



# S7136H

## High Frequency Circuit Material

### 特点

- 电子级玻璃纤维布增强无机陶瓷填料和碳氢类树脂复合介质材料
- 具有优异的低介电常数和介电损耗等高频性能。
- 不同频率下稳定的介电性能
- Z轴膨胀系数低，优异的尺寸稳定性。

### FEATURES

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

### 应用领域

高频无线通讯  
高速计算机  
卫星信号传输设备  
微带和蜂窝基站  
天线和功率放大器  
LNA/LNB

### APPLICATIONS

High frequency wireless communication  
High speed computer.  
Satellite signal transmission equipment.  
Microstrip and Cellular Base Station  
Antennas and Power Amplifiers.  
LNA/LNB

## GENERAL PROPERTIES

Property	Typical Value	Direction	Units	Condition	Test Method
Dielectric Constant, $\epsilon_r$ (Process)	3.42±0.05	Z		10GHz/23°C	IPC-TM-650 2.5.5.5 (1)Clamped Stripline
Dielectric Constant, $\epsilon_r$ (Design)	3.61	Z		A	Differential phase length test
Dielectric Constant, $\epsilon_r$	3.68±0.05	-		10GHz/23°C	SPDR
Dissipation Factor tan, $\delta$	0.0030 0.0035	-		10GHz/23°C 10GHz/23°C	IPC-TM-650 2.5.5.5 SPDR
Volume Resistivity	1.1×10 <sup>8</sup>		MΩ·cm	A	IPC-TM-650 2.5.17.1
Surface Resistivity	1.6×10 <sup>7</sup>		MΩ	A	IPC-TM-650 2.5.17.1
Electrical Strength	40	Z	KV/mm	0.51mm (0.020")	IPC-TM-650 2.5.6.2
Tensile Modulus	16,120	Y	MPa	RT	ASTM D638
Tensile Strength	175	Y	MPa	RT	ASTM D638
Flexural Strength	260	X	MPa		IPC-TM-650 2.4.4
Tg(DSC)	>280		°C	A	IPC-TM-650 2.4.24
Td(TGA)	390		°C		ASTM D3850
Thermal Conductivity	0.66		W/m/°K	100°C	ASTM D5470
Moisture Absorption	0.06		%		IPC-TM-650 2.6.2.1
Copper Peel Strength	0.72		N/mm	A	IPC-TM-650 2.4.8
Flammability	94V-0				UL

(1)Clamped stripline method can potentially lower the actual dielectric constant due to presence of airgap. Dielectric constant in practice may be higher than the values listed.

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

(3)Typical values are a representation of an average value for the population of the property. For specification values contact SYTECH corporation. The information in this data sheet is intended to assist you in designing with SYTECH's circuit materials. It is not intended to and does not create any warranties, express or implied, including any warranty of merchantability or fitness for a particular purpose or that any results shown in this data sheet will be achieved by a user for a particular purpose. The user is responsible for determining the suitability of SYTECH's circuit materials for each application.

## PRODUCT SPEC. INFORMATION

Standard Thickness	Standard Panel Size	Standard Copper Cladding
0.010" (0.254mm), 0.020" (0.51mm), 0.030" (0.76mm), 0.040" (1.02mm), 0.060" (1.52mm).	36"×48", 40"×48", 42"×48" Additional panel sizes may be available upon request.	½ oz. (17 μm), 1 oz. (35 μm) electrodeposited copper foil.