

Antenna Specification Sheet

**OverAir® SMD 天线系列
符合 RoHS 规范**

PN: OA-C09

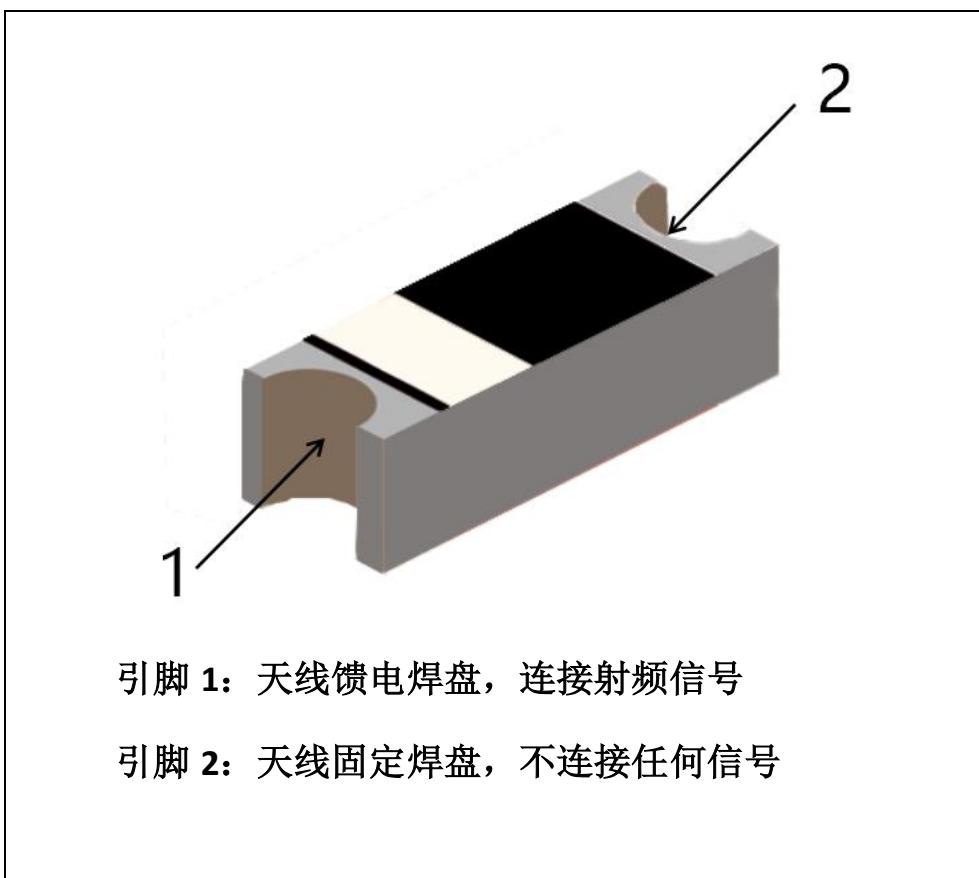
2.4 GHz ISM 频段天线

Features

1. A small-sized SMD patch antenna with dimensions of only 5.5 X 1.2 X 1.2 mm³.
2. Low energy loss and high antenna efficiency.
3. It has high stability under conditions of temperature and humidity changes.

"Application

1. Application of 2.4GHz ISM band antennas
2. Bluetooth, ZigBee, wireless applications, smart home applications, etc
3. WIFI (only 2.4G)

Structure**尺寸**

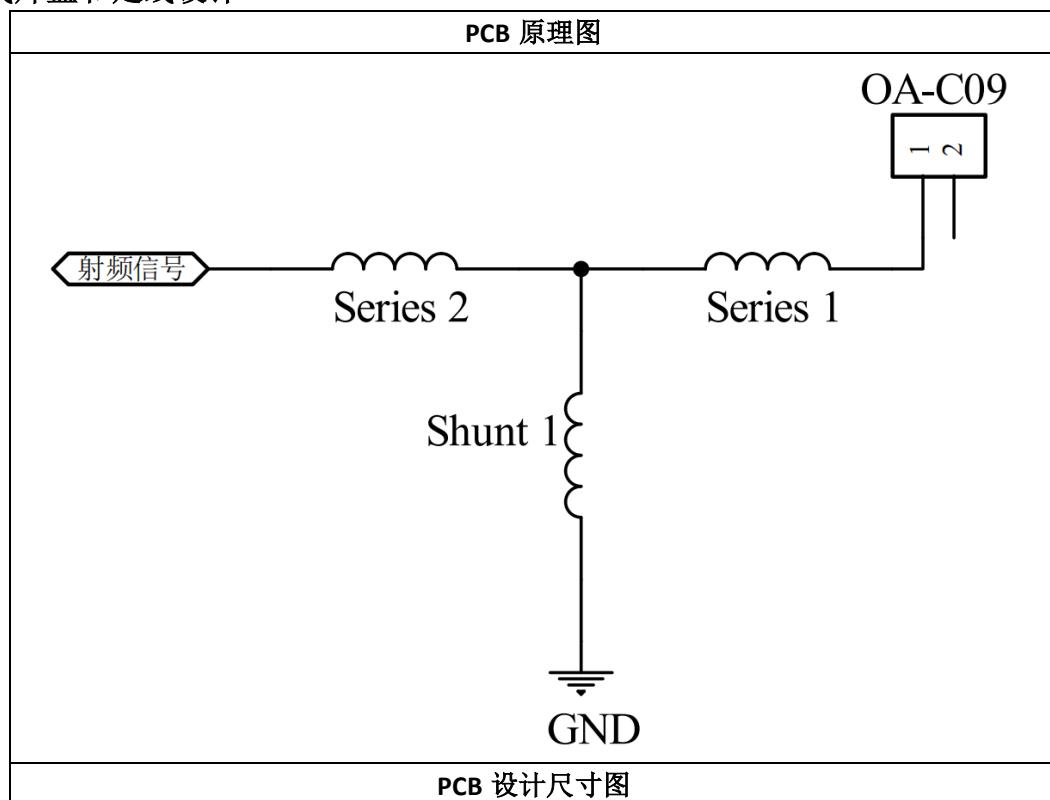
三视图	符号	尺寸(mm)
	L	5.5±0.2
	W	1.2±0.1
	T	1.2±0.1
	a	0.4±0.1

电气特性

OA-C09	Specification
工作频率范围 Working Frequency	2450±50MHz
带宽 Band Width	>100MHz
阻抗 Impedance	50 Ω
增益 Gain(dBi)	4.0 (peak)
驻波比 VSWR	<2
工作温度 Operation Temperature	-40°C~+95°C
可承受功率 Power Capacity	3W

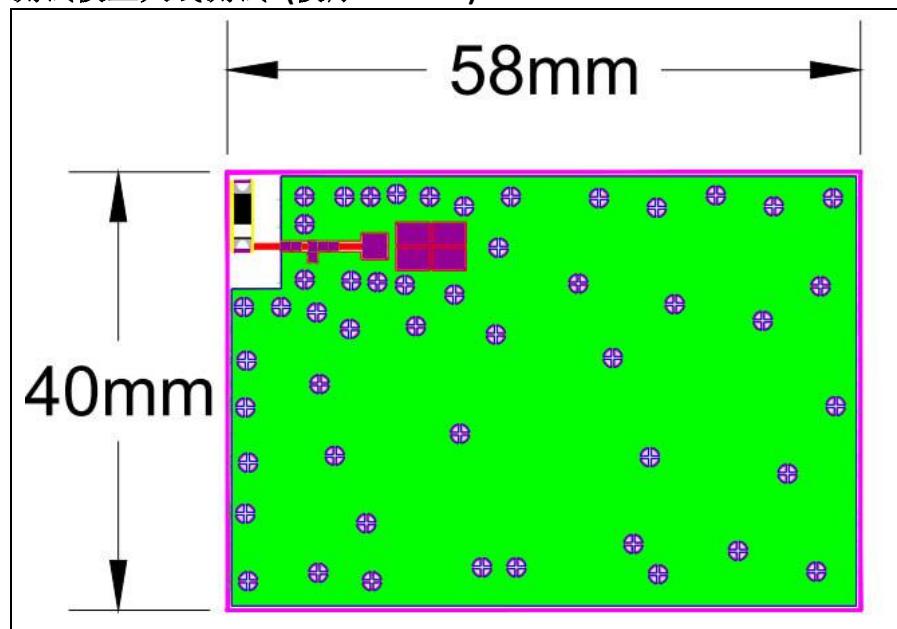
天线 2.4G 工作频率需要通过阻抗匹配器件调试来实现.

天线焊盘和走线设计

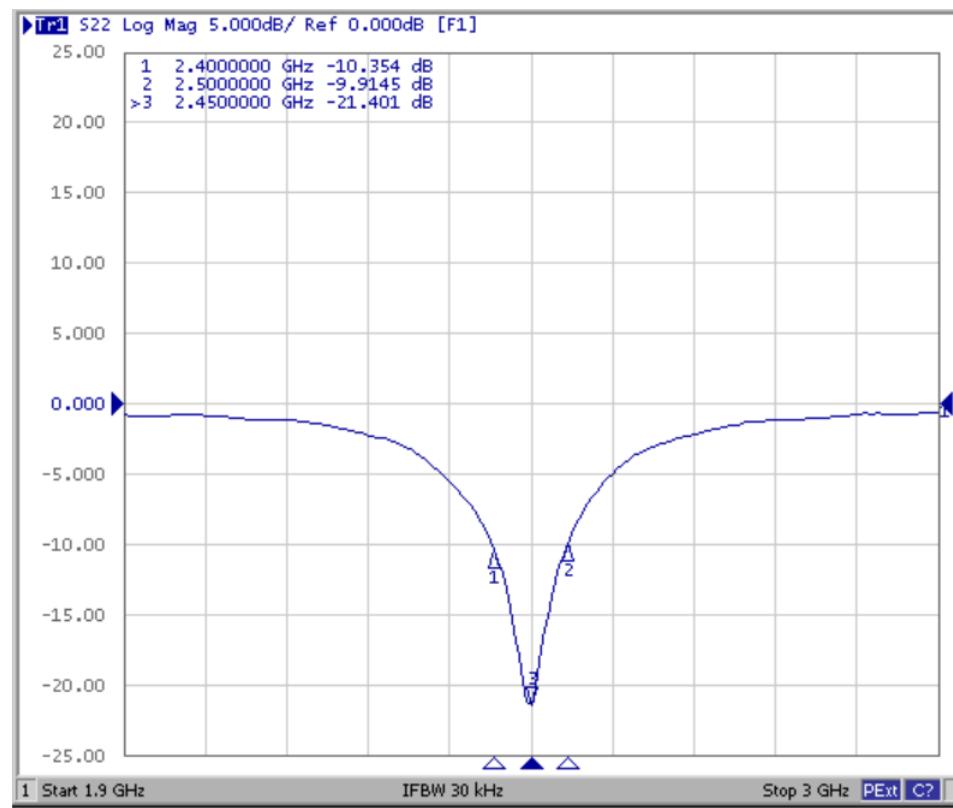


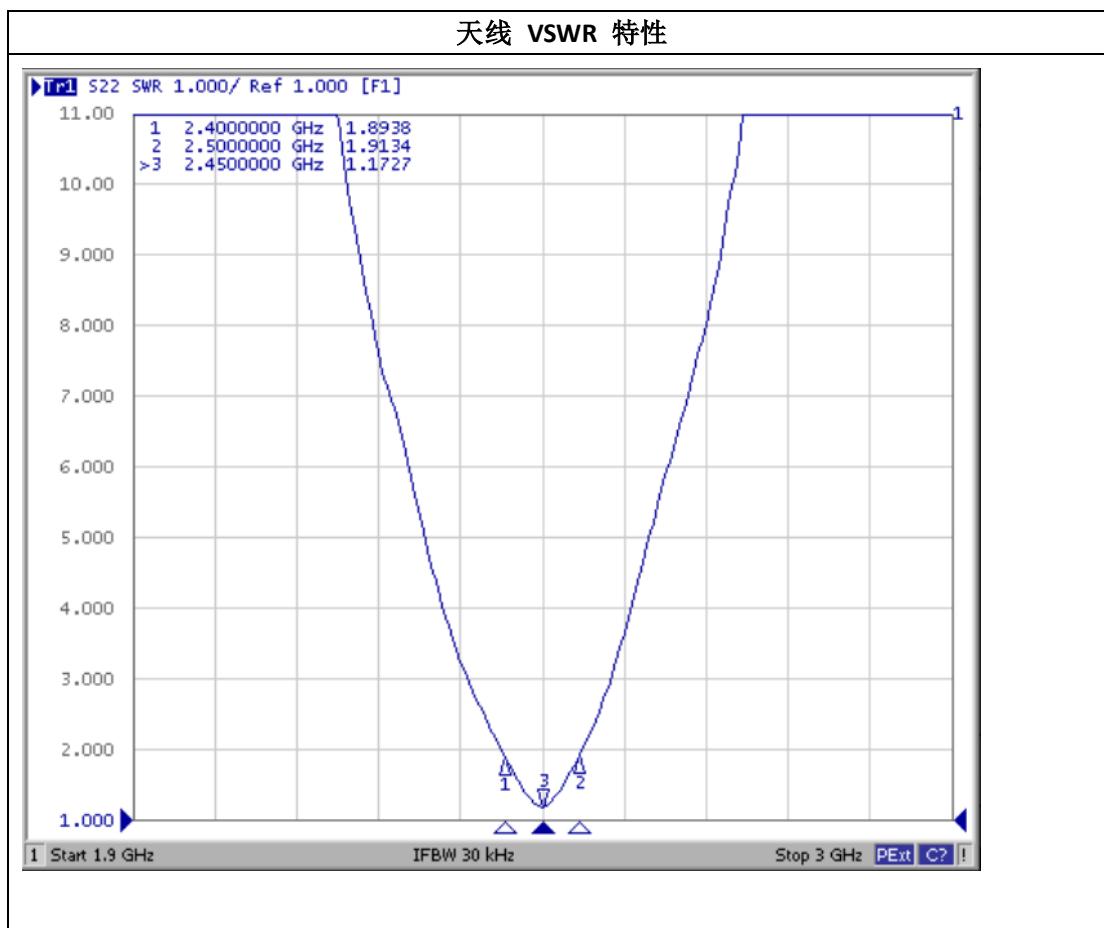


测试板上天线测试 (板厚 1.0mm)



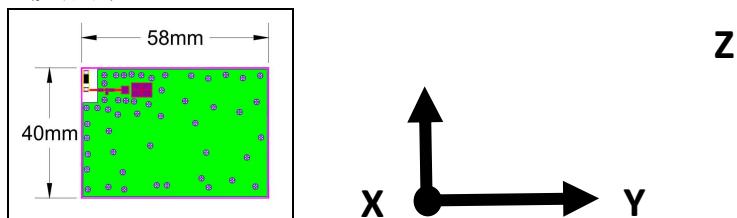
天线 S11 特性





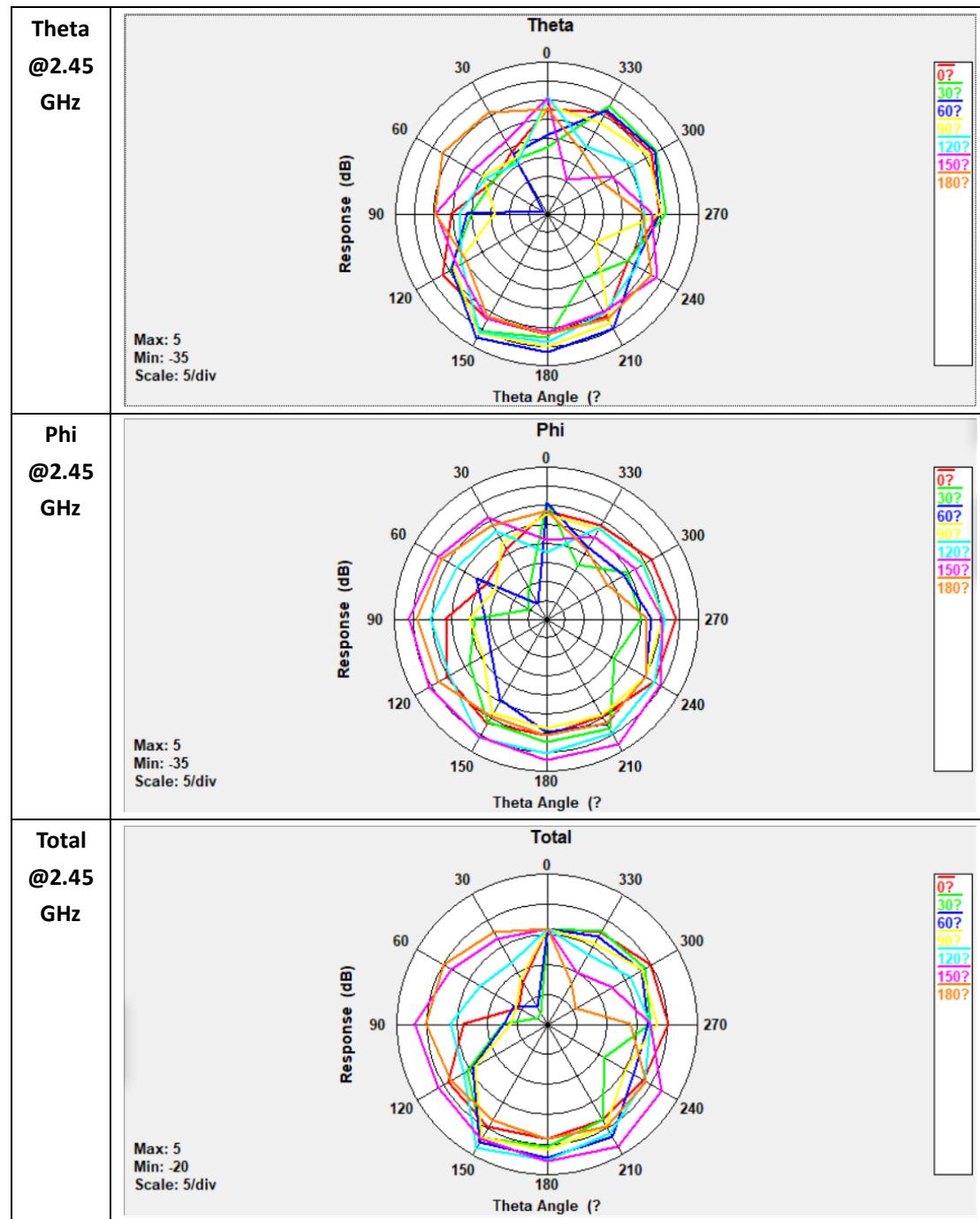
效率和辐射图

效率、辐射图、增益等性能是基于测试板设计得到的。OA-C09 天线的规格特性测试数据是基于测试 PCB 板尺寸以及下图所示的测试方向所得到的。以下数据是在 ETS 3D 微波暗室测试完成的。



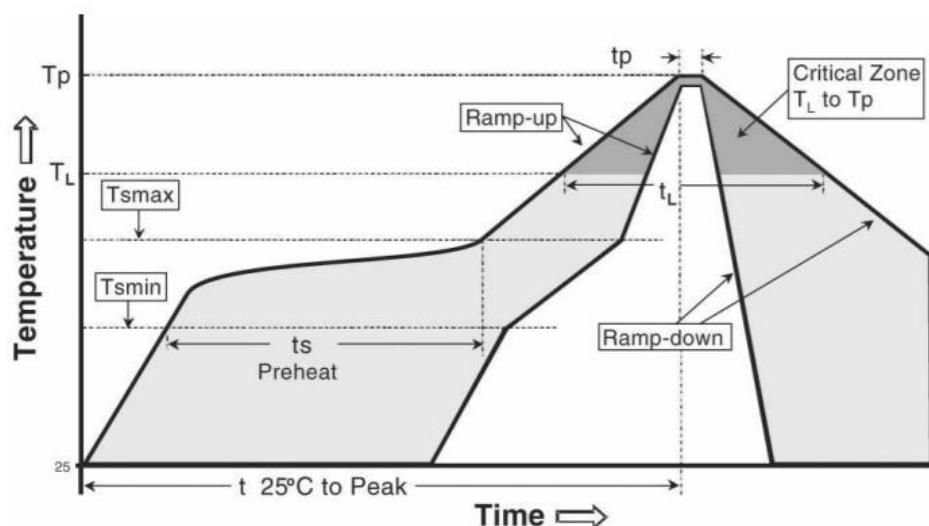
增益和效率	带宽 2.4G-2.5GHz
峰值增益 Peak Gain	4.33dBi
带内平均增益 Average Gain across the band	4.0dBi
带内增益范围 Gain Range across the band	3.59dBi~4.33dBi
峰值效率 Peak Efficiency	62.5%
带内平均效率 Average Efficiency across the band	57.5%
带内效率范围	51.3%~62.5%

Efficiency Range across the band



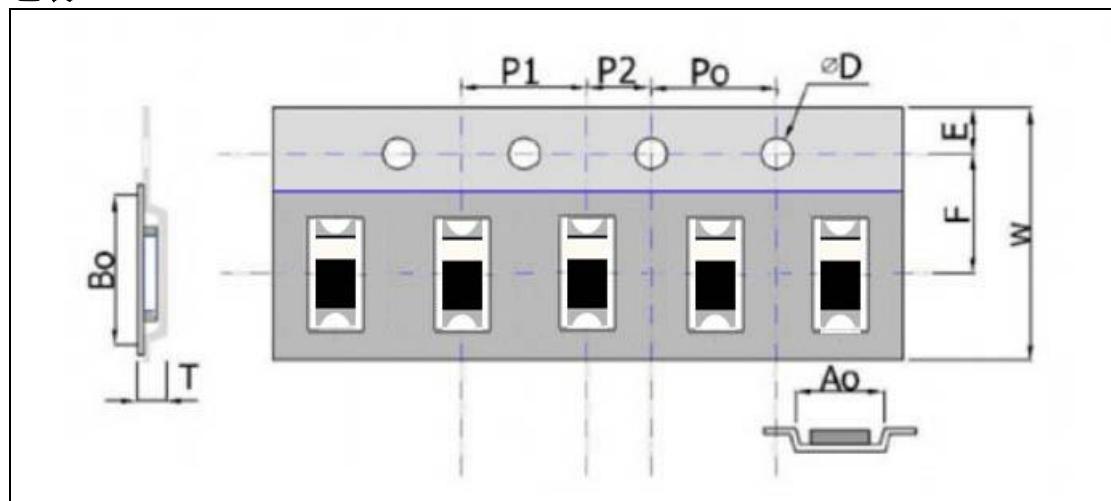
焊接条件

可靠无损的典型焊接规范如下图所示：



Phase	Profile features	Pb-Free assembly (SnAgCu)
RAMP-UP	Avg. Ramp-up Rate (Tsmax to Tp)	3 °C / second (max.)
PREHEAT	<ul style="list-style-type: none"> - Temperature Min (Tsmin) - Temperature Max (Tsmax) - Time (tsmin to tsmax) 	150 °C 200 °C 60-180 seconds
REFLOW	<ul style="list-style-type: none"> - Temperature (T_L) - Total Time above T_L (t_L) 	217 °C 60-150 seconds
PEAK	<ul style="list-style-type: none"> - Temperature (T_p) - Time (tp) 	260 °C 20-40 seconds
RAMP-DOWN	Rate	6 °C/second max
Time from 25 °C to Peak Temperature		8 minutes max

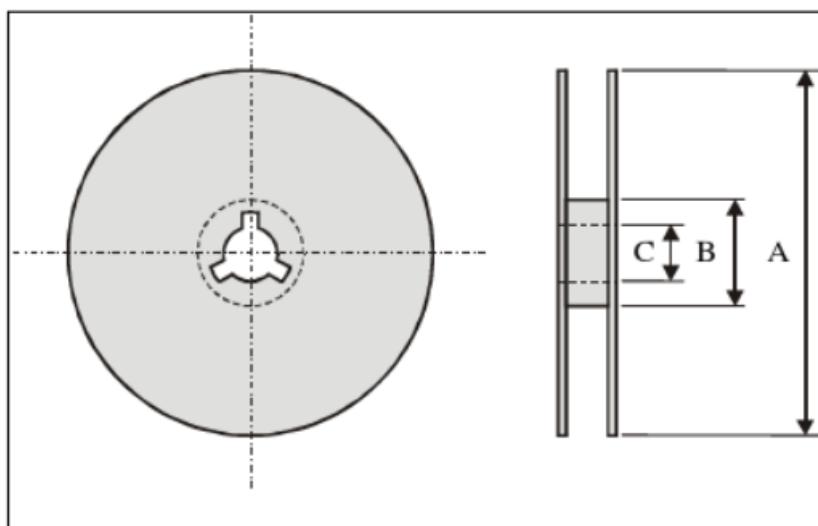
包装



塑胶载带规格 (单位:mm)

Index	Ao	Bo	ΦD	T	W
Dimension (mm)	1.3±0.1	5.8±0.1	1.55±0.05	1.8±0.1	12±0.1
Index	E	F	Po	P1	P2
Dimension (mm)	1.5±0.1	5.4±0.1	4.0±0.1	4.0±0.1	2.0±0.1

卷盘尺寸



Index	A	B	C
Dimension(mm)	330	100	13.5

标准数量： 3000 PCS/盘.

存储环境

产品存储时应满足下列条件:

温度 : -10°C~+40°C

湿度 : 30% 至 70% 相对湿度

产品放置的位置不要接触腐蚀性气体，如硫磺等。氯气或酸可能导致产品电极氧化造成可焊接性变差。

产品应放置在工具箱里且避免受潮、灰尘的影响。

产品应存放在仓库中且避免热、振动、阳光直射。

产品应在密闭条件下储存。