

**Name:** APECAN253V01**Description:****Type:** Earth station, Receiving and Transmitting

Earth station antenna pattern submitted by CAN for network HOTH. Based on ITU-R S.1528 for space station pattern. Recommends 1.2.

**Required Input Parameters:**

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**Validation Warnings/Errors:**

Type	Message
Error	Gmax () is less than 15 (). Gmax is too low.

**Co-Polar Component:**

$$G = G_{\max} - 3 \left(\frac{\varphi}{\psi b}\right)^{1.5} \quad \text{for } 0^\circ \leq \varphi \leq a \psi b$$

$$G = G_{\max} - 15 \quad \text{for } a \psi b < \varphi \leq b \psi b$$

$$G = G_{\max} - 15 - 25 \log(\varphi/b/\psi b) \quad \text{for } b \psi b < \varphi \leq Y$$

$$G = 0 \quad \text{for } Y < \varphi \leq 90^\circ$$

$$G = 0.25 G_{\max} \quad \text{for } 90^\circ < \varphi \leq 180^\circ$$

where:

$$\psi b = \varphi_0 / 2$$

$$a = 2.58$$

$$b = 6.32$$

$$Y = b \psi b 10^{0.04 (G_{\max} - 15)}$$