

For high current applications thick copper glass composite circuit board materials

Double-sided copper clad **R-1786**

High current (Thick copper foil type)

Tracking resistance

High reliability

Proposals 提案

1. Compatible with high current applications
-Thick copper foil used (70 μm)
2. CEM-3 grade material with high reliability
-Tracking resistance CTI ≥ 600V

Applications 用途

Power supply system board
Inverter, converter board
Ex: power conditioner and battery of the solar power

Tracking resistance

Pattern method (circuit method)	Product name / number	IEC method IEC法	Appearance of the test piece	
			Standard state	After test
175	CEM-3 R-1786	600		
—	Conventional FR-4 R-1705	240		

● Test method 試験方法

Test piece

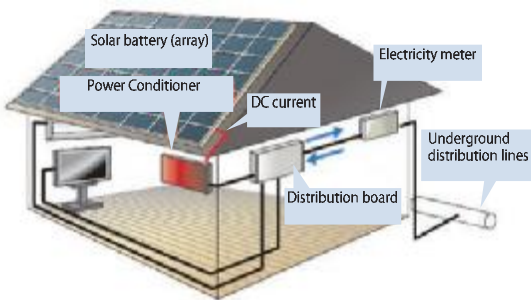
Drop out
30~40mm
1mm
Circuit interval

Test piece (Overall etching)

Drop out
60°
±0.1mm
30~40mm
1mm
Circuit interval

Drip 50 drops electrolyte (0.1% aqueous solution of ammonium chloride) towards the central circuit current of 1.0A flows in the voltage of 100V ~ 600V (25V interval). Measure the voltage current flows for more than 2 seconds.

General configuration of solar power (personal residence)



General properties 一般特性

Item 項目	Condition 条件	Unit 单位	R-1786	
Solder heat resistance	260°C solder float for 2min	-	No abnormality	
Heat resistance 耐熱性	1oz A	-	240°C 60min	
Dielectric constant (Dk)* 比誘電率	C-96/20/65	-	4.5	
	C-96/20/65+D-24/23		4.5	
Dissipation factor (Df)* 誘電正接	C-96/20/65		0.015	
	C-96/20/65+D-24/23		0.015	
Volume resistivity 体積抵抗率	C-96/20/65	MΩ·m	1×10 ⁸	
	C-96/20/65+C-96/40/90	5×10 ⁷		
Surface resistivity 表面抵抗	C-96/20/65	MΩ	3×10 ⁸	
	C-96/20/65+C-96/40/90	1×10 ⁸		
Insulation resistance 絶縁抵抗	C-96/20/65	MΩ	5×10 ⁸	
	C-96/20/65+D-2/100	1×10 ⁷		
Water absorption	E-24/50+D-24/23	%	0.08	
Flexural strength	Fill 埋入方向	A	N/mm ²	280
		A	2.2	
Peel strength	2oz	260°C solder float for 20sec	kN/m	2.1
		-	-	
Alkali resistance	dipping (3min)	-	No abnormality	
Flammability	A+E-168/70	-	94V-0	

The sample thickness is 1.6mm

<Test method 試験方法>
JIS C6481 ※ IPC TM-650 2.5.5.9

The above data is actual values and not guaranteed values. 上記データ

More Product line from Panasonic 関連商品

Please see the page for "Notes before you use"

- For digital-home appliance glass composite circuit board materials
- For digital-home appliance & LED lightings paper phenolic circuit board materials

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