

Shenzhen Methink Technology Limited

SPECIFICATIONS

Part No.	AN3216F2450-B0
Customer P/N	
Make By	Lu
Check By	Tony
Date	2022-4-18

Customer approval signature	
Date	

Manufacturer : Shenzhen Methink Technology Limited

Add: 312, Building 6, Zone 2, Samsung Industrial Park, Fuyong Community, Fuyong Subdistrict, Bao'an District, Shenzhen, China .

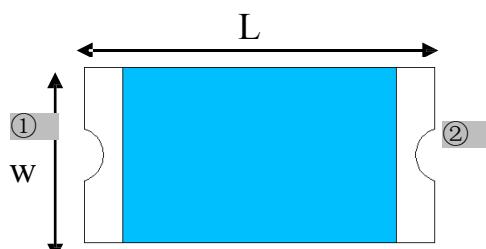
Features

1. Surface Mounted Devices with a small dimension of $3.2 \times 1.6 \times 0.42 \text{ mm}^3$ meet future miniaturization trend.
2. Embedded and LTCC (Low Temperature Co-fired Ceramic) technology is able to future integrate with system design as well as beautifying the housing of final product.
3. High Stability in Temperature / Humidity Change

Applications

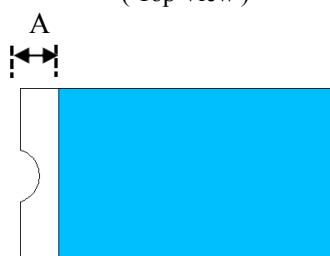
1. Bluetooth
2. Wireless LAN
3. ISM band 2.4GHz wireless applications

Dimensions (Unit: mm)



Number	Terminal Name
①	INPUT
②	OUTPUT

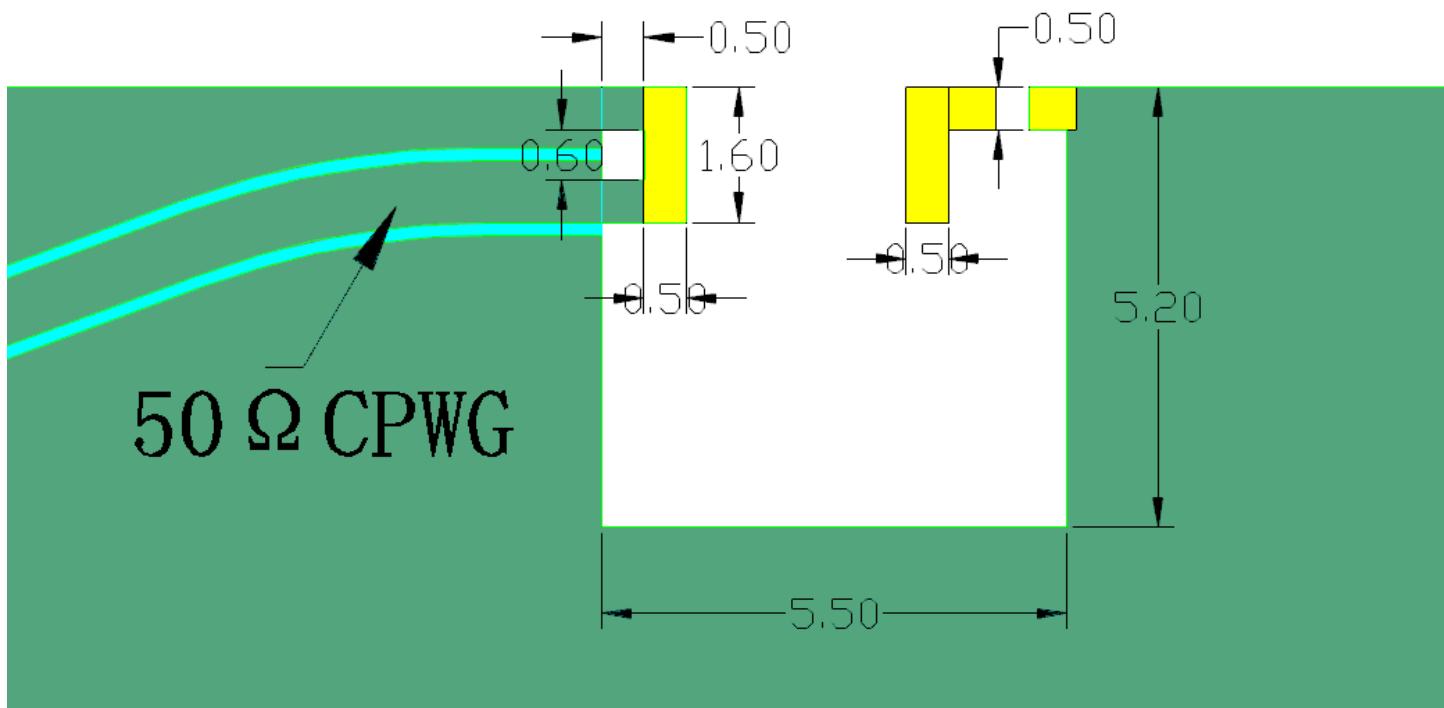
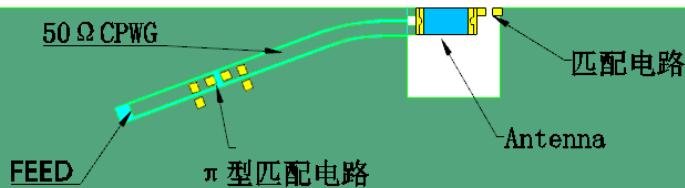
(Top View)



(Bottom View)

Symbols	L	W	T	A
Dimensions	3.2 ± 0.2	1.65 ± 0.2	0.42 ± 0.1	0.35 ± 0.1

Evaluation Board and Matching Circuits

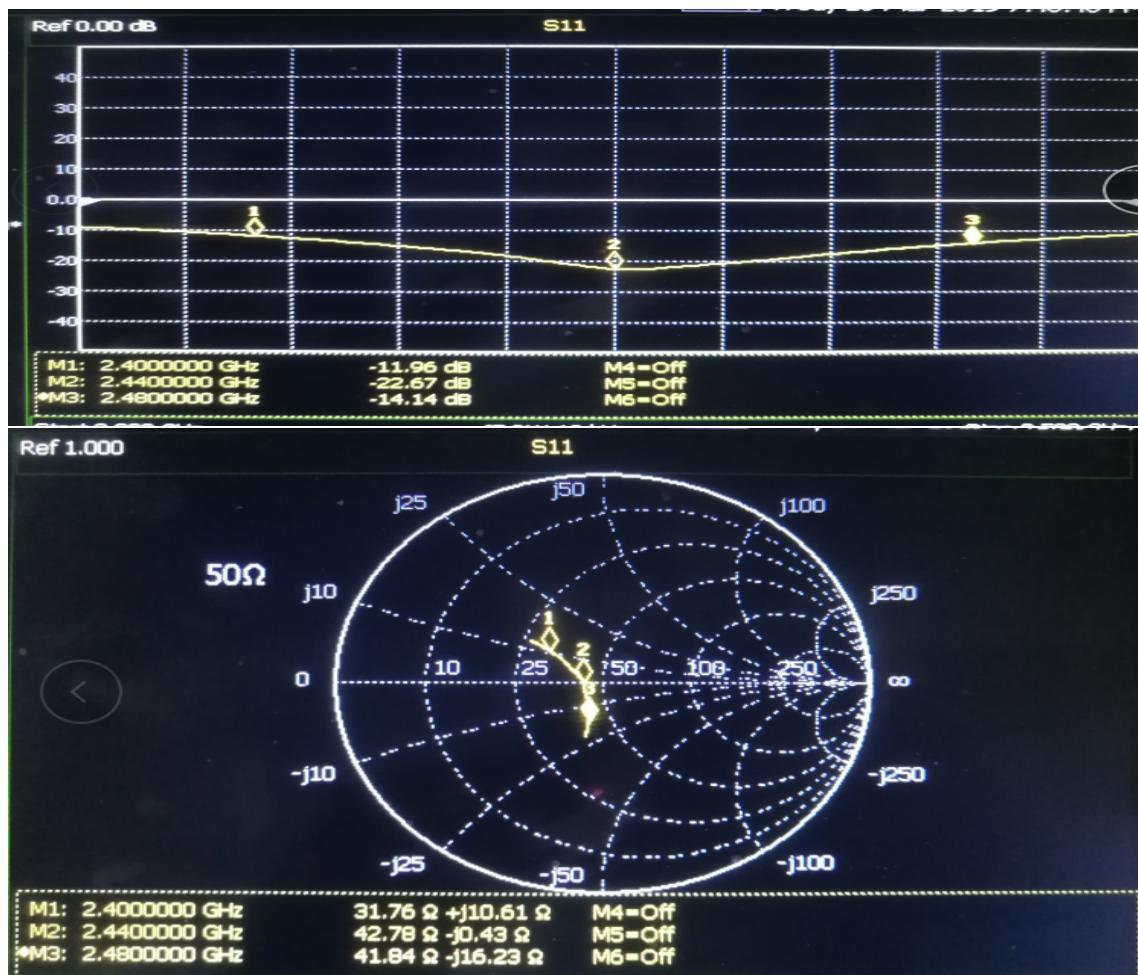


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Electrical Characteristics

No.	Product number	AN3216F2450-B0	
1	Central Frequency	2450	MHz
2	Bandwidth	100 (Min.)	MHz
3	Return Loss	-11.96 (Max.)	dB
4	Peak Gain	2.58	dBi
5	Impedance	50	Ω
6	Operating Temperature	-40~+85	°C
7	Maximum Power	5	W
8	Resistance to soldering heat	10 (@260°C)	Sec.
9	Polarization	Linear	
10	Azimuth Beam width	Omni-directional	
11	Termination	Sn (leadless)	

Characteristic curve

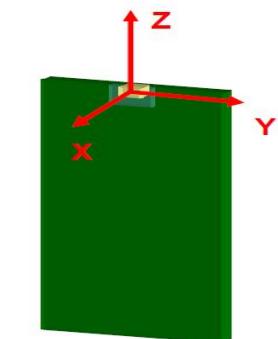


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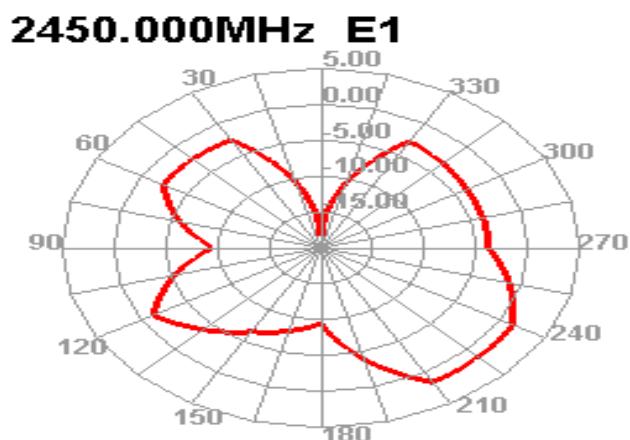
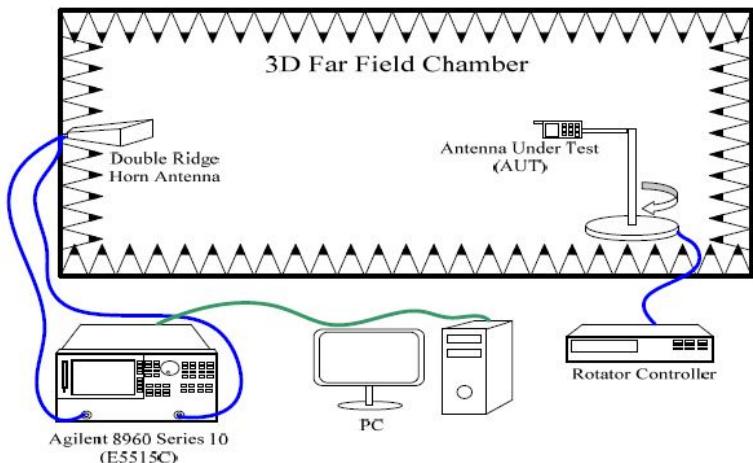
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Radiation Pattern

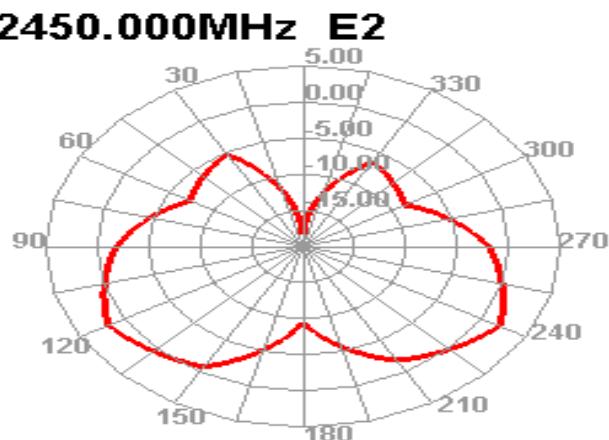
coordinates:



X-Z Plane

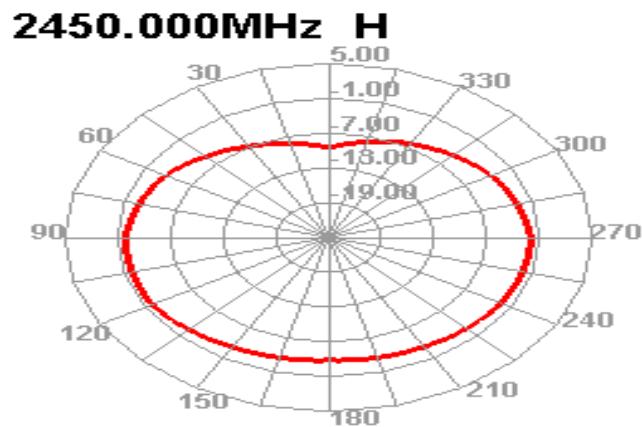


X-Y Plane

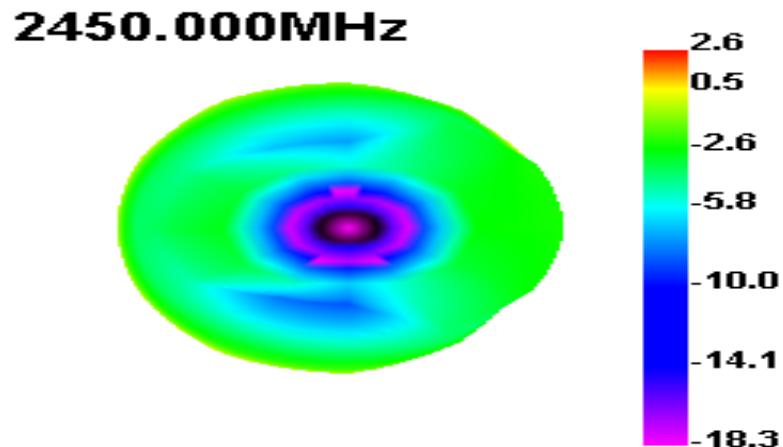


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Y-Z Plane



3D Radiation Pattern



Frequency (MHz)	2400	2450	2500
Avg. Gain (dBi)	-1.83	-1.86	-2.97
Peck Gain (dBi)	2.7	2.58	1.34
Efficiency (%)	65.5	65.22	50.45

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Dependability Test

Temperature range	25±5°C
Relative Humidity range	55~75%RH
Operating Temperature range	-40°C~+85°C
Storage Temperature range	-40°C~+85°C

Vibration Resist

The device should fulfill the electrical specification after applied to the vibration of 10 to 55Hz with amplitude of 1.5mm for 2 hours each in X , Y and Z directions.

Drop Shock

The device should have no mechanical damage after dropping onto the hard wooden board from the height of 100cm for 3 times each facet of the 3 dimensions of the device.

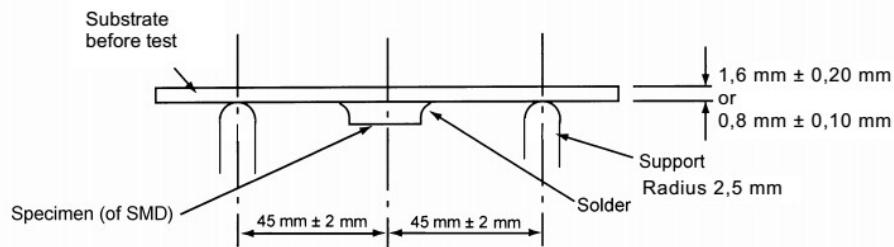
Solder Heat Proof

The device should be satisfied after preheating at 120°C~150°C for 120 seconds and dipping in soldering Sn at 255°C+10°C for 5±0.5 seconds, or electric iron 300°C-10°C for 3±0.5 seconds, without damage.

Adhesive Strength of Termination

The device have no remarkable damage or removal of the termination after horizontal force of 5N(≤0603); 10N(>0603)with 10±1 seconds.

Bending Resist Test



Weld the product to the center part of the PCB with the thickness $1.6 \pm 0.2\text{mm}$ or $0.8 \pm 0.1\text{mm}$ as the illustration shows, and keep exerting force arrow-ward on it at speed of :1mm/S , and hold for $5 \pm 1\text{S}$ at the position of 1.5mm bending distance , so far , any peeling off of the product metal coating should not be detected .

Moisture Proof

The device should fulfill the electrical specification after exposed to the temperature $60 \pm 2^\circ\text{C}$ and the relative humidity 90~95% RH for 96 hours and 1~2 hours recovery time under normal condition.

High Temperature Endurance

The device should fulfill the electrical specification after exposed to temperature $85 \pm 5^\circ\text{C}$ for 96 ± 2 hours and 1~2 hours recovery time under normal temperature.

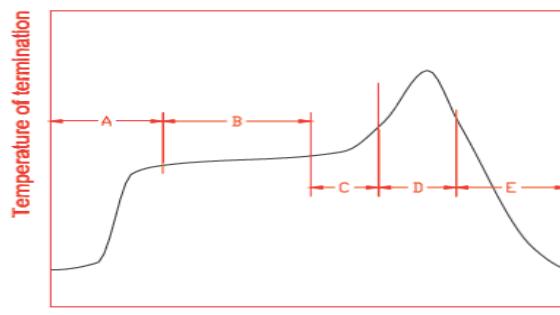
Low Temperature Endurance

The device should fulfill the electrical specification after exposed to the temperature $-40^\circ\text{C} \pm 5^\circ\text{C}$ for 96 ± 2 hours and to 2 hours recovery time under normal temperature.

Temperature Cycle Test

The device should fulfill the electrical specification after exposed to the low temperature -40°C and high temperature $+85^\circ\text{C}$ for 30 ± 2 min each by 5 cycles and 1 to 2 hours recovery time under normal temperature.

Reflow Soldering Standard Condition

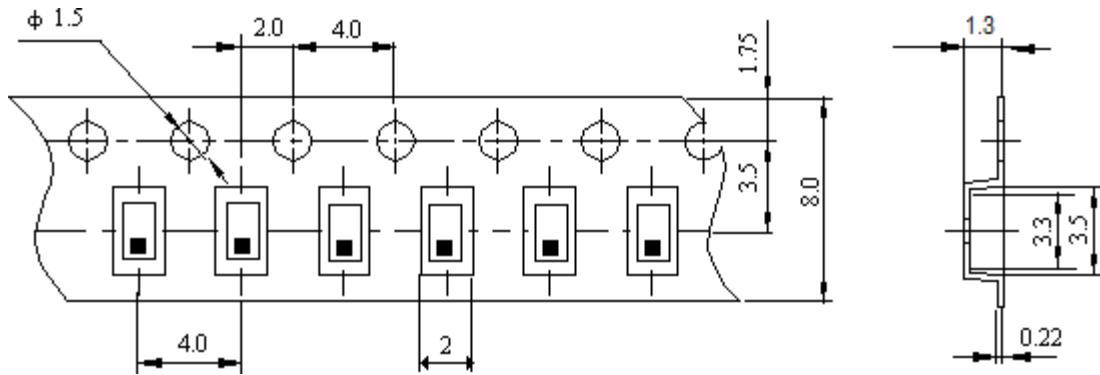


A	1 st rising temperature	The normal to Preheating temperature	30s to 60s
B	Preheating	140°C to 160°C	60s to 120s
C	2 nd rising temperature	Preheating to 200°C	20s to 40s
D	Main heating	if 220°C	50s~60s
		if 230°C	40s~50s
		if 240°C	30s~40s
		if 250°C	20s~40s
		if 260°C	20s~40s
E	Regular cooling	200°C to 100°C	$1^\circ\text{C/s} \sim 4^\circ\text{C/s}$

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Packaging and Dimensions (3216)

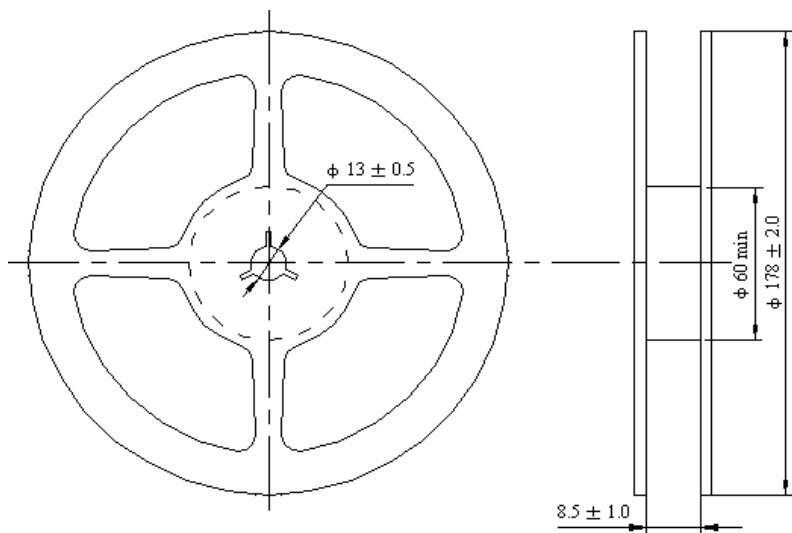
Plastic Tape



Remarks for Package

Reserve a length of 150~200mm for the trailer of the carrier and 250~300 mm for the leader of the carrier and further 250mm of cover tape at the leading part of the carrier.

Reel (5000 pcs/Reel)



Storage Period

Product should be used within six months of receipt.

MSL 1 / Storage Temperature Range : <30 degree C, Humidity : <85%RH