

[illegible]

# MDA-LTE4-008-B Specification

## 1. Explanation of Part Number :

MDA - LTE4 - 00 8 - B  
(1) (2) (3) (4) (5)

(1) Product type : wireless antenna

(2) Frequency : 791~960MHz 、 1710~2170MHz 、 2500~2690MHz

(3) Connector Types : 00

(4) Serial number : 8

(5) Vehicle use: Before loading

※RoHS Compliant

## 2. Electrical Specification :

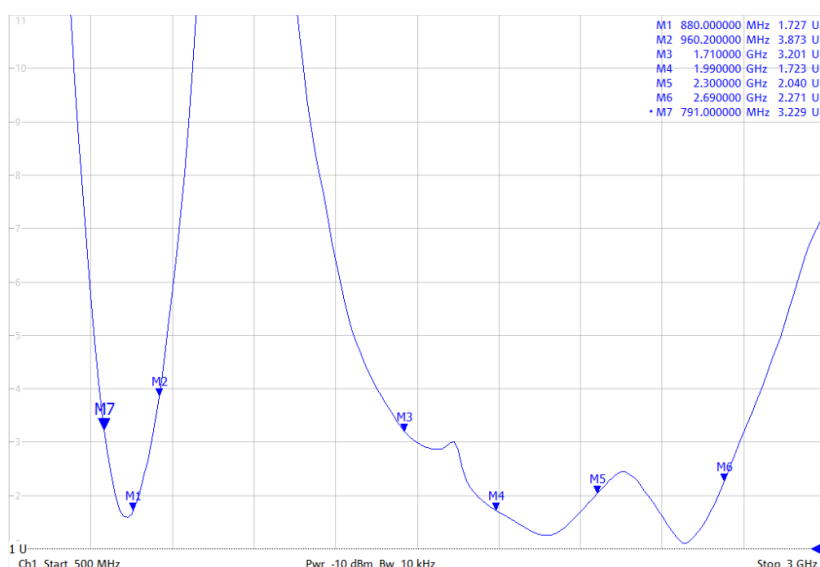
Item	Specification
Frequency Band	791~960 MHz 、 1710~2690 MHz
VSWR	4.0 Max
Polarization	Linear
Impedance	50 ohm Typ.

\* Test condition : Test board size 120\*45 mm

Matching circuit may be required

## 3. Electrical Characteristics :

### 3.1 VSWR



Frequency(MHz)	VSWR
791	3.23
880	1.73
960	3.87
1710	3.20
1990	1.72
2300	2.04
2690	2.27

UNLESS OTHER SPECIFIED TOLERANCES:±0.2



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SCALE: 1:1

UNIT: mm

DRAWN BY: 李志强

CHECKED BY: 林娟

DESIGNED BY: 刘源

APPROVED BY: 唐龙

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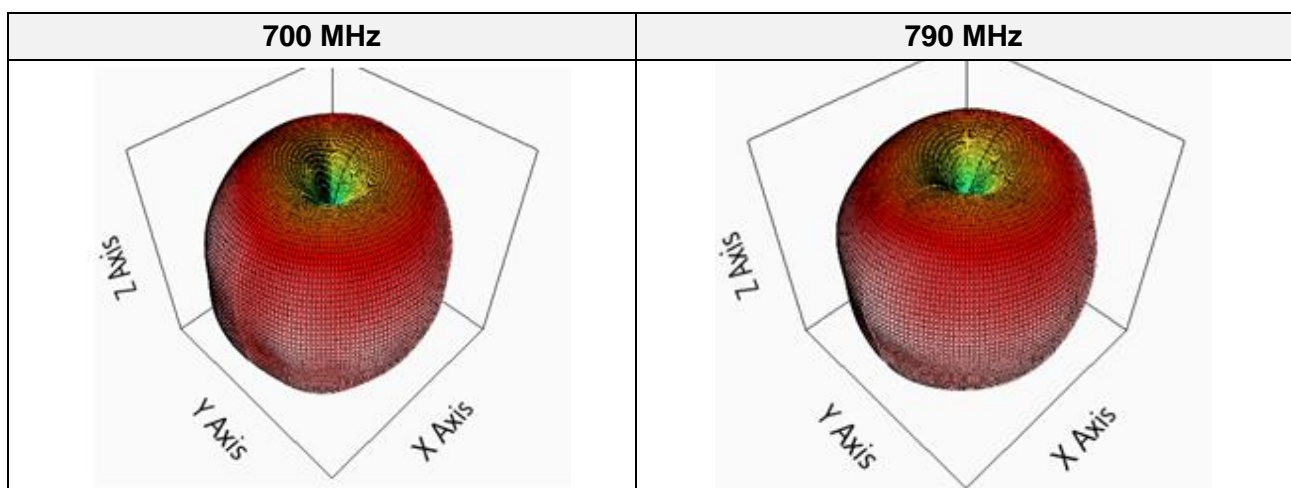
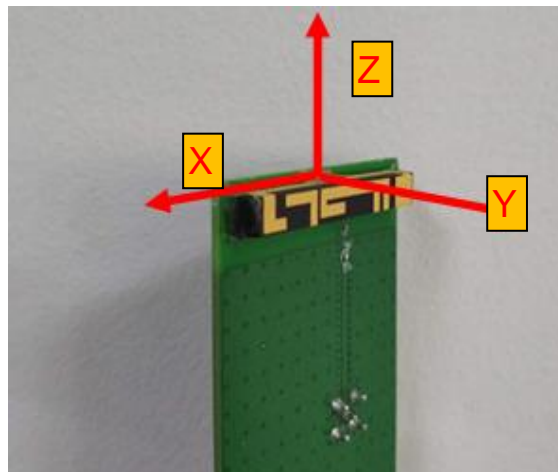
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### 3.2 Efficiency and Gain

Frequency (MHz)	Peak Gain (dBi)	Efficiency (%)
791	0.27	53.68
824	1.00	65.02
849	0.80	61.50
880	1.05	61.14
897	0.55	54.20
960	-0.09	46.43
1710	1.92	42.92
1880	1.24	42.46
1900	2.37	50.35
1990	3.58	66.37
2170	4.12	73.10
2250	3.78	72.39
2300	2.45	59.18
2500	5.44	62.68
2570	5.95	66.85
2690	5.18	46.62

\*Antenna Test Date on Demo Board

### 3.3 3D Radiation Patten



UNLESS OTHER SPECIFIED TOLERANCES:±0.2



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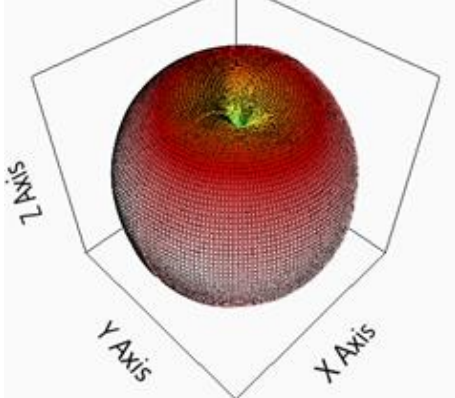
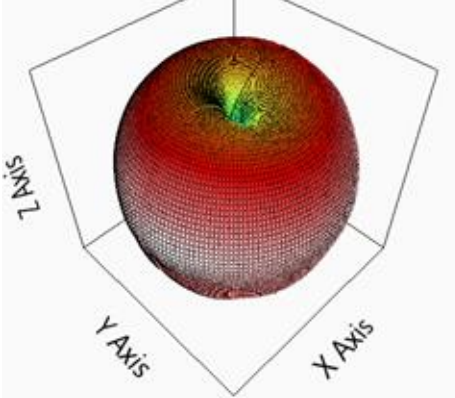
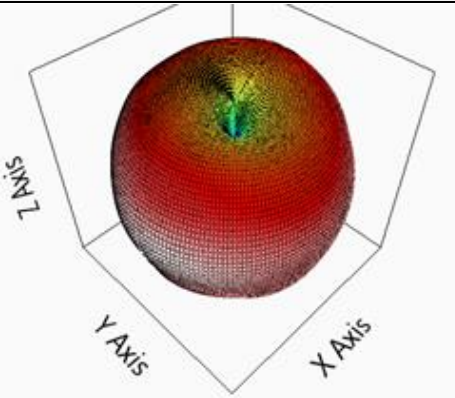
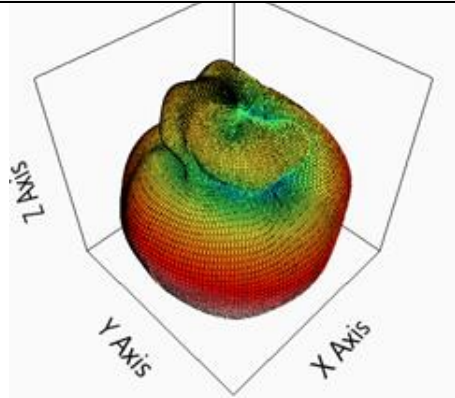
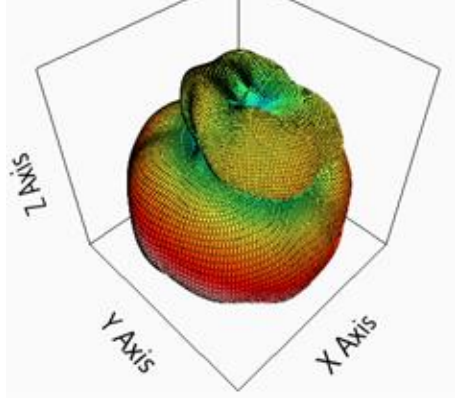
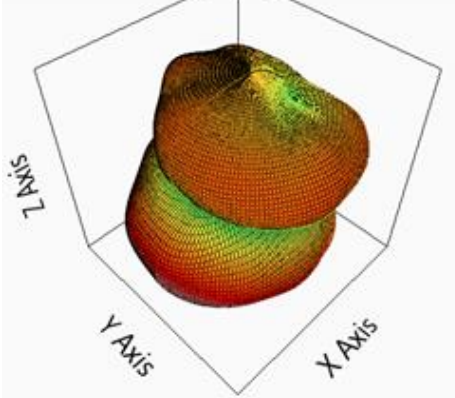
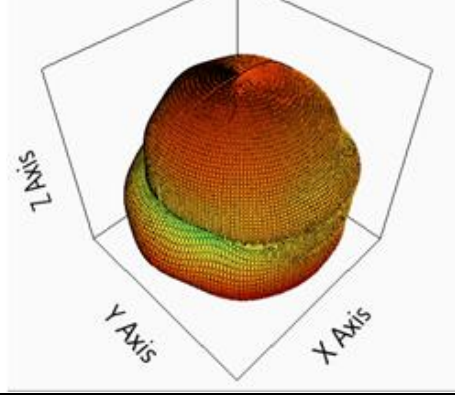
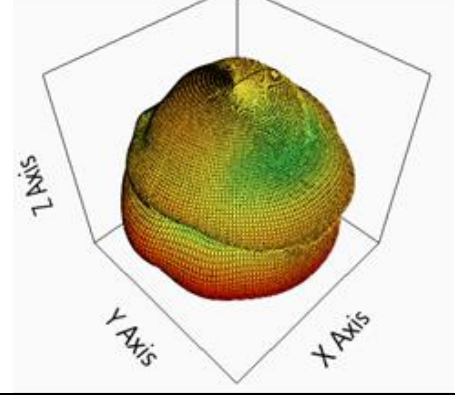

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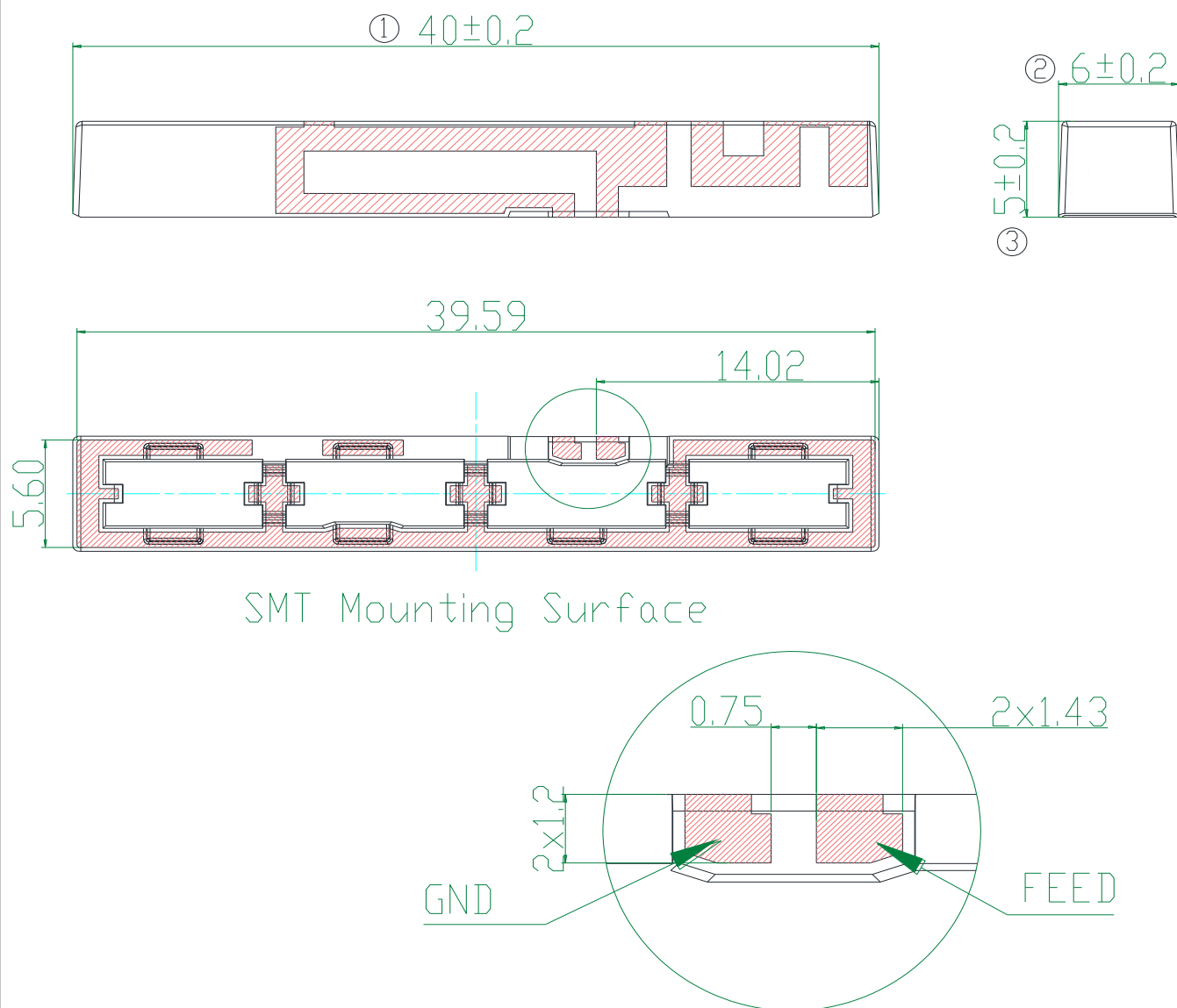
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824 MHz		880 MHz	
			
960 MHz		1710 MHz	
			
1880 MHz		2170 MHz	
			
2500 MHz		2690 MHz	
			
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DRAWN BY: 李志强	CHECKED BY: 林娟		
DESIGNED BY : 刘源	APPROVED BY : 唐龙		
TITLE : MDA-LTE4-008-B Specification		DOCUMENT NO.	<b>ENS000120830</b> <div> <div>SPEC REV.</div> <div>A0</div> </div>

#### 4. Antenna Dimensions:



Item	Specification
Dimension	40x6x5mm
Material	PA
Surface treatment	Chemical Gold Plating

UNLESS OTHER SPECIFIED TOLERANCES:  $\pm 0.2$



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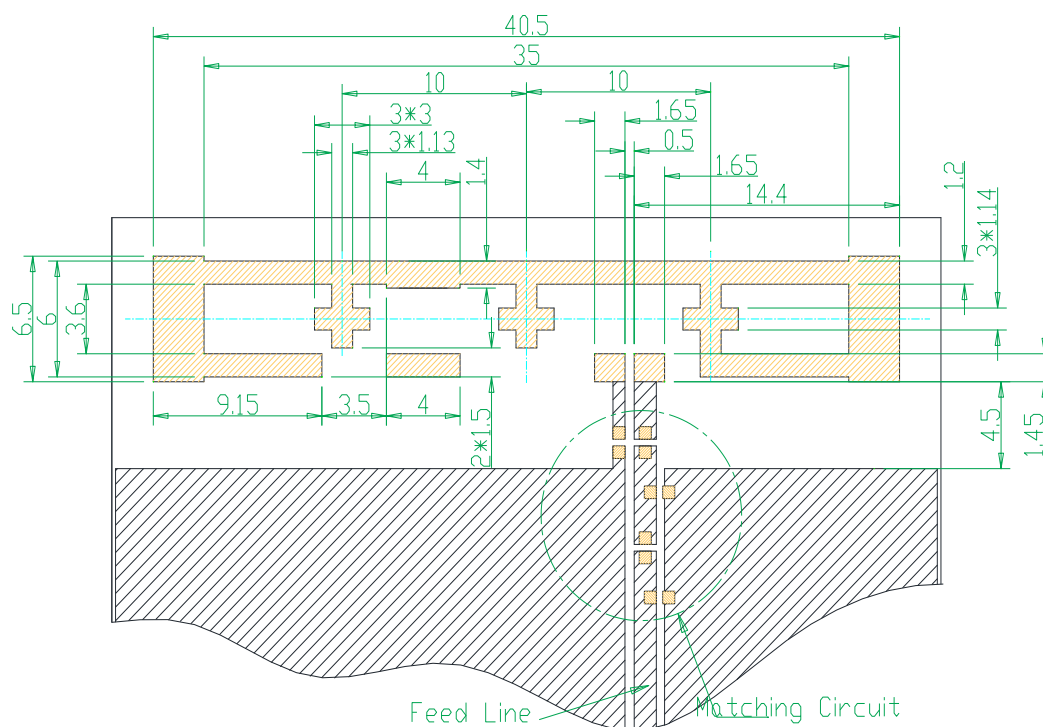
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## 5. Recommended PCB Layout :

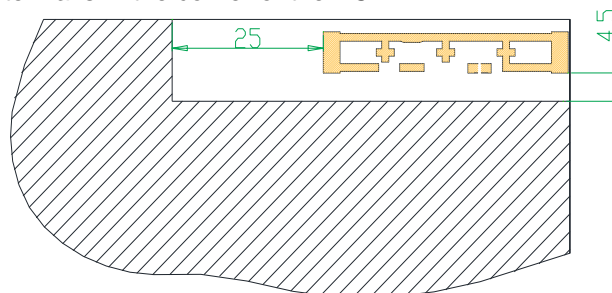
### 5.1 Layout



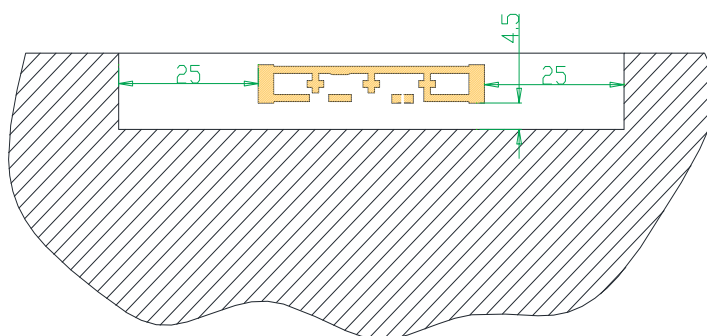
Tolerance:  $\pm 0.05$

### 5.2 Antenna Clearance Size

Case1: The antenna is in the corner of the PCB.



Case2: The antenna is in other non-corner locations of one side.



UNLESS OTHER SPECIFIED TOLERANCES:  $\pm 0.2$



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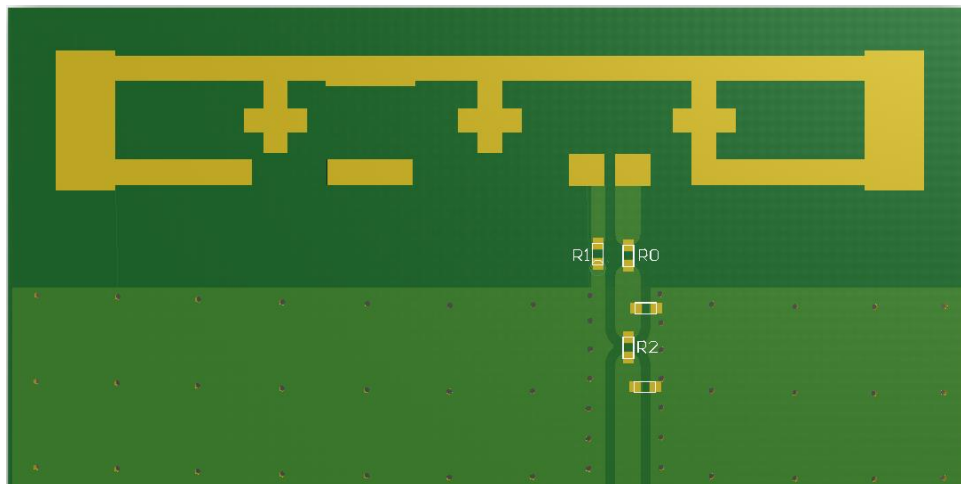
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### 5.3 Matching Circuit on Demo-board



Circuit Symbol	Size	Description
R0	0402	0Ω
R1	0402	0Ω
R2	0402	0Ω

## 6. Environmental Characteristics :

### 6.1 Reliability Test

Item	Condition	Specification
Thermal shock	1. 30 minutes at -40°C±5°C, 2. Convert to +105°C in 5 minutes, 3. 30 minutes at +105°C±5°C, 4. Convert to -40°C in 5 minutes, 5. Total 1000 continuous cycles.	No apparent damage, Fulfill the electrical Spec. after test.
High Temperature / Humidity resistance	1. Humidity : 85±5% RH, 2. Temperature : 85±3°C, 3. Time : 1000 hours.	No apparent damage, Fulfill the electrical Spec. after test.
High temperature resistance	1. Temperature : 105°C±5°C, 2. Time : 1000 hours.	No apparent damage, Fulfill the electrical Spec. after test.
Low temperature resistance	1. Temperature : -40°C±5°C, 2. Time : 1000 hours.	No apparent damage, Fulfill the electrical Spec. after test.
Soldering heat resistance	1. Solder bath temperature : 260±5°C, 2. Bathing time : 10±0.5 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±5°C for 5±0.5seconds.	No apparent damage.

UNLESS OTHER SPECIFIED TOLERANCES:±0.2



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## 6.2 Storage condition:

### (a) At warehouse :

The temperature should be within 0 ~ 30°C and humidity should be less than 60% RH.

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

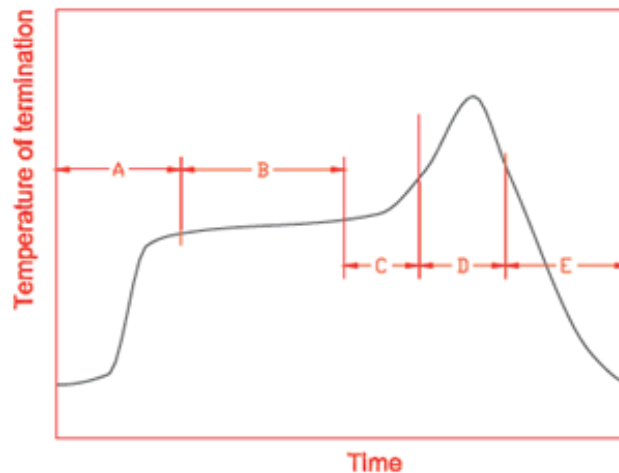
### (b) On board :

The temperature should be within -40 ~ 85°C and humidity should be less than 85% RH.

## 6.3 Operating temperature range:

Operating temperature range : -40 ~ +105°C.

## 7. Recommended reflow soldering :



A	1 <sup>st</sup> rising temperature	The normal to Preheating temperature	30s to 60s
B	Preheating	140°C to 200°C	90s to 120s
C	2 <sup>nd</sup> rising temperature	Preheating to 217°C	30s to 60s
D	Main heating	240°C ~ 260°C	20s to 40s
E	Regular cooling	200°C to 100°C	3°C/s ~ 6C/s

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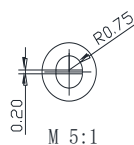
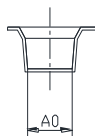
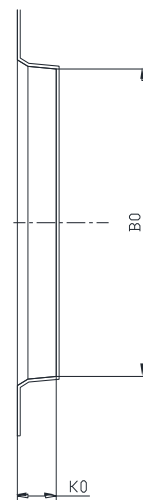
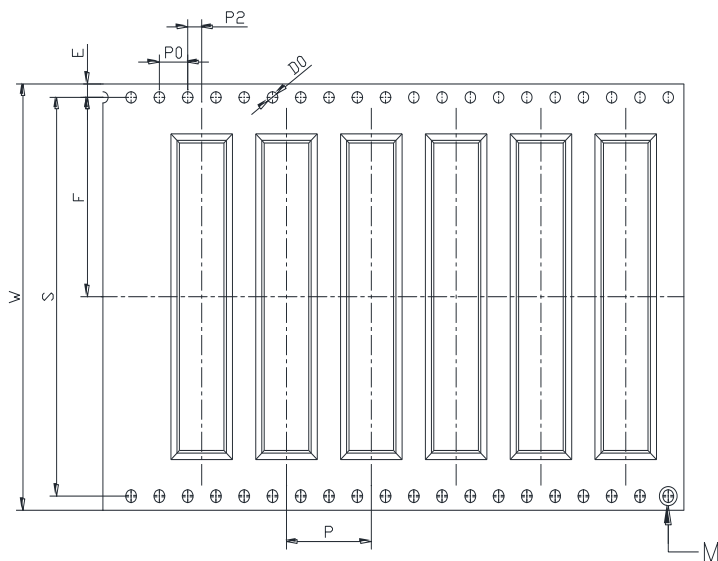
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## 8. Packing :

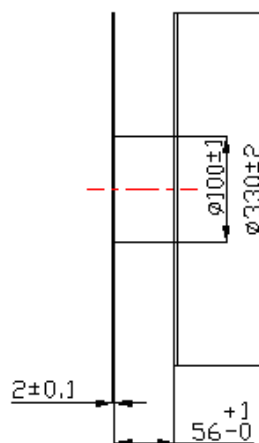
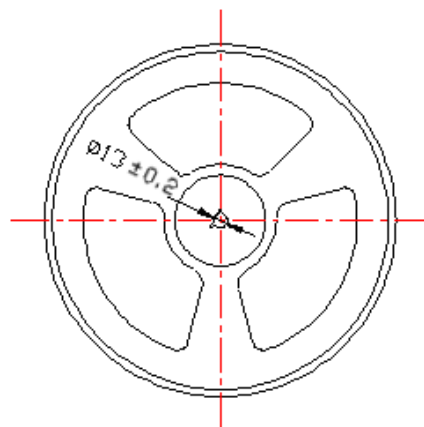
8.1 Quantity/Reel : 750pcs/Reel

### 8.2 Carrier tape dimensions



Item	規格
W	56.00
P	12.00
S	52.40
E	1.75
F	26.20
P2	2.00
D0	1.50
D1	----
Po	4.00
10Po	40.00
Ao	6.30
B0	40.40
Ko	5.50

### 8.3 Taping reel dimensions



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