

IPC-4101 /30 UL - File Number E41625

Isola's G200 product is a fully proven laminate and prepreg system designed to meet today's high reliability printed circuit board requirements.

PRODUCT FEATURES

Industry Recognition

- UL File Number: E41625
- RoHS Compliant

Performance Attributes

- CAF resistant

PRODUCT AVAILABILITY

Standard Material Offering: Laminate

- 2 to 125 mil (0.05 to 3.2 mm)

Copper Foil Type

- HTE Grade 3

Copper Weight

- ½, 1 and 2 oz (18, 35 and 70 µm) available
- Thinner copper foil available

Standard Material Offering: Prepreg

- Tooling of prepreg panels
- Moisture barrier packaging

Glass Fabric Availability

- E-glass
- Square weave glass
- Mechanically spread glass

Blending Bismaleimide/Triazine (BT) and epoxy resin provides G200 with enhanced thermal, mechanical and electrical performance over most epoxy materials. G200 possesses performance characteristics that make it an excellent selection for large panel size, high layer count Printed Wiring Boards (PWB).

PRODUCT ATTRIBUTES



TYPICAL MARKET APPLICATIONS



ORDERING INFORMATION:

Contact your local sales representative or contact info@isola-group.com for further information.

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Typical Values Table

Property	Typical Value	Units		Test Method
		Metric (English)	IPC-TM-650 (or as noted)	
Glass Transition Temperature (Tg) by DSC	180	°C	2.4.25C	
Decomposition Temperature (Td) by TGA @ 5% weight loss	325	°C	2.4.24.6	
Time to Delaminate by TMA (Copper removed)	A. T260 B. T288	60 >10	Minutes 2.4.24.1	
Z-Axis CTE	A. Pre-Tg B. Post-Tg C. 50 to 260°C, (Total Expansion)	55 275 3.30	ppm/°C ppm/°C %	2.4.24C
X/Y-Axis CTE	Pre-Tg	13/14	ppm/°C	2.4.24C
Thermal Conductivity		0.35	W/m·K	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. @ 1 GHz C. @ 2 GHz D. @ 5 GHz E. @ 10 GHz	3.80 3.70 3.70 3.65 3.65	—	2.5.5.3 2.5.5.9 Bereskin Stripline Bereskin Stripline Bereskin Stripline
Df, Loss Tangent	A. @ 100 MHz B. @ 1 GHz C. @ 2 GHz D. @ 5 GHz E. @ 10 GHz	0.0150 0.0150 0.0130 0.0150 0.0150	—	2.5.5.3 2.5.5.9 Bereskin Stripline Bereskin Stripline Bereskin Stripline
Volume Resistivity	A. After moisture resistance B. At elevated temperature	8.9×10^8 6.5×10^8	MΩ·cm	2.5.17.1
Surface Resistivity	A. After moisture resistance B. At elevated temperature	2.21×10^6 4.4×10^8	MΩ	2.5.17.1
Dielectric Breakdown		>60	kV	2.5.6B
Arc Resistance		130	Seconds	2.5.1B
Electric Strength (Laminate & laminated prepreg)		45 (1175)	kV/mm (V/mil)	2.5.6.2A
Comparative Tracking Index (CTI)		3 (175-249)	Class (Volts)	UL 746A ASTM D3638
Peel Strength	A. Low profile copper foil and very low profile copper foil all copper foil >17 μm [0.669 mil] B. Standard profile copper 1. After thermal stress 2. After process solutions	1.14 (6.5) 0.96 (5.5) 0.90 (5.1)	N/mm (lb/inch)	2.4.8C 2.4.8.2A 2.4.8.3
Flexural Strength	A. Length direction B. Cross direction	599 (86.9) 507 (73.6)	MPa (kpsi)	2.4.4B
Tensile Strength	A. Length direction B. Cross direction	356 (51.6) 292 (42.4)	MPa (kpsi)	ASTM D3039
Young's Modulus	A. Length direction B. Cross direction	3489 3200	ksi	ASTM D790-15e2
Poisson's Ratio	A. Length direction B. Cross direction	0.182 0.160	—	ASTM D3039
Moisture Absorption		0.2	%	2.6.2.1A
Flammability (Laminate & laminated prepreg)		V-0	Rating	UL 94
Relative Thermal Index (RTI)		130	°C	UL 796

NOTES

Visit our site <http://www.isola-group.com> for more details.

Revisions:

A: Initial release - 4/17

B: Corrected units for Flexural and Tensile Strength - 8/18

C: Change MOT to RTI 5/19

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