

# **SPECIFICATION**

Product Name : 2450MHz Patch Antenna

Features : 25mm\*25mm\*4.5mm ROHS Compliant



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## 1.0 Introduction

This WLP.25 patch antenna for ISM, Wi-Fi, Bluetooth and Zigbee is based on smart *XtremeGain*<sup>™</sup> technology. It is mounted via pin and double-sided adhesive and has been selected as optimal solution for the 50\*50mm ground plane. This passive patch offers typical gain response from 2.5 dBi and a higher gain can be achieved, depending on the Ground Plane, the space available and clearance afforded. The WLP.25's high gain performance is a perfect solution for metering and remote monitoring applications; it can deliver longer range than smaller chip antennas.

#### 2.0 Key Antenna Performance Indicators

No	Parameter	Specification	Notes
1	Range of Receiving Frequency	2450±50Mhz	
			with 50*50mm GND
2	Center Frequency	2482MHz	Plane
3	Bandwidth	85 MHz min	Return Loss ≤-10dB
4	VSWR	2.0 max	Center Frequency
5	Gain at Zenith	+5.0dBic typ.	Center Frequency
6	Gain at 10° Elevation	-1.0dBic typ.	Center Frequency
7	Axial Ratio	3 dB Max	Center Frequency
8	Polarization	RHCP	
9	Impedance	50Ω	
10	Frequency Temp Coefficient (Tf)	0±20ppm/°C	-40°C to +105°C
11	Operating Temperature	-40°C to +105°C	

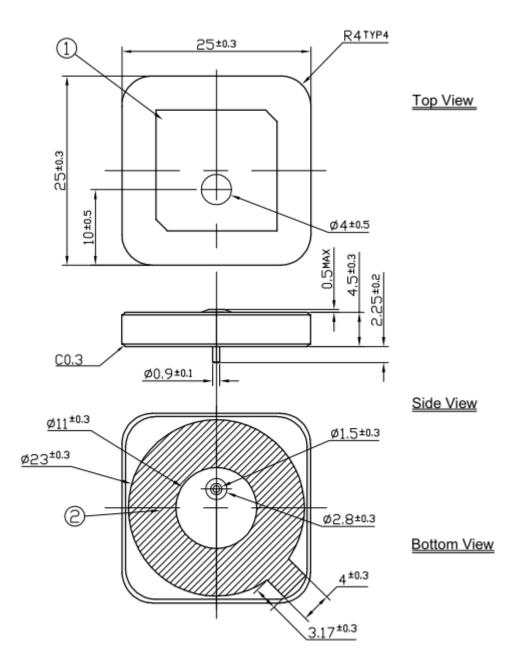
**Original Patch Specification tested on 50\*50mm ground plane** 

\*Changes in user groundplane and environment will have an effect on the antennas performance



### **3.0** Mechanical Specifications

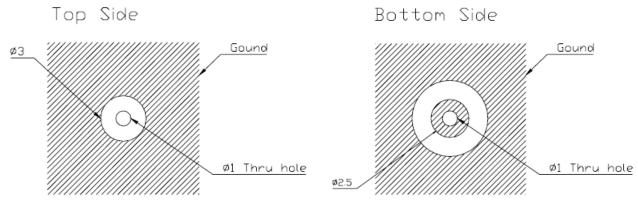
# 3.1 Dimensions and Drawing



[		Name	Material	Finish	QTY	
	1	WLP.2450 Patch 25x25x4	Ceramic	Clear	1	1.Double Sided Adhesive
	2	Double Sided Adhesive	NITTO 5015	White Liner	1	

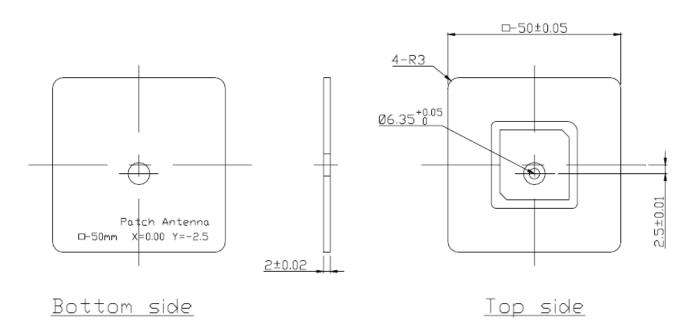


#### **3.2 Layout Dimensions**



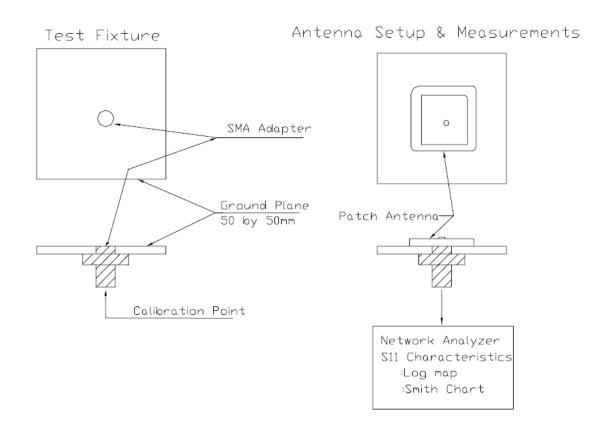
TEL:±0.20 UNIT:mm

#### **3.3Ground Plane Dimension**





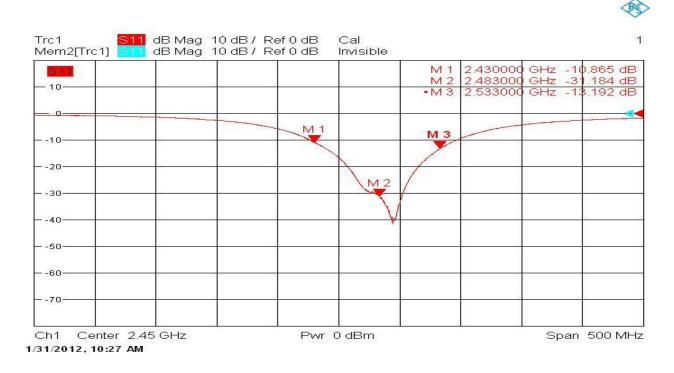
#### 3.4 Test Fixture Antenna & Performance Measurements



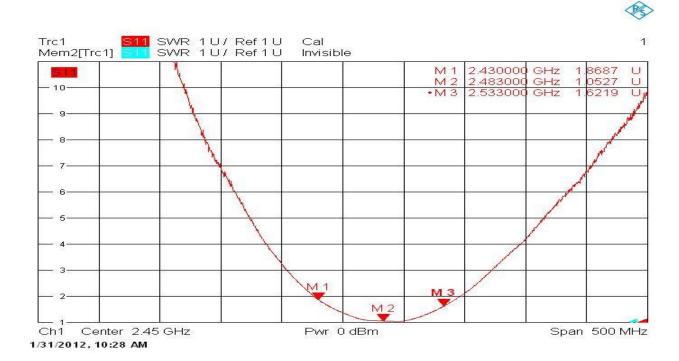


#### **4.0 Performance Measurement**

#### 4.1 Antenna S11(Return Loss)

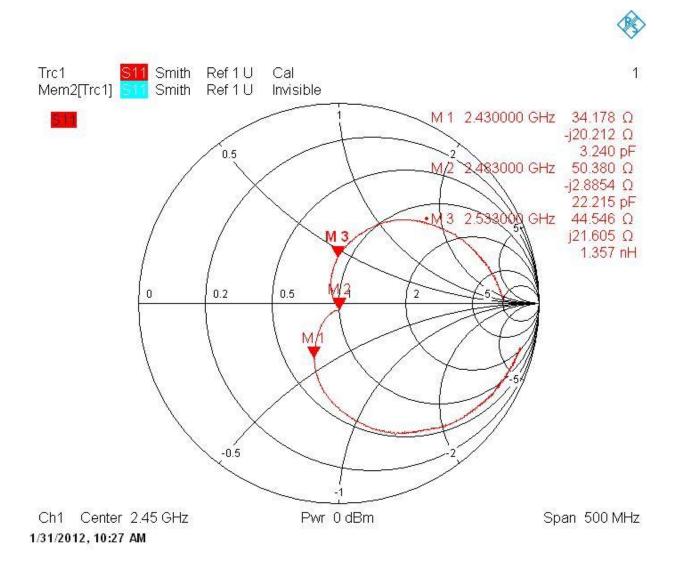


#### **4.2 VSWR**



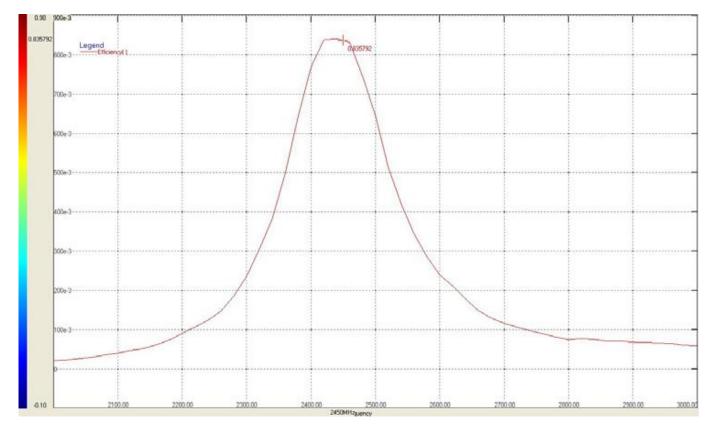


#### 4.3 Antenna Smith Chart(Impedance)



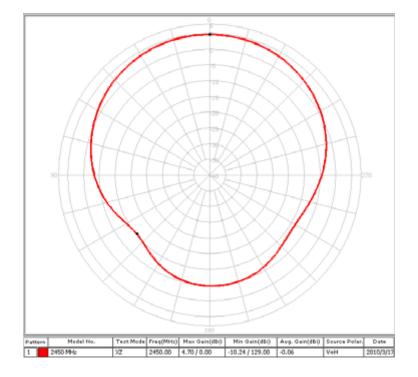


### 4.4 Efficiency

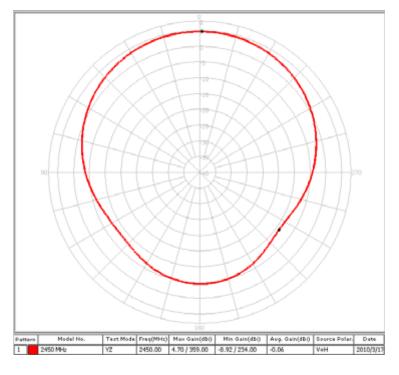




#### 4.5 Antenna Gain

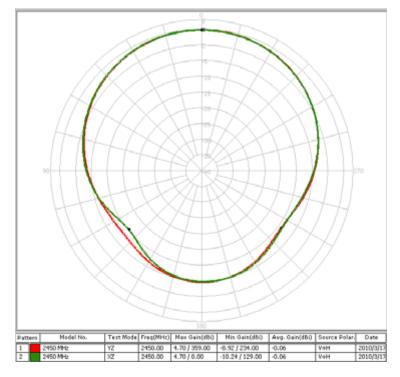


**XZ-Plane** 



**YZ-Plane** 





**XY Plane** 



# 5.0 Packaging

- •Per Tray: 50 pieces
- •Per Carton(Inside Box) 4 Trays = 200 pieces

•Outer Carton (Outside Box)- 4 Cartons = 800 pieces

