

VT-447PP NF/LF

UL Approval: E214381 Version: B1

No Flow & Low Flow Prepreg

General Information

VT-447 No Flow and Low Flow product is designed to meet friendly environment requirement. It has good bonding and thermal performance in applications of heat sink bonding and rigid-flex board, and have a minimal flow range with a consistent lamination.

- > High Tg & High Td
- > Halogen Free & Lead Free Compatible
- > IPC-4101E /127 /128 /130
- > Optimized flow range for camera module

Storage Condition & Shelf Life

		Prepreg	
Storage Condition	Temperature	< 23°C [73°F]	< 5°C [41°F]
	Relative humidity	< 55%	/
Shelf Life		3 months	6 months

The prepreg exceeding shelf life should be retested.

Availability

Product	Type	Glass Type	Resin Content	Flow Range (mil)	(mm)	Pressed Thickness (mil)	(mm)
VT-447 PP Lead Free & Environment Friendly Tg 170°C	1027 NF	1027	57%	10~50	0.25~1.25	1.2	0.030
	1037 NF	1037	62%	10~50	0.25~1.25	1.6	0.040
	1067 NF	1067	64%	10~50	0.25~1.25	2.0	0.050
	1067 NF	1067	68%	10~50	0.25~1.25	2.4	0.060
	1078 NF	1078	60%	10~50	0.25~1.25	3.1	0.080
	1086 NF	1086	62%	10~50	0.25~1.25	3.6	0.090
	1067 LF	1067	72%	60~120	1.5~3	2.6	0.066
	1078 LF	1078	65%	60~120	1.5~3	3.3	0.084

* Measured by micrometer "NF" ---- No Flow PP, "LF" ---- Low Flow PP

1) Press Temperature ---- 171°C

2) 3plys per pressing

3) Press Pressure ---- 200psi Built per IPC-TM-650 2.3.17.2

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Properties Sheet of Pressed No Flow Prepreg

Test Item		Test Method (IPC-TM-650)	Unit	VT-447
Tg	TMA	2.4.24	°C	170
Td	TGA	ASTM D3850	°C	370
Electric Strength		2.5.6.2	KV/mm	54
Peel Strength with 1oz Cu		2.4.8	Lb/in	8-9
Peel strength with CVL		2.4.8	Lb/in	7.5
Moisture Absorption	D24 / 23	2.6.21	%	0.10
	After PCT	1atm., 121°C, 1hour	%	0.12
X,Y-axis CTE	30~125°C	2.4.24	ppm/°C	12~15
Z-axis CTE	Before Tg	2.4.24	ppm/°C	70
	After Tg			300
Thermal Stress	Solder dip 288°C	2.4.13.1	Second	>300
Breakdown Voltage	D48/50+ D0.5/23	2.5.6	KV	>60
Arc Resistance	D48/50+ D0.5/23	2.5.1	Second	120
DK (RC60% at 1GHz)	C24/23/50	2.5.5.9	—	3.9
DF (RC60% at 1GHz)	C24/23/50	2.5.5.9	—	0.015
Flammability	As Received	UL94	Rating	V0

All test data provided are typical values and not intended to be specification values.

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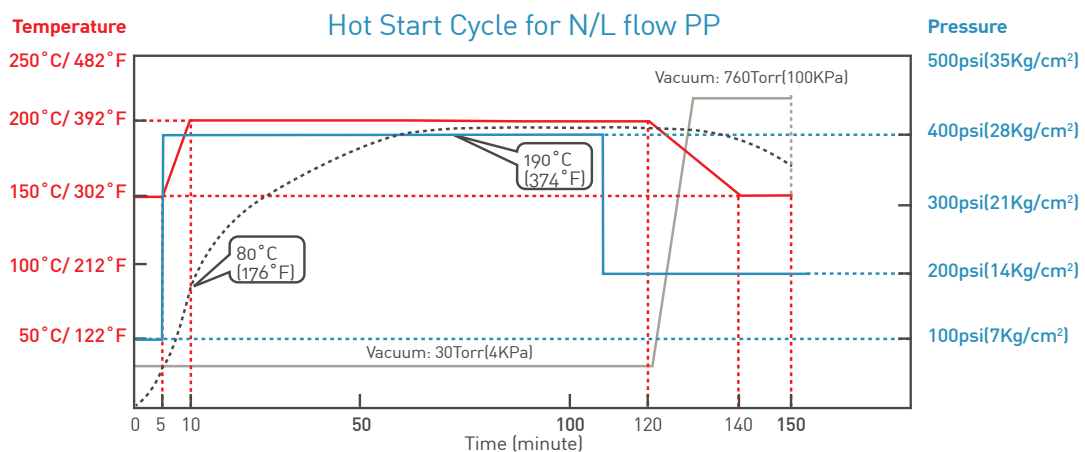
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Press Condition

	VT-447PP
Heating rate of materials	3.0-5.0 °C/min (5~10 °F/min)
Cure Temperature	≥185 °C
Cure Time	>60min
Vacuum should be continued until over 140 °C (284 °F) [Material Temperature]	
Pressure on materials: Start with 100psi, Full pressure: 250~450psi	
Cold Press: Keep Plate @ Room Temperature by water; Pressure: 100psi; Dwell Time: 60minutes	

Contact Ventec technical service to discuss the specific condition.



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