

DS-7409S

(ANSI: FR-4) EXCELLENT HEAT RESISTANCE

Features

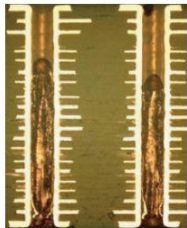
- High Tg (above 170°C)
- Excellent thermal performance
- Good moisture resistance
- CAF resistant
- Suitable for lead-free soldering process

Applications

- High layer count boards
- High density multi-layer boards
- Servers, advanced computers, workstations and automotives

General Properties

● Multiple Thermal Excursion Test Result



- Test Condition
 - 20L PCB
 - Thickness 2.3mm
 - 6 Times @288°C/10sec
 - Drill Hole Size 250mic
 - Pitch 39.4mil
- Test Result
 - No Crack
 - No Delamination

● Thermal Shock Test Result after Moisture Treatment

Test Condition (1.0T)	DS-7409S	Standard Tg
PCT 1hr + Solder Dipping 288°C/10sec	○ ○ ○	○ ○ ×
PCT 2hr + Solder Dipping 288°C/10sec	○ ○ ○	○ × ×
PCT 3hr + Solder Dipping 288°C/10sec	○ ○ ○	× × ×

○ : No Abnormality × : Measling or Delamination

Property	Unit	Test Condition	Typical Value	Test Method
Tg	°C	DSC	170	IPC-TM-650.2.4.25c
		TMA	165	IPC-TM-650.2.4.24c
CTE Z-axis	ppm/°C	Ambient to Tg	50	IPC-TM-650.2.4.41
Z-axis Expansion		50°C to 260°C	3.2	IPC-TM-650.2.4.41
Decomposition Temperature (5% wt loss)	°C	TGA	350	IPC-TM-650.2.3.40
T-260	min	TMA	120	IPC-TM-650.2.4.24.1
T-288	min	TMA	10	IPC-TM-650.2.4.24.1
Dielectric Constant (Resin Content 50%)		C-24/23/50 (1GHz)	4.2	IPC-TM-650.2.5.5.9
Dissipation Factor (Resin Content 50%)		C-24/23/50 (1GHz)	0.015	IPC-TM-650.2.5.5.9
Peel Strength (Standard profile 1oz)	N/mm	Condition A	1.7	IPC-TM-650.2.4.8
Water Absorption	%	E-24/50+D-24/23	0.06	IPC-TM-650.2.6.2.1

* IPC-4101B/24

* Test specimen thickness: 1.0mm (7628x5)

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Prepreg Parameter

[Thin Core]

Thickness (mm)	Glass Fabric	Copper Foil spec.
0.06	106	
0.08	1080	H/H,
0.10~0.13	2116	1/1
0.15	1506	
0.18	3313 x 2	H/H,
0.20~0.25	2116 x 2	1/0,
0.30	1506 x 2	1/1
0.40	7628 x 2	
0.60	7628 x 3	
0.80	7628 x 4	H/H,
1.00	7628 x 5	1/0,
1.20	7628 x 6	1/1
1.60	7628 x 8	

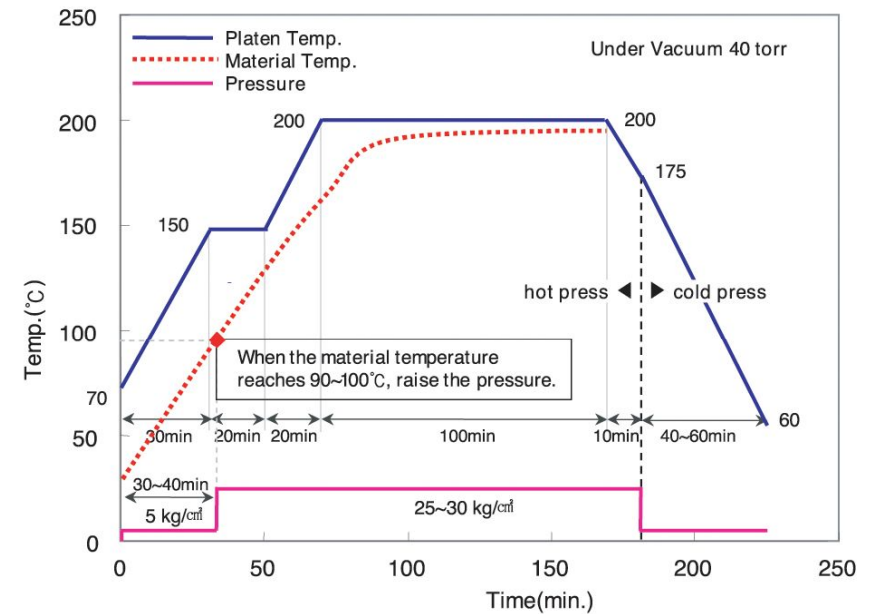
[Bonding Sheet]

Glass Fabric	Resin Content	Thickness (mm)
1080	62%	0.06
3313	54%	0.08
2116	52%, 56%	0.11~0.12
1506	52%	0.15
7628	42%	0.18

* Data of Resin Content and Thickness are typical values.
Each value has variation of about ±3%, 0.03 mm.

* 0: No copper, H: 0.5 oz, 1: 1 oz, 2: 2 oz
1/1: 1oz copper foil on one side / 1oz on the other side
* Thickness data are typical values.
Each value has variation of about ±(0.1~0.2) mm.

Recommended Press Cycle



- Material heating rate (80~130°C) : 1.5 ~ 2.5 °C/min
- Curing condition : above 165°C 80min~