eXsense

传递温度·感知冷暖

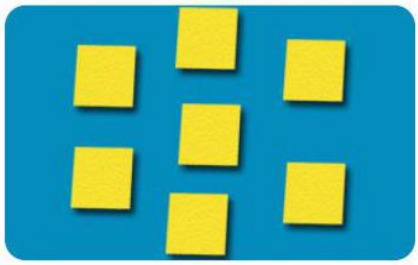
单 层 芯 片 电 容

Single Layer Capacitor

广东爱晟电子科技有限公司

EXSENSE Electronics Technology Co., Ltd.

通用型芯片电容器
General Series Single Layer Capacitor



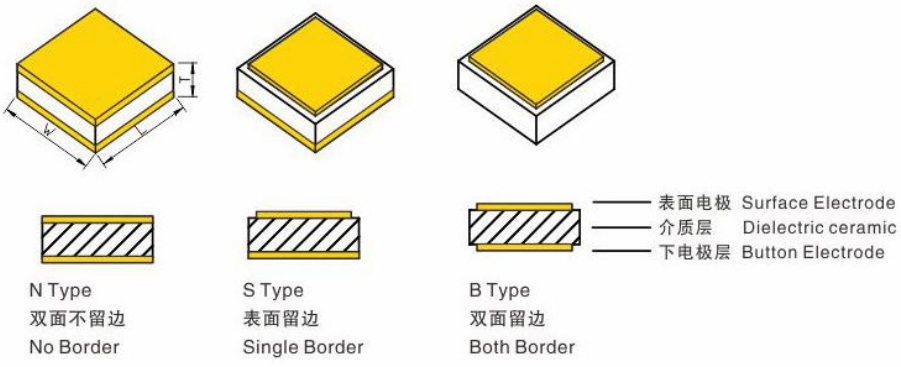
应用领域 Application

- 主要应用于微波集成电路，起隔直流、源旁路、阻抗匹配等作用。
- 便于用户匹配电容宽度与线路板导体线宽，或者在线路面积很有限时以电容尺寸将就线路。
- Microwave integrated circuit,DC isolation, bypass,impedance matching etc.
- The design allows the user to match line with or design a custom capacitor for limited circuit dimensions.

特点 Key Features

- 体积小，电容量大 微波性能优异
- 可焊性良好
- 对于表面留边型的芯片电容，有助于防止溢胶造成的短路，这种设计也减少了因镊子而造成的损害，也便于自动机械的操作。
- 可根据客户要求定制不同尺寸及参数
- Small size, large capacitance,excellent microwave performance
- Good solderability
- The borders help prevent short circuits (arcing at the chip edges) after die attachment, especially with conductive epoxy. The design also reduces handling damage from tweezers, and facilitates automated pick and place assembly processes.
- Customized sizes and parameters available

外形尺寸 Dimension

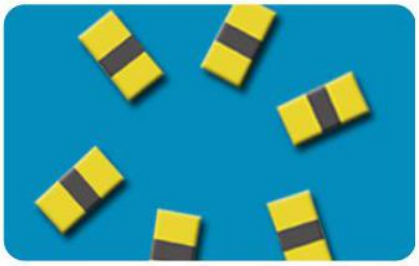


N Type
双面不留边
No Border

S Type
表面留边
Single Border

B Type
双面留边
Both Border

双电极型芯片电容器
Double Electrode Series Single Layer Capacitor



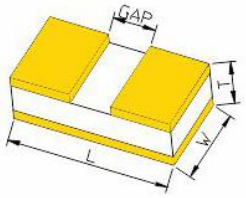
应用领域 Application

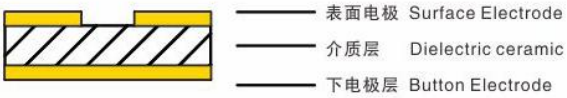
- 此系列电容产品是用于射频/微波和毫米波线路的理想元件。
- This series make it ideal for RF/ microwave and millimeter wave application.

特点 Key Features

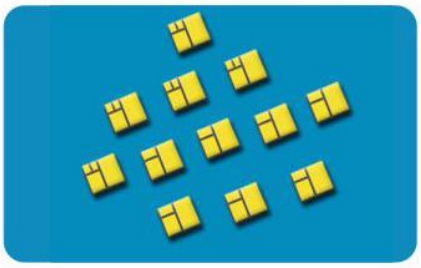
- 结构独特
- 性能一致性好
- 可根据客户要求定制不同尺寸及参数
- Peculiar structure
- Consistent performance
- Customized sizes and parameters available

外形尺寸 Dimension





二进制多电极型芯片电容器
Binary Multi Electrode Series Single Layer Capacitor



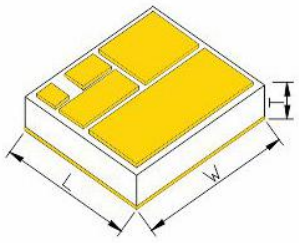
应用领域 Application

- 主要应用于匹配网络、提供方便的电路可调性。隔直流应用和耦合电容器。
- Matching networks, tank circuits, dielectric resonator tuning/coupling.

特点 Key Features

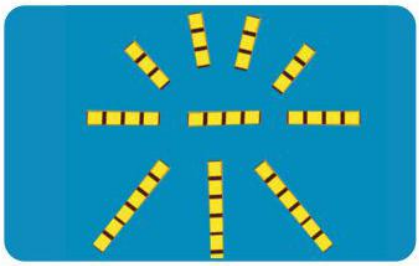
- 几何尺寸小，适合于微波电路
- 有利于电路匹配和调整
- Small size,suitable for microwave geometries
- Ideal for prototype circuit

外形尺寸 Dimension



表面电极 Surface Electrode
介质层 Dielectric ceramic
下电极层 Button Electrode

阵列型芯片电容器
Single Layer Capacitor Array



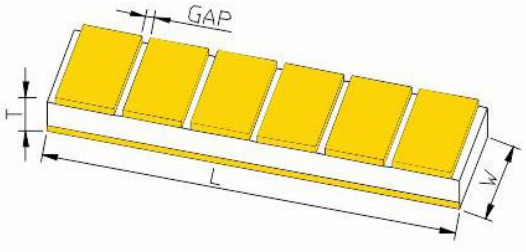
应用领域 Application

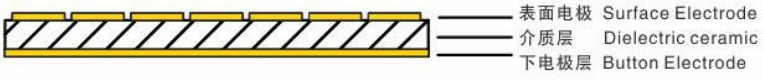
- 主要使用于单片微波集成电路，解耦电路、射频旁路。
- Microwave integrated circuit, decoupling, RF bypassing

特点 Key Features

- 安装简单
- 可在IC封装中集成以减少引线长度并提高性能
- 可以降低电容器的成本以及安装成本
- Simplified assembly
- Can be integrated into IC package to reduce bond wire lengths and improve performance
- Single insertion reduces complexity and costs

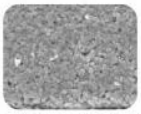
外形尺寸 Dimension



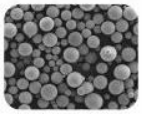


看得见的品质
Quality Assurance

★材料结构微观检控 Microcosmic QC of Material

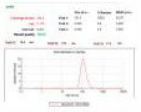


SLC陶瓷烧结晶型结构品质控制
SLC Ceramic Sintering Structure QC



材料微观检控图片
Microcosmic QC of Material Structure

SLC表面电极微观结构品质控制
SLC The Surface of Electrode Grain QC



SLC 粉体粒度分布图
SLC powder particle size analysis

★品质控制 Quality Control

扫描电子显微镜
Scanning Electron Microscope

焊锡结合强度测试
Soldering Intensity Test

网络分析仪
Network Analyzer

激光粒度分析仪
Laser Particle Size Analyzer

★电气性能稳定性 Stability Performance

高温负荷实验
High Temperature Loading Test

材料老化测试
Material Aging Test

冷热冲击实验
Temperature Shock Test

高温高压高湿实验
High Temperature/ Humidity /Pressure Test

可靠性评估方法
Reliability Evaluation Method

可焊性（GJB2442-95中4.7.8及GJB360A方法208） Soderability (GJB2442-95 4.7.13 and GJB360 method 208)
耐焊接热（GJB2442-95中4.7.13及GJB360A方法210） Resistance to solder heat (GJB2442-95 4.7.13 and GJB360A method 210)
键合强度（GJB2442-95中4.7.9及GJB548方法2011条件D） Bond Strength (GJB2442-95 4.7.9 and GJB548 method 2011 condition D)
抗剪强度（GJB2442-95中4.7.10及GJB548方法2019） Die shear strength (GJB2442-95 4.7.10 and GJB548 method 2019)
温度特性（GJB2442-95中4.7.11） Temperature characteristic (GJB2442-95 4.7.11)
温度冲击和浸渍（MIL-STD-202F方法107条件D及MIL-STD-202F方法104条件A） Thermal shock and immerse (MIL-STD-202F method 107 condition D and MIL-STD-202F method 104 condition A)
寿命（GJB2442-95中4.7.15及GJB360A方法108）+125℃，2倍额定电压 Life test (GJB2442-95 4.7.15 and GJB360A method 108) +125℃，2* rated voltage
低电压耐湿（GJB2442-95中4.7.17） Low voltage humidity (GJB2442-95 4.7.17)

公司介绍 About Us

广东爱晟电子科技有限公司是专业从事单层芯片电容（SLC）及热敏芯片的相关材料与器件研究、生产、开发及销售的民营高科技企业。采用先进的半导体制程结合自主知识产权的芯片电容与热敏芯片控制加工工艺技术，通过日本、德国进口的高精度材料加工、切片、封装及测试设备，我们实现了芯片电容与热敏芯片的高精度批量化高可靠制造。

Exsense Electronics Technology Co.Ltd is a private high-tech company focus on the R&D, manufacturing and selling Single-Layer Capacitor, NTC thermistor chip and relative electronic materials.

Adopting advanced semi-conductor processing system;combining with single layer capacitor and NTC Thermistor chip with our own patents; using`high precision material processing,cutting,sealing,packing and testing equipment from Japan and Germany. We already succeed to manufacture highly accurate,highly reliable Single Layer Capacitor and NTC Thermistor chip with mass production.

产品介绍 Products Induction

芯片电容-单层陶瓷电容器具有尺寸小、厚度薄（厚度一般为0.15-0.5mm)。等效串联电阻低、损耗低的优点，应用频率可达数GHz,适用于小型、微波的场合，可应用于微波集成电路中，起到隔直、RF旁路、滤波、调谐等作用。

Single-Layer Ceramic Capacitor possess the advantages of small size, thin thickness(0.15~0.5mm), low equivalent series resistance and low loss. The application frequency up to GHz and suitable for small microwave occasions. It also can be applied in microwave integrated circuits with the functions of blocking, RF by-passing, filtering and tuning etc.

产品型号 Part No.

DC	N	G	100	J	03	N	050	B	X

芯片电容 Die Capacitor

外型代码Type Code
N: No Border无留边
S: Single Border 单面留边
B: Both Border 双面留边
D: Double Electrode SLC 双电极
A: SLC Array 阵列型
M: Binary Multi Electrode SLC 二进制型

电极材料 Electrode Material
G: Gold Electrode 金电极
S: Silver Electrode 银电极
N:Tiw/Ni/Au
T:Tiw/Au
X: Special Material 特殊材料

容量代码 Capacitance Code
1R0=1.0PF
100=10PF
101=100PF
102=1000PF
103=10000PF

公差代码 Tolerance

A=±0.05PF	B=±0.10PF
C=±0.25PF	D=±0.5PF
F=±1.0%	G=±2%
J=±5.0%	K=±10%
L=±15%	M=±20%

尺寸代码 Size code
长L*宽W
03：0.3*0.3mm
04：0.4*0.4mm
05：0.5*0.5mm
06：0.6*0.6mm
08：0.8*0.8mm
11：1.1*1.1mm
14：1.4*1.4mm
18：1.8*1.8mm
23：2.3*2.3mm

介质代码 Dielectric code
N=NPO
X=X7R
Y=Y5V

工作电压 Working Voltage
025=25V
050=50V
100=100V

包装形式 Package
B: Bulk 散装
F: Film 贴膜
T: Taping 编带

顾客特殊要求 Special Requirements

通用型芯片电容器典型参考产品一览表
General Parameter and Part No.

尺寸Size mm / CAP (PF)	03 0.3*0.3±0.05	04 0.4*0.4±0.05	05 0.5*0.5±0.05	06 0.6*0.8±0.05	08 0.8*0.8±0.15	55 1.1*1.1±0.15	14 1.4*1.4±0.15	15 1.8*1.8±0.25	23 2.3*2.3±0.25
0.1(0R1)	√	√							
0.2(0R2)	√	√	√	√					
0.3(0R3)	√	√	√	√					
0.5(0R5)	√	√	√	√	√				
1.0(1R0)	√	√	√	√	√	√	√		
1.2(1R2)	√	√	√	√	√	√	√		
2.7(2R7)	√	√	√	√	√	√	√		
3.0(3R0)	√	√	√	√	√	√	√		
3.6(3R6)	√	√	√	√	√	√	√		
5.1(5R1)	√	√	√	√	√	√	√		
10(100)	√	√	√	√	√	√	√		
15(150)	√	√	√	√	√	√	√		
22(220)	√	√	√	√	√	√	√		
27(270)	√	√	√	√	√	√	√		
33(330)	√	√	√	√	√	√	√		
47(470)	√	√	√	√	√	√	√		
56(560)	√	√	√	√	√	√	√		
68(680)	√	√	√	√	√	√	√		
82(820)	√	√	√	√	√	√	√		
100(101)	√	√	√	√	√	√	√		
150(151)	√	√							
220(221)	√	√	√	√	√	√	√		
270(271)	√	√							
330(331)	√	√	√	√	√	√	√		
390(391)			√	√					
470(471)			√	√	√	√	√		
560(561)			√	√	√	√	√		
680(681)			√	√	√	√	√		
750(751)			√	√	√	√	√		
820(821)			√	√	√	√	√		
1000(102)						√	√		
1200(122)					√	√	√		
1500(152)					√	√	√		
1800(182)						√	√		
2200(222)						√	√		
2700(272)						√	√		
3300(332)						√	√	√	
3900(392)								√	
4700(472)								√	
5600(562)								√	
6200(622)								√	√
6800(682)								√	√
7500(752)									√
8200(822)									√
10000(103)									√

注Noted：0.3*0.3±0.05 (Lenght长0.3mm*宽 Width0.3mm±0.05) Special specifications can be customized Designed

可以根据客户要求定做特殊规格(Customized special parameters are available)

包装形式 Package Method：B: 散装 Bulk F：贴膜 Film T：编带 Taping

广东爱晟电子科技有限公司
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