



# Q160

(UL ANSI: FR-4.0) Thermal conductivity

## FEATURES

- Good thermal conductivity
- CTI≥600V
- Good mechanical process ability
- Not recommended for solder mask rework

## APPLICATIONS

LED lighting, Power supplier  
Household appliances  
For applications with CAF requirements, recommend customer to carry a systematic assessment of its reliability.

## GENERAL PROPERTIES

Test Items	Test Method	Test Condition	Unit	Typical Value
Thermal conductivity	ASTM 5470	A	W/(m·K)	0.72
Tg	IPC-TM-650 2.4.25D	DSC	°C	130
Td	IPC-TM-650 2.4.24.6	TGA (5% W.L)	°C	310
T288	IPC-TM-650 2.4.24.1	TMA	min	2
T260	IPC-TM-650 2.4.24.1	TMA	min	15
Thermal Stress	IPC-TM-650 2.4.13.1	288°C, solder dip	s	>60
CTE (Z-axis)	IPC-TM-650 2.4.24	Before Tg	ppm/°C	40
	IPC-TM-650 2.4.24	After Tg	ppm/°C	235
	IPC-TM-650 2.4.24	50-260°C	%	2.8
Permittivity (1GHz)	IPC-TM-650 2.5.5.9	C-24/23/50	-	4.9
Loss Tangent (1GHz)	IPC-TM-650 2.5.5.9	C-24/23/50	-	0.015
Volume Resistivity	IPC-TM-650 2.5.17.1	C-96/35/90	MΩ-cm	1.5×10 <sup>8</sup>
Surface Resistivity	IPC-TM-650 2.5.17.1	C-96/35/90	MΩ	1.8×10 <sup>7</sup>
Arc Resistance	IPC-TM-650 2.5.1	D-48/50+D-0.5/23	s	130
Dielectric Breakdown	IPC-TM-650 2.5.6	D-48/50+D-0.5/23	kV	> 45
Peel Strength (1oz)	IPC-TM-650 2.4.8	288°C/10s	N/mm [lb/in]	1.3 [7.43]
Flexural Strength (LW/CW)	IPC-TM-650 2.4.4	A	MPa	470/370
Water Absorption	IPC-TM-650 2.6.2.1	D-24/23	%	0.10
Flammability	UL94	C-48/23/50	Rating	V-0
CTI	IEC60112	A	Rating	PLC0(≥600V)

- Remarks: 1. Specification sheet: IPC-4101/21, is for your reference only.  
2. All the typical value is based on the 1.6mm (8\*7628) specimen.  
3. All the typical value listed above is for your reference only, please turn to Shengyi Technology Co., Ltd for detailed information, and all rights from this data sheet are reserved by Shengyi Technology Co., Ltd.

## PURCHASING INFORMATION

Thickness	Copper foil	Standard size
0.23mm to 3.2mm	18um to 105 um	915mm ×1,220mm(36"×48") 1,020mm ×1,220mm(40"×48") 1,070mm ×1,220mm(42"×48")

Remarks: Other sheet size and thickness could be available upon request.