HIGH ISOLATION DUAL-LINEAR CORRUGATED FEEDS



These feeds are used in offset parabolic or Cassegrain antennas for applications requiring two orthogonal linear polarizations with high isolation (greater than 60 dB) between them. They can be tailored to any 9 - 10% frequency band up to 40 GHz. The performance of a 37 GHz model, which is the smallest feed in the picture, is shown above. Also shown in the picture are 6.8 GHz and 23.8 GHz models. The performance of the lower frequency feeds is generally better than that shown for the 37 GHz feed.

39

-75

35.5

36

36.5

37

FREQUENCY IN GHZ

37.5

38

38.5

1.2

1.0

35.5

36

37

37.5

FREQUENCY IN GHZ

39

The feed patterns have a high degree of rotational symmetry about the feed axis, so that the cross polarization patterns of the two feed ports are very similar. Space-qualified versions operating at 6.8, 10.7, 18.7, 23.8, and 37 GHz are being used on the Windsat satellite which will measure wind speed and direction over the ocean.