



TU-872 SLK

Core: TU-872 SLK

Prepreg: TU-87P SLK

TU-872 SLK is based on a high performance modified epoxy FR-4 resin. This material is reinforced with regular woven E-glass and designed with low dielectric constant and low dissipation factor for high speed low loss and high frequency multilayer circuit board application. TU-872 SLK material is suitable for environmental protection lead free process and also compatible with FR-4 processes. TU-872 SLK laminates also exhibit excellent moisture resistance, improved CTE, superior chemical resistance, thermal stability, CAF resistance, and toughness enhanced by an allyl network forming compound.

Applications

- Radio frequency
- Backpanel, High performance computing
- Line cards, Storage
- Servers, Telecom, Base station
- Office Routers

Performance and Processing Advantages

- Excellent electrical properties
- Dielectric constant less than 4.0
- Dissipation factor less than 0.010
- Stable and flat Dk/Df performance
- Compatible with modified FR-4 processes
- Excellent moisture resistance and Lead Free reflow process compatible
- Improved Z-axis thermal expansion
- Anti-CAF capability
- Superior dimensional stability, thickness uniformity and flatness
- Excellent through-hole and soldering reliability

Industry Approvals

- IPC-4101 Type Designation : /29, /98, /99, /101, /126
- 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 5 oz for built-up & double sides
- Prepregs: Available in roll or panel form
- Glass Styles: 106, 1080, 3313, 2116 and other prepreg grades are available upon request.





Typical Properties for TU-872 SLK Laminate			
	Typical Values	Test Condition	SPEC
Thermal			
T _g (DMA) T _g (DSC) T _g (TMA) T _d (TGA)	220 °C 200 °C 190 °C 340 °C	E-2/105+des	N/A
CTE x-axis CTE y-axis CTE z-axis	12~15 ppm/°C 12~15 ppm/°C 2.3 %	Ambient to T _g Ambient to T _g 50 to 260°C	N/A N/A <3.0%
Thermal Stress, Solder Float, 288°C	> 60 sec	A	> 10 sec
T-260 T-288	60 min 20 min	E-2/105+des	> 30 min > 15 min
Flammability	94V-0	E-24/125+des	94V-0
Electrical			
Permittivity (RC50%) 1GHz (SPC method/4291B) 5GHz (SPC method) 10GHz (SPC method)	4.0/3.8 3.9 3.8	C-24/23/50	N/A
Loss Tangent (RC50%) 1GHz (SPC method/4291B) 5GHz (SPC method) 10GHz (SPC method)	0.008/0.006 0.008 0.009	C-24/23/50	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			
Young's Modulus Warp Direction Fill Direction	26 GPa 24 GPa	-	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. Cu foil	5~7 lb/in	A	> 4 lb/in
Water Absorption	0.13 %	E-1/105+des+D-24/23	< 0.8 %

NOTE:

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