Name: APENST804V01

Type: Earth station, Receiving and Transmitting

Region(s): 123

Required Input Parameters:
gain,coefA,coefB

Validation Warnings/Errors:

<table>
<thead>
<tr>
<th>Type</th>
<th>Message</th>
</tr>
</thead>
<tbody>
<tr>
<td>Error</td>
<td>CoefB () is out of limits [10:50].</td>
</tr>
<tr>
<td>Error</td>
<td>CoefA () is out of limits [18:47].</td>
</tr>
<tr>
<td>Error</td>
<td>Gmax () is less than CoefA (), Gmax is too low.</td>
</tr>
</tbody>
</table>

Pattern Information:
Pattern is equal to the maximum antenna gain in the main-lobe range (angles less than 1 degree).

Co-Polar Component:

\[
G = G_{\text{max}} \quad \text{for } 0^\circ \leq \varphi < 1^\circ
\]

\[
G = \text{CoefA} - \text{CoefB} \times \log \varphi \quad \text{for } 1^\circ \leq \varphi < \varphi_b
\]

\[
G = G_{\text{min}} \quad \text{for } \varphi_b \leq \varphi \leq 180^\circ
\]

where:

\[
\varphi_b = 10 \left( \frac{\text{CoefA} + 10}{\text{CoefB}} \right)
\]

\[
G_{\text{min}} = -10
\]