TU-768

Core: TU-768

Prepreg: TU-768P

TU-768 / TU-768P laminate / prepreg are made of high quality woven E-glass coated with the epoxy resin system, which provides the laminates with UV-block characteristic, and compatibility with automated optical inspection (AOI) process. These products are suitable for boards that need to survive severe thermal cycles, or to experience excessive assembly work. TU-768 laminates exhibit excellent CTE, superior chemical resistance and thermal stability plus CAF resistance property.

Applications

- Consumer Electronics
- Server, workstation
- Automotive

Performance and Processing Advantages

- Lead Free process compatible
- Excellent coefficient of thermal expansion
- Anti-CAF property
- Superior chemical and thermal resistance
- Fluorescence for AOI
- Moisture resistance

Industry Approvals

- IPC-4101E Type Designation : /98, /99, /101, /126
- IPC-4101E/126 Validation Services QPL Certified
- UL Designation - ANSI Grade: FR-4.0
- UL File Number: E189572
- Flammability Rating: 94V-0
- Maximum Operating Temperature: 130°C

Standard Availability

- Thickness: 0.002" [0.05mm] to 0.062" [1.58mm], available in sheet or panel form
- Copper Foil Cladding: 1/8 to 12 oz (HTE) for built-up; 1/8 to 3 oz (HTE) for double sides and H to 2 oz (MLS)
- Prepregs: Available in roll or panel form
- Glass Styles: 106, 1080, 2113, 2116, 1506 and 7628 etc.

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Typical Properties for TU-768 Laminate

	Typical Values	Conditioning	IPC-4101 /126
Thermal			
Tg (DMA) Tg (DSC) Tg (TMA) Td (TGA)	190°C 180°C 170°C 350°C	E-2/105	> 170°C > 340°C
CTE x-axis CTE y-axis CTE z-axis	11~15 ppm/°C 11~15 ppm/°C 2.7 %	E-2/105	N/A N/A < 3.0%
Thermal Stress, Solder Float, 288°C	> 60 sec	A	> 10 sec
T260 T288 T300	> 60 min > 15 min > 2 min	E-2/105	> 30 min > 15 min > 2 min
Flammability	94V-0	E-24/125	94V-0
Electrical			
Permittivity (RC50%) 1GHz (SPC method/HP 4291B) 5GHz (SPC method) 10GHz (SPC method)	 4.4/4.3 4.3 4.3	E-2/105	 < 5.2 N/A N/A
Loss Tangent (RC50%) 1GHz (SPC method/HP4291B) 5GHz (SPC method) 10GHz (SPC method)	 0.019/0.018 0.021 0.023	E-2/105	 < 0.035 N/A N/A
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			
Young's Modulus Warp Direction Fill Direction	 25 GPa 22 GPa	A	N/A
Flexural Strength Lengthwise Crosswise	 > 60,000 psi > 50,000 psi	 A A	 > 60,000 psi > 50,000 psi
Peel Strength, 1.0 oz RTF Cu foil	7~9 lb/in	A	> 4 lb/in
Water Absorption	0.18 %	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.

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