

DATA SHEET

WIRELESS COMPONENTS
Ceramic Patch Antenna
ANT1212B00BT1575A

GPS
SMD 12 x 12 x 4 mm



FEATURES

- Compact size
- High radiation efficiency
- Reflow process compatible
- RoHS compliant

APPLICATIONS

- Navigation device
- Telematics box
- Fleet management

ORDERING INFORMATION

All part numbers are identified by the series, packing type, material, size, antenna type, working frequency and packing quantity.

PART NUMBER

ANT I2I2 B 00B T I575A
(1) (2) (3) (4) (5) (6)

(1) PRODUCT

ANT = Antenna

(2) SIZE

I2I2 = 12 × 12 mm

(3) ANTENNA TYPE

B = Bulk Antenna

(4) SERIAL NO.

00B

(5) PACKING TYPE

R = Tape and Reel

(6) WORKING FREQUENCY

I575 = 1.575GHz

PHYCOMP CTC

CAN43I34220BI58IB

I2NC

43I34220BI58

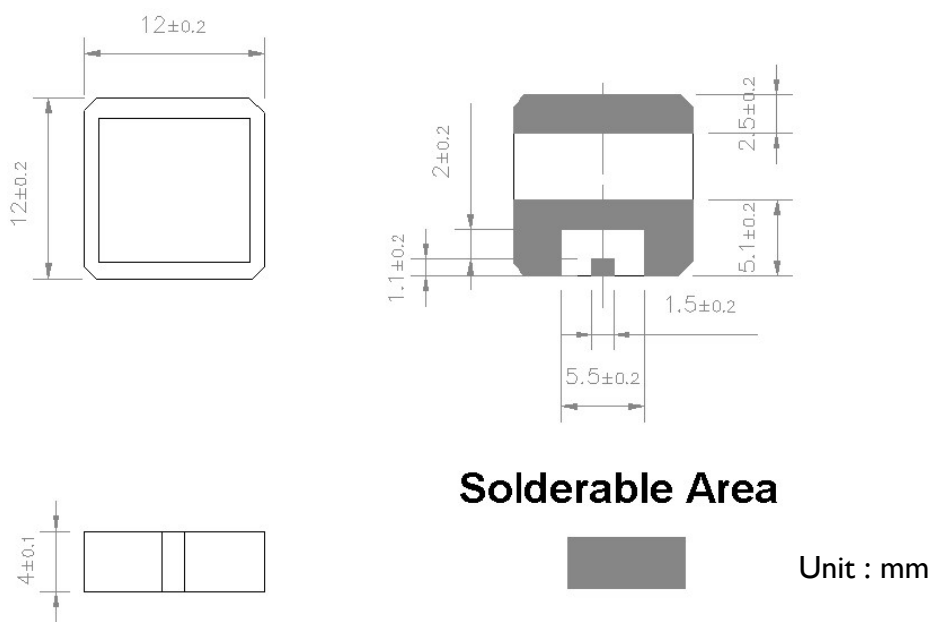
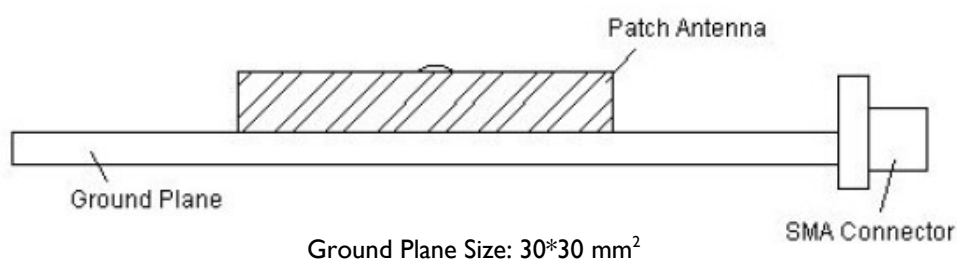
SPECIFICATION

Table I

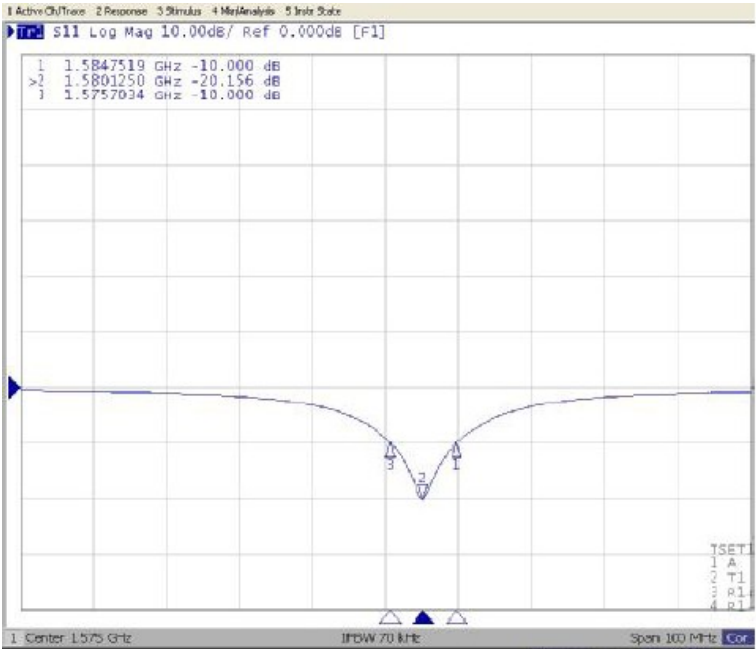
DESCRIPTION	VALUE
Centre Frequency	1580 $\pm$ 2 MHz
Bandwidth	6 MHz (Typ.)
Gain	-1 dBic (Typ.)
VSWR	2.0 Max
Polarization	Right Hand Circular Polarization
Axis Ratio	$\leq$ 3dB
Beam Width	> 120 degrees
Impedance	50 Ω
Operating Temperature	-40~105 $^{\circ}$ C

NOTE

1. Based on 30*30mm² square ground plane.
2. Centre frequency will be offset to working frequency while changes of customer's housing and ground plane.
3. Please contact local sales if you need customized design to gain optimum antenna performance.

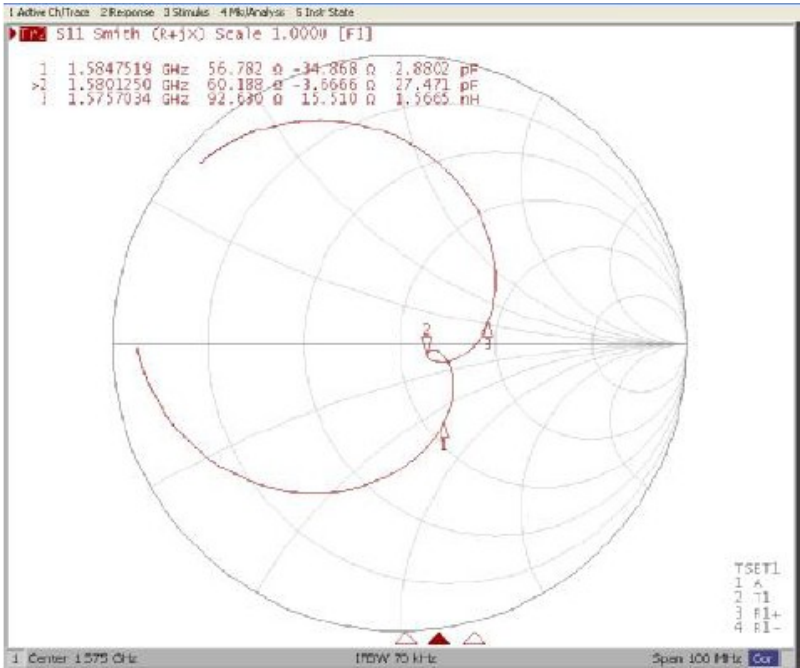
**Fig. 1** Mechanical data**Fig. 2** Evaluation Board

ELECTRICAL PERFORMANCES



1	1.5847519 GHz	-10.000 dB
> 2	1.5801250 GHz	-20.156 dB
3	1.5757034 GHz	-10.000dB

Fig. 3 Return loss



1	1.5847519 GHz	56.782 Ω	-34.868Ω	2.8802 pF
> 2	1.5801250 GHz	60.188 Ω	-3.6666Ω	27.471 pF
3	1.5757034 GHz	92.630 Ω	15.510 Ω	1.5665 nH

Fig. 4 Smith Chart

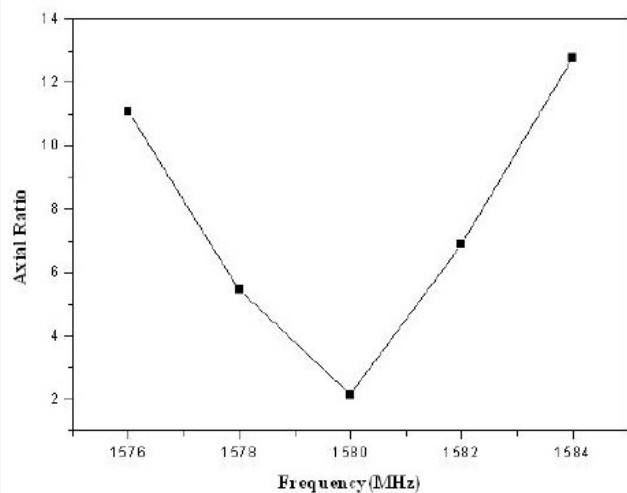


Fig. 5 Axial Ratio measurement

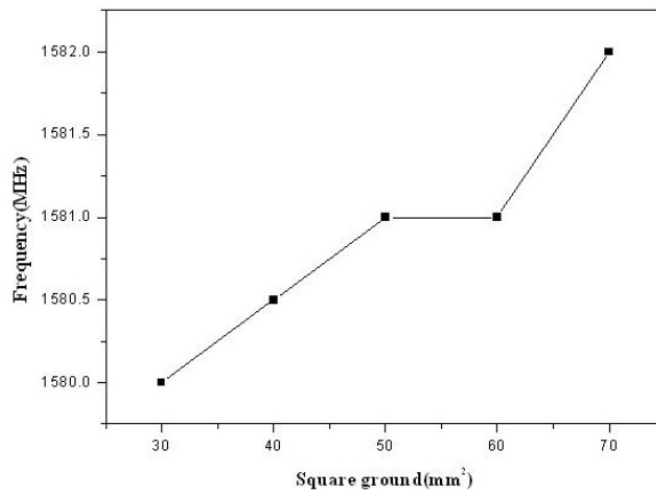


Fig. 6 Center Frequency V.S. Ground Plane

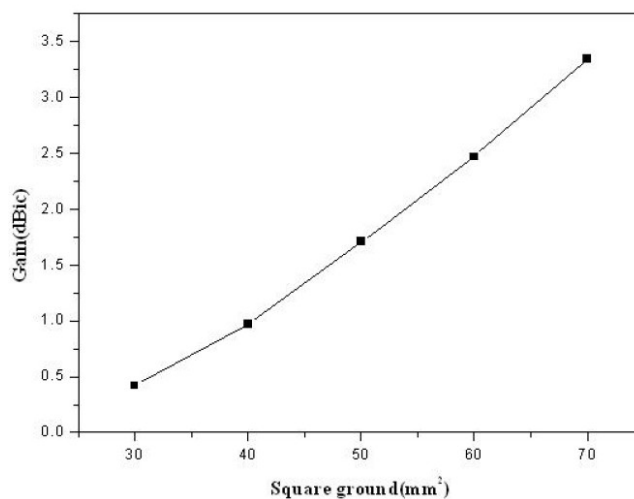
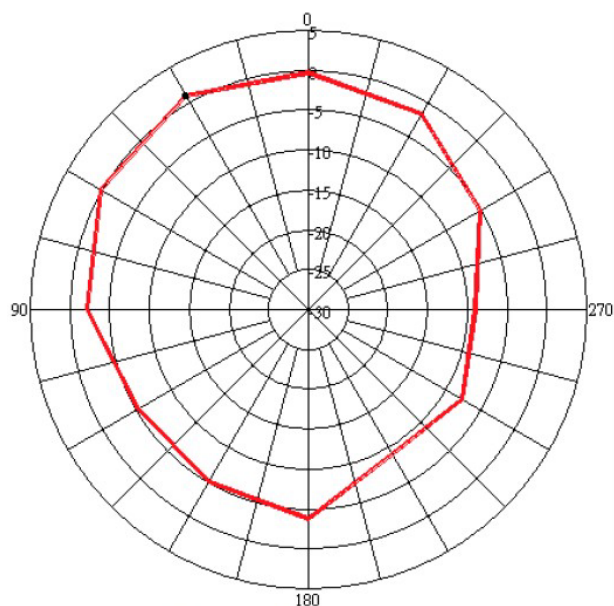
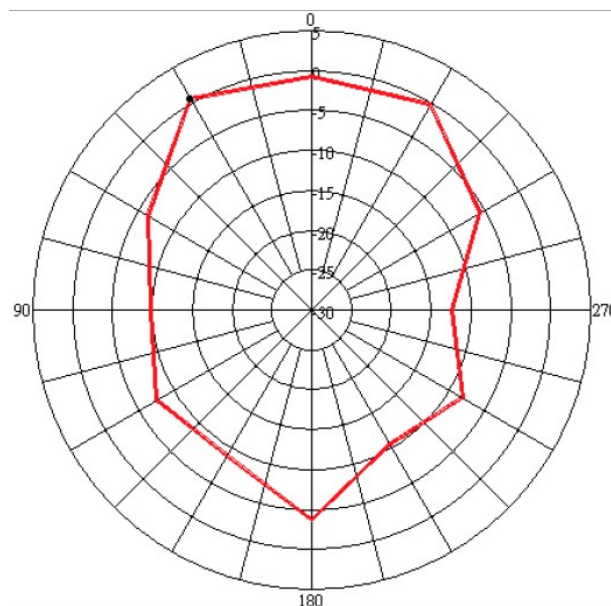
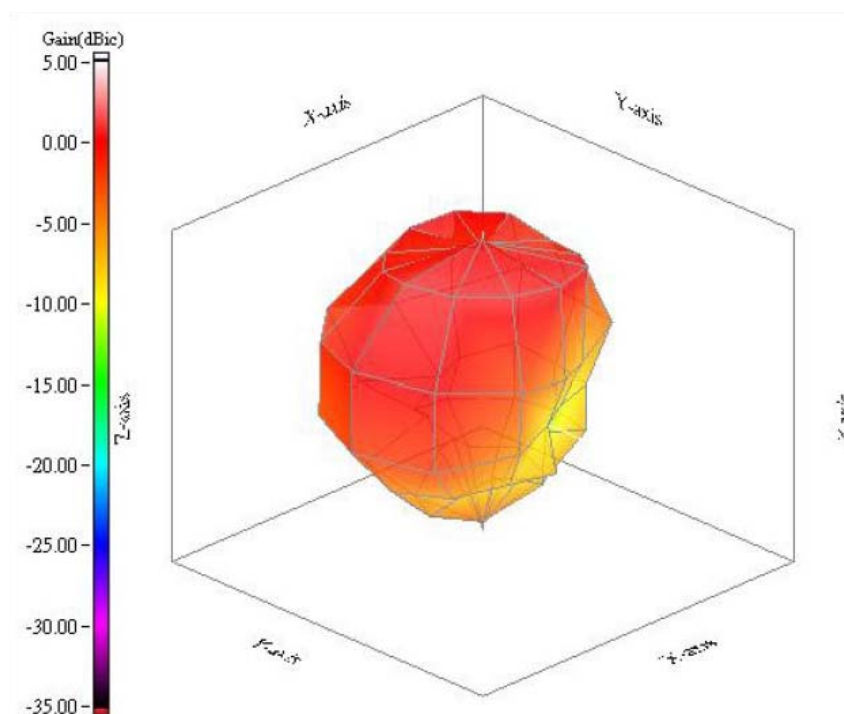


Fig. 7 Antenna Gain V.S. Ground Plane

**2D x-z plane pattern****2D y-z plane pattern****3D radiation pattern****Fig. 8 Radiation Pattern (Frequency = 1580MHz)**

REVISION HISTORY

REVISION	DATE	CHANGE NOTIFICATION	DESCRIPTION
Version 0	Apr. 01, 2013	-	- New data sheet for Ceramic Patch Antenna, SMD Feed size 12×12×4 mm