1.陶瓷基板 Ceramic substrate

参数 item	影响 Impacts	说明 Instructions
厚度 Thickness	频率上限 Frequency limit	厚度 0.127mm,最高 60GHz； 厚度 0.254mm,最高 40GHz Thickness 0.127mm,up to 60GHz;Thickness 0.254mm,up to 40GHz 厚度 0.381mm,最高 18GHz； 厚度 0.635mm,最高 6GHz Thickness 0.381mm,up to 18GHz;Thickness 0.635mm,up to 6GHz
	最小孔径 Min. hole diameter	标准最小孔径=基片厚度的 0.8 倍 Standard minimum hole diameter = 0.8×thickness of the substrate
介电常数 Dielectric constants	线条宽度 Line width	由器件性能决定 Determined by device performance
表面粗糙度 Surface roughness	最细线条宽度 Min. line width	线条宽度小于 30um 采用精抛基片 Line width less than 30um using polished substrates
损耗因素 Loss factors	插入损耗 Insertion Losses	一般要求损耗小于 0.0005 Less than 0.0005
导热率 Thermal conductivity	功率耗散 Power dissipation	氮化铝、氧化铍大功率场合运用；氧化铝普通电路运用 Aluminum nitride, beryllium oxide use for high-power applications; aluminum oxide use for normal circuit

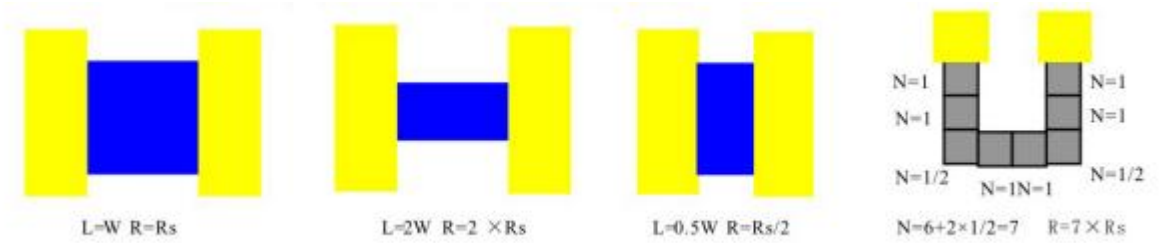
2 电阻设计 Resistance

2.1 电阻特性参数表 Resistance Parameter

项目 Item	典型值 Typical values	备注 Notes
方块电阻 Rs Sheet Resistance	50	范围：10-200 欧姆/方 Range: 10-200 ohm/sq
功率密度(瓦/平方毫米) Power density (W/mm2)	3	99.6% 0.254mm Al2O3
功率密度(瓦/平方毫米) Power density (W/mm2)	8	99%.0.381mm AIN
功率密度(瓦/平方毫米) Power density (W/mm2)	10	99% 0.381mm BeO
-55℃~+125℃电阻温度变化系数 temperature coefficient of resistance	±100ppm/C	
1000 小时 125℃阻值稳定性 1000 hours 125℃ resistance stability	0.02%	
短时间高温承受能力 Thermal Shock Resistance	450℃ 5min	
电阻精度 Resistance Tolerance	10%	1%可选 1% optional

3. 薄膜电阻设计规则 Thin Film Circuit Design Instruction

R=Rs×(L/W): L is the lenght, W is the width



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