

ITEQ
Your Partner of Advanced Materials & Mass Lam Service

IT-998GSE

CCL : IT-998GSETC
Prepreg: IT-998GSEBS

High Tg / Halogen Free / Low Dk / Super Ultra Low Loss Laminate & Prepreg

- ANSI Type :No ANSI
- Appliceable IPC-4101 / 134 ; IPC-4103 /240/540
- Lower Dk (3.14 @ 10GHz) and Ultra low Df (0.0013 @ 10GHz)
- Very Stable Dk-Df across frequency / 800G Solution

Laminate properties

Items	IPC TM-650	Typical Value		Unit
Peel Strength A. Low profile copper foil (35 μm)	2.4.8	3.0		lb/inch
Volume Resistivity	2.5.17.1	10^{10}		MΩ-cm
Surface Resistivity	2.5.17.1	10^{10}		MΩ
Moisture Absorption	2.6.2.1	0.06		%
Permittivity (Dk) A. 2 GHz B. 5 GHz C. 10 GHz	 2.5.5.13 2.5.5.13 2.5.5.13	(RC 58%) 3.47 3.44 3.41	(RC 78%) 3.17 3.15 3.14	--
Loss Tangent (Df) A. 2 GHz B. 5 GHz C. 10 GHz	 2.5.5.13 2.5.5.13 2.5.5.13	(RC 58%) 0.0014 0.0015 0.0017	(RC 78%) 0.0010 0.0012 0.0013	--
Flexural Strength A. Length direction B. Cross direction	2.4.4	355 335		Mpa
Young's Modulus A.Warp direction B.Fill direction	ASTM D3039	17 15		Gpa
Thermal Stress 10 sec at 288°C A. Unetched B. Etched	2.4.13.1	Pass Visual Pass Visual		Rating
Flammability	UL94	V-0		Rating
Comparative Tracking Index (CTI)	ASTM D3638/ UL 746	CTI 2 (250-399)		Class (Volts)
Maximum Operating Temperature(MOT)	UL 746	130		˚C
Glass Transition Temperature(DMA)	2.4.24.2	200		˚C
Glass Transition Temperature(TMA)	2.4.24	170		˚C
Decomposition Temperature (5% W.L)	2.4.24.6	380		˚C
X/Y Axis CTE (40°C to 125°C)	2.4.24.5	12/13		ppm/˚C
Z-Axis CTE A. Alpha 1 B. Alpha 2 C. 50 to 260 Degrees C	2.4.24	45-50 225-250 2.0		ppm/˚C ppm/˚C %
Thermal Resistance A. T260 B. T288	2.4.24.1	> 60 > 60		Minutes Minutes