



**HSX Series Antennas - High XPD Microwave Antennas**

HSX Series antennas are high performance antennas which feature very high cross polarization discrimination (XPD) in both the azimuth and elevation planes. The guaranteed XPD for these antennas is 40 dB. These antennas are suitable for high capacity digital systems, utilizing transmission schemes such as Synchronous Digital Hierarchy (SDH).

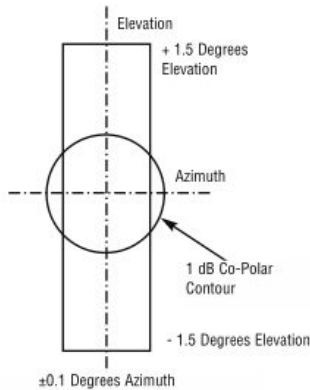
This performance is achieved through the use of an antenna feed horn with a unique illuminator ring design and strict quality control measures in the manufacture of these feeds.

The cross polarization characteristics close to the boresight of the antenna are shown in the figure below. These values apply for antennas up to the 11 GHz frequency band.

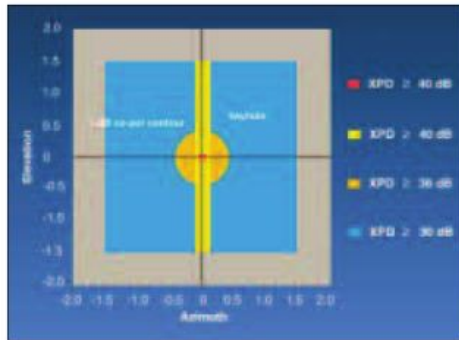
For antennas at frequency bands higher than 11 GHz, the XPD is greater than 36 dB within the circular -1 dB co-polar contour and greater than 30 dB elsewhere.

The HSX Series antennas are available for frequency bands from 3.4 to 18 GHz.

**HSX Antennas**  
2-Dimensional  
Cross-Polar  
Characteristics



- 40 dB XPD at antenna boresight
- 40 dB\* XPD inside rectangle (±0.1 degrees Azimuth, ±1.5 degrees elevation)



Keyhole specifications for XPD



Radomes are used to protect microwave antennas against accumulation of ice, snow, and dirt and to reduce wind loading. All Andrew shielded antennas include a planar radome. Antennas which include a radome are indicated in the antenna specification tables on pages 116-119. Optional molded radomes, listed on page 118, are available for most other solid reflector, standard unshielded parabolic antennas.

**Radomes for shielded antennas.** All Andrew shielded antennas, except ValuLine® include a flexible planar radome. The radome is stretched across the opening of the shield (through tensioning springs) flexing slightly in the wind to shed ice and snow in most environments.

Two types of flexible planar radomes are used, TEGLAR® and Hypalon. Hypalon is a rubber coated nylon and is provided with HP and HPX series antennas. TEGLAR is a polymer-coated fiberglass material and is provided with HSX, UHX and UMX type antennas.

In addition, TEGLAR radomes are extremely durable, and excel in resistance to heat, rain, snow, fungus, ice accumulation, corrosive atmosphere and ultraviolet light. Upgrades to TEGLAR on HP and HPX series is optional.

**Pre-tensioned radomes.** Some high performance antennas are supplied with a pre-tensioned radome. Pre-tensioned radomes are made from TEGLAR® material bonded to a support ring. They replace the previously offered spring tensioned design.

**Radomes for standard antennas.** Molded radomes are manufactured of ABS plastic or fiberglass. They help reduce tower wind loading and are optional for most antennas.

#### Mounts

All microwave antennas are supplied with a vertical tower mount. Roof, vertical tilt and horizontal tilt mounts are available as options.

#### Shields

Cylindrical shields, attached to the reflector rim, improve the radiation pattern performance of parabolic antennas. RF absorbing material is placed at critical locations inside the shield to reduce RF energy reflections.

Standard colors for microwave antennas and radomes are listed in the table below. Other colors in compliance with U.S. FCC and U.S. FAA regulations or special applications are available on request. Unless otherwise specified, radomes supplied with special color antennas will be the standard color.

For optional TEGLAR radome colors, see page 116.

#### Microwave Antenna and Radome Standard Colors

Description	Standard Color
Shielded Antennas	Gray
Radomes for Shielded Antennas 4-15 ft (1.2-4.6 m)	White
Standard Antennas	Gray
Molded Radomes for Standard Antennas	Gray
GRIDPAK® and Mini-GRIDPAK® Antennas	Unpainted aluminum

