

VT-441

UL Approval: E214381 Version: Rev. B4

技术资料表

VT-441 基板 / 半固化片

概述

- 酚醛固化体系
- 无卤素&中Tg FR-4
- UV遮蔽
- 耐CAF
- 低Z轴膨胀系数
- 优异的热信赖性

应用

电脑、通讯设备、移动电话、
智能手机、测量仪器、电视机、
VCR、游戏机，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
- Pre-pregs are available in roll or panel form
- E-Glass styles: 7628, 1506, 1500, 2113, 2313, 3313, 2116, 1080, 1086, 1078, 106 & 1067, etc

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1lbs/in~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)

过期半固化片在使用前需复测以确认特性。

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DATASHEETS

特性表: IPC-4101C Slash Sheet(s)/128(most compliant),127

Properties	Test Method	Units	Specification	Typical Value
Thermal Properties				
Glass Transition Temp. (Tg)				
DSC	IPC-TM-650 2.4.25	°C	-	152
TMA	IPC-TM-650 2.4.24	°C	145 minimum	158
Td	ASTM D3850	°C	325 minimum	385
T260	IPC-TM-650 2.4.24.1	Minute	30 minimum	>60
T288	IPC-TM-650 2.4.24.1	Minute	5 minimum	>30
Thermal Stress @ 288°C	IPC-TM-650 2.4.13.1	Second	Pass 10s	>600
Z-axis CTE				
Before Tg	IPC-TM-650 2.4.24	ppm/°C	60 maximum	38
After Tg	IPC-TM-650 2.4.24	ppm/°C	300 maximum	190
Total Expansion (50~260°C)	IPC-TM-650 2.4.24	%	3.5 maximum	2.2
MOT	UL 94	°C	-	130
Electrical Properties				
Dielectric Constant @ 1GHz RC 50%	IPC-TM-650 2.5.5.9	-	5.4 maximum	4.4
Dissipation Factor @ 1GHz RC 50%	IPC-TM-650 2.5.5.9	-	0.035 maximum	0.014
Volume Resistivity				
After Moisture Resistance	IPC-TM-650 2.5.17.1	MΩ-cm	10 ⁴ 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 3 (175~250)
Arc Resistance	ASTM D495	Second	-	187
Mechanical Properties				
Peel Strength (1oz)				
As received	IPC-TM-650 2.4.8	lb/in (N/mm)	-	7~9 (1.2~1.6)
After thermal stress	IPC-TM-650 2.4.8	lb/in (N/mm)	6 (1.05) minimum	7~9 (1.2~1.6)
Flexural Strength				
Warp	IPC-TM-650 2.4.4	Kpsi (MPa)	60 (415) minimum	72 (500)
Fill	IPC-TM-650 2.4.4	Kpsi (MPa)	50 (345) minimum	58 (400)
Physical Properties				
Moisture Absorption	IPC-TM-650 2.6.2.1	%	0.80 maximum	0.18
Flammability	UL-94	Rating	V0 minimum	V0

所提供测试数据均为典型值，非特定规范。