

SMD 天线规格书

OverAir[®] SMD 天线系列
符合 RoHS 规范

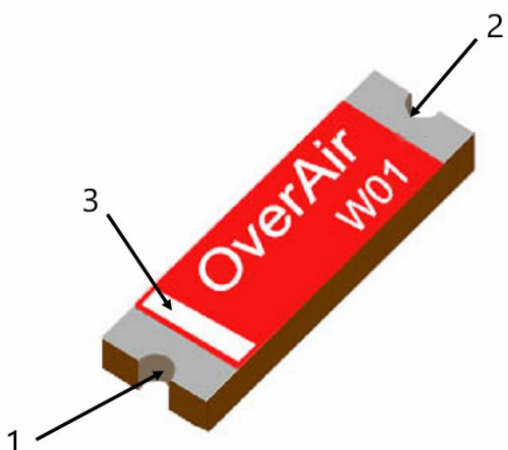
PN: OA-W01

2.4G/5G WIFI 频段天线

- 特点**
- 1. 尺寸仅 8.0 X 3.0 X 1.0 mm³ 的小尺寸 SMD 贴片天线。
 - 2. 低能量损耗，高天线效率。
 - 3. 在温度湿度变化的情况下具有高稳定性。
1. A compact SMD patch antenna measuring only 8.0×3.0×1.0mm³ in size.
2. Low energy loss with high antenna efficiency.
3. High stability under varying temperature and humidity conditions.

- 应用**
- 1. 2.4G/5G WIFI 频段的 天线应用。
 - 2. 其他工作在 2.4G 或 5G 频段的 天线应用。
1. Antenna applications for 4G/5G WIFI frequency bands.
2. Other antenna applications operating in the 2.4G or 5G frequency bands

结构

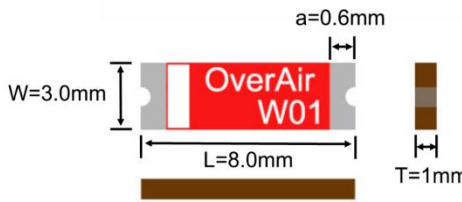


1、天线信号馈电端 1, antenna signal feed end

2、天线焊接固定端 2, antenna welding fixed end

3、天线馈电端标记 3, antenna feed end mark

尺寸

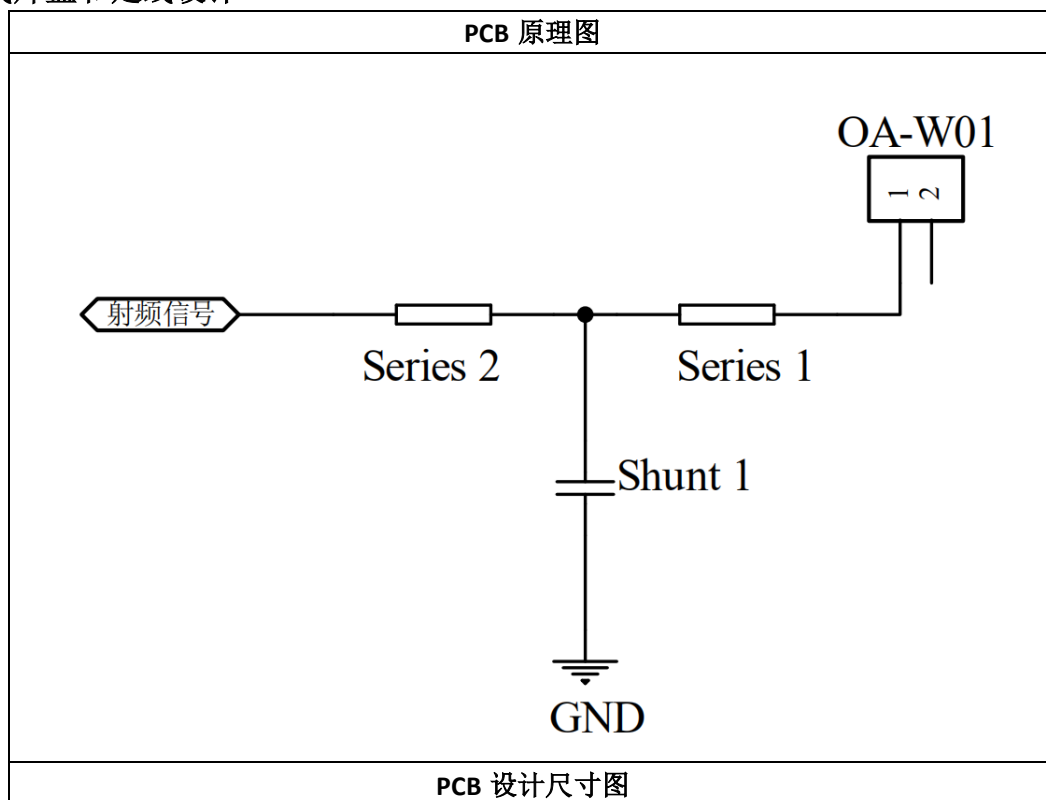
三视图	符号	尺寸(mm)
	L	8.0±0.1
	w	3.0±0.1
	T	1.0±0.1
	a	0.6±0.1

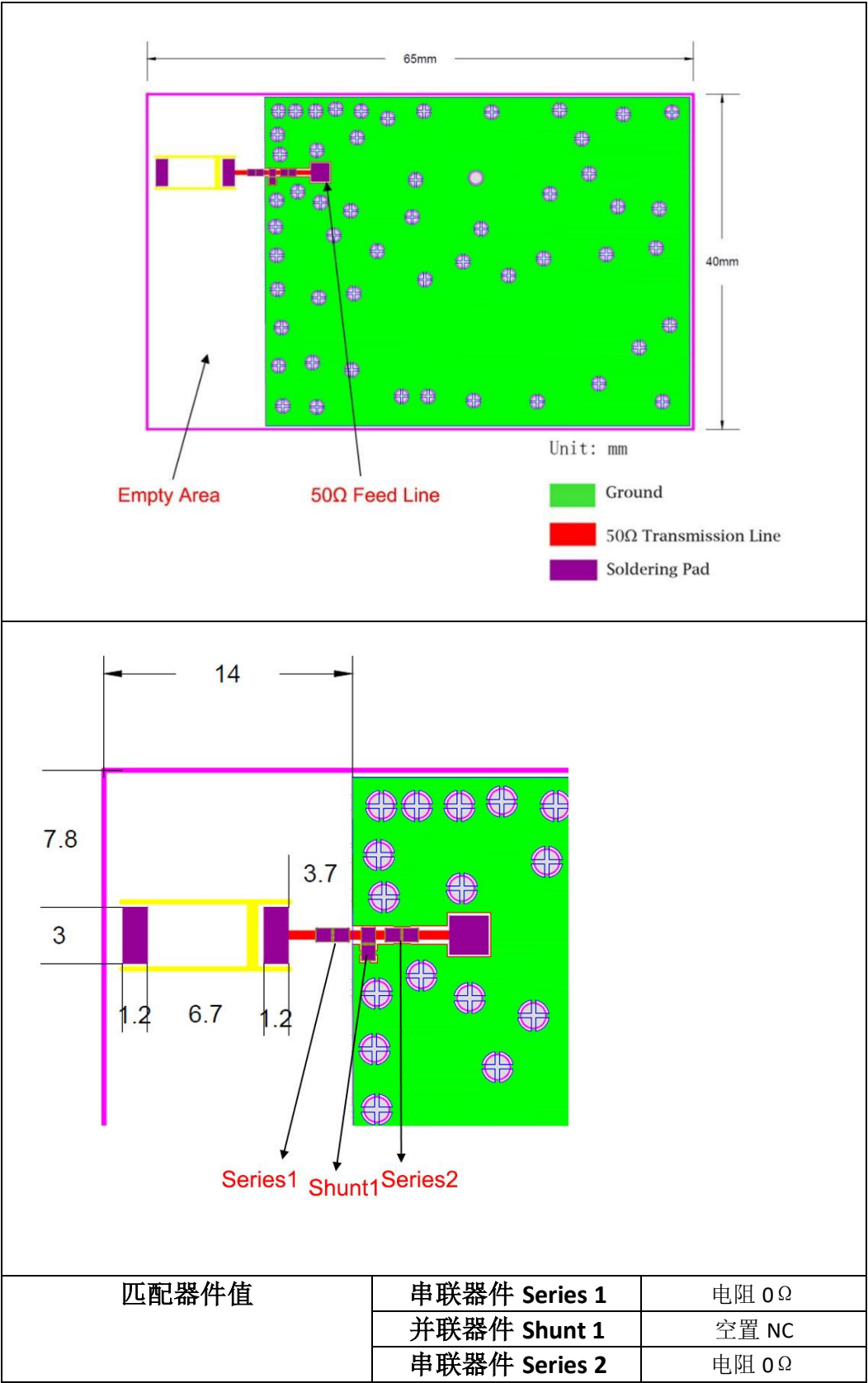
电气特性

OA-W01	Specification
工作频率范围 Working Frequency	2400-2500MHz, 5200-6000MHz
阻抗 Impedance	50 Ω
增益 Gain(dBi)	5.9dBi(2400-2500MHz), 3.67dBi(5200-6000MHz)
驻波比 VSWR	<2
工作温度 Operation Temperature	-40℃~+85℃
可承受功率 Power Capacity	3W

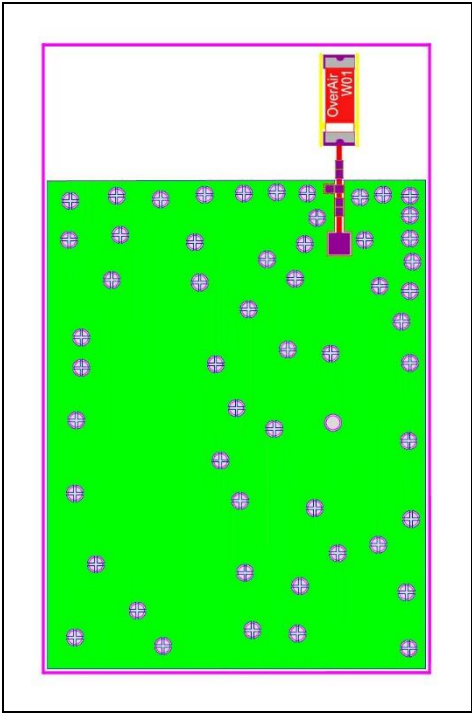
天线工作频率需要通过阻抗匹配器件调试来实现。

天线焊盘和走线设计

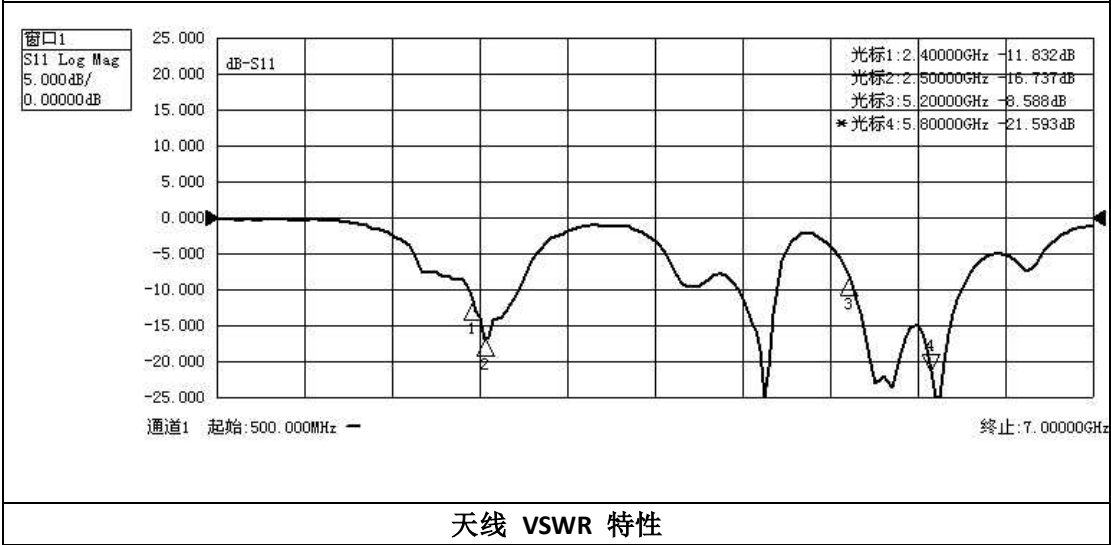


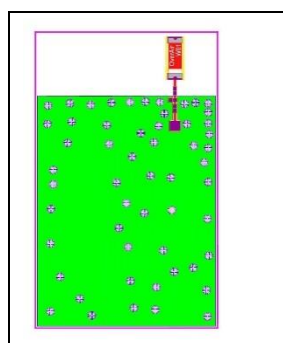
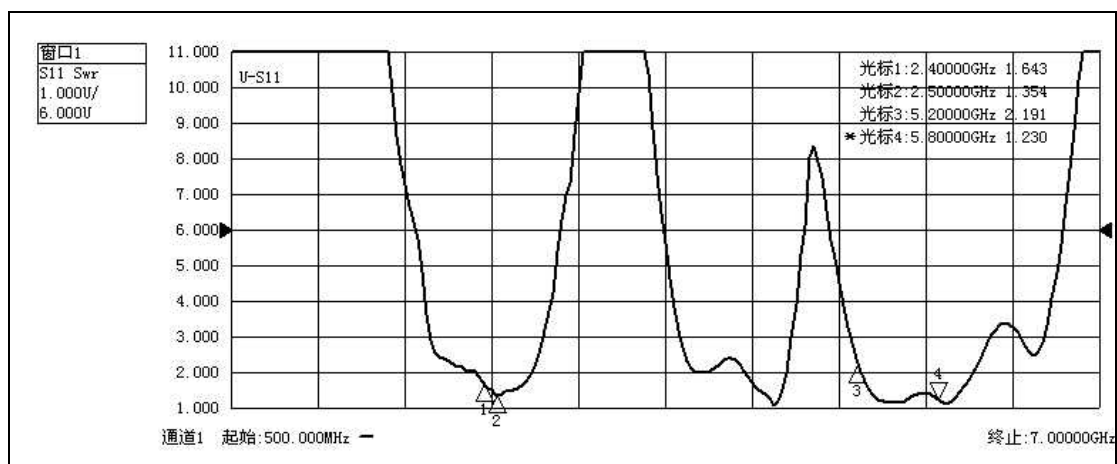


测试板上天线测试 (板厚 1.0mm)

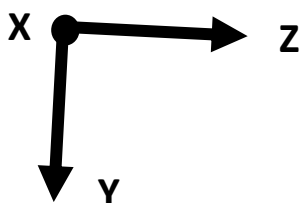


天线 S11 特性

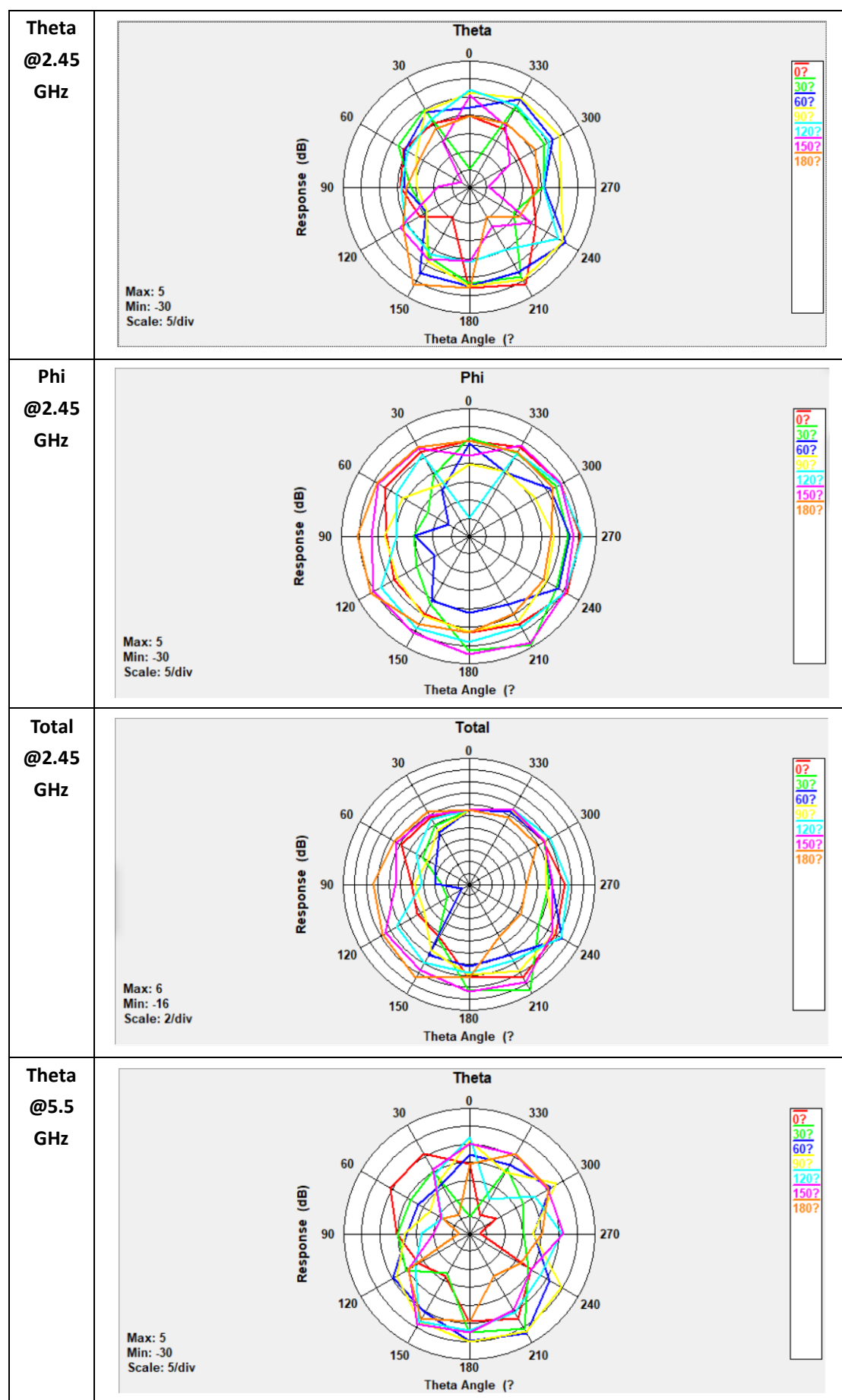


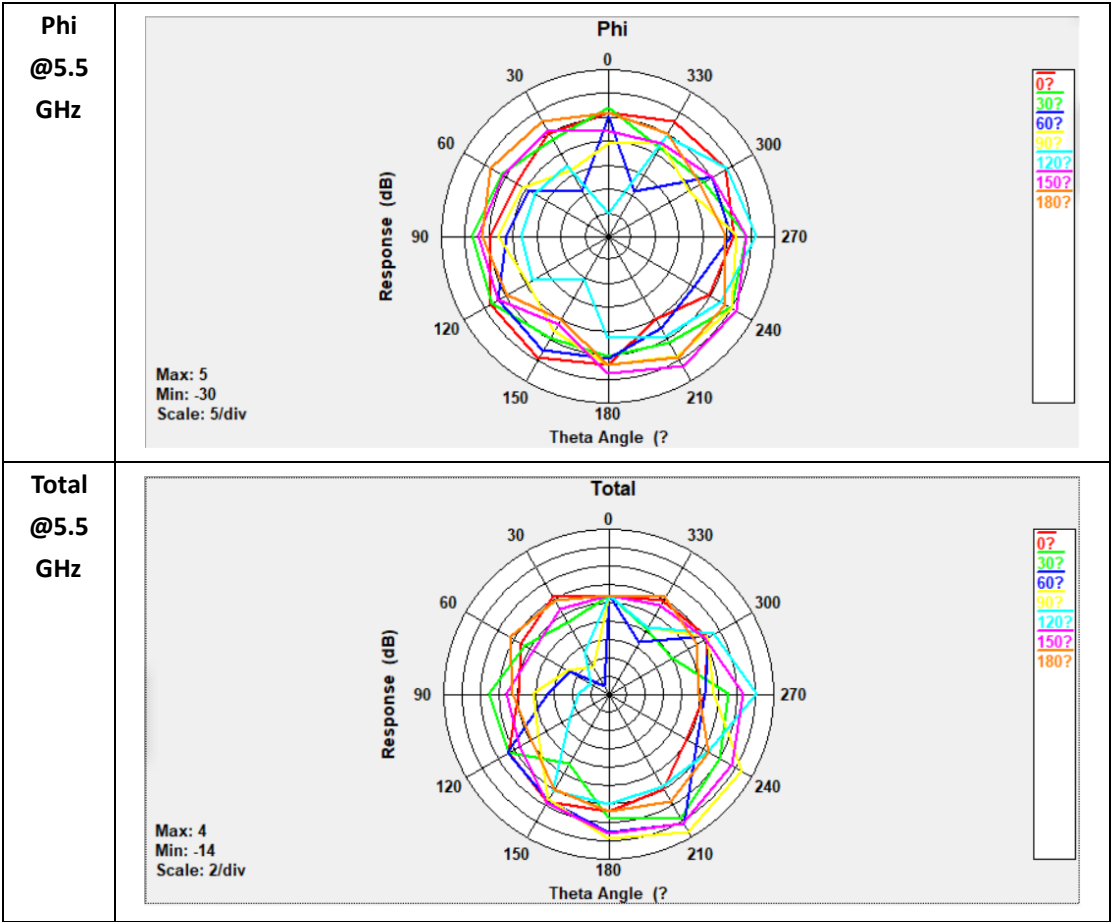


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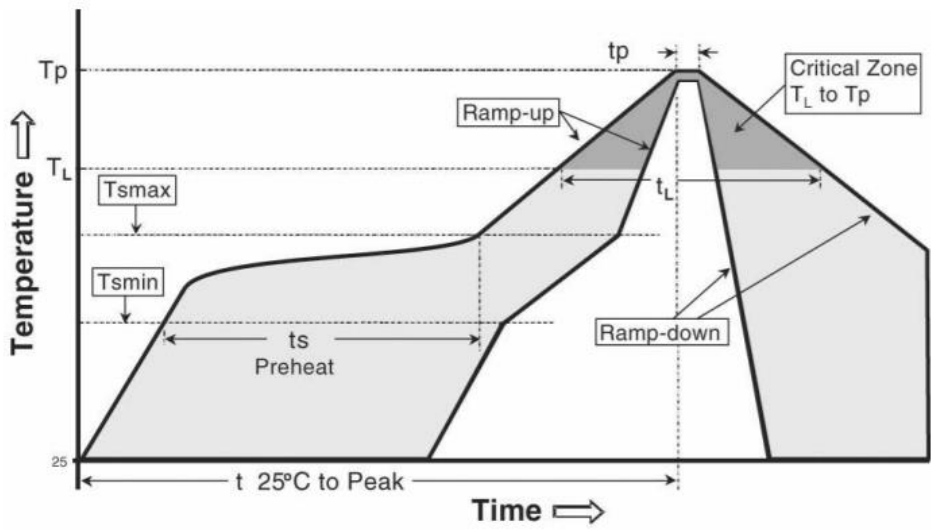
增益和效率	带宽 2.4G-2.5GHz	带宽 5.2G-5.8GHz
峰值增益 Peak Gain	5.9dBi	3.67dBi
带内平均增益 Average Gain across the band	5.7dBi	2.63dBi
带内增益范围 Gain Range across the band	5.5dBi~5.9dBi	1.33dBi~3.67dBi
峰值效率 Peak Efficiency	82.5%	62.4%
带内平均效率 Average Efficiency across the band	79%	51%
带内效率范围 Efficiency Range across the band	74.8%~82.5%	30.77%~62.4%





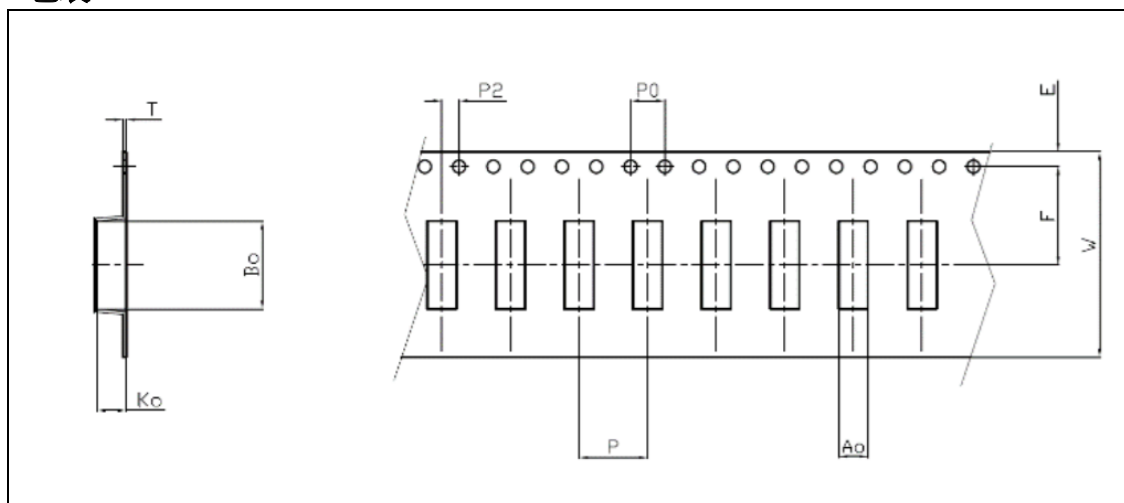
焊接条件

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 (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

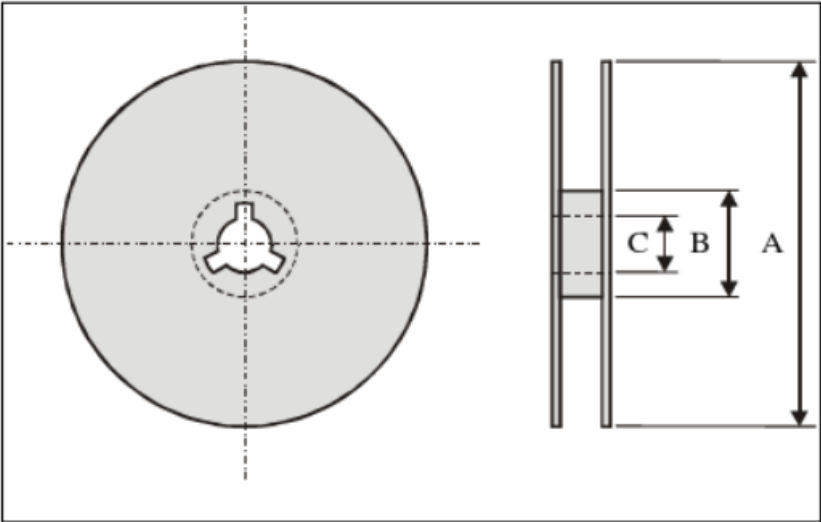
包装



塑胶载带规格 (单位:mm)

Index	Ao	Bo	Ko	T	W
Dimension (mm)	3.3±0.1	8.4±0.1	1.3±0.1	0.3±0.05	16.0±0.3
Index	E	F	P	P0	P2
Dimension (mm)	1.75±0.1	7.0±0.1	8.0±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: 2000 PCS/盘.

存储环境

- 产品存储时应满足下列条件：
- 料盘存储温度 ： -10℃~+40℃ （非天线工作温度）
- 料盘存储湿度 ： 30% 至 70% 相对湿度 （非天线工作湿度）
- 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。

Storage Environment

When storing the product, the following conditions should be met:
Storage temperature of the material tray: -10℃ to +40℃ (not the working temperature of the antenna)
Storage humidity of the material tray: 30% to 70% relative humidity (not the working humidity of the antenna)
The product should not be placed in contact with corrosive gases such as sulfur, chlorine gas or acid, which may cause oxidation of the product's electrodes and deteriorate its solderability.
The product should be placed in a toolbox and protected from moisture and dust.
The product should be stored in a warehouse and protected from heat, vibration and direct sunlight.
The product should be stored in a sealed condition.