

## tec-speed 6.0 H-LF - VT-462SH NF/LF UL Approval: E214381 Version: 02/12/2024

### Ultra Low Loss No Flow & Low Flow Prepreg

### General Information

VT-462SH (Ultra low loss) 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 Speed / Ultra Low Loss
- > Halogen Free & Lead Free Compatible
- > Optimized flow range

### Storage Condition

Properties		Prepreg	
Storage Condition	Temperature	Below 23°C (73°F)	Below 5°C (41°F)
	Relative humidity	Below 55% RH	/

### Availability

Type	Glass Type	Flow Range		Pressed Thickness (100% Copper Remain)	
		mil	mm	mil	mm
1067NF-50	1067	20~80	0.5~2	2.0	0.050
1067NF-60	1067	20~80	0.5~2	2.4	0.060
1078NF-80	1078	20~80	0.5~2	3.1	0.080

\* Measured by micrometer "NF" ---- No 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

Properties		Test Method	Units	Typical Value
<b>Thermal Properties</b>				
Tg	TMA	IPC-TM-650 2.4.24	°C	175
	DMA	IPC-TM-650 2.4.24.4		200
Td	TGA	ASTM D3850	°C	440
Thermal Stress @ 288 °C		IPC-TM-650 2.4.13.1	Second	>300
X,Y-axis CTE	30~125 °C	IPC-TM-650 2.4.24	°C	12~15
Z-axis CTE	Before Tg	IPC-TM-650 2.4.24	ppm/°C	70
	After Tg	IPC-TM-650 2.4.24	ppm/°C	240
<b>Electrical Properties</b>				
Dk (RC 60%)	@ 10GHz C24/23/50	IPC-TM-650 2.5.5.9	-	3.2
Df (RC 60%)	@ 10GHz C24/23/50	IPC-TM-650 2.5.5.9	-	0.004
Electrical Strength		IPC-TM-650 2.5.6.2	KV/mm	54
Breakdown Voltage	D48/50 + D0.5/23	IPC-TM-650 2.5.6	KV	60
Arc Resistance	D48/50 + D0.5/23	IPC-TM-650 2.5.1	Second	120
<b>Mechanical Properties</b>				
Peel Strength (1oz Cu)		IPC-TM-650 2.4.8	lb/in	5-6
Peel Strength with CVL		IPC-TM-650 2.4.8	lb/in	7.0
<b>Physical Properties</b>				
Moisture	D24/23	IPC-TM-650 2.6.21	%	0.10
Moisture Absorption	after PCT	1 atm., 121 °C, 1 hour	%	0.12
Flammability		UL-94	Rating	V-0

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

Disclaimer: The information and data contained in this technical literature is based on data and knowledge correct at the time of publishing/printing and is believed to be accurate and is offered in good faith for the benefit of the user. The user should make his own tests to verify the suitability of this product for any application before its use. All data are typical values only and subject to change without notice.