

Product Brief



ANT-450-RHS-SMA 450 MHz Cellular LTE Antenna

The ANT-450-RHS-SMA is a compact whip-style antenna for cellular and cellular IoT (LTE-M, NB-IoT) applications in the 450 MHz to 470 MHz range including LTE bands 72, 73 and 31.

The ANT-450-RHS-SMA is a rugged and compact monopole antenna with a height of only 51.8 mm. The ANT-450-RHS-SMA may be used with plastic or metal enclosures.



Features

- Compact size
 - Height 51.8 mm (2.04 in)
 - Diameter 9.0 (0.35 in)
- Performance at 450 MHz to 470 MHz
 - VSWR: ≤ 2.1
 - Peak Gain: -8.2 dBi
 - Efficiency: 5%
- SMA plug (male pin) connection

Applications

- Cellular IoT:
 - LTE-M (Cat-M1)
 - NB-IoT
- 450 MHz LTE bands 72, 73 and 31
- Hand-held devices
- Remote control, monitoring and sensing
- Internet of Things (IoT) devices

Ordering Information

Part Number	Description
ANT-450-RHS-SMA	450 MHz RH series antenna with SMA plug (male pin)

Available from Linx Technologies and select distributors and representatives.

Table 1. Electrical Specifications

ANT-450-RHS-SMA	450 MHz (LTE bands 31, 72, 73)		
Frequency Range	450 MHz to 470 MHz		
VSWR (max)	2.1		
Peak Gain (dBi)	-8.2		
Average Gain (dBi)	-13.2		
Efficiency (%)	5		
Polarization	Linear	Radiation	Omnidirectional
Max Power	10 W	Wavelength	1/4-wave
Electrical Type	Monopole	Impedance	50 Ω

Electrical specifications and plots measured with a 102 mm x 102 mm (4 in x 4 in) reference ground plane.

Table 2. Mechanical Specifications

ANT-450-RHS-SMA	450 MHz (LTE bands 31, 72, 73)		
Connection	SMA plug (male pin)		
Dimensions	Height 51.8 mm (2.04 in) Diameter 9.0 (0.35 in)		
Weight	6.2 g (0.22 oz)		
Operating Temp. Range	-20 °C to +85 °C		

VSWR

Figure 1 provides the voltage standing wave ratio (VSWR) across the antenna bandwidth. VSWR describes the power reflected from the antenna back to the radio. A lower VSWR value indicates better antenna performance at a given frequency. Reflected power is also shown on the right-side vertical axis as a gauge of the percentage of transmitter power reflected back from the antenna.

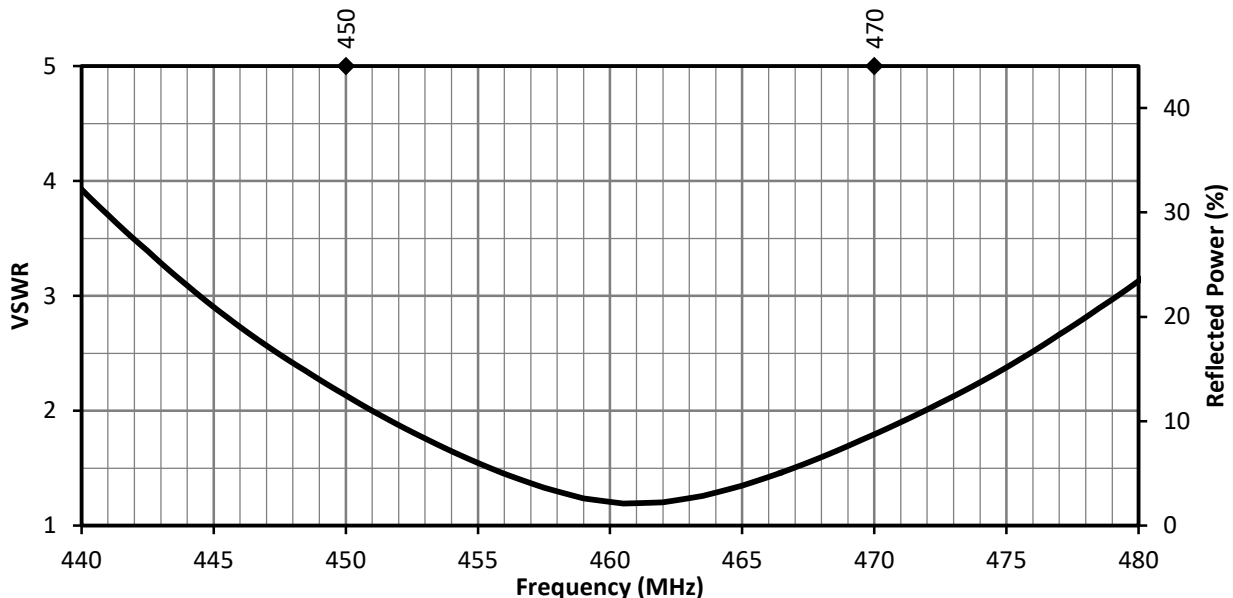


Figure 1. VSWR for ANT-450-RHS-SMA

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