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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)

(1) PRODUCT

ANT = Antenna

(2) SIZE

7836 = 7.8 x 3.6 mm

(3) ANTENNA TYPE

L,F,A = Chip Antenna

(4) SERIAL NO.

L15

(5) PACKING STYLE

R = Tape and Reel

(6) WORKING FREQUENCY

2400 = 2.4 GHz

PHYCOMP CTC

CAN4311778152451K

I2NC

431177815245

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

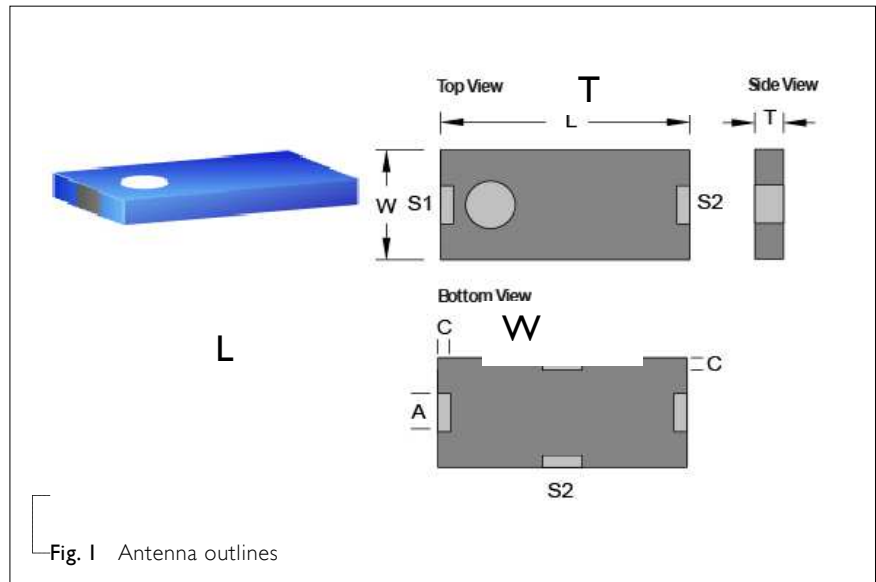
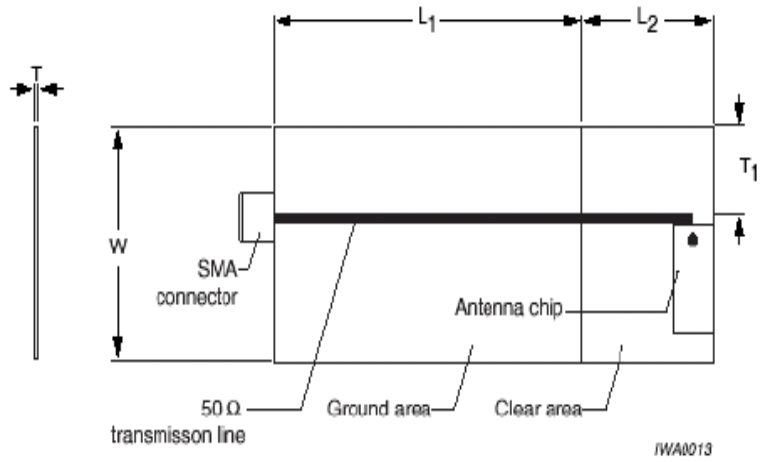


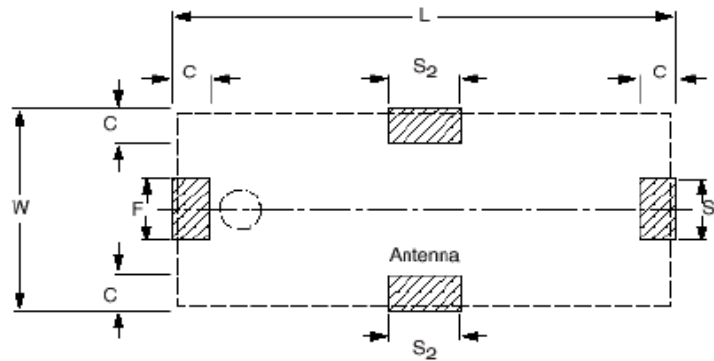
Fig. 1 Antenna outlines

REFERENCE DESIGN OF EVALUATION BOARD



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

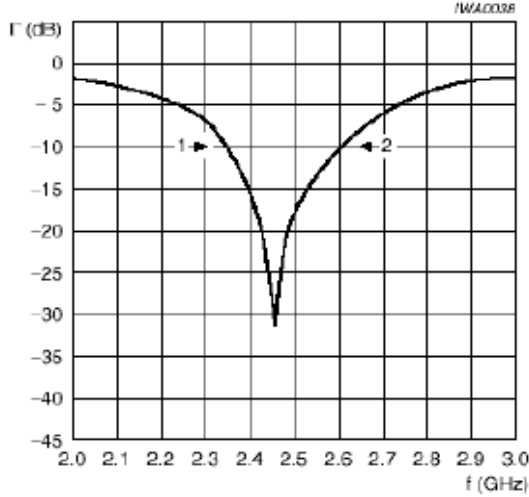
Fig. 2 Outlook and dimension of evaluation board



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

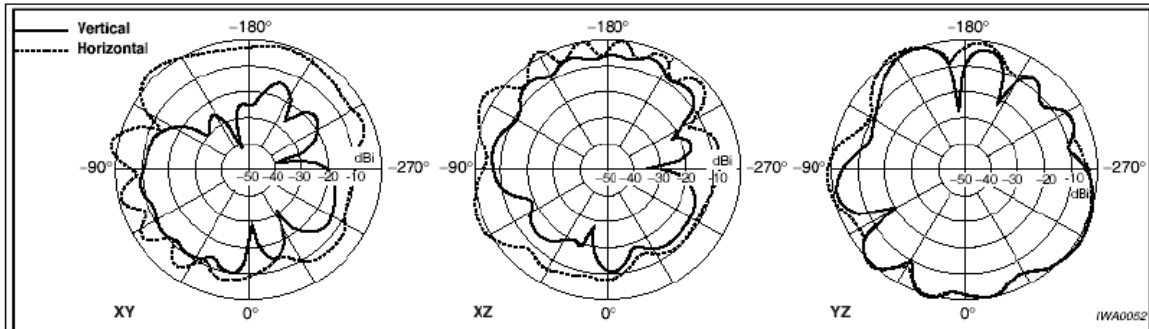
Fig. 3 Details of soldering Pad

ELECTRICAL PERFORMANCES



Marker data:
1: $\Gamma = -10$ dB; $f = 2.35$ GHz
2: $\Gamma = -10$ dB; $f = 2.56$ GHz

Fig. 4 Return loss



For antenna gain value see Table 4.

Fig.6 Radiation pattern measurements

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