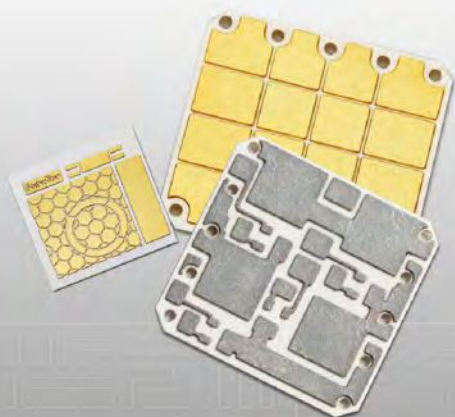
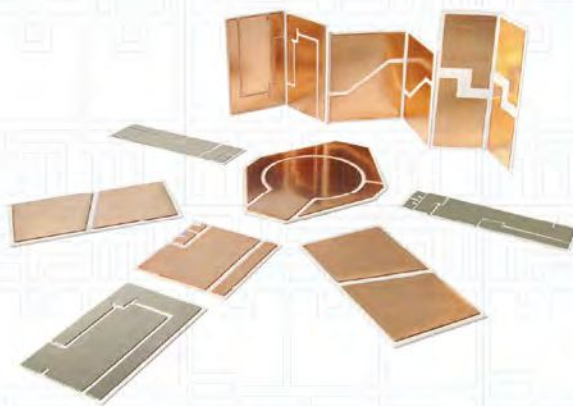


DBC Substrate



覆铜陶瓷基板是用DBC (Direct Bond Copper) 技术将铜箔直接烧结到 Al_2O_3 或 AlN 陶瓷表面而制成的一种复合基板。上海申和热磁电子有限公司拥有10多年的覆铜陶瓷基板生产经验，产品接近国际先进水平，可以根据客户需求，提供不同参数的优质产品。

DBC Substrates are composed of a ceramic insulator, Al_2O_3 or AlN onto which pure copper metal is attached by a high temperature eutectic melting process and thus tightly and firmly joined to the ceramic. Shanghai Shenhe Thermo-Magnetics Electronics Co., Ltd. with 10 years experience in producing DBC substrates, could manufacture goods close to the international first class level. Also, we accept orders against customer's requirements.



性能优势

- 良好机械强度
- 良好的绝缘性
- 良好的热传导性
- 良好的热稳定性
- 热膨胀系数接近硅
- 象PCB板一样可以蚀刻各种图形

Advantages

- Excellent mechanical strength
- Excellent electrical insulation
- High thermal conductivity
- High thermal stability
- The thermal expansion coefficient is close to that of silicon
- May be structured just like printed circuit boards



	项目	Item	数值 Value	单位 Unit
氧化铝陶瓷 Al ₂ O ₃ Ceramic	成分	Al ₂ O ₃ Content	>96	%
	厚度	Thickness	1.00, 0.76, 0.63, 0.5, 0.38 0.25	mm
	密度	Bulk Density	3.78	g/cm ³
	导热系数 (25°C)	Thermal Conductivity (25°C)	24	W/m.K
	弯曲强度(最小值)	Bending Strength(Min)	400	Mpa
	介电常数 (1MHz)	Dielectric Constant (1MHz)	9.8	
	介电损耗 (1MHz 25°C)	Dielectric Loss (1MHz 25°C)	0.0003	
	击穿电压	Dielectric Strength	20	KV/mm
	体积电阻率 (25°C, 最小值)	Volume Resistivity (25°C,Min)	1*10 ¹⁴	Ω·cm
铜 Copper	材质	Material	无氧铜 OFHC	
	厚度	Copper Thickness	0.40, 0.30, 0.25, 0.20, 0.10	mm
DBC基板性能 DBC Substrates	最大尺寸	Master Card Size (Max)	5.5 x 7.5	inch
	最大可用面积	Max. Useable area (Max)	5 x 7	inch
	线距	Spacing Between Conductors (Min)	0.5	mm
	线宽	Width of Conductors (Min)	0.5	mm
	热膨胀系数	Thermal Expansivity (Normally)	7.4 x 10 ⁻⁶	K ⁻¹
	铜层剥离强度(最小值)	Peeling Strength (Min)	>4	N/mm
	可焊性	Solderability	>95%	
	表面状态	Surface Options	裸铜/镀镍/镀金 Bare copper/Ni-plating/Au-Flash	

* 氧化铝基板取决于客户要求。

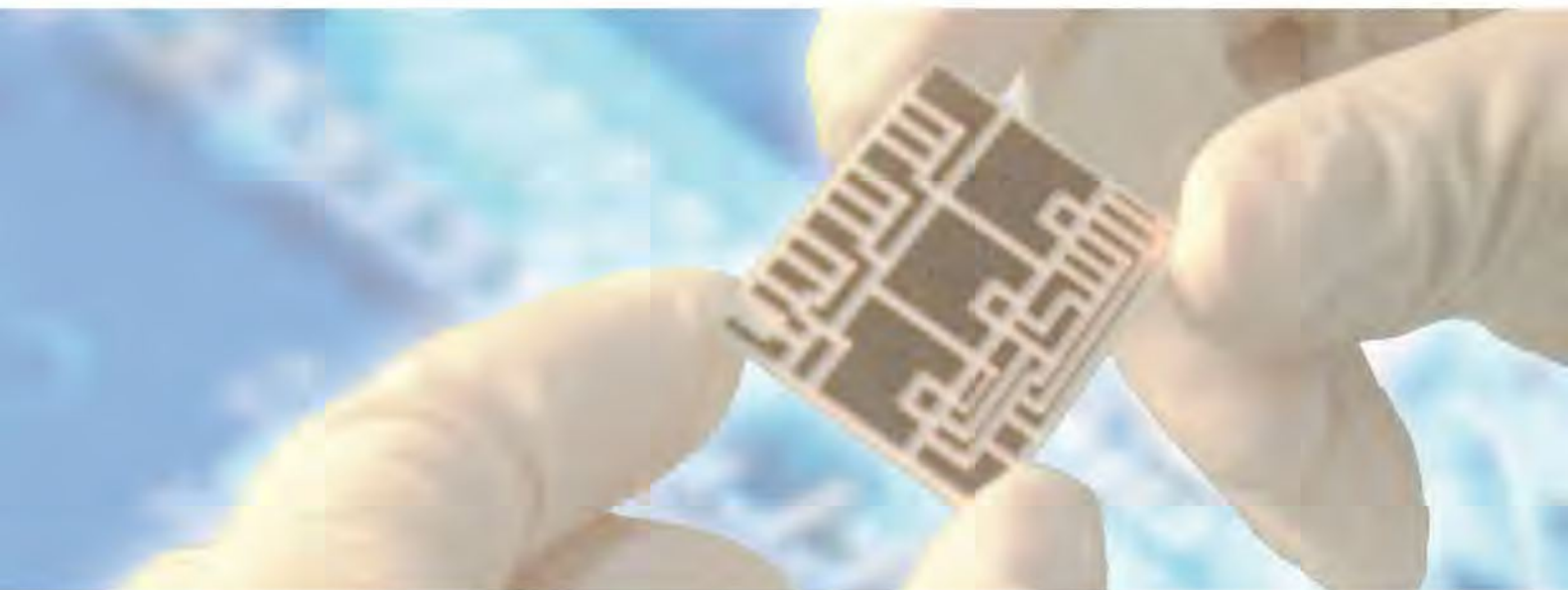
* AlN DBC is based on client requests.

* 也可以根据客户的要求定制。

* We also accept custom-made orders according to specific requirements.

* 根据实际情况，一些参数值可能会略有不同。

* Some values will be a little bit different from the table according to specific conditions.



DBC Substrate Application



工业 Industry

热电制冷器 Thermoelectric Coolers
空调 Air Conditioning



环保技术 Environmental Technology

聚焦太阳能电池 Concentrator Photovoltaic (CPV)
太阳能转换器 Solar Converters
风力发电站 Wind Power Plants
LED 照明 LED Lighting



家电 Home Appliances

白色家电 White Goods
热电制冷器 Thermoelectric Coolers



航空航天 Aerospace

热电制冷器 Thermoelectric Coolers
激光 Laser
电源 Power Supplies



电力电子技术 Power Electronics

IGBT模块 IGBT Modules
IPM模块 IPM Modules
MOS模块 MOS Modules
其他半导体组件 Power Construction
Semiconductor Elements



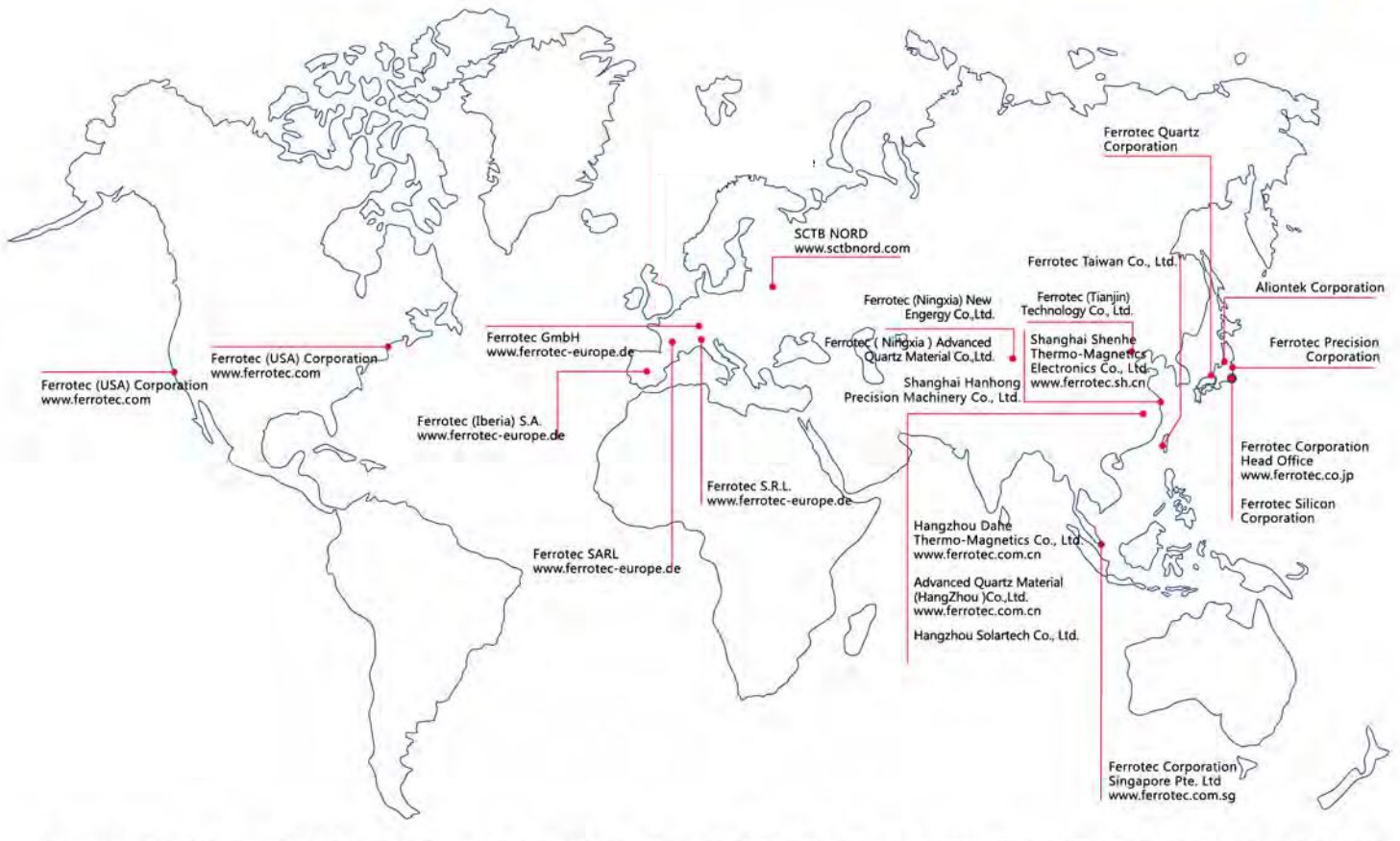
汽车 Automotive

ABS
电子传动 Electrical Power Steering
LED车灯 LED Lighting
混合动力汽车 Hybrid Vehicles
电动汽车 Electric Vehicles



IT

热电制冷器 Thermoelectric Coolers
电源 Power Supplies



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Founded on a technology core of Ferrofluid magnetic liquid and Ferrofluidic sealing products, our company and our product portfolio have grown to meet the evolving needs of our customers. Ferrotec is now a global enterprise characterized by substantial intercompany cooperation in research, manufacturing and marketing of products.



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