Product Specification

Number: L-KLS1-5G-F-SMD26*05*1.6

Name: 26.0 X 5.0 X 1.6 mm^3
SMD Antenna

Customer: _____

Date: 2025-08-18

Customer Signature:

NINGBO KLS ELECTRONIC CO; LTD

Tel : 0086-574-86828566

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Compi	Check	Review	Approva
Jenny	Jack.C		

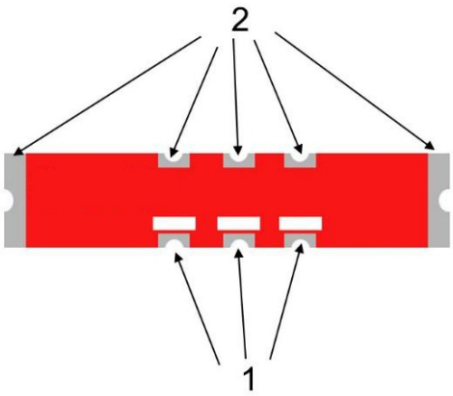
FEATURES

1. Surface Mounted Devices with a small dimension of 26.0 X 5.0 X 1.6 mm^3 meet miniaturization trend.
2. Low power loss and high antenna efficiency.
3. High stability in Temperature and Humidity Change.

APPLICATIONS

5G(Sub-6G),4G,3G,2G,NBIOT,CAT1,CATM band RF applications.

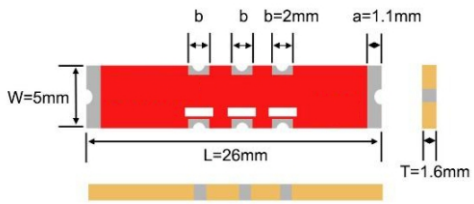
CONSTRUCTION



1、Antenna Feeding

2、Soldering terminal

DIMENSIONS

Figure	Symbol	Dimension(mm)
	**L**	**26.0± 0. 1**
	W	**5.0± 0. 1**
	T	**1.6± 0. 1**
	a	**1.1± 0. 1**
	b	**2.0± 0. 1**

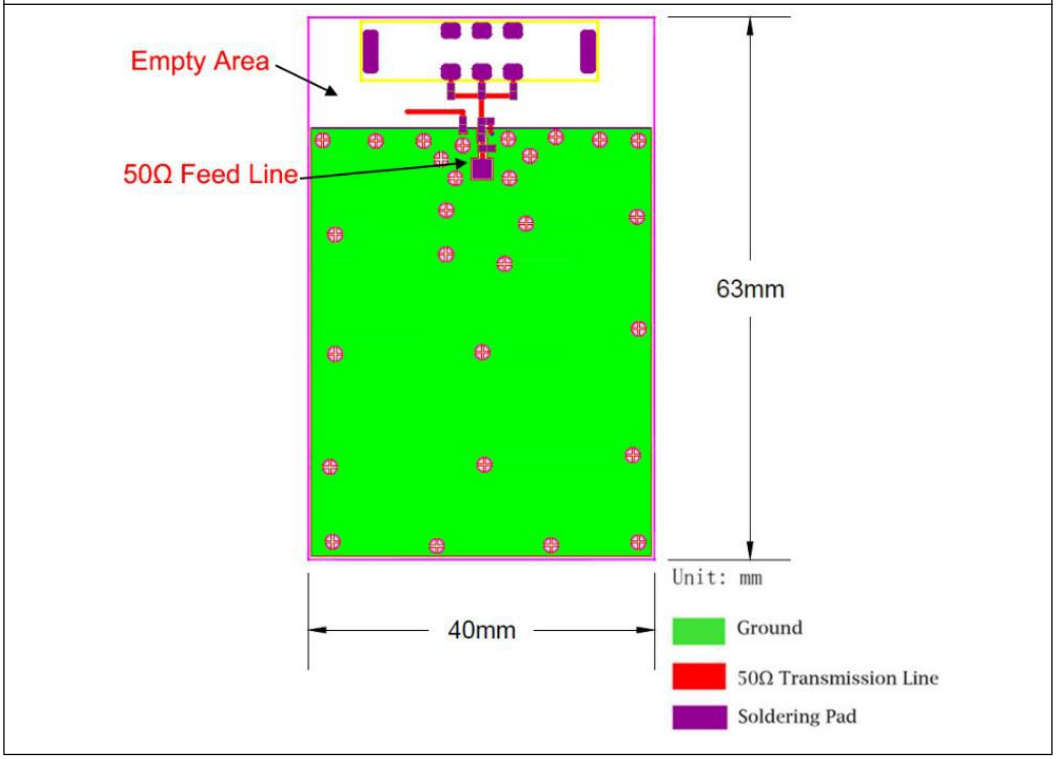
ELECTRICAL CHARACTERISTICS

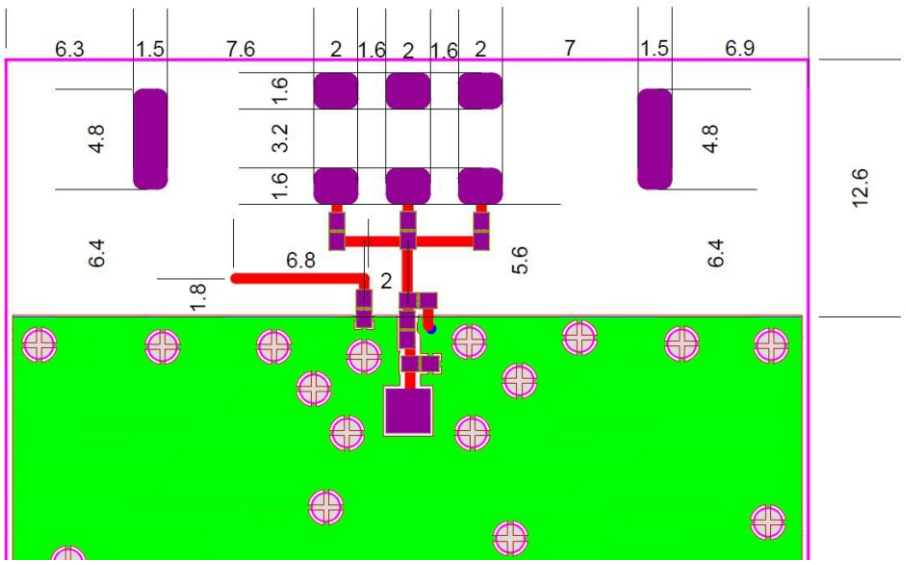
	Specification
Working Frequency Range	700-960Mhz，1710-2700Mhz， 3300-4200Mhz，4400-5000Mhz
Impedance	50Ω
Gain(dBi)	3.0 dBi（890Mhz） 5.0 dBi（2Ghz） 3.1 dBi（3.7Ghz） 2.0 dBi（4.8Ghz）
VSWR	<3
Operation Temperature	-40℃~+85℃
Power Capacity	3W

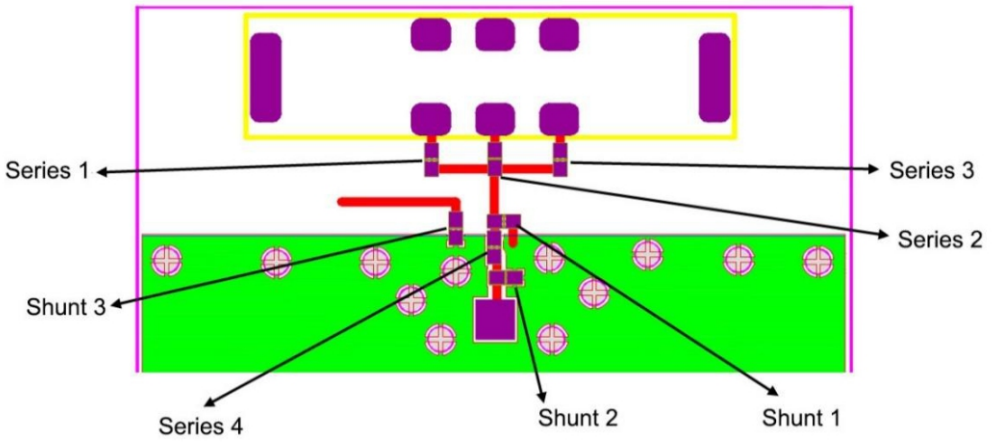
The working frequency need be adjusted to working band with matching circuit.

SOLDER LAND PATTERN DESIGN

Figure

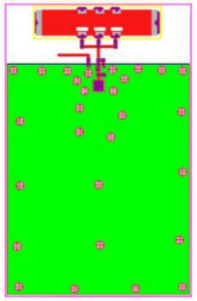




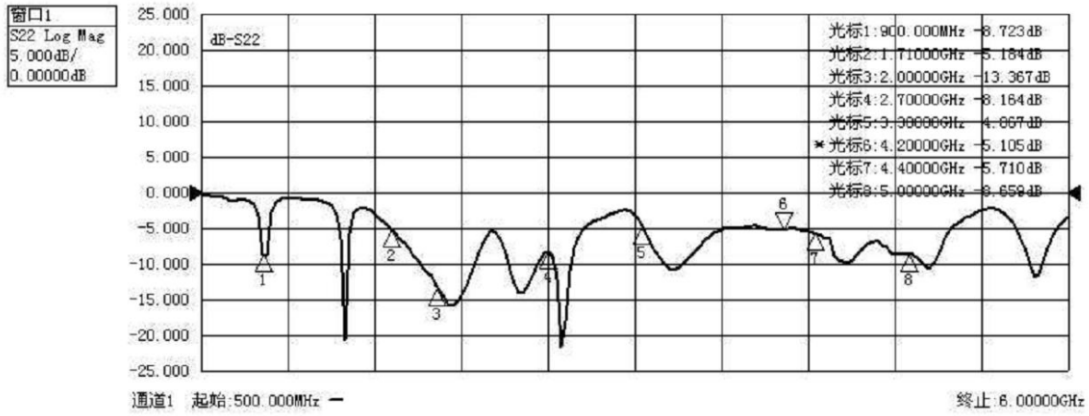


Matching component value		
	Series 1	22nh
	Series 2	0Ω
	Series 3	1nh
	Series 4	0Ω
	Shunt 1	NC
	Shunt 2	NC
	Shunt 3	0Ω

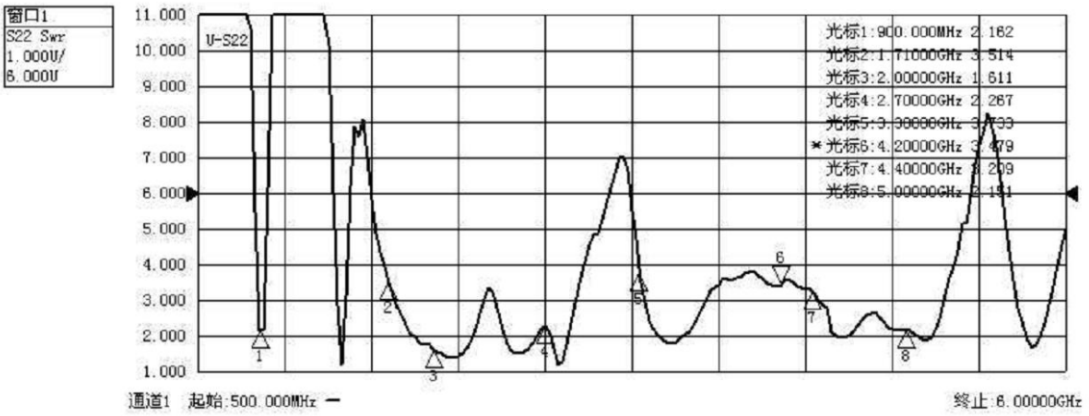
Antenna on Test Board (Thickness 1.0mm)



Antenna S11 on Test Board

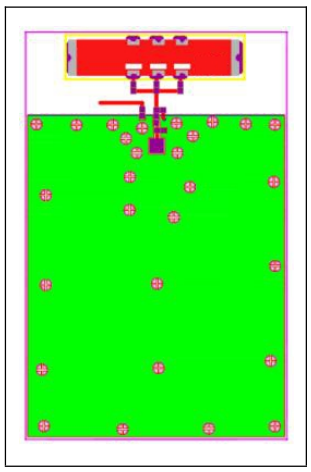


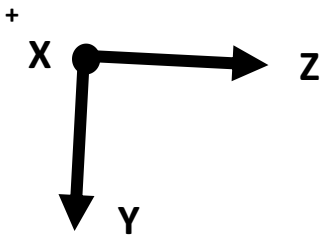
Antenna VSWR on Test Board



Efficiency and RADIATION PATTERN

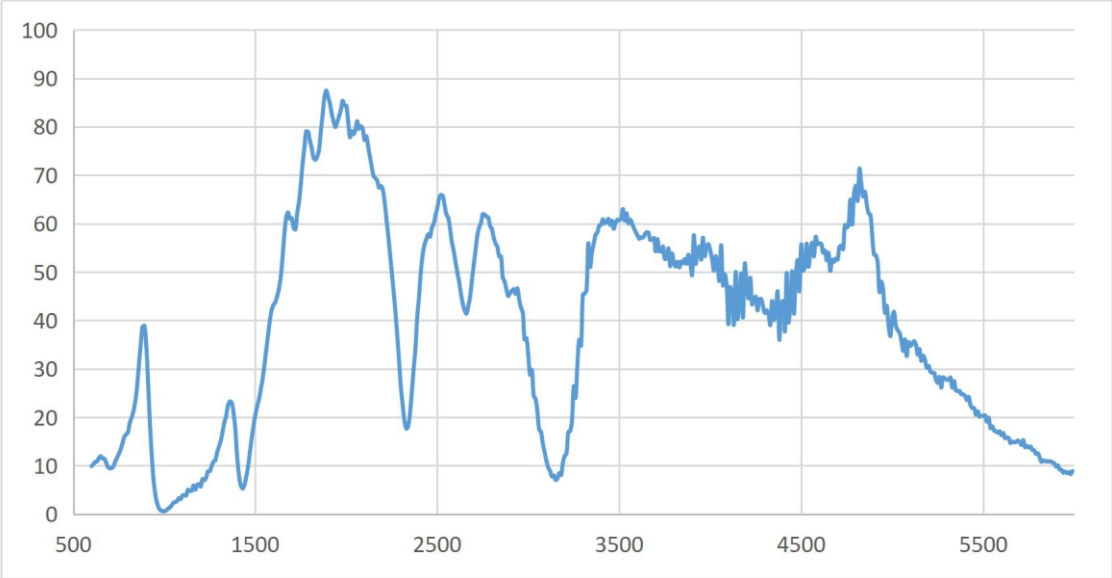
Efficiency , Radiation Pattern and Gain were dependent on measurement board design. The specification of L-KLS1-5G-F-SMD26*05*1.6 antenna was measured based on the PCB size and installation position asshown in the below figure test board. The test results were tested in ETS 3D Chamber.

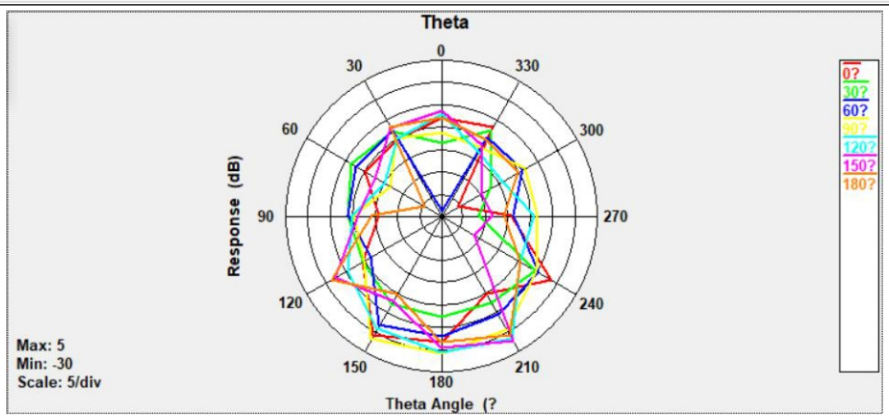


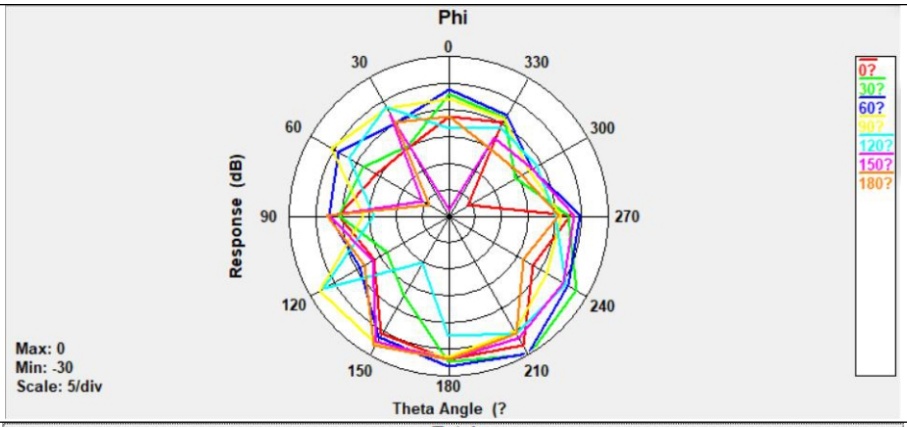
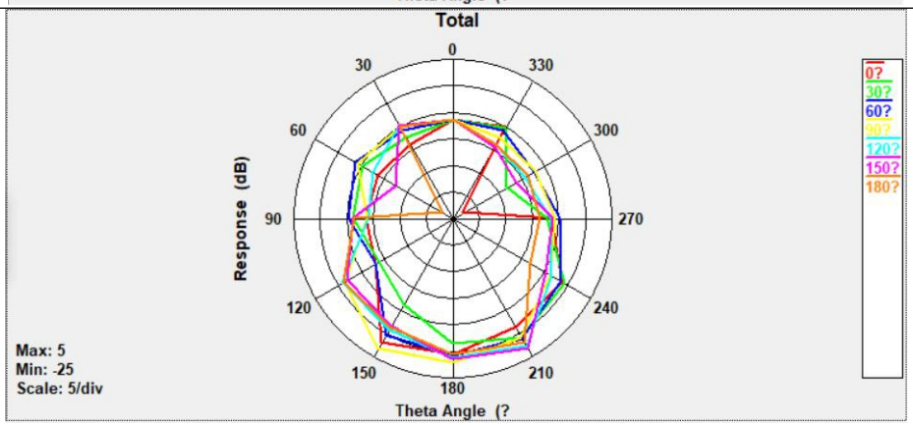
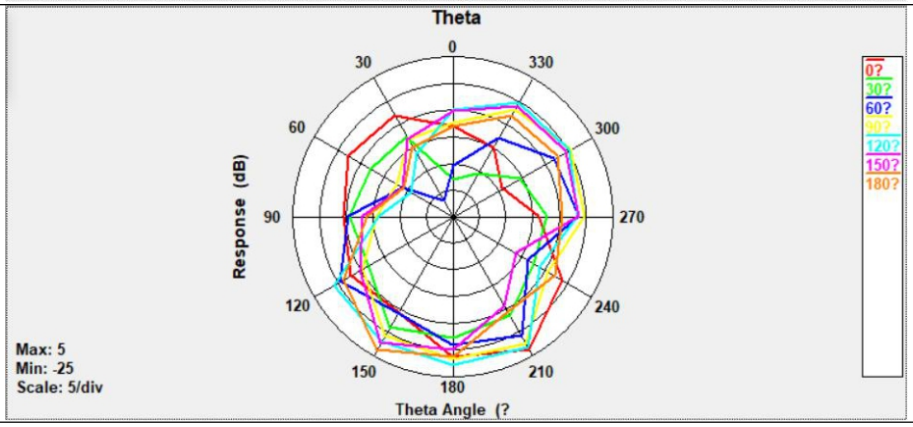
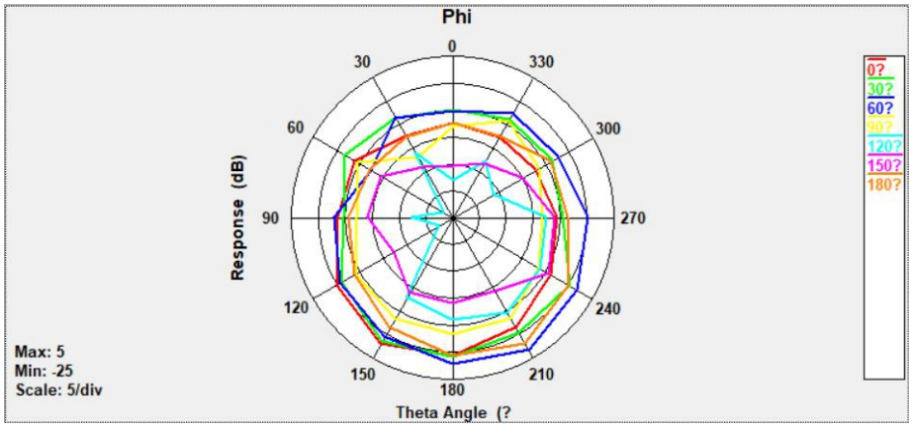


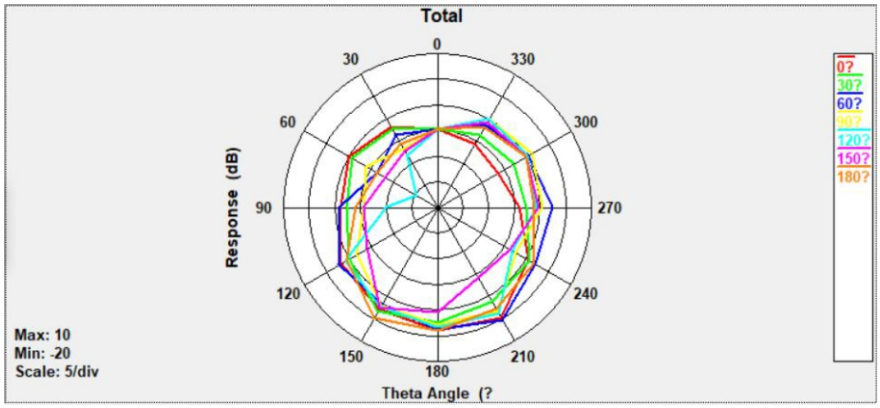
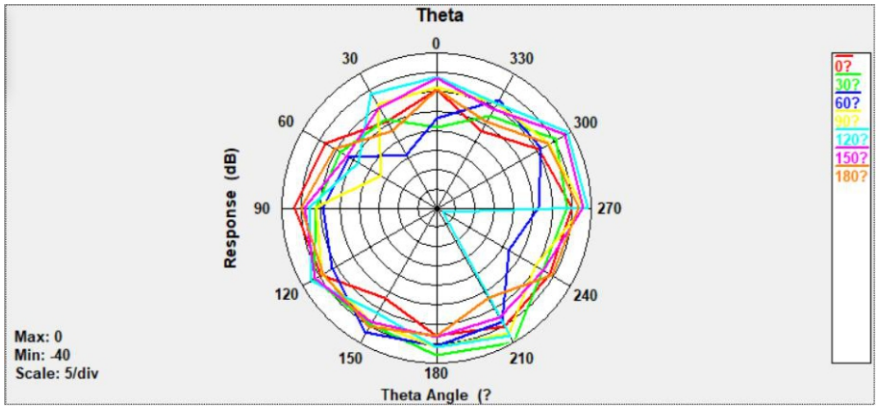
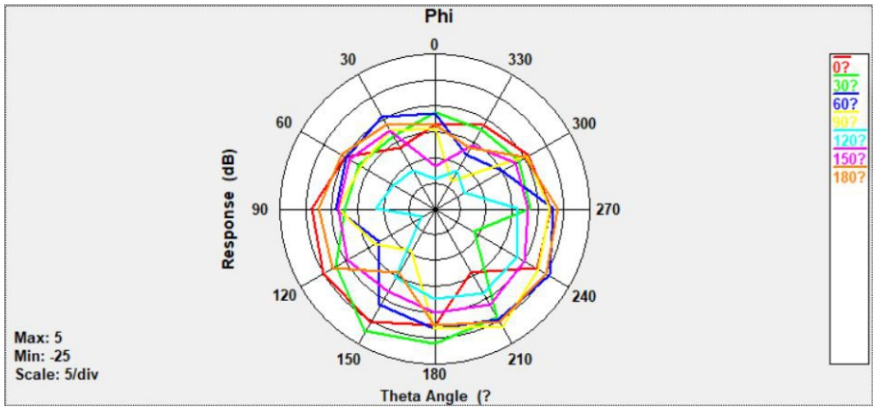
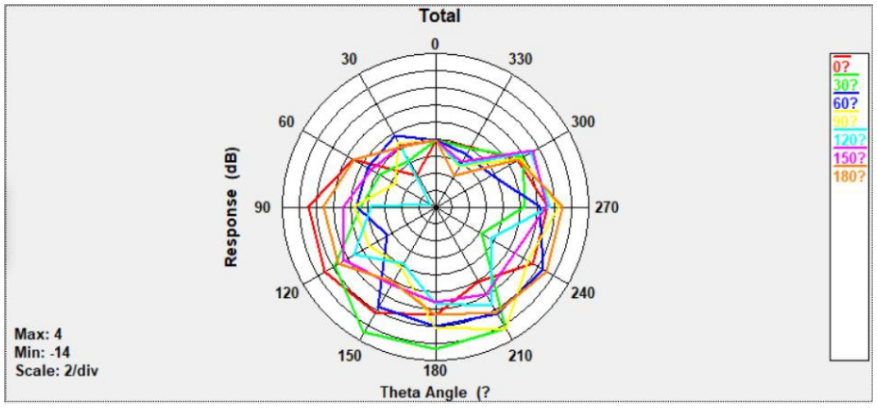
Gain and Efficiency	700-960MHz	1.71-2.7GHz	3.3-4.2GHz	4.4-5.0GHz
Peak Gain	3.0dBi	6.1dBi	3.3dBi	2.1dBi
Average Gain across the band	-1.3dBi	3.7dBi	2.8dBi	0.9dBi
Gain Range across the band	-3.7dBi~3.0dBi	-0.4dBi~6.1dBi	1.5dBi~3.3dBi	0.3dBi~2.1dBi
Peak Efficiency	38.8%	87%	62.9%	68%
Average Efficiency across the band	18.6%	62.1%	54%	51%
Efficiency Range across the band	9.4%~38.8%	19.7%~87%	39.1%~62.9%	37%~68%

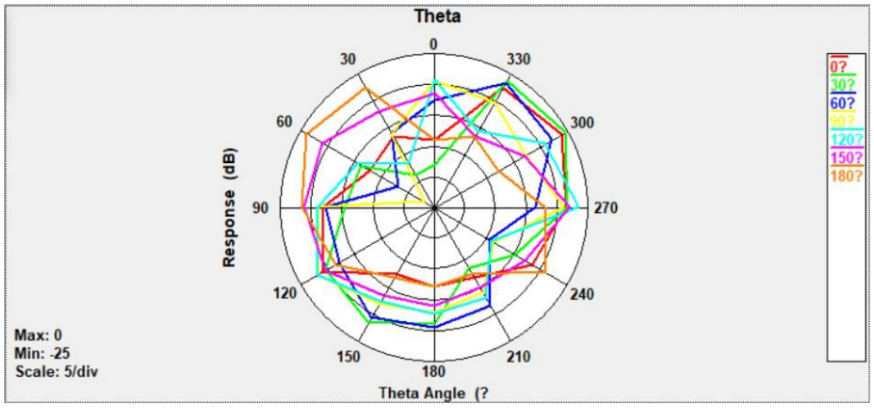
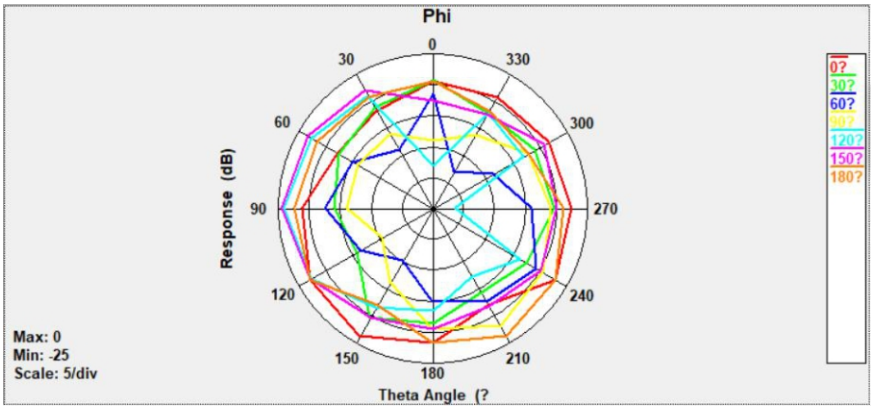
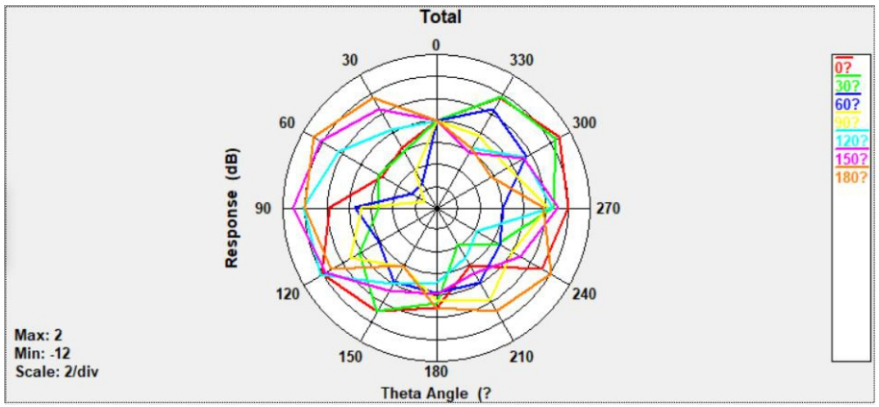
Total Efficiency at LTE band (824-960MHz, 1710-2170MHz, 2300-2690MHz).



Theta @890 MHz	

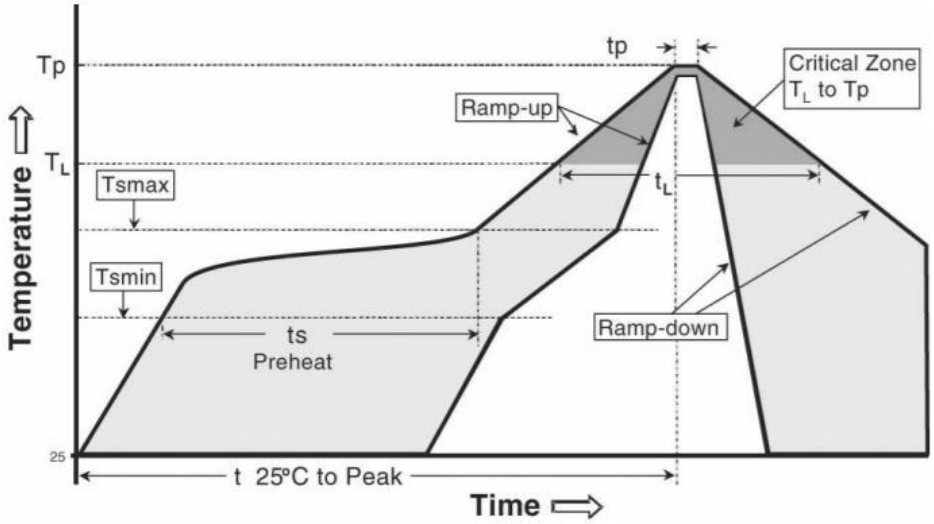
Phi @890 MHz	
Total @890 MHz	
Theta @2 GHz	
Phi @2 GHz	

Total @2 GHz	
Theta @3.7 GHz	
Phi @3.7 GHz	
Total @3.7 GHz	

Theta @4.8 GHz	
Phi @4.8 GHz	
Total @4.8 GHz	

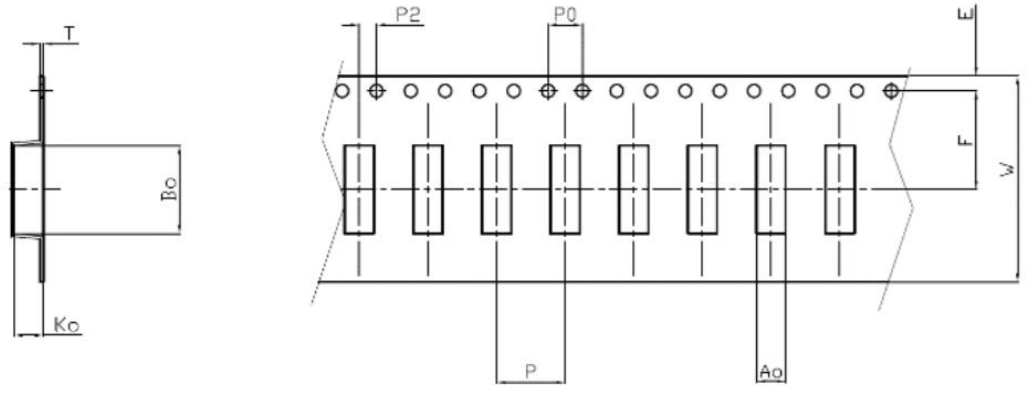
SOLDERING CONDITION

Typical examples of soldering processes that provide reliable joints without any damage is as follows:



Phase	Profile features	Pb-Free assembly (SnAgCu)
RAMP-UP	Avg. Ramp-up Rate (Tsmax to Tp)	3 °C / second (max.)
PREHEAT	- Temperature Min (Tsmin) - Temperature Max (Tsmax) - Time (tsmin to tsmax)	150 °C 200 °C 60-180 seconds
REFLOW	- Temperature (TL) - Total Time above TL (tL)	217 °C 60-150 seconds
PEAK	- 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

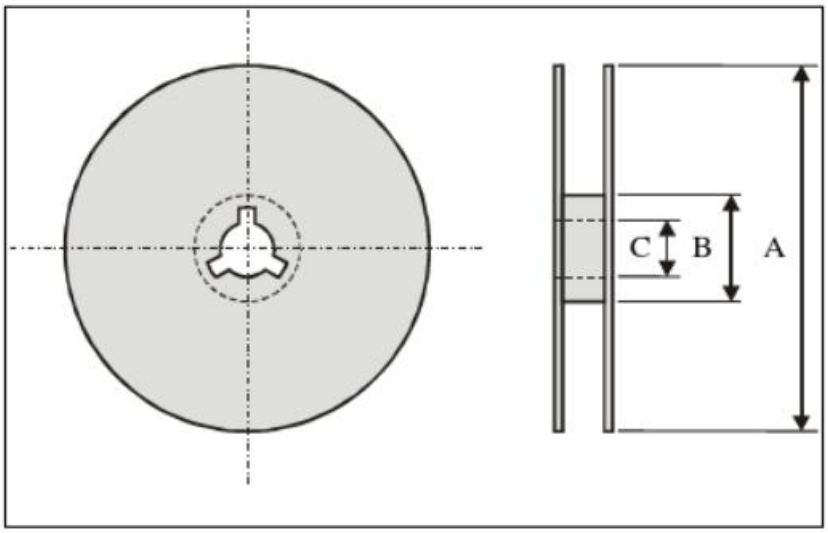
PACKAGING



Plastic Tape specification (unit:mm)

Index	Ao	Bo	Ko	T	W
Dimension (mm)	**5.7± 0.1**	**26.3± 0.1**	**2.0± 0.1**	**0.3± 0.05**	**44.0± 0.3**
Index	**E**	**F**	**P**	**P0**	**P2**
Dimension (mm)	**1.75± 0.1**	**20.0± 0.1**	**8.0± 0.1**	**4.0± 0.1**	**2.0± 0.1**

Reel dimensions



Index	A	B	C
Dimension(mm)	**330**	**100**	**13.5**

Typing Quantity: 2000 pieces per reel.

CAUTION OF HANDLING

Storage environment condition

Products shoud be storage in the warehouse on the following conditions:

Temperature : -10℃~+40℃

Humidity : 30% to 70% relative humidity

Don't keep products in corrosive gases such as sulfur. Chlorine gas or acid or it may cause oxidization of electrode, resulting in poor solderability.

Products should be storage on the palette for the prevention of the influence from humidity, dust and so on.

Products should be storage in the warehouse without heat shock, vibration, direct sunlight and so on.

Products should be storage under the airtight packaged condition.