

SMD Antenna datasheet

NB-IOT B5 B8 /Lora/ Sub-1g/ UHF

Model: AB-S01

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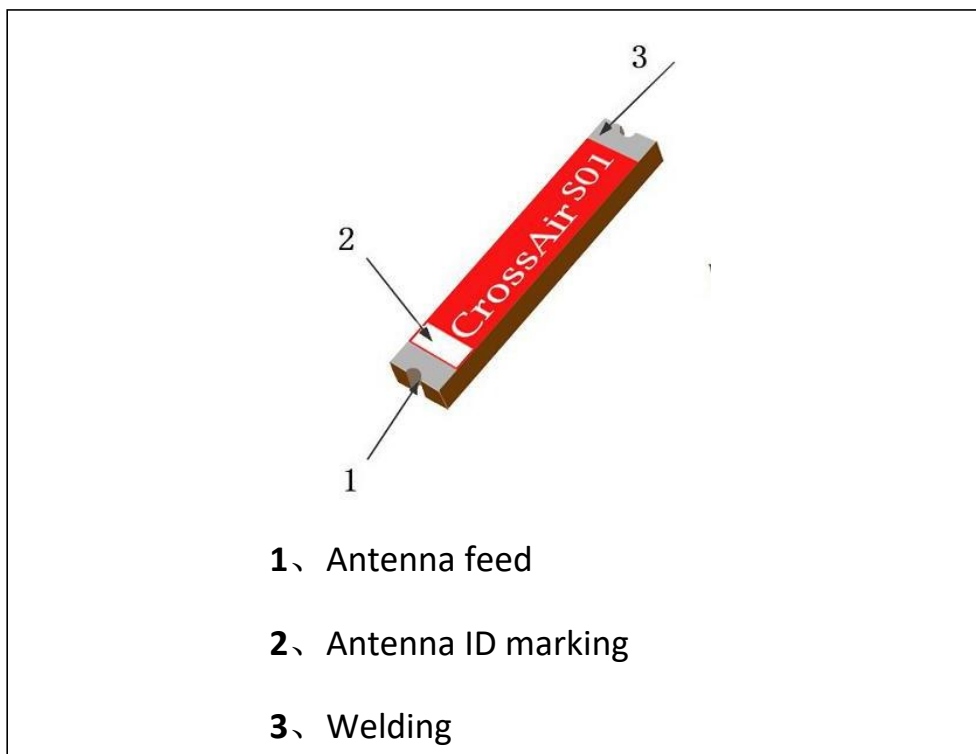
Specification:

1. Size: 15.0 X 3.0 X 1.0 mm。
2. Low energy loss, high gain antenna.。
3. High stability in the case of temperature and humidity changes.

Applicable to:

1. NB-IoT B5 B8 。
2. Lora 915M 868M 490M 433MHz 。
3. Sub-1g 915M 868M 490M 433MHz 。
4. UHF band (400M-800Mhz) 。

structure



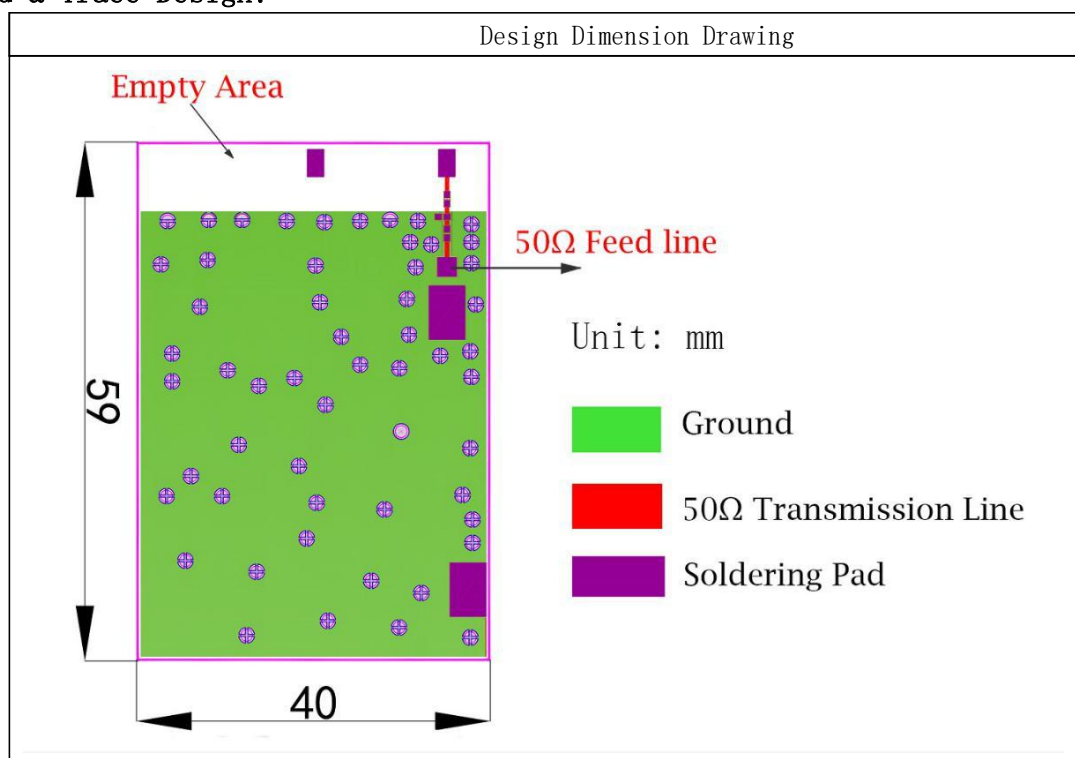
Size

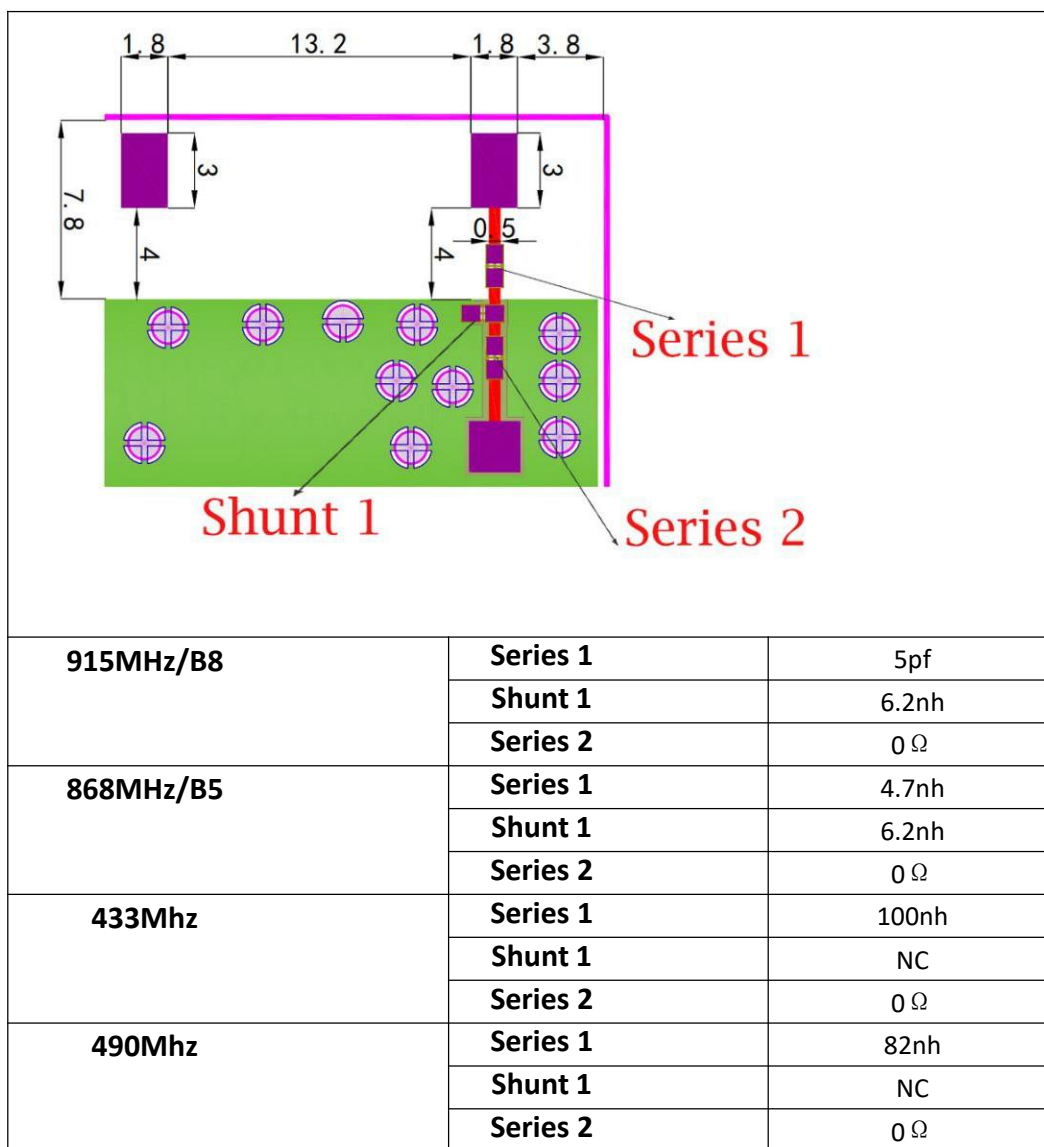
views	sign	Size(mm)
	L	15.0±0.2
	w	3.0±0.1
	T	1.0±0.05
	a	0.9±0.1

电气特性:

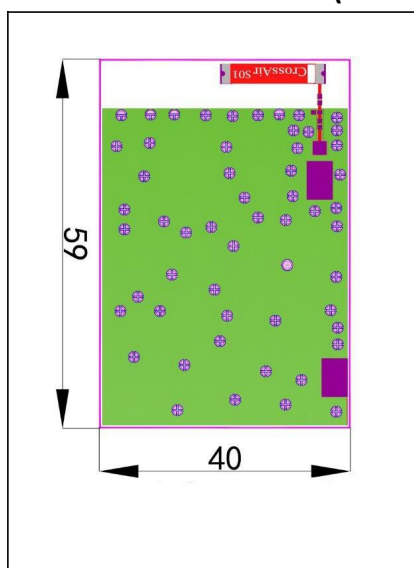
AB-S01	Specification
Working Frequency	400Mhz-960Mhz
Band Width	>80MHz
Impedance	50 Ω
Gain(dBi)	7
VSWR	<2
Operation Temperature	-40°C~+85°C
Power Capacity	4W

Pad & Trace Design:

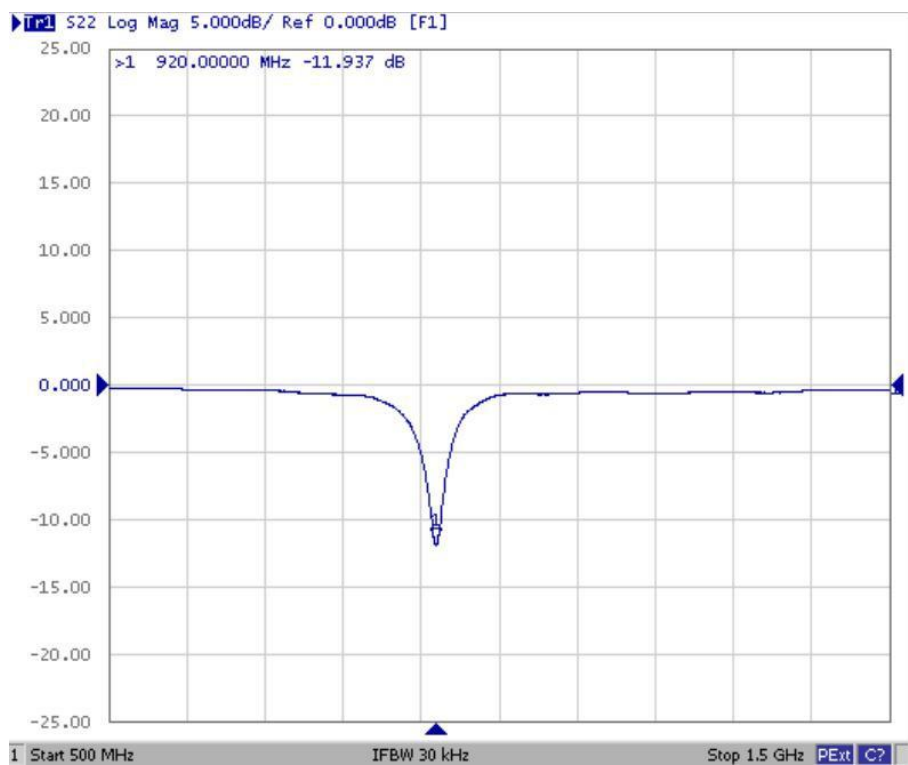




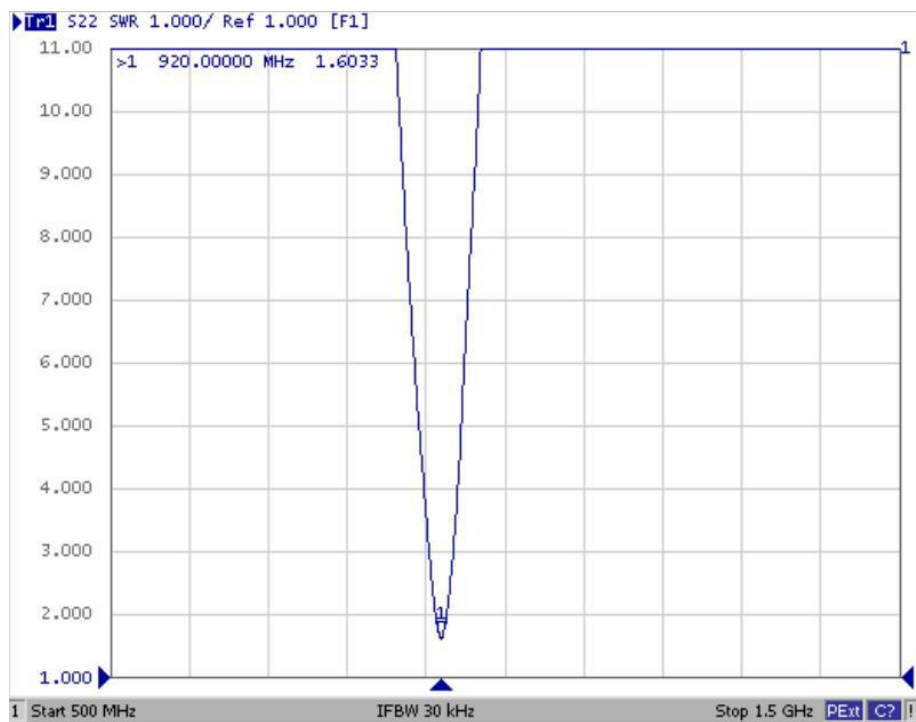
On-board antenna test (board thickness 1.0mm)



antenna **S11** parameter

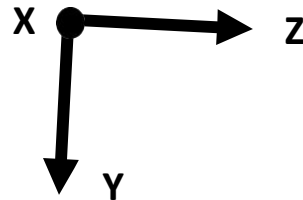
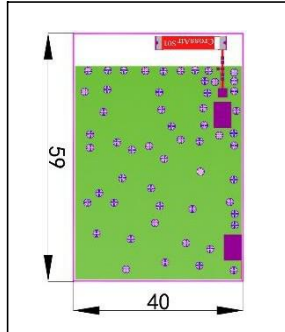


antenna **VSWR** parameter

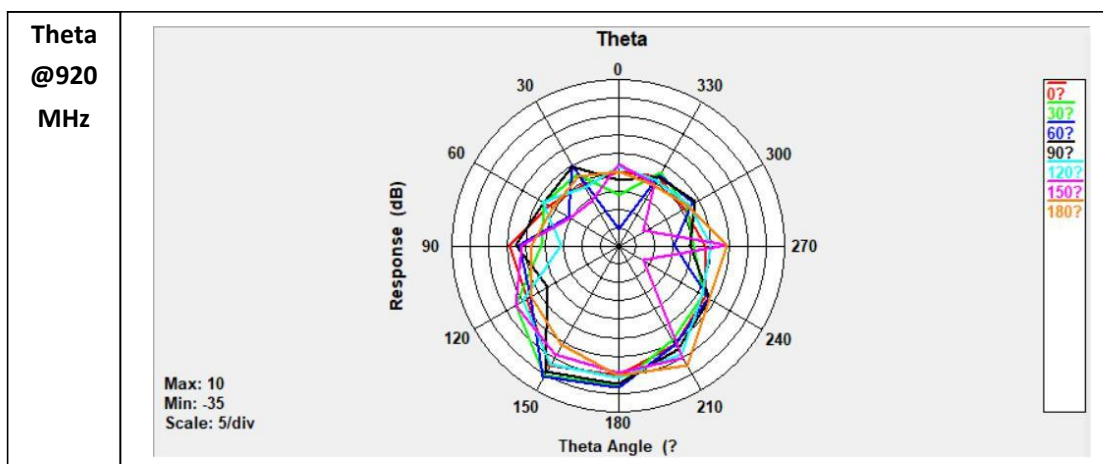


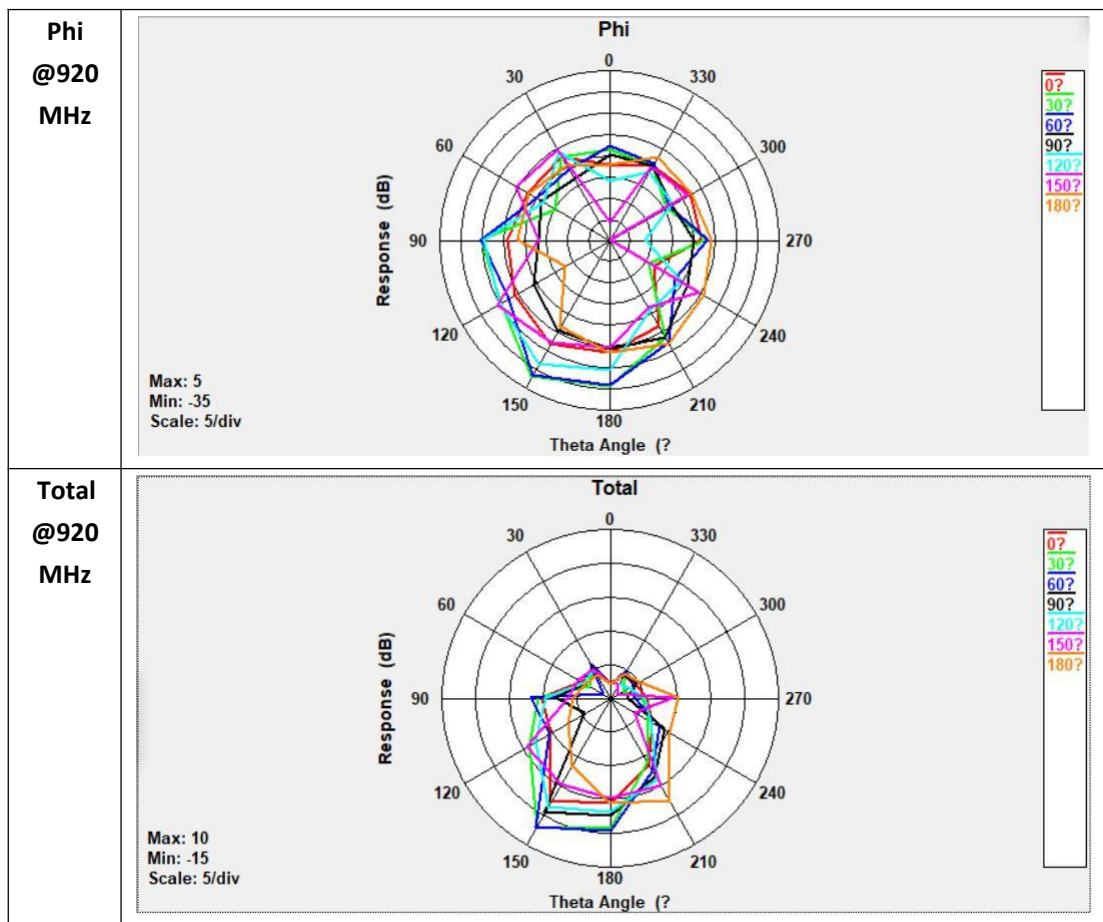
Efficiency and Radiation Patterns:

The specifications of the AB-S01 antenna are based on the parameters obtained from the test PCB board and the test direction shown in the figure below. The following data is the result of ETS 3D anechoic chamber testing.

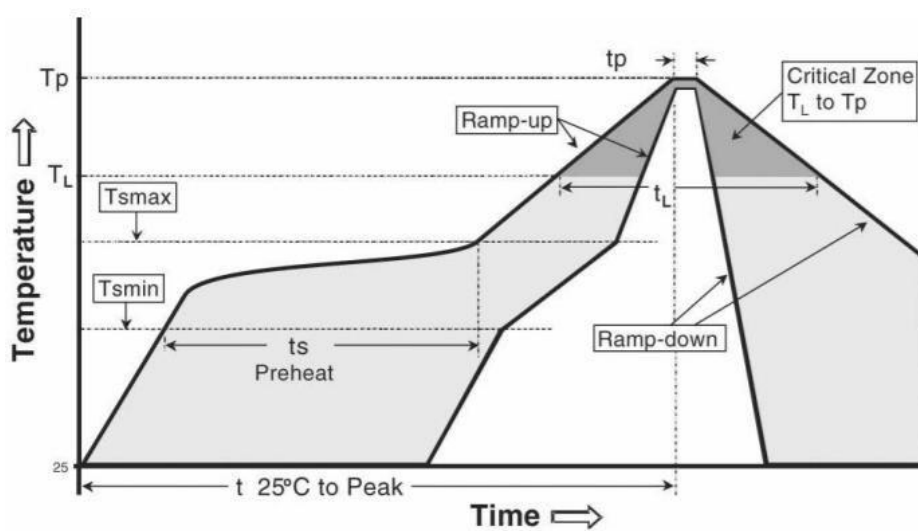


Gain and efficiency	bandwidth 880M-960MHz
Peak Gain	5.6dBi
Average Gain across the band	5.6dBi
Gain Range across the band	2.2dBi~7.2dBi
Peak Efficiency	39.5%
Average Efficiency across the band	28.7%
Efficiency Range across the band	12.3%~39.5%



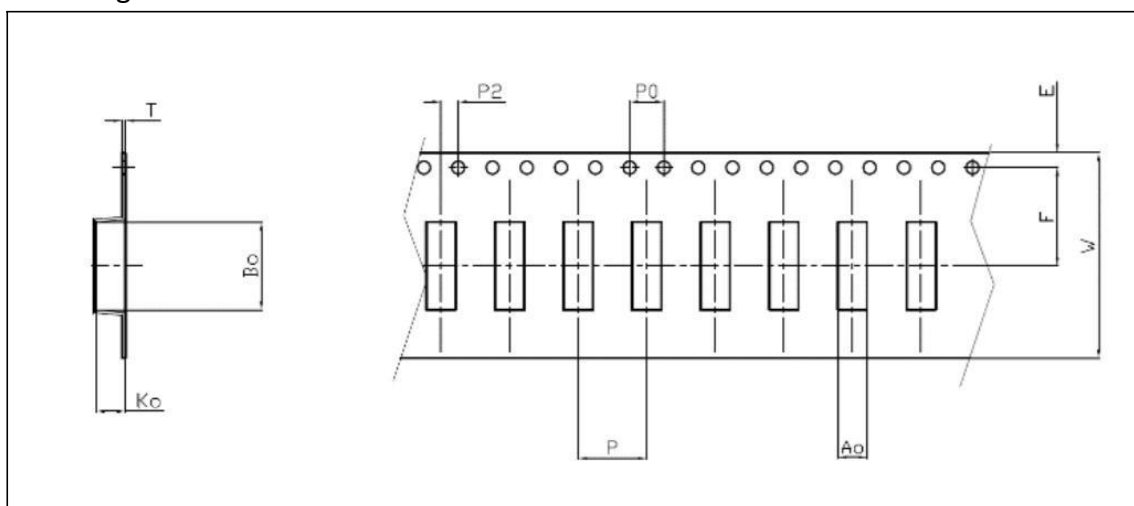


A typical welding specification that is reliable and non-destructive is shown in the figure below:



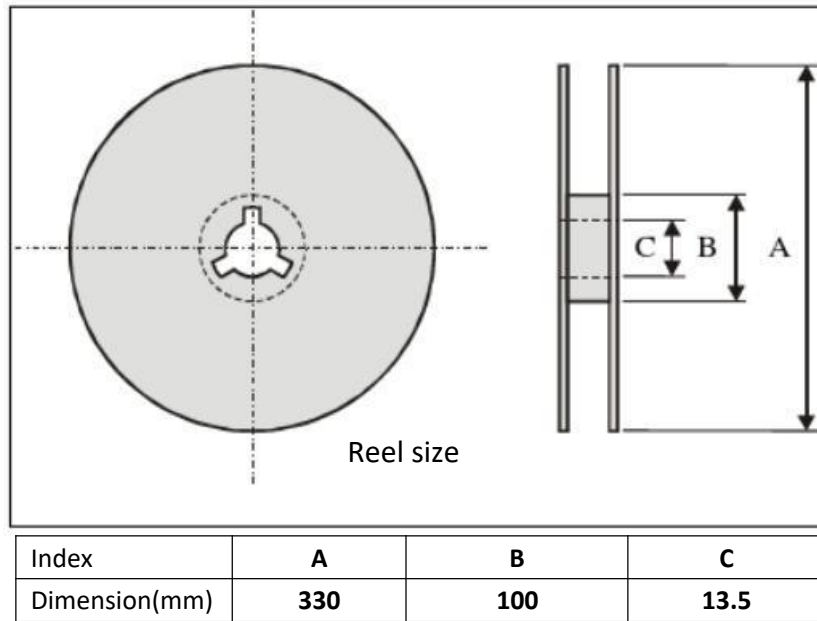
Phase	Profile features	Pb-Free assembly (SnAgCu)
RAMP-UP	Avg. Ramp-up Rate (T _{smax} to T _p)	3 °C / second (max.)
PREHEAT	- Temperature Min (T_{smin}) - Temperature Max (T_{smax}) - Time (t_{smin} to t_{smax})	150 °C 200 °C 60-180 seconds
REFLOW	- Temperature (T_L) - Total Time above T_L (t_L)	217 °C 60-150 seconds
PEAK	- Temperature (T_p) - Time (t_p)	260 °C 20-40 seconds
RAMP-DOWN	Rate	6 °C/second max
Time from 25 °C to Peak Temperature		8 minutes max

Packaged



Specifications of Plastic Carrier Tape (Unit: mm)

Index	Ao	Bo	Ko	T	W
Dimension (mm)	3.3 ± 0.1	15.5 ± 0.1	1.3 ± 0.1	0.3 ± 0.05	24.0 ± 0.3
Index	E	F	P	P0	P2
Dimension (mm)	1.75 ± 0.1	11.0 ± 0.1	8.0 ± 0.1	4.0 ± 0.1	2.0 ± 0.1



Standard quantity: 2000 PCS/pallet.

Storage environment

The following conditions should be met when the product is stored:

Tray storage temperature : -10°C~+40°C (non-antenna operating temperature)

Tray storage humidity : 30% to 70% relative humidity (non-antenna operating humidity)

The product should not be placed in contact with corrosive gases such as sulfur. Chlorine or acid may cause oxidation of the electrodes of the product, resulting in poor weldability.

The product should be placed in the toolbox and protected from moisture and dust.

Products should be stored in a warehouse away from heat, vibration, and direct sunlight.

The product should be stored in an airtight condition.