

No. 603, Shenghuihui Commercial Building, Jinhai Road,
Yantian Community, Xixiang Street, Bao'an District,
Shenzhen City

SPECIFICATIONS

CUSTOMER: _____

DESCRIPTION: _____ Ceramic Antenna

CUSTOMER PART No: _____

OUR MODEL NO: _____ LTC-3216MLT

DATE: _____

PLEASE RETURN TO US ONE COPY OF “SPECIFICATION FOR APPROVAL”
WITH YOUR APPROVED SIGNATURES

Check	Mai wencai	Audit	Kang zhongzhu	make	Huang ruile
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The customer acknowledges the signature and seal.	
Date	

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SCALE: N/A	UNIT: mm	These drawings and specifications are the property of Litongchuang Technology Limited and shall not be reproduced or used as a basis for the manufacture or sale of instruments or equipment without permission		
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DESIGNED BY: Sera	APPROVED BY: XD			
TITLE: LTC2-2405-3216 Specification		DOCUMENT NO.	3216	SPEC REV.
				P1

LTC-3216MLT Specification

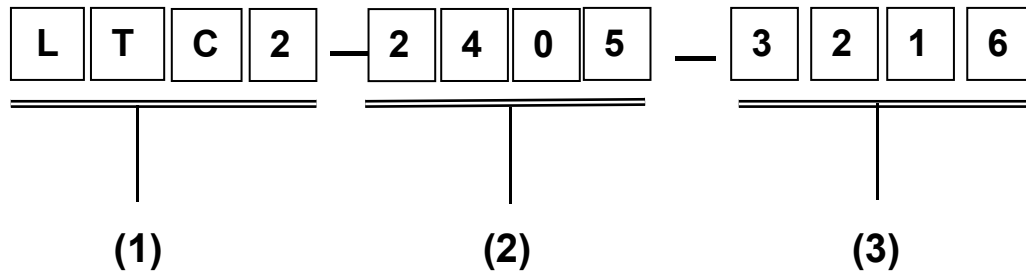
Operating Temp. : -40℃~+85℃

**1. FEATURES:**

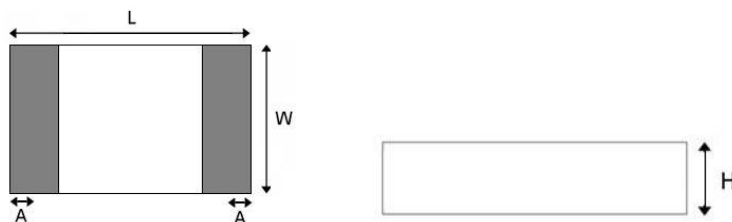
- Light weight, compact
- Wide bandwidth, low cost
- Built-in antenna with high gain

2. APPLICATIONS:

- Bluetooth, Wireless LAN, Mobile TV
- Home RF System, etc

3. PRODUCT IDENTIFICATION

- (1) Product type: Multilayer chip Antenna
 (2) Center Frequency: 2450MHz
 (3) External Dimensions (L×W) (mm): 3.2*1.6

4. SHAPE AND DIMENSIONS:

L	W	H	A
3.2±0.2	1.6±0.2	0.52±0.1	0.4±0.1

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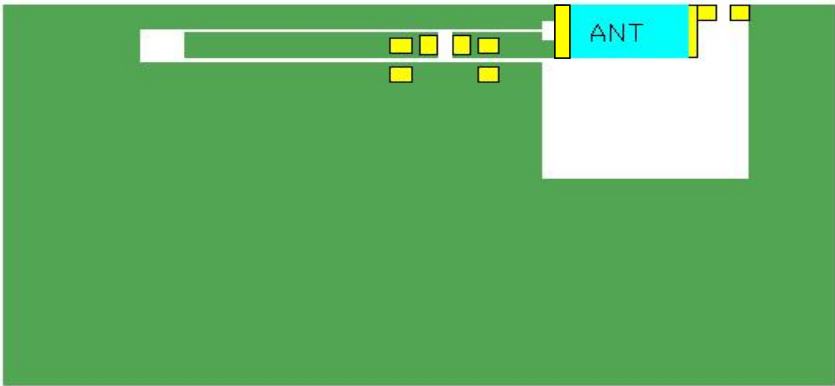
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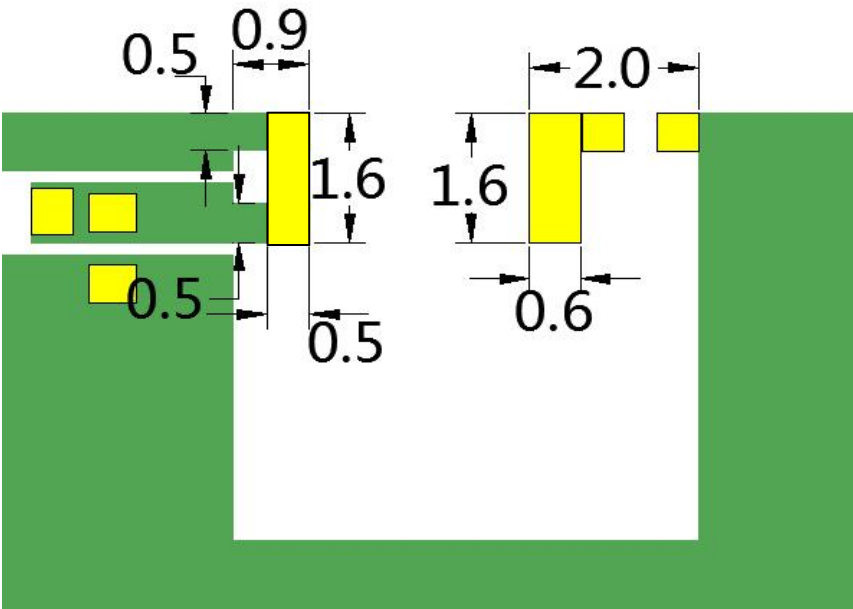
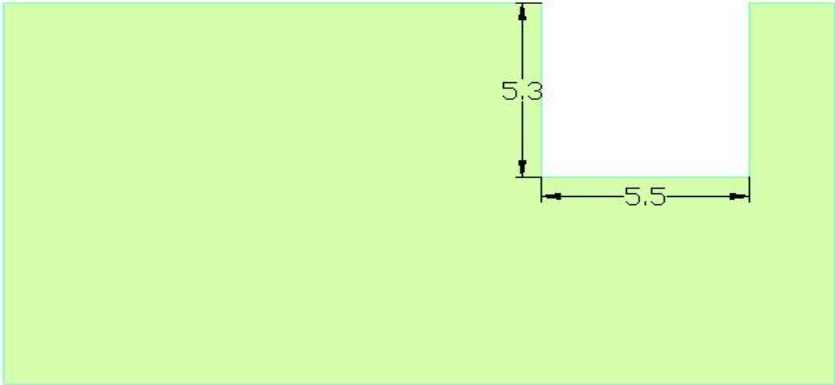
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Unit: mm

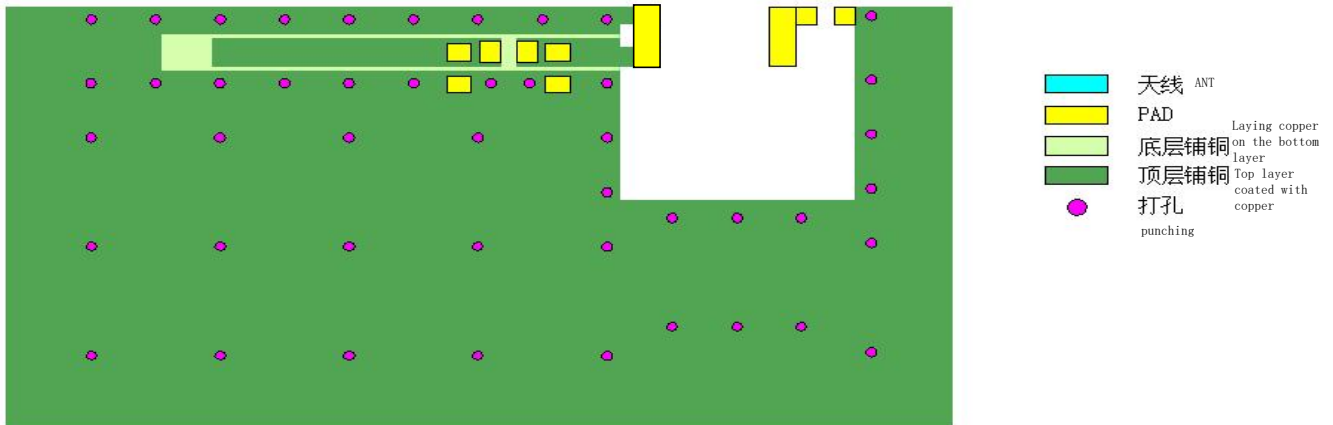


- 天线 ANT
- PAD
- 底层铺铜 Laying copper on the bottom layer
- 顶层铺铜 Top layer coated with copper

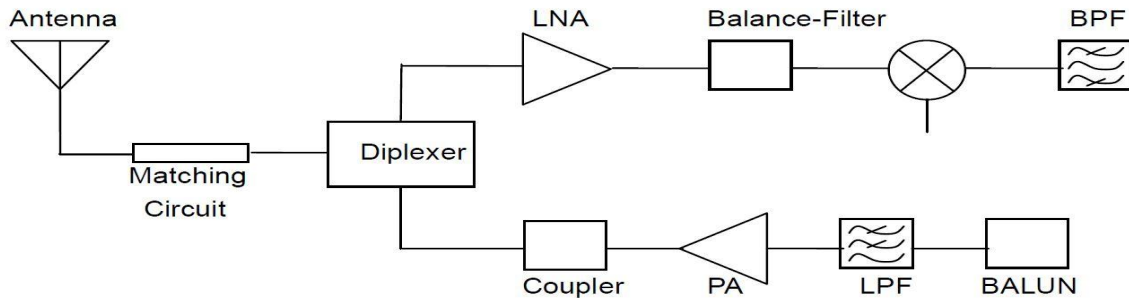


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Piercing reference diagram



APPLICATION GUIDE



5. SPECIFICATIONS:

测试项 Test Item	规格 specification
带宽 bandwidth	2400~2483MHz
极化方式 polarization mode	线极化 linear polarization
*最大增益 Max dbi	2.67dBi
*效率 efficiency	72.30%
输入阻抗 input impedance	50 Ω

* Test condition: Test board size 90*40 mm

Matching circuit: Pi matching circuit will be required

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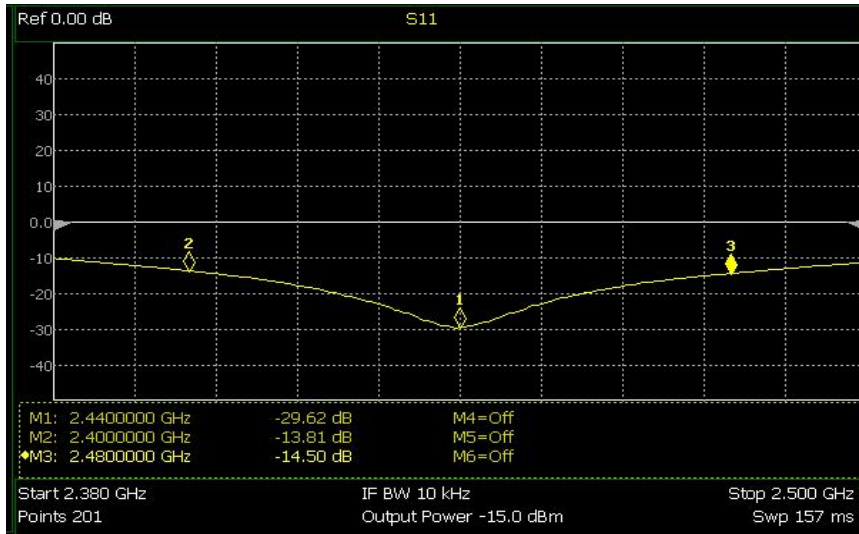
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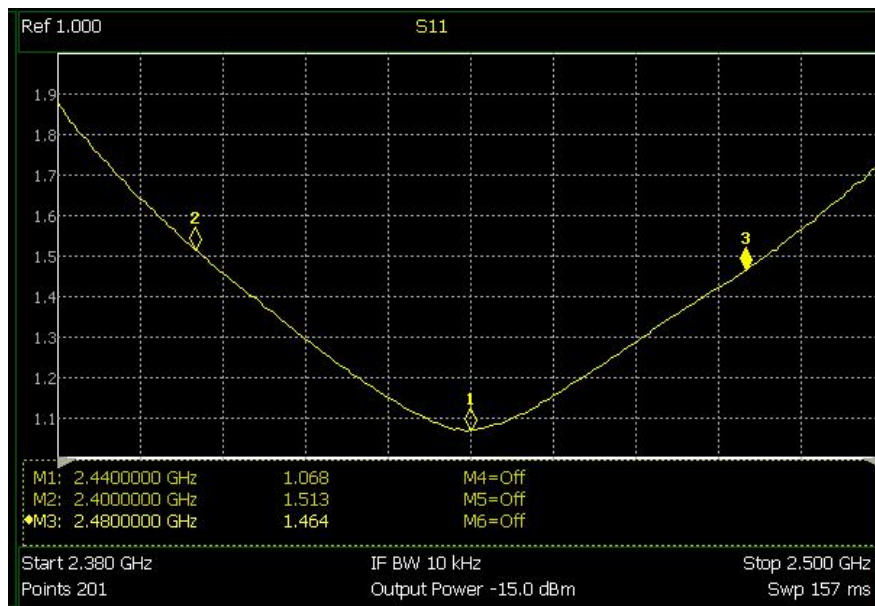
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6. Electrical Characteristics :

RL (return loss)



VSWR



Mark	Frequency	VSWR
1	2400 MHz	1.513
2	2440 MHz	1.068
3	2480 MHz	1.464

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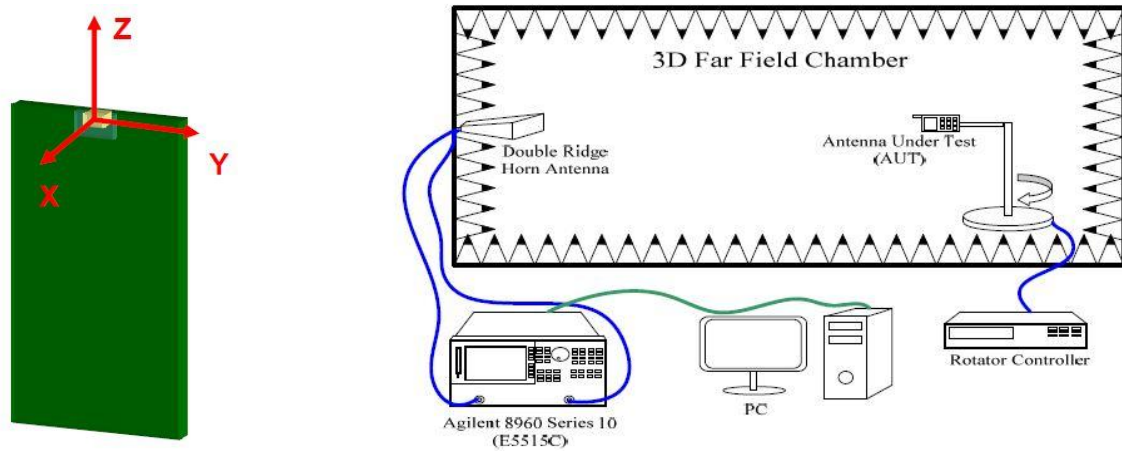
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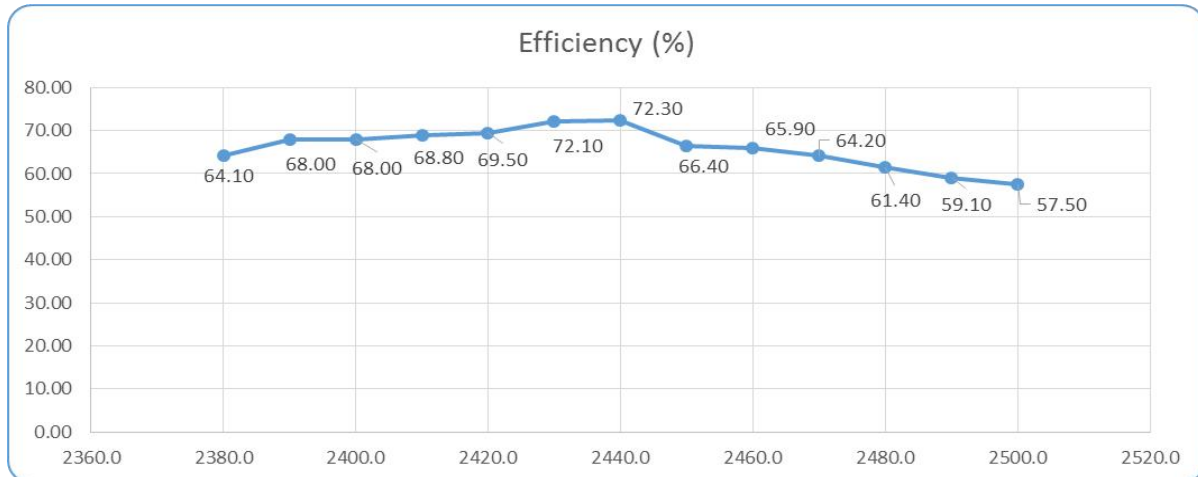
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Radiation Pattern

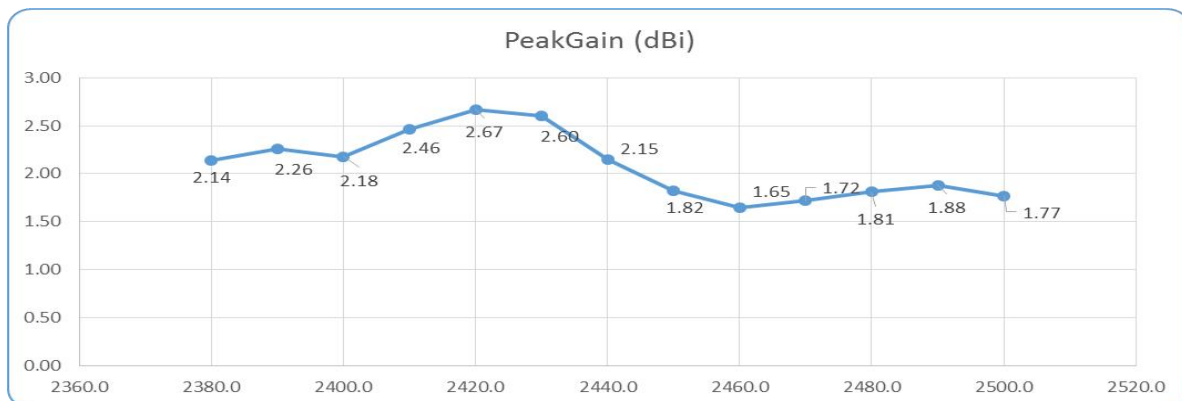
The Gain pattern is measured in FAR-field chamber. DUT is placed on the table of rotator, a standard horn antenna and Vector Network Analyzer is used to collect data.



© efficiency



maximum gain



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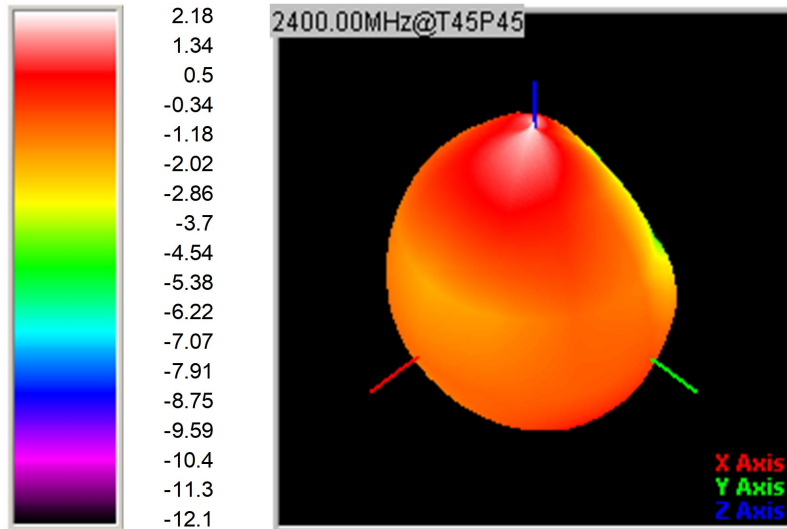
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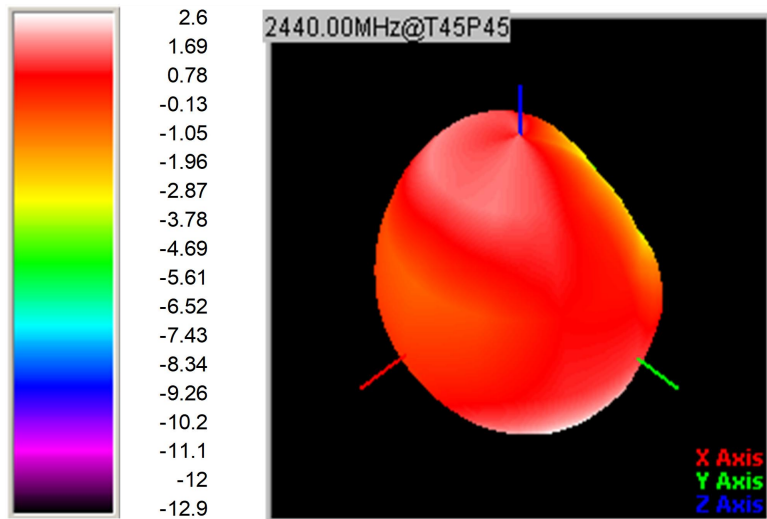
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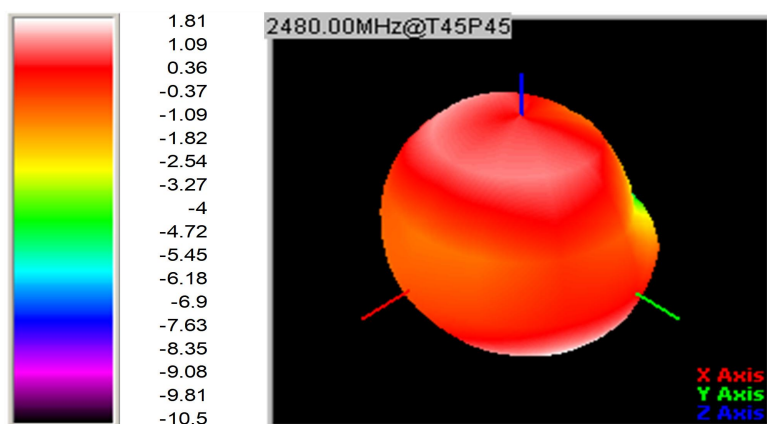
◎ **3D Gain Pattern (2400 MHz)**



◎ **3D Gain Pattern (2440 MHz)**



◎ **3D Gain Pattern (2480 MHz)**



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7. Environmental Characteristics

(1) Reliability Test

Item	Condition	Specification
Thermal shock	1. 30 ± 3 minutes at $-40^{\circ}\text{C}\pm5^{\circ}\text{C}$, 2. Convert to $+105^{\circ}\text{C}$ (5 minutes) 3. 30 ± 3 minutes at $+105^{\circ}\text{C}\pm5^{\circ}\text{C}$, 4. Convert to -40°C (5 minutes) 5. Total 100 continuous cycles	No apparent damage Fulfill the electrical spec. after test.
Humidity resistance	1. Humidity: 85% R.H. 2. Temperature: $85\pm5^{\circ}\text{C}$ 3. Time: 1000 hours.	No apparent damage Fulfill the electrical spec. after test.
High temperature resistance	1. Temperature: $150^{\circ}\text{C}\pm5^{\circ}\text{C}$ 2. Time: 1000 hours.	No apparent damage Fulfill the electrical spec. after test.
Low temperature resistance	1. Temperature: $-40^{\circ}\text{C}\pm5^{\circ}\text{C}$ 2. Time: 1000 hours.	No apparent damage Fulfill the electrical spec. after test.
Soldering heat resistance	1. Solder bath temperature : $260\pm5^{\circ}\text{C}$ 2. Bathing time: 10 ± 1 seconds	No apparent damage
Solderability	The dipped surface of the terminal shall be at least 95% covered with solder after dipped in solder bath of $245\pm5^{\circ}\text{C}$ for 3 ± 1 seconds.	No apparent damage

(2) Storage Condition

(a) At warehouse:

The temperature should be within $0\sim30^{\circ}\text{C}$ and humidity should be less than 60% RH.

The product should be used within 1 year from the time of delivery.

(b) On board:

The temperature should be within $-40\sim85^{\circ}\text{C}$ and humidity should be less than 85% RH.

(3) Operating Temperature Range

Operating temperature range : -40°C to $+105^{\circ}\text{C}$.

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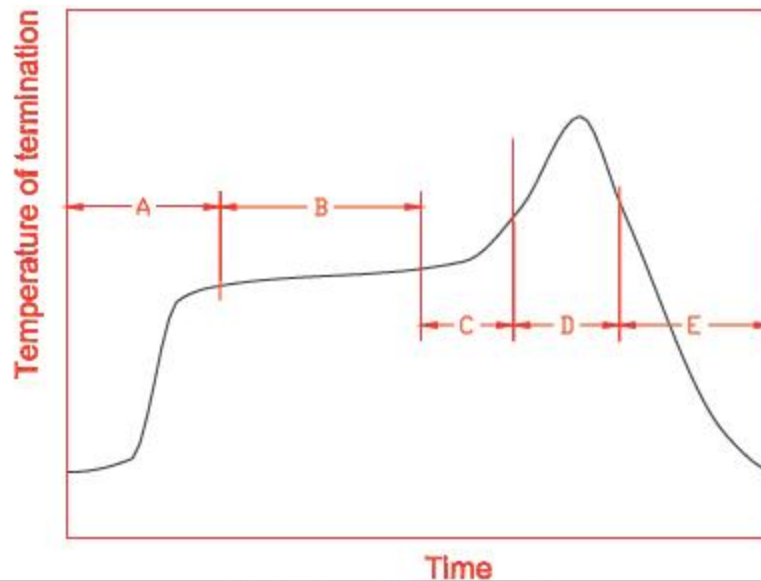
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8. Recommended Reflow Soldering



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°C/s ~ 4°C/s

*reference: J-STD-020C

(1) Soldering Gun Procedure

Note the follows, in case of using solder gun for replacement.

- The tip temperature must be less than 350° C for the period within 3 seconds by using soldering gun under 30 W.
- The soldering gun tip shall not touch this product directly.

(2) Soldering Volume

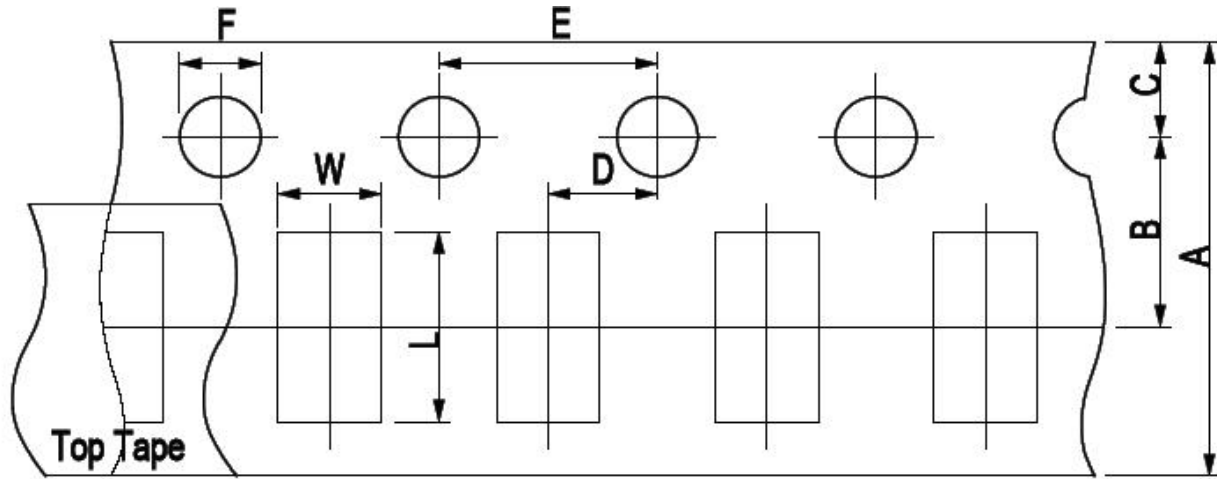
Note that excess of soldering volume will easily get crack the body of this product.

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9. Taping Package and Label Marking: (unit: mm)

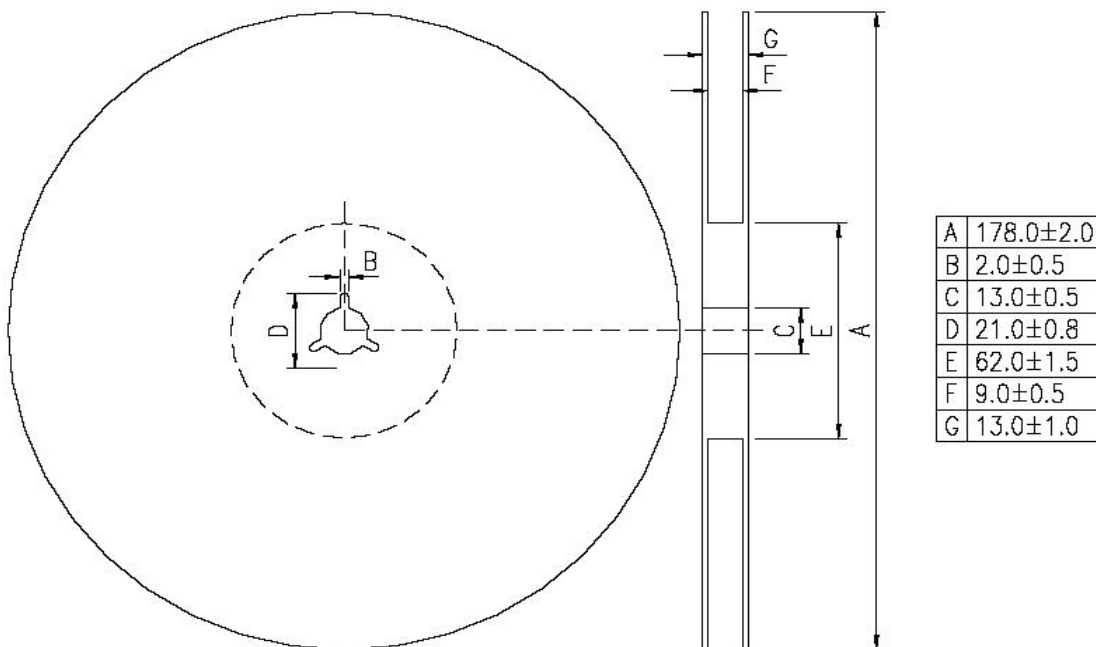
(1) Quantity/Reel: 5000pcs/Reel

(2) Carrier tape dimensions



Type	A	B	C	D	E	F	L	W
2450-21	8.00 ± 0.3	3.50 ± 0.05	1.75 ± 0.1	2.00 ± 0.05	4.00 ± 0.1	1.50 ± 0.1	2.30 ± 0.1	1.55 ± 0.1

(3) Taping reel dimensions



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