

# ISM 433MHz Helical Antenna

Pulse Part Number CW3127



## Features

- Plastic supported helical antenna
- Size (helix): Length 35.35mm,  $\phi$ 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.*

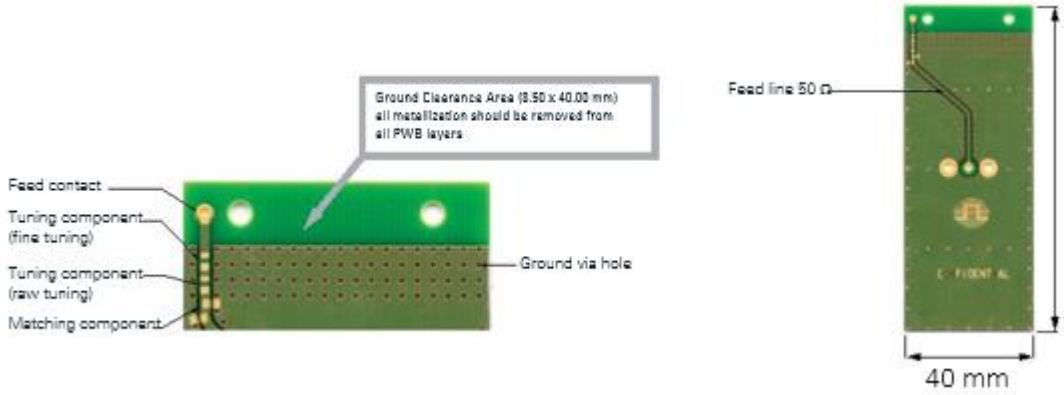
*Typical performance (test board size 100x40 mm, PWB ground clearance area 8.50 x40.00 mm), tuning and matching circuit: tuning 12nH series, matching 6.8nH shunt for Pulse standard evaluation board.*

Frequency Range [MHz]	Max Gain [dBi]	Return loss min. [dB]	Impedance [ $\Omega$ ]	Operating Temperature [ $^{\circ}$ C]
433 – 435	-2.9	-15	50	-40 to +85

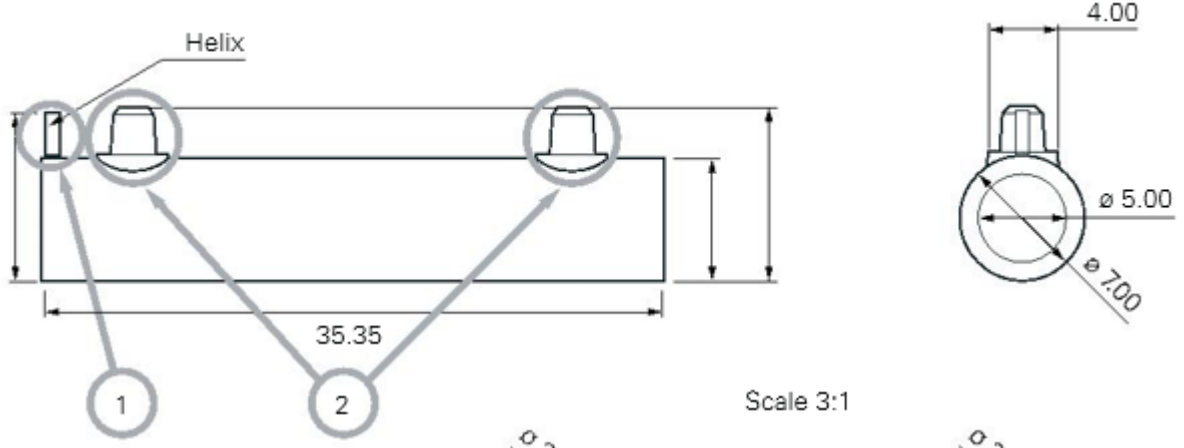
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## PWB Layout

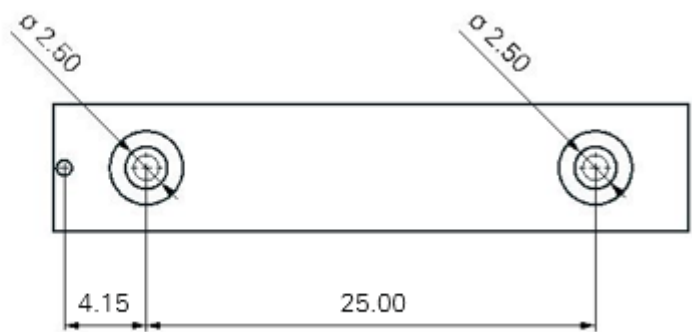


## Terminal Configuration and Antenna Dimensions



Antenna Features

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



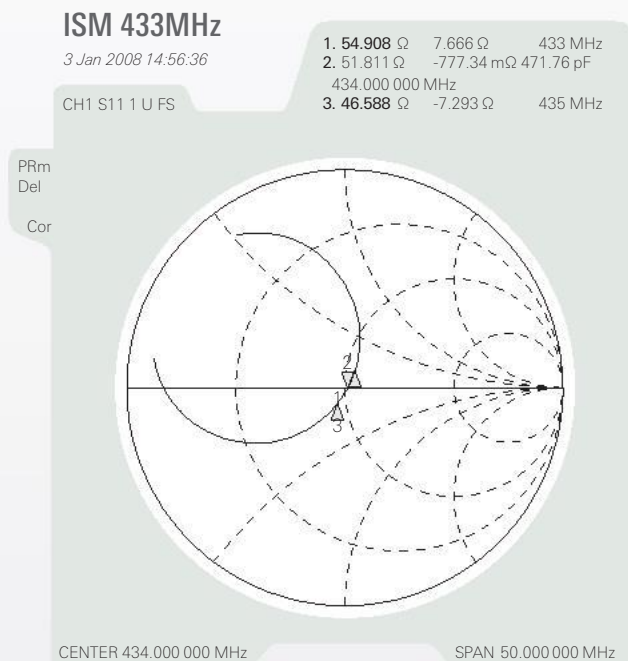
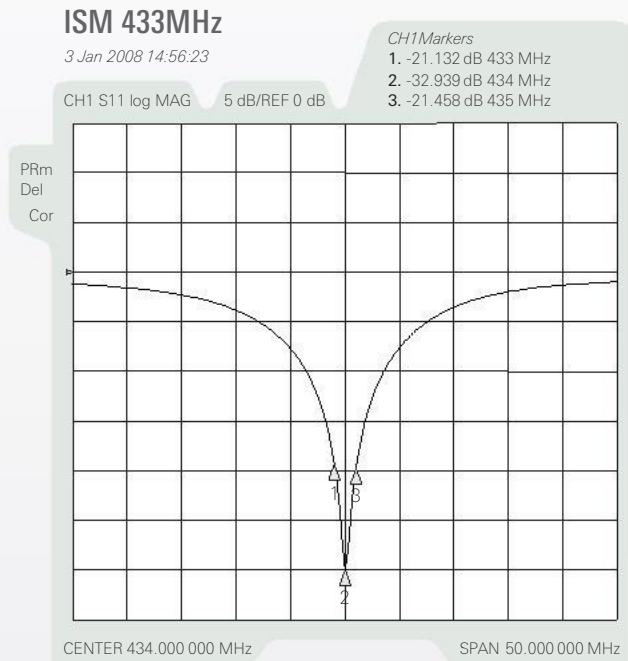
Matching circuit needs to be placed on PCB close to antenna feed terminal.  
 Matching component values depend on device construction; size, surrounding mechanics, materials etc..

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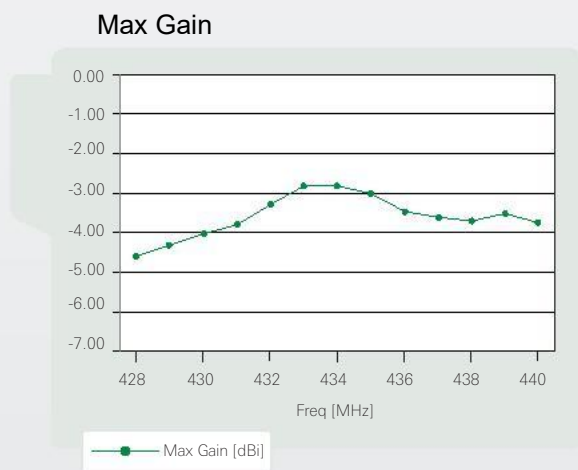
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## Typical Electrical Characteristics ( T=25 °C)

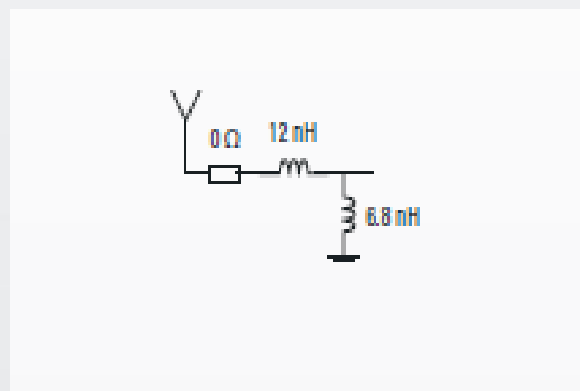
### Typical Return Loss S11/ impedance



### Free space maximum gain



### Matching Circuit



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## Typical Free space Radiation Patterns

