



IT-189TC

High Tg / Lead Free / High Reliability Laminate & Prepreg

- Excellent CAF resistance (1000 Volts)
- Good through-hole reliability
- Low CTE and high thermal reliability
- For automotive ECU 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	0.10	%
Permittivity (Dk, 50% resin content) A. 1GHz B. 2GHz C. 5GHz D. 10GHz	2.5.5.13	4.4 4.2 4.1 4.1	--
Loss Tangent (Df, 50% resin content) A. 1GHz B. 2GHz C. 5GHz D. 10GHz	2.5.5.13	0.013 0.014 0.015 0.016	--
Flexural Strength, minimum A. Length direction B. Cross direction	2.4.4	500-550 400-450	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)	IEC 60112 / UL 746	CTI 2 (250-399)	Class (Volts)
Glass Transition Temperature(DSC)	2.4.25	175	°C
Decomposition Temperature	2.4.24.6	350	°C
X/Y Axis CTE (40°C to 125°C)	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	35 230 2.4	ppm/°C ppm/°C %
Thermal Resistance A. T260 B. T288	2.4.24.1	>60 25	Minutes Minutes