TU-900

Core: TU-900

Prepreg: TU-900P

TU-900 Tg260 material is made of BT-like high performance resin system and E-glass fabric. It's a halogen free material and design to have both features for high elastic modulus, high reliability and low Dk/Df, low loss category electrical performance at the same time. TU-900 laminate and TU-900P prepreg designed for high reliability multilayer, substrate or, 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. TU-900 materials also exhibit superior chemical resistance, high rigidity, low thermal expansion and excellent long term reliability and CAF performance.

Applications

- Substrate
- HDI, ELIC Design
- Aerospace & Military -Harsh environments

Performance and Processing Advantages

- Halogen free and antimony, red phosphorous free
- Ultra High Tg characteristics
- Low-loss category material
- Low coefficient of thermal expansion
- Excellent moisture resistance
- Lead free processing compatible
- Anti-CAF capability
- Environmental friendly materials

Industry Approvals

- IPC-4101 Type Designation : /127, /128, /130
- UL Designation - No ANSI grade
- UL File Number: E189572
- Flammability Rating: 94V-0
- Maximum Operating Temperature: 150°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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Typical Properties for TU-900 Laminate			
	Typical Values	Test Condition	IPC-4101 /130
Thermal			
Tg (DMA) Tg (TMA) Td (TGA)	260 °C 220 °C 390 °C	E-2/105	> 170°C > 340°C
CTE x-axis CTE y-axis CTE z-axis	7~10 ppm/°C 7~10 ppm/°C 1.3 %	Ambient to Tg Ambient to Tg 50 to 260°C	N/A N/A < 3.0%
Thermal Stress, Solder Float, 288°C	> 60 sec	A	> 10 sec
T260 T288 T300	> 60 min > 60 min > 30 min	E-2/105	> 30 min > 15 min > 2 min
Flammability	94V-0	E-24/125	94V-0
Electrical			
Permittivity (RC70%) 1GHz (SPC method) 10GHz (SPC method)	 3.8 3.7	E-2/105	 < 5.4
Loss Tangent (RC70%) 1GHz (SPC method) 10GHz (SPC method)	 0.0045 0.0055	E-2/105	 < 0.015
Volume Resistivity	> 10^{10} MΩ·cm	C-96/35/90	> 10^{6} MΩ·cm
Surface Resistivity	> 10^{8} MΩ	C-96/35/90	> 10^{4} MΩ
Electric Strength	> 40 kV/mm	A	> 30 KV/mm
Dielectric Breakdown Voltage	> 50 KV	A	> 40 KV
Mechanical			
Flexural Strength Lengthwise Crosswise	 > 60,000 psi > 50,000 psi	 A A	 > 60,000 psi > 50,000 psi
Peel Strength 1 oz Cu foil	 5~7 lb/in	A	> 4 lb/in
Water Absorption	0.08 %	E-1/105+D-24/23	< 0.8 %

NOTE:

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.

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