

Antenna specification

CrossAir™ SMD 天线系列
符合 RoHS 规范

CrossAir™ SMD antenna series complies with RoHS specification

PN: CA-C03

2.4 GHz ISM

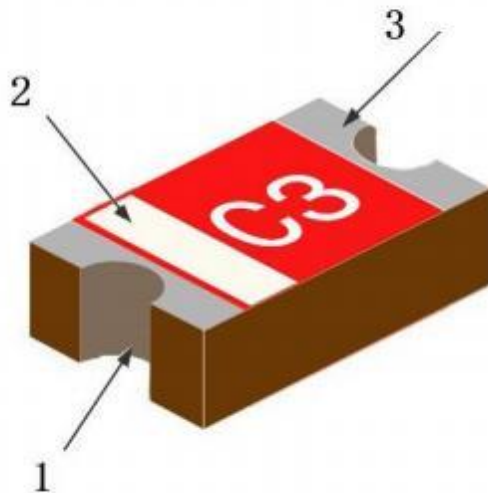
特点 Feature

1. 尺寸仅 5.5 X 2.0 X 1.0 mm³ 的小尺寸 SMD 贴片天线.
(Small size SMD patch antenna only 5.5 X 2.0 X 1.0 mm³.)
2. 低能量损耗, 高天线效率。
(Low energy loss, high antenna efficiency)
3. 在温湿度变化的情况下具有高稳定性。
(High stability in the case of temperature and humidity changes)

应用 Applications

1. 2.4GHz ISM 频段天线应用。
(2.4GHz ISM band antenna application)
2. 蓝牙、ZigBee、无线应用、智能家居应用等
(Bluetooth ZigBee wireless application smart Home application etc.)
3. WIFI (2.4G)

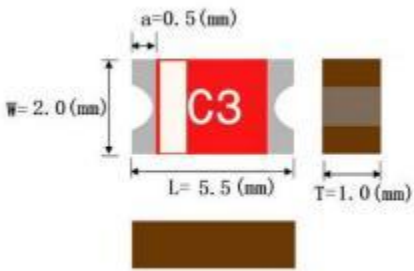
结构construction



- 1、天线馈电端 Antenna feed end
- 2、馈电识别标志 Feed identification mark
- 3、天线焊接固定端 Weld the fixed end of the antenna

CA-C03

size

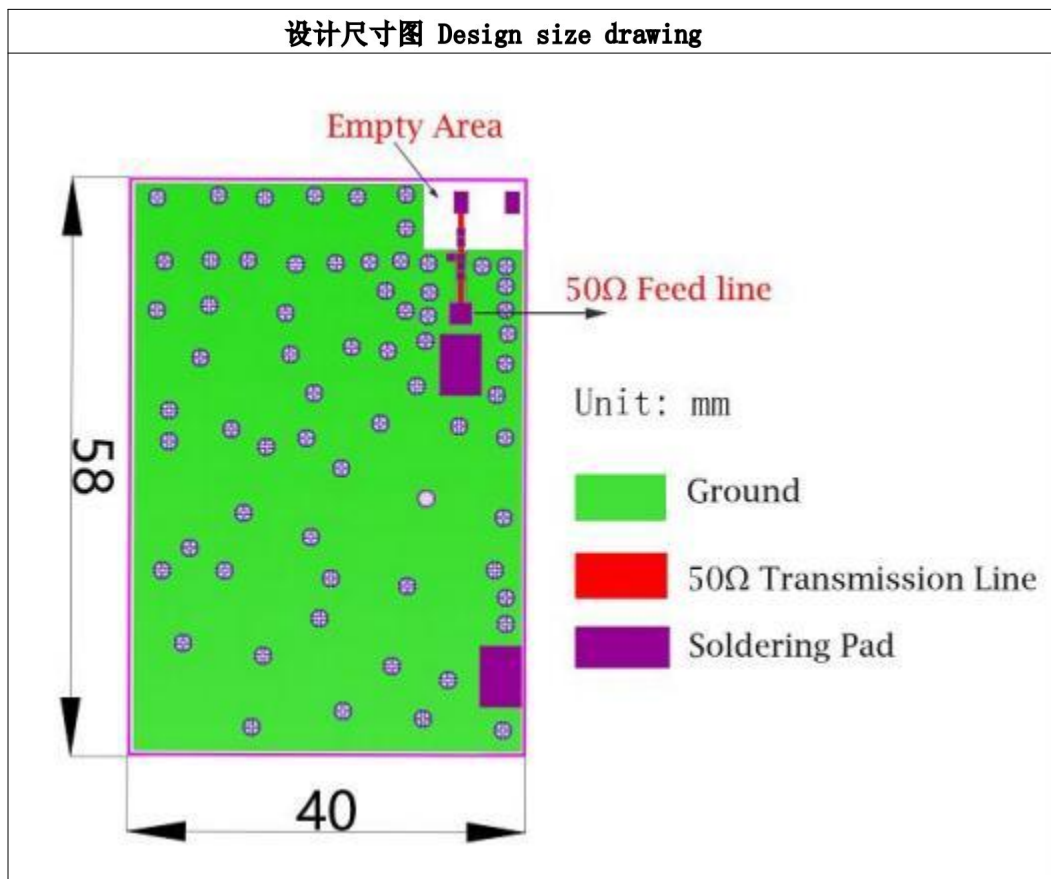
三视图 views	符号symbol	尺寸(mm)
	L	5.5±0.1
	w	2.0±0.1
	T	1.0±0.1
	a	0.5±0.1

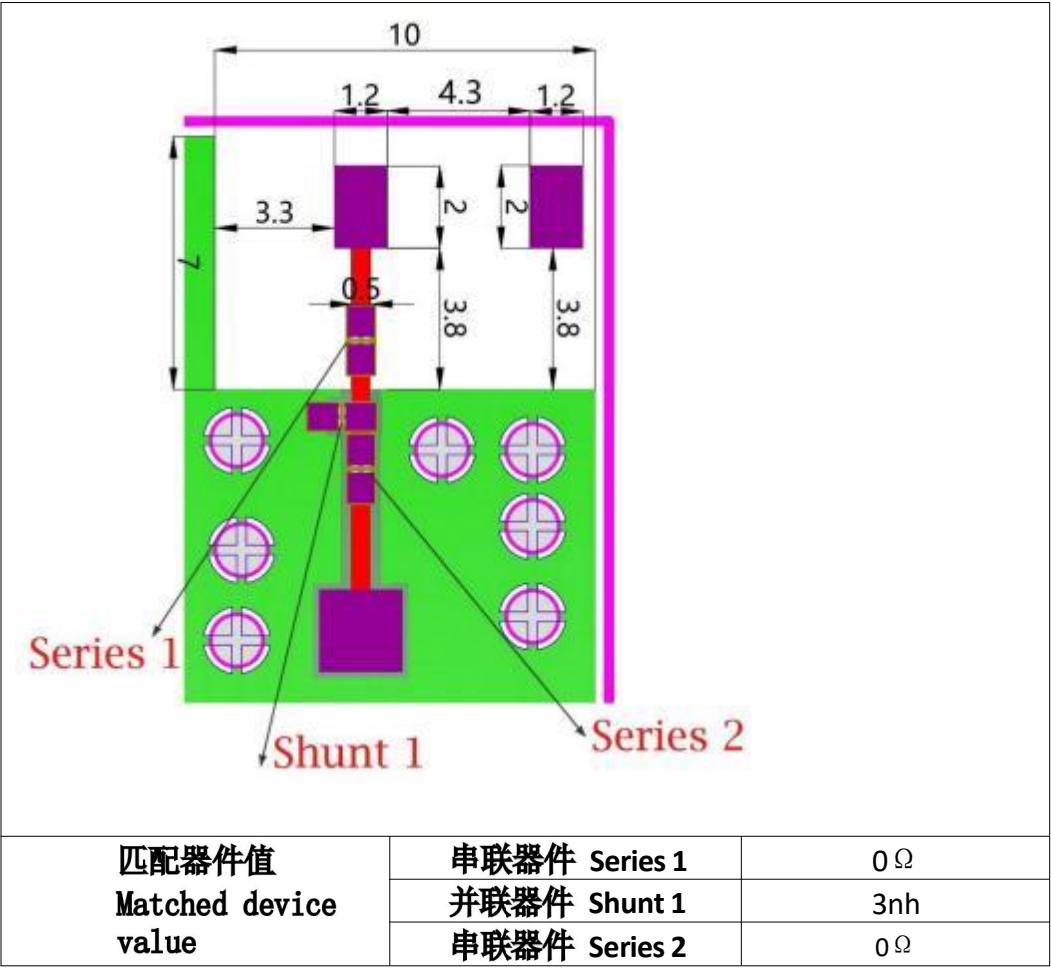
电气特性 electrical specification

CA-C03	Specification
工作频率范围 Working Frequency	2450±50MHz
初始频段(GHz)	2.7GHz
带宽 Band Width	>100MHz
阻抗 Impedance	50 Ω
增益 Gain(dBi)	4.3 (peak)
驻波比 VSWR	<2
工作温度 Operation Temperature	-40℃~+95℃
可承受功率 Power Capacity	3W

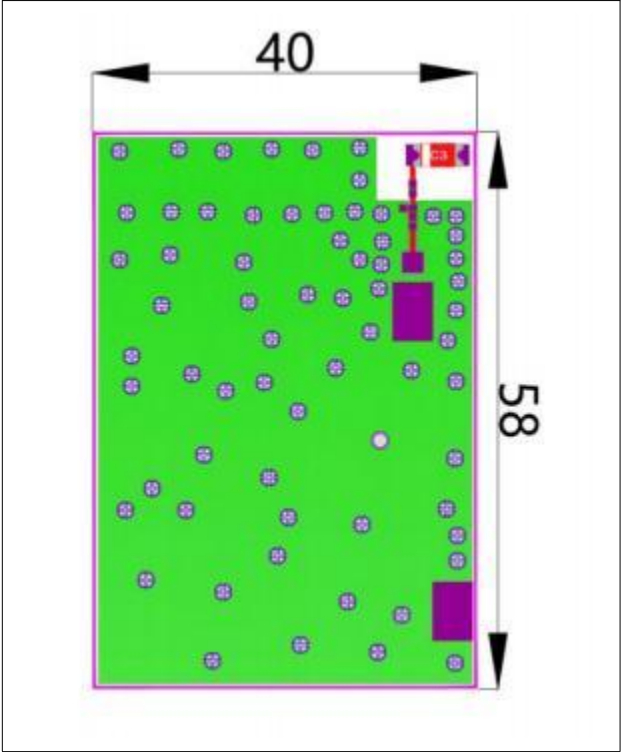
The antenna 2.4G operating frequency needs to be realized through impedance matching device debugging.

天线焊盘和走线设计 Antenna pad and routing design

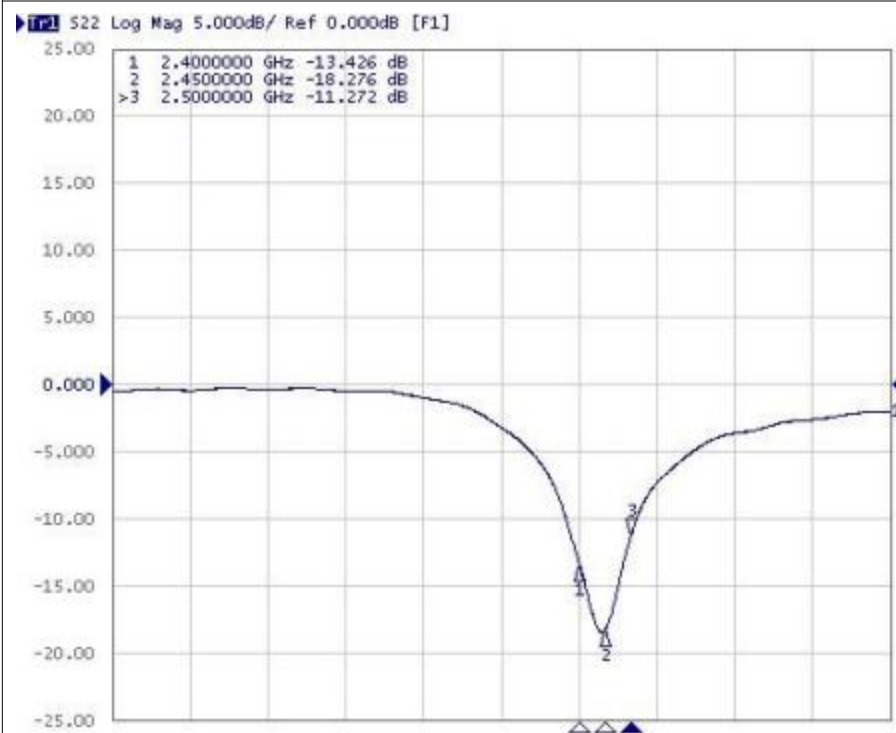




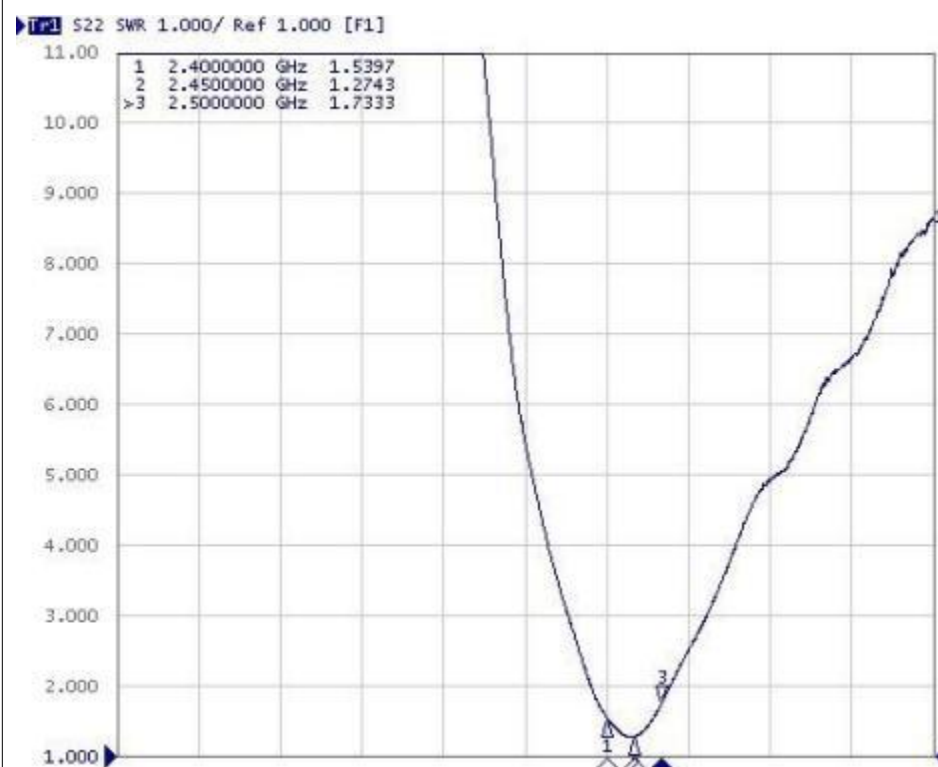
测试板上天线测试 Test plate antenna test (板厚 1.0mm)



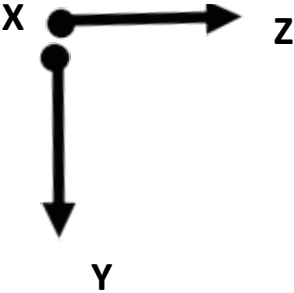
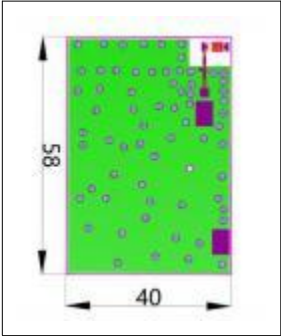
S11



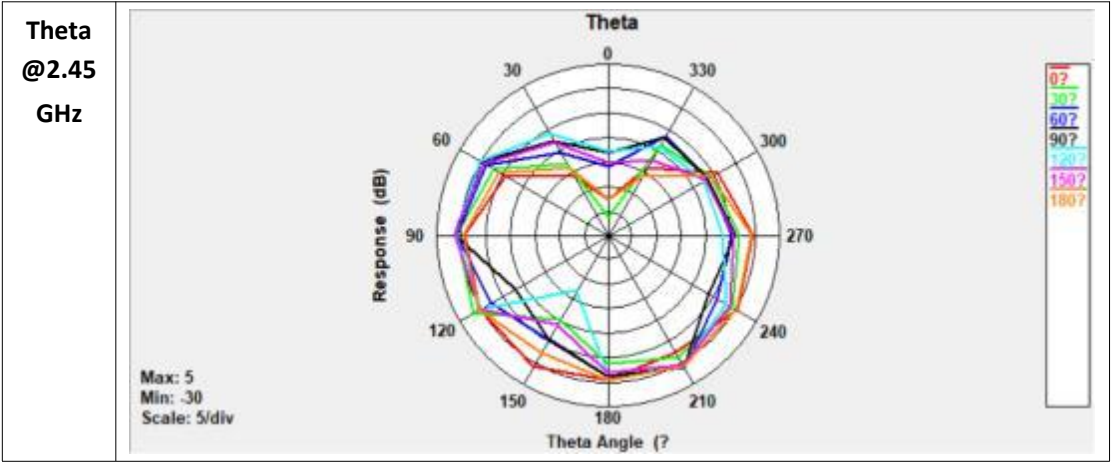
VSWR

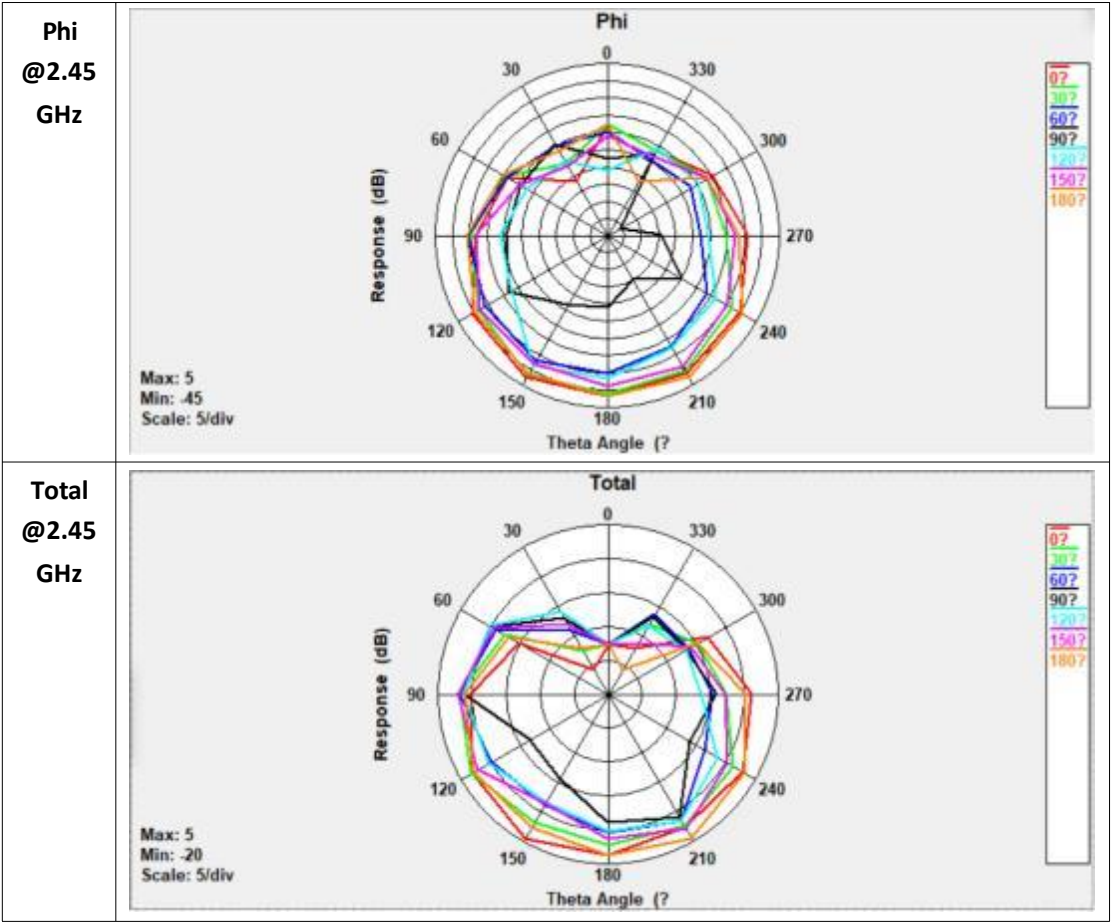


效率和辐射图 Efficiency and radiation maps

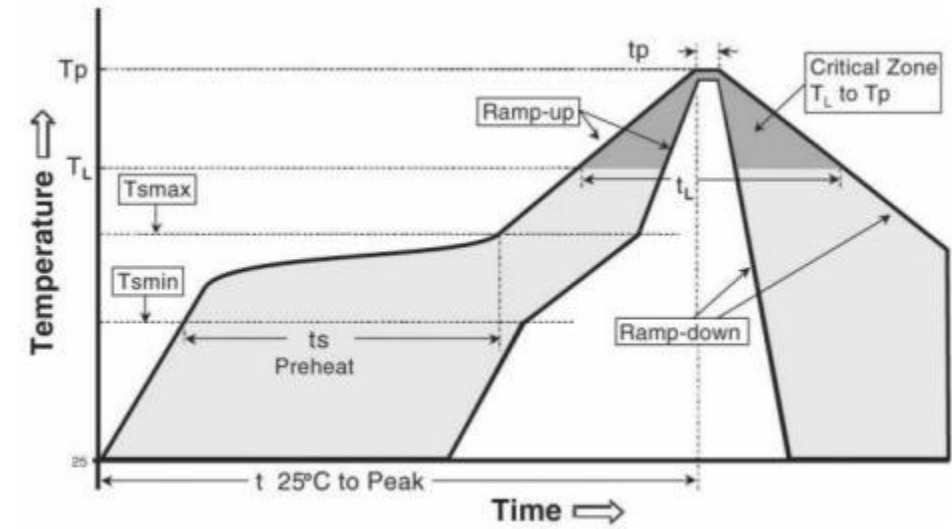


增益和效率Gain and efficiency	2.4G-2.5GHz
峰值增益 Peak Gain	4.3dBi
带内平均增益 Average Gain across the band	4.1dBi
带内增益范围 Gain Range across the band	3.9dBi~4.3dBi
峰值效率 Peak Efficiency	81.7%
带内平均效率 Average Efficiency across the band	80.2%
带内效率范围 Efficiency Range across the band	78.6%~81.7%



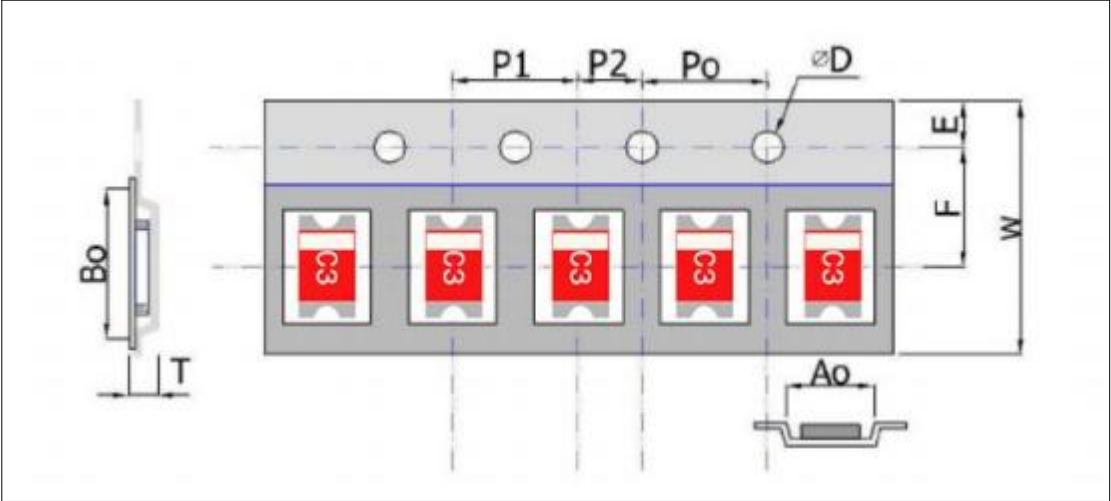


焊接条件 welding condition



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

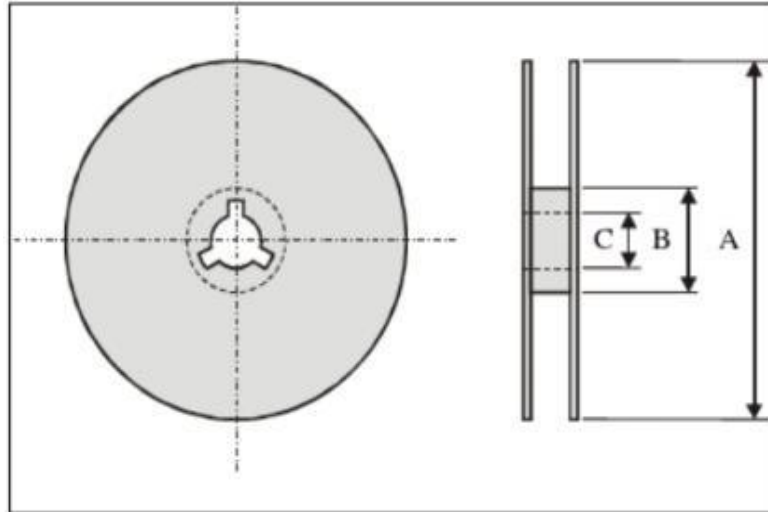
包装 packaging



塑胶载带规格 Plastic carrier tape specification (单位:mm)

Index	Ao	Bo	ΦD	T	W
Dimension (mm)	3.0±0.1	6.0±0.1	1.55±0.05	1.2±0.1	11.8±0.1
Index	E	F	Po	P1	P2
Dimension (mm)	1.75±0.1	4.6±0.1	4.0±0.1	4.0±0.1	2.0±0.1

卷盘尺寸 Reel size



Index	A	B	C
Dimension(mm)	178	60	13.5

quantity: 3000 PCS/盘.

存储环境 storage environment

The following conditions must be met before storage:

Temperature: -10℃~+40℃

Humidity: 30% to 70% relative humidity

Keep the product away from corrosive gases, such as chlorine or acid such as sulfur, which may lead to electrode oxidation and poor weldability.

Keep the product in a toolbox and avoid moisture and dust.

Store the product in a warehouse and avoid thermal vibration and direct sunlight.

Products should be stored in airtight conditions.