GA-888

GA-888 is an advanced high Tg (200℃/DSC) ultra low-loss multifunctional resin laminate .Superior electrical performance are suitable for high frequency high speed telecommunications. The characteristics of low transmission loss and low degree of distortion can be mainly suitable for base station platform, cloud computing, storage and advanced servers.

Key Features

- ***Tg: 200℃(DSC)***
  This material with high performance multi-function resin，crosslink density is high. Material Tg values can reach above 200℃(DSC).
- ***Dk: 3.58 & Df: 0.0019***
  Material has superior electrical properties, is conducive to the high frequency high-speed transmission, and high density wiring design. The lower signal loss can ensure signal integrity.
- ***Z-CTE(50-260):2.2%***
  Its remarkable very low expansion coefficient, is more suitable for making high multilayer PCB, ensure the reliability of high temperature welding and assembly process.
- ***Td: 400℃***
  Excellent resistance to aging temperature, keep the material performance in high thermal shock or high temperature environment impact.

Laminate:GA-888

Prepreg: GA-888B

Applications

- *Multilayer PCB*
- *Servers*
- *Storage*
- *Router/Switch*
- *RF/Wireless Communication*
- *Line cards*

Industrial Approvals

- *IPC-4101E/102*
- *UL File Number：e186152*
- *Flammability Rating：94V-0*

Normal Size & Thickness

Thickness	Size		Thickness Tolerance
Inch (mm)	Inch	mm	
0.002 (0.05)	49×37	1244×0940	IPC-4101 Class C/M
To	49×41	1244×1042	
0.125 (3.2)	49×43	1244×1093	

Characteristic		Unit	Test Method	Typical data	spec
GA-888			IPC-TM-650 （or as noted）		
Volume Resistivity		MΩ-cm	2.5.17.1	2X10^{9}	≧10^{6}
Surface Resistivity		MΩ	2.5.17.1	1X10^{8}	≧10^{5}
Permittivity (RC54%)	At 1GHz	-	2.5.5.9	3.58	/
	At 5GHz		2.5.5.13	3.56	/
	At 10GHz		2.5.5.13	3.56	/
	At 15GHz		2.5.5.13	3.55	/
Loss Tangent (RC54%)	At 1GHz	-	2.5.5.9	0.0019	/
	At 5GHz		2.5.5.13	0.0029	/
	At 10GHz		2.5.5.13	0.0034	/
	At 15GHz		2.5.5.13	0.0039	/
Arc Resistance		Sec	2.5.1	120	≧60
Dielectric Breakdown		KV	2.5.6	40	≧40
Electric Strength(thickness<0.5mm)		KV/mm	2.5.6.2	40	≧30
Thermal Stress Test		－	2.4.13.1	Pass	Pass
Td (5% Weight loss)		℃	2.4.24.6	400	≧340
Glass Transition Temperature	DMA	℃	2.4.24.4	220	≧185
	DSC	℃	2.4.25	200	
T288		Min	2.4.24.1	≧120	≧15
Z-Axis CTE	Before Tg	PPM/℃	2.4.24	40	≦45
	After Tg	PPM/℃		240	≦260
Z-Axis CTE (50~260℃)		%	2.4.24	2.2	≦2.8
Peel Strength (1OZ)		Lb/in(N/mm)	2.4.8	4(0.7)	≧4(0.7)
Flexural Strength	LW	N/mm^{2}	2.4.4	430	≧345
	CW	N/mm^{2}		360	≧345
Moisture Absorption		%	2.6.2.1	0.05	≦0.2
Flammability		－	UL94	V-0	V-0

Note: 1.Test sample is 62mil 1/1(without special remark).

2. The data above is only for reference, and the actual data will have deviation, according to varieties of test equipment and method.