

Dual Iridium/GPS Antenna Model SAF4070-IG

General Description

Model SAF4070-IG is a low-profile dual Iridium/GPS antenna designed to operate with the NAL Research's A3LA and 9601 satellite modems and trackers. It provides continuous coverage from 1610.0 to 1626.5 MHz specifically for the Iridium network and 1575.42±13 MHz (L1) for the GPS. The SAF4070-IG is suitable for harsh environment and long term operations. It is impact, UV, chemical and jet fuel resistance.



Specifications

Mechanical

Dimensions: 5.03" L x 2.08" W x 0.69" H
(12.77 cm x 5.28 cm x 1.75 cm)

Weight: 8.0 oz. (226 g)

Finish: Skydrol Resistant Polyurethane
Enamel and Base Iridite Per
MIL-C-5441

Color: Gloss White #17925
Lusterless Gray #36320
Olive Drab Green #34031
Lusterless Black #37038

Connector: Iridium-TNC Female Connector
GPS-SMA Female Connector
(Option: SMA, TNC, TNC
Bulkhead, N, N Bulkhead, MCX,
MMCX or Cable)

Material: 6061-T6 Aluminum Alloy Base
Composite Radome

Environmental

Operating Temperature: -67°F to +185°F
(-55°C to +85°C)

Operating Altitude: 70,000 ft (21 km)

Vibration: > 30 G's

Leakage: Hermetically Seal

Designed To

FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810 and SAE J1455

Electrical for Iridium Antenna

Frequency:	1610.0 to 1626.5 MHz	
Radiation Pattern:	Hemispherical	
Polarization:	Right Hand Circular	
VSWR:	Less than 1.5 : 1	
Gain (dB):	With 4-Foot Ground Plane	Free Space
	90° Zenith +4.9	90° Zenith +5.0
	10° Elevation -1.0	10° Elevation -2.5
	20° Elevation +1.5	20° Elevation -0.5
	30° Elevation +2.4	30° Elevation +1.0
	60° to 90° Elevation > +3.3	60° to 90° Elevation > +2.7
Beam Width (3dB):	129°	98° 侧 106°
Axial Ratio:	2 dB	
Power Handling:	30 Watts	
Lightning Protection:	DC Grounded	
Cable loss between antenna and modem:	Must be kept < 3dB	

Electrical for GPS Antenna

Frequency:	1575.42±13 MHz (L1)	
Radiation Pattern:	Hemispherical	
Polarization:	Right Hand Circular	
VSWR:	Less than 1.5 : 1	
Gain (dB):	With 4-Foot Ground Plane	Free Space
	90° Zenith +2.9	90° Zenith +4.6
	10° Elevation -1.8	10° Elevation -2.5
	20° Elevation +0.7	20° Elevation -1.1
	30° Elevation +1.7	30° Elevation +0.5
	60° to 90° Elevation > +2.1	60° to 90° Elevation > +3.6
Beam Width (3dB):	146°	103°
Axial Ratio at Zenith:	2 dB	
Power Handling:	1 Watts	
Lightning Protection:	DC Grounded	
Filter (Rej.@16161Mz):	Greater than 60 dB	
LNA Gain:	33.0±1 dB	
LNA P 1 dB Out:	+16 dBm	
LNA Noise Figure:	2.8 dB (Filter loss is included)	
Voltage/Current:	+2.8 to +28 VDC/30 to 50 mA	