

# DATA SHEET

WIRELESS COMPONENTS  
Ceramic Chip Antenna  
ANT7836LL15R2400A  
2.4-2.5 GHz  
7836 Series



FEATURES

- Compact size
- Omni-directional Radiation
- Tape & reel automatic mounting
- Reflow process compatible
- RoHS compliant

APPLICATIONS

- 2.4 GHz WiFi device
- Bluetooth gadget
- Zigbee device
- ISM band equipment

ORDERING INFORMATION

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

**PART NUMBER**

**ANT 7836 L L15 R 2400A**  
 (1) (2) (3) (4) (5) (6)

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**(1) PRODUCT**

ANT = Antenna

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**(2) SIZE**

7836 = 7.8 x 3.6 mm

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**(3) ANTENNA TYPE**

L,F,A = Chip Antenna

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**(4) SERIAL NO.**

L15

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**(5) PACKING STYLE**

R = Tape and Reel

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**(6) WORKING FREQUENCY**

2400 = 2.4 GHz

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**PHYCOMP CTC**

CAN4311778152451K

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**I2NC**

431177815245

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**SPECIFICATION**

Table 1

DESCRIPTION	VALUE
Centre Frequency	2.45 GHz
Bandwidth	>100 MHz
Return Loss	10 dB min
Polarization	Linear
Azimuth Beamwidth	Omni-directional
Peak Gain	4.1 dBi (Max.)
Impedance	50 Ω
Operating Temperature	- 40~105 °C
Maximum Power	1 W
Termination	Ni & Sn (Environmentally-Friendly Leadless)
Resistance to Soldering Heats	260°C , 10sec.

**NOTE**

I. The specification is defined on Yageo evaluation board

**DIMENSIONS**

Table 2 Machinical Dimension

MARK	DIMENSION
L (mm)	7.8 ±0.25
W (mm)	3.6 ±0.20
T (mm)	0.9 ±0.20
A (mm)	1.25 ±0.25
C (mm)	0.4 ±0.20

MARK	FUNCTION
S1	Feeding Point
S2	Soldering Point

**OUTLINES**

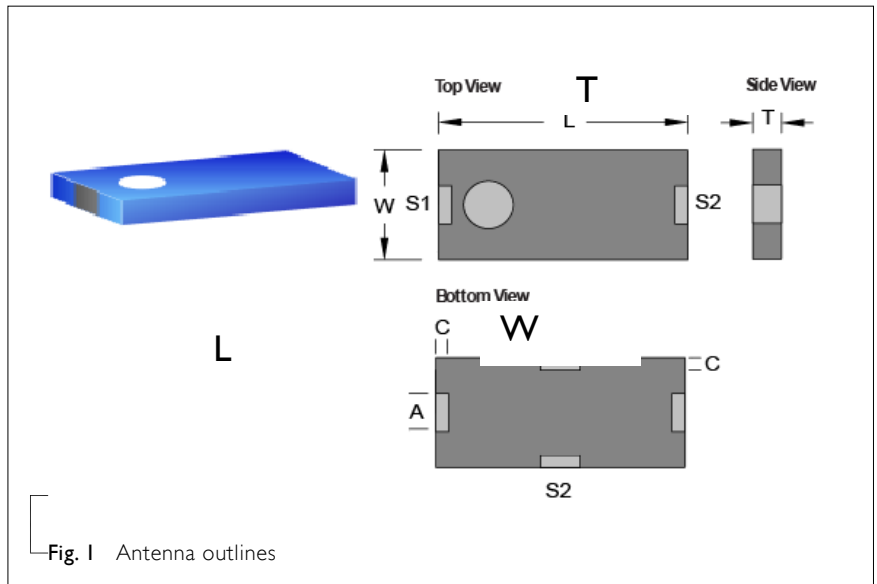
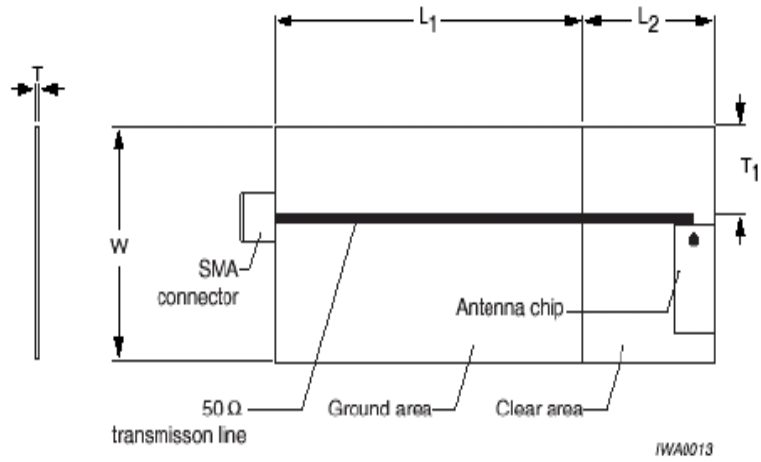


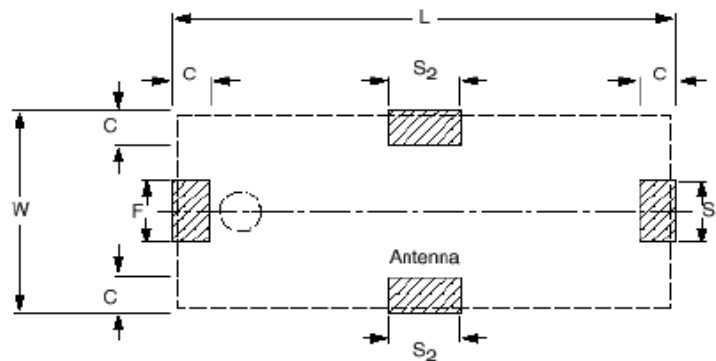
Fig. 1 Antenna outlines

REFERENCE DESIGN OF EVALUATION BOARD



SYMBOL	DETAILS	DIMENSIONS (mm)
L1	-	30
L2	-	10
W	-	18
T	-	0.8
T1	-	5.0

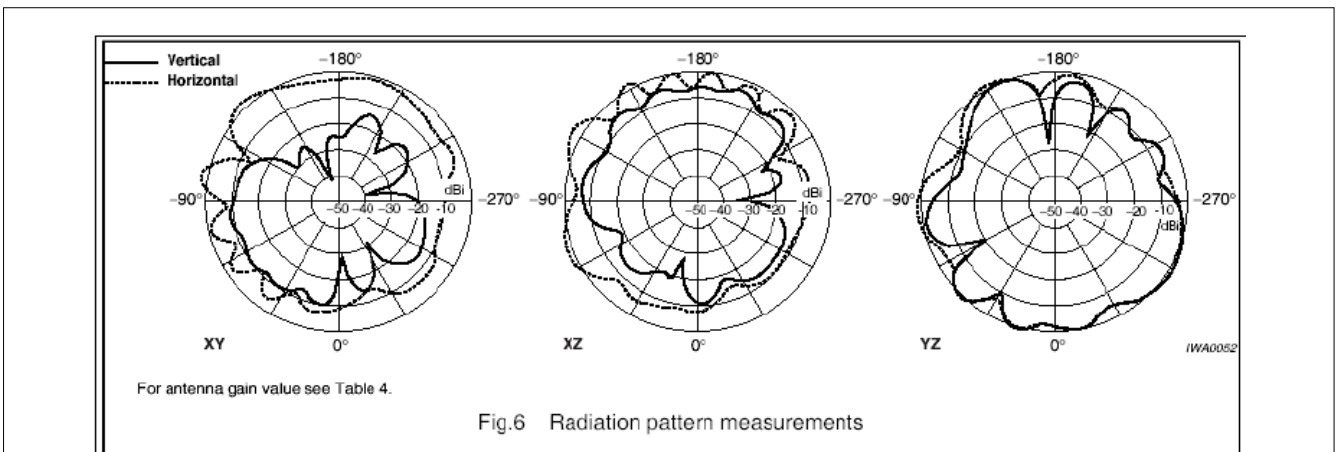
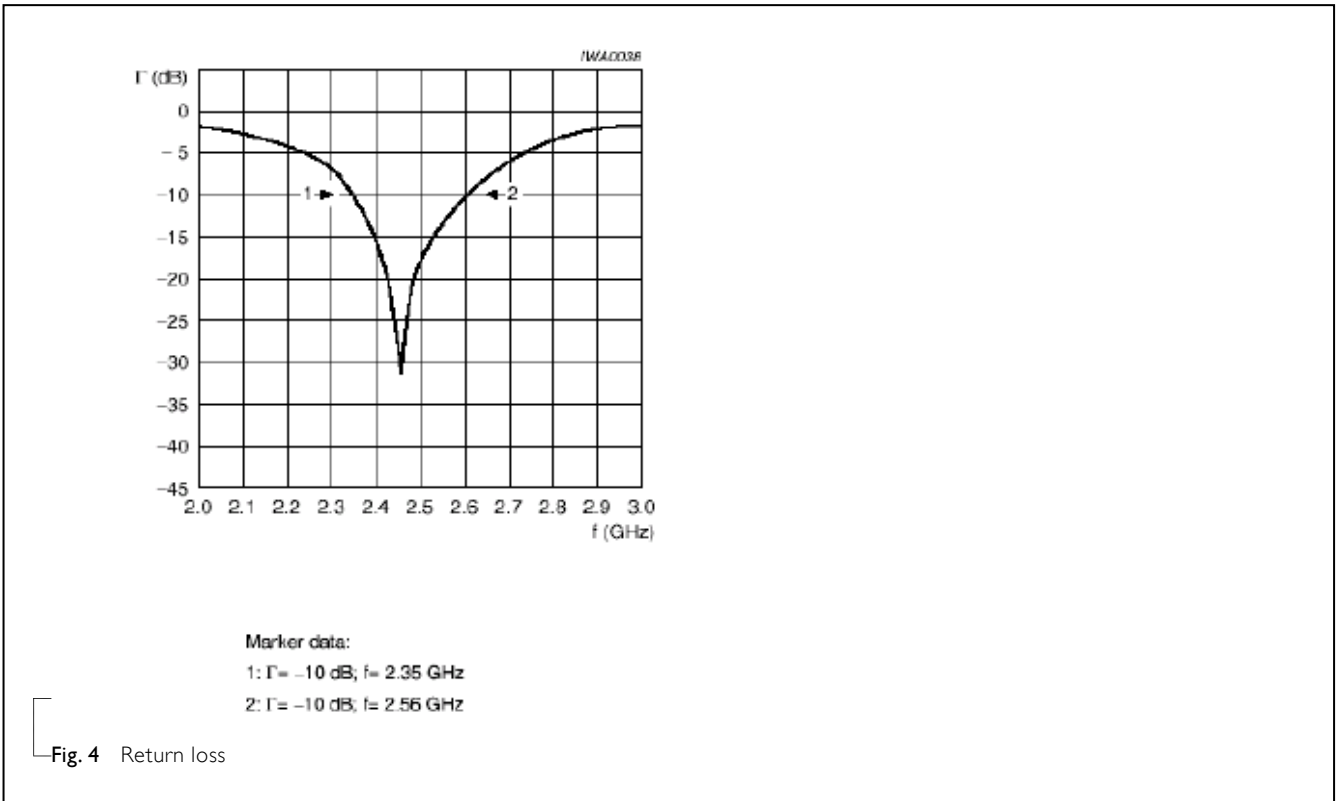
Fig. 2 Outlook and dimension of evaluation board



SYMBOL	DETAILS	DIMENSIONS (mm)
L	-	9.0 ±0.1
W	-	4.4 ±0.2
F	feed pad	1.4 ±0.25
C	-	0.8 ±0.20
S1	-	1.4 ±0.25
S2	-	1.6 ±0.25

Fig. 3 Details of soldering Pad

**ELECTRICAL PERFORMANCES**



**Table 4** Max. and avg. antenna gain value of radiation pattern

Plane	XY (dBi)	XZ(dBi)	YZ (dBi)
Vertical Pol. (max.)	-8.9	-4.3	1.4
Vertical Pol. (avg.)	-14.6	-9.8	-2.8
Horizontal Pol. (max.)	2.4	4.1	1.1
Horizontal Pol. (avg.)	-3.7	-3.1	-5.2
Total gain (max.)	2.4	4.1	1.6
Total gain (avg.)	-3.6	-2.8	-1.6

Fig. 5 Radiation pattern

REVISION HISTORY

REVISION	DATE	CHANGE NOTIFICATION	DESCRIPTION
Version 0	Feb. 19, 2014	-	- New data sheet for Ceramic Chip Antenna, 2.45 GHZ, size 7.8 x 3.6mm, 7836 Series