

WordPress database error: [You have an error in your SQL syntax; check the manual that corresponds to your MySQL server version for the right syntax to use near ') AND A.meta_key = 'attribute_icon_with_text' AND P.post_type = 'attachment' at line 3]
SELECT meta_value as attachment_id, P.ID, P.guid FROM isola_postmeta A INNER JOIN isola_posts P ON A.meta_value = P.ID WHERE A.post_id IN () AND A.meta_key = 'attribute_icon_with_text' AND P.post_type = 'attachment']

isola®

new test

Lead-free Epoxy Laminate and Prepreg

Tg 180°C Td 350°C Dk 3.97 Df 0.0200

UL - File Number E41625

IS410 is a high-performance FR-4 epoxy laminate and prepreg system designed to support the printed circuit board industry's requirements for higher levels of reliability and the trend to use lead-free solder.

PRODUCT FEATURES

Industry Recognition

- UL File Number: E41625
- RoHS Compliant

Performance Attributes

- Lead-free assembly compatible
- 6x 288°C solder float capable

Processing Advantages

- FR-4 process compatible

PRODUCT AVAILABILITY

Standard Material Offering: Laminate

- 2 to 125 mil (0.05 to 3.2 mm)

Copper Foil Type

- HTE Grade 3
- RTF (Reverse Treat Foil)

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

Glass Fabric Availability

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

Isola's IS410 has a glass transition temperature (Tg) of 180°C and is specially formulated for superior performance through multiple thermal excursions, passing 6X solder tests at 288°C. IS410 is optimized for enhanced drilling performance allowing high aspect ratio holes of ≤10 mils. Its unique resin chemistry provides CAF resistance with the benefit of long-term reliability of boards built with small feature designs.

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		350	°C	2.4.24.6
Time to Delaminate by TMA (Copper removed)	A. T260	50	Minutes	2.4.24.1
	B. T288	10		
Z-Axis CTE	A. Pre-Tg	55	ppm/°C	2.4.24C
	B. Post-Tg	250	ppm/°C	2.4.24C
	C. 50 to 260°C, (Total Expansion)	3.5	%	
X/Y-Axis CTE	Pre-Tg	11	ppm/°C	2.4.24C
Thermal Conductivity		0.5	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	3.96	—	2.5.5.3
	B. @ 1 GHz	3.90		2.5.5.9
	C. @ 2 GHz	3.97		Bereskin Stripline
	D. @ 5 GHz	3.87		Bereskin Stripline
	E. @ 10 GHz	3.87		Bereskin Stripline
Df, Loss Tangent	A. @ 100 MHz	0.0149	—	2.5.5.3
	B. @ 1 GHz	0.0189		2.5.5.9
	C. @ 2 GHz	0.0200		Bereskin Stripline
	D. @ 5 GHz	0.0230		Bereskin Stripline
	E. @ 10 GHz	0.0230		Bereskin Stripline
Volume Resistivity	A. After moisture resistance B. At elevated temperature	8.0 x 10 ⁸ 3.6 x 10 ⁸	MΩ-cm	2.5.17.1
Surface Resistivity	A. After moisture resistance B. At elevated temperature	8.0 x 10 ⁶ 4.5 x 10(8)	MΩ	2.5.17.1
Dielectric Breakdown		>50	kV	—
Arc Resistance		129	Seconds	—
Electric Strength (Laminate & laminated prepreg)		44 (1100)	kV/mm (V/mil)	—
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]	1.14 (6.5)	N/mm (lb/inch)	2.4.8C
	B. Standard profile copper	1.225 (7.0)		2.4.8.2A
	1. After thermal stress	1.14 (6.5)		2.4.8.3
	2. At 125°C (257°F)	0.90 (5.1)		2.4.8.3
Flexural Strength	A. Length direction	570 (82.6)	MPa (kpsi)	2.4.4B
	B. Cross direction	458 (66.4)		
Tensile Strength	A. Length direction	420 (60.9)	MPa (kpsi)	ASTM D3039
	B. Cross direction	316 (45.8)		
Poisson's Ratio	A. Length direction	0.175	—	ASTM D3039
	B. Cross direction	0.143		
Moisture Absorption		0.20	%	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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