Highly heat resistant Low CTE Multi-layer circuit board materials

高耐熱・低熱膨張多層基板材料

Laminate **R-1755E**
Prepreg **R-1650E**

Applications 用途

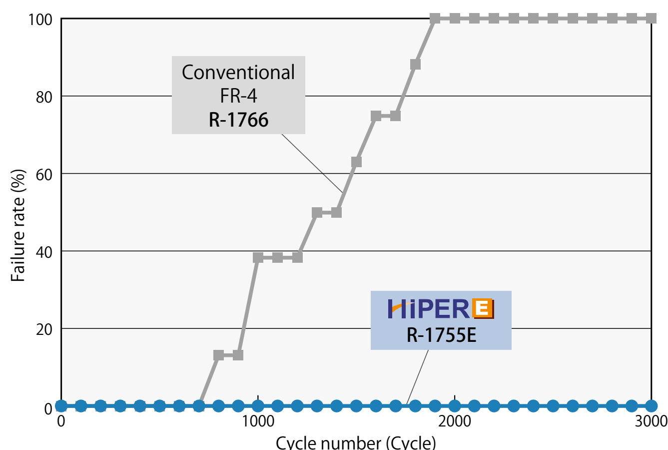
Automotive component(ECU board, GPS navigation system), Electric car, Industry, Appliance, Etc.
車載機器 (エンジン ECU、カーナビ)、電気自動車、産業機器、アプライアンスなど

Good highly heat resistant property as general materials apply to Automotive component in harsh environment, high voltage and Industry application.
汎用材でありながら耐熱性に優れており、高温環境の車載用途や高電圧用途、産業機器用途などに適用可能

High Tg	Halogen-free / HIPER D	R-1566S / R-1755D
Middle Tg	HIPER M / Halogen-free	R-1755M / R-1566
Standard Tg	HIPER E / Standard FR-4	R-1755E / R-1766

Tg (DSC)	Td (TGA)	CTE z-axis
133℃	370℃	42ppm/℃

Through-hole reliability スルーホール導通信頼性

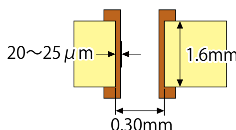


●Condition

Cycle condition	-40℃ (30min) ⇔ 125℃ (30min)

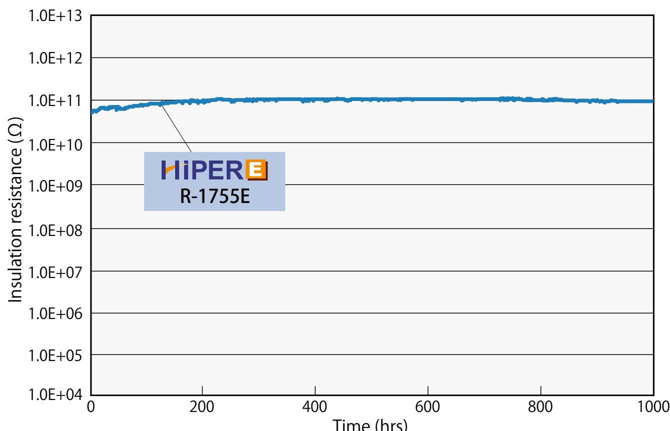
* Failure is over 10% changes of resistance

●Construction



Insulation reliability 絶縁信頼性

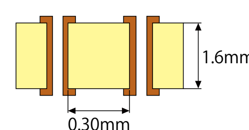
●CAF evaluation



●Condition

Board thickness	1.6mm
Condition	85℃ 85%RH DC50V
Through-hole wall to wall distance	0.3mm

●Construction



General properties 一般特性

Item		Test method	Condition	Unit	HIPER E R-1755E	Conventional FR-4 R-1766
Glass transition temp.(Tg)		DSC	A	℃	133	140
Thermal decomposition temp.(Td)		TGA	A	℃	370	315
CTE z-axis	α1	IPC-TM-650 2.4.24	A	ppm/℃	42	65
	α2				250	270
T288(with copper)		IPC-TM-650 2.4.24.1	A	min	25	1
Peel strength	1oz(35μm)	IPC-TM-650 2.4.8	A	kN/m	1.6	2.0

The sample thickness is 0.8mm.

The above data are typical values and not guaranteed values. 上記データは当社測定による代表値であり、保証値ではありません。
Please see the page for "Notes before you use" 商品のご採用に当たっての注意事項は こちら

© Panasonic Corporation 2020