

n257 Optimized Dual-Polarized Horn Antenna

ANT-HA-2531-DP

The ANT-HA-2531-DP is a corrugated conical horn antenna that covers frequencies from 25 to 31 GHz. It is a dual-polarized horn antenna that supports both horizontal and vertical linear waveforms. It has high port isolations and high cross-polarization rejections. The antenna is equipped with 2.92 mm coaxial connectors. It is ideal for use in 5G FR2 mobile communication and test equipment applications.

Features

- Operating frequency 25 to 31 GHz
- Dual and linear polarization
- Very low side lobe levels
- High port isolations and cross-polarization rejections
- Corrugated structure
- 2.92 mm coaxial connectors



Figure 1. Photo of Horn Antenna

RF Specifications

Parameter	Conditions	Unit	Min.	Typ.	Max.
Frequency	---	GHz	25	28	31
Return Loss	---	dB	---	15	---
Isolation	---	dB	---	35	---
Peak Gain	---	dB	---	17	---
Cross Polarization	---	dB	---	30	---
3dB Beamwidth	---	deg	---	18	---

Package Specifications

Parameter	Conditions	Unit	Specification
Horizontal and Vertical Ports	---	---	2.92 mm (K-type)
Antenna Type	---	---	Corrugated structure
Material	---	---	Aluminum
Finish	---	---	Gold plated
Weight	---	g	85
Dimension	Length	mm	74.5
	Width	mm	46
	Height	mm	46

Typical Performances

Return Loss

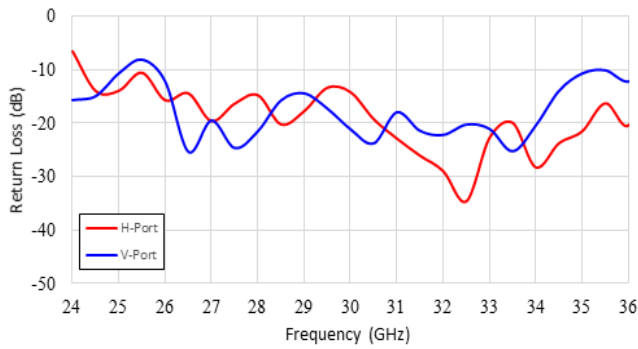


Figure 2. Return Loss

Isolation

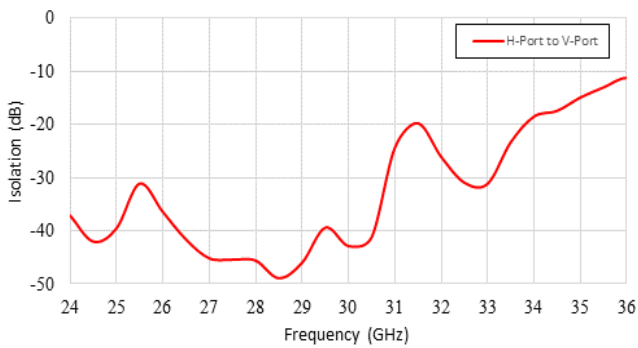


Figure 3. Isolation

Peak Gain

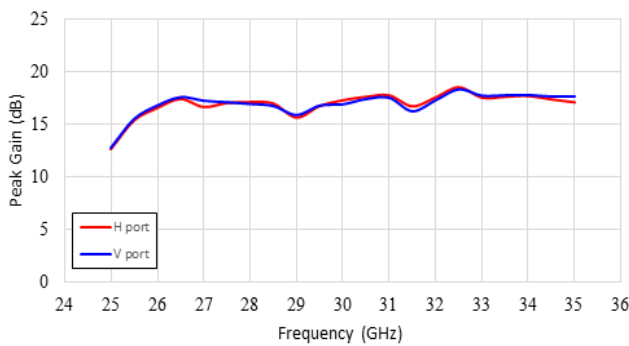


Figure 4. Peak Gain

Cross Polarization

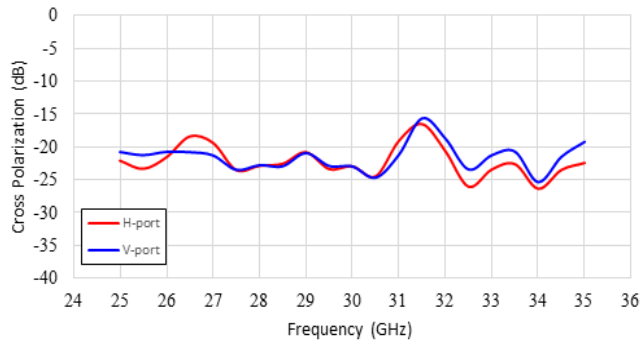


Figure 5. Cross Polarization

3 dB Beamwidth

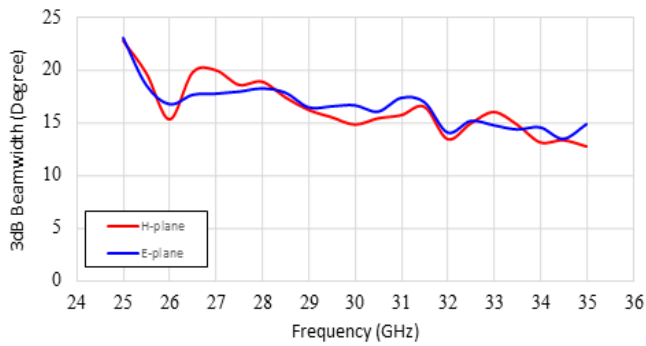


Figure 6. 3 dB Beamwidth

Radiation Pattern

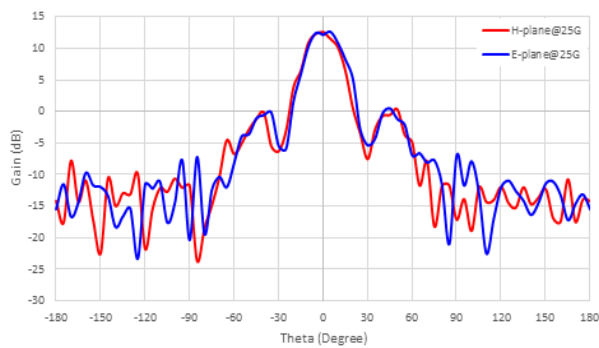


Figure 7. Gain at 25 GHz

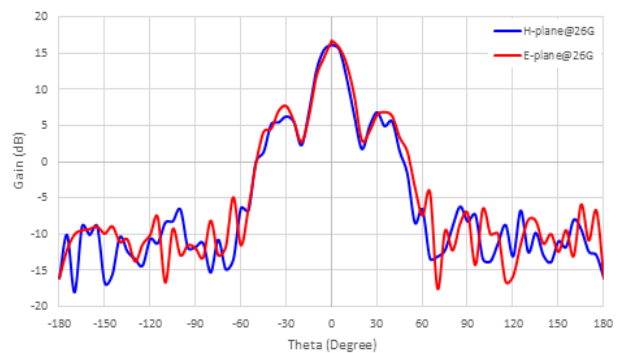


Figure 8. Gain at 26 GHz

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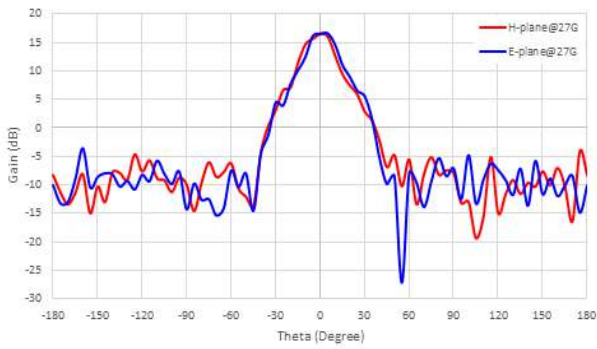


Figure 9. Gain at 27 GHz

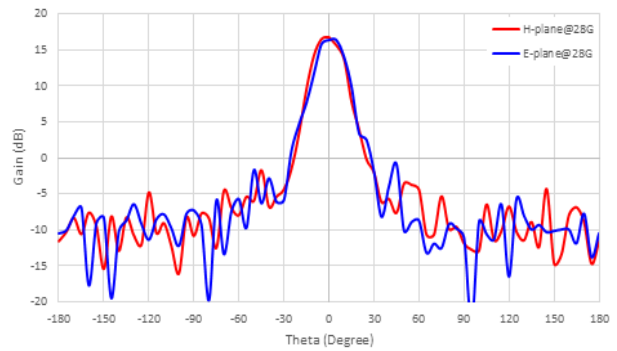


Figure 10. Gain at 28 GHz

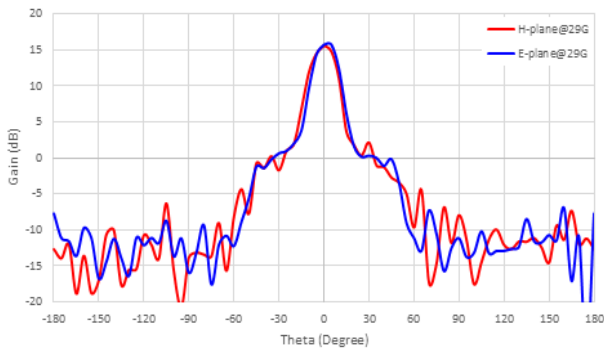


Figure 11. Gain at 29 GHz

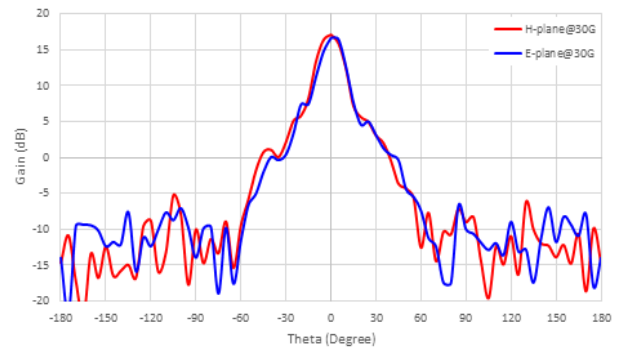


Figure 12. Gain at 30 GHz

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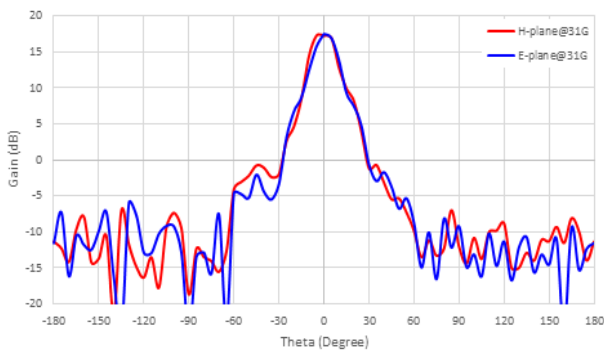


Figure 13. Gain at 31 GHz

Mechanical Outline

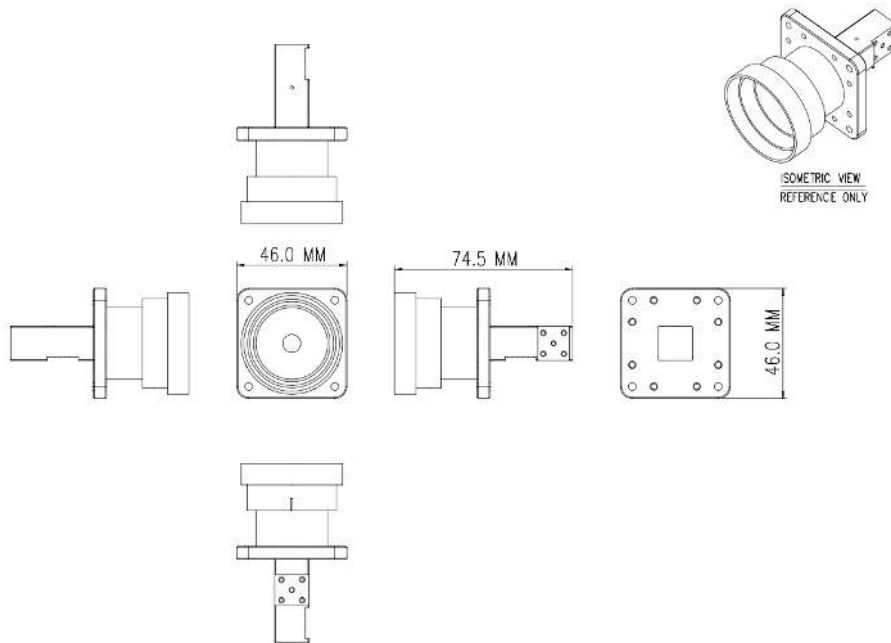


Figure 14. Outline Drawing