ISM 433MHz Helical Antenna

Ground cleared under antenna, clearance area 8.50x40.00 mm. Pulse Part Number: W3127

Features

- Plastic supported helical antenna
- Size (helix): Length 35.35mm, ø 7mm
- Low weight (1.8g)
- Mounting on top of the PWB
- Through hole mechanical support pegs
- Feed contact by soldering via PWB hole
- Tray packing
- RoHS Compliant Product

Applications

- Remote controls, toys etc.
- 433MHz ISM Band Systems

Electrical specifications @ +25 °C

Note: Electrical characteristics depend on test board (GP) size and antenna positioning on GP and Ground Clearance area size.

ISM 433MHz

Typical performance (test board size 100x40 mm, PWB ground clearance area 8.50 x40.00 mm), tuning and matching circuit: tuning 12nH series, matching 6.8nH shunt for Pulse standard evaluation board.

Frequency Range [MHz]	Max Gain [dBi]	Return loss min. [dB]	Impedance [Ω]	Operating Temperature [°C]
433 – 435	-2.9	-15	50	-40 to +85

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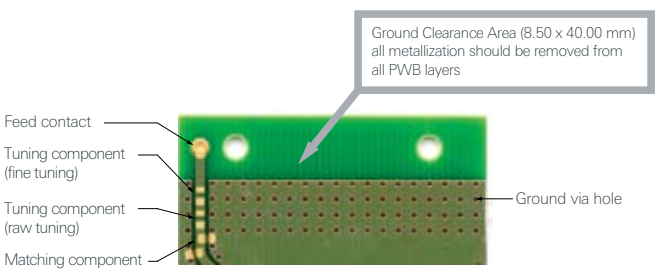
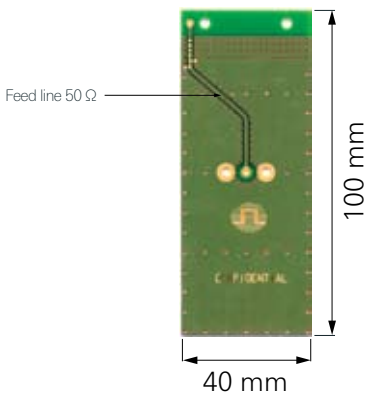
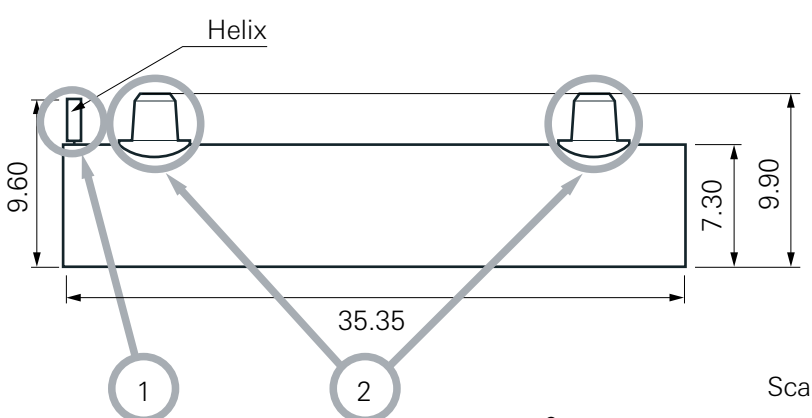
Terminal Configuration

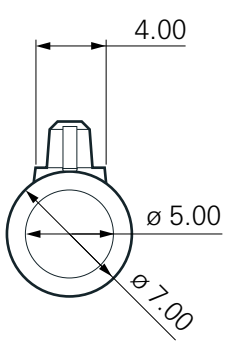
PWB Layout



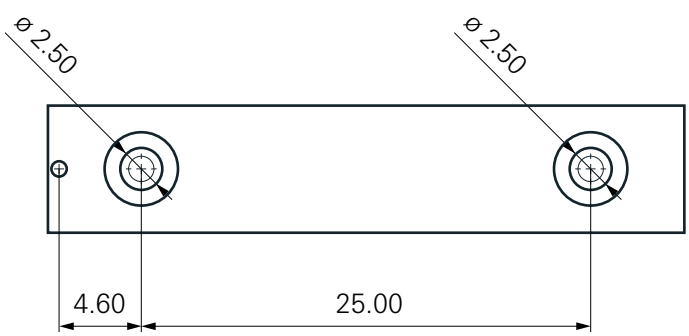


Terminal Configuration and Antenna Dimensions





Scale 3:1



Antenna Features

No.	Terminal Name	Terminal Dimensions
1	Feed terminal	Wire diameter 0.8mm
2	Support	Diameter 2.5mm, length 2.6mm

Matching circuit needs to placed on PCB close to antenna feed terminal.
Matching component values depend on device construction; size, surrounding mechanics, materials etc..

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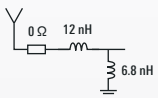
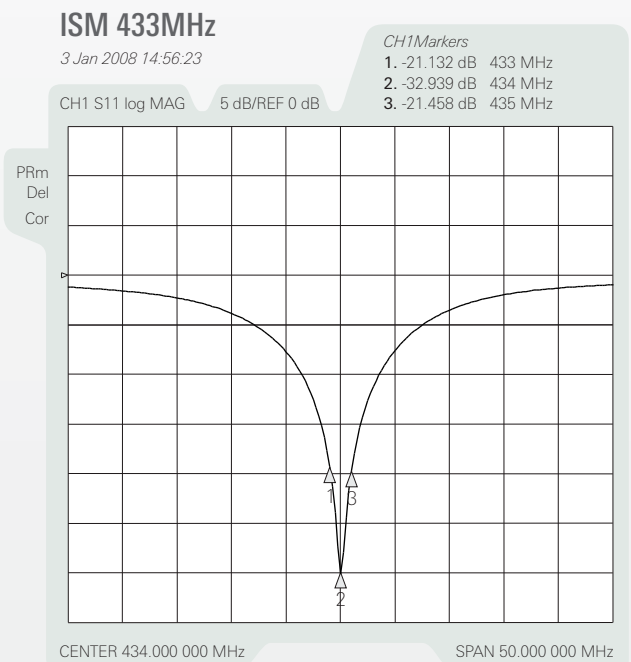
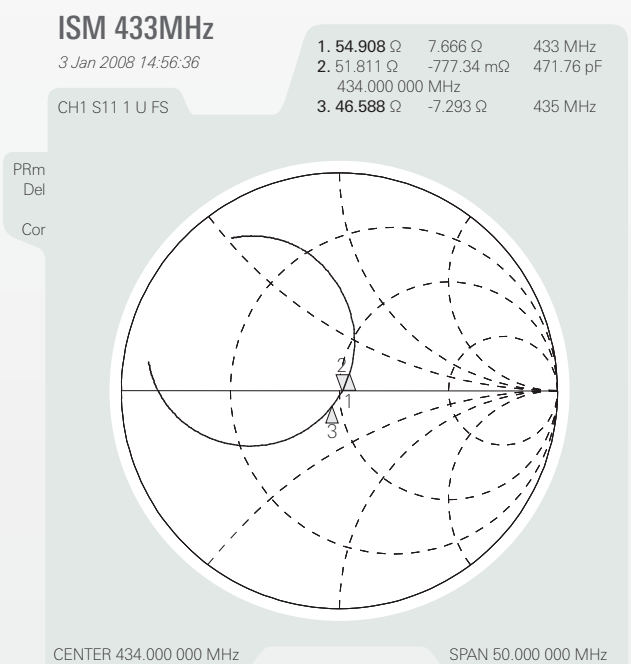
Typical Electrical Characteristics (T=25 °C)

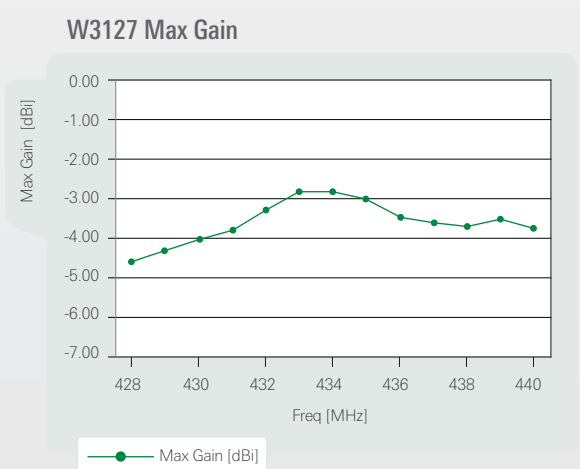
Typical Return Loss S11/ impedance,
Measured on the 100x40mm test board with tuning and matching circuit







Free space maximum gain, PWB ground clearance area 8.50 x 40.00 mm



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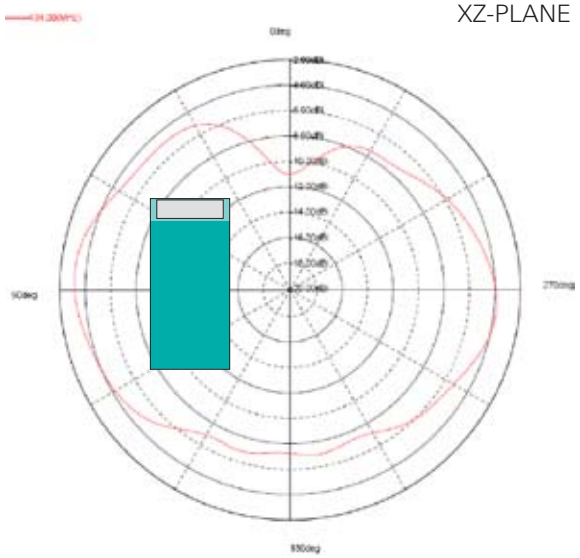
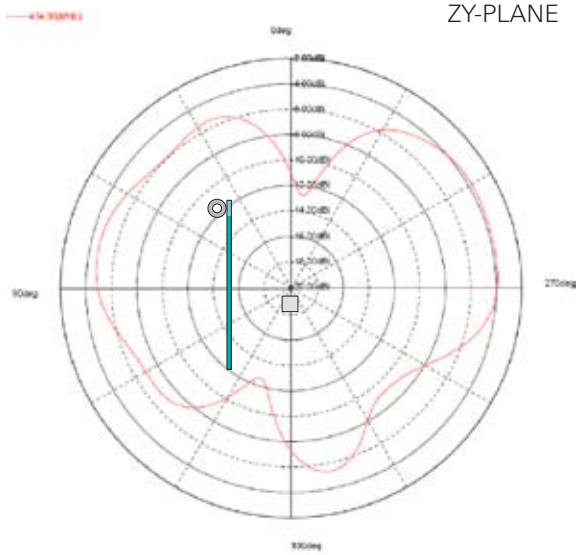
Typical Free space Radiation Patterns

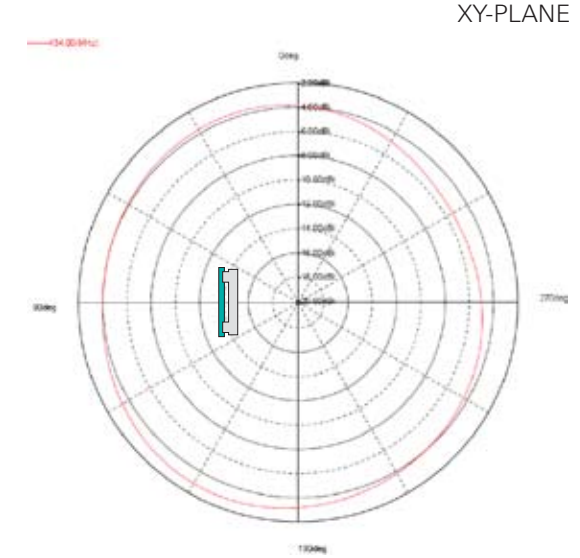
XZ-PLANE

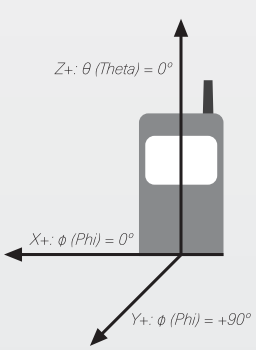


ZY-PLANE



XY-PLANE





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