2.4GHz 3216 Chip Antenna: AAN3216F5P2G45

Features

SMD, high reliability, ultra Impact, Omni-directional …

Part number

AAN 3216 - F5 P 2G45

(1) (2) (3) (4) (5)

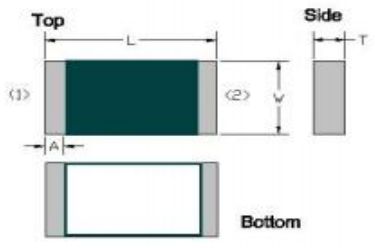
(1)Product Type	Chip Antenna
(2)Size Code	3.2x1 .6mm
(3)Type Code	F5
(4)Packing	Paper Tape
(5)Frequency	2400-2484MHz

Electrical Specification

Working Frequency Range	2400 ~2484 MHz
Peak Gain	1.6 dBi (Typ.)
Impedance	50 Ohm
Return loss	10 dB (Min)
Polarization	Linear
Azimuth Beamwidth	Omni- directional
Operation Temperature(C)	-40 ~85C

The specification is defined on EVB.

Dimension and Terminal Configuration



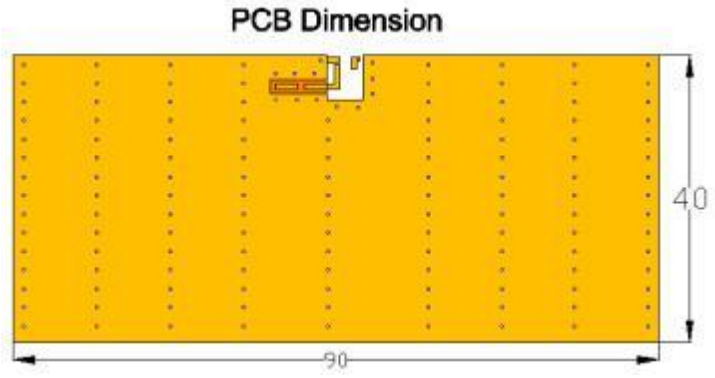
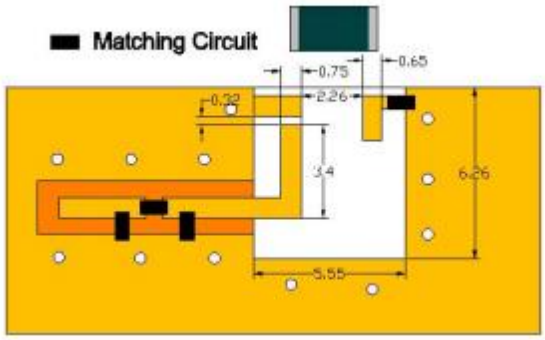
Dimension (mm)	
L	3.15+-0.15
W	1.55+-0.15
T	0.50+-0.10
A	0.35+-0.10

No.	Terminal Name
1	Feeding point
2	GND

ShenZhen XinErSheng Technology Co.,Ltd
Address: 3F,Bldg D, No.96 Lingxia Road, Fourth Industrial Zone, Fenghuang, Fuyong, Baoan, Shenzhen, China
Tel：0755-33881455 Fax：0755-33233276
Email: liqinghui@sufeitech.com

2.4GHz 3216 Chip Antenna: AAN3216F5P2G45

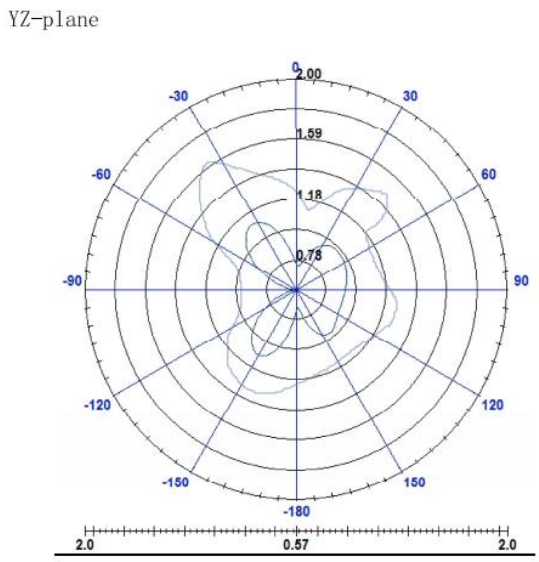
Evaluation Board Reference

PCB Dimension	Antenna Layout Reference
	

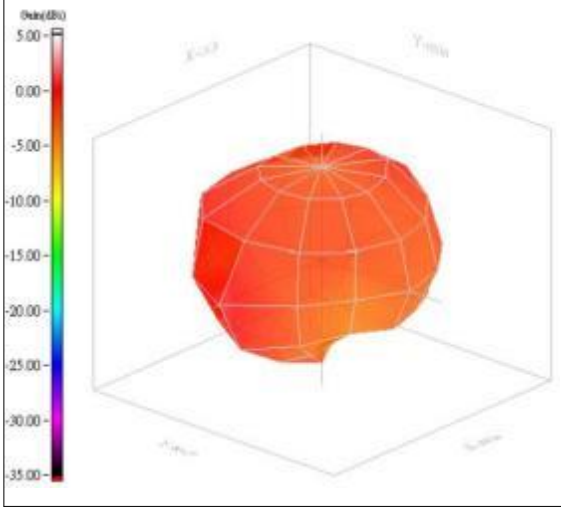
unit :mm

Electrical Characteristics

2D figure



Frequency (MHz)	Gain(dBi)
2400	1.05
2442	1.60
2484	1.53

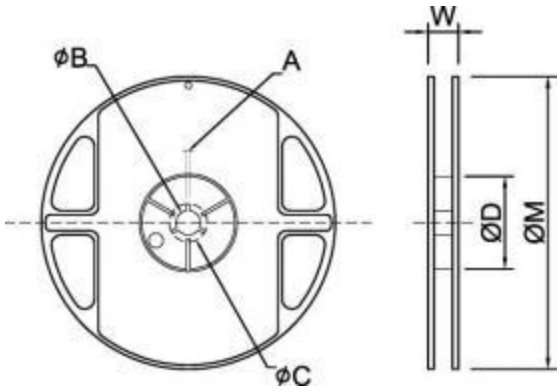


2.4GHz 3216 Chip Antenna: AAN3216F5P2G45

Taping Specifications

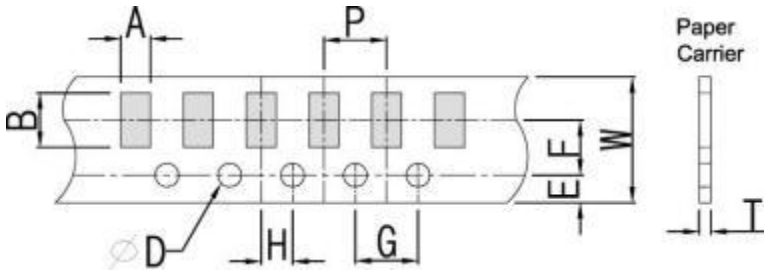
Reel and Taping Specification

Reel Specification



TYPE	SIZE		A	ψB	ψC	ψD	W	ψM
3216	7”	3K/Reel	2.0±0.5	13.5±1.0	21±1.0	60±1.0	11.5±2.0	178±2.0

Tapping Specification

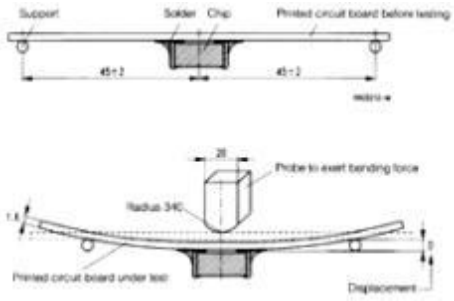
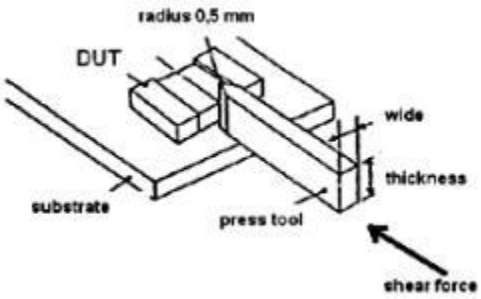


Packaging	Type	A	B	W	E	F	G	H	T	ψ D	P
Paper Type	3216	1.90±0.20	3.50±0.20	8.0±0.20	1.75±0.10	3.5±0.05	4.0±0.10	2.0±0.05	0.75±0.10	1.50 +0.10 -0	4.0±0.1

2.4GHz 3216 Chip Antenna: AAN3216F5P2G45

Reliability Table

Test Item	Procedure	Requirements Ceramic Type	Remark (Reference)
Electrical Characterization		Fulfill the electrical specification	User Spec.
Thermal Shock	1 . Preconditioning: 50 ± 10℃ / 1 hr , then keep for 24 ± 1 hrs at room temp . 2 . Initial measure: Spec: refer Initial spec. 3 . Rapid change of temperature test: -30℃ to +85℃; 100 cycles; 15 minutes at Lower category temperature; 15 minutes at Upper category temperature .	No Visible Damage . Fulfill the electrical specification .	MIL-STD-202 107
Temperature Cycling	1 . Initial measure: Spec: refer Initial spec. 2. 100 Cycles (-30℃ to +85℃), Soak Mode=1 (2 Cycle/hours). 3 . Measurement at 24 ± 2Hours after test condition .	No Visible Damage . Fulfill the electrical specification .	JESD22 JA104
High Temperature Exposure	1 . Initial measure: Spec: refer Initial spec. 2 . Unpowered; 500hours @ T=+85℃ . 3 . Measurement at 24 ± 2 hours after test.	No Visible Damage . Fulfill the electrical specification .	MIL-STD-202 108
Low Temperature Storage	1 . Initial measure: Spec: refer Initial spec. 2 . Unpowered: 500hours @ T= -30℃ . 3 . Measurement at 24 ± 2 hours after test.	No Visible Damage . Fulfill the electrical specification .	MIL-STD-202 108
Solderability (SMD Bottom Side)	Dipping method: a . Temperature: 235 ± 5°C b . Dipping time: 3 ± 0 .5s	The solder should cover over 95% of the critical area of bottom side .	IEC 60384-21/22 4.10
Soldering Heat Resistance (RSH)	Preheating temperature: 150 ± 10°C . Preheating time: 1~2 min . Solder temperature: 260 ± 5°C . Dipping time: 5 ± 0 .5s	No Visible Damage .	IEC 60384-21/22 4.10
Vibration	5g's for 20 min ., 12 cycles each of 3 orientations Note: Use 8"X5" PCB .031" thick 7 secure points on, one long side and 2 secure points at corners of opposite sides . Parts mounted within 2" from any secure point. Test from 10-2000 Hz.	No Visible Damage .	MIL-STD-202 Method 204
Mechanical Shock	Three shocks in each direction shall be applied along the three mutually perpendicular axes of the test specimen (18 shocks) Peak value: 1,500g's Duration: 0 .5ms Velocity change: 15.4 ft/s Waveform: Half-sine	No Visible Damage .	MIL-STD-202 Method 213
Humidity Bias	1 . Humidity: 85% R .H ., Temperature: 85 ± 2 °C . 2 . Time: 500 ± 24 hours . 3. Measurement at 24 ± 2hrs after test condition .	No Visible Damage . Fulfill the electrical specification .	MIL-STD-202 Method 106

Board Flex (SMD)	1 . Mounting method: IR-Reflow . PCB Size (L:100 × W:40 × T:1 .6mm) 2 . Apply the load in direction of the arrow until bending reaches 2 mm . 	No Visible Damage .	AEC-Q200 005
Adhesion	Force of 1 .8Kg for 60 seconds . 	No Visible Damage Magnification of 20X or greater may be employed for inspection of the mechanical integrity of the device body terminals and body/terminal junction .	AEC-Q200 006
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

Revision History

Revision	Date	Content
1	2018/7/20	New issue