

GS-420



▶ THE GS-420 IS BACKWARDS COMPATIBLE WITH PREVIOUS ILS SYSTEMS.

▶ HIGH STABILITY

GLIDE SLOPE ANTENNA

The GS-420 glide slope antenna was designed, tested and certified as part of the new generation and more stable ILS-420 system. The GS-420 antenna contains numerous improvements over existing glide slope antennas.

THESE IMPROVEMENTS INCLUDE:

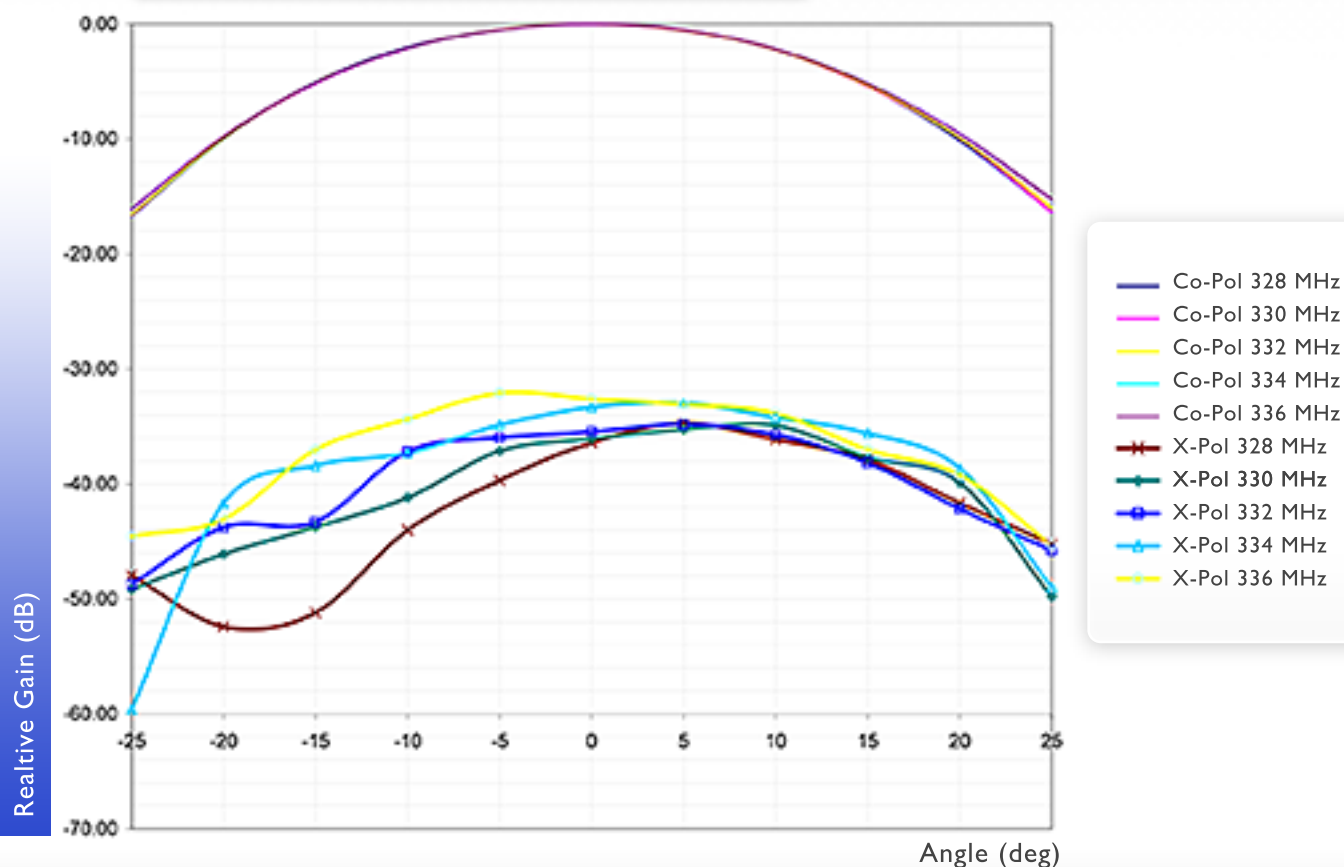
- ▶ Extremely stable monitor coupling and phase operation over the environment service conditions, as well as during dipole heater operation.
- ▶ Improved sealing of the antenna.
- ▶ Improved vibration tolerance, in both transportation and installed conditions.
- ▶ Improved dipole design.
- ▶ Improved solderability.
- ▶ More precise tuning and phase matching of cables.

ENVIRONMENTAL SPECS

TEMPERATURE RATING, OPERATIONAL	-50C to +70C
REALTIVE HUMIDITY, OPERATIONAL	5% to 100%
ALTITUDE, OPERATIONAL	0 to 100,000 feet
WIND LOADING, OPERATIONAL	100 MPH operational
ICE LOADING, OPERATIONAL	0.5 inches radial ice
VIBRATION, TRANSPORTATION	Mil-Std-810G, Method 514.6, Category 4, Procedure I, 90 minutes each axis
VIBRATION, SWEEP/DWELL	Mil-Std-810G, Method 514.6, Annex A, 4-600 Hz sweep, 2 hour dwell on all three axis, total of six hours.



▼ Co-Pol and Cross-Pol



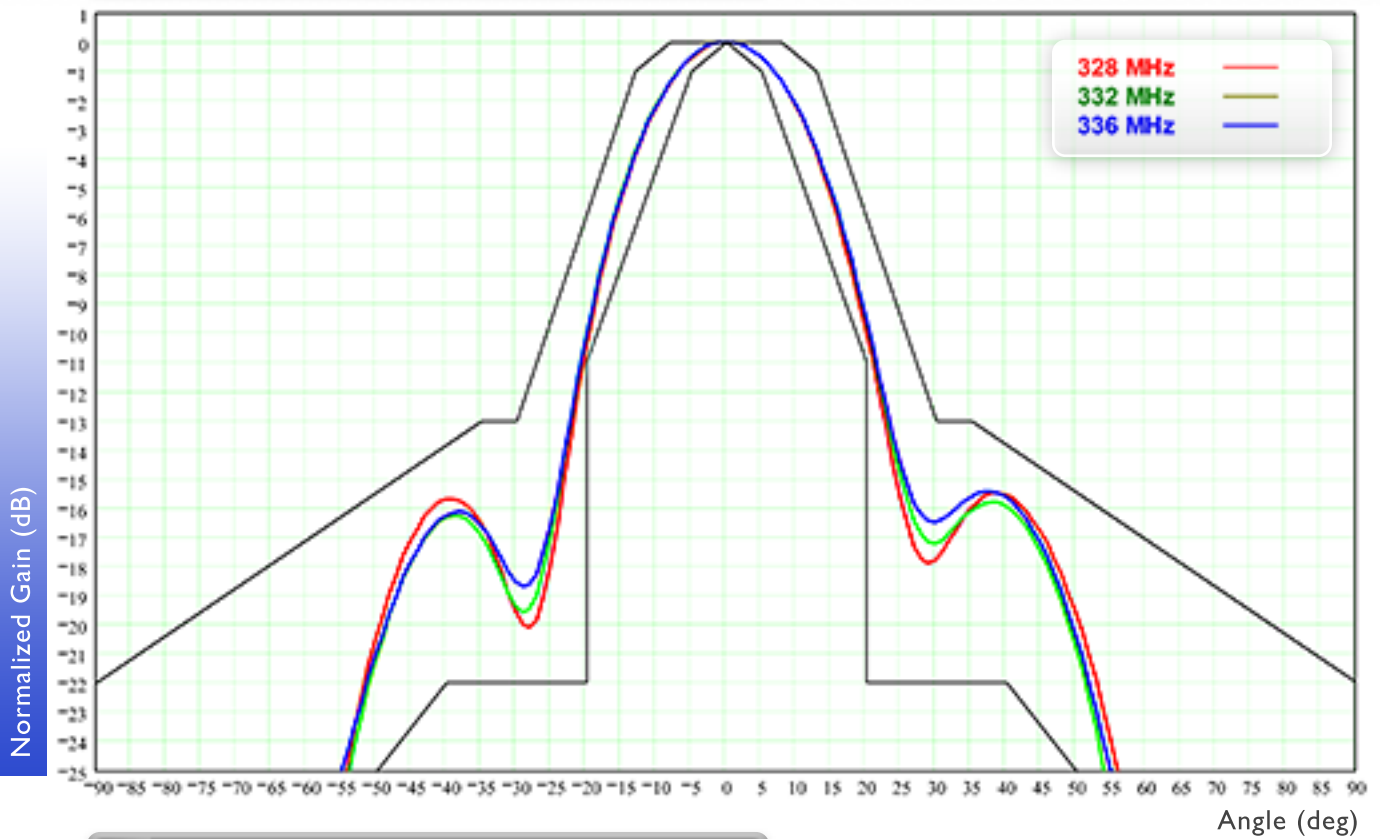
SPECS

FREQUENCY RANGE	328-336 MHz
IMPEDANCE	50 Ohms
RF POWER	50 watts CW
MONITOR COUPLING	-6 to -10 dB over 328-336 MHz
POLARIZATION	Horizontal
CROSS POLARIZATION	At least -25 dB as measured in front of the antenna and within +/- 25 degrees in azimuth of a vertical plane perpendicular to the reflector and passing through the center of the antenna array
FRONT-TO-BACK RATIO	More than 16 dB
VSWR	1.2:1 Max over 328-336 MHz
GAIN	More than 10 dBi
HORIZONTAL RADIATION PATTERN	Between the upper and lower limit lines as shown in following table
VERTICAL RADIATION PATTERN	Symmetrical around 0 degrees elevation and decreasing smoothly in amplitude in either direction from 0 degrees elevation.
DIPOLE PHASE	Left and right dipoles with 20-30 degrees phase of center dipole
MONITOR STABILITY SIGNAL LEVEL	Constant within +/- 0.2 dB over the service condition range; track other antennas within 0.15 dB.
MONITOR AMPLITUDE STABILITY TEST	Max change from baseline is +/- 0.075 dB when heaters are energized.
PHASE STABILITY TEST	Max change from baseline is +1.1 degrees, -0.4 degrees when heaters are energized.
DIPOLE HEATERS	Yes





Azimuth Radiation Pattern



Gain (dBi)

