

DS-7402

(ANSI: FR-4) HALOGEN-FREE

Features

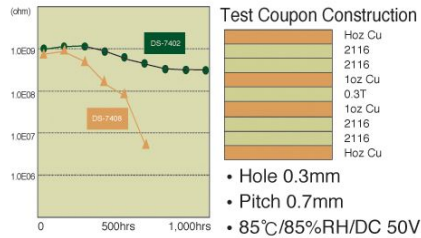
- Middle Tg (Tg 150°C)
- Halogen-free, antimony-free, and red phosphorus-free
- High decomposition temperature
- Low z-axis CTE
- Anti-CAF property

Applications

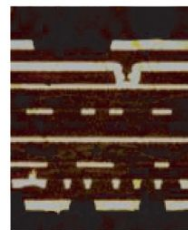
- Alternative for conventional lead-free FR-4
- Personal computer, Notebook computer
- Cellular phone, A/V Device, etc.

General Properties

• CAF Resistance Test Result



• Lead-free Soldering Test Result



- Test Condition
 - 8L PCB
 - THB (30°C, RH60%)
 - 168hr—Reflow 260°C
 - 3 cycles—TCT
 - 100 cycles (-65°C→125°C)
- Test Result
 - No delamination
 - No crack

Property	Unit	Test Condition	Typical Value	Test Method
Tg	°C	DSC	150	IPC-TM-650.2.4.25c
		TMA	150	IPC-TM-650.2.4.24c
CTE Z-axis	ppm/°C	Ambient to Tg	45	IPC-TM-650.2.4.41
Z-axis Expansion	%	50°C to 260°C	3.0	IPC-TM-650.2.4.41
Decomposition Temperature (5% wt loss)	°C	TGA	370	IPC-TM-650.2.3.40
T-260	min	TMA	120	IPC-TM-650.2.4.24.1
T-288	min	TMA	> 60	IPC-TM-650.2.4.24.1
Dielectric Constant (Resin Content 50%)		C-24/23/50 (1GHz)	4.4	IPC-TM-650.2.5.5.9
Dissipation Factor (Resin Content 50%)		C-24/23/50 (1GHz)	0.014	IPC-TM-650.2.5.5.9
Peel Strength (Standard profile 1oz)	N/mm	Condition A	1.6	IPC-TM-650.2.4.8
Water Absorption	%	E-24/50+D-24/23	0.13	IPC-TM-650.2.6.2.1

* IPC-4101B/92

* Test specimen thickness: 1.0mm (7628x5)

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Prepreg Parameter

[Thin Core]

Thickness (mm)	Glass Fabric	Copper Foil spec.
0.06	106	1/1, 2/2
0.10~0.13	2116	
0.15	1506	H/H, 1/1
0.2	2116x2 / 7628x1	H/H, 1/1
0.3	1506x2 / 2116x3	1/1
0.35~0.40	7328 x 2	H/H, 1/1
0.60	7628 x 3	
1.60	7628 x 8	H/H, 1/1

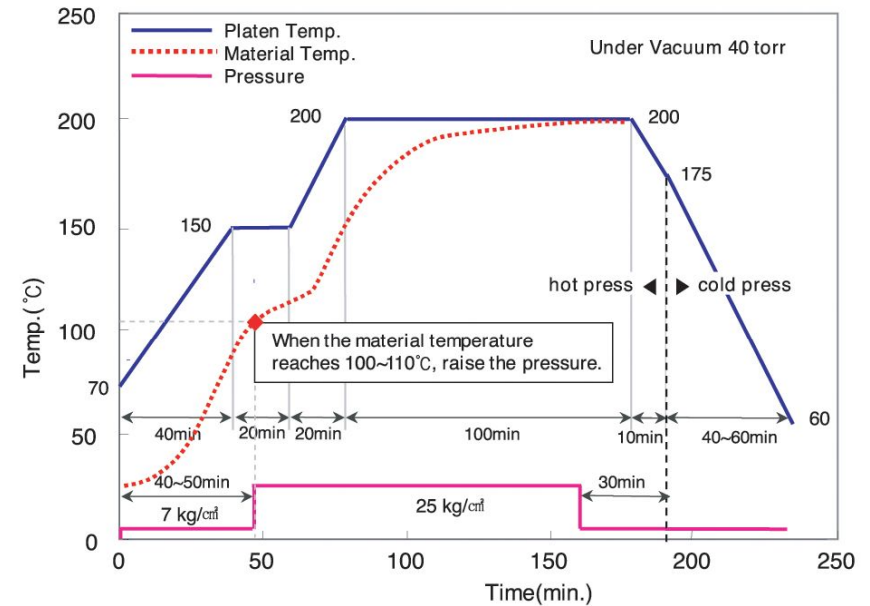
- 0.No copper, H:0.5 oz,1:1 oz,2:2 oz
- 1/1:1oz copper foil on one side /1oz on the other side
- Thickness data are typical values.
- Each value has variation of about ±(0.1~0.2)mm.

[Bonding Sheet]

Glass Fabric	Resin Content	Thickness (mm)
106	72%	0.045
1078	58%~64%	0.05, 0.06
1080	62~70%	0.05~0.07
3313	55~59%	0.08~0.09
2116	50~60%	0.10~0.13
7628	42~51%	0.17~0.20

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

Recommended Press Cycle



- Material heating rate (80~130°C) : 1.3 ~ 1.9 °C/min
- Curing condition : above 165°C 90min~