



# SAR20H

## Aluminum Base Copper Clad Laminate

### FEATURES

- Halogen free and High CTI
- Superior heat dissipation
- Excellent mechanical process ability
- Excellent Thermal and insulation reliability

### APPLICATIONS

On-board Charger, EPS, Automobile  
Lighting, AC-Inverter, DC-DC Converter  
Power Supply Board  
Hi-pot LED Lighting

### GENERAL PROPERTIES

Test Items	Test Method	Test Condition	Unit	Typical Value
Thermal Conductivity	ASTM-D5470	Dielectric layer	W/(m·K)	2.1
Thermal Resistance	ASTM-D5470	Dielectric layer	K·cm <sup>2</sup> /W	0.52
Tg	IPC-TM-650 2.4.25D	DSC	°C	160
Td	IPC-TM-650 2.4.24.6	5% Wt. loss	°C	395
Thermal Stress	IPC-TM-650 2.4.13.1	288°C, solder float	min	30
CTE(Z-axis)	IPC-TM-650 2.4.24	Before Tg	ppm/°C	20
	IPC-TM-650 2.4.24	After Tg	ppm/°C	39
	IPC-TM-650 2.4.24	50-260°C	%	0.69
Volume Resistivity	IPC-TM-650 2.5.17.1	C-96/35/90	MΩ·cm	10 <sup>8</sup>
Surface Resistivity	IPC-TM-650 2.5.17.1	C-96/35/90	MΩ	10 <sup>8</sup>
Dielectric Breakdown	IPC-TM-650 2.5.6	D-48/50+D-0.5/23	kV	5.0
Hi-pot Test	GB/T 31988	DC/1mA/60s	V	4000
		AC/5mA/60s	V	3000
Peel Strength(1oz)	IPC-TM-650 2.4.8	288°C/10s	N/mm	1.3 [7.43]
Flammability	UL94	C-48/23/50	Rating	V-0
MOT	UL	A	°C	130
CTI	IEC60112	A	Rating	PLC 0

Remarks: Typical value is based on specimen of 1.5mm Al/100μm dielectric/1oz Cu, and 100% Hi-pot test of DC 2500V on the whole sheet is performed. Any higher requirements on Hi-pot test is AABUS.

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.

Explanation: C=Humidity conditioning, D=Immersion conditioning in distilled water, E=Temperature conditioning, The first digit following the letter indicates the duration of preconditioning in hours, the second digit the preconditioning temperature in °C and the third digit the relative humidity.

### PURCHASING INFORMATION

	Material	Thickness
Cu	E/D Cu	Hoz-4oz
Dielectric Layer	Epoxy resin filled with inorganic filler	50-150μm
Aluminum Plate	1060 Al, 5052 Al, Low CTE Al	0.3-3.0mm
Protective Film	PET	
Standard Size	1040mm×1240mm, 510mm×610mm (Other sizes are available upon request)	