



P25N

Isola offers a P25N product line of polyimide-based no flow prepreg materials for high temperature printed circuit applications.

These products consist of a polyimide resin system suitable for military, commercial or industrial electronic applications requiring superior performance and the utmost in thermal properties. These products utilize a polyimide and thermoplastic blend resin, fully cured without the use of Methylenedianiline (MDA). This results in a polymer with a high Tg without the characteristic difficulties of brittleness and low initial bond strength associated with traditional thermoset polyimides.

ORDERING INFORMATION:

Contact your local sales representative or visit www.isola-group.com for further information.

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Performance

Tg 250°C

Td 383°C

Dk 3.67

Df 0.0187

zIPC- 4101C /21 /24 /26 /98 /101 /126

UL - File Number E41625

Qualified to UL's MCIL Program

Product Features

- Industry Recognition
 - UL File Number: E41625
 - RoHS Compliant
- Performance Attributes
 - Halogen free
- Processing Advantages

Product Availability

- Standard Material Offering: Laminate
 - Copper Foil Type
 - Copper Weight
- Standard Material Offering: Prepreg
 - Roll or panel form
 - Tooling of prepreg panels
- Glass Fabric Availability
 - E-glass

P25N Specifications

Property		Typical Value	Units	Test Method
			Metric (English)	IPC-TM-650 (or as noted)
Glass Transition Temperature (Tg) by DSC		250	°C	2.4.25
Decomposition Temperature (Td) by TGA @ 5% weight loss		383	°C	2.4.24.2
Time to Delaminate by TMA (Copper removed)	A. T260 B. T288	60	Minutes	2.4.24.1
Z-Axis CTE	A. Pre-Tg B. Post-Tg C. 50 to 260°C, (Total Expansion)	55 TBD –	ppm/°C ppm/°C %	2.4.24
X/Y-Axis CTE	Pre-Tg	13/14	ppm/°C	2.4.24.1
Thermal Conductivity		0.4	W/mK	ASTM E1952
Thermal Stress 10 sec @ 288°C (550.4°F)	A. Unetched B. Etched	Pass	Pass Visual	2.4.13.1
Dk, Permittivity	A. @ 100 MHz B. @ 500 MHz C. @ 1 GHz D. @ 2 GHz	3.75 3.72 3.70 3.67	–	2.5.5.9 2.5.5.9 2.5.5.9 Bereskin Stripline
Df, Loss Tangent	A. @ 100 MHz B. @ 500 MHz C. @ 1 GHz D. @ 2 GHz	0.0140 0.0157 0.0180 0.0198	–	2.5.5.9 2.5.5.9 2.5.5.9 Bereskin Stripline
Volume Resistivity	A. After moisture resistance B. At elevated temperature	3.0 x 10 ⁸ 7.0 x 10 ⁸	MΩ-cm	2.5.17.1
Surface Resistivity	A. After moisture resistance B. At elevated temperature	3.0 x 10 ⁶ 2.0 x 10 ⁸	MΩ	2.5.17.1
Dielectric Breakdown		>55	kV	2.5.6
Arc Resistance		130	Seconds	2.5.1
Electric Strength (Laminate & laminated prepreg)		44 (1100)	kV/mm (V/mil)	2.5.6.2
Comparative Tracking Index (CTI)		4 (100-174)	Class (Volts)	UL 746A ASTM D3638
Flexural Strength	A. Length direction B. Cross direction	83,600 55,500	lb/inch ²	2.4.4
Tensile Strength	A. Length direction B. Cross direction	55,030 35,370	lb/inch ²	ASTM D3039
Moisture Absorption		0.5	%	2.6.2.1
Flammability (Laminate & laminated prepreg)		HB	Rating	UL 94
Max Operating Temperature		140	°C	UL 796

The data, while believed to be accurate and based on analytical methods considered to be reliable, is for information purposes only. Any sales of these products will be governed by the terms and conditions of the agreement under which they are sold.

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