PegaClad 300 (E-glass)

Core : TU-1400
Prepreg : TU-1400P

PegaClad 300 (Dk_3.0) designed for Antenna and Low-orbit satellites applications. It is an advanced hydrocarbon-based very low loss material, and capable for multi-layer circuit board design with excellent thermal reliability. PegaClad 300 is the solution for double side and multi-layer radio frequency designs.

PegaClad 300 material also exhibit excellent moisture resistance, improved CTE, superior chemical resistance, thermal stability, and also compatible with modified FR-4 processes.

Applications

- Antenna
- Low-orbit satellites

Performance and Processing Advantages

- Excellent electrical and thermal properties
- Dielectric constant is 3.05 @ 10GHz (IPC-2.5.5.5 Method)
- Stable and flat Dk/Df performance over frequency and temperature variance.
- Compatible with modified FR-4 processes
- Excellent moisture resistance and Lead Free reflow process compatible
- Superior dimensional stability, thickness uniformity and flatness
- Excellent through-hole and soldering reliability

Industry Approvals

- UL File Number: E189572
- ANSI Grade: non-ANSI
- Flammability Rating: 94V-0
- Maximum Operating Temperature: 140°C

Standard Availability

- Thickness: 0.020", 0.030" and 0.060", available in sheet or panel form
- Copper Foil Cladding : 1/2 and 1 oz for built-up & double sides
- Prepreg glass Styles: 1027, 1037, 1067 and 1078 types available in roll or panel form.

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PegaClad 300 (E-glass)	Typical Values	Units	Test Method
Electrical			
Permittivity @10GHz	3.05	-	E-2/105 IPC-2.5.5.5C
Loss Tangent @10GHz	0.0018	-	E-2/105 IPC-2.5.5.5C
Volume Resistivity	$> 10^{10}$	MΩ·cm	IPC-2.5.17.1
Surface Resistivity	$> 10^{8}$	MΩ	IPC-2.5.17.1
Electric Strength	>40	KV/mm	ASTM D149
Thermal			
Tg / DMA Tg / TMA Td / TGA	210 170 400	℃	PC-2.4.24.2 IPC-2.4.24.3 IPC-2.4.24.6
Thermal Conductivity	0.4	W/mK	ASTM-5470
CTE-x,y, α1, RC50% CTE-z, α1, RC50% CTE-z, α2, RC50% CTE z-axis, RC50%	13 40 220 2.7	ppm/℃ ppm/℃ ppm/℃ %	IPC-2.4.24C
Dimensional Stability	<0.3	mils/inch	IPC-2.4.4
Thermal Stress, Solder Float, 288℃	> 120 sec		IPC-2.6.8.1 IPC-2.6.16
T-260 T-288 T-300	> 60 min > 60 min > 60 min		IPC-2.4.24.1
Flammability	94V-0		UL 94
Mechanical			
Flexural Strength Lengthwise Crosswise	 > 50000 psi > 45000 psi		IPC-2.4.4
Copper Peel Strength, 1.0 oz. VLP Cu foil	>4 lb/in	lb/in	IPC-2.4.8
Water Absorption	< 0.1	%	IPC-2.6.2.1

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.

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