



# IT-258GA3

CCL : IT-258GA3TC  
Prepreg: IT-258GA3BS

## Middle Tg / Halogen Free / High Reliability Laminate & Prepreg

- ANSI Type : FR-4.1
- Applicable IPC-4101 /127/128 ; IPC-4103 /250/550
- Excellent CAF resistance (1000 Volts) and good through-hole reliability
- High CTI (400-599 Volts) and thermal conductivity (0.70 W/mK)
- Low CTE and high thermal reliability /For automotive ECU, HDI, and heavy copper applications

### Laminate properties

Items	IPC TM-650	Typical Value	Unit
Peel Strength, minimum			
A. Low profile copper foil	2.4.8	5	lb/inch
B. Standard profile copper foil		8	
Volume Resistivity	2.5.17.1	1x10 <sup>9</sup>	MΩ-cm
Surface Resistivity	2.5.17.1	1x10 <sup>8</sup>	MΩ
Moisture Absorption, maximum	2.6.2.1	0.12	%
Permittivity (Dk, 50% resin content)			
A. 1GHz	2.5.5.13	4.4	--
B. 2GHz		4.4	
C. 5GHz		4.4	
D. 10GHz		4.3	
Loss Tangent (Df, 50% resin content)			
A. 1GHz	2.5.5.13	0.014	--
B. 2GHz		0.014	
C. 5GHz		0.015	
D. 10GHz		0.016	
Flexural Strength, minimum			
A. Length direction	2.4.4	500-530	N/mm <sup>2</sup>
B. Cross direction		440-470	
Thermal Stress 10 s at 288°C			
A. Unetched	2.4.13.1	Pass	Rating
B. Etched		Pass	
Flammability	UL94	V-0	Rating
Comparative Tracking Index (CTI)	ASTM D3638/ UL 746	CTI 1 (400-599)	Class (Volts)
Maximum Operating Temperature(MOT)	UL 746	130	°C
Glass Transition Temperature(DSC)	2.4.25	155	°C
Decomposition Temperature(5% W.L)	2.4.24.6	385	°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	2.4.24	35	ppm/°C
B. Alpha 2		210	ppm/°C
C. 50 to 260 Degrees C		2.8	%
Thermal Resistance			
A. T260	2.4.24.1	>60	Minutes
B. T288		>60	