

MAN1216Q50A

Quadrifilar Helix Antenna For GNSS

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Quadrifilar Helix Antenna

For L1/L2/L5 G1/G2 B1/B2/B3 E1/E5/E6 L-band

MAN1216Q50A

42.16 x Φ 50 mm

All Use For RF & Microwave

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FEATURES

1. High gain and low Noise Figure.
2. Light weight less than 30g.
3. Convenient connect both DC bias and RF Signal through SMA.
4. IP67 compliance.



DESCRIPTION

The MAN1216Q50A is a Quadrifilar Helix antenna in structure, which has better gain and wide-angle circular polarization characteristics compared to traditional antennas. It can receive more low elevation satellite signals. Especially suitable for devices such as UAV, handheld devices, wearable devices, etc. It convenient connected both DC bias and RF Signal through one SMA. All Antennas are 100% RF tested.

MAXIMUM RATINGS

Characteristic	Ratings	Units
Weight	25	g
Operating Temperature Range	-40~+85	°C
Storage Temperature Range	-40~+85	°C
Moisture Sensitivity Levels	3	MSL

ANTENNA CHARACTERISTICS

Item	Frequency Range	Min.	Typ.	Max.
Gain(dBi)	GPS L1		1.5	
	GPS L2		2.5	
	GPS L5		2	
	GLONASS G1		1	
	GLONASS G2		1.5	
	BDS B1		2	
	BDS B2a		2	
	BDS B2b		3	
	BDS B3i		0	
	E1		1.5	
	E5a		2	
	E5b		3	
	E6		-0.5	
	L-Band		1	
Characteristics Impedance (Ω)		50 (Nominal)		
Polarization		RHCP		
Covering Range (°)		360		
Out Put VSWR (:1)		2		
Axial Ratio (dB)		3		

- Ta: +25±5°C

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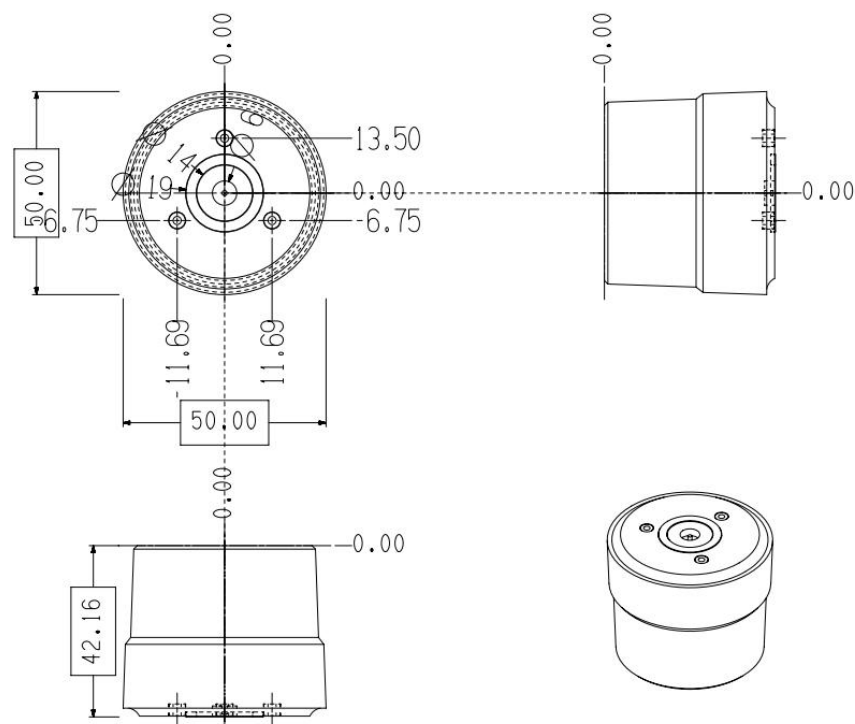
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AMPLIFIER CHARACTERISTICS

Item	Frequency Range (MHz)	Min.	Typ.	Max.
Gain (dB)			28	
Noise Figure (dB)			1.5	2
Output VSWR (:1)				2
Voltage (V)		3.0		16
Current (mA)			15	20

- Ta: +25±5°C

SHAPES AND DIMENSIONS



Units: mm

Revision	Description	Date
Rev0	Preliminary	2025/10/17

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