TerraGreen® 400G (RF/MW)

Halogen-free, Extremely Low Loss Material

UL - File Number E41625

TerraGreen® 400G laminate materials are our most advanced ultra high speed, halogen free ultra low loss design solution.

PRODUCT FEATURES

Industry Recognition

- UL File Number: E41625
- RoHS Compliant

Performance Attributes

- CAF resistant
- Lead-free assembly compatible
- 0.8 mm pitch capable
- 6x 260°C reflow capable
- 6x 288°C solder float capable

Processing Advantages

- FR-4 process compatible
- Excellent fill and flow for heavy copper
- Multiple lamination cycles
- HDI technology compatible

PRODUCT AVAILABILITY

Standard Material Offering: Laminate

- 2.5, 5, 7.5, 10, 12.5, 15, 20, 30, 60 mil (0.0635, 0.127, 0.1905, 0.254, 0.3175, 0.381, 0.510, 0.760, 1.50 mm)

Copper Foil Type

Copper Weight

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

Standard Material Offering: Prepreg

Glass Fabric Availability

- Low Dk glass
- Square weave glass
- Mechanically spread glass

ORDERING INFORMATION:

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

TerraGreen® 400G (RF/MW) is our Halogen Free material solution for next generation 5G infrastructure and mmWave applications. Our novel resin system has been engineered for high data rates with excellent cost for loss performance.

TerraGreen® 400G (RF/MW) is lead free compatible and can be processed utilizing standard PCB equipment and processing steps.

TerraGreen® 400G (RF/MW) meets UL 94 V-0 and is halogen free.

PRODUCT ATTRIBUTES

Image not found or type unknown HIGH THERMAL RELIABILITY Image not found or type unknown Image not found or type unknown

TYPICAL MARKET APPLICATIONS

AUTOMOTIVE & TRANSPORTATION Image not found or type unknown AEROSPACE & DEFENSE

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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		200	°C	2.4.25C
Glass Transition Temperature (Tg) by DMA		210	—	2.4.24.4
Glass Transition Temperature (Tg) by TMA		180	°C	2.4.24C
Decomposition Temperature (Td) by TGA @ 5% weight loss		400	°C	2.4.24.6
Time to Delaminate by TMA (Copper removed)	T288	60+	Minutes	2.4.24.1
Z-Axis CTE		3.1	ppm/°C	2.4.24C
X/Y-Axis CTE		14-23	ppm/°C	2.4.24C
Thermal Stress 10 sec @ 288ºC (550.4ºF)	A. Unetched B. Etched	Pass	Pass Visual	2.4.13.1
Dk, Permittivity	A. @ 5 GHz B. @ 10 GHz C. @ 20 GHz	3.07	—	2.5.5.5
Df, Loss Tangent	A. @ 5 GHz B. @ 10 GHz C. @ 20 GHz	0.0018	—	Bereskin Stripline
Peel Strength	Low profile copper foil and very low profile copper foil all copper foil >17 µm [0.669 mil]	0.6 (3.5)	N/mm (lb/inch)	2.4.8C
Flammability (Laminate & laminated prepreg)		V-0	Rating	UL 94
Relative Thermal Index (RTI)		130	°C	UL 796

NOTES

Notes:
All data is preliminary and subject to chaange
*** Data was developed using 55% RC rigid laminate**
Revisions:
A: Preliminary Release

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