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Tg 260°C Halogen Free Laminate and Prepreg











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Core: TU-901 **TU-901** Prepreg: TU-901P

TU-901 Tg260 material is made of high performance robust resin system and E-glass fabric. It's a halogen free material and designed to have high modulus, thermal robust, low Dk/Df, low CTE and ultra-low insertion loss features at the same time. TU-901 laminate and TU-901P prepreg are designed to achieve high reliability multilayer, substrate, SiP, radio frequency and ultra-thin HDI boards design and applications. The product is suitable for boards that need stringent X, Y dimensional stability, low board distortion or need to experience excessive harsh environmental work with excellent signal integrity performance. TU-901 materials also exhibit superior chemical resistance, high rigidity, PCB process friendly, excellent long term reliability and CAF performance.

Applications

- Substrate
- HDI, ELIC Design
- High speed / frequency applications
- Aerospace & Military Harsh environments

Performance and Processing Advantages

- Ultra-High Tg characteristics
- Ultra-Low insertion loss material
- Low coefficient of X/Y/Z thermal expansion
- Excellent resin filling capability for thin dielectric thickness design
- Lead free & modified FR4 processes compatible
- Halogen free environmental friendly material

Industry Approvals

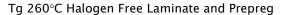
- IPC-4101E Specification Number: 134
- IPC-4101E/134 Validation Services QPL Certified
- UL File Number: E189572
- ANSI Grade: No-ANSI
- Flammability Rating: 94V-0
- Maximum Operating Temperature: 160°C

Standard Availability

- Thickness: 0.0012" [0.03mm] to 0.062" [1.58mm], available in sheet or panel form
- Copper Foil cladding: 1/3 to 3 oz
- Prepregs: Available in roll or panel form
- Glass Styles: 1017, 1027, 1037, 1067, 1078, 3313 and 2116 etc. and others upon request



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Validation Services







Typical Properties		
	Typical Values	Test Conditions
Thermal		
Tg (DMA) Tg (TMA) Td (TGA)	260 °C 230 °C 430 °C	E-2/105
CTE x/y axis CTE z-axis CTE z-axis CTE z-axis	8/10 ppm/°C 25-35 ppm/°C 140-150 ppm/°C 1.0 %	Ambient to Tg Ambient to Tg Tg to 260°C 50 to 260°C
Thermal Stress, Solder Float, 288°C	> 60 sec	А
T260 T288 T300	> 60 min > 60 min > 60 min	E-2/105
Flammability	94V-0	E-24/125
Electrical		
Permittivity (RC70%) 10GHz (SPC method) Impedance simulation DK	3.59 3.10	E-2/105
Loss Tangent (RC70%) 10GHz (SPC method)	0.0036	E-2/105
Volume Resistivity	> 10¹0 MΩ∙cm	C-96/35/90
Surface Resistivity	$> 10^8 \ M\Omega$	C-96/35/90
Electric Strength	> 40 kV/mm	Α
Dielectric Breakdown Voltage	> 50 KV	Α
Mechanical		
Flexural Strength Lengthwise Crosswise	> 60,000 psi > 50,000 psi	A A
Peel Strength 1 oz. RTF Cu foil	4 lb/in	A

- ${\it 1. Property values are for information purposes only and not intended for specification.}\\$
- 2. Any sales of these products will be governed by the terms and conditions of the agreement under which they are sold.
- 3. This product is based on a patent pending technology.

