OHMEGA/FARADFLEX SPECIFICATIONS AND PROPERTIES for 1R25 / BC24

1-Oak-Mitsui Properties

OAK-MITSUI TECHNOLOGIES
MITSUI KINZOKU CORPORATE GROUP

Properties	Ohmega/FaradFlex Core	Remarks and Conditions
Copper Weight, µm	35	Nominal
Sheet Resistivity, ohms / square	25	Nominal
Dielectric Thickness, µm	24	Nominal
Cp@ 1MHz, nF/in2(pF/cm2)	1.0 (155)	IPC-TM 650 2.5.5.3
Dk @1MHz	4.4	IPC-TM 650 2.5.5.3
Loss Tangent @ 1MHz	0.015	IPC-TM 650 2.5.5.3
Peel Strength, lbs/in	5.0	IPC-TM 650 2.4.9
Dielectric Strength, kV/mil	5.3	IPC-TM 650 2.5.6.3
Tensile Strength, Mpa(kpsi)	152(22.0)	ASTM D-882 A
Elongation, %	18.5	ASTM D-882 A

2-OhmegaPly Properties

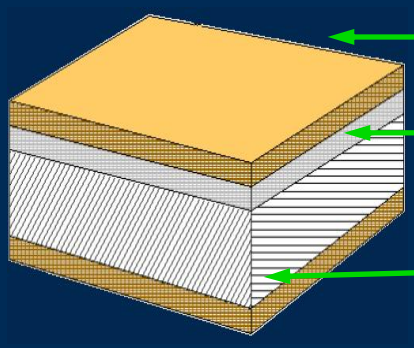
Ohmega
Ohmega Technologies, Inc.

Properties	Ohmega/FaradFlex Core	Ohmega Core FR-4 (control)	Remarks and Conditions
Sheet Resistivities (ohm/square)	25	25	Nominal
Material Tolerance	+/-5%	+/-5 %	
Load Life Cycling Test Resistor Size: 0.500" X 0.050" Loaded: (Δ R%) @ 150mW Unloaded: (Δ R%)	 1.6 1.2	 <5	MIL-STD-202-108I Ambient Temp: 70C On Cycle: 1.5 hrs Off Cycle: 1.5 hrs Length Of Test: 10000 hrs
Current Noise Index in dB	<-23	<-15	MIL-STD-202-308 Voltage Applied: 5.6 Volts
Humidity Test (Δ R%)	0.5	0.5	MIL-STD-202-103A Temp: 40 °C Relative Humidity: 95% Time: 240 hrs
Characteristic (RTC) PPM/°C	-6.0	50	MIL-STD-202-304 Hot Cycle: 25°, 50°,75° 125°C Cold Cycle: 25°, 0°,-25°, -55°C
Thermal Shock (Δ R%)	0.2	-0.5	MIL-STD-202-107B No of Cycles: 25 Hot Cycle Temp: 125 °C Cold Cycle Temp: -65 °C
Solder Float (Δ R%) After 1 Cycle After 5 cycles	 -0.4 -0.6	 0.5	MIL-STD-202-210D Temp: 260°C Immersion: 20 Second
Power Density (mW/mil ^{2}) derated at 50%	0.45	0.15	Step-up Power Test Resistor Size: 0.020" X 0.035"

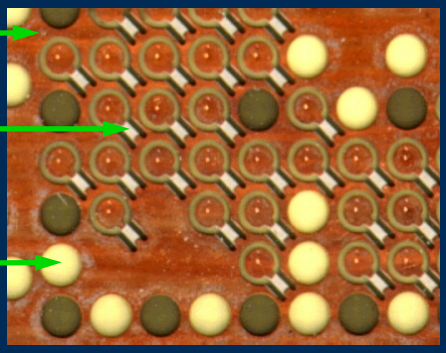
Ohmega®/*FaradFlex*®

EMBEDDED RESISTANCE-CAPACITANCE TECHNOLOGY

Ohmega®/*FaradFlex*® is a combined product of the OhmegaPly® thin film resistive-conductive material (RCM) laminated to a *FaradFlex*® dielectric material and subtractively processed to produce embedded RC Networks.



▲ Ohmega/*FaradFlex laminate*



▲ Ohmega/*FaradFlex Layer.*

- Combined Laminate Product.
- Resistance and Capacitance in the same core.
- Developed to accommodate high density designs.
- Embedded Resistor and Capacitor Networks
- Improved signal integrity by better impedance matching.
- Improved signal to noise ratios.
- Standard PCB Subtractive Processing.
- Greater cost effectiveness than separate BR and BC cores.

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