

VT-42F

UL Approval: E214381 Version: Rev. B3

技术资料表

VT-42F 基板 / 半固化片

概述

- 双氰胺固化体系
- 标准 FR-4
- UV 遮蔽

应用

医疗、汽车领域
 一次性成型装配

产品规格

- Core Thickness: 0.002" to 0.006", or as required
- Copper Foil: 1/4oz to 3oz
- Prepregs are available in roll or panel form
- Prepregs pressed thickness .002", .003", .004", or as required

Glass Style	Resin Content (%)	Pressed Thickness (mm)
106	72%	0.050
1080	63%	0.075
2113	56%	0.100

存储条件&保存期限

		Prepreg		Laminate
Storage Condition	Temperature	Below 22°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要复测以确认特性。

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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	120~125
TMA	IPC-TM-650 2.4.24	°C	-	-
Td	ASTM D3850	°C	-	305
T260	IPC-TM-650 2.4.24.1	Minute	-	25
T288	IPC-TM-650 2.4.24.1	Minute	-	2
Thermal Stress @ 288°C	IPC-TM-650 2.4.13.1	Second	Pass 10s	300
Z-axis CTE				
Before Tg	IPC-TM-650 2.4.24	ppm/°C	-	50
After Tg	IPC-TM-650 2.4.24	ppm/°C	-	260
Total Expansion (50~260°C)	IPC-TM-650 2.4.24	%	-	4
MOT	UL 94	°C	-	90
Electrical Properties				
Dielectric Constant @ 1GHz RC 50%	IPC-TM-650 2.5.5.9	-	5.4 maximum	4.8
Dissipation Factor @ 1GHz RC 50%	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	54
Dielectric Breakdown	IPC-TM-650 2.5.6	KV	40 minimum	60
Comparative Tracking Index (CTI)	ASTM D3638	Rating (Volt)	-	Class 3 (175~250)
Arc Resistance	ASTM D495	Second	-	111
Mechanical Properties				
Peel Strength (1oz)				
As received	IPC-TM-650 2.4.8	lb/in (N/mm)	-	10~14 (1.7~2.5)
After thermal stress	IPC-TM-650 2.4.8	lb/in (N/mm)	6 minimum	9~12 (1.5~2.0)
Flexural Strength				
Warp	IPC-TM-650 2.4.4	Kpsi (MPa)	415 minimum	87 (600)
Fill	IPC-TM-650 2.4.4	Kpsi (MPa)	345 minimum	72 (500)
Physical Properties				
Moisture Absorption	IPC-TM-650 2.6.2.1	%	0.80 maximum	0.15
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。

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弯折性

Core	Pre-treatment	Bending Radius(1cycle:±90°~-90°)		Hi-pot after bending (VDC)
		2mm	5mm	
3mil 1/1	Lead free IR *3	70 cycles	150 cycles	4000
5mil 1/1	Lead free IR *3	50 cycles	120 cycles	6000

基板组合表

VT-42F semi-flex laminates are available as sheets or panels with double or single sided copper cladding. Standard copper thickness are 18, 35 and 70um.

Nominal dielectric thickness (mm)	Construction
0.050	106*1
0.075	1080*1
0.100	2113*1
0.150	1080*2

内层基板容易弯折，请小心操作。