

High current
(Thick copper foil type)

Tracking resistance

High reliability

Applications
High Current
Power Supply System Board, Inverter, converter board (Power Conditioner and Battery of the Solar Power)

Double-sided copper clad

R-1786

For high current applications
Thick copper glass composite circuit board materials

Compatible with high current applications by thick copper foil usage (70 μ m).

CEM-3 grade material with high reliability (Tracking resistance CTI \geq 600V)

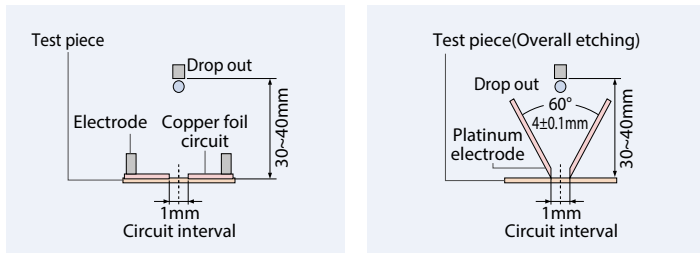
Tracking resistance

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

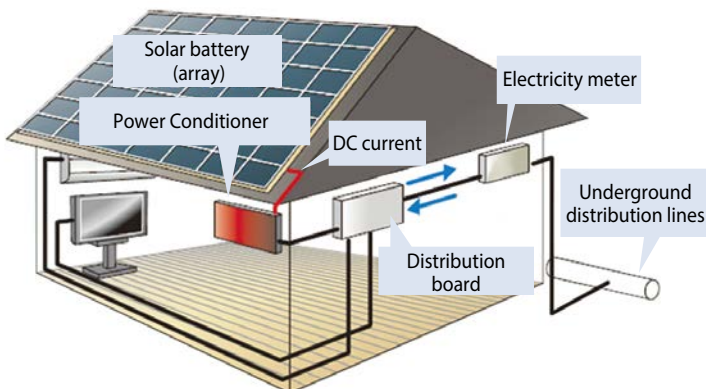
Test method

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

Item	Unit	Unit	R-1786
Tg	Temp. rising rate:10°C/min	°C	140
Solder heat resistance	260°C solder float for 2min	-	No abnormality
Heat resistance	1oz	A	240°C 60min
CTE x-axis	α1	TMA	ppm/°C
CTE y-axis			
CTE z-axis	α1	TMA	ppm/°C
Dk	1MHz	C-96/20/65	4.2
		C-96/20/65+D-24/23	4.2
Df	1MHz	C-96/20/65	0.011
		C-96/20/65+D-24/23	0.011
Volume resistivity	MΩ·m	C-96/20/65	1×10 ⁸
		C-96/20/65+C-96/40/90	5×10 ⁷
Surface resistivity	MΩ	C-96/20/65	3×10 ⁸
		C-96/20/65+C-96/40/90	1×10 ⁸
Insulation resistance	MΩ	C-96/20/65	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	A	N/mm ²
Peel strength	2oz	A	kN/m
		260°C solder float for 20sec	2.1
Alkali resistance	dipping(3min)	-	No abnormality
Flammability	A+E-168/70	-	94V-0

The sample thickness is 1.6mm.

The figure in parentheses is for the thickness of 0.8mm.

<Test method> JIS C6481

Please see our website for Notes before you use.

The above data are typical values and not guaranteed values.

industrial.panasonic.com/ww/electronic-materials

Panasonic Industry R-1786