SI10U

Halogen-free Low CTE Laminate for IC Plastic Packages

FEATURES

- Low CTE and high modulus, effective to reduce the warpage of substrate for IC PKG.
- Superior heat resistance after moisture absorption.
- Good drill processability.
- Halogen-free material.

APPLICATIONS

Substrates for Memory, CSP, BGA, POP etc.

GENERAL PROPERTIES

Items	Test Method	Test Condition	Unit	SI10U	SI10U LC
Tg	-	DMA	℃	270	270
X/Y-CTE	-	<Tg	ppm/℃	10	7
Flexural modulus	-	A	GPa	30	32
Peel Strength	IPC-TM650 2.4.8	12um LP	N/mm	0.8	0.8
Heat resistance after Moisture absorption	-	PCT 5h +288℃ solder 20s	-	Pass	Pass
Heat resistance	-	300℃/solder dip	S	>300	>300
Moisture Absorption	-	C-168/85/85	%	0.35	0.35
Dk(1GHz)	IPC-TM650 2.5.5.9	IPC-TM650 2.5.5.9	-	4.6	4.2
Df(1GHz)	IPC-TM650 2.5.5.9		-	0.006	0.006
T300	IPC-TM650 2.4.24.1	TMA	min	>60	>60
Td	IPC-TM650 2.4.24.6	5% loss	℃	>400	>400
Flammability	UL-94	UL-94	-	V-0	V-0
Halogen free	-	-	-	Yes	Yes
Glass	-	-	-	E glass	Low CTE-glass

Remarks:1.These properties were measured with 0.80mm laminates except for XY-CTE that was measured with 0.10mm laminates.
2. All the typical values listed above are for your reference only and not intended for specification. Please contact Shengyi Technology Co., Ltd. for detailed information. All rights from this data sheet are reserved by Shengyi Technology Co., Ltd.
3. The preconditioning temperature in ℃ and with the third digit the relative humidity.

Explanation: C=Humidity conditioning, D=Immersion conditioning in distilled water, E=Temperature conditioning
The first digit following the letter indicates the duration of preconditioning in hours, the second digit the preconditioning temperature in ℃ and the third digit the relative humidity.

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Line up of Core Material

Designation	Type	Nominal Thickness(mm)	Glass Fabric Construction	Glass Fabric Type
SI10U	-	0.10	1x2116	E-glass
		0.20	2x2116	
		0.25	2116+1078+2116	
		0.30	3x2116	
		0.40	4x2116	
	M	0.04	2x1015	
		0.06	2x1037	
		0.10	2x1078	
		0.15	3x1078	
		0.20	4x1078	
	LC	0.04	1x1067	Low CTE-glass
		0.06	1x1280	
		0.10	1x2116	
		0.15	2x2013	
		0.20	2x2116	
		0.25	2116+1078+2116	
		0.30	3x2116	
		0.40	4x2116	
	LCM	0.06	2x1037	
		0.10	2x1078	
		0.15	3x1078	

Line up of PREPREG

Designation	Nominal Thickness(um) (Copper Remaining 100%)	Resin Content (Wt%)	Glass Fabric Construction	Glass FabricType
SI10NB	30	76	1017	E-glass
	40	73	1027	
	50	74	1037	
	60	72	1067	
	70	64	1078	
SI10NB LC	30	76	1017	Low CTE-glass
	40	73	1027	
	50	74	1037	
	60	72	1067	
	70	64	1078	