



# SCGA-500 GF220

PTFE with Glass Reinforced RF Circuit Material

## FEATURES

- Consistent and Stable Dk/Df over Frequency and Temperature.
- Low Dielectric Loss Tangent.
- Low Moisture Absorption.
- Excellent Price Performance Value.

## APPLICATIONS

Base Station Antennas  
 Satellite Communications  
 Filters, Couplers, LNAs, Power Amplifiers  
 Phased Array Antennas,  
 Avionics and Aerospace

## GENERAL PROPERTIES

Test Items	Test Method	Test Condition	Unit	Typical Value
Dielectric Constant, Process Dk	IPC-TM-650 2.5.5.5	10GHz/23°C	-	2.20±0.02
Loss Tangent	IPC-TM-650 2.5.5.5	10GHz/23°C	-	0.0009
TcDk	IEC 61189-2-721	10GHz (-40-150°C)	ppm/°C	-110
CTE (X/Y/Z-axis)	IPC-TM-650 2.4.24	TMA (30-260°C)	ppm/°C	41/30/217
Volume Resistivity	IPC-TM-650 2.5.17.1	A	MΩ-cm	1.5X10 <sup>8</sup>
Surface Resistivity	IPC-TM-650 2.5.17.1	A	MΩ	8.8X10 <sup>7</sup>
Peel Strength	IPC-TM-650 2.4.8	288°C/10s	N/mm [lb/in]	1.2 [6.86]
Water Absorption	IPC-TM-650 2.6.2.1	D-24/23	%	0.007
Thermal Conductivity	ASTM C518	100°C	W/(m·K)	0.27
Tensile Modulus (LW/CW)	IPC-TM-650 2.4.4	A	GPa	1.9/2.6
Tensile Strength (LW/CW)	IPC-TM-650 2.4.4	A	MPa	60/76
Density	ASTM D792	-	g/cm <sup>3</sup>	2.18
Flammability	UL-94	C-48/23/50	Rating	V-0

Notes: All the typical value is based on the 0.94mm (0.037") specimen.

## PRODUCT SPECIFICATION PROPEAIES

Standard Thickness Offerings	Standard Panel Sizes	Standard Copper Cladding
0.010"(0.25mm) 0.020"(0.51mm) 0.030"(0.76mm) 0.037"(0.93mm) 0.040"(1.02mm) 0.050"(1.27mm) 0.060" (1.52mm)	36"x 48" & 40"x48" Additional sizes may be available upon request	HOz, 1Oz HTE & RTF

Remark: All the typical values listed above are for your reference only and not intended for specification. Please contact Shengyi Technology Co., Ltd. for detailed information. All rights from this data sheet are reserved by Shengyi Technology Co., Ltd.