Name: **APSDNK631V01**

Type: Space station, Receiving and Transmitting

Description:
Space station antenna pattern submitted by DNK for DISCO1 network.

Required Input Parameters:
gain

Validation Warnings/Errors: None

Co-Polar Component:

$$G = G\varphi_1 + (G_{max} - G\varphi_1)\sqrt{cos\left(\frac{\pi\varphi}{2\varphi_1}\right)}$$

for $0° \leq \varphi \leq \varphi_1$

$$G = G\varphi_1 + (G_b - G\varphi_1)sin\left(\frac{\pi(\varphi - \varphi_1)}{2(180 - \varphi_1)}\right)$$

for $\varphi_1 < \varphi \leq 180°$

where:

$\varphi_1 = 90°$

$G\varphi_1 = -14$ dB

$G_b = -34$ dB