

**Name:** APEDNK254V01**Description:****Type:** Earth station, Receiving and Transmitting

Earth station antenna pattern submitted by DNK for network DISCO1.

**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  $0^\circ \leq \varphi \leq \varphi_1$

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

for  $\varphi_1 < \varphi \leq 180^\circ$

where:

$$\varphi_1 = 100^\circ$$

$$G_{\varphi_1} = -20 \text{ dB}$$

$$G_b = -8.5 \text{ dB}$$