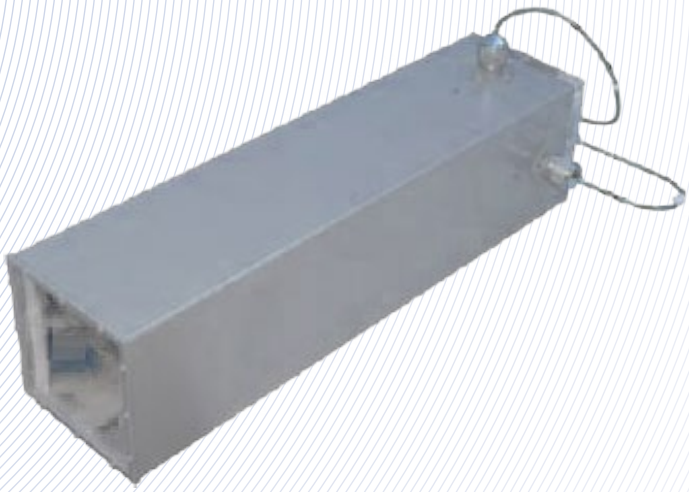
MI-28 Family of Dual Polarized Feeds



The MI-28 Family of Dual Polarized Feeds combines with MI-22 parabolic reflectors to create a dual polarized feed solution featuring frequency and polarization versatility. Particularly useful on antenna test ranges, these feeds also have applications in communications and monitoring links.

Description

The MI-28 Family of Dual Polarized Feeds utilize two input ports to provide two orthogonal polarizations for antenna measurement applications, communication applications or anywhere two simultaneous polarizations are required.

The MI-28 Family consist of two types of structures to cover the full frequency band. The frequency range from 0.5 to 2 GHz is covered with crossed log periodic dipole arrays. Quad-ridged waveguide feeds are used from 2 to 18 GHz. All waveguide feeds are treated to resist corrosion and weather sealed with a radome cover. A desiccator in the feeds absorbs any moisture which may accumulate.

In addition to the dual linearly polarized versions of the feeds, dual circularly polarized versions are also offered. The MI-28C feeds utilize dual inputs and a 90° hybrid. Left hand circular and right hand circular can be obtained by proper element excitation. Left hand circular and right hand circular polarizations are available simultaneously.

All MI-28 antenna feeds are supplied with procedures for mechanically aligning and adjusting the feed in the MI-22 Family of Parabolic Reflectors. Electrical alignment and focusing for optimum radiation patterns can be performed at the factory and copies of the data provided for an additional cost per unit. Each MI-28C model includes a 90° hybrid and a 50-ohm termination for either right-hand or left-hand circular polarization. Two female type-N connectors are employed on all models (except the MI-28-12.4, which is SMA).

Applications

MI-28 feeds are dual polarized feeds intended for use with the MI-22 Family of Parabolic Reflectors, as sources for some far-field measurement systems and as a dual-polarized probe in Near-Field Measurement Systems.

Specifications

General Attributes

VSWR	2.2:1
Nominal Side Lobe	18 dB
Maximum Axial Ratio (MI-28C Models)	2 dB
Cross Polarization	-2 dB

Specific Attributes

Model [3]	Reflector	Structure	Frequency Range (GHz)	Nominal Gain (dB)	Min BW at Band Edges (deg)	Inter-Channel Isolation (deg)	Power [1] Handling CW (W)	Shipping Weight lbs (kg)
28-.05/10 28C-0.5/10	22-10A	Crossed Log Periodic	0.5-1.0	21-26	15-7.5	25	345 250	10 (5)
28-1.0/8/10 28C-1.0/8/10	22-8A	Crossed Log Periodic	1.0-2.0	25-30	9-4.5	20	225 100	7 (4)
28-1.0/8/10 28C-1.0/8/10	22-10A	Crossed Log Periodic	1.0-2.0	27-32	7.5-3.7	20	225 100	7 (4)
28-2.0/8/10 28C-2.0/8/10	22-8A	Ridged Waveguide	2.0-4.0	31-35	4.5-2.3	26	140 50	12 (5)
28-2.0/8/10 28C-2.0/8/10	22-10A	Ridged Waveguide	2.0-4.0	33-37	3.5-1.7	26	140 50	9 (4)
28-4.0/4/6 28C-4.0/4/6	22-4A	Ridged Waveguide	4.0-8.0	31-35	4.3-2.1	25	90 50	9 (4)
28-4.0/4/6 28C-4.0/4/6	22-6A	Ridged Waveguide	4.0-8.0	35-39	2.9-1.5	25	90 50	9 (4)
28-4.0/8 28C-4.0/8	22-8A	Ridged Waveguide	4.0-8.0	37-41	2.2-1.1	25	90 50	7 (4)
28-8.0/4/6	22-4A	Ridged Waveguide	8.0-12.4	37-39	2.2-1.4	25	35	7 (4)
28-8.0/4/6	22-6A	Ridged Waveguide	8.0-12.4	41-43	1.4-1.0	25	35	7 (4)
28-12.4/4 [2]	22-4A	Ridged Waveguide	12.4-18.0	41-43	1.4-1.0	25	20	7 (4)

[1] Power handling for feed only (does not include coaxial cable)
[2] Mounts in 22-4A Reflector (no cables furnished). Input connectors to 28-12.4 feed are SMA type
[3] All specifications define combined performance when installed in a Series 22 parabolic reflector

Ordering Information

Each Model 28C-xx includes a 90° hybrid and a 50-ohm termination for either right-hand or left-hand circular polarization. Two female type-N connectors are employed on all models (except 28-12.4).

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