TU-862T

Core: TU-862T

Prepreg: TU-862P T

TU-862T High Tg halogen free materials are made of High Tg epoxy resin and E-glass fabric. Unlike conventional FR-4 material using brominated resin as flame retardant, TU-862T /TU-862P T achieves flammability class of UL94V-0 by incorporating phosphorus and nitrogen compounds in the materials. The materials are compatible with the AOI process and exhibit the UV-block characteristic. TU-862P T is designed for use with TU-862T for making multilayer printed wire boards. TU-862T is also available for single/double sided application. This series of green materials are designed to eliminate the use of halogenated resins due to the potential hazardous effects from the environmental concerns. These products are suitable for boards that need to survive severe thermal cycles, or to experience excessive assembly work. TU-862T laminates also exhibit superior chemical resistance, thermal stability for lead free soldering assembly and CAF resistance than conventional High Tg materials.

Applications

- Backplane, High performance computing
- Automotive, Harsh environments
- Servers, Telecom, Base station
- Office Routers

Performance and Processing Advantages

- Low halogen and environmental friendly materials
- Lead free process compatible
- Compatible to PCB processes
- Very low coefficient of thermal expansion
- Moisture resistance
- Anti-CAF capability
- Higher Tg characteristics

Industry Approvals

- IPC-4101E Type Designation : /127, /128, /130
- IPC-4101E/130 Validation Services QPL Certified
- UL Designation - ANSI Grade : FR-4.1
- 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: 1/3 to 5 oz (HTE) for built-up & 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.

Taiwan Union Technology Corporation (TUC)
TUC Taiwan +886 3 555 1103 . TUC Changshu, China +86 512 5230 1688 . TUC Zhongshan, China +86 760 2813 6688

Typical Properties for TU-862T Laminate

	Typical Values	Conditioning	IPC-4101 /130
Thermal			
Tg (DSC)	190°C		>170°C
Tg (TMA)	175°C	E-2/105	
Td (TGA)	370°C		>340°C
CTE x-axis	11~15 ppm/°C		N/A
CTE y-axis	11~15 ppm/°C	E-2/105	N/A
CTE z-axis	2.0 %		< 3.0%
Thermal Stress, Solder Float, 288°C	> 60 sec	A	> 10 sec
T260	> 60 min		> 30 min
T288	> 60 min	E-2/105	> 15 min
T300	> 30 min		> 2 min
Flammability	94V-0	E-24/125+des	94V-0
Electrical			
Permittivity (RC50%) 1GHz (SPC method) 10GHz (SPC method)	4.5 4.4	E-2/105	N/A
Loss Tangent (RC50%) 1GHz (SPC method) 10GHz (SPC method)	0.013 0.015	E-2/105	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			
Flexural Strength			
Lengthwise	> 60,000 psi	A	> 60,000 psi
Crosswise	> 50,000 psi	A	> 50,000 psi
Peel Strength, 1.0 oz RTF Cu foil	5~8 lb/in	A	> 4 lb/in
Water Absorption	0.13 %	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

Taiwan Union Technology Corporation (TUC)
TUC Taiwan +886 3 555 1103 . TUC Changshu, China +86 512 5230 1688 . TUC Zhongshan, China +86 760 2813 6688