

VT-42 (Black)

UL Approval: E214381 Version: Rev. B2

技术资料表

VT-42 (Black) 基板 / 半固化片

概述

- 双氰胺固化体系
- 标准 FR-4 (Tg140°C)
- 黑色、遮光
- UV 遮蔽

应用

LED, 仪器仪表、计时器等

产品规格

- Core Thickness: .002" (0.05mm) to .200" (5mm), available in sheet or panel form
- Copper Foil: 1/4oz to 12oz
- Prepregs are available in roll or panel form
- E-Glass styles: 7628

注：对于.005" 以下的芯板，建议使用低棱线的反转铜箔，但其剥离强度比标准铜箔之剥离强度低
≈1-2lbs/in (0.35Kg/m).

存储条件&保存期限

		Prepreg		Laminate
Storage Condition	Temperature	Below 23°C (73°F)	Below 5°C (41°F)	Room
	Relative Humidity	Below 55% RH	/	/
Shelf Life		3 Months	6 Months	24 Months (airproof)

过期的半固化片在使用前需要复测以确认特性。

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DATASHEETS

特性表 IPC-4101C Specification Sheet(s)/21

Properties	Test Method	Units	Specification	Typical Value
Thermal Properties				
Glass Transition Temp. (Tg)				
DSC	IPC-TM-650 2.4.25	°C	110 minimum	140
TMA	IPC-TM-650 2.4.24	°C	-	-
Td	ASTM D3850	°C	-	305
T260	IPC-TM-650 2.4.24.1	Minute	-	10
T288	IPC-TM-650 2.4.24.1	Minute	-	-
Thermal Stress @ 288°C	IPC-TM-650 2.4.13.1	Second	Pass 10s	150
Z-axis CTE				
Before Tg	IPC-TM-650 2.4.24	ppm/°C	-	50
After Tg	IPC-TM-650 2.4.24	ppm/°C	-	250
Total Expansion (50~260°C)	IPC-TM-650 2.4.24	%	-	3.75
MOT	UL 94	°C	-	130
Electrical Properties				
Dielectric Constant @ 1GHz	IPC-TM-650 2.5.5.9	-	5.4 maximum	4.5
Dissipation Factor @ 1GHz	IPC-TM-650 2.5.5.9	-	0.035 minimum	0.018
Volume Resistivity				
After Moisture Resistance	IPC-TM-650 2.5.17.1	MΩ-cm	10 ⁶ minimum	5*10 ⁸
E-24/125	IPC-TM-650 2.5.17.1	MΩ-cm	10 ³ minimum	5*10 ⁶
Surface Resistivity				
After Moisture Resistance	IPC-TM-650 2.5.17.1	MΩ	10 ⁴ minimum	5*10 ⁷
E24/125	IPC-TM-650 2.5.17.1	MΩ	10 ³ minimum	5*10 ⁶
Electrical Strength	IPC-TM-650 2.5.6.2	Volt/mil (KV/mm)	762 (30) minimum	1200~1400 (54)
Dielectric Breakdown	IPC-TM-650 2.5.6	KV	40 minimum	60
Comparative Tracking Index (CTI)	ASTM D3638	Rating (Volt)	-	Grade 4 (100~175)
Arc Resistance	ASTM D495	Second	-	111
Mechanical Properties				
Peel Strength (1oz)				
As received	IPC-TM-650 2.4.8	lb/in (N/mm)	-	10~12 (1.7~2.0)
After thermal stress	IPC-TM-650 2.4.8	lb/in (N/mm)	6 (1.05) minimum	9~12 (1.5~2.0)
Flexural Strength				
Warp	IPC-TM-650 2.4.4	Kpsi (MPa)	60 (415) minimum	87 (600)
Fill	IPC-TM-650 2.4.4	Kpsi (MPa)	50 (345) minimum	72 (500)
Physical Properties				
Moisture Absorption	IPC-TM-650 2.6.2.1	%	0.80 maximum	0.25
Flammability	UL-94	Rating	V0 minimum	V0

所有提供的测试数据均为典型值，非特定规范。