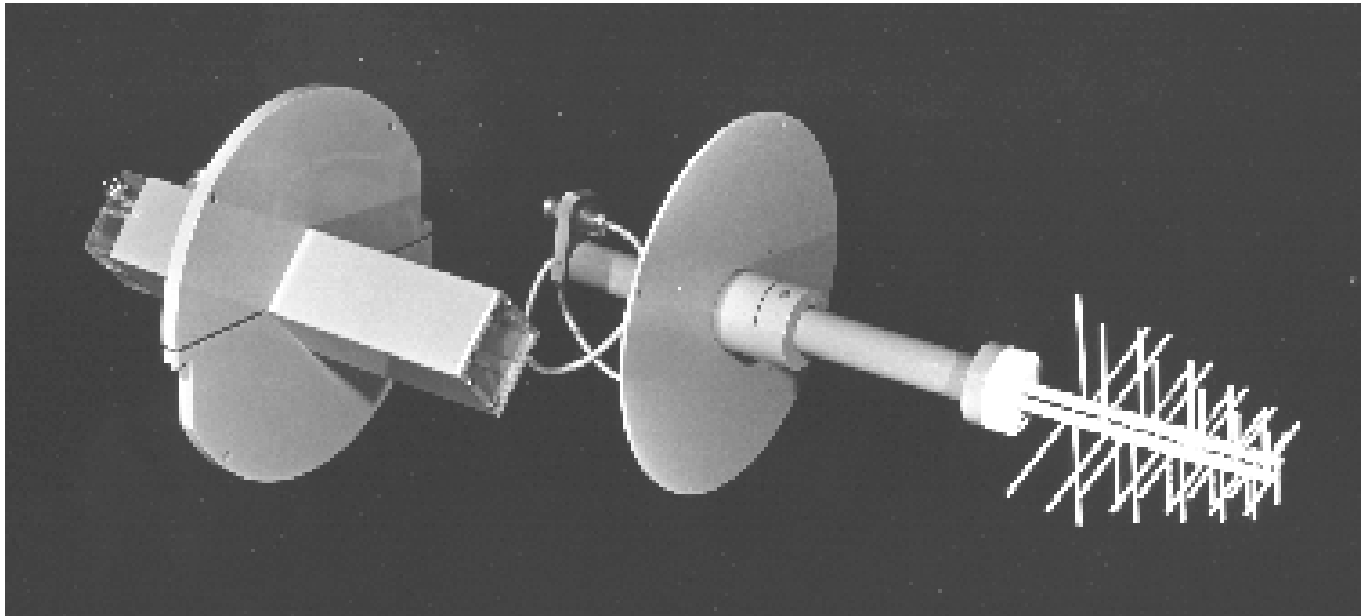


### *Series 28 Broadband Dual Polarized Feeds*



1989

#### Features

- Offers the versatility of a dual polarized feed for your antenna range
- Can be used for left-hand or right-hand circular polarization

#### Description

Series 28 Antenna Feeds are dual-polarized feeds intended for use with Series 22 Reflectors.

Series 28C Antenna Feeds utilize a dual-polarized structure and a 90° hybrid with a 50-ohm termination. Left-hand circular, right-hand circular, or dual-linear polarizations can be obtained by proper element excitation.

Because of the frequency and polarization versatility of these antennas, they are particularly useful on antenna test ranges. They also have applications in communications and monitoring links.

The 28 and 28C Series of antenna feeds are made up of two types of structures. The frequency range from 0.5 GHz to 2.0 GHz is covered with crossed log-periodic dipole arrays. Four-ridged waveguide feeds are used from 2.0 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.

All Series 28 and 28C Antenna Feeds are supplied with procedures for mechanically aligning and adjusting the feed in their respective 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.

#### Specifications

|                                |                    |
|--------------------------------|--------------------|
| Maximum VSWR                   | Nominal side lobe  |
| 2.2:1                          | 18 dB              |
| Maximum axial ratio (28C only) | Cross Polarization |
| 2.0 dB                         | -25 dB             |

# Products - Antennas and Components

## Series 28 Broadband Dual Polarized Feeds - *continued*

| Model No. <sup>3</sup>      | Recommended Reflector | Structure            | Frequency Range (GHz) | Nominal Gain at Band Edges (dB) | Nom. BW Min. at Band Edges (degree) | Inter-Channel Isolation (dB) | Power <sup>1</sup> Handling CW (W) | Shipping Weight lbs (kg) |
|-----------------------------|-----------------------|----------------------|-----------------------|---------------------------------|-------------------------------------|------------------------------|------------------------------------|--------------------------|
| 28-0.5/10<br>28C-0.5/10     | 22-10A                | Crossed Log Periodic | 0.5-1.0               | 21-26                           | 15-7.5                              | 25                           | 345<br>250                         | 10 (5)                   |
| 28-1.0/8/10<br>28C-1.0/8/10 | 22-8B                 | Crossed Log Periodic | 1.0-2.0               | 25-30                           | 9-4.5                               | 20                           | 225<br>100                         | 7 (4)                    |
| 28-1.0/8/10<br>28C-1.0/8/10 | 22-10A                | Crossed Log Periodic | 1.0-2.0               | 27-32                           | 7.5-3.7                             | 20                           | 225<br>100                         | 7 (4)                    |
| 28-2.0/8/10<br>28C-2.0/8/10 | 22-8B                 | Ridged Waveguide     | 2.0-4.0               | 31-35                           | 4.5-2.3                             | 26                           | 140<br>50                          | 12 (5)                   |
| 28-2.0/8/10<br>28C-2.0/8/10 | 22-10A                | Ridged Waveguide     | 2.0-4.0               | 33-37                           | 3.5-1.7                             | 26                           | 140<br>50                          | 9 (4)                    |
| 28-4.0/4/6<br>28C-4.0/4/6   | 22-4A                 | Ridged Waveguide     | 4.0-8.0               | 31-35                           | 4.3-2.1                             | 25                           | 90<br>50                           | 9 (4)                    |
| 28-4.0/4/6<br>28C-4.0/4/6   | 22-6B                 | Ridged Waveguide     | 4.0-8.0               | 35-39                           | 2.9-1.5                             | 25                           | 90<br>50                           | 9 (4)                    |
| 28-4.0/8<br>28C-4.0/8       | 22-8B                 | Ridged Waveguide     | 4.0-8.0               | 37-41                           | 2.2-1.1                             | 25                           | 90<br>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                  | 22-6B                 | Ridged Waveguide     | 8.0-12.4              | 41-43                           | 1.4-1.0                             | 25                           | 35                                 | 7 (4)                    |
| 28-12.4/4 <sup>2</sup>      | 22-4A                 | Ridged Waveguide     | 12.4-18.0             | 41-43                           | 1.4-1.0                             | 25                           | 20                                 | 7 (4)                    |

<sup>1</sup> Power handling for feed only (does not include coaxial cable).

<sup>2</sup> Mounts in 22-4A Reflector (no cables furnished). Input connectors to 28-12.4 feed are SMA type.

<sup>3</sup> All specifications define combined performance when installed in a Series 22 parabolic reflector.

### Ordering Information

For complete information on Series 22 reflectors, refer to that section of the catalog.

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).

### Options

Not Applicable

### Accessories

Series 22 Parabolic Reflectors