



# High reliability Glass composite Circuit board materials

## 高信頼性ガラスコンポジット基板材料

Double-sided **R-1785**

### Applications 用途

Automotive component, Power supply board, Power device module board, Infrastructure(Smart meter, IC tag), etc.

車載機器、電源基板、パワーデバイスモジュール基板、インフラ関係(スマートメーター、電子タグ)など



Automotive  
オートモーティブ



Appliance  
アプライアンス

Improved solder joint reliability compared with conventional CEM-3 which has already good to safety and long-time reliability property. Contribute to high reliability PCB for electric car.

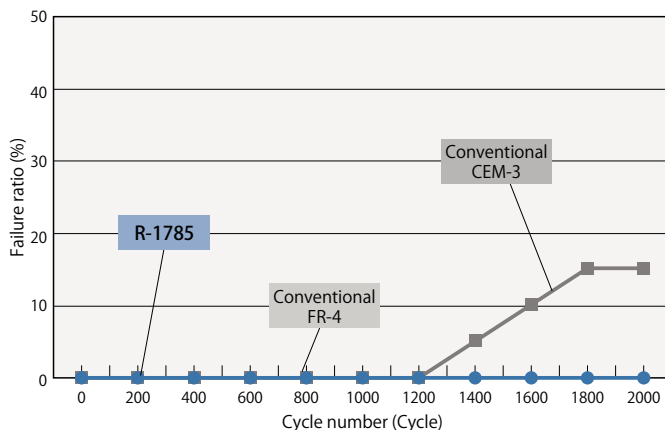
従来 CEM-3 の優れた安全性・長期絶縁信頼性の特性に加え、更に部品実装信頼性を向上。EV 向け車載基板の信頼性向上に貢献

CTE x,y-axis  
20ppm/°C

Tg (TMA)  
150°C

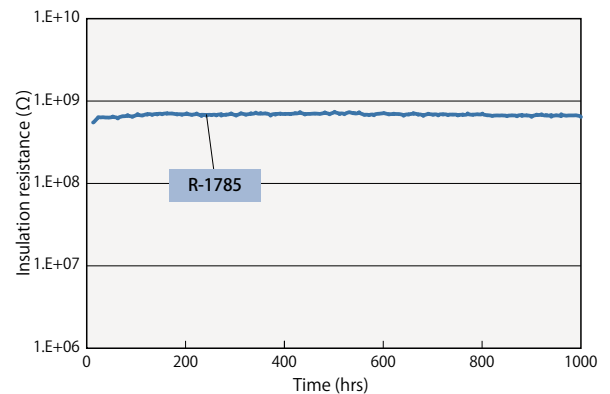
CTI ≥ 600V

### Solder joint reliability 部品実装信頼性



Cycle condition	-40°C ⇄ 80°C (30min) ⇄ (30min)
Mounted chip	3216
Thickness	1.6mm
Copper foil thickness	35/35 μm

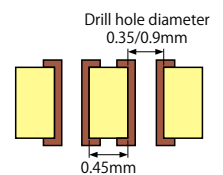
### CAF resistance 耐CAF性



#### Condition

Treating condition	85°C, 85%, 100V applied
Distance between THs	0.45mm
Drill diameter	φ0.9, φ0.35mm
Method	Continuous measurement in the oven
PWB	Our test pattern Warp direction : 60holes Fill direction : 60holes

#### Construction



### General properties 一般特性

Item	Test method	Condition	Unit	R-1785	Our conventional CEM-3	Our conventional FR-4
Glass transition temp.(Tg)	TMA	Temp. rising rate: 10°C/min	°C	150	140	140
CTE x-axis	α 1 IPC-TM-650 2.4.41	TMA	ppm/°C	19 (15)	25 (20)	13
CTE y-axis				21 (17)	28 (23)	15
CTE z-axis	α 1 IPC-TM-650 2.4.24	TMA	ppm/°C	50	65	65
Tracking resistance	IEC 60112	A	V	CTI ≥ 600	CTI ≥ 600	250 > CTI ≥ 175
Accuracy of thickness(σ value)	—	A	mm	0.013	0.013	0.027

The sample thickness is 1.6mm.  
The figure in parentheses is for the thickness of 0.8mm.

The above data is actual values and not guaranteed values. 上記データは当社の実測値であり、保証値ではありません。  
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