PegaClad 2A

Core : TU-1400
Prepreg : TU-1400P

PegaClad 2A designed for mmWave and automobiles radar applications. It is an advanced brominated, hydrocarbon resin based Dk 3.0 super low loss material, and it provides laminate and prepreg for multi-layer circuit board design with excellent thermal reliability. **PegaClad 2A** laminate is also compatible with various prerepg types to achieve hybrid multi-layer design from regular FR-4 to low loss prepreg.

PegaClad 2A laminates also exhibit excellent moisture resistance, improved CTE, superior chemical resistance, thermal stability, and also compatible with modified FR-4 processes.

Applications

- mmWave
- Automotive radars and sensors
- Wi-Fi Antennas

Performance and Processing Advantages

- Excellent electrical and thermal properties
- Dielectric constant is 3.00 @ 10GHz
- 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 (under registration)
- ANSI Grade: non-ANSI
- Flammability Rating: 94V-0
- Maximum Operating Temperature: 140°C
- UL Registration Product Code : TU-1400

Standard Availability

- Thickness: 0.005" [0.125mm]/0.0075" [0.19mm]/0.010" [0.25mm], available in sheet or panel form
- Copper Foil Cladding : 1/2 and 1 oz and others available upon request

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PegaClad 2A	Typical Values	Units	Test Method
Electrical			
Permittivity @ 10GHz RC77% (SCR method)	3.04	-	IPC-2.5.5.13
Loss Tangent @ 10GHz RC77% (SCR method)	0.0016	-	IPC-2.5.5.13
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-288 T-300	> 60 min > 60 min		IPC-2.4.24.1
Flammability	94V-0		UL 94
Mechanical			
Flexural Strength Lengthwise Crosswise	 > 51000 psi > 46000 psi		IPC-2.4.4
Peel Strength, 1.0 oz. HVLP 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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