

**Dk 3.4 Df 0.003  
@12GHz**

**Tg (DMA) 250°C**

**T320 (with copper)  
>120min**

**Applications**  
**Network / Wireless**

ICT Infrastructure Equipment, High Speed Networking (High-End Server/Router, Optical Network, Switch), High-Layer-Count PCB



Halogen-free **MEGTRON6**

Laminate

**R-5375(N)\* R-5375(E)**

Prepreg

**R-5370(N)\* R-5370(E)**

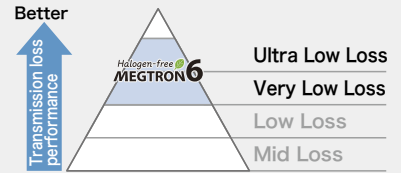
\*Low Dk glass cloth type

**Halogen-free ultra-low transmission loss multi-layer circuit board materials**

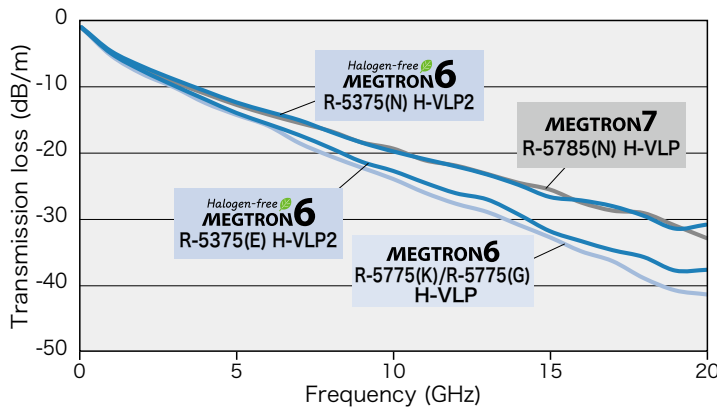
The industry standard high-speed, ultra-low loss material.

Transmission loss is between MEGTRON6 R-5775(K)/R-5775(G) and MEGTRON7 R-5785(N).

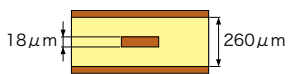
Excellent HDI and thermal performance.



## Frequency dependence by transmission loss



## Construction



|                    |                      |
|--------------------|----------------------|
| Line length        | 200mm , 100mm        |
| Line width         | 125μm                |
| Impedance          | 50Ω                  |
| Inner Cu treatment | No-surface treatment |
| Core               | 0.13mm               |
| Prepreg            | #2116 56% x 1ply     |

## Heat resistance of high multi-layered Result

|                                 |        |       |
|---------------------------------|--------|-------|
| Drill diameter                  | φ0.3mm |       |
| Wall to wall distance           | 0.3mm  | 0.5mm |
| Halogen-free MEGTRON6 R-5375(E) | pass   | pass  |

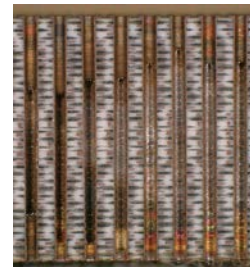
## Condition

260°C reflow x 10times

## Construction

32 Layers

Board thickness: 4.5mm



## General properties

| Item              | Test method         | Condition                             | Unit       | Halogen-free MEGTRON6 R-5375(N)<br>Low Dk glass cloth | Halogen-free MEGTRON6 R-5375(E)<br>E glass cloth | MEGTRON6 R-5775(K)/R-5775(G)<br>E glass cloth |       |
|-------------------|---------------------|---------------------------------------|------------|---|--|---|-------|
| Tg                | DMA (1Hz)           | A                                     | °C         | 250   | 250  | 210*1   |       |
| Thermal expansion | TMA (Z direction)   | 50-260°C                              | %          | 1.7   | 1.7  | 2.9   |       |
| T288(with copper) | IPC-TM-650 2.4.24.1 | A                                     | min        | >120  | >120   | >120  |       |
| T320(with copper) |                     |                                       |            | >120  | >120   | 50  |       |
| Dk                | 12GHz               | Balanced-type circular disk resonator | C-24/23/50 | -   | 3.4  | 3.6   |       |
| Df                |                     |                                       |            | 0.003   | 0.004  | 0.004   |       |
| Peel strength     | 1oz(35μm)           | IPC-TM-650 2.4.8                      | A          | kN/m  | 0.6*2  | 0.6*2   | 0.8*3 |

The sample thickness is 0.75mm.

\*1 10Hz \*2 H-VLP2 Copper \*3 H-VLP Copper

Please see our website for Notes before you use.

industrial.panasonic.com/ww/electronic-materials

Panasonic Industry Halogen-free MEGTRON6

Our Halogen-free materials are based on JPCA-ES-01-2003 standard and others.

The above data are typical values and not guaranteed values.