



## PRODUCTS

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We provide the best service, hope you will like.  
Our goal is to provide exceptional service  
and support to our customers.

## IT-258GA3BS/IT-258GA3TC

### Halogen Free Multifunctional Epoxy Resin and Lead Free Laminate & Prepreg

*IT-258GA3 is a medium Tg (>150 °C by DSC) halogen free multifunctional epoxy with high thermal reliability and CAF resistance. It's suitable for handheld and consumer applications with 260 °C Lead free assembly.*

### Key Features =====

#### Advanced Resin Technology

*Industrial standard material with medium Tg (150 °C by DSC) halogen free multifunctional epoxy resin and excellent thermal reliability.*

#### Excellent Thermal Resistance

*Advanced halogen free resin system provides high thermal reliability, even for multiple HDI press cycles.*

#### Lead-Free Assembly Compatible

*RoHS compliant and low CTE, that's suitable for high thermal reliability needs, and Lead free assemblies with a maximum reflow temperature of 260 °C.*

#### Friendly Processing and CAF Resistance

*Friendly to PCB process that users can easily handle the process by current equipment and chemical. Excellent thermal reliability and CAF resistance providing long-term reliability for industrial boards and automobile application.*

#### Available in Variety of Constructions

*Available in various of constructions, copper weights and glass styles.*

### Applications

**Smart Phone and Cell Phone**

**HDI and Multilayer PCB**

**PC and Notebook**

**Memory Module**

**LCD Panels**

**Game Player**

**Servers and Networking**

**Telecommunications**

### Industrial Approval

**UL 94 V-0**

**IPC-4101C Spec / 128**

**RoHS Compliant**

# ITEQ Laminate/ Prepreg : IT-258GA3TC/IT-258GA3BS

## IPC-4101C Spec / 128

### LAMINATE (IT-258GA3TC)

Property	Thickness < 0.50 mm [0.0197 in]		Thickness ≥ 0.50 mm [0.0197 in]		Units	Test Method
	Typical Value	Spec	Typical Value	Spec	Metric (English)	IPC-TM-650 (or as noted)
Peel Strength, minimum A. Low profile copper foil and very low profile copper foil - all copper weights > 17µm [0.669 mil] B. Standard profile copper foil 1. After Thermal Stress 2. At 125°C [257 F] 3. After Process Solutions	0.87 (5.0)	0.70 (4.00)	0.87 (5.0)	0.70 (4.00)	N/mm (lb/inch)	2.4.8 2.4.8.2 2.4.8.3
Volume Resistivity, minimum A. C-96/35/90 B. After moisture resistance C. At elevated temperature E-24/125	10 <sup>10</sup> -- 10 <sup>10</sup>	10 <sup>6</sup> -- 10 <sup>3</sup>	-- 10 <sup>10</sup> 10 <sup>10</sup>	-- 10 <sup>4</sup> 10 <sup>3</sup>	MΩ-cm	2.5.17.1
Surface Resistivity, minimum A. C-96/35/90 B. After moisture resistance C. At elevated temperature E-24/125	10 <sup>10</sup> -- 10 <sup>10</sup>	10 <sup>4</sup> -- 10 <sup>3</sup>	-- 10 <sup>10</sup> 10 <sup>10</sup>	-- 10 <sup>4</sup> 10 <sup>3</sup>	MΩ	2.5.17.1
Moisture Absorption, maximum	--	--	0.12	0.8	%	2.6.2.1
Dielectric Breakdown, minimum	--	--	60	40	kV	2.5.6
Permittivity (Dk, 50% resin content) (Laminate & Laminated Prepreg) A. 1MHz B. 1GHz C. 2GHz D. 5GHz E. 10GHz	4.5 4.4 4.4 4.4 4.3	5.4	4.5 4.4 4.4 4.4 4.3	5.4	--	2.5.5.9 2.5.5.13
Loss Tangent (Df, 50% resin content) (Laminate & Laminated Prepreg) A. 1MHz B. 1GHz C. 2GHz D. 5GHz E. 10GHz	0.014 0.014 0.014 0.015 0.016	0.035	0.014 0.014 0.014 0.015 0.016	0.035	--	2.5.5.9 2.5.5.13
Flexural Strength, minimum A. Length direction B. Cross direction	-- -- --	-- -- --	500-530 (72,500-76,850) 470-500 (68,150-72,500)	415 (60,190) 345 (50,140)	N/mm <sup>2</sup> (lb/in <sup>2</sup> )	2.4.4
Arc Resistance, minimum	90	60	90	60	s	2.5.1
Thermal Stress 10 s at 288°C [550.4F], minimum A. Unetched B. Etched	Pass Pass	Pass Visual Pass Visual	Pass Pass	Pass Visual Pass Visual	Rating	2.4.13.1
Electric Strength, minimum (Laminate & Laminated Prepreg)	45	30	--	--	kV/mm	2.5.6.2
Flammability, (Laminate & Laminated Prepreg)	V-0	V-0	V-0	V-0	Rating	UL94
Glass Transition Temperature(DSC)	151	150 minimum	151	150 minimum	°C	2.4.25
Decomposition Temperature	--	--	370	325 minimum	°C	2.4.24.6 (5% wt loss)
X/Y Axis CTE (40°C to 125°C)	--	--	11-13	--	ppm/°C	2.4.24
Z-Axis CTE A. Alpha 1 B. Alpha 2 C. 50 to 260 Degrees C	-- -- --	-- -- --	40 200 2.8	60 maximum 300 maximum 3.5 maximum	ppm /°C ppm /°C %	2.4.24
Thermal Resistance A. T260 B. T288	-- --	-- --	>60 >60	30 minimum 5 minimum	Minutes Minutes	2.4.24.1
CAF Resistance	--	--	Pass	AABUS	Pass/Fail	2.6.25
Halogen Content, maximum -Chlorine -Bromine -Chlorine+Bromine	<900 <900 <1500	900 900 1500	<900 <900 <1500	900 900 1500	ppm	2.3.41

The above data and fabrication guide provide designers and PCB shop for their reference. We believe that these information are accurate, however, the data may vary depend on the test methods and specification used. The actual sales of the product should be according to specification in the agreement between ITEQ and its customer. ITEQ reserves the right to revise its data at any time without notice and maintain the best information available to users.