

SHENZHEN WINNERELEC INDUSTRIAL CO.,LTD.

APPROVAL SHEET

1.CUSTOMER.

: _____

2.DISCRPTION.

: AT2.4G -Ceramic Antenna

3. PART NO.

: AT2409

4. APPROVAL NO.

: AT2409

5. ISSUED DATE.

: _____

APPROVAL BY	CHECKED BY	PREPARED BY

Company Address:

Tel :

Fax :

Application of AT2.4G-Ceramic Antenna

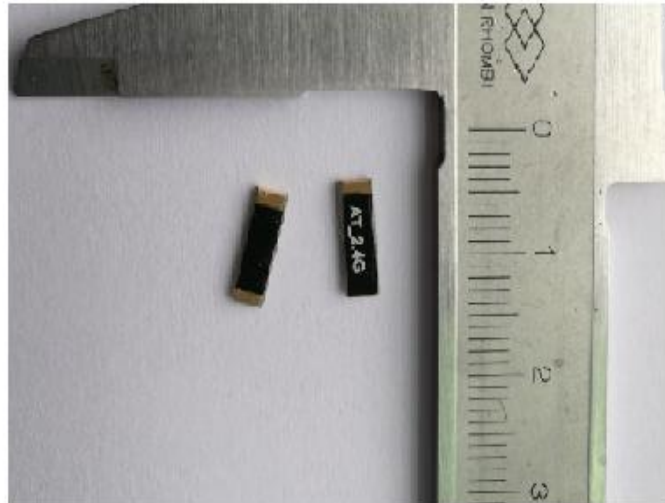
Feature

- ※ High gain
- ※ Omni-directional
- ※ Wide bandwidth

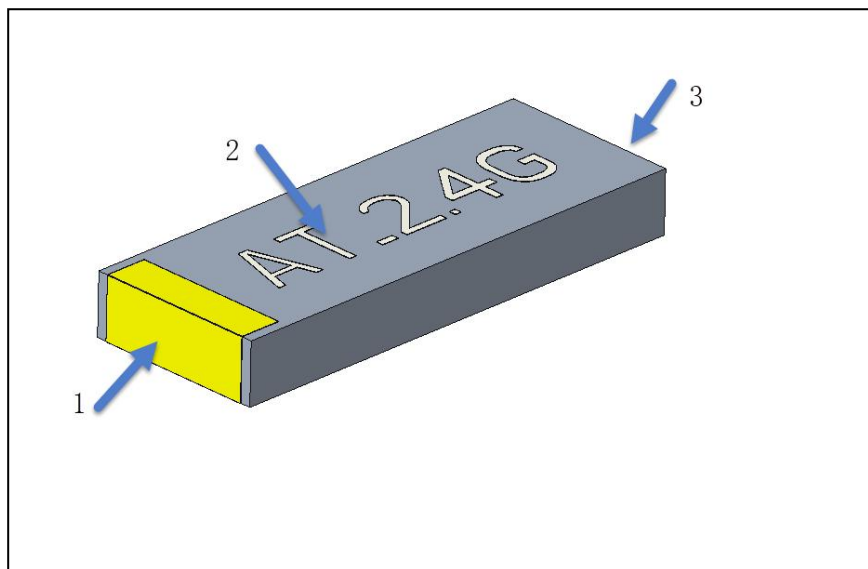
Applications

- ※ Bluetooth/wireless LAN/Home RF
- ※ ISM band 2.4GHz applications

PCB Board Pattern



Structure:

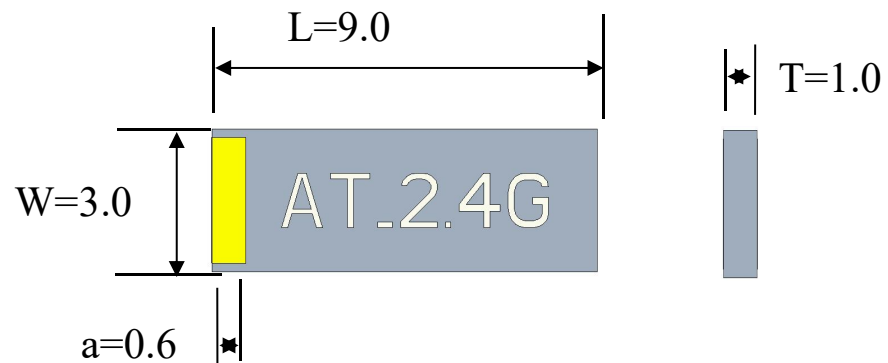


1, Feed end

2, Identification

3, Fixed end

Dimensions:



$$L=9.0\text{mm} \pm 0.2 \quad W=3.0\text{mm} \pm 0.2 \quad T=1.0\text{mm} \pm 0.1 \quad a=0.6\text{mm} \pm 0.1$$

Electric Specifications:

TYPE	Specification
Operating Frequency Range	2400~2500MHz
Band Width	>100MHz
Input impedance	50 Ω
Gain (dBi)	0 (Peak)
VSWR	< 2
Operation temperature	-40 $^{\circ}\text{C}$ ~ +95 $^{\circ}\text{C}$
Power Capacity	3W

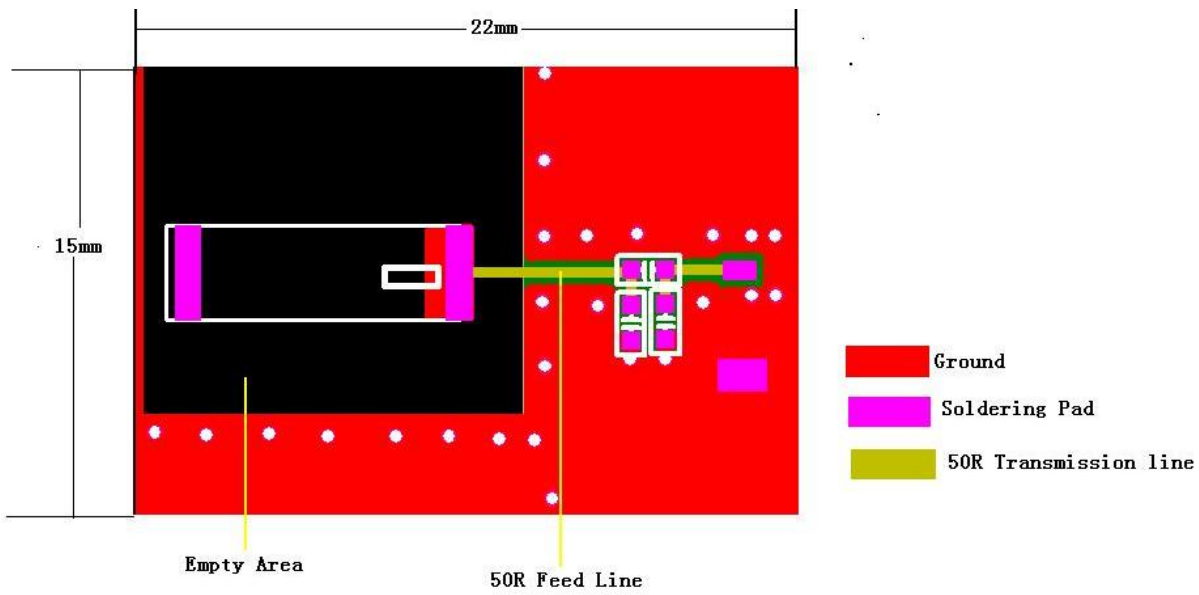
Low, medium, high Antenna gain:

2400 MHz = -0.5dBi

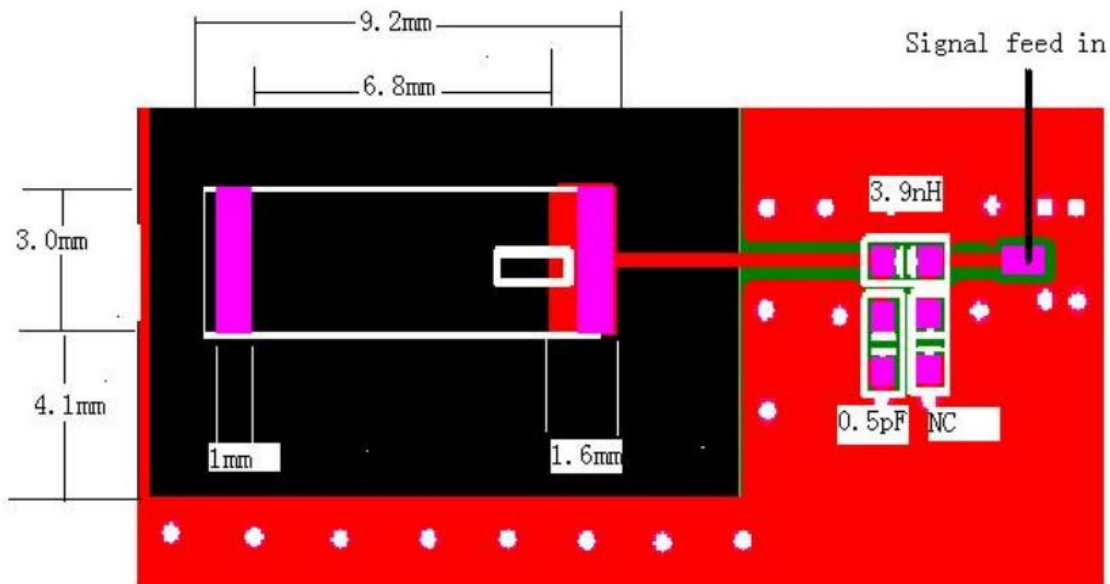
2440 MHz = -0.3dBi

2500 MHz = 0dBi

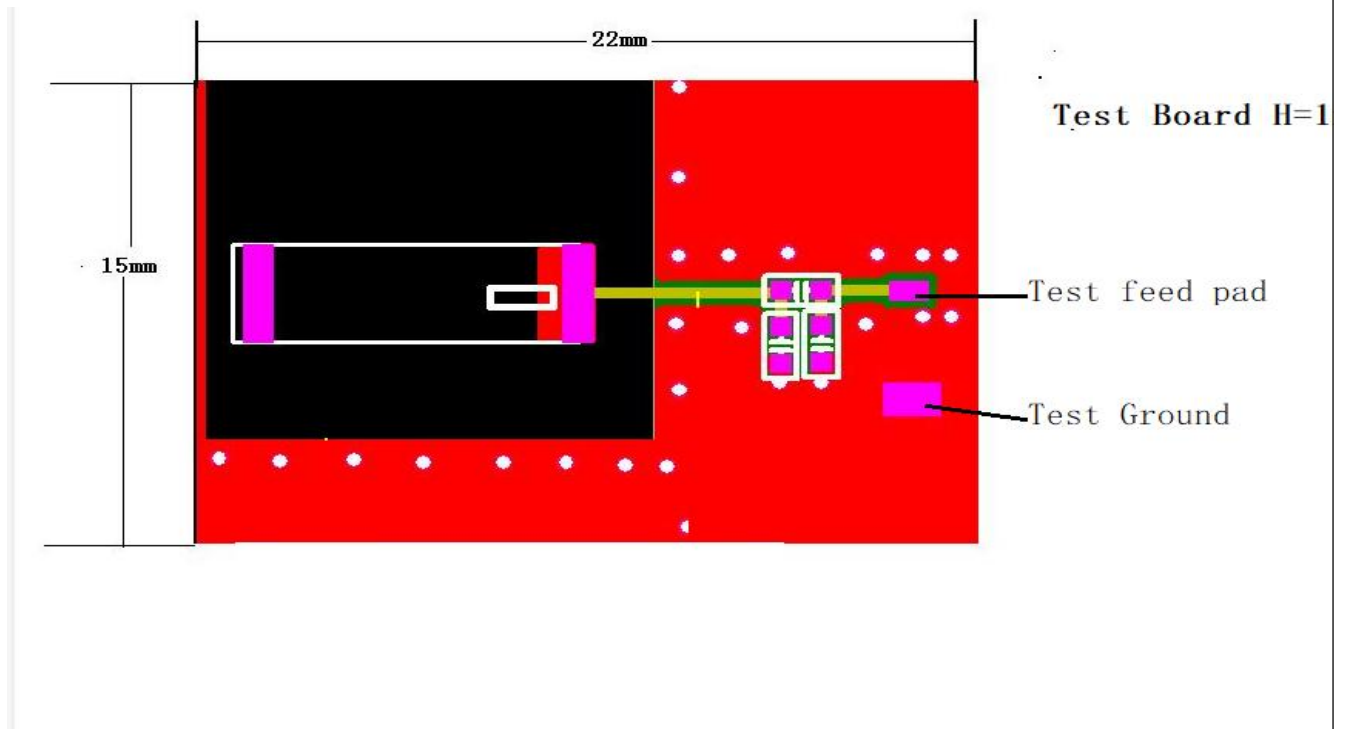
Antenna pad and routing design:



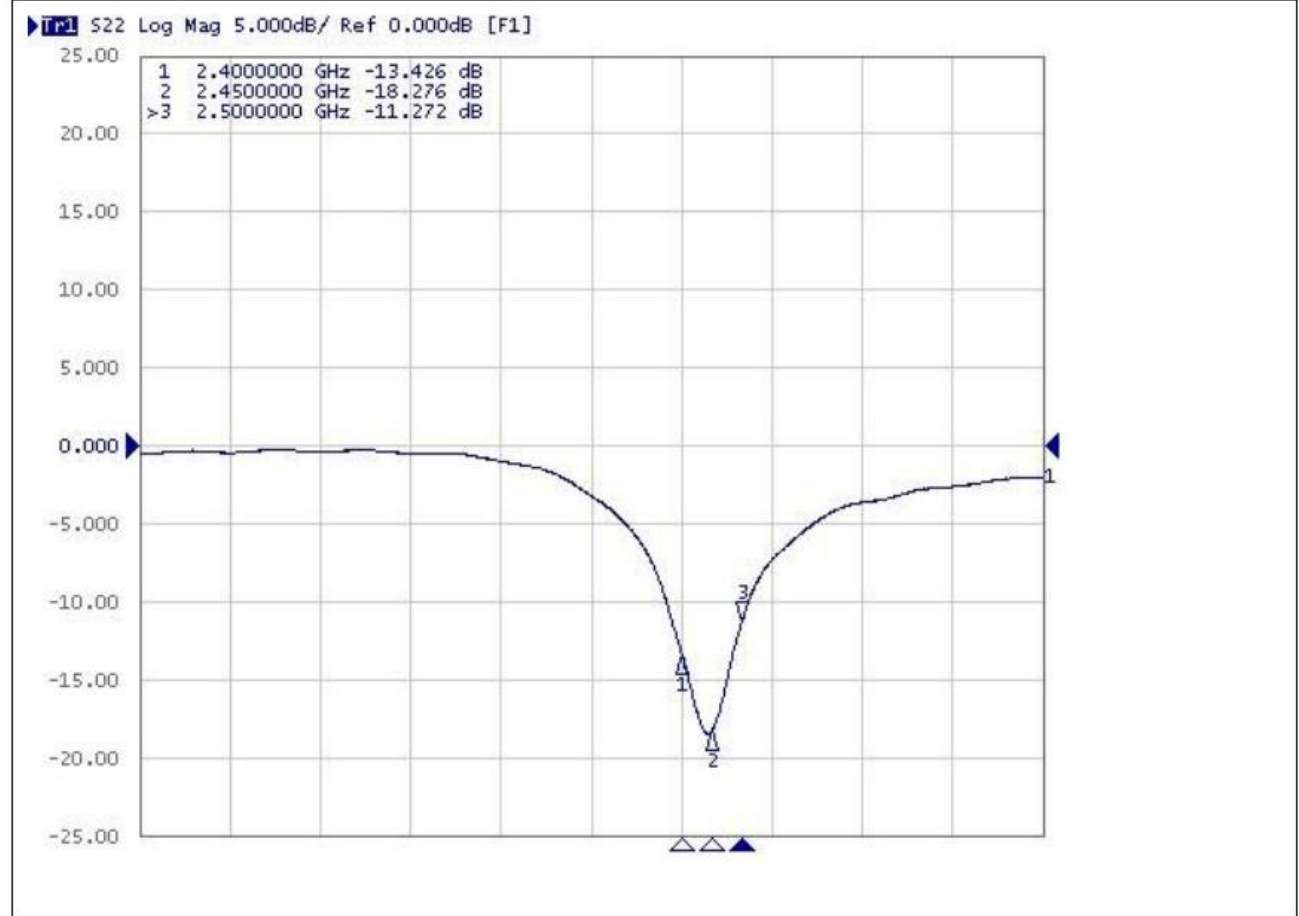
Pad size and Matching part:



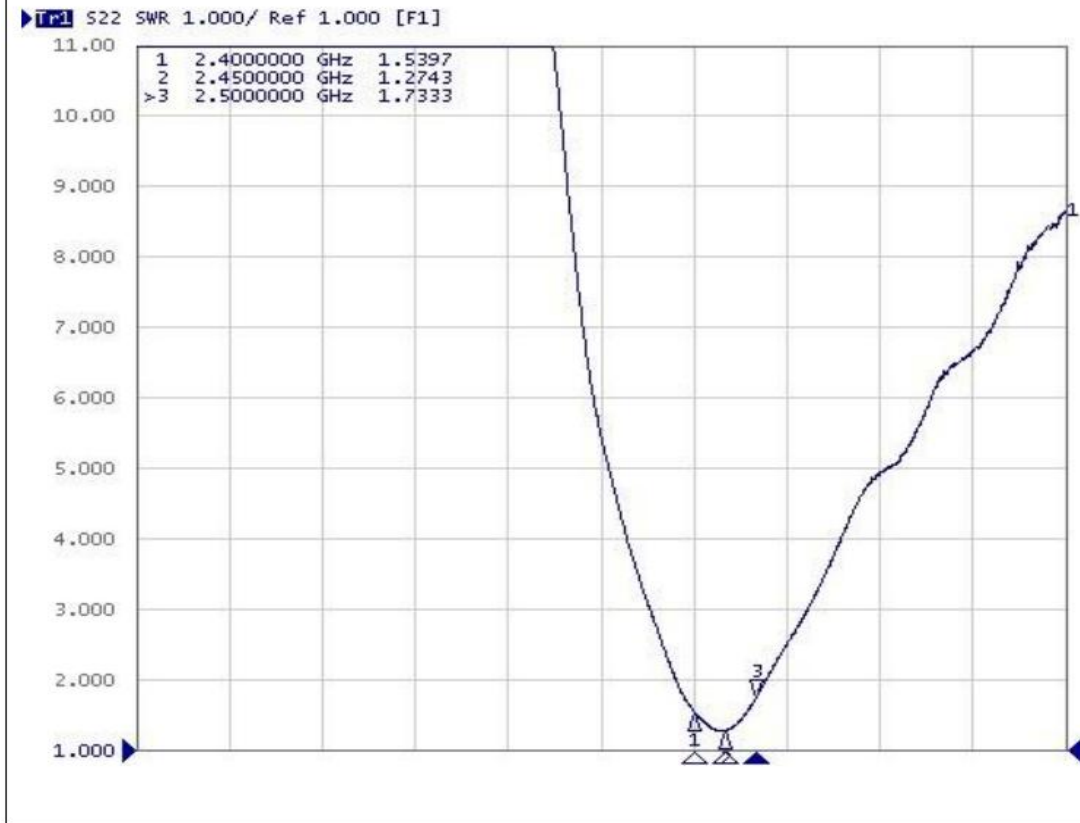
Test Board:



天线 S11 特性

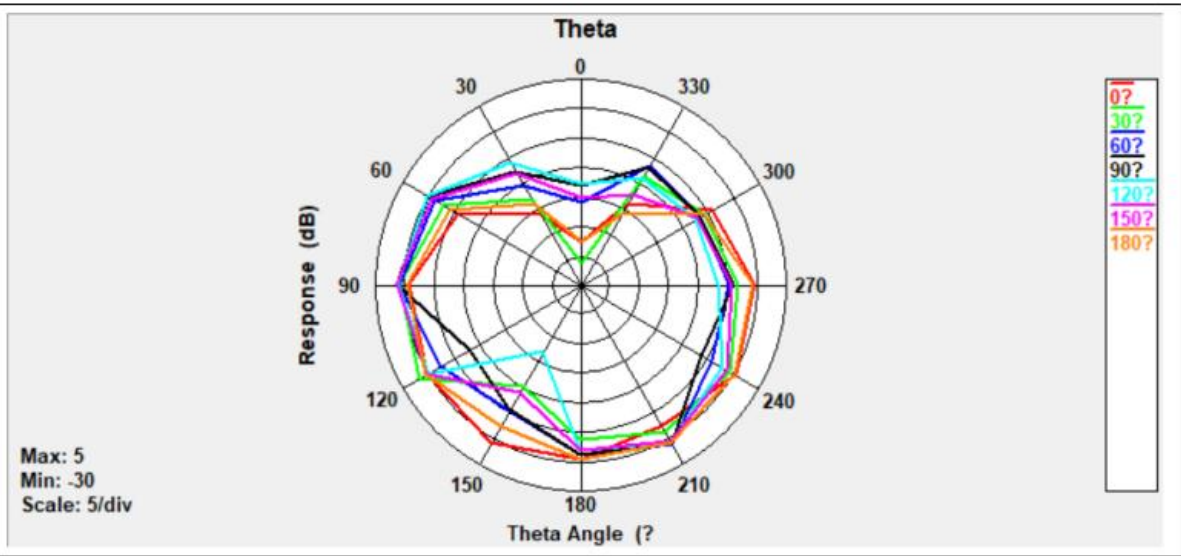


天线 VSWR 特性

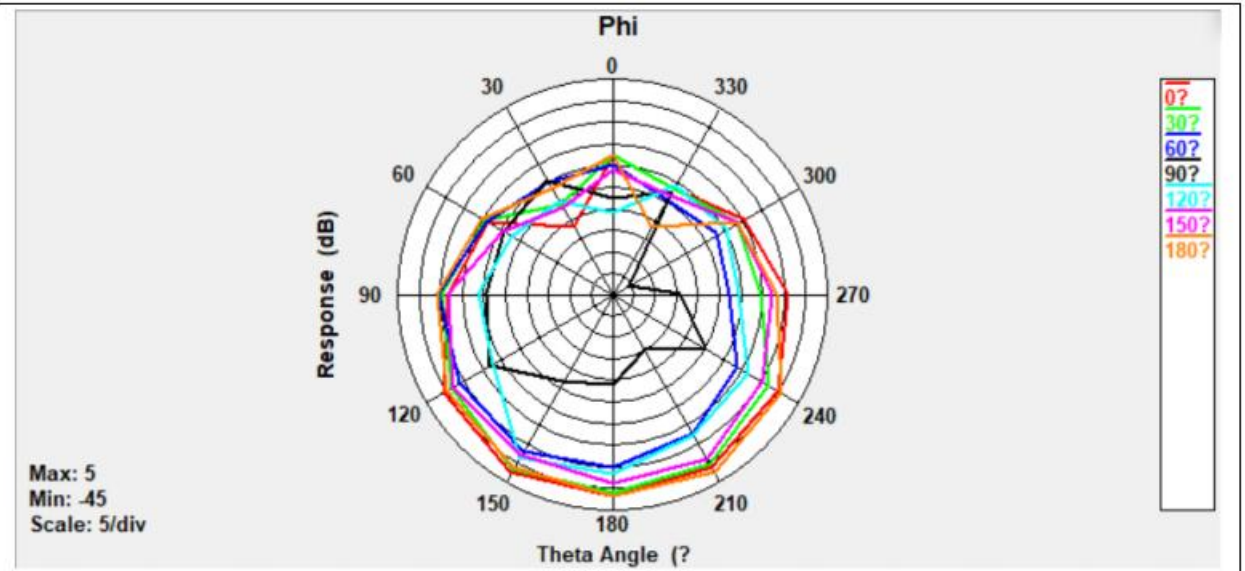


Gain and Efficiency	Bandwidth (2.4G-2.5GHz)
Peak gain	0 dBi
Gain range across the band	-0.5dBi ~ 0dBi
Peak efficiency	81.7%
Average efficiency across the band	80.2%
Efficiency range across the band	78.6% ~ 81.7%

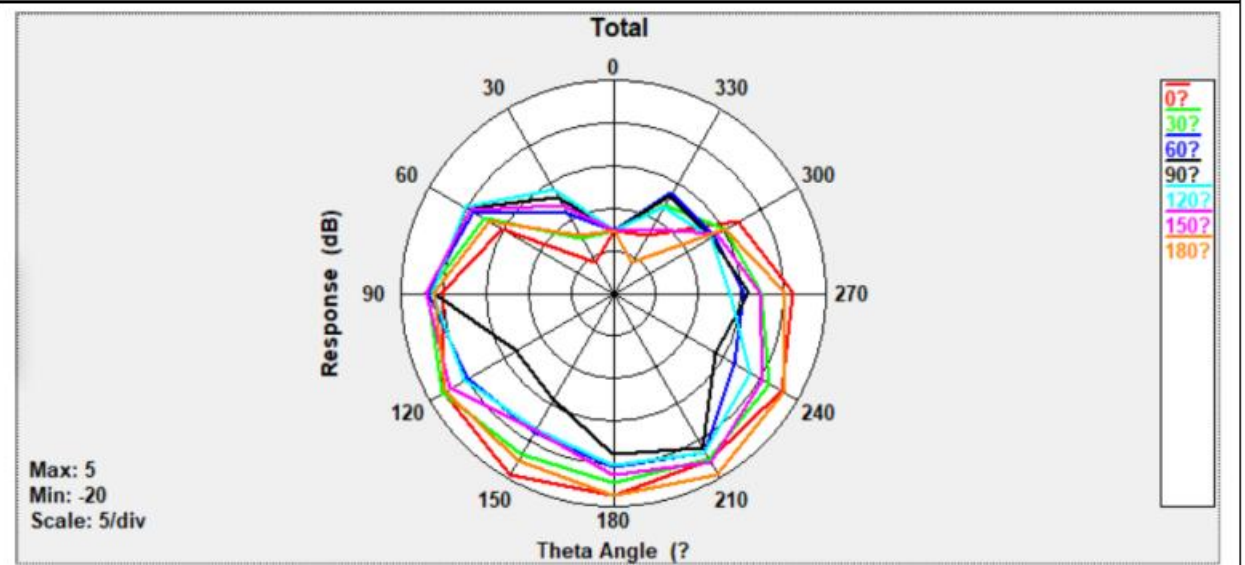
Theta
@2.45
GHz



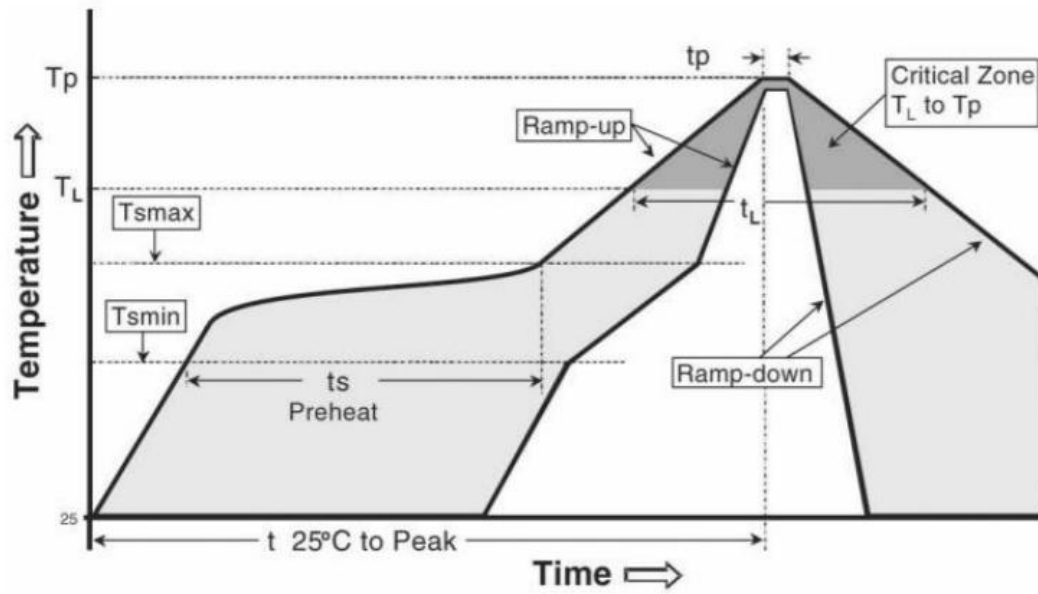
Phi
@2.45
GHz



Total
@2.45
GHz

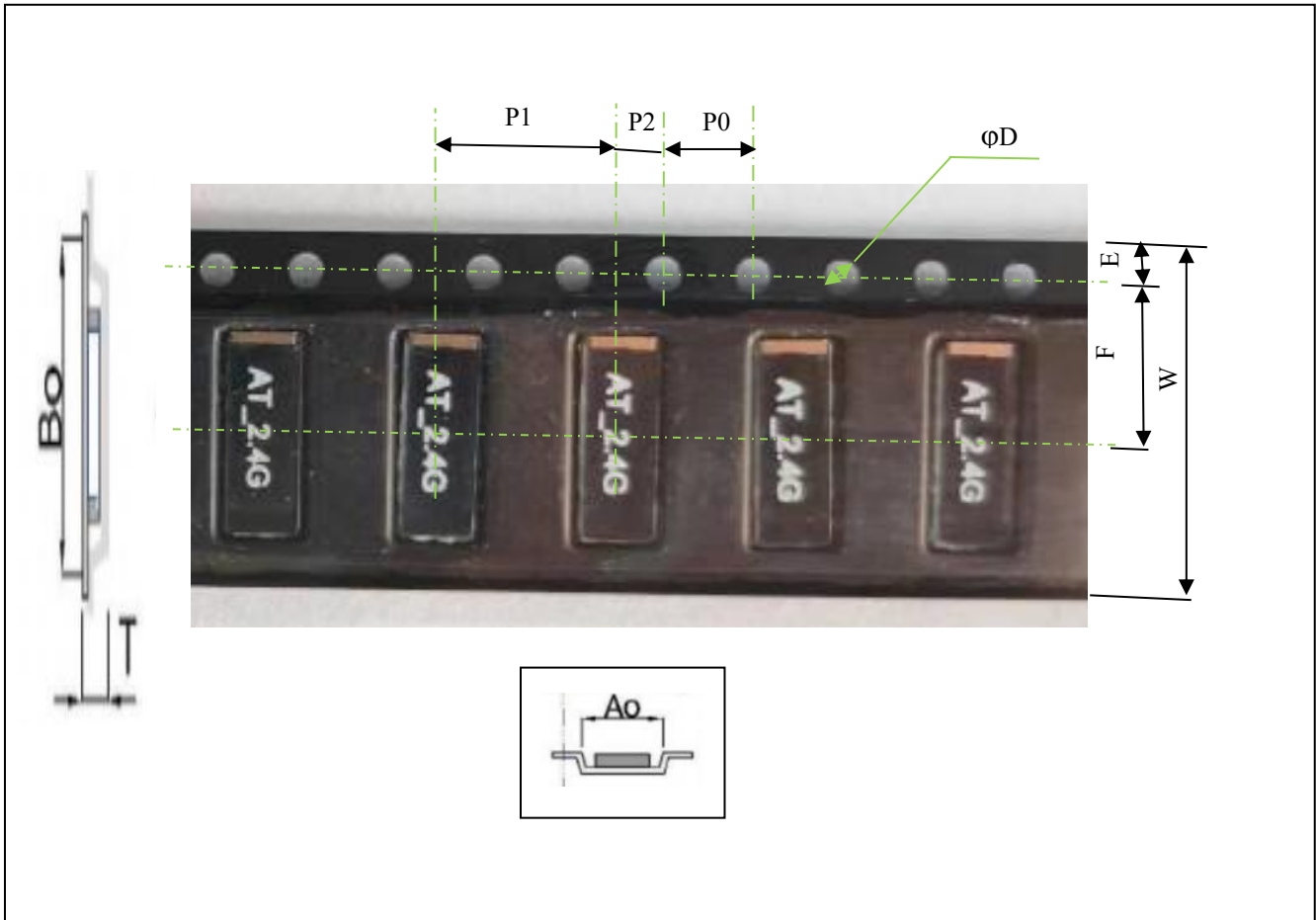


Welding condition:



Phase	Profile features	Pb-Free assembly (SnAgCu)
RAMP-UP	Avg. Ramp-up Rate (Tsmax to Tp)	3 °C / second (max.)
PREHEAT	<ul style="list-style-type: none"> - Temperature Min (Tsmín) - Temperature Max (Tsmáx) - Time (tsmín to tsmáx) 	150 °C 200 °C 60-180 seconds
REFLOW	<ul style="list-style-type: none"> - Temperature (TL) - Total Time above TL (tL) 	217 °C 60-150 seconds
PEAK	<ul style="list-style-type: none"> - Temperature (Tp) - Time (tp) 	260 °C 20-40 seconds
RAMP-DOWN	Rate	6 °C/second max
Time from 25 °C to Peak Temperature		8 minutes max

PACK:



Packaging Specification (unit: mm)

Index	A0	B0	T	φD	W
Dimension(mm)	4.5	10	1.8	1.5	16
Index	E	F	P0	P1	P2
Dimension(mm)	1.8	8.0	4	8.0	2.0