勤基集团 KINJI GROUP 1998-2011 成功源于责任

SM780-8

SM780-8 Laminate

SM780B-8 Prepreg *UL FILE : E199230*

(IPC-4101C/99/101/103/126) *updated：A Version 03/07/2011*

General Specification:

Thickness		Copper Cladding		Standard Size		Special large (on Request)	
inch	(mm)	oz	(μm)	inch	(mm)	inch	(mm)
0.003	(0.08)	3/8	(12)	36.8 x 48.8	(935 x 1240)	37.0 x 49.0	(941 x 1246)
to		to		40.8 x 48.8	(1035 x 1240)	41.0 x 49.0	(1043 x 1246)
0.125	(3.14)	12	(410)	42.8 x 48.8	(1085 x 1240)	43.0 x 49.0	(1093 x 1246)

Characteristics：

- Multi-functional Epoxy
- E-woven Glass
- HTE Copper Foil
- RoHS Compliant Bromine

Features:

- Lead free soldering process suitable (Tg 180℃ Laminate)
- UV Blocking and AOI Performance
- Excellent dimensional stability and thickness uniformity
- Superior thermal and chemical resistance
- Excellent electrical and mechanical properties
- Lower CTE in Z direction

Applications：

-Computer & Peripheral
-Communications Telecom
-Consumer Electronics
-Instrumentation / Industry / Medical
-OA Equipment / printer etc

SM780-8 Laminate Properties

Based on 1.6 mm^t ,1/1

Test Items		Units Metric (English)	Test Condition	IPC Spec.	Typical Value	Test Method IPC-TM-650
Electrical	Dielectric Constant (1MHz)	---	C-96/23/50	< 5.4	4.0 - 4.5	2.5.5
	Dissipation Factor	---	C-96/23/50	< 0.035	0.010 - 0.020	2.5.5
	Volume Resistivity	MΩ -cm	C-96/23/50	> 10^6	> 10^7	2.5.17.1
	Surface Resistivity	MΩ	C-96/23/50	> 10^4	> 10^6	2.5.17.1
Physical	Dimensional stability	ppm	–	< 300	< 200	–
	Moisture absorption	%	E-24/50+d-24/23	< 0.5	< 0.2	2.6.2.1
	Peel strength (1oz)	N / mm (1b/in)	As Received	0.7 (4.0)	1.40 -1.75 (8 – 10)	2.4.8
			After Solder	0.7 (4.0)	1.05 -1.40 (6 – 8)	2.4.8
Thermal	Glass Transition Temp	℃	DSC	By DSC >150	>180	2.4.25
			TMA		>173	2.4.24
	CTE (Z axis)	ppm/℃	＞Tg	< 350	< 250	2.4.24
	Thermal resistance	min	TMA (T288℃)	>5	>30	2.4.24.1
	Decomposition Temp	℃	ASTM D3850	>325 (5% wt	>345	2.4.24.6
	Thermal stress	sec	288℃ Solder	> 10	＞600	2.4.13.1

※Specification Sheet：IPC-4101C/99/101/103/126

SM780B-8 Prepreg Parameters :

	7628	2116	1080
R/C：Resin Content (%)	42 ± 3	53 ± 3	62 ± 4
R/F：Resin Flow (%)	18 ± 5	30 ± 5	34 ± 5
P/G：Gel Time (sec)	130 ±20	130 ± 20	130 ± 20
After Pressed Thickness (mil)	7.0 ± 0.5	5.0 ± 0.5	3.0 ± 0.4
VC：Volatile Content (%)	Max 1.0	Max 1.0	Max 1.0

* Other fabric types are available upon request.

* Above value can be adjusted to fit customer's processing condition.

Storage and Shelf Life:

Storage condition	Shelf life
20 ± 2℃ ，50 ± 10%RH // Refrigeration	＜3 months
5 ± 2℃ ，50 ± 10%RH // Frozen	＜6 months

* Excessive humidity will cause high press flow

- Excessive humidity will result in high press flow & possible quality defects.

SM780B-8 Prepreg Recommended Press Cycle:

- **Temperature Profile:**

  Heating Rise

  Heating rate of material between 60℃ and 140℃, 1 – 3℃/min. is acceptable, 1.5 – 2.5℃/min. would be better.

  Curing Condition

  ＞190℃/60 min.

  Cooling Down

  Hold cooling rate to less than 2.5℃/min down to below 120℃ to minimize the accumulated stress, then cool down to 45℃ as fast as possible.

- **Pressure Profile:**

  Load press hot, close quickly, use kiss pressure 8 – 12 Kg/㎝^{2} (114 – 170 psi)for 15 – 20 minutes then apply full pressure 15 - 25 Kg/㎝^{2} (213 –355 psi) (laminate pressure).

  Increase pressure by 10% for non-vacuum press system.

- **Vacuum:**

  Min. 72 mmHg

SM 780B-8 Press Cycle