

Технологические параметры FR-2/JIS PP3F

Features

- Less odor
- Halogen-free, Friendly to the environment.
- High CTI over 600V
- Superior heat and humidity resistance
- Suitable for punching at 40-70°C
- Warp and twist are small and stable.

General Properties

Test Item		Unit	Test Condition	Testing Method	Specification	Typical Value
Solder Resistance		Sec	A	JIS C 6481	≥10	20~30
Heat Resistance		—	130°C 30min	JIS C 6481	No Change	No Change
Peel Strength (Copper Foil 35 μ m)		kgf/cm	A 260°C 10Sec	JIS C 6481	≥1.2	1.8~2.0 1.7~1.9
Flexural Strength	Lengthwise	kgf/mm ²	A	JIS C 6481	≥8	14~16
	Crosswise				≥8	13~14
Volume Resistivity		Ω·cm	C-96/20/65 C-96/20/65+C-96/40/90	JIS C 6481	5×10 ¹⁰ 5×10 ⁹	1.0×10 ¹² ~10 ¹³ 1.0×10 ¹² ~10 ¹³
Surface Resistivity	Adhesive Side	Ω	C-96/20/65 C-96/20/65+C-96/40/90	JIS C 6481	1×10 ¹² 1×10 ¹¹	1.0×10 ¹² ~10 ¹³ 1.0×10 ¹¹ ~10 ¹²
	Laminate Side		C-96/20/65 C-96/20/65+C-96/40/90		1×10 ¹¹ 5×10 ⁸	1.0×10 ¹¹ ~10 ¹² 1.0×10 ¹⁰ ~10 ¹¹
Insulation Resistance		Ω	C-96/20/65 C-96/20/65+D-2/100	JIS C 6481	1×10 ¹¹ 1×10 ⁸	1.0×10 ¹¹ ~10 ¹² 1.0×10 ⁹ ~10 ¹⁰
Chemical Resistance		—	3% NaOH 40°C 3min	JIS C 6481	No change	No Change
			Boiled in trichloroethylene for 3 min	JIS C 6481	No change	No Change
Moisture Absorption		%	E-24/50+D-24/23	JIS C 6481	≤0.75	0.5~0.75
Flammability		Rating	A	UL94	UL94 V-0	V-0
Dielectric Constant (1 MHz)		—	C-96/20/65 C-96/20/65+D-24/23	JIS C 6481	≤5.0 ≤5.3	3.5~5.0 4.0~5.3
Dissipation Factor		—	C-96/20/65 C-96/20/65+D-24/23	JIS C 6481	≤0.04 ≤0.05	0.025~0.035 0.030~0.045
CTI Value		V	0.1 % NH ₄ CL	IEC 112	600	≥600
Punching Temperature		°C	A	GB/T4722	40-70	40-70

Remarks: Typical values for reference only Stand values according to JIS-C-6485

A = Keep the specimen originally without any process

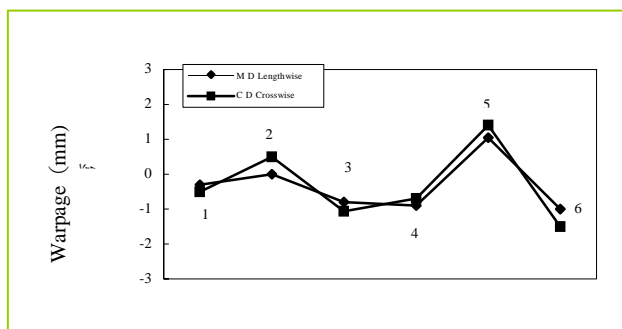
C = Temperature and humidity conditioning

D = Immersing in distilled water with temperature control.

E = Temperature conditioning

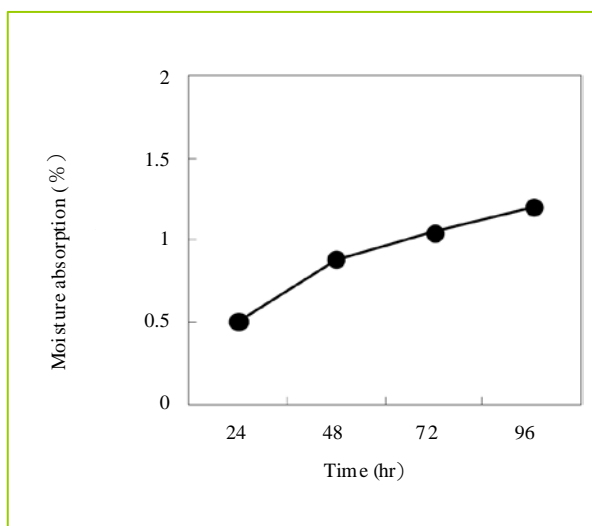
Speciality Chart

Warpage of PCB during processing/
(Thickness 1.6mm single side)

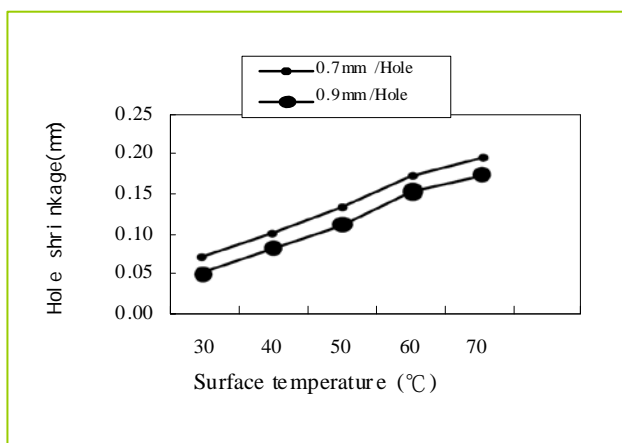


1. Feeding	2. Heating at 130°C for 90 sec	3. Etching. Rinsing. Drying
4. Heating at 200°C for 30 sec	5. Punching at 50°C	6. Soldering at 260°C for 5sec

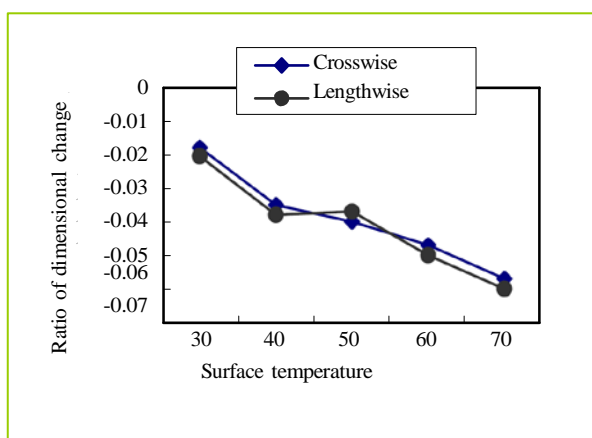
Moisture absorption



Punched hole shrinkage



Dimensional change of punched PCB



Purchasing Information

Type	Thickness	Copper Cladding	Regular Size (mm)	CTI Value
KB-2150GC	0.8mm ~	35μm	1020*1220mm (40" * 48")	600V
FR-2	1.6mm	70μm	1020*1020mm (40" * 40")	

Note: Other sheet size and thickness could be available upon request.