

MIA-25

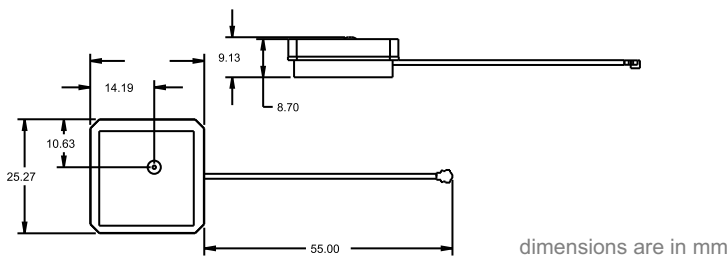
Embedded Active GPS Antenna 25 mm

Description

This is a high performance antenna designed for embedded applications. It is ideal for GPS handhelds, PDAs and tracking devices. The compact size and lightweight features make it perfect for various commercial and industrial applications. With a low noise figure and high-linearity LNA, this antenna is the ideal solution for the most extreme and demanding applications where reliable satellite reception and high accuracy are required. The interface connector is available in U.FL or other.

Mechanical Specifications

Parameter	Design Specifications
RF connector	U.FL or other



Electrical Specifications

76X76 mm ground plane

Parameter	Design Specifications
Frequency	1575.42 MHz
Polarization	RHCP
Antenna element peak gain	5.5 dBic
DC voltage	2.5 to 5 V
DC current	7 mA @ 2.5 V / 11 mA @ 3.5 V
Bandwidth (-1dB)	20 MHz
LNA network gain	34 dB @ 2.5 V / 34 dB @ 3.5 V
Axial ratio	1.5 dB (typical) / 2.5 dB (max)
VSWR	2 (max)
Impedance	50 Ohm
Operating temp.	from -40°C to 85°C

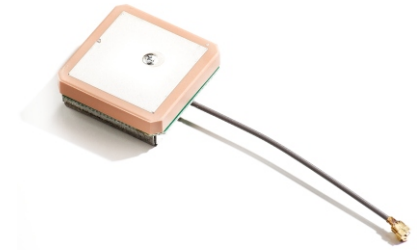


Image does not reflect the actual size of the antenna

Features

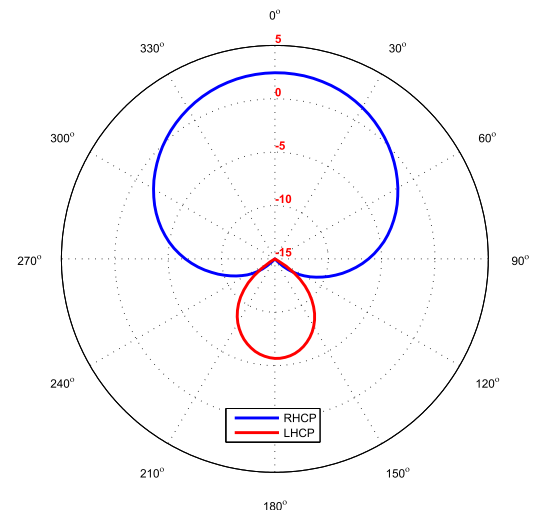
- GPS L1 frequency
- Active LNA circuitry
- Custom connector options
- Low current

Applications

- Vehicle & fleet tracking
- Embedded applications
- Military & security
- Asset tracking
- PDAs and laptops
- Oil & gas industries
- Navigation devices
- Law enforcement
- LBS & M2M applications

Realized gain plot

measured at 1575.42 MHz on a 76X76mm ground plane (E plane, 2.5 V)



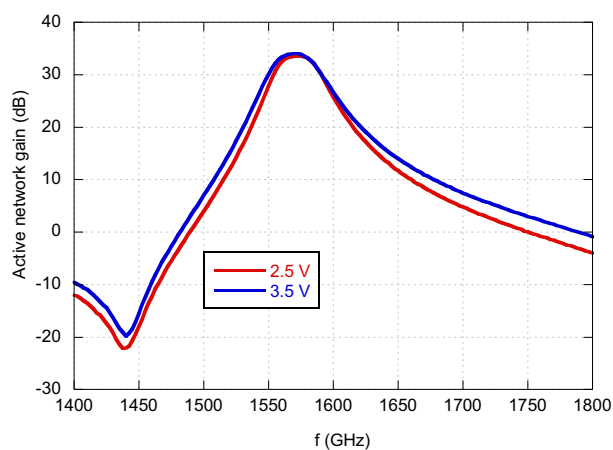
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Active network characteristics

Parameter	Design Specifications
Frequency	1575.42 MHz
DC voltage	2.5 V to 3.5 V
DC current	7 mA @ 2.5 V / 11 mA @ 3.5 V
Noise figure	1.5 dB (max)
VSWR	1.3 dB (max)
Gain	34 dB @ 2.5 V / 34 dB @ 3.5 V
Input P1dB	-35 dBm @ 2.5 V / -30 dBm @ 3.5 V

Active network wide band response



Antenna element characteristics

76X76 mm ground plane

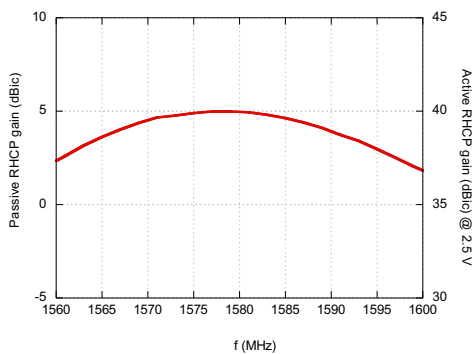
Parameter	Design Specifications
Frequency	1575.42 MHz
Polarization	RHCP
Antenna element gain	5.5 dBic
Efficiency	90%
Bandwidth (-1dB)	20 MHz

Antenna element characteristics

25X25 mm ground plane

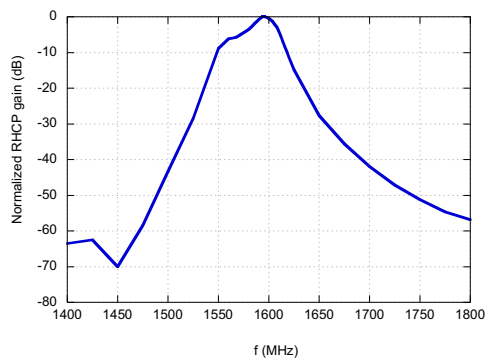
Parameter	Design Specifications
Frequency	1575.42 MHz
Polarization	RHCP
Antenna element gain	0 dBic
Efficiency	70%
Bandwidth (-1dB)	15 MHz

Antenna element gain vs. frequency

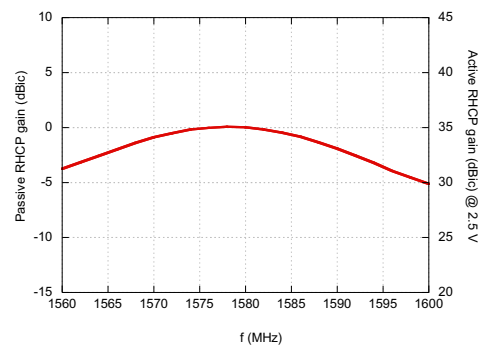


76X76 mm ground plane

System rejection



Antenna element gain vs. frequency



25X25 mm ground plane