

PRODUCT CATALOG

RF Test Antennas

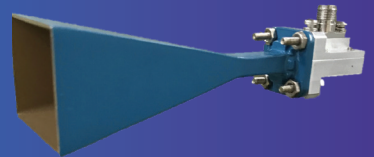
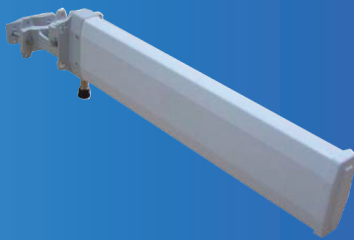


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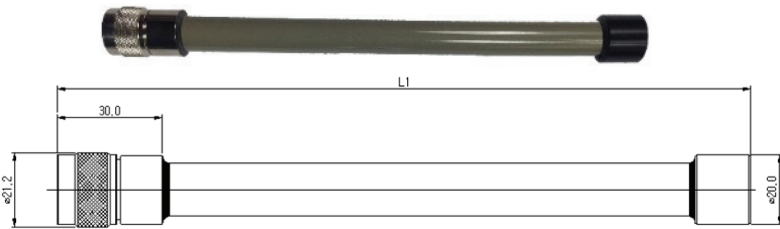
Selection Table

Antenna Type	Catalog Number	Connector	Frequency Range
Omni Antenna	G700050353	N plug (male)	806 to 896 MHz
	G700050354	N plug (male)	870 to 960 MHz
	G700050355	N plug (male)	1710 to 2170 MHz
	G700050356	N plug (male)	720 to 800 MHz
	G700050357	N plug (male)	2300 to 2700 MHz
	G700050350	N plug (male)	3300 to 3800 MHz
	G700050349	SMA plug (male)	600 to 6000 MHz
Dual Band Omni Antenna	G700050359	N plug (male)	2400 to 2500 MHz
			5100 to 5900 MHz
Mag Mount Omni Antenna	G700050358	N plug (male)	689 to 6000 MHz
	G700050340	K jack (female)	24000 to 40000 MHz
	G700050342	K jack (female)	24000 to 40000 MHz
	G700050345	N plug (male)	600 to 6000 MHz
Log Periodic Antenna	G700050366	SMA jack (female)	650 to 4000 MHz
	G700050367	SMA jack (female)	650 to 6000 MHz
Horn Antenna	G700050370	K jack (female)	26500 to 40000 MHz
	G700050371	K jack (female)	22000 to 33000 MHz
Isotropic Antenna	G700050382	N plug (male)	30 to 8000 MHz
GPS Antenna	JD71050351	SMA plug (male)	L1 1575.42 MHz
	G700050390	SMA plug (male)	L1 1575.42 MHz
	G700050391	SMA plug (male)	1197-1249 MHz (L2, B2, G2, G3, E5B)
			1559-1606 MHz (L1, E1, B1, B1-2, G1)

Omni Antenna

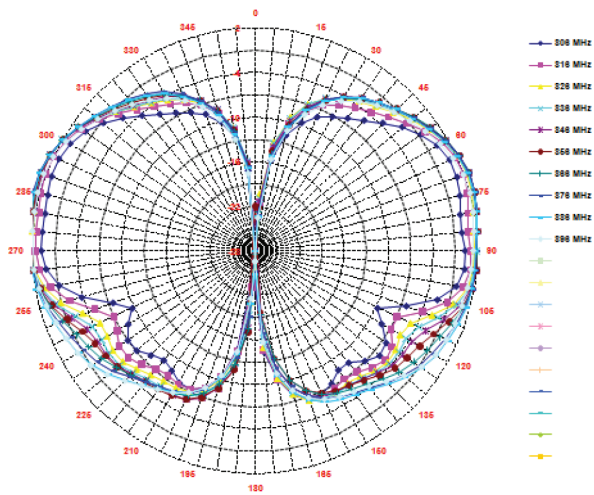
Specifications

VIAVI Omni antennas are used for both indoor and outdoor applications. They are constructed with a Type N male connector to make it easy for a direct attachment.

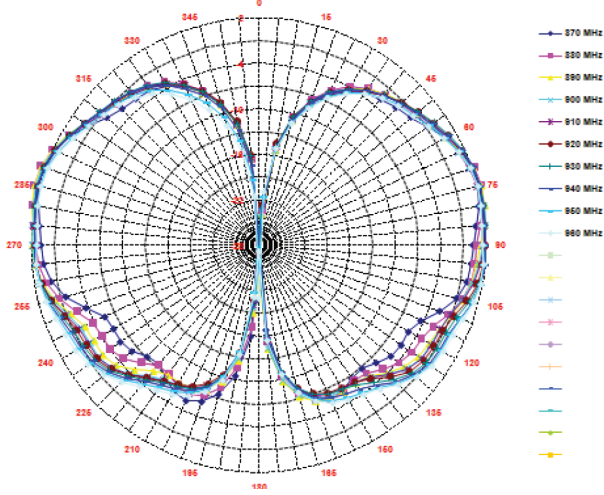
Catalog Number	G700050353	G700050354	G700050355	G700050356	G700050357
Mechanical Data					
Length (L1)					
	227.0 ± 3.0 mm	223.0 ± 3.0 mm	143.0 ± 3.0 mm	266.0 ± 3.0 mm	129.0 ± 3.0 mm
Connector	Type N plug (male)				
Environmental Data					
Operating Temperature	-20 to +70°C	-20 to +70°C	-20 to +70°C	-20 to +70°C	-20 to +70°C
Electrical Data					
Frequency Range	806 to 896 MHz	870 to 960 MHz	1710 to 2170 MHz	720 to 800 MHz	2300 to 2700 MHz
Gain	> 1 dBi	> 1 dBi	> 1 dBi	> 1 dBi	> 1 dBi
VSWR	≤ 2.4:1 (806 to 816 MHz)	≤ 2.0:1	≤ 2.0:1	≤ 2.0:1 (720 to 780 MHz)	≤ 2.0:1
	≤ 2.0:1 (816 to 896 MHz)			≤ 2.4:1 (780 to 800 MHz)	
Impedance	50 Ω	50 Ω	50 Ω	50 Ω	50 Ω
Maximum Power	50 W	50 W	50 W	50 W	50 W

Antenna Pattern

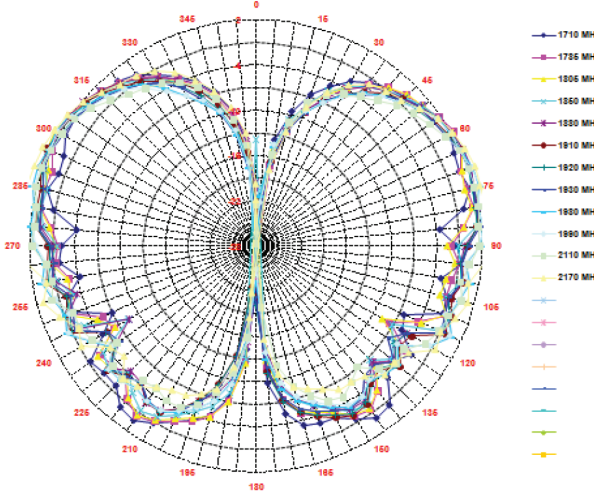
G700050353 (806 to 896 MHz)



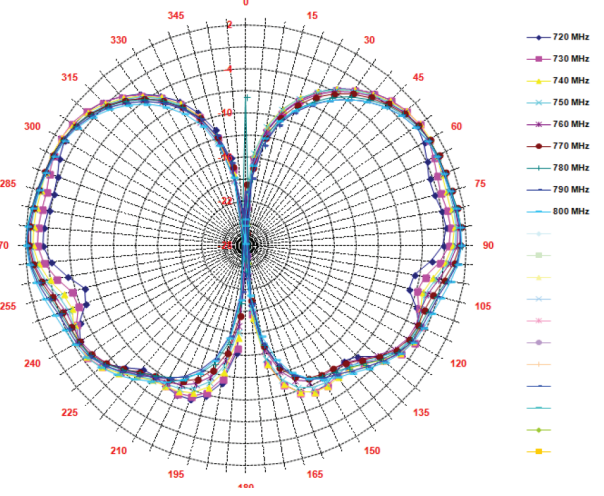
G700050354 (870 to 960 MHz)



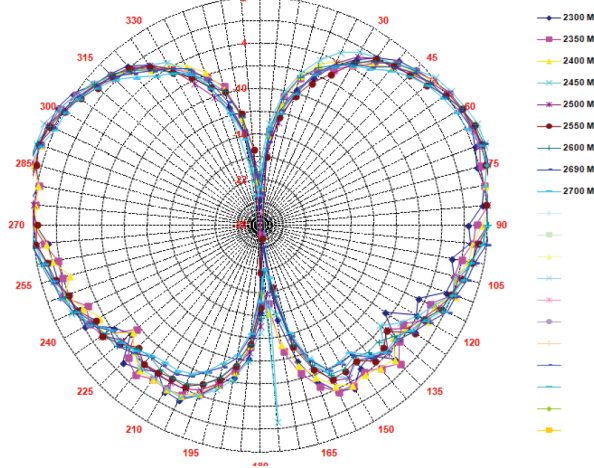
G700050355 (1710 to 2170 MHz)



G700050356 (720 to 800 MHz)



G700050357 (2300 to 2700 MHz)



Specifications

Catalog Number	G700050350
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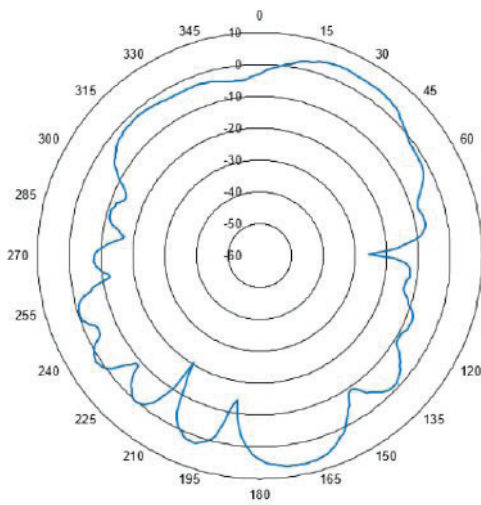
RF omni antenna, N(m), 3.3 to 3.8 GHz, 4 dBi

Mechanical Data	
Dimension	280 x 24 mm (11.02 x 0.94 in) 
Connector	Type N plug (male)
Electrical Data	
Frequency Range	3300 to 3800 MHz
Gain	> 4 dBi
VSWR	≤ 2.0:1
Impedance	50 Ω

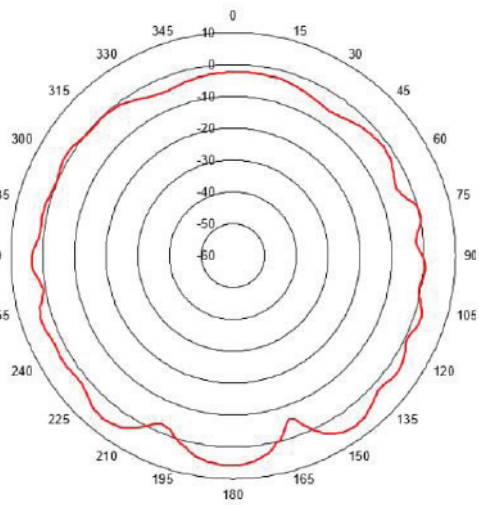
Antenna Pattern

3300 MHz

E-plane

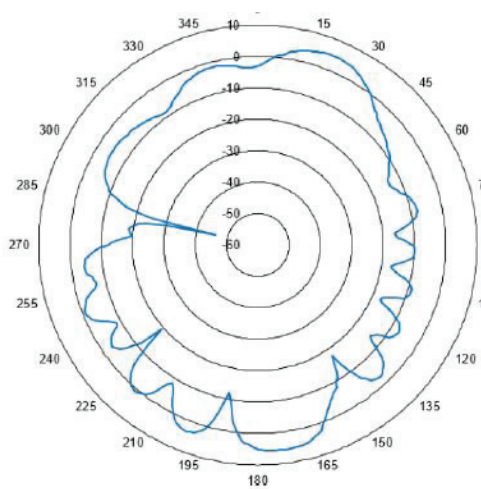


H-plane

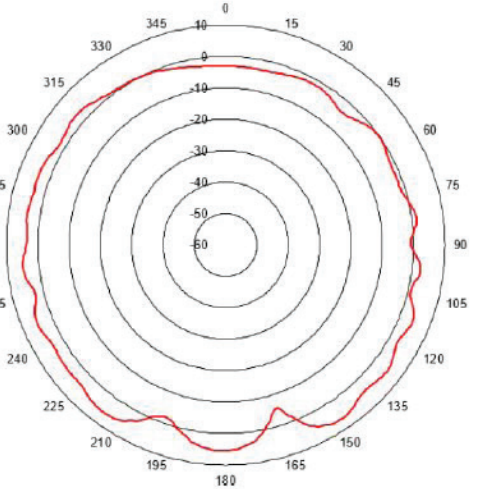


3550 MHz

E-plane

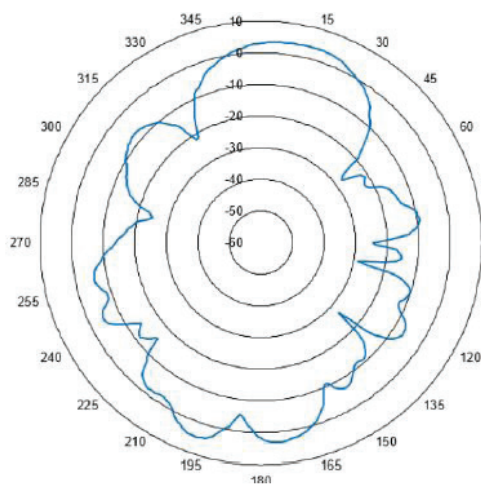


H-plane

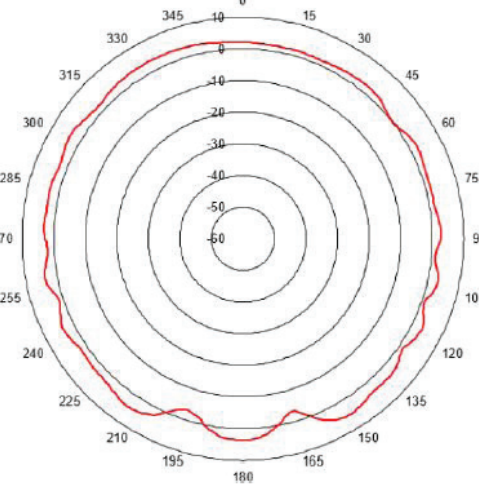


3800 MHz

E-plane



H-plane



Specifications

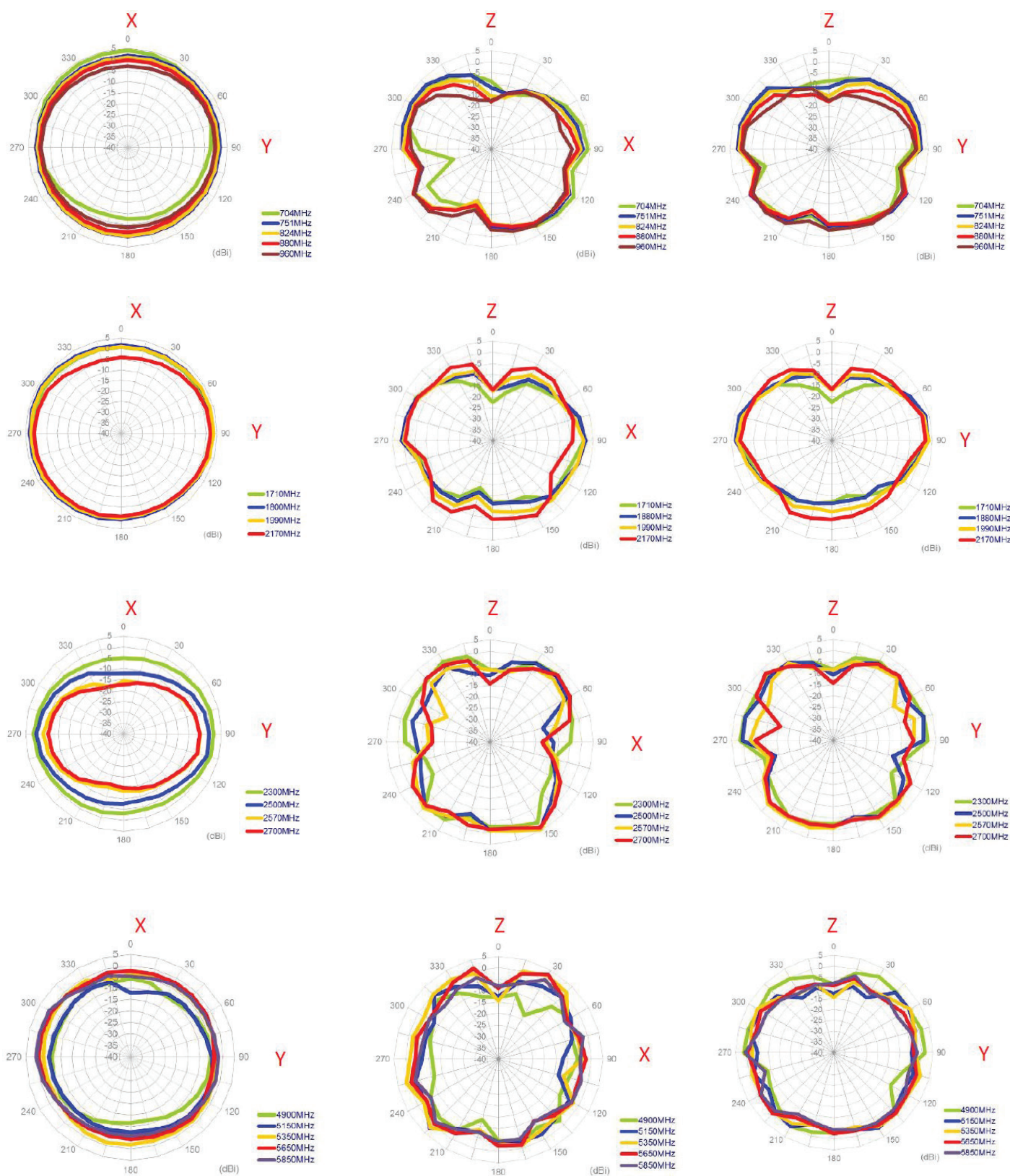
Catalog Number	G700050349
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RF Omni Antenna 600 MHz to 6 GHz with SMA to N Adapter

Mechanical Data						
Dimension	Straight: 224 x 58 x 13mm Right-Angle: 197 x 58 x 32 mm 					
Antenna Casing Material	UV Resistant PC/ABS					
Connector	SMA(m)					
Environmental Data						
Operating Temperature	-40 to +85°C					
Electrical Data						
Frequency Range	600 to 6000 MHz					
Peak Gain (dBi)	Straight Free Space					
	617-698	698-824	824-960	1427-1518	1710-1880	1850-1990
	1.82	1.5	1.63	1.88	3.21	2.91
	1920-2170	2300-2690	3300-3500	3400-3800	3600-4600	5150-5925
	2.69	1.55	-0.61	-0.28	0.53	2.25
	Bent Free Space					
	617-698	698-824	824-960	1427-1518	1710-1880	1850-1990
	1.68	2.73	2.16	2.14	3.62	3.5
	1920-2170	2300-2690	3300-3500	3400-3800	3600-4600	5150-5925
	3.7	2.8	-0.31	0.14	1.02	3.02
Impedance	50 Ω nominal					
Maximum Power	5 W					

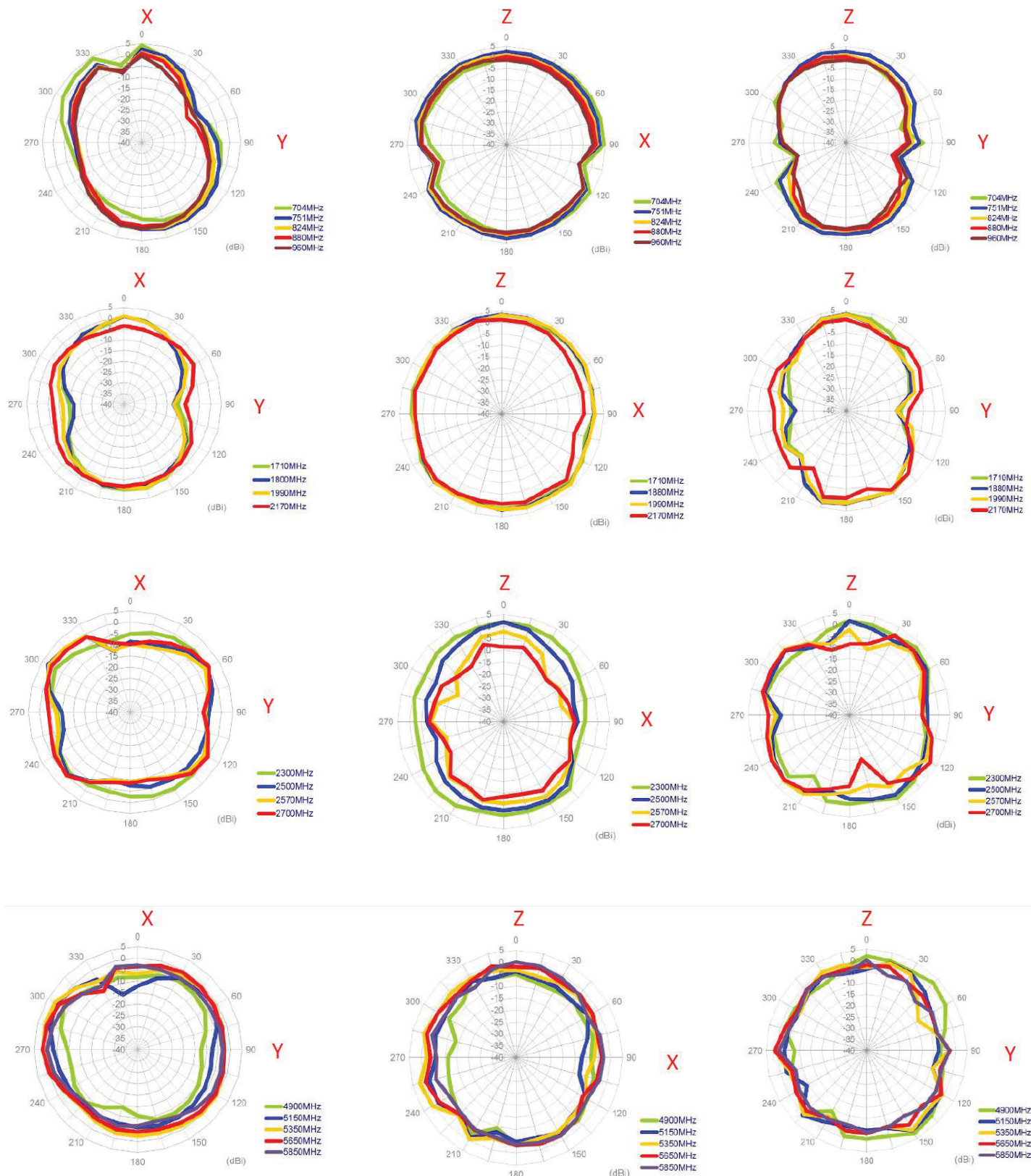
Radiation Patterns

Straight Free Space



Radiation Patterns

Bent 90° in Free Space



Mag Mount Omni Antenna

Specifications

Catalog Number	G700050358
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Mag mount RF omni antenna, N(m), 694 to 6000 MHz

Mechanical Data	
Dimension	107 x 107 x 93 mm (4.20 x 4.20 x 3.67 in) 
Radome Material	Black ASA UV Inhibitive
Cable	RG-174, 8 ft. (GPS DC 3V and 5V)
	RF-195, 8 ft. (694-960/1710-3700 MHz)
	RF-195, 8 ft. (2.4 to 2.485 and 4.9 to 6.0 GHz)
Connector	RF: Type N plug (male)
	GPS: SMA plug (male)
Environmental Data	
Operating Temperature	-40 to +80°C
Shock and Vibration	IEEE1478, EN 61373, MIL-810G, TIA 329.2-C
Dust and Water Ingress	IP67
Electrical Data	
Frequency Range	RF: 694-960 MHz, 1710-3700 MHz, 2400 MHz, and 4900-6000 MHz
	GPS: 1575.42 ± 2 MHz
Gain	3 dBi (694 to 960 MHz)
	4 dBi (1710 to 3700 MHz)
	5 dBi (2.4 to 2.485 and 4.9 to 6.0 GHz)
GPS Unit Gain	26 dB, 5 dBi antenna
	3.3 and 5 V DC (Voltage)
	10 mA typical, 20 mA max. (Current)
VSWR	< 2.0:1
Impedance	50 Ω nominal
Maximum Power	10 W

Specifications

Catalog Number	G700050340
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Mag mount RF omni antenna, K(f), 24 to 40 GHz, 3 dBi

Mechanical Data	
Dimension	52 x 52 x 84.3 mm (2.05 x 2.05 x 3.32 in) 
Weight	200 g (7.05 oz)
Radome Material	HDPE
Connector	K jack (female)
Environmental Data	
Operating Temperature	-40 to +85°C
Electrical Data	
Frequency Range	24000 to 40000 MHz
Gain	3 dBi typical*
Azimuth Gain Variation	± 1 dB
Azimuth Beam Width	360°
3 dB Vertical Beam Width	45°
Return Loss	8 dB
Maximum Power	200 W

* Catalog number G700050343 available for factory upgrade with LNA

Specifications

Catalog Number	G700050342
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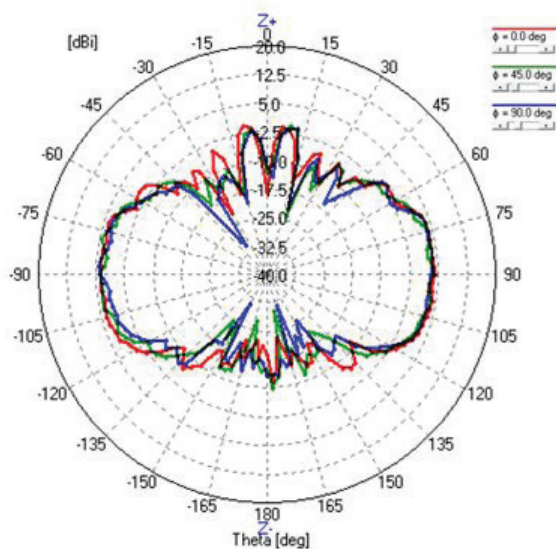
Mag mount RF omni antenna with LNA, K(f), 24 to 40 GHz, 18 dBi

Mechanical Data	
Dimension	With the housing: 54.0 x 137.3 x 125.5 mm (2.13 x 5.41 x 4.94 in) 
Weight	340 g (11.99 oz) without the USB cabling and housing
Radome Material	HDPE
Connector 1	K jack (female)
Connector 2	USB Type C with locking screw
Environmental Data	
Operating Temperature	-20 to +65°C
Electrical Data	
Frequency Range	24000 to 40000 MHz
Gain	18 dBi typical (3 dBi from the antenna and 15 dBi from the integrated LNA)
Azimuth Gain Variation	± 1 dB
Azimuth Beam Width	360°
3 dB Vertical Beam Width	45°
P1dB	11 dBm
Return Loss	10 dB
RF Input Power	-8 dBm maximum
Damage RF Input Power	-3 dBm maximum
Supply Voltage	4.8 V DC minimum, 5 V DC typical, 20 V DC maximum
Supply Current	150 mA typical

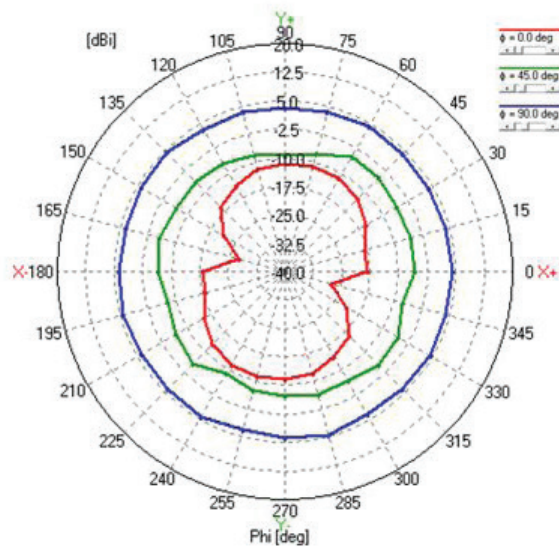
Antenna Pattern

G700050340 (28 GHz)

E-plane

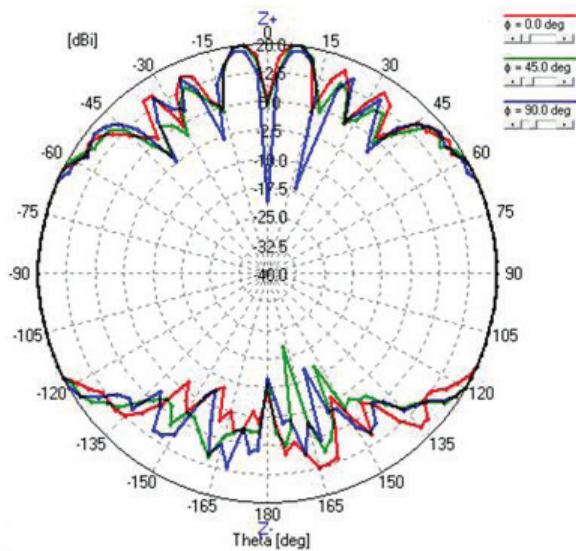


H-plane

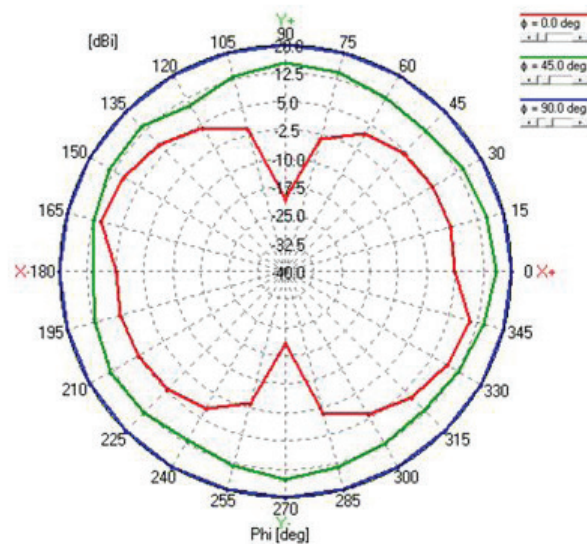


G700050342 (28 GHz)

E-plane



H-plane



Specifications

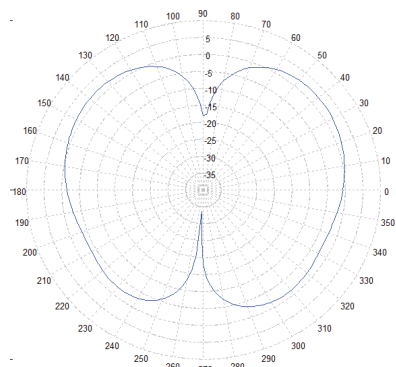
Catalog Number	G700050345
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Mag Mount RF Omni Antenna 617-960/1700-6000 MHz 8 ft. LL-195 with N-plug

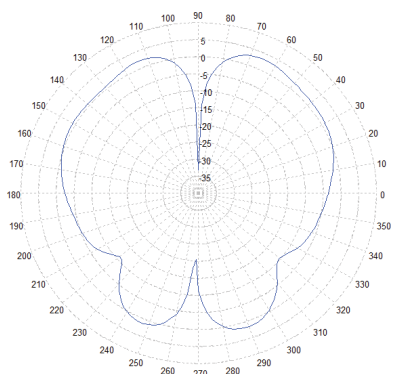
Mechanical Data	
Dimension	1.7" diameter x 3 5/8" high (43 mm x 92 mm) Mag base dia. 2 5/8" (67mm) 
Radome	Black ABS Plastic
Cable	8 ft. LL-195
Connectors	N plug
Environmental Data	
Operating Temperature	-40 to +80°C
Shock & Vibration	IEEE1475, EN 61373, MIL-STD-810G
Dust & Water Ingress	IPX5
Electrical Data	
Frequency Range	617-960/1700-6000 MHz
Peak Gain	3 dBi
VSWR	2.0:1
Impedance	50 Ω nominal
Maximum Power	10 Watts

Antenna Pattern

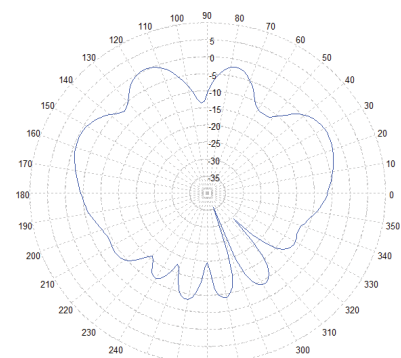
620 MHz – Elevation Plot



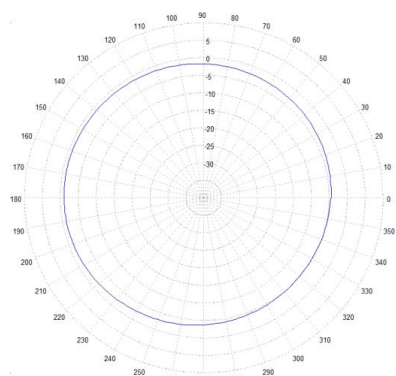
960 MHz – Elevation Plot



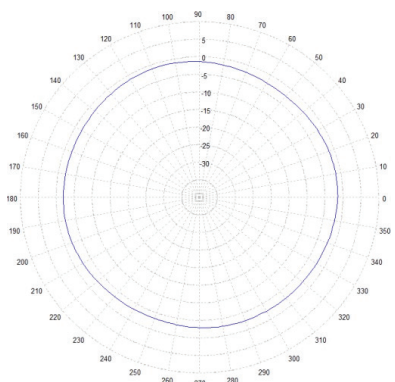
1950 MHz – Elevation Plot



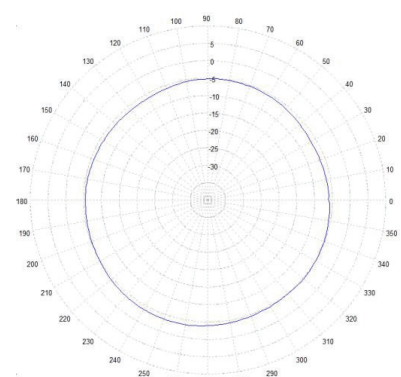
620 MHz – Azimuth Plot



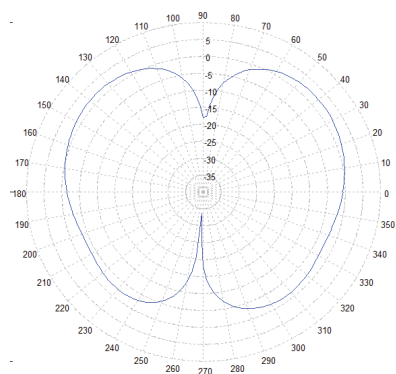
960 MHz – Azimuth Plot



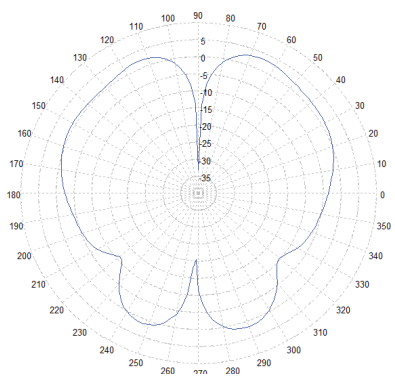
1950 MHz – Azimuth Plot



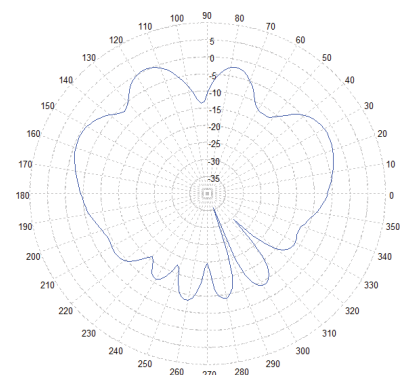
2600 MHz – Elevation Plot



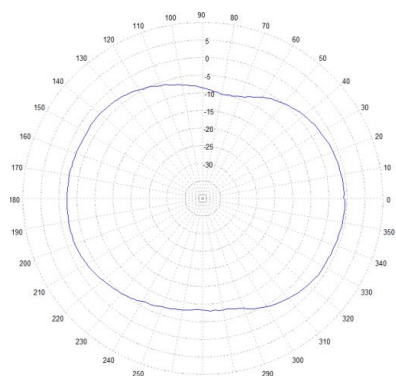
3800 MHz – Elevation Plot



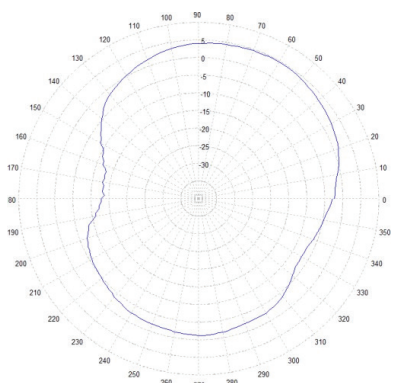
5500 MHz – Elevation Plot



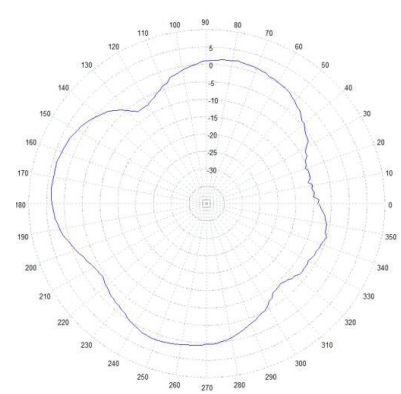
2600 MHz – Azimuth Plot



3800 MHz – Azimuth Plot



5500 MHz – Azimuth Plot



Broadband Log Periodic Antenna

Specifications

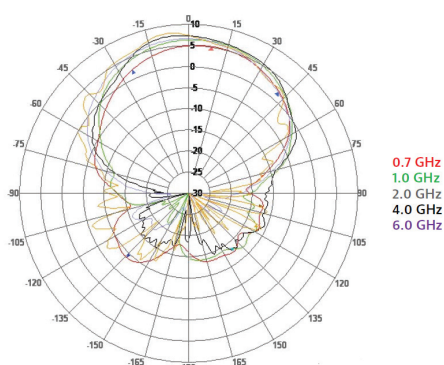
VIAVI broadband log periodic antenna is an extremely cost-effective solution that works with an AntennaAdvisor handle and CellAdvisor base station analyzer to let technicians at any skill level quickly identify and isolate RF interference. With a wide frequency coverage (up to 6 GHz), field technicians working in the cellular spectrum only need this one antenna for different cellular bands. A robust design and rugged construction with a high-tech radome housing protects against mechanical stress and environmental influence without sacrificing performance. This antenna can be used with optional JD70050007 AntennaAdvisor Handle.

Catalog Number	G700050366	G700050367
Mechanical Data		
Dimension	197 x 310 x 25.4 mm (7.75 x 12.20 x 1 in) 	
Connector	SMA jack (female)	SMA jack (female)
Environmental Data		
Operating Temperature	-30 to +70°C (-22 to 158°F)	-30 to +70°C (-22 to 158°F)
Electrical Data		
Frequency Range	650 to 4000 MHz	650 to 6000 MHz
Gain	5 dBi	5 dBi
VSWR	< 2.0:1	< 2.0:1
Maximum Power	50 W	50 W

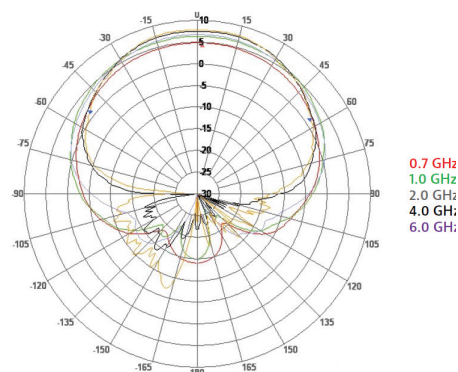
Antenna Pattern

G700050367 (650 to 6000 MHz)

E-plane



H-plane



Horn Antenna

Specifications

Catalog Number	G700050370
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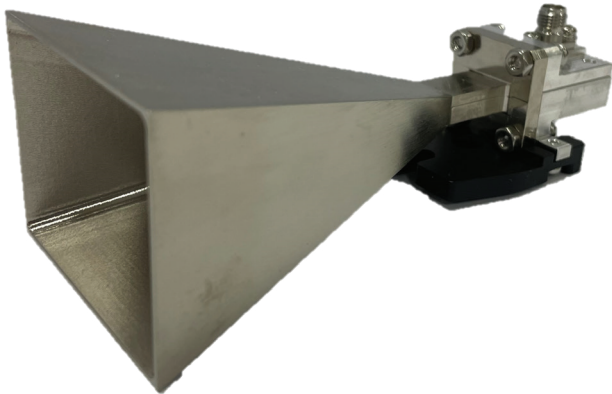
RF directional horn antenna kit that includes a 26.5 to 40 GHz horn antenna, a tripod handle, a 40 GHz cable, and a hard carrying case.

Mechanical Data	
Dimension	93.73 x 36.83 x 27.94 mm (3.69 x 1.45 x 1.10 in) 
Connector	K jack (female)
Electrical Data	
Frequency Range	26.5 to 40 GHz
Polarization	Linear
Gain	20 dB nominal
3 dB Beam Width	16.7° (E-Plane)
	18.3° (H-Plane)
VSWR	≤ 1.4:1
Impedance	50 Ω nominal

Specifications

Catalog Number	G700050371
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RF directional horn antenna kit that includes a 22 to 33 GHz horn antenna, a tripod handle, a 40 GHz cable, and a hard carrying case

Mechanical Data	
Dimension	118 x 54 x 42 mm (4.65 x 2.13 x 1.65 inch) 
Connector	K jack (female)
Electrical Data	
Frequency Range	22000 to 33000 MHz
Polarization	Linear
Gain	20 dB typical
Beam Width	13° to 18°
VSWR	≤ 1.4:1
Impedance	50 Ω nominal

Isotropic Antenna

Specifications

Catalog Number	G700050382
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Isotropic Triaxial E-field antenna, N(m), 30 MHz to 8 GHz

Mechanical Data	
Dimension	Total length 455 mm (17.71 inch) Antenna radome Ø 120 mm (4.72 inch)
Weight	0.560 kg (19.75 oz)
Connector	Type N plug (male)
Environmental Data	
Operating Temperature	-10 to +50°C
Electrical Data	
Frequency Range	30 MHz to 8 GHz
Dynamic Range	3.0 mV/m – 400 V/m (30 MHz – 75 MHz)
	1.0 mV/m – 400 V/m (75 MHz – 400 MHz)
	0.3 mV/m – 300 V/m (400 MHz to 6 GHz)
	2.0 mV/m – 400 V/m (6 GHz – 8 GHz)
Maximum Field Strength (Destruction Limit)	600 V/m
Isotropic Deviation	< ± 1 dB (30 MHz to 3 GHz)
	< ± 2 dB (3 GHz to 5 GHz)
	< ± 2.8 dB (5 GHz to 6 GHz)
	< ± 4 dB (6 GHz to 8 GHz)
Control and Power Supply	USB (including axis selection)



Measurement Uncertainty (combined with module types RA09/18/32/44MA-0 and 3m long cable)

Frequency (MHz)	Single-axis Measurement	Isotropic Measurement
30 - 100 MHz	±1.7 dB	+1.7 / -1.7 dB
> 100 - 800 MHz	±2.4 dB	+2.4 / -2.4 dB
> 800 - 3200 MHz	±2.3 dB	+2.7 / -3.3 dB
> 3200 - 4000 MHz	±2.3 dB	+2.3 / -3.4 dB
> 4000 - 5000 MHz	±2.7 dB	+3.3 / -3.8 dB
> 5000 - 6000 MHz	±2.7 dB	+3.3 / -5.2 dB
> 6000 - 8000 MHz	±2.7 dB	+3.4 / -5.2 dB

Included Accessories

- 2 m long cable
- 3 m long cable (optionally)
- Hard carrying case
- Vertical/horizontal/tilted support for fixing to ¼" thread
- Calibration certificate with antenna factor and return loss of three axis

GPS Antenna

Specifications

Catalog Number	JD71050351
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GPS antenna with cable

Mechanical Data	
Dimension	45 x 45 x 13 mm (1.77 x 1.77 x 0.51 in)
Weight	110 g (incl. 5 m cable and connector)
Cable Length	5 m (16.4 ft)
Connector	SMA plug (male)
Environmental Data	
Operating Temperature	-10 to +50°C
Electrical Data	
Patch	
Center Frequency	1575.42 MHz
Bandwidth (10 dB return loss)	10 MHz min @ S11-10 dB
Return Loss	-10 dB max.
Gain at Zenith	5.0 dBi typical
Polarization	RHCP
Axial Ratio	3 dB typical
Filter/LNA	
Center Frequency	1575.42 MHz $\pm$ 3
Gain	28 dB typical (without cable)
Noise Figure	1.2 dB typical
Output VSWR	< 2.0:1
Voltage	2.7 to 5 V dc
Current	8 mA typical @ 3.3 V $\pm$ 0.1 (11 mA max.)



Specifications

Catalog Number	G700050390
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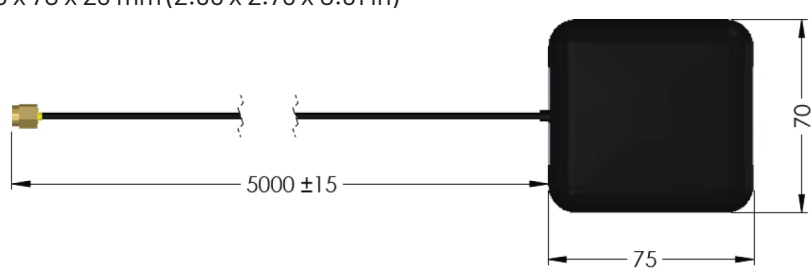
GPS SMA mount antenna

Mechanical Data	
Dimension	15.1 x 15.1 x 44.5 mm (0.59 x 0.59 x 1.75 in) 
Weight	30 g (1.06 oz)
Radome Material	Black Ultem 1000
Connector	SMA plug (male)
Environmental Data	
Operating Temperature	-40 to +71°C
Electrical Data	
Center Frequency	1575.42 MHz
VSWR	≤ 3.0:1
Gain	-5 dBic ± 1 dB
Polarization	RHCP
Beam Width	120° x 120°
Axial Ratio at Zenith	4 dB typical
Impedance	50 Ω

Specifications

Catalog Number	G700050391
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Mag mount dual band GNSS and GPS antenna with cable

Mechanical Data		
Dimension	75 x 70 x 23 mm (2.95 x 2.76 x 0.91 in) 	
Weight	230 g (incl. 5 m cable and connector)	
Cable Length	5 m (16.4 ft)	
Connector	SMA plug (male)	
Environmental Data		
Operating Temperature	-40 to +105°C	
Electrical Data		
Passive Antenna Performance		
Frequency	1197-1249 MHz (L2, B2, G2, G3, E5B)	1559-1606 MHz (L1, E1, B1, B1-2, G1)
Peak Efficiency	39%	40%
Polarization	RHCP	RHCP
Realized Gain	2.6 dB	3.3 dB
Axial Ratio	1.5 dB max. at the Zenith	1.5 dB max. at the Zenith
VSWR	≤2:1	≤2.3:1
Beamwidth	117°	100°
RF Specifications		
Conducted Gain	28 dB ± 3 dB	
Noise Figure	2 dB max.	
Voltage	3.0 - 5.0 V	
Current	35 mA max.	
Out of Band Rejection	40 dB typical	
Group Delay Variation	Less than 5 ns over GNSS bands	
EMI Immunity Out of Band	30 V/m	
ESD Circuit Protection	15 kV human body model air discharge	



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