



Line-up
for
Automotive

Multi-layer circuit board materials for Automotive component

車載機器向け多層基板材料

HIPER Series

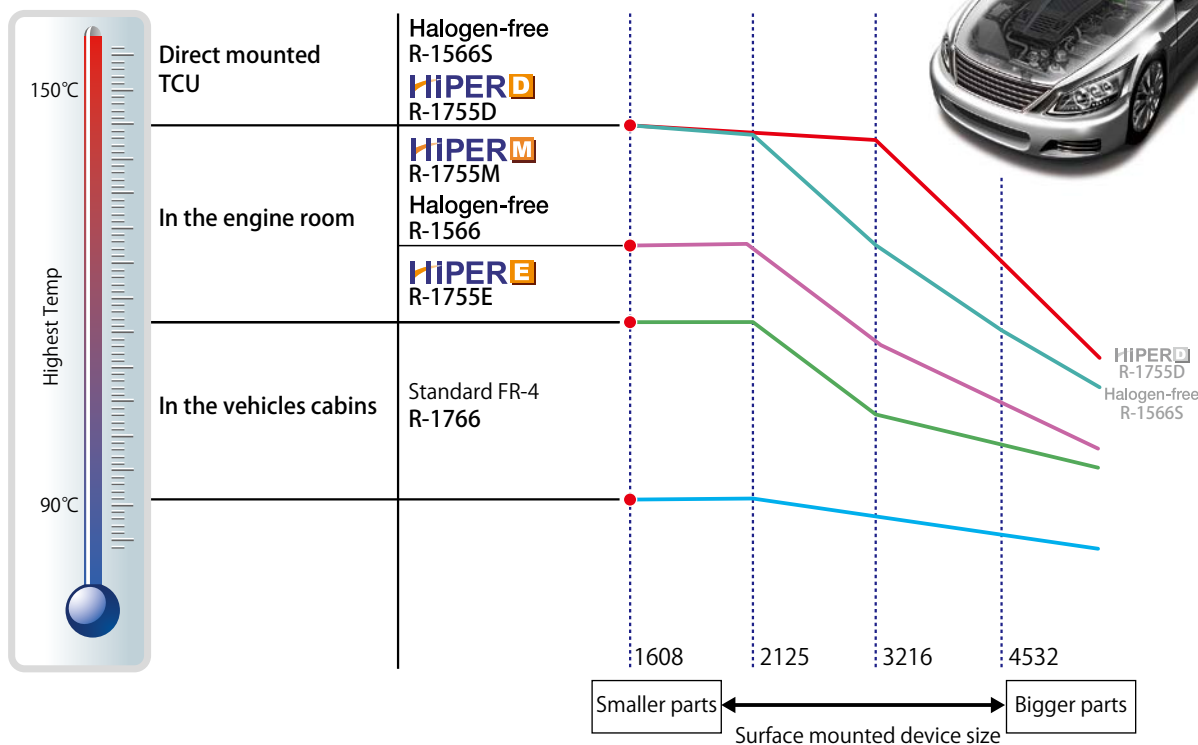
Applications 用途

Automotive component(Direct mounted TCU, Power control ECU, Body control ECU), Etc.
車載機器 (エンジン直載 ECU, パワー系制御 ECU, ボディ系制御 ECU) など

Multi-layer circuit board materials with excellent highly heat resistant and high reliability.
高信頼性と高耐熱性に優れた多層基板材料

Line-up ラインアップ

Heat resistance test at the solder connection part
by circuit board material and surface mounted devices size



General properties 一般特性

Item	Test method	Condition	Unit	Halogen-free R-1566S	HIPER D R-1755D	HIPER M R-1755M	Halogen-free R-1566	HIPER E R-1755E	Standard FR-4 R-1766
Glass transition temp.(Tg)	DSC	A	°C	175	163	153	148	133	140
CTE x-axis	α1	IPC-TM-650 2.4.24	A	ppm/°C	11-13	10-12	11-13	11-13	11-13
					13-15	12-14	13-15	13-15	13-15
CTE y-axis	α1	IPC-TM-650 2.4.24	A	ppm/°C	40	43	40	40	42
					180	236	240	180	250
CTE z-axis	α2	IPC-TM-650 2.4.24	A	ppm/°C	180	236	240	180	250
T288(with copper)	IPC-TM-650 2.4.24.1	A	min	10	15	18	3	25	1
Peel strength (1oz(35μm))	IPC-TM-650 2.4.8	A	kN/m	1.6	1.3	1.5	1.8	1.6	2.0

The sample thickness is 0.8mm.

Our Halogen-free materials are based on JPCA-ES-01-2003 standard and others. 当社ハロゲンフリー材料は、JPCA-ES-01-2003などの定義によるものです。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。

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