High Elastic Modulus, low CTE Multilayer Material

classification in reference to IPC-4101/42, ANSI: GPY/42

basic material: copper clad laminate

Resin: Polyimide, Epoxy, hight Tg, halogen free, filled

Application: Substrates and modules in SLIM.hdi technology

Low CTE values in X,Y directions and reduced warpage of package substrate significantly

Cycle-proof

Characteristics					
Item		**Condition**[3]	**Unit**	**Actual Value ANSI: GPY/42**	**Reference (IPC-TM-650)**
Tg	TMA method	A	°C	260-280	2.4.24
	DMA method	A		300-330	
CTE[1]	X (30-120 °C)	A	ppm/°C	4,0-6,0	
	Y (30-120°C)			4,0-6,0	
Solder Heat Resistance (260 °C)		A	sec.	>=300	
T260 (without cuopper)		A	min.	>=60	
T288 (without copper)				>=60	2.4.24.1
Decomposition Temperature (TGA methode, 5% Weight Loss)		A	°C	430-450	2.3.40
Heat Resistance for HDI Proces (Semi-Additive)		260°C Reflow	cycles	>=20	
Copper Peel Strength	12 µm	A	kN/m	0,7-0,9	2.4.8
	18 µm			0,8-1,0	
Surface Roughness (Ra)		A	µm	2-3	2.2.17
Flexural Modulus (Lengthwise)[4]		A	Gpa	30-32	
Dielectric Constant	10 GHz[2]	A		4.2-4.4	
Dissipation Factor	10 GHz[2]	A		0,006-0,008	
Volume Resistivity		C-96/40/90	Ω*cm	$1x10^{14}$ - $1x10^{16}$	2.5.17
Survace Resistance		C-96/40/90	Ω	$1x10^{13}$ -$1x10^{15}$	
Insulation Resistance		A	Ω	$1x10^{14}$ -$1x10^{16}$	
		D-2/100		$1x10^{12}$ -$1x10^{14}$	

1: Heating Rate: 10°C/min

2: Measured by SPDR

3: Room Temperature, rel. Air Humidity of 50%

4: Material Thinckness: 0,8 mm

0,4mm thickness core is used depending on test item

Above data are experimental result and not guaranteed

Materials Available

Prepreg					
Part Number	**Type**		**Glass Cloth Stiyle**	**Properties Resin Content %**	**Dielectric Thickness after Lamination in mm**
ANSI: GPY/42	0,04	(1037N72)	1037	72 +/- 2	0,03

Copper clad Laminate				
Part Number	**Type**	**copper Foil Thickness**		**Laminate Thickness**
ANSI: GPY/42	R	12 µm		0,05
		12 µm		0,1

Disclaimer: All the parameters of this data sheet has been evaluated professionally. Above data are experimental results and cannot be guaranteed in regard of the variaty of the application conditions as well as different process and applicaton technologies.

Thus, there is no warranty claim possible out of this experimental results.

Above our terms of conditions only written agreements are legally binding.