

Dk 3.60 Df 0.0045 @13GHz

Thermal conductivity 0.60W/m-K

Tg (DMA) 245°C

Applications
Wireless / Automotive

Power Amplifier Board (Base Station for Wireless Communication, Small Cell), Antenna (Automotive Millimeter-Wave Rader)



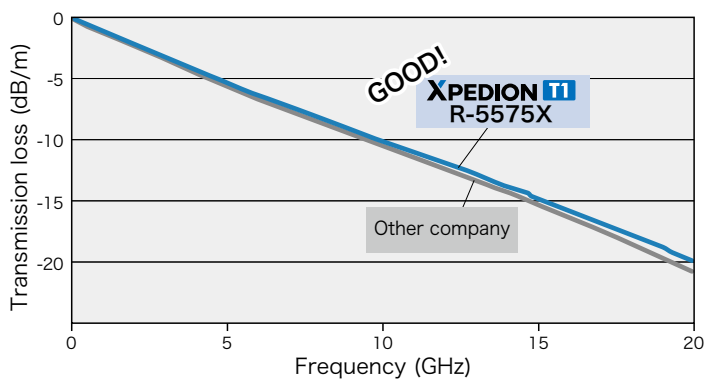
XPEDION T1

Laminate **R-5575X** Prepreg **R-5470X**

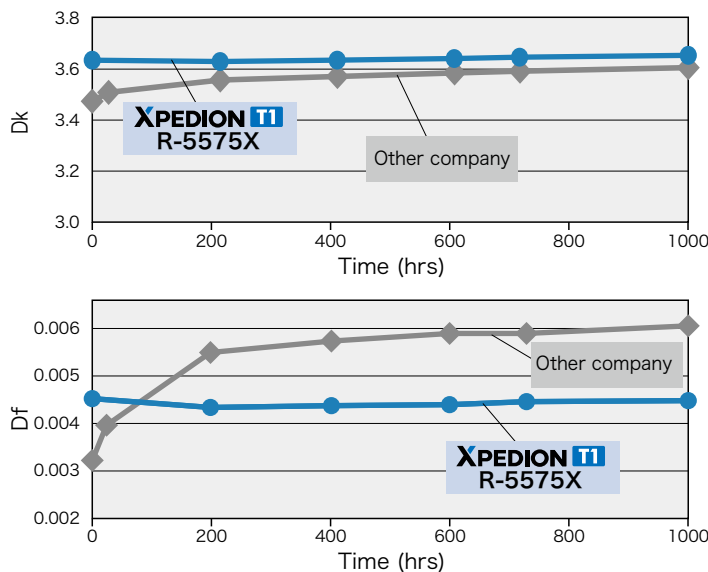
High thermal conductivity, low transmission loss Halogen-free multi-layer circuit board materials

Leveraging multi-layer processability, low transmission loss, high thermal conductivity and Halogen-free, these materials are suitable for miniaturized and 5G small cell PCBs.

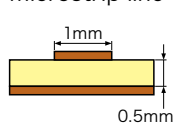
Frequency dependence by transmission loss



Long-term stability under high temperature (Dk, Df)



Construction



Item	R-5575X	Other company
Line length	1000mm	1000mm
Impedance	50±1Ω	50±1Ω
Copper thickness	18μm→+20μm plating	18μm→+20μm plating
Copper	RT	ST
Core	0.5mm	0.5mm

- Measurement method : Balanced-type circular disk resonator method
- Aging temperature : 125°C (without humidity control)
- Measurement frequency : 18GHz

General properties

Item	Test method	Condition	Unit	XPEDION T1 R-5575X	Other company	
Tg	DMA	A	°C	245	Tg less	
CTE z-axis	α1/α2	IPC-TM-650 2.4.24	ppm/°C	20/155	21/42	
T288(with copper)	IPC-TM-650 2.4.24.1	A	min	>120	>120	
Thermal conductivity	Laser flash	A	W/m-K	0.6	0.6	
Dk	Balanced-type circular disk resonator method	C-24/23/50	-	3.60	3.5	
Df				0.0045	0.004	
Peel strength*	1 oz(35 μm)	IPC-TM-650 2.4.8	A	kN/m	0.80	0.58

The sample thickness is 0.5mm.
 * RT Copper

Our Halogen-free materials are based on JPCA-ES-01-2003 standard and others.
 The above data are typical values and not guaranteed values.