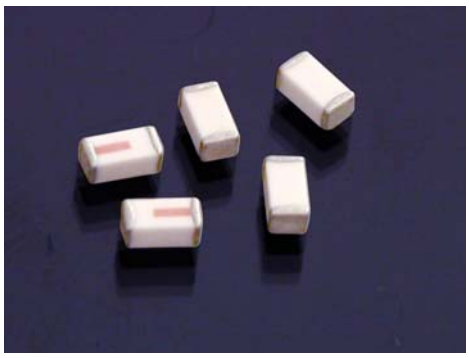
AN3216 Series

Multilayer Chip Antenna

Gravio

Features

- ❖ Monolithic SMD with small, low-profile and light-weight type.
- ❖ Wide bandwidth
- ❖ RoHS compliant



Applications

- ❖Bluetooth/Wireless LAN/Home RF
- ❖ISM band 2.4/5 GHz applications

Specifications

Part Number	Operating Frequency (MHz)	Peak Gain (XZ-V)	Average Gain (XZ-V)	VSWR	Impedance
JTW2G45 AN3216A100	2400-2500 5150 - 5850	2.0 dBi typ.	-0.5 dBi typ.	2 max.	50 Ω

Q'ty/Reel (pcs) : 3,000pcs
Operating Temperature Range : -40 ~ +85 °C
Storage Temperature Range : +5 ~ +35 °C, Humidity 45~75%RH
Storage Period : 12 months max.
Power Capacity : 2W max.

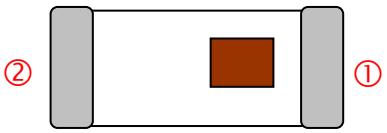
Part Number

JTW ① 2G45 ② AN ③ 3216 ④ A100 ⑤ □ ⑥

Material Code

① Identifier	JTW	② Frequency Range	2400-2500 5150-5850
③ Type	AN : Antenna	④ Dimensions (L × W)	3.2× 1.6 mm
⑤ Material Code+BW	A100=100MHz	⑥ Packaging	R: Tape & Reel B: Bulk

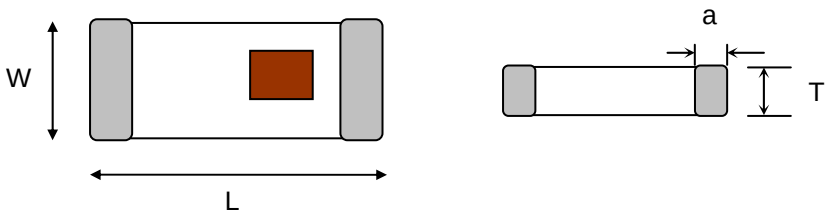
Terminal Configuration



No.	Terminal Name	No.	Terminal Name
①	Feeding Point	②	NC

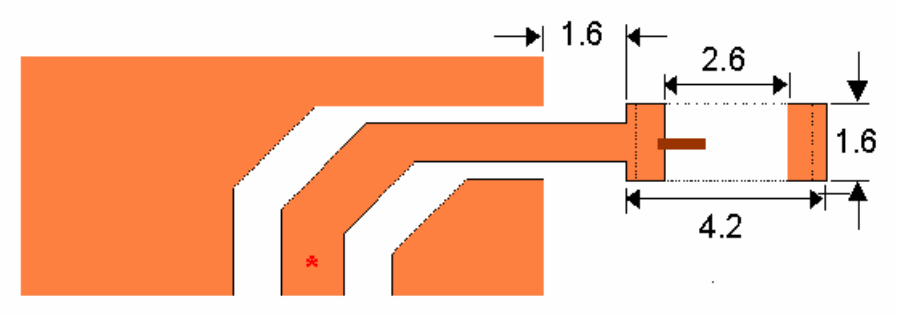
Dimensions and Recommended PC Board Pattern

Unit : mm

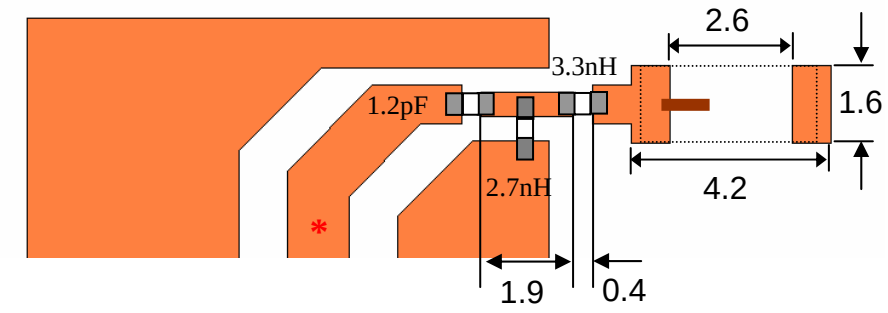


Mark	L	W	T	a
Dimensions	3.2±0.2	1.6±0.2	1.3+ 0.1/-0.2	0.5±0.3

(a) Without Matching Circuits



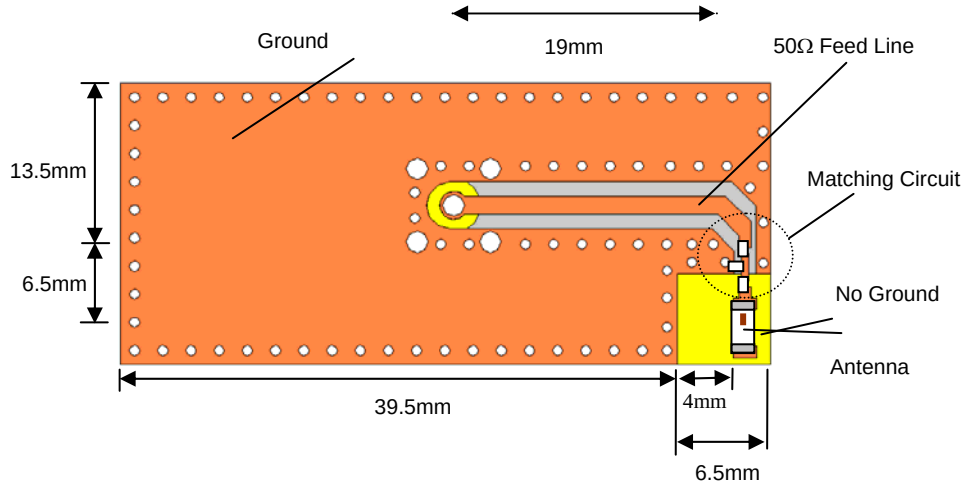
(b) With Matching Circuits



*Line width should be designed to match 50Ω characteristic impedance, depending on PCB material and thickness.

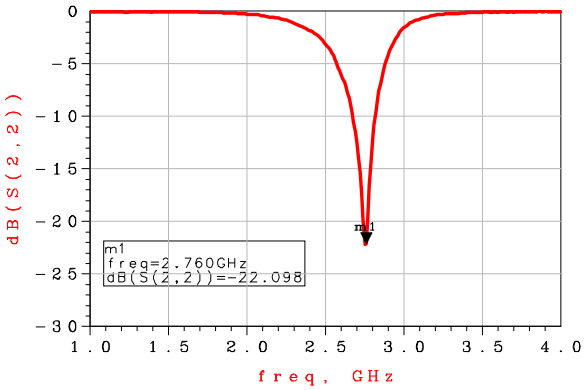
Typical Electrical Characteristics (T=25°C)

❖Test Board

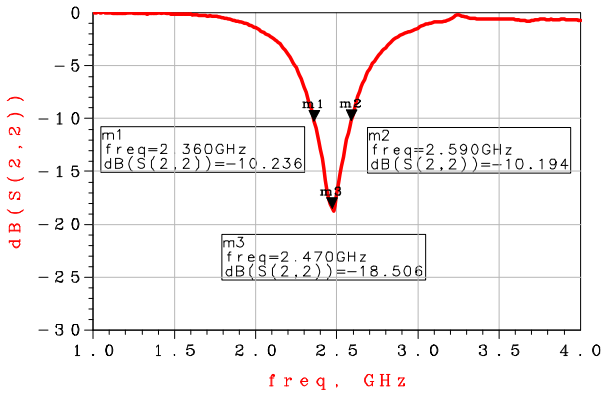


❖Return Loss

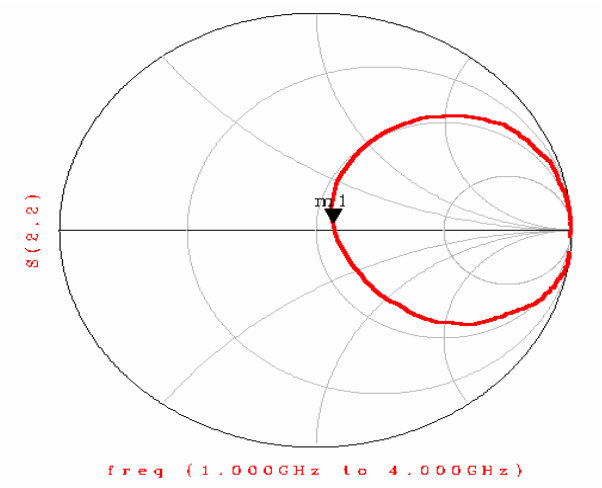
(a) Without Matching Circuits

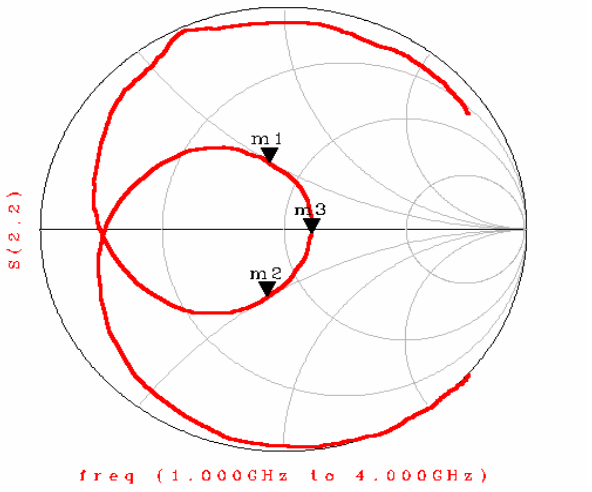


(b) With Matching Circuits

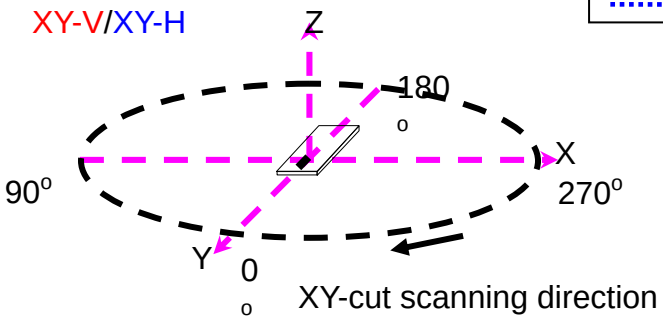


Radiation Patterns

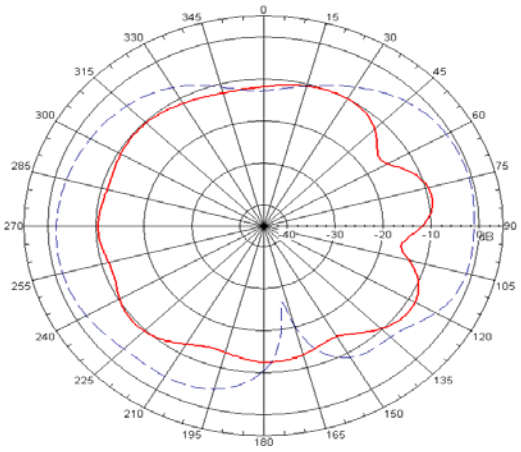




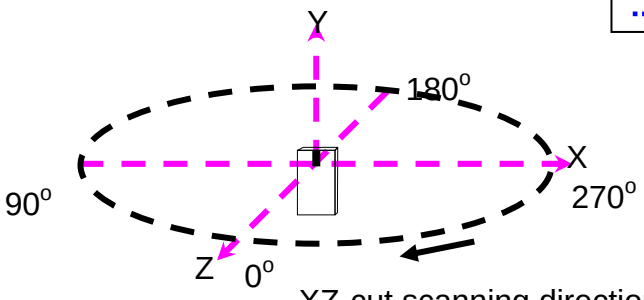
XY-V/XY-H



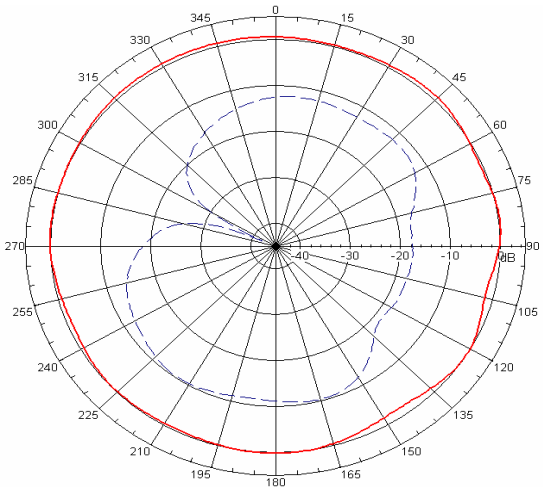
XY-cut scanning direction



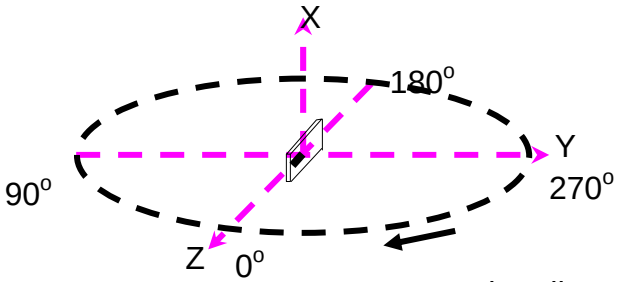
XZ-V/XZ-H



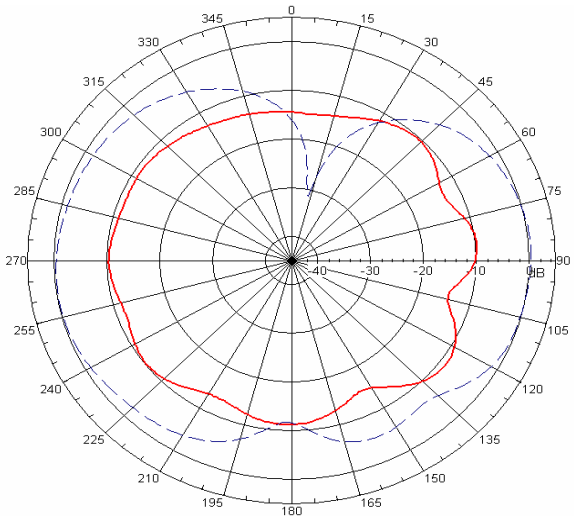
XZ-cut scanning direction



YZ-V/YZ-H

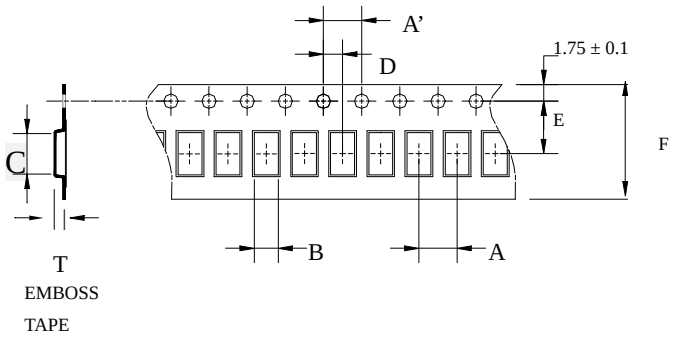


YZ-cut scanning direction



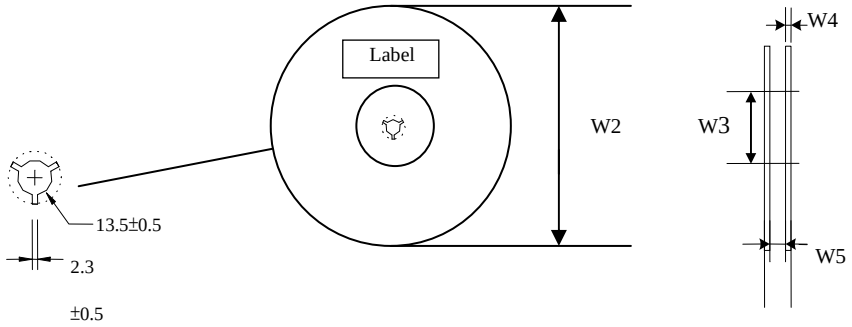
Taping Specifications

❖Tape & Reel Dimensions (Unit: mm) vs. Quantity (pcs)



Type	A	A'	B	C	D	E	F	T	Quantity/per reel	Tape material
AN3216	4.0± 0.1	4.0± 0.05	1.95± 0.1	3.5± 0.1	2.0± 0.05	3.5± 0.05	8.00± 0.2	1.50± 0.1	3,000pcs	Plastic (Embossed)

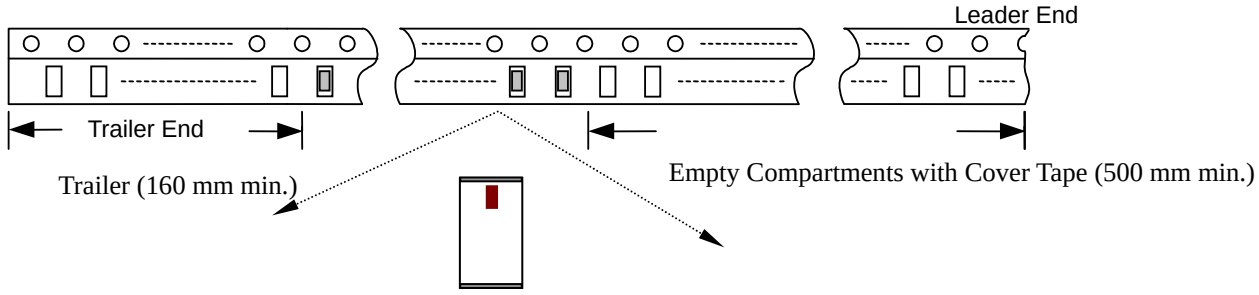
❖Reel Dimensions (Unit: mm)



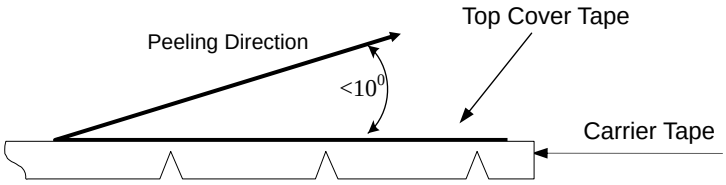
Label: Customer's Name,
ACX P/N, Q'ty, Date,
ACX Corp.

Type	W2	W3	W4	W5
AN3216	178±1	60±1	1.4±0.2	17±0.5

❖Leader and Trailer Tape



❖**Peel-off Force**



Peel-off force should be in the range of 0.1 – 0.6 N at a peel-off speed of 300±10 mm/min .

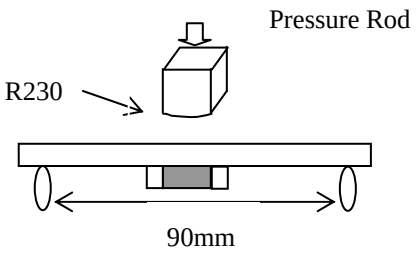
❖**Storage Conditions**

(1) Temperature: 15 ~35℃, relative humidity (RH): 45~75%.
(2) Non-corrosive environment

Notes

❖The contents of this data sheet are subject to change without notice. Please confirm the specifications and delivery conditions when placing your order.

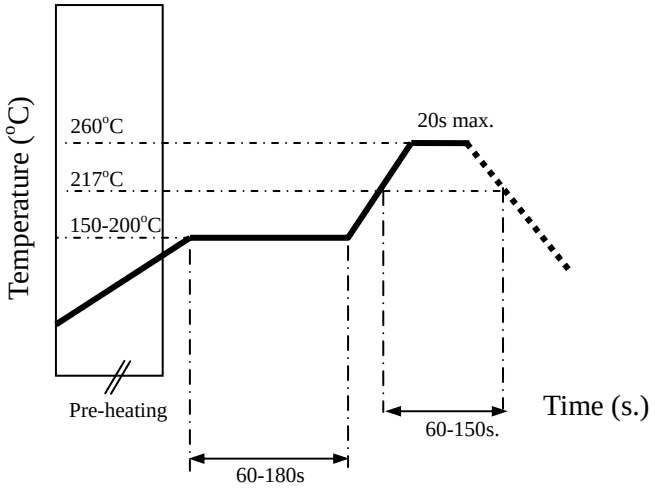
Mechanical & Environmental Characteristics

Item	Requirements	Procedure
Solderability	1. No apparent damage 2. More than 95% of the terminal electrode shall be covered with new solder	1. Preheat: 120± 5 °C 2. Solder: 245± 5°C for 5± 1 sec
Soldering strength (Termination Adhesion)	1. 1kg minimum	1. Solder specimen onto test jig. 2. Apply push force at 0.5mm/s until electrode pads are peeled off or ceramic are broken. Pushing force is applied to longitude direction
Deflection (Substrate Bending)	1. No apparent damage	1. Solder specimen onto test jig (FR4, 0.8mm) using the recommend soldering profile. 2. Apply a bending force of 2mm deflection 、 
Heat/Humidity Resistance	1. No apparent damage 2. Fulfill the electrical specification after test	1. Temperature: 85± 2°C 2. Humidity: 90% ~ 95% RH 3. Duration: 1000±48hrs 4. Recovery: 1-2hrs
Thermal shock (Temperature Cycle)	1. No apparent damage 2. Fulfill the electrical specification after test	1. One cycle/step 1：125 ± 5°C for 30 min step 2：- 40 ± 5°C for 30 min 2. No of cycles：100 3. Recovery:1-2 hrs
Low Temperature Resistance	1. No apparent damage 2. Fulfill the electrical specification after test	1. Temperature: -40°± 5 °C 2. Duration: 500 ±24hrs 3. Recovery: 1-2hrs

Soldering Conditions

❖**Typical Soldering Profile for Lead-free Process**

Reflow Soldering :



Notes

❖The contents of this data sheet are subject to change without notice. Please confirm the specifications and delivery conditions when placing your order.