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EVER OHMS Chip Antenna-ECA Series

2.4 GHz Chip Antenna

Application

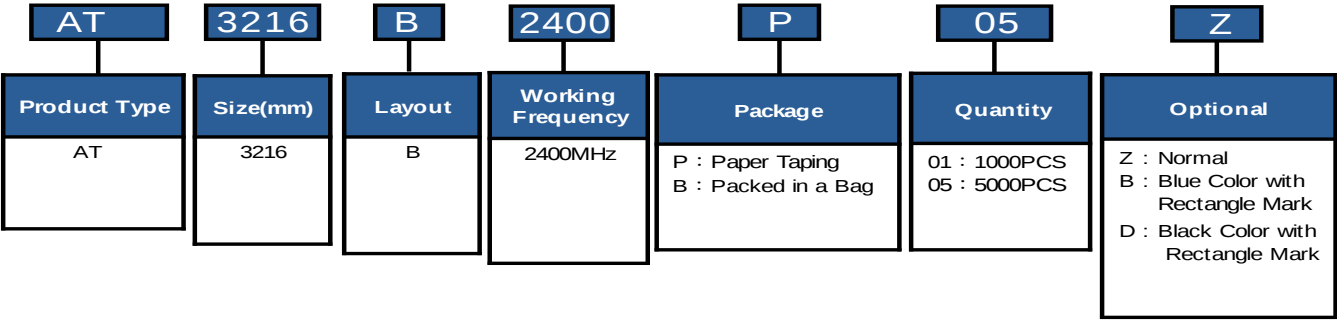
WLAN, 802.11b/g, Bluetooth, etc...

Features

SMD, high gain, high reliability, ultra- impact, omni-directional...

Parts Number Explanation

Example:

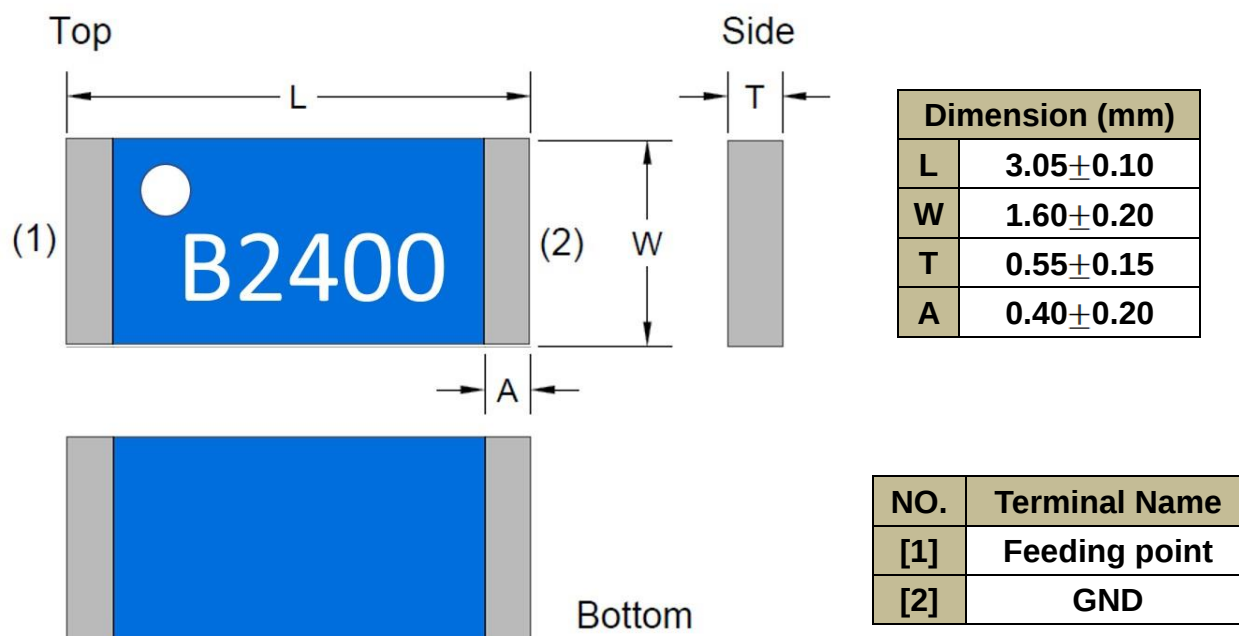


Example:Optional Code

Optional Code	3216 Product appearance	
	Top	Bottom
Z		
B		
D		

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■ Type Dimension

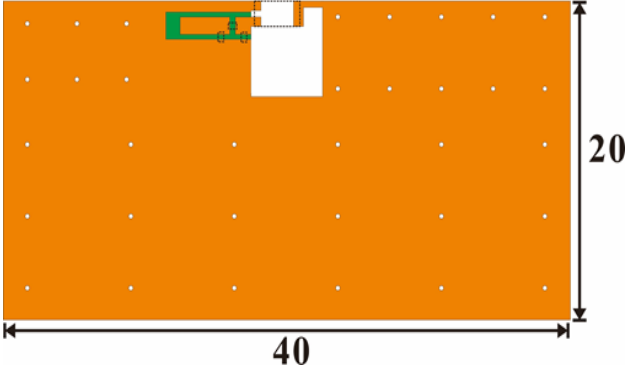
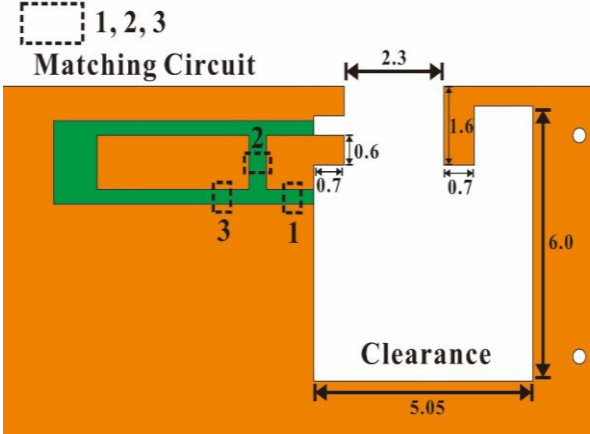


■ Electrical Specifications

Working Frequency Range	2400 ~ 2484 MHz
Peak Gain	1.5 dBi
Impedance	50 Ohm
Return loss	10 dB (Min)
Polarization	Linear
Azimuth Beamwidth	Omni-directional
Operation Temperature	-40 ~ 125 °C

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Evaluation Board Reference – Regular Layout

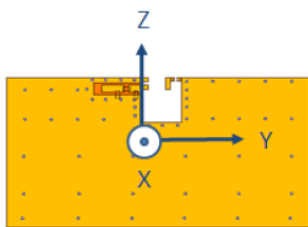
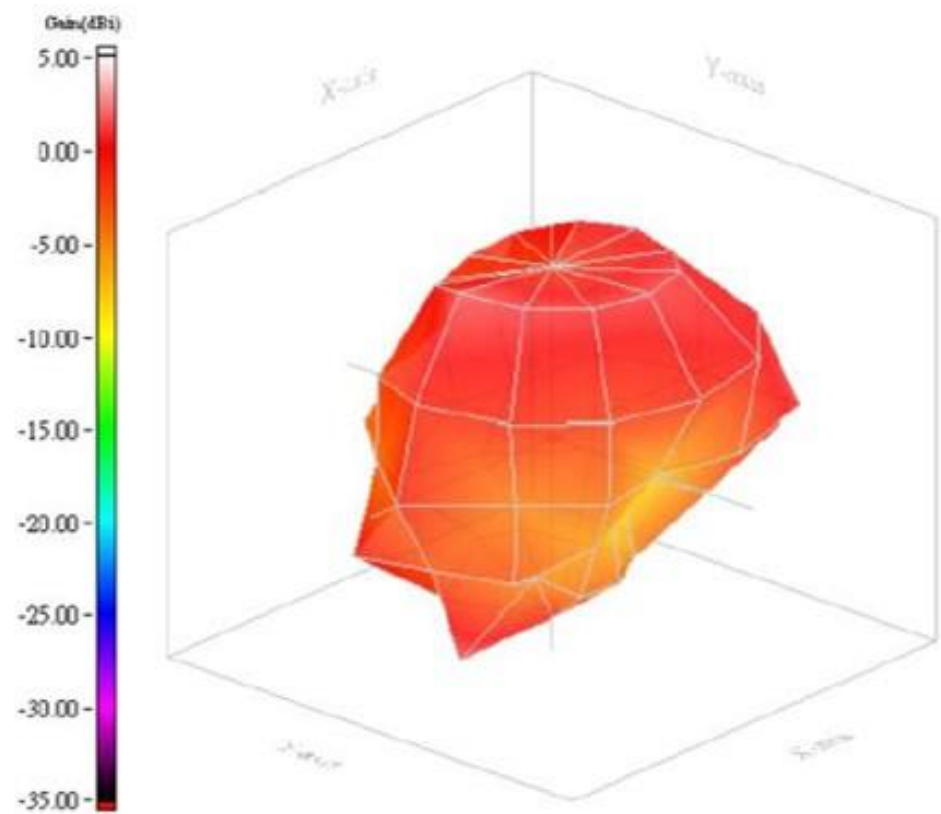
PCB Dimension	Antenna Layout Reference
 Unit:mm	 Unit:mm

Electrical Characteristics

Return Loss & Radiation									
Return Loss									
	<table> <tr> <th>Frequency (MHz)</th><th>Return Loss (dB)</th></tr> <tr> <td>2400</td><td>12.9</td></tr> <tr> <td>2442</td><td>19.0</td></tr> <tr> <td>2484</td><td>12.5</td></tr> </table>	Frequency (MHz)	Return Loss (dB)	2400	12.9	2442	19.0	2484	12.5
Frequency (MHz)	Return Loss (dB)								
2400	12.9								
2442	19.0								
2484	12.5								

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3D Radiation

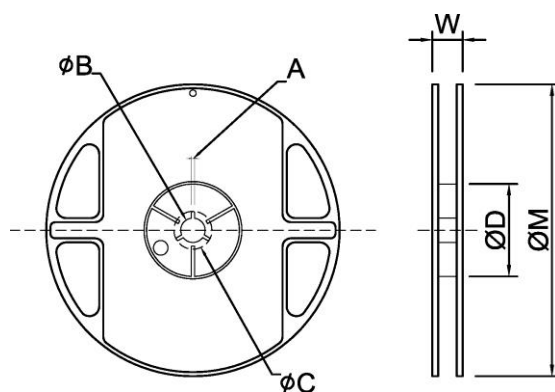


Frequency	2442 MHz
Peak Gain	1.5 dBi
Average Gain	-2.1 dBi
Efficiency	62.3 %

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■ Appendix For SMD Chip Antenna

● Packaging Information

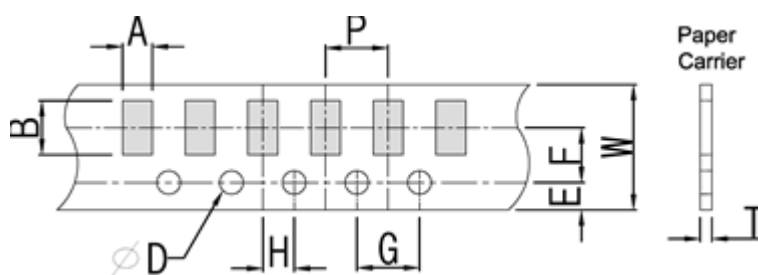


■ Dimension

Unit:mm

TYPE	SIZE		A	ØB	ØC	ØD	W	ØM
3216	7"	5K/Reel	2.0±0.5	13.5±1.0	21±1.0	60±1.0	11.5±2.0	178±2.0

■ Tapping Specification



■ Dimension

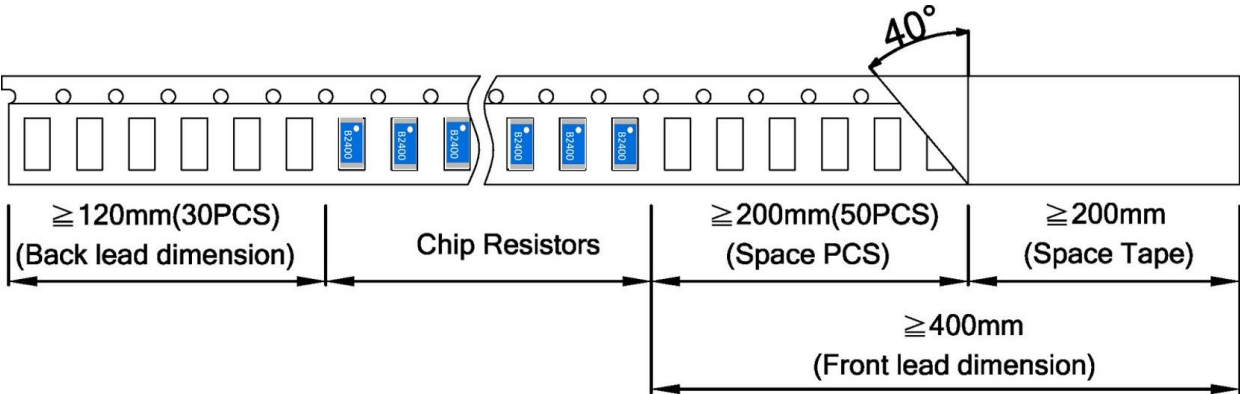
Unit:mm

Packaging	Type	A	B	W	E	F	G	H	T	ØD	P
Paper Type	3216	1.90±0.2	3.50±0.2	8.0±0.2	1.75±0.1	3.5±0.05	4.0±0.1	2.0±0.05	0.75±0.1	1.50 ^{+0.10} ₋₀	4.0±0.1

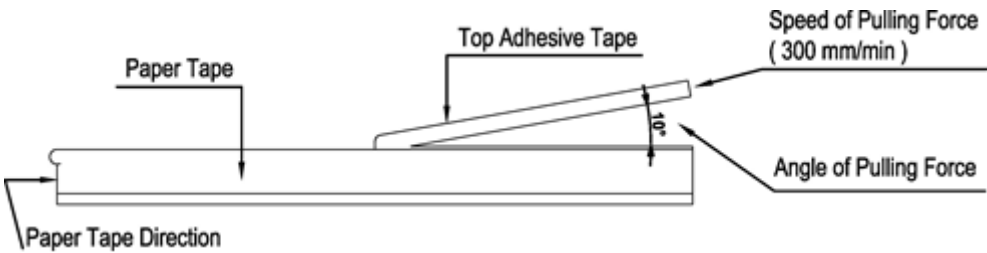
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Packing Material Data/Storage Data

■ Front & Back Lead Dimension

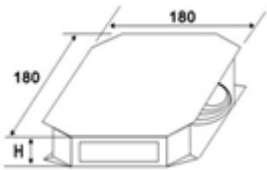


■ Top Adhesive Peel Off Strength : 10~70g

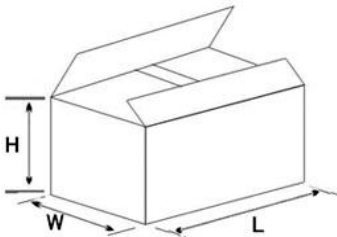


■ Package

Inner Box Size	
Reel	Size H(mm)
1	13
2	24
3	36
5	60
10	113



External Box Size			
Contain (Kpcs)	Length (mm)	Width (mm)	Height (mm)
25K	180	180	60
50K	180	180	110
150K	430	200	200
300K	400	400	200

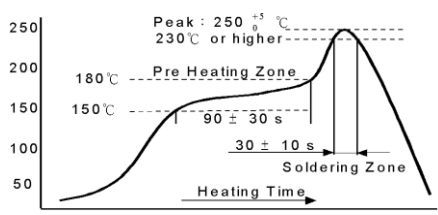


■ Storage Data :

Storage time at the environment temp: 25±5℃ & humidity: 60±20% is valid for one year from the date of delivery

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● Reliability Test and Requirement

Test Item	Procedure	Requirements Ceramic Type	Remark (Reference)
Electrical Characterization		Fulfill the electrical specification	User Spec
Thermal Shock	50 ± 10°C / 1 hr	No Visible Damage Fulfill the electrical specification	MIL-STD-202 107
Temperature Cycling	-30°C to +85°C , 100 Cycles	No Visible Damage Fulfill the electrical specification	JESD22 JA104
HighTemperature Exposure	500hours @ T=+85°C	No Visible Damage Fulfill the electrical specification	MIL-STD-202 108
Low Temperature Storage	500hours @ T= -30°C	No Visible Damage Fulfill the electrical specification	MIL-STD-202 108
Leaching	260°C ±5°C.for 30 seconds	>95% Coverage	Sony SS-00254-9
Soldering Heat	260 ± 5°C For 10 Seconds	No Visible Damage	JIS C 5201-1
Vibration	5g's for 20 min., 12 cycles each of 3 orientations	No Visible Damage	MIL-STD-202 Method 204
Mechanical Shock	Impact acceleration:1500g Pulse duration:0.5ms Number Of shocks:30shocks(5 shocks for eachface)	No Visible Damage	MIL-STD-202 Method 213
Biased Humidity	500hours 85 °C./85% RH.	No Visible Damage Fulfill the electrical specification	MIL-STD-202 Method 106
Board Flex(SMD)	Bending once for 60 seconds	No Visible Damage	AEC-Q200 005
IR Reflow	 The graph shows a temperature profile for IR reflow. The y-axis represents temperature in degrees Celsius (50 to 250), and the x-axis represents heating time. Key points on the curve include: a pre-heating zone starting at 150°C, a peak temperature of 250 ± 5°C (noted as 230°C or higher), and a soldering zone with a duration of 30 ± 10 seconds. The total heating time is indicated as 90 ± 30 seconds.	In accordance with specification	Sony SS-00254
Physical Dimension	Any applicable method using x10 magnification, micrometers, calipers, gauges, contour projectors, or other measuring equipment, capable of determining the actual specimen dimensions.	In accordance with specification	JESD22 JB100

