180.0 | 62.8  |
| 44.4 | 0.0   | 0.0   | 0.2   | 0.5   | 0.4   | 2.0   | 0.6   | 4.6   | 0.8   | 8.1   | 1.1   | 14.6  | 1.4   | 14.6  | 5.7   | 30.0  | 13.0  | 38.8  | 24.0  | 45.4  | 36.0  | 49.8  | 48.0  | 62.9  | 180.0 | 62.9  |
| 44.5 | 0.0   | 0.0   | 0.2   | 0.5   | 0.4   | 2.1   | 0.6   | 4.7   | 0.8   | 8.3   | 1.1   | 14.6  | 1.4   | 14.6  | 5.7   | 30.0  | 13.0  | 38.9  | 24.0  | 45.6  | 36.0  | 50.0  | 48.0  | 63.1  | 180.0 | 63.1  |
| 44.6 | 0.0   | 0.0   | 0.2   | 0.5   | 0.4   | 2.1   | 0.6   | 4.8   | 0.8   | 8.5   | 1.1   | 14.7  | 1.4   | 14.7  | 5.6   | 30.0  | 13.0  | 39.1  | 24.0  | 45.7  | 36.0  | 50.1  | 48.0  | 63.2  | 180.0 | 63.2  |
| 44.7 | 0.0   | 0.0   | 0.2   | 0.5   | 0.4   | 2.2   | 0.6   | 4.9   | 0.8   | 8.7   | 1.0   | 14.7  | 1.4   | 14.7  | 5.5   | 30.0  | 13.0  | 39.2  | 24.0  | 45.9  | 36.0  | 50.3  | 48.0  | 63.4  | 180.0 | 63.4  |
| 44.8 | 0.0   | 0.0   | 0.2   | 0.6   | 0.4   | 2.2   | 0.6   | 5.0   | 0.8   | 8.9   | 1.0   | 14.7  | 1.3   | 14.7  | 5.4   | 30.0  | 13.0  | 39.4  | 24.0  | 46.0  | 36.0  | 50.4  | 48.0  | 63.5  | 180.0 | 63.5  |
| 44.9 | 0.0   | 0.0   | 0.2   | 0.6   | 0.4   | 2.3   | 0.6   | 5.1   | 0.8   | 9.1   | 1.0   | 14.7  | 1.3   | 14.7  | 5.4   | 30.0  | 13.0  | 39.5  | 24.0  | 46.2  | 36.0  | 50.6  | 48.0  | 63.7  | 180.0 | 63.7  |
| 45   | 0.0   | 0.0   | 0.2   | 0.6   | 0.4   | 2.3   | 0.6   | 5.2   | 0.8   | 9.3   | 1.0   | 14.8  | 1.3   | 14.8  | 5.3   | 30.0  | 13.0  | 39.7  | 24.0  | 46.3  | 36.0  | 50.7  | 48.0  | 63.8  | 180.0 | 63.8  |
| 45.1 | 0.0   | 0.0   | 0.1   | 0.1   | 0.3   | 1.3   | 0.5   | 3.7   | 0.7   | 7.3   | 1.0   | 14.8  | 1.3   | 14.8  | 5.2   | 30.0  | 13.0  | 39.8  | 24.0  | 46.5  | 36.0  | 50.9  | 48.0  | 64.0  | 180.0 | 64.0  |
| 45.2 | 0.0   | 0.0   | 0.1   | 0.2   | 0.3   | 1.4   | 0.5   | 3.8   | 0.7   | 7.5   | 1.0   | 14.8  | 1.3   | 14.8  | 5.1   | 30.0  | 13.0  | 40.0  | 24.0  | 46.6  | 36.0  | 51.0  | 48.0  | 64.1  | 180.0 | 64.1  |
| 45.3 | 0.0   | 0.0   | 0.1   | 0.2   | 0.3   | 1.4   | 0.5   | 3.9   | 0.7   | 7.6   | 1.0   | 14.8  | 1.3   | 14.8  | 5.1   | 30.0  | 12.0  | 39.3  | 24.0  | 46.8  | 36.0  | 51.2  | 48.0  | 64.3  | 180.0 | 64.3  |
| 45.4 | 0.0   | 0.0   | 0.1   | 0.2   | 0.3   | 1.4   | 0.5   | 4.0   | 0.7   | 7.8   | 1.0   | 14.9  | 1.3   | 14.9  | 5.0   | 30.0  | 12.0  | 39.4  | 24.0  | 46.9  | 36.0  | 51.3  | 48.0  | 64.4  | 180.0 | 64.4  |
| 45.5 | 0.0   | 0.0   | 0.1   | 0.2   | 0.3   | 1.5   | 0.5   | 4.1   | 0.7   | 8.0   | 1.0   | 14.9  | 1.2   | 14.9  | 4.9   | 30.0  | 12.0  | 39.6  | 24.0  | 47.1  | 36.0  | 51.5  | 48.0  | 64.6  | 180.0 | 64.6  |



| GAIN | ANGLE | ATTN. | ANGLE | ATTN. | ANGLE | ATTN. | ANGLE | ATTN. | ANGLE | ATTN. | ANGLE | ATTN. | ANGLE | ATTN. | ANGLE | ATTN. | ANGLE | ATTN. | ANGLE | ATTN. | ANGLE | ATTN. | ANGLE | ATTN. |       |      |
|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|
| 45.6 | 0.0   | 0.0   | 0.1   | 0.2   | 0.3   | 1.5   | 0.5   | 4.2   | 0.7   | 8.2   | 0.9   | 14.9  | 1.2   | 14.9  | 4.9   | 30.0  | 12.0  | 39.7  | 24.0  | 47.2  | 36.0  | 51.6  | 48.0  | 64.7  | 180.0 | 64.7 |
| 45.7 | 0.0   | 0.0   | 0.1   | 0.2   | 0.3   | 1.5   | 0.5   | 4.3   | 0.7   | 8.4   | 0.9   | 14.9  | 1.2   | 14.9  | 4.8   | 30.0  | 12.0  | 39.9  | 24.0  | 47.4  | 36.0  | 51.8  | 48.0  | 64.9  | 180.0 | 64.9 |
| 45.8 | 0.0   | 0.0   | 0.1   | 0.2   | 0.3   | 1.6   | 0.5   | 4.4   | 0.7   | 8.6   | 0.9   | 15.0  | 1.2   | 15.0  | 4.7   | 30.0  | 12.0  | 40.0  | 24.0  | 47.5  | 36.0  | 51.9  | 48.0  | 65.0  | 180.0 | 65.0 |
| 45.9 | 0.0   | 0.0   | 0.1   | 0.2   | 0.3   | 1.6   | 0.5   | 4.5   | 0.7   | 8.8   | 0.9   | 15.0  | 1.2   | 15.0  | 4.7   | 30.0  | 12.0  | 40.2  | 24.0  | 47.7  | 36.0  | 52.1  | 48.0  | 65.2  | 180.0 | 65.2 |
| 46   | 0.0   | 0.0   | 0.1   | 0.2   | 0.3   | 1.7   | 0.5   | 4.6   | 0.7   | 9.0   | 0.9   | 15.0  | 1.2   | 15.0  | 4.6   | 30.0  | 12.0  | 40.3  | 24.0  | 47.8  | 36.0  | 52.2  | 48.0  | 65.3  | 180.0 | 65.3 |
| 46.1 | 0.0   | 0.0   | 0.1   | 0.2   | 0.3   | 1.7   | 0.5   | 4.7   | 0.7   | 9.2   | 0.9   | 15.0  | 1.2   | 15.0  | 4.5   | 30.0  | 12.0  | 40.5  | 24.0  | 48.0  | 36.0  | 52.4  | 48.0  | 65.5  | 180.0 | 65.5 |
| 46.2 | 0.0   | 0.0   | 0.1   | 0.2   | 0.3   | 1.7   | 0.5   | 4.8   | 0.7   | 9.4   | 0.9   | 15.1  | 1.1   | 15.1  | 4.5   | 30.0  | 12.0  | 40.6  | 24.0  | 48.1  | 36.0  | 52.5  | 48.0  | 65.6  | 180.0 | 65.6 |
| 46.3 | 0.0   | 0.0   | 0.1   | 0.2   | 0.3   | 1.8   | 0.5   | 4.9   | 0.7   | 9.6   | 0.9   | 15.1  | 1.1   | 15.1  | 4.4   | 30.0  | 12.0  | 40.8  | 24.0  | 48.3  | 36.0  | 52.7  | 48.0  | 65.8  | 180.0 | 65.8 |
| 46.4 | 0.0   | 0.0   | 0.1   | 0.2   | 0.3   | 1.8   | 0.5   | 5.0   | 0.6   | 7.2   | 0.9   | 15.1  | 1.1   | 15.1  | 4.3   | 30.0  | 12.0  | 40.9  | 24.0  | 48.4  | 36.0  | 52.8  | 48.0  | 65.9  | 180.0 | 65.9 |
| 46.5 | 0.0   | 0.0   | 0.1   | 0.2   | 0.3   | 1.9   | 0.5   | 5.1   | 0.6   | 7.4   | 0.9   | 15.1  | 1.1   | 15.1  | 4.3   | 30.0  | 12.0  | 41.1  | 24.0  | 48.6  | 36.0  | 53.0  | 48.0  | 66.1  | 180.0 | 66.1 |
| 46.6 | 0.0   | 0.0   | 0.1   | 0.2   | 0.3   | 1.9   | 0.5   | 5.3   | 0.6   | 7.6   | 0.8   | 15.2  | 1.1   | 15.2  | 4.2   | 30.0  | 12.0  | 41.2  | 24.0  | 48.7  | 36.0  | 53.1  | 48.0  | 66.2  | 180.0 | 66.2 |
| 46.7 | 0.0   | 0.0   | 0.1   | 0.2   | 0.3   | 1.9   | 0.5   | 5.4   | 0.6   | 7.8   | 0.8   | 15.2  | 1.1   | 15.2  | 4.2   | 30.0  | 12.0  | 41.4  | 24.0  | 48.9  | 36.0  | 53.3  | 48.0  | 66.4  | 180.0 | 66.4 |
| 46.8 | 0.0   | 0.0   | 0.1   | 0.2   | 0.3   | 2.0   | 0.4   | 3.5   | 0.6   | 7.9   | 0.8   | 15.2  | 1.1   | 15.2  | 4.1   | 30.0  | 12.0  | 41.5  | 24.0  | 49.0  | 36.0  | 53.4  | 48.0  | 66.5  | 180.0 | 66.5 |
| 46.9 | 0.0   | 0.0   | 0.1   | 0.2   | 0.3   | 2.0   | 0.4   | 3.6   | 0.6   | 8.1   | 0.8   | 15.2  | 1.1   | 15.2  | 4.1   | 30.0  | 12.0  | 41.7  | 24.0  | 49.2  | 36.0  | 53.6  | 48.0  | 66.7  | 180.0 | 66.7 |
| 47   | 0.0   | 0.0   | 0.1   | 0.2   | 0.3   | 2.1   | 0.4   | 3.7   | 0.6   | 8.3   | 0.8   | 15.3  | 1.0   | 15.3  | 4.0   | 30.0  | 12.0  | 41.8  | 24.0  | 49.3  | 36.0  | 53.7  | 48.0  | 66.8  | 180.0 | 66.8 |
| 47.1 | 0.0   | 0.0   | 0.1   | 0.2   | 0.3   | 2.1   | 0.4   | 3.8   | 0.6   | 8.5   | 0.8   | 15.3  | 1.0   | 15.3  | 3.9   | 30.0  | 12.0  | 42.0  | 24.0  | 49.5  | 36.0  | 53.9  | 48.0  | 67.0  | 180.0 | 67.0 |
| 47.2 | 0.0   | 0.0   | 0.1   | 0.2   | 0.3   | 2.2   | 0.4   | 3.9   | 0.6   | 8.7   | 0.8   | 15.3  | 1.0   | 15.3  | 3.9   | 30.0  | 12.0  | 42.1  | 24.0  | 49.6  | 36.0  | 54.0  | 48.0  | 67.1  | 180.0 | 67.1 |
| 47.3 | 0.0   | 0.0   | 0.1   | 0.2   | 0.3   | 2.2   | 0.4   | 4.0   | 0.6   | 8.9   | 0.8   | 15.3  | 1.0   | 15.3  | 3.8   | 30.0  | 12.0  | 42.3  | 24.0  | 49.8  | 36.0  | 54.2  | 48.0  | 67.3  | 180.0 | 67.3 |
| 47.4 | 0.0   | 0.0   | 0.1   | 0.3   | 0.3   | 2.3   | 0.4   | 4.1   | 0.6   | 9.1   | 0.8   | 15.4  | 1.0   | 15.4  | 3.8   | 30.0  | 12.0  | 42.4  | 24.0  | 49.9  | 36.0  | 54.3  | 48.0  | 67.4  | 180.0 | 67.4 |
| 47.5 | 0.0   | 0.0   | 0.1   | 0.3   | 0.3   | 2.3   | 0.4   | 4.1   | 0.6   | 9.3   | 0.8   | 15.4  | 1.0   | 15.4  | 3.8   | 30.0  | 12.0  | 42.5  | 24.0  | 50.0  | 36.0  | 54.4  | 48.0  | 67.5  | 180.0 | 67.5 |
| 47.6 | 0.0   | 0.0   | 0.1   | 0.3   | 0.3   | 2.4   | 0.4   | 4.2   | 0.6   | 9.5   | 0.8   | 15.4  | 1.0   | 15.4  | 3.7   | 30.0  | 12.0  | 42.6  | 24.0  | 50.1  | 36.0  | 54.5  | 48.0  | 67.6  | 180.0 | 67.6 |
| 47.7 | 0.0   | 0.0   | 0.1   | 0.3   | 0.3   | 2.4   | 0.4   | 4.3   | 0.6   | 9.8   | 0.8   | 15.4  | 1.0   | 15.4  | 3.7   | 30.0  | 12.0  | 42.7  | 24.0  | 50.2  | 36.0  | 54.6  | 48.0  | 67.7  | 180.0 | 67.7 |
| 47.8 | 0.0   | 0.0   | 0.1   | 0.3   | 0.2   | 1.1   | 0.4   | 4.4   | 0.5   | 6.9   | 0.7   | 15.5  | 1.0   | 15.5  | 3.6   | 30.0  | 12.0  | 42.8  | 24.0  | 50.3  | 36.0  | 54.7  | 48.0  | 67.8  | 180.0 | 67.8 |
| 47.9 | 0.0   | 0.0   | 0.1   | 0.3   | 0.2   | 1.1   | 0.4   | 4.5   | 0.5   | 7.1   | 0.7   | 15.5  | 1.0   | 15.5  | 3.6   | 30.0  | 12.0  | 42.9  | 24.0  | 50.4  | 36.0  | 54.8  | 48.0  | 67.9  | 180.0 | 67.9 |
| 48   | 0.0   | 0.0   | 0.1   | 0.3   | 0.2   | 1.2   | 0.4   | 4.7   | 0.5   | 7.3   | 0.7   | 15.5  | 1.0   | 15.5  | 3.6   | 30.0  | 12.0  | 43.0  | 24.0  | 50.5  | 36.0  | 54.9  | 48.0  | 68.0  | 180.0 | 68.0 |
| 48.1 | 0.0   | 0.0   | 0.1   | 0.3   | 0.2   | 1.2   | 0.4   | 4.8   | 0.5   | 7.4   | 0.7   | 15.5  | 0.9   | 15.5  | 3.5   | 30.0  | 12.0  | 43.1  | 24.0  | 50.6  | 36.0  | 55.0  | 48.0  | 68.1  | 180.0 | 68.1 |
| 48.2 | 0.0   | 0.0   | 0.1   | 0.3   | 0.2   | 1.2   | 0.4   | 4.9   | 0.5   | 7.6   | 0.7   | 15.6  | 0.9   | 15.6  | 3.5   | 30.0  | 12.0  | 43.2  | 24.0  | 50.7  | 36.0  | 55.1  | 48.0  | 68.2  | 180.0 | 68.2 |
| 48.3 | 0.0   | 0.0   | 0.1   | 0.3   | 0.2   | 1.2   | 0.4   | 5.0   | 0.5   | 7.8   | 0.7   | 15.6  | 0.9   | 15.6  | 3.5   | 30.0  | 12.0  | 43.3  | 24.0  | 50.8  | 36.0  | 55.2  | 48.0  | 68.3  | 180.0 | 68.3 |
| 48.4 | 0.0   | 0.0   | 0.1   | 0.3   | 0.2   | 1.3   | 0.4   | 5.1   | 0.5   | 8.0   | 0.7   | 15.6  | 0.9   | 15.6  | 3.4   | 30.0  | 12.0  | 43.4  | 24.0  | 50.9  | 36.0  | 55.3  | 48.0  | 68.4  | 180.0 | 68.4 |
| 48.5 | 0.0   | 0.0   | 0.1   | 0.3   | 0.2   | 1.3   | 0.4   | 5.2   | 0.5   | 8.2   | 0.7   | 15.6  | 0.9   | 15.6  | 3.4   | 30.0  | 12.0  | 43.5  | 24.0  | 51.0  | 36.0  | 55.4  | 48.0  | 68.5  | 180.0 | 68.5 |
| 48.6 | 0.0   | 0.0   | 0.1   | 0.3   | 0.2   | 1.3   | 0.4   | 5.3   | 0.5   | 8.3   | 0.7   | 15.7  | 0.9   | 15.7  | 3.4   | 30.0  | 12.0  | 43.6  | 24.0  | 51.1  | 36.0  | 55.5  | 48.0  | 68.6  | 180.0 | 68.6 |
| 48.7 | 0.0   | 0.0   | 0.1   | 0.3   | 0.2   | 1.4   | 0.4   | 5.5   | 0.5   | 8.5   | 0.7   | 15.7  | 0.9   | 15.7  | 3.4   | 30.0  | 12.0  | 43.7  | 24.0  | 51.2  | 36.0  | 55.6  | 48.0  | 68.7  | 180.0 | 68.7 |

| AIN  | ANGLE | ATTN. | ANGLE | ATTN. | ANGLE | ATTN. | ANGLE | ATTN. | ANGLE | ATTN. | ANGLE | ATTN. | ANGLE | ATTN. | ANGLE | ATTN. | ANGLE | ATTN. | ANGLE | ATTN. | ANGLE | ATTN. | ANGLE | ATTN. |       |      |
|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|
| 48.8 | 0.0   | 0.0   | 0.1   | 0.3   | 0.2   | 1.4   | 0.4   | 5.6   | 0.5   | 8.7   | 0.7   | 15.7  | 0.9   | 15.7  | 3.3   | 30.0  | 12.0  | 43.8  | 24.0  | 51.3  | 36.0  | 55.7  | 48.0  | 68.8  | 180.0 | 68.8 |
| 48.9 | 0.0   | 0.0   | 0.1   | 0.4   | 0.2   | 1.4   | 0.3   | 3.2   | 0.5   | 8.9   | 0.7   | 15.7  | 0.9   | 15.7  | 3.3   | 30.0  | 12.0  | 43.9  | 24.0  | 51.4  | 36.0  | 55.8  | 48.0  | 68.9  | 180.0 | 68.9 |
| 49   | 0.0   | 0.0   | 0.1   | 0.4   | 0.2   | 1.5   | 0.3   | 3.3   | 0.5   | 9.1   | 0.7   | 15.8  | 0.9   | 15.8  | 3.3   | 30.0  | 12.0  | 44.0  | 24.0  | 51.5  | 36.0  | 55.9  | 48.0  | 69.0  | 180.0 | 69.0 |
| 49.1 | 0.0   | 0.0   | 0.1   | 0.4   | 0.2   | 1.5   | 0.3   | 3.4   | 0.5   | 9.4   | 0.6   | 15.8  | 0.9   | 15.8  | 3.2   | 30.0  | 12.0  | 44.1  | 24.0  | 51.6  | 36.0  | 56.0  | 48.0  | 69.1  | 180.0 | 69.1 |
| 49.2 | 0.0   | 0.0   | 0.1   | 0.4   | 0.2   | 1.5   | 0.3   | 3.4   | 0.5   | 9.6   | 0.6   | 15.8  | 0.9   | 15.8  | 3.2   | 30.0  | 12.0  | 44.2  | 24.0  | 51.7  | 36.0  | 56.1  | 48.0  | 69.2  | 180.0 | 69.2 |
| 49.3 | 0.0   | 0.0   | 0.1   | 0.4   | 0.2   | 1.6   | 0.3   | 3.5   | 0.5   | 9.8   | 0.6   | 15.8  | 0.9   | 15.8  | 3.2   | 30.0  | 12.0  | 44.3  | 24.0  | 51.8  | 36.0  | 56.2  | 48.0  | 69.3  | 180.0 | 69.3 |
| 49.4 | 0.0   | 0.0   | 0.1   | 0.4   | 0.2   | 1.6   | 0.3   | 3.6   | 0.5   | 10.0  | 0.6   | 15.9  | 0.9   | 15.9  | 3.1   | 30.0  | 12.0  | 44.4  | 24.0  | 51.9  | 36.0  | 56.3  | 48.0  | 69.4  | 180.0 | 69.4 |
| 49.5 | 0.0   | 0.0   | 0.1   | 0.4   | 0.2   | 1.6   | 0.3   | 3.7   | 0.4   | 6.6   | 0.6   | 15.9  | 0.9   | 15.9  | 3.1   | 30.0  | 12.0  | 44.5  | 24.0  | 52.0  | 36.0  | 56.4  | 48.0  | 69.5  | 180.0 | 69.5 |
| 49.6 | 0.0   | 0.0   | 0.1   | 0.4   | 0.2   | 1.7   | 0.3   | 3.8   | 0.4   | 6.7   | 0.6   | 15.9  | 0.9   | 15.9  | 3.1   | 30.0  | 12.0  | 44.6  | 24.0  | 52.1  | 36.0  | 56.5  | 48.0  | 69.6  | 180.0 | 69.6 |
| 49.7 | 0.0   | 0.0   | 0.1   | 0.4   | 0.2   | 1.7   | 0.3   | 3.9   | 0.4   | 6.9   | 0.6   | 15.9  | 0.9   | 15.9  | 3.1   | 30.0  | 12.0  | 44.7  | 24.0  | 52.2  | 36.0  | 56.6  | 48.0  | 69.7  | 180.0 | 69.7 |
| 49.8 | 0.0   | 0.0   | 0.1   | 0.4   | 0.2   | 1.8   | 0.3   | 4.0   | 0.4   | 7.0   | 0.6   | 16.0  | 0.8   | 16.0  | 3.0   | 30.0  | 12.0  | 44.8  | 24.0  | 52.3  | 36.0  | 56.7  | 48.0  | 69.8  | 180.0 | 69.8 |
| 49.9 | 0.0   | 0.0   | 0.1   | 0.5   | 0.2   | 1.8   | 0.3   | 4.1   | 0.4   | 7.2   | 0.6   | 16.0  | 0.8   | 16.0  | 3.0   | 30.0  | 12.0  | 44.9  | 24.0  | 52.4  | 36.0  | 56.8  | 48.0  | 69.9  | 180.0 | 69.9 |
| 50   | 0.0   | 0.0   | 0.1   | 0.5   | 0.2   | 1.8   | 0.3   | 4.1   | 0.4   | 7.4   | 0.6   | 16.0  | 0.8   | 16.0  | 3.0   | 30.0  | 12.0  | 45.0  | 24.0  | 52.5  | 36.0  | 56.9  | 48.0  | 70.0  | 180.0 | 70.0 |

CP: copolar antenna radiation pattern all the angles and attenuations in one row (for appropriate maximum antenna gain) should be taken.

XP: crosspolar antenna radiation pattern, values in shaded fields should be disregarded (i.e. only the white fields should be taken into account). Attenuation in the main axis (i.e. 0 degrees) for crosspolar antenna diagram is given in the following

table

(depending on maximum antenna gain):

| Maximum antenna gain [dBi] |      | Attenuation for angle of 0 degrees in XPD [dB] |
|----------------------------|------|--|
| From:                      | To:  |  |
| 20                         | 22.9 | 15   |
| 23                         | 26.9 | 20   |
| 27                         | 29.9 | 25   |
| 30                         | 50   | 30   |