



TU-322

Metal Laminate : TU-322L

TU-322 , thermal conductive material, offer you an effective solution to the thermal problem in electronic field. With high thermal conductive insulator on Aluminum or Copper, it rapidly transfers the heating from component side to the back of the substrate. There are three layers material included, copper foil, thermal conductive film, and base metal.

Application

- LED Application
 - LED Lighting
 - COB Substrate
 - LCD Backlight
 - Outdoor LED display
- Vehicle & Power Application
 - Vehicle lighting
 - ECU/Controller
 - Regulator/Power module
 - Inverter/Converter/Power supplier/Relay

Performance and Processing Advantages

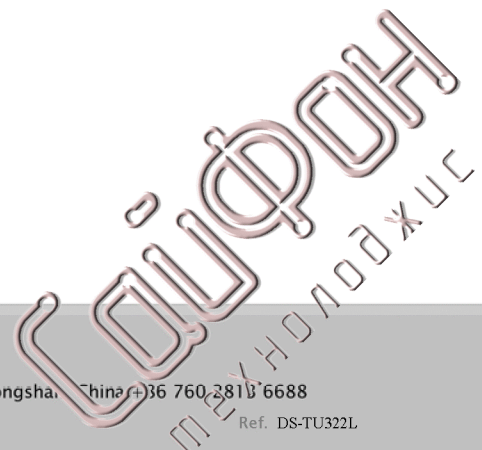
- Good Heat sink and Durability
- Excellent circuit integration and electrical insulation
- High mechanical strength and reliability
- PCB/SMT/COB process compatible
- Halogen free and ROHS compliant

Industry Approvals

- UL Designation: Metal Base Laminate
- UL File Number: E189572
- Flammability Rating: 94V-0
- Relative Thermal Index(RTI) Elec/Eech : 130°C/ 130°C
- Comparative Tracking Index (CTI) > 600 V
- Halogen free and ROHS compliant

Standard Availability

- Aluminum/Copper base thickness : 0.15 mm to 1.5 mm
- PP : Film type without glass fiber
- Film thickness : 40 to 150 um
- Copper Foil Cladding: 1/2 to 5oz
- Standard size : 510x610mm/340x520mm




Typical Properties of TU-322L

	Unit	Typical Values	Test Method
Standard Dielectric Thickness	um	80	
Thermal Properties			
Film Thermal Conductivity	W/mk	2	ASTM-E1461
MCCL Thermal Resistance	°C/W	0.1	ASTM-D5470
Tg	°C	125	DMA
Td	°C	370	TGA
Electrical Properties			
Volume Resistivity	Ωcm	>1E13	IPC-TM-650 2.5.17.1
Surface Resistivity	Ω	>1E12	IPC-TM-650 2.5.17.1
Dielectric constant	-	5.5	IPC-TM-650 2.5.5.3
Dissipation factor	-	0.014	IPC-TM-650 2.5.5.3
Reliability			
Solder Float 288°C	min	20	IPC-TM-650 2.4.13.1
Solder Dip 288°C/ 10 sec	Cycle	6	Aluminum side float
Peel Strength (1.0 oz)	kgf/cm	>1.4	IPC-TM-650 2.4.8
After solder Float 288°C/30 sec	kgf/cm	>1.3	
Hi-Pot Withstand	KVDC	> 6.0	IPC-TM-650 2.5.7.2
	KVAC	> 3.0	2" pattern, 100V/sec, Lmt:1.5mA
Bending Test	-	Pass	Reverse±180° R=10 mm 25X Lupe no break/delam
High Temp. & High Hum. Test	-	3000 Hrs.	85°C & 85 %RH
Thermal Shock	-	3000 Cycle	-30°C/30 min ↔ 80°C/30 min
Migration Resistance Test	-	Pass	60°C/95%RH/200VCD/1000Hrs Line/Space 0.2 mm
Agency Ratings			
Flammability Rating	-	94V-0	UL Standard
Relative Thermal Index (RTI or MOT)	°C	130	UL Standard
Comparative Tracking Index (CTI)	Volts	> 600 (PLC=0)	UL Standard
Halogen free and ROHS compliant	-	Pass	SGS Result : n.d.

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.

