

WiFi / Bluetooth Chip Antenna 2400 ~ 2485 MHz

ACA-102-T

NOT RECOMMENDED FOR NEW DESIGNS

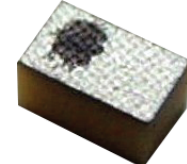
HF



RoHS / RoHS II Compliant



Moisture Sensitivity Level (MSL) – MSL = 1



2.0 x 1.2 x 1.0mm

FEATURES:

- Chip Antenna constructed from solid dielectric ceramic material
- Suitable for RoHS compliant reflow
- Gain 3D 0.60 (Peak), -3.48 (Average) [dBi]
- VSWR 1.0 ~ 2.6 : 1
- Smallest size – 2.0 x 1.2 x 1.0mm (0.08 x 0.048 x 0.04 inch)
- Non Ground Mounting type.
- Linear Polarization
- Matched to 50 Ohm.

APPLICATIONS:

- Wireless application - Bluetooth / WLAN (2.442GHz)
- High density applications
- Bluetooth headsets or ear pieces
- Computer mouse and keyboards
- PROFINET – Industrial automation
- Video Game systems
- Alternative to larger PCB solution

STANDARD SPECIFICATIONS

Maximum Ratings

Item	Value
ESD Voltage	15kV [HBM Class 3B]
Operating Temperature Range	-40°C to + 85°C
Storage Temperature Range	-40°C to + 85°C

Electrical Characteristics

Item		Spec		
Frequency Range		2400 ~ 2485MHz		
VSWR		2.6 : 1 max (Typ 1.6 : 1)		
Polarization		Linear		
Input Impedance [Ω]		50 Ohm		
Bandwidth (MHz)		85		
Matching Value of Antenna Matching Circuit (Direction, from Antenna to Module)		Antenna Matching Circuit	Series (Feeding)	3pF
			Series (Ground)	2.7pF
		π -Matching Circuit	Shunt1	N/C
			Series	22nH
			Shunt 2	N/C
Directivity		Omni directional		
Frequency [MHz]		2400MHz	2442.5MHz (CF)	2485MHz
Efficiency [%]		66.05	84.23	72.19
Gain [dBi]	Peak	Avg		Peak
	Azimuth	-3.02		-0.71
	Elevation 1	-4.54		-1.32
	Elevation 2	-3.18		-0.66
	3D	-3.48		0.60



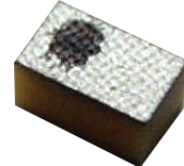
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PART IDENTIFICATION:

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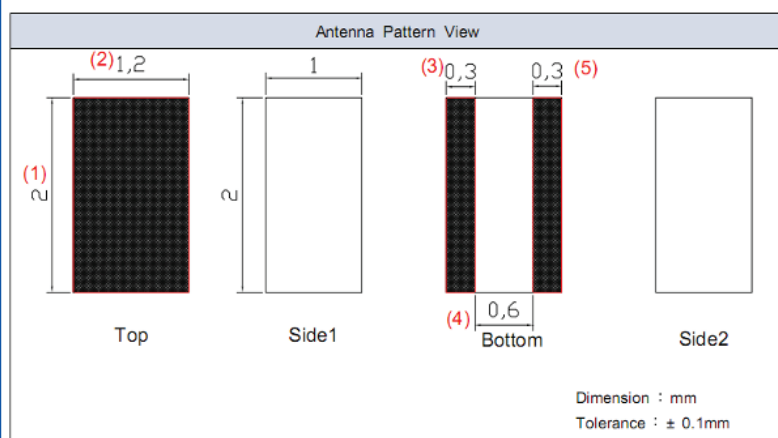
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Packaging

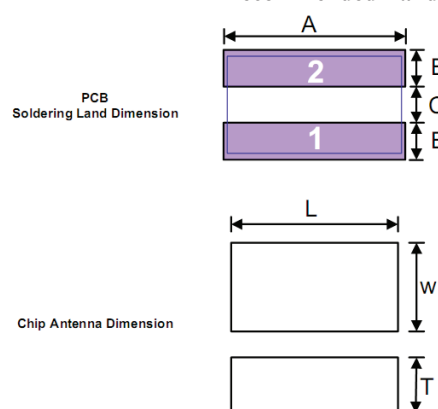
Blank: Bulk

T: Tape and Reel

OUTLINE DIMENSIONS:



Recommended Land Pattern

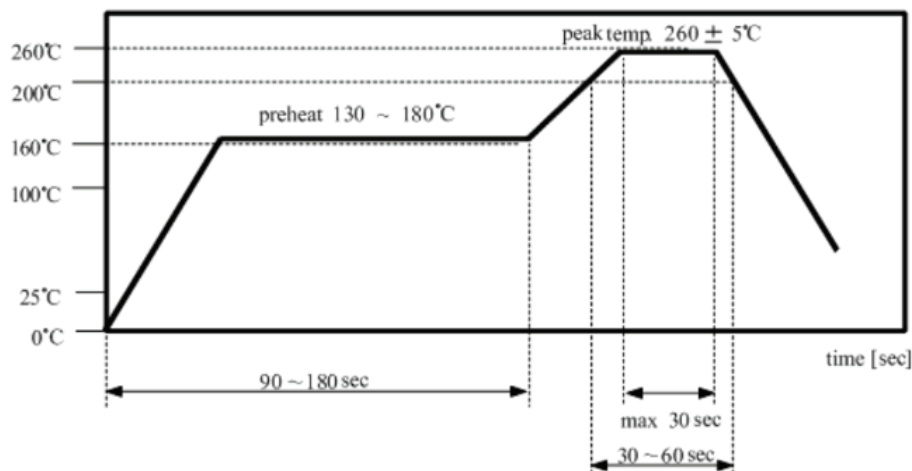


L	2.0 ± 0.1
W	1.2 ± 0.1
T	1.0 ± 0.1
A	2.1
B	0.5
C	0.5

Item	1	2	3	4	5
Dimension [mm]	2.0 ± 0.1	1.2 ± 0.1	0.3 ± 0.1	0.6 ± 0.1	0.3 ± 0.1

(Dimensions: mm)

REFLOW PROFILE:



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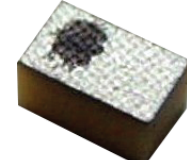
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(Pb)

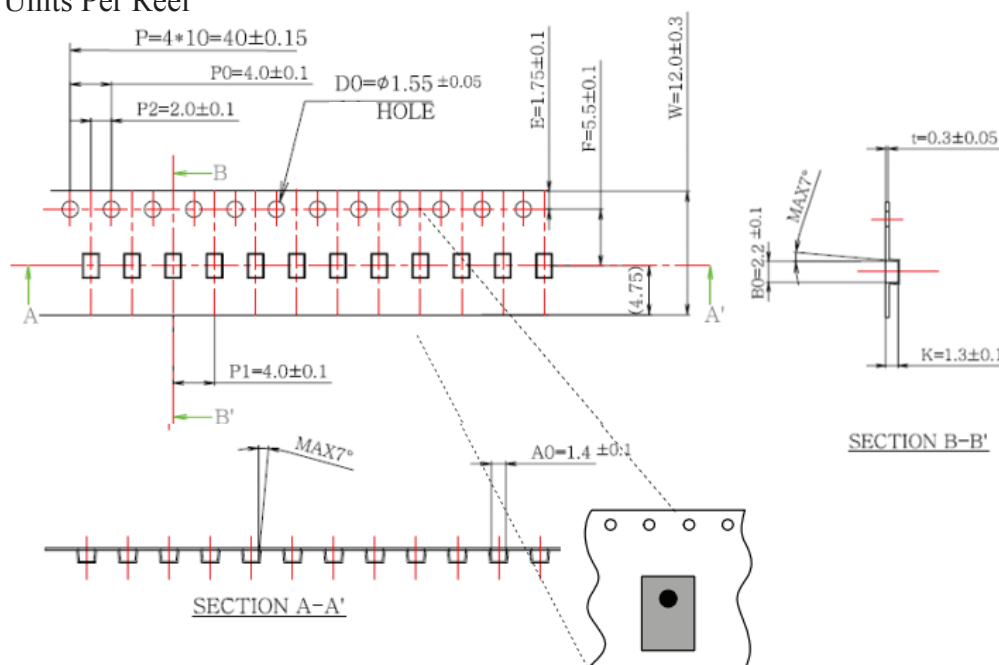
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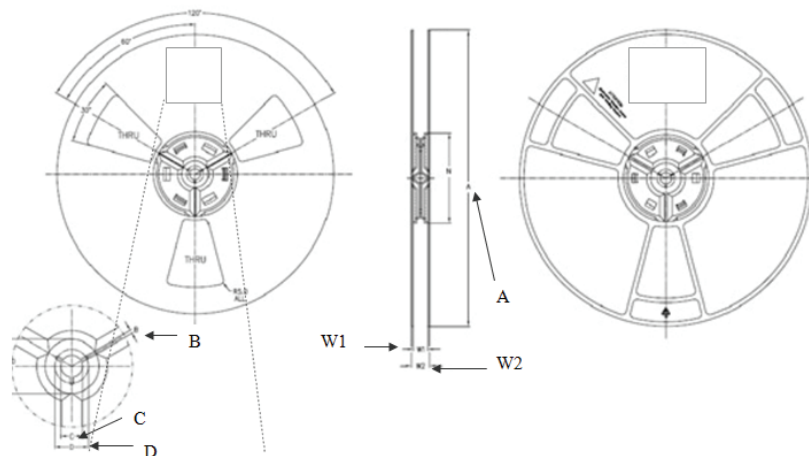
2.0 x 1.2 x 1.0mm

TAPE & REEL:

Packaging: 1,000 Units Per Reel



Reel Dimensions:



Size	12mm Reel		
A	330mm (+0.2 / -2.0mm)	N	100mm (+3.0 / - 0.0mm)
B	1.5mm min	W1	12.4mm (+3.0 / -0.0mm)
C	13.0mm +0.5 / -0.0	W2	16.4mm (+2.0 / -2.0mm)
D	20.2mm min		

(Dimensions: mm)

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