S1140F

(ULANSI:FR-4.0) UV Blocking

FEATURES

- Lower Z-axis CTE
- Better thermal resistance
- Good T/H reliability
- Lower water absorption

APPLICATIONS

Computer, Instrumentation, Communication equipment, Automotive electronics, Power supplier

GENERAL PROPERTIES

Items		Condition	Unit	Property Data	
				Spec	**Typical Value**
Tg		DSC	℃	≥130	135
Flammability		C-48/23/50 and E-24/125	-	V-0	V-0
Volume Resistivity		After moisture resistance	MΩ-cm	$\geq 10^{6}$	1.5E+08
		E-24/125		$\geq 10^{3}$	3.2E+06
Surface Resistivity		After moisture resistance	MΩ	$\geq 10^{4}$	3.5E+07
		E-24/125		$\geq 10^{3}$	2.3E+06
Arc Resistance		D-48/50+D-0.5/23	S	≥60	125
Dielectric Breakdown		D-48/50+D-0.5/23	KV	≥40	45KV+NB
Dielectric Constant	(1GHz)	C-24/23/50	-	-	4.6
	(1MHz)	C-24/23/50	-	≤5.4	4.9
Dissipation Factor	(1GHz)	C-24/23/50	-	-	0.012
	(1MHz)	C-24/23/50	-	≤0.035	0.011
Thermal Stress		288℃, solder dip	-	>10s No Delamination	>120s No Delamination
Peel Strength (1 Oz)		288℃/10s	N/mm	≥1.05	1.35
Flexural Strength		LW	Mpa	≥415	530
		CW		≥345	440
Water Absorption		D-24/23	%	≤0.5	0.09
CTE(Z-axis)		Before Tg	PPM/℃	-	50
		After Tg	PPM/℃	-	250
		50-260℃	%	-	3.5
Td		Wt5%loss	℃	-	315
T260		TMA	min	-	25
T288		TMA	min	-	3
CTI		IEC60112Method	V	PLC3 (175~249)	PLC3

Specimen thickness: 1.5~1.6mm. Test method is according to IPC TM-650.

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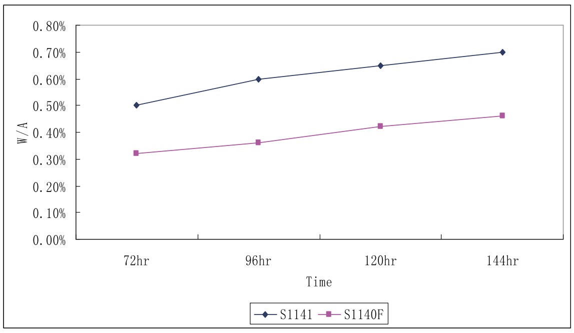
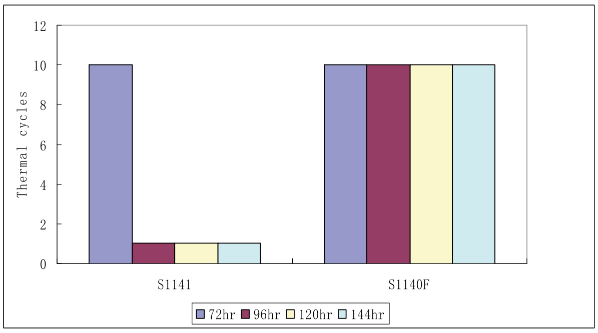
Humidity resistance

(85deg C, 85% humidity)



Humidity resistance

(85deg C, 85% humidity)



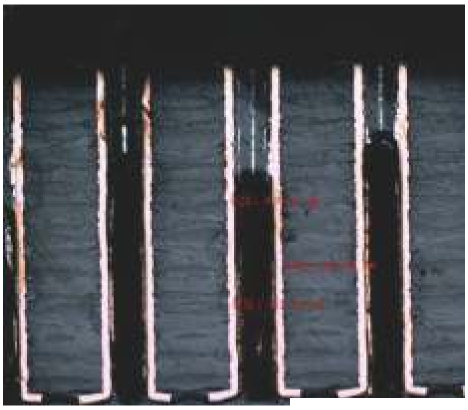
Better through hole quality (hole wall roughness/resin recession)

10 层板：H+2116+0.12 1/1+1080+7628+1080+0.12 1/1+7628*2+0.12 1/1+1080+7628+1080+0.12 1/1+2116+H

整板厚 2.2mm，**PITCH**0.8mm，钻嘴 0.35mm

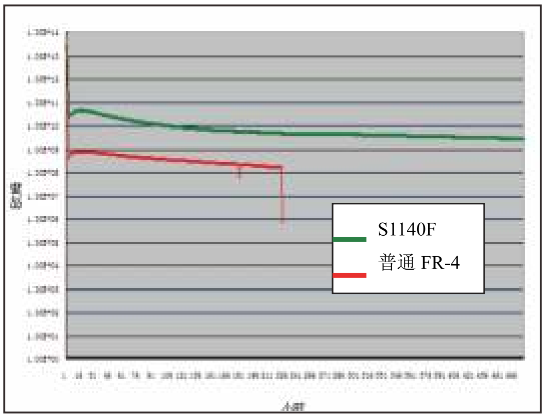
无铅回流六次

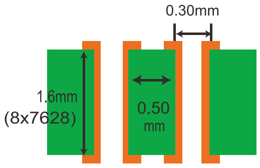
普通 FR-4 材料



S1140F 材料

Excellent Anti-CAF performance





<u>**Pretreatment condition:**</u>

125℃/4hrs->85℃/85%RH/96hrs->260℃Lead free reflow 1X

<u>**CAF condtion:**</u>

85℃/85%RH/50VDC

S1140FB PREPREG

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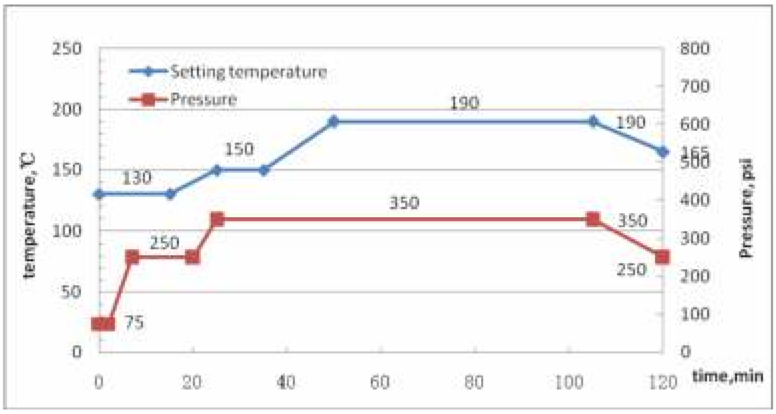
PREPREG PARAMETERS

Glass fabric type	Resin content (%)	Cured thickness (mm)	DK(1GHz)	Df(1GHz)	Standard size (Roll type)
106/1037	74	0.052	3.7	0.015	1.260m X150m
	78	0.063	3.6	0.016	
1080/1078	63	0.070	3.9	0.014	1.260m X300m
	65	0.075	3.9	0.014	
	68	0.082	3.8	0.014	
2313	55	0.095	4.1	0.013	
	58	0.100	4.1	0.013	
2116	55	0.120	4.1	0.013	1.260m X250m
	58	0.130	4.1	0.013	
1506	45	0.150	4.4	0.012	1.260m X150m
	48	0.160	4.3	0.012	
7628	43	0.185	4.4	0.012	
	45	0.193	4.4	0.012	
	47	0.202	4.3	0.012	
	50	0.218	4.3	0.012	

Remark: DK and Df are tested according to IPC TM-650 2.5.5.9

Prepreg type, resin content and size could be available upon request.

HOT PRESSING CYCLE



- ■ Heat up rate: 1.5-2.5℃/min (80-140℃)
- ■ Curing time: >30min (>180℃)
- ■ The hot pressing parameter is for your reference only; please turn to Shengyi Technology Co., Ltd. for detailed information.

STORAGE CONDITION

- 3 months when stored at < 23℃ and <50% RH.
- 6 months when stored at <5℃. Normalize in room temperature for at least 4h before using.
- Beware of moisture, always keeping wrapped in damp-proof material. Were kept in normal condition, prepreg might absorb moisture and its bonding strength would be weakened.
- Avoid UV-rays and strong light.