

CTI \geq 600V

Insulation reliability

Low dielectric property

Applications
Appliance

Home Appliance, Digital Appliance, LED Lighting, Meter Panel, Power Supply System Board, Amusement Machine, Antenna (Base Station), etc.

Double-sided copper clad

R-1786

Single-sided copper clad

R-1781

For digital home appliance

Glass composite circuit board materials

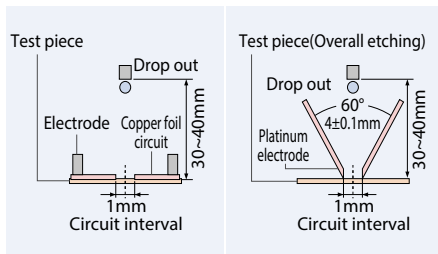
Excellent tracking resistance (CTI \geq 600V), excellent CAF resistance and excellent thickness accuracy. Reduces CO₂ emission amount in our manufacturing process to one-quarter by our unique manufacturing process. (Compared with our conventional FR-4 (R-1705))

Tracking resistance

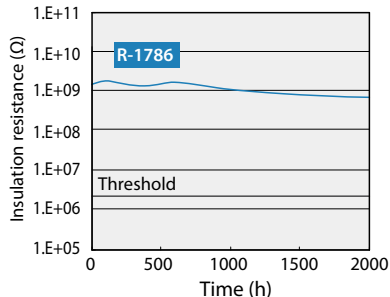
Pattern method (circuit method)	Product name / number	IEC method	Appearance of the test piece	
			Standard state	After test
175	CEM-3 R-1786	600		
-	Conventional FR-4 R-1705	240		

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.



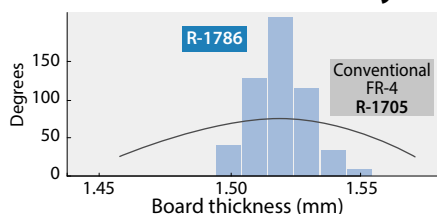
CAF resistance



Evaluation condition

Test condition	85°C, 85%, 100V applied voltage
Wall to wall distance	0.45mm
Drill diameter	Φ0.9~Φ0.35
Test method	Continuous measurement in a tank
Board	Our test pattern
Warp direction	60 hole
Fill direction	60 hole

Board thickness accuracy



Board thickness : 1.6mm
Copper foil thickness : 0.018mm

\bar{x} =1.52mm
R=0.053mm
 \sqrt{V} =0.014mm

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	4.5
		C-96/20/65+D-24/23	4.5
Df*	1MHz	C-96/20/65	0.015
		C-96/20/65+D-24/23	0.015
Volume resistivity	C-96/20/65	MΩ·m	1×10 ⁸
	C-96/20/65+C-96/40/90		5×10 ⁷
Surface resistivity	C-96/20/65	MΩ	3×10 ⁸
	C-96/20/65+C-96/40/90		1×10 ⁸
Insulation resistance	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	A	N/mm ²
Peel strength	1/2oz	A	kN/m
		260°C solder float for 20sec	
	1oz	A	
		260°C solder float for 20sec	
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 C 6481 * IPC-TM-650 2.5.5.9

The above data are typical values and not guaranteed values.