

**DK 3.31 Df 0.0023  
@14GHz**

**T<sub>g</sub> (DSC) 200°C**

**T288 (with copper)  
>120min**

# MEGTRON7

Laminate

**R-5785(N)\* R-5785(GN)\* R-5785(GE)**

Prepreg

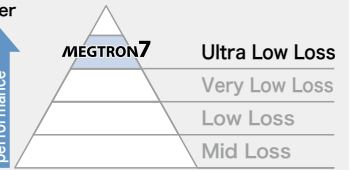
**R-5680(N)\* R-5680(GN)\* R-5680(GE)**

\*Low Dk glass cloth type

**Ultra-low transmission loss, highly heat-resistant multi-layer circuit board materials**

Due to our industry leading low dielectric constant and dissipation factor, these materials are suitable for high-speed data transmission by servers and routers using high-layer-count, large-size PCB designs.

Better  
↑  
Transmission loss performance

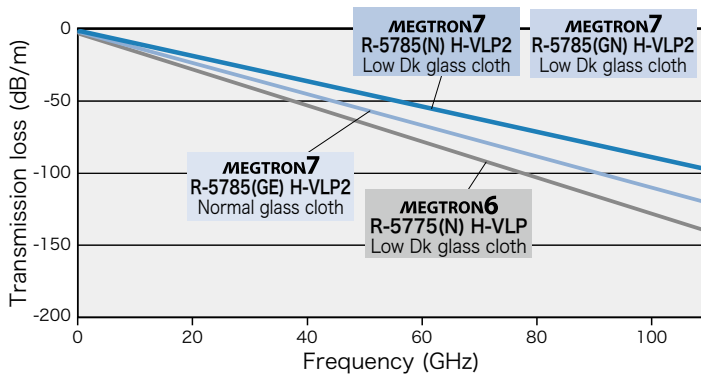


## Applications

## Network / Wireless

ICT Infrastructure Equipment, Supercomputer, Measuring Instrument, Antenna (Base Station, Automotive Millimeter-Wave Radar)

## Frequency dependence by transmission loss



## Heat resistance of high multi-layered

### Result

	Drill diameter		
	0.4mm	0.5mm	0.6mm
Wall to wall distance	0.4mm	0.5mm	0.6mm
R-5785(N) Low Dk glass cloth/H-VLP2	pass	pass	pass
R-5785(GN) Low Dk glass cloth/H-VLP2	pass	pass	pass

### Condition

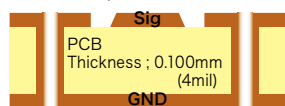
260°C reflow x 20times

### Construction

32 Layers  
Board thickness: 4.5mm

## Construction

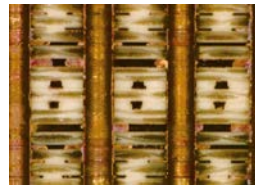
Microstrip line



Measurement	2 port S-Parameter
Frequency	10MHz-110GHz
De-embedded	Multiline TRL method
Measurement line	adjust to 50Ω(Z <sub>0</sub> )

Layer1: Signal line (line width: 270μm, Cu thickness: 24μm)

Layer2: GND plane (Cu thickness: 24μm)



R-5785 (N)



R-5785 (GN)

## General properties

Item	Test method	Condition	Unit	MEGTRON7 R-5785(N)	MEGTRON7 R-5785(GN)	MEGTRON7 R-5785(GE)	
				Low Dk glass cloth	Low Dk glass cloth	Normal glass cloth	
T <sub>g</sub>	DSC	A	°C	200	200	200	
CTE z-axis	α1	IPC-TM-650 2.4.24	A	ppm/°C	42	42	
					α2	280	280
T288(with copper)	IPC-TM-650 2.4.24.1	A	min	>120	>120	>120	
Dk	13, 14GHz	Balanced-type circular disk resonator	C-24/23/50	-	3.31 [14GHz]	3.31 [14GHz]	3.60 [13GHz]
Df					0.0023 [14GHz]	0.0023 [14GHz]	0.0034 [13GHz]
Peel strength*	1oz(35μm)	IPC-TM-650 2.4.8	A	kN/m	0.8	0.8	0.8

The sample thickness is 0.75mm.

\* R-5785(GN), R-5785(GE): H-VLP2, R-5785(N): H-VLP Copper

Please see our website for Notes before you use.

The above data are typical values and not guaranteed values.

industrial.panasonic.com/ww/electronic-materials

Panasonic Industry MEGTRON7