



DCPHA  
10-60 GHz  
Outdoor/Indoor

## DUAL-CIRCULAR POLARIZED CORRUGATED CYLINDRICAL HORN ANTENNAS

Using a polarizer and an orthomode transducer, the **DCPHA** family offers dual circular polarization with outstanding electrical performance

### OVERVIEW

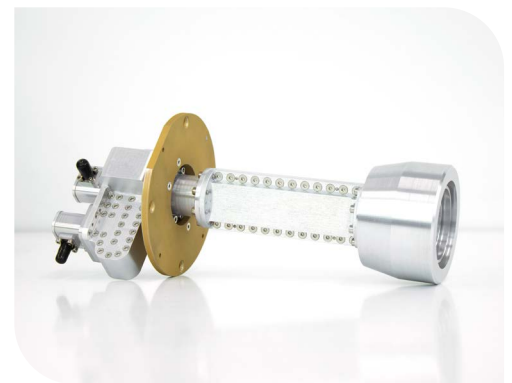
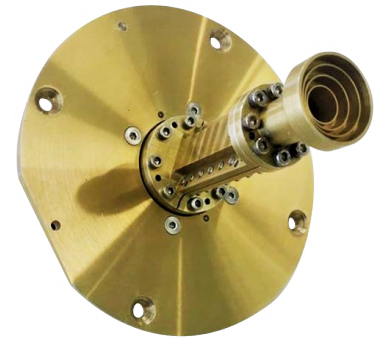
**Dual Circular-Polarized corrugated cylindrical Horns Antenna** are based on cylindrical waveguide horns, with several axial choke corrugations (standard corrugated cylindrical horns are also available upon request). As a result of an optimised design and high-precision manufacturing, horns possess rotationally symmetric radiation patterns with low back radiation and very low cross-discrimination.

Horns are provided with integrated polarizers and ortho-mode transducers with very low cross-coupling with SMA or K connectors up to 40 GHz and in standard rectangular waveguide flange outputs from 40 GHz, one with LHCP polarization and one with RHCP polarization. Corrugated cylindrical horns have wideband operation.

High precision mounting interfaces with levels and absorber collar customized for each horn for anechoic chamber applications and detailed calibration report (option).

### APPLICATIONS

- \* Satellite communications
- \* Radioastronomy
- \* Point to point datalinks
- \* Wireless
- \* Compact antenna test range feeds
- \* Spherical near-field antenna test
- \* Far-field antenna test range sources



### KEY FEATURES

- \* Dual circular polarization
- \* Rotationally symmetric radiation patterns
- \* Low back radiation
- \* Low cross polarization
- \* Low axial ratio
- \* Low VSWR
- \* High precision design
- \* High precision manufacturing

### OPTIONS

- \* Detailed calibration report
- \* Absorber collar
- \* Custom mounting interface
- \* Storage case



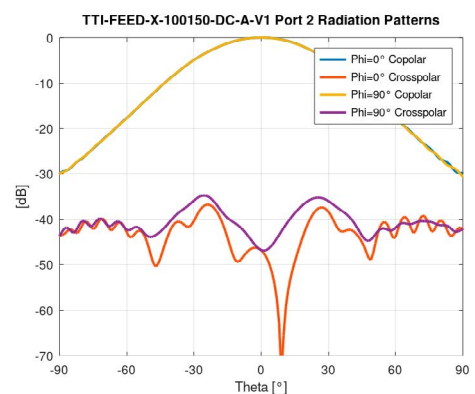
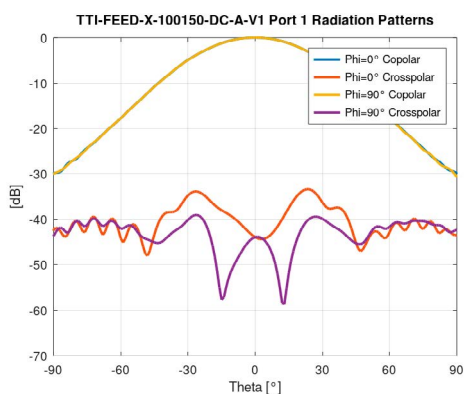
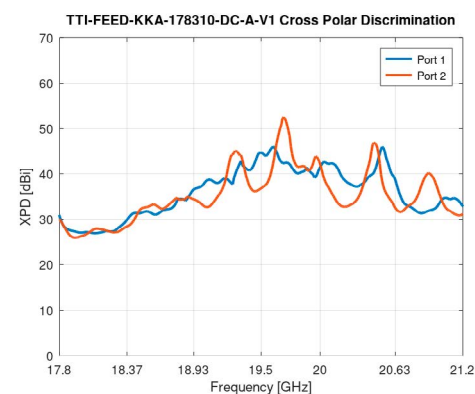
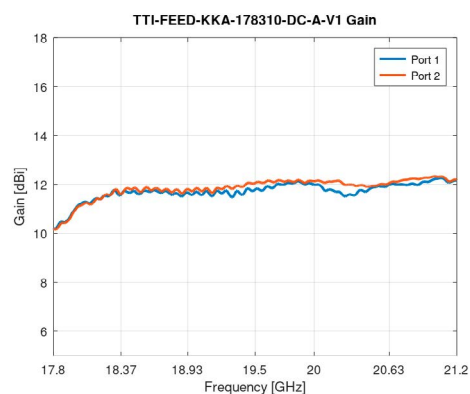
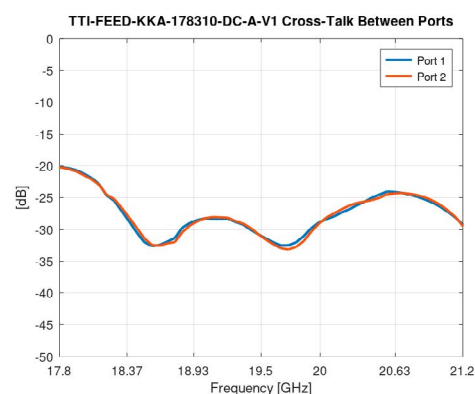
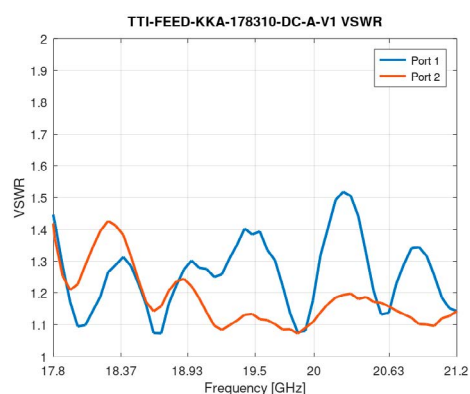
## TECHNICAL SPECIFICATIONS

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PRODUCT CODE	WG band	Freq. range [GHz]	VSWR	Cross-talk between ports [dB]		Gain <sup>1</sup> [dBi]	Crosspolar discrimination <sup>2</sup> [dB]		RF interface
				Target	Typical		Target	Typical	
TTI-FEED-XKu-100150-DC-A	WR-75	10.0 – 15.0	< 1.9:1	> 25	> 20	12.5 ± 0.5	> 30	> 25	SMA (f)
TTI-FEED-KKa-178310-DC-A	-	17.8 – 21.2 27.5 – 31.0	< 1.9:1	> 25	> 20	12.0 ± 0.5	> 30	> 25	K (f)
TTI-FEED-K-180265-DC-A	WR-42	18.0 – 26.5	< 1.9:1	> 25	> 20	12.5 ± 0.5	> 30	> 25	SMA (f)
TTI-FEED-Ka-265400-DC-A	WR-28	26.5 – 40.0	< 1.9:1	> 25	> 20	12.5 ± 0.5	> 30	> 25	K (f)
TTI-FEED-Ka-300400-DC-A	-	30.0 – 40.0	< 1.5:1	> 25	> 20	12.5 ± 0.5	> 30	> 25	K (f)
TTI-FEED-U-400600-DC-A	WR-19	40.0 – 60.0	< 1.9:1	> 25	> 20	12.5 ± 0.5	> 30	> 25	UG-383/U-M flange

## TYPICAL MEASURED DATA



## TTI CONTACT

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## NOTICE

Information contained in this document is  
subject to change without notice.