



S7136H

Glass Reinforced Hydrocarbon Ceramic High Frequency Circuit Material

FEATURES

- Glass-reinforced hydrocarbon & ceramic dielectric
- Excellent high frequency performance due to Low dielectric tolerance and loss.
- Stable electrical properties versus frequency.
- Low Z-CTE and excellent dimensional stability.

APPLICATIONS

Microstrip and Cellular Base Station
Power Amplifiers
Antennas
High frequency wireless communication.
Satellite signal transmission equipment.

GENERAL PROPERTIES

Test Items	Test Method	Condition	Unit	Typical Value
Dielectric Constant	IPC-TM-650 2.5.5.5	10GHz/23°C	-	3.42
Dielectric Constant	Differential phase length test	A	-	3.61
Dielectric Constant	IEC 61189-2-721(SPDR)	10GHz/23°C	-	3.68±0.05
Loss Tangent	IPC-TM-650 2.5.5.5	10GHz/23°C	-	0.0030
	IEC 61189-2-721(SPDR)	10GHz/23°C	-	0.0035
TcDk	IEC 61189-2-721(SPDR)	10GHz (-40-	ppm/°C	+50
Volume Resistivity	IPC-TM-650 2.5.17.1	A	MΩ-cm	1.1x10 ⁸
Surface Resistivity	IPC-TM-650 2.5.17.1	A	MΩ	1.6x10 ⁷
Tg	IPC-TM-650 2.4.25	DSC	°C	>280
Td	ASTM D3850	TGA (5% W.L)	°C	390
CTE (X/Y/Z-axis)	IPC-TM-650 2.4.24	TMA (30-260°C)	ppm/°C	12/14/45
Peel Strength	IPC-TM-650 2.4.8	288°C/10s	N/mm [lb/in]	0.72 [4.11]
Water Absorption	IPC-TM-650 2.6.2.1	D-24/23	%	0.06
Thermal Conductivity	ASTM D5470	100°C	W/m·K	0.66
Tensile Modulus (LW/CW)	ASTM D638	A	GPa	16.1/18.5
Tensile Strength (LW/CW)	ASTM D638	A	MPa	175/245
Flexural Strength	IPC-TM-650 2.4.4	A	MPa	260
Flammability	UL-94	C-48/23/50	Rating	V-0

All the typical value is based on the 0.508mm (0.020") specimen, and the specification sheet is based on IPC4103/11.

PRODUCT SPECIFICATION

Product	Standard Thickness Offerings	Standard Panel Sizes	Standard Copper Cladding
S7136H	0.004" (0.10mm), 0.008" (0.20mm) 0.010" (0.25mm), 0.016" (0.30mm) 0.020" (0.51mm), 0.030" (0.76mm) 0.040" (1.02mm), 0.050" (1.27mm)	36"x 48" 40"x48" 42"x48"	HOz, 1Oz, 2Oz HTE
S7136H (CR) ^[1]	0.0040" (0.10mm), 0.0107" (0.27mm) 0.0207" (0.53mm), 0.0307" (0.78mm) 0.0407" (1.04mm), 0.0507" (1.29mm)	Additional sizes may be available upon request	HOz, 1Oz RTF

[1] For double-sided boards, with coated RTF, Dk for S7136H (CR) is 3.5 for dielectric thickness above 0.0207" and the Dk of S7136H (CR) decreases by about 0.1 as the core thickness decreases from 0.0207" to 0.0107"

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.

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