



Highly heat resistant Low CTE Multi-layer circuit board materials <Middle-Tg type>

高耐熱・低熱膨張多層基板材料 <Middle-Tgタイプ>

HiPER M

Laminate **R-1755M**

Prepreg **R-1650M**

Applications 用途

Automotive component(ECU board), Photovoltaic(Inverter),
Electronic equipment requiring high reliability(using lead-free solder), Etc.
車載機器 (ECU 用基板)、太陽光発電、高信頼性が求められる電子機器
(鉛フリーはんだ使用) など



Improved connection reliability of circuit board for automotive by good CAF resistance.
Available for high voltage and industry application.

優れた耐CAF性により、車載用基板の接続信頼性を向上し更なる車の安全性に貢献。
高電圧用途・産業機器用途などにも対応

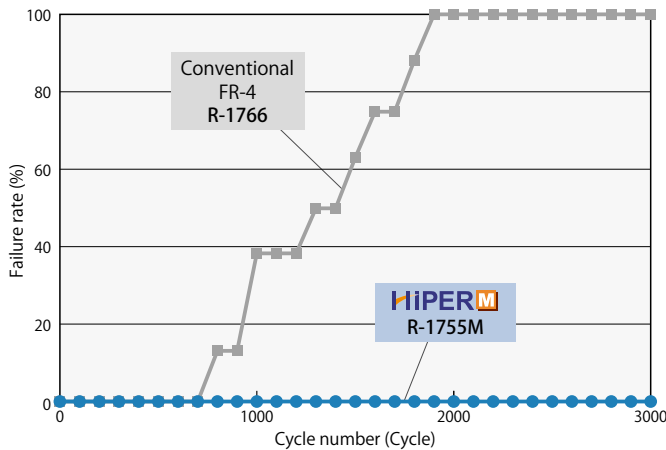
High Tg	Halogen-free R-1566S HiPER M R-1755D
Middle Tg	HiPER M R-1755M Halogen-free R-1566
Standard Tg	HiPER M R-1755E Standard FR-4 R-1766

T_g (DSC)
153°C

T_d (TGA)
355°C

CTE z-axis
40ppm/°C

Through-hole reliability スルーホール導通信頼性

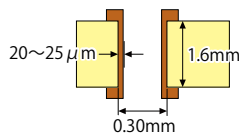


Condition

Cycle condition	-40°C (30min) ⇄ 125°C (30min)
-----------------	-------------------------------

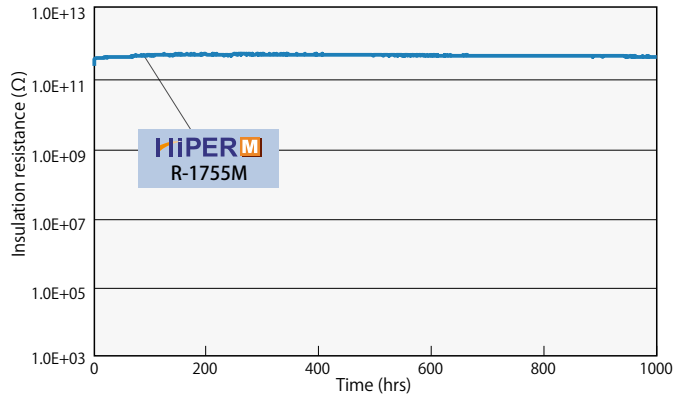
* Failure is over 10% changes of resistance

Construction



Insulation reliability 絶縁信頼性

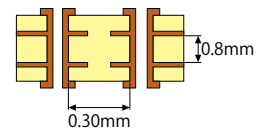
CAF evaluation



Condition

4-layers board	
Pretreatment	260°C Peak reflow x 3times
Condition	85°C 85%RH DC100V
Core	0.8 mm
Prepreg	#7628 x 1 ply
Through-hole wall to wall distance	0.30mm

Construction



General properties 一般特性

Item	Test method	Condition	Unit	HiPER M R-1755M	Conventional FR-4 R-1766
Glass transition temp.(T _g)	DSC	A	°C	153	140
Thermal decomposition temp.(T _d)	TGA	A	°C	355	315
CTE z-axis	IPC-TM-650 2.4.24	A	ppm/°C	α1	40
				α2	240
T288(with copper)	IPC-TM-650 2.4.24.1	A	min	18	1
Peel strength	1oz(35 μm) IPC-TM-650 2.4.8	A	kN/m	1.5	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](#)