

# For automotive components high heat resistance multi-layer circuit board materials

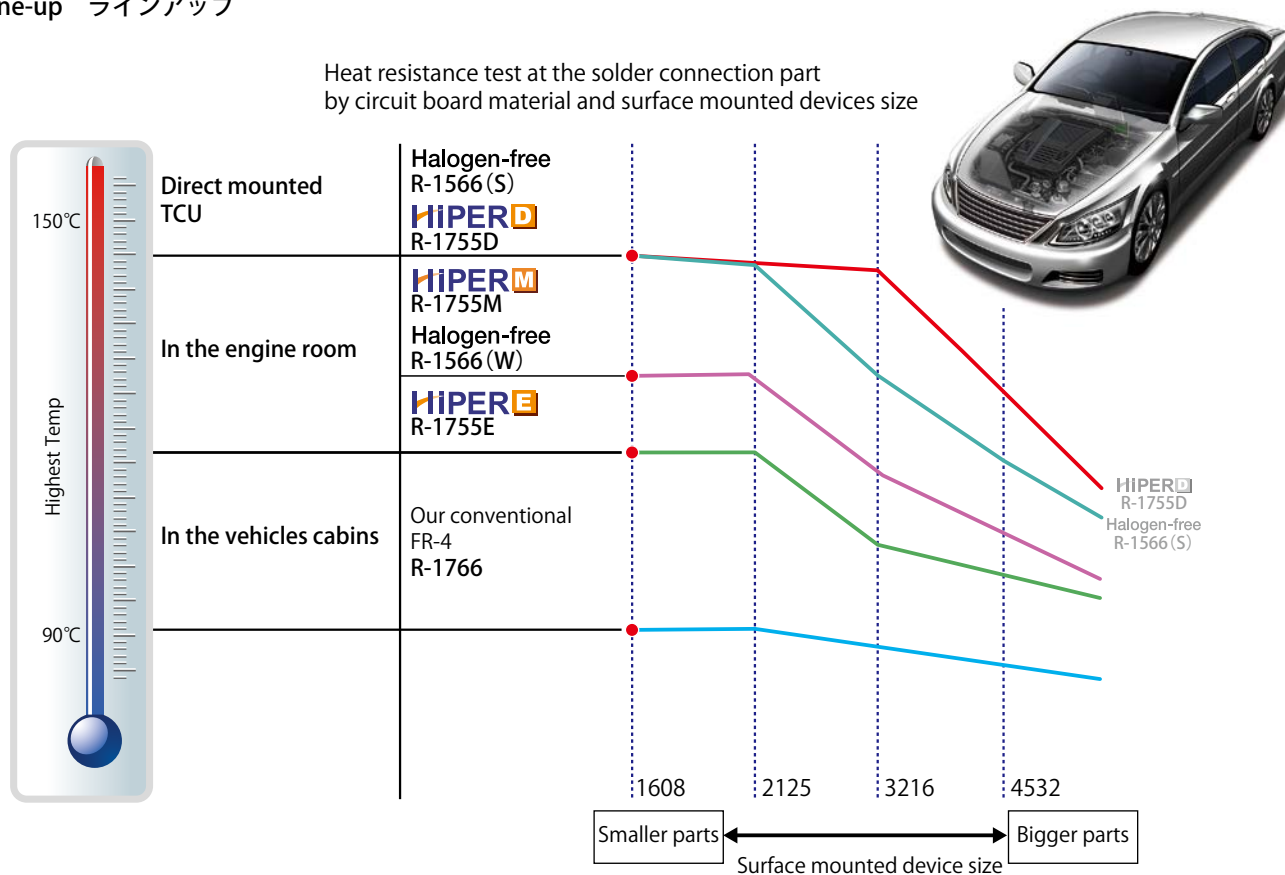
## 車載機器向け 高耐熱多層基板材料

### **HIPER** Series シリーズ

Lineup of multi-layer circuit board materials with excellent high heat resistance and high reliability.

高信頼性と高耐熱性に優れた多層基板材料をラインアップ

#### Line-up ラインアップ



#### General properties 一般特性

| Item                       | Test method         | Condition        | Unit   | Halogen-free R-1566(S) | <b>HIPER D</b> R-1755D | <b>HIPER M</b> R-1755M | Halogen-free R-1566(W) | <b>HIPER E</b> R-1755E | Conventional FR-4 R-1766 |     |
|----------------------------|---------------------|------------------|--------|------------------------|------------------------|------------------------|------------------------|------------------------|--------------------------|-----|
| Glass transition temp.(Tg) | DSC                 | A                | °C     | 175                    | 163                    | 153                    | 148                    | 133                    | 140                      |     |
| CTE x-axis                 | IPC-TM-650 2.4.41   | A                | ppm/°C | 11-13                  | 10-12                  | 11-13                  | 11-13                  | 11-13                  | 11-13                    |     |
| CTE y-axis                 |                     |                  |        | 13-15                  | 12-14                  | 13-15                  | 13-15                  | 13-15                  | 13-15                    |     |
| CTE z-axis                 | α1                  | A                |        | 40                     | 43                     | 40                     | 40                     | 42                     | 65                       |     |
|                            | α2                  |                  |        | 180                    | 236                    | 240                    | 180                    | 250                    | 270                      |     |
| 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.

#### More Product line from Panasonic 関連商品

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

- High heat resistance phenolic molding compounds
- For ICT infrastructure equipment multi-layer materials MEGTRON Series
- For mobile products and automotive components flexible materials FELIOS LCP
- For automotive components and mobile product halogen-free multi-layer materials

- 高耐熱フェノール樹脂成形材料
- ICTインフラ機器向け基板材料 MEGTRONシリーズ
- モバイル機器・車載機器向けLCPフレキシブル基板材料
- 車載機器・モバイル機器向けハロゲンフリー多層基板材料

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