TU-662

Core: TU-662

Prepreg: TU-66P

TU-662/ TU-66P laminate/ prepreg are made of high quality woven E-glass coated with the epoxy resin system, which provides the laminates 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-662 laminates exhibit excellent CTE, superior chemical resistance, and thermal stability for lead free soldering assembly with general CAF resistance.

Applications

- Automotive
- Consumer Electronics

Performance and Processing Advantages

- Lead Free process compatible
- Excellent coefficient of thermal expansion
- Anti-CAF property
- Use friendly FR-4 processing conditions such as oxide, press, drilling and desmear
- Superior chemical and thermal resistance
- Fluorescence for AOI
- Optical characteristics provide UV-block property
- High interlayer bonding strength with optimum resin flow
- Low moisture absorption

Industry Approvals

- IPC-4101 Type Designation : /21, /98, /99, /101
- 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: 1/3 to 6 oz (HTE) for built-up; 1/3 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.

Typical Properties for TU-662 Laminate

	Typical Values	Test Condition	SPEC
Thermal			
Tg (DMA) Tg (DSC) Tg (TMA) Td (TGA)	160 °C 150 °C 140 °C 340 °C	E-2/105+des	N/A
CTE x-axis CTE y-axis CTE z-axis	11~15 ppm/°C 11~15 ppm/°C 3.2 %	Ambient to Tg Ambient to Tg 50 to 260°C	N/A N/A < 3.5%
Thermal Stress, Solder Float, 288°C	> 60 sec	A	> 10 sec
T-260 T-288	> 60 min > 10 min	E-2/105+des	> 30 min > 5 min
Flammability	94V-0	E-24/125+des	94V-0
Electrical			
Permittivity (RC50%) 1MHz (LCR meter) 1GHz (SPC method/HP4291B)	 4.7 4.4/4.3	C-24/23/50	 < 5.4 N/A
Loss Tangent (RC50%) 1MHz (LCR meter) 1GHz (SPC method/HP4291B)	 0.016 0.018/0.014	C-24/23/50	 < 0.035 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		> 30 KV/mm
Dielectric Breakdown Voltage	> 50 KV		> 40 KV
Mechanical			
Flexural Strength Lengthwise Crosswise	 > 75,000 psi > 65,000 psi	 A A	 > 60,000 psi > 50,000 psi
Peel Strength, 1.0 oz. Cu foil	8~11 lb/in	A	> 4 lb/in
Bow and Twist 0.020"~0.031" 0.032:~0.065: >0.066"	 < 0.8% < 0.8% < 0.8%	A	 Max 1.5 Max 1.0 Max 1.0
Dimensional Stability	< 0.03%	E-4/105+E-2/150	< 0.03 %
Water Absorption	0.13 %	E-1/105+des+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.