

ITEQ
Your Partner of Advanced Materials & Mass Lam Service

IT-180

CCL : IT-180TC
Prepreg: IT-180BS

High Tg / Lead Free / High Reliability Laminate & Prepreg

- ANSI Type : **FR-4.0**
- Applicable IPC-4101 /21/24/26/121/124/129；IPC-4103 /250/550
- Excellent CAF resistance / Good through-hole reliability / High thermal reliability
- For automotive, Telecommunications, high layer PCB and heavy copper applications

Laminate properties

Items	IPC TM-650	Typical Value	Unit
Peel Strength, minimum A. Low profile copper foil B. Standard profile copper foil	2.4.8	 5 8	lb/inch
Volume Resistivity	2.5.17.1	$1x10^9$	MΩ-cm
Surface Resistivity	2.5.17.1	$1x10^8$	MΩ
Moisture Absorption, maximum	2.6.2.1	0.12	%
Permittivity (Dk, 50% resin content) A. 1GHz B. 2GHz C. 5GHz D. 10GHz	 2.5.5.9 2.5.5.13 2.5.5.13 2.5.5.13	 4.2 4.2 4.1 4.0	--
Loss Tangent (Df, 50% resin content) A. 1GHz B. 2GHz C. 5GHz D. 10GHz	 2.5.5.9 2.5.5.13 2.5.5.13 2.5.5.13	 0.017 0.018 0.019 0.020	--
Flexural Strength, minimum A. Length direction B. Cross direction	2.4.4	 480-510 410-440	N/mm^2
Thermal Stress 10 s at 288°C A. Unetched B. Etched	2.4.13.1	 Pass Pass	Rating
Flammability	UL94	V-0	Rating
Comparative Tracking Index (CTI)	ASTM D3638 / UL 746	CTI 3 (175-249)	Class (Volts)
Maximum Operating Temperature(MOT)	UL 746	130	˚C
Glass Transition Temperature(DSC)	2.4.25	175	˚C
Decomposition Temperature(5% W.L)	2.4.24.6	350	˚C
X/Y Axis CTE (40℃ to 125℃)	2.4.41	11-13 / 13-15	ppm/˚C
Z-Axis CTE A. Alpha 1 B. Alpha 2 C. 50 to 260 Degrees C	2.4.24	 50 250 3.0	 ppm/˚C ppm/˚C %
Thermal Resistance A. T260 B. T288	2.4.24.1	 >60 20	 Minutes Minutes