Garlock
An ENPRO Company

DATA SHEET

WavePro® WP025LDf

Ceramic filled PTFE dielectric for RF and mmWave applications (Dk=2.50 | Df=0.0007)

HIGH PERFORMANCE DIELECTRIC MATERIAL

The WavePro® family of dielectrics is engineered for use in demanding, high-performance RF and mmWave applications. Its precise formulation delivers a low-loss factor, superior mechanical and thermal stability, and unparalleled consistency, making it suitable for a broad range of commercial and military applications where performance and reliability are essential.

MADE TO ORDER PANELS, CURVED/CONFORMAL SURFACES, & 3D SHAPES

Available in a variety of form factors – panels, conformal surfaces, and 3D shapes – WavePro® dielectrics can be custom made to the size, thickness, and geometry required. The Dk value is not restricted to standard values and can be customized. Our expertise in materials science and manufacturing ensures repeatability and reliability between and within production batches.

Visit www.waveproantenna.com to learn more and order free samples.

TYPICAL VALUES

Parameter	WP025LDf	Units	Condition	Test Method
Dielectric constant (Dk)	2.50	-	5 GHz @ 23˚C	IPC-TM-650-2.5.5.5
Loss factor (Df/tan δ)	0.0007	-	5 GHz @ 23˚C	IPC-TM-650-2.5.5.5
Moisture absorption	0.02	%	24 hours/23˚C	IPC-TM-650-2.6.2.1
Thermal Coefficient of Dk (TCDk)[1]	-111	ppm/˚C	5 GHz -50 to 150˚C	IPC-TM-650-2.5.5.5
Coefficient of thermal expansion (CTE)[1]	X: - Y: - Z: -	ppm/˚C	-55 to 150˚C	IPC-TM-650-2.4.4.1
Volume Resistivity	- -	MΩ-cm MΩ-cm	1.5hr/25˚C/90%RH 96hr/35˚C/90%RH	IPC-TM-650-2.5.17.1
Surface Resistivity	- -	MΩ MΩ	1.5hr/25˚C/90%RH 96hr/35˚C/90%RH	IPC-TM-650-2.5.17.1
Tensile strength	X: 26.0 / 3776 Y: 25.1 / 3565	MPa / psi	23˚C	ASTM D1708
Density	2.17	g/cm³	23˚C	ASTM D792
Flammability	V-0	-	-	UL-94V
Panel size	18" x 24" (457 x 610 mm) | Custom sizes made to order			
Panel Thickness	10 to 375 mil (0.25 to 10 mm) | Custom thicknesses made to order			
Conformal surface	Made to order			
3D shape	Made to order			

Notes: 1 - Data for other temperature ranges available. Contact Garlock for more information

ISO 9001 2015 CERTIFIED

ITAR Registered International Traffic in Arms Regulations

RoHS compliant

UL

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