

SPECIFICATION

Part No. : **TI.10.0112**

Product Name : 433MHz ISM Band Helical Antenna
0dBi Gain

Features : SMA(M)RA Connector
Low profile and Robust Handling
45*16.5mm Antenna Dimensions
16.5*8mm Connector Dims
ROHS Compliant

Photo :



REVISION STATUS

Version	Date	Page	Revision Description	Prepared	Approved
01	Mar 11 2008	All	New product	TW Product Centre	Zita Lin
02	Mar 6 2009	All	Antenna Spec	TW Product Centre	Ruben F Cuadras

1.0 Introduction

The TI.10 series are high performance 433MHz omni-directional antennas. The TI.10 helical SMA plug mount antenna is ideal for mobile small form factor applications. At only 48mm in length omni-directional 0dBi gain ensures constant reception and transmission. The antenna structure is designed for robust handling and the housing is made with TPE giving reliable performance in tough environments.

2.0 Key Antenna Performance Indicators

Parameter	Specification
Applications	433Mhz ISM Band
Frequency	433.05~434.79MHz
Gain	0dBi
Return Loss	-20dB
Impedance	50 Ohms
Radiation Pattern	Omni-directional
Polarization	Linear
VSWR	≤1.5:1
Power handling	5 W
Housing	TPE
Connector	SMA(M)RA plug
Operation Temperature	-40°C to + 85°C
Storage Temperature	-40°C to + 85°C
Relative Humidity	40% to 95%
Dimensions	45*16.5mm Antenna Dimensions 16.5*8mm Connector Dims
Weight	8.5g

3.0 Test Set-up

Low Frequency 5 Meters Anechoic Chamber with 2D Scan System.

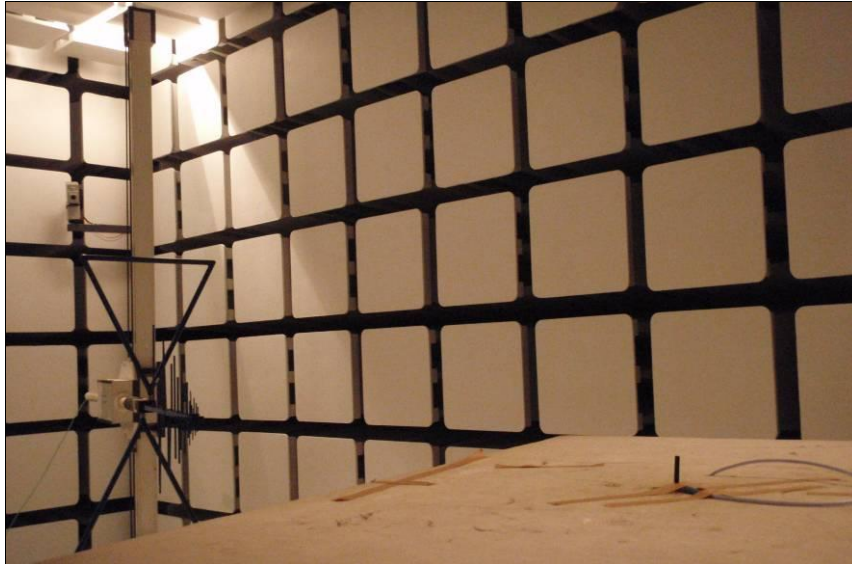


Figure 1. Satimo System.

Agilent 8753ES Vector Network Analyzer

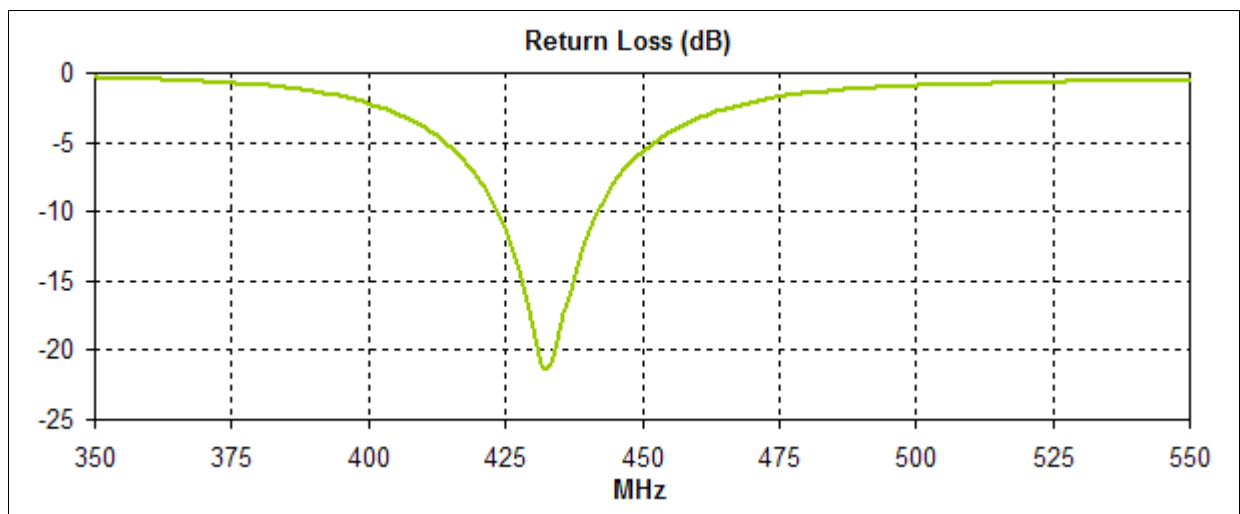


Figure 2. Network Analyzer.

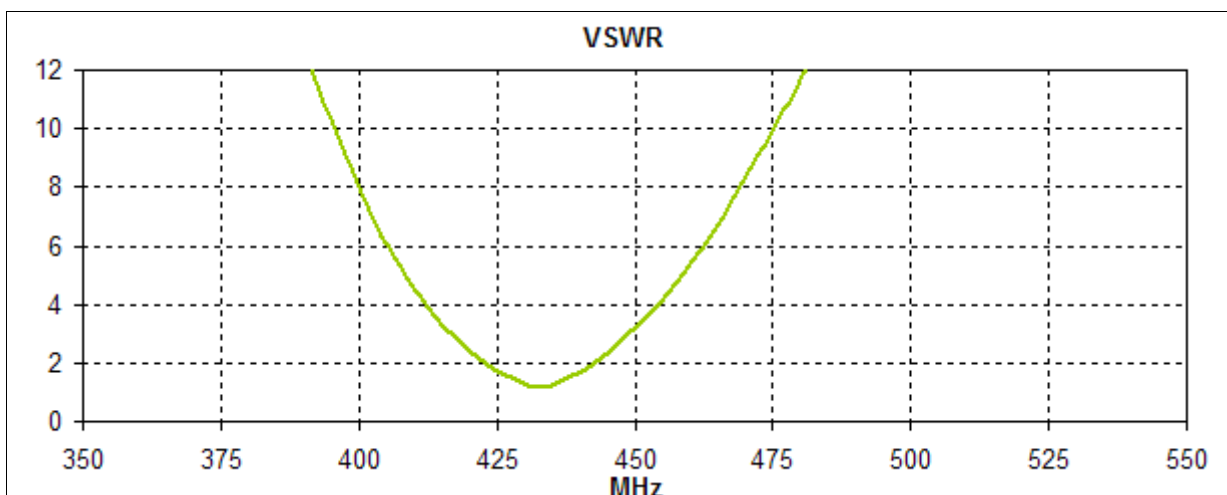
4.0 Antenna Parameters

The next antenna parameter graphs like Return Loss, Smith Chart and VSWR were measured in the Agilent 8753ES Vector Network Analyzer. The Radiation Patterns were measured in a Low Frequency Anechoic Chamber.

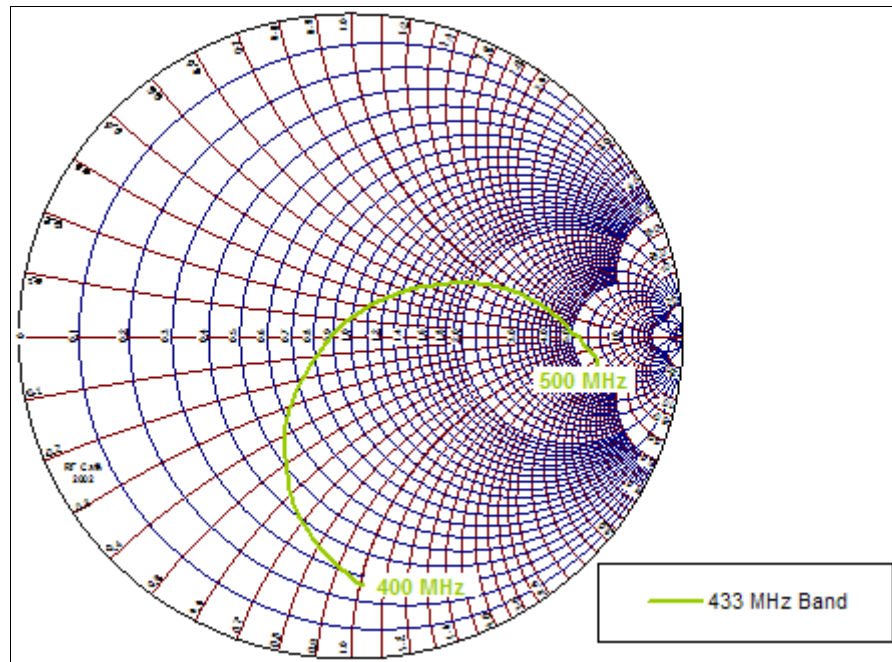
4.1 Return Loss Data



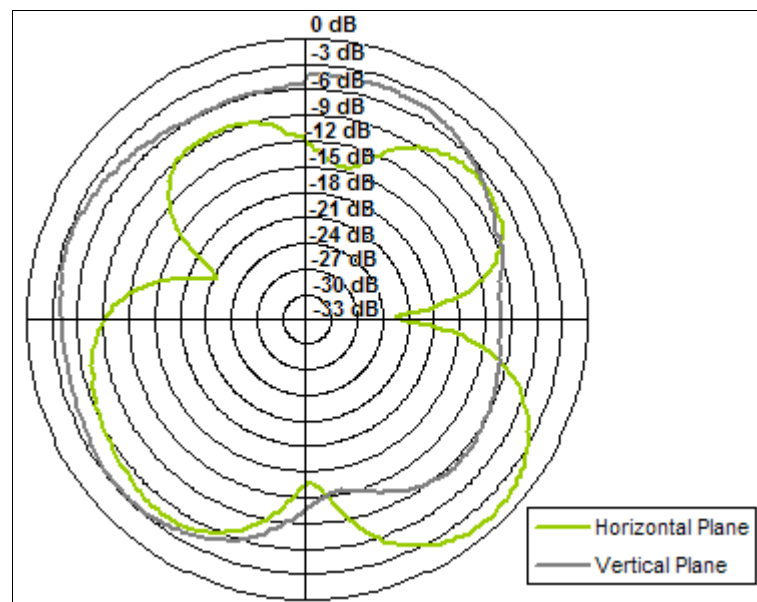
4.2 VSWR Data



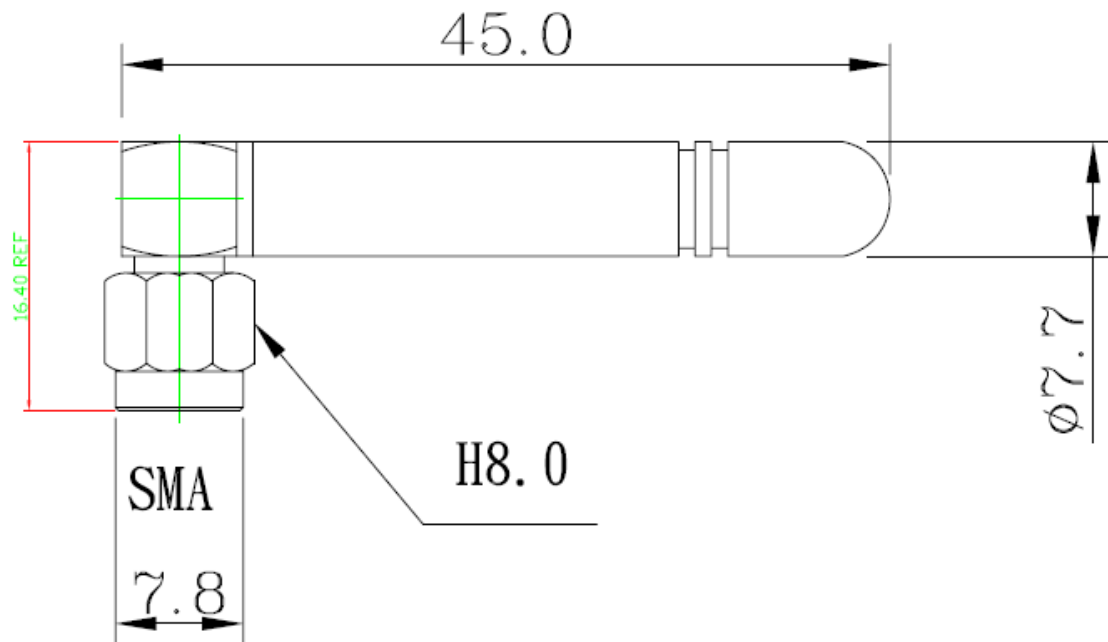
4.3 Smith Chart Data



4.4 Radiation Pattern



5.0 Mechanical Drawing



Unit:mm