

HB Radiofrequency Wideband Cellular Stud Antenna

Product Code

VST-6927-3.SA1

Polarisation

Vertical (V)

Design Type

Planar / Blade

Application Category

IoT/M2M

RF Category

Cellular



The VST-6927-3 is an economic, high performance stud mount wideband 3G/4G antenna for external use on a range of M2M devices including electronic advertising, vending machines, and metering applications. Stable omnidirectional gain and moderate-high efficiency across the entire operating frequency range ensures consistent reception and transmission.

This antenna is mounted on metal and plastic structures and is locked from the inside of the structure by a nut. Rubber gaskets at the base provide a watertight seal to the mounting structure. VST-6927-3 provides a 2 dBi gain across global UMTS/LTE bands when mounted on non-metallic surfaces, however performance is dramatically improved when mounting on a metal surface to act as a ground plane.

Two of these antennas separated >150 mm from each other are suitable for the LTE nominal MIMO applications.

Customised cable length and connectors are available. HB Radiofrequency recommend a minimum cable length of 70 mm when used on a ground plane to achieve an efficiency of greater than 40% in the 900 MHz band and greater than 60% in the 1800 MHz band.

Below data are calculated from electrical performance testing on a 400 x 400 mm ground plane.

- Wideband 690 to 2655 MHz covering most cellular bands
- Stud Mount for permanent applications
- No ground plane required
- Waterproof IP67 Rated
- 1.5 metre RG58 cable with SMA Male straight connector
- Fully customisable cable length and connector

Antenna Technical Data

Physical Characteristics

Construction Material	ABS Plastic	RF Connections	1
Radome Colour	Other - Black	Environmental Rating	IP67
Dimensions	75.4 x 45.2 mm (H x ø)	Operating Temperature	-40 °C to 85 °C
Weight	0.1100 kg	Mounting	Stud, M12

Wideband Microstrip Element

Electrical Specifications		Mechanical Specifications	
Input Impedance	50 Ω	Input Connector	SMA
Polarisation	Vertical (V)	Input Connector Gender	Male
Max. Input Power	5 W	Cable Series	RG-58
PIM, 3rd Order	-	Cable Length	2000 mm
Range: 698 to 960 MHz			
Peak Gain	2.50 dBi	Azimuth Beamwidth	360°
VSWR	< 2.9:1	Elevation Beamwidth	120°
Radiation Efficiency	40%	Electrical Tilt	0°
Front-to-Back Ratio	-	Inter-Port Isolation	-
Cross-Polar Discrimination	-		
Range: 1710 to 2690 MHz			
Peak Gain	3.00 dBi	Azimuth Beamwidth	360°
VSWR	< 2.8:1	Elevation Beamwidth	60°
Radiation Efficiency	60%	Electrical Tilt	-5°
Front-to-Back Ratio	-	Inter-Port Isolation	-
Cross-Polar Discrimination	-		



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