

Linear-Polarized Horn Antennas



THE LPHA FAMILY OFFERS ROTATIONALLY SYMMETRIC RADIATION PATTERNS WITH LOW BACK RADIATION AND LOW CROSS-POLARIZATION THAT MAKE IT EXCELLENT FOR SATELLITE COMMUNICATIONS AND REFERENCE ANTENNA TESTING



Overview

Linear-Polarized Horn Antennas 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-polarisation.

Horns are provided with integrated waveguide-to-coax adapters with SMA or K connectors up to 40 GHz and in standard rectangular waveguide flange output from 40 GHz. Corrugated cylindrical horns have wideband operation, covering all standard waveguide bands.

High precision mounting interfaces with levels and absorber collars 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

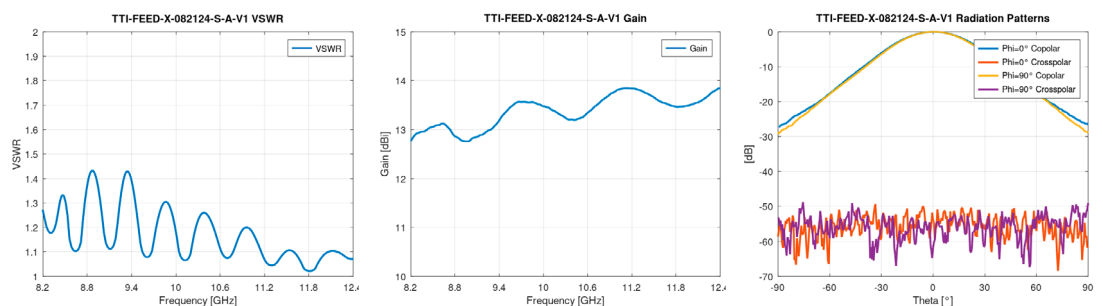
- * Linear polarization
- * Rotationally symmetric radiation patterns
- * Low back radiation
- * Low cross polarization
- * Low VSWR
- * High precision design
- * High precision manufacturing

OPTIONS

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

PRODUCT CODE	WG band	Freq. range [GHz]	VSWR	Gain ¹ [dBi]	Crosspolar discrimination ² [dB]		RF interface
					Target	Typical	
TTI-FEED-UHF-005008-S-A	-	0.55 - 0.89	< 1.6:1	12.0 ± 0.5	> 40	> 35	SMA (f)
TTI-FEED-UHF-007011-S-A	WR-975	0.75 - 1.10	< 1.6:1	12.0 ± 0.5	> 40	> 35	SMA (f)
TTI-FEED-L-011017-S-A	WR-650	1.10 - 1.70	< 1.6:1	12.0 ± 0.5	> 40	> 35	SMA (f)
TTI-FEED-L-014022-S-A	WR-510	1.40 - 2.20	< 1.6:1	12.0 ± 0.5	> 40	> 35	SMA (f)
TTI-FEED-R-017026-S-A	WR-430	1.70 - 2.60	< 1.6:1	12.0 ± 0.5	> 40	> 35	SMA (f)
TTI-FEED-S-026039-S-A	WR-284	2.60 - 3.95	< 1.5:1	13.5 ± 0.5	> 45	> 40	SMA (f)
TTI-FEED-SGC-032060-S-A	-	3.20 - 6.00	< 1.5:1	13.0 ± 0.5	> 40	> 35	SMA (f)
TTI-FEED-G-039058-S-A	WR-187	3.95 - 5.85	< 1.5:1	13.5 ± 0.5	> 45	> 40	SMA (f)
TTI-FEED-C-058082-S-A	WR-137	5.85 - 8.20	< 1.5:1	13.5 ± 0.5	> 45	> 40	SMA (f)
TTI-FEED-H-070100-S-A	WR-112	7.05 - 10.00	< 1.5:1	13.5 ± 0.5	> 45	> 40	SMA (f)
TTI-FEED-X-082124-S-A	WR-90	8.20 - 12.40	< 1.5:1	13.5 ± 0.5	> 45	> 40	SMA (f)
TTI-FEED-XKu-100150-S-A	WR-75	10.00 - 15.00	< 1.5:1	13.5 ± 0.5	> 45	> 40	SMA (f)
TTI-FEED-Ku-124180-S-A	WR-62	12.40 - 18.00	< 1.5:1	13.5 ± 0.5	> 45	> 40	SMA (f)
TTI-FEED-K-170255-S-A	-	17.00 - 25.50	< 1.5:1	13.5 ± 0.5	> 45	> 40	SMA (f)
TTI-FEED-KKa-177300-S-A	-	17.70 - 30.00	< 1.5:1	13.0 ± 0.5	> 40	> 35	K (f)
TTI-FEED-K-180265-S-A	WR-42	18.00 - 26.50	< 1.5:1	13.5 ± 0.5	> 45	> 40	SMA (f)
TTI-FEED-KKa-185305-S-A	-	18.50 - 30.50	< 1.5:1	13.0 ± 0.5	> 40	> 35	K (f)
TTI-FEED-KKa-220330-S-A	WR-34	22.00 - 33.00	< 1.5:1	13.5 ± 0.5	> 45	> 40	K (f)
TTI-FEED-KKa-240380-S-A	-	24.00 - 38.00	< 1.5:1	13.5 ± 0.5	> 45	> 40	K (f)
		24.00 - 40.00	< 1.5:1	13.0 ± 0.5	> 40	> 35	Ke (f)
		24.00 - 44.00	< 1.7:1	13.5 ± 0.5	> 35	> 30	2.4 mm (f)
TTI-FEED-Ka-265400-S-A	WR-28	26.50 - 40.00	< 1.5:1	13.5 ± 0.5	> 40	> 35	K (f)
TTI-FEED-U-400600-S	WR-19	40.00 - 60.00	< 1.55:1	12.8 ± 0.5	> 40	> 35	1.85 mm (f)
			< 1.50:1	13.0 ± 0.5	> 50	> 45	UG-383/U-M flange
			> 50	> 45	> 40	> 35	
TTI-FEED-V-500750-S-A	WR-15	50.00 - 70.00	< 1.6:1	12.5 ± 0.5	> 40	> 35	1.85 mm (f)
50.00 - 75.00		< 1.5:1	13.0 ± 0.5	> 40	> 35	UG-385/U-M flange	
TTI-FEED-E-600900-S-A	WR-12	60.00 - 90.00	< 1.5:1	13.0 ± 0.5	> 40	> 35	UG-387/U-M flange
TTI-FEED-EF-6701150-S-A	WR-10	67.00 - 115.00	< 1.5:1	13.0 ± 0.5	> 40	> 20	UG-387/U-M flange
TTI-FEED-W-7501100-S-A	WR-10	75.00 - 110.00	< 1.5:1	13.0 ± 0.5	> 40	> 35	UG-387/U-M flange
TTI-FEED-D-11001700-S-A	WR-06	110 - 170.00	< 1.5:1	13.0 ± 0.5	> 40	> 35	UG-387/U-M flange

 Typical measured data



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Custom frequency bands are available upon request