TU-84P MF

Prepreg: TU-84P MF

TU-84P MF medium flow, halogen-free prepreg consist of optimal resin flow specially formulated for unique purpose bonding application. The special design TU-84P MF medium flow, halogen-free prepreg is appropriate for applying in multiple layer rigid-flex bonding, heat sink bonding and die cavity board application. TU-84P MF medium flow prepreg also provide excellent bonding performance with a variety of polyimide materials and with excellent high Tg, low CTE thermal performance for sequential lamination and lead-free processes.

Applications

- Rigid-flex
- Heat sink, Cavity

Performance and Processing Advantages

- Stable resin flow and resin filling capability
- Excellent bonding strength with polyimide materials
- Low resin powder dust generation
- Higher Tg and halogen free characteristics
- Lead Free process compatible
- Reduced Z-axis thermal expansion
- Superior dimensional stability, thickness uniformity and flatness
- Good drilling & lamination processes friendly
- Superior dielectric thickness control

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

- Prepregs: Available in roll or panel form
- Glass Styles: 106 and 1080, other prepreg grades are available upon request

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Typical Properties for TU-84P MF Prepreg

	Typical Values	Conditioning	IPC-4101 /130
Thermal			
Tg (DMA) Tg (TMA) Td (TGA)	190 °C 165 °C 390 °C	E-2/105	N/A
CTE x-axis CTE y-axis CTE z-axis	11~15 ppm/°C 11~15 ppm/°C 2.1 %	E-2/105	N/A N/A < 3.0%
Thermal Stress, Solder Float, 288°C	> 60 sec	A	> 10 sec
T-260 T-288 T-300	> 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 (RC50%) 1GHz (HP4291B) 5GHz (SPC method) 10GHz (SPC method)	 4.4 4.5 4.4	E-2/105	N/A
Loss Tangent (RC50%) 1GHz (HP4291B) 5GHz (SPC method) 10GHz (SPC method)	 0.010 0.014 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
Mechanical			
Young's Modulus Warp Direction Fill Direction	 26 GPa 24 GPa	A	N/A
Flexural Strength Lengthwise Crosswise	 > 75,000 psi > 65,000 psi	A	 > 60,000 psi > 50,000 psi
Peel Strength, 1.0 oz RTF Cu foil	9~12 lb/in	A	> 4 lb/in
Dimensional Stability	< 0.03%	E-4/105+E-2/150	< 0.03 %
Water Absorption	0.15 %	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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