

IT-180BS

Features

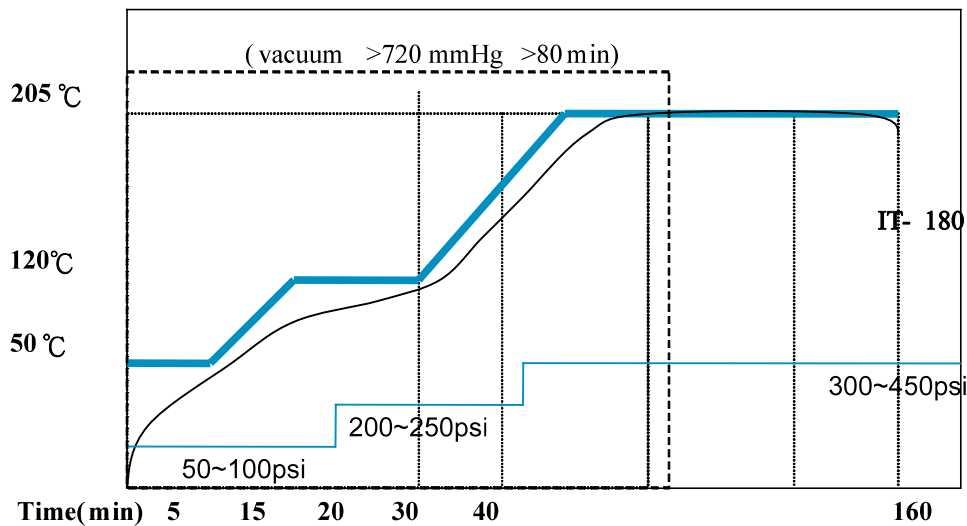
- Multifunctional epoxy resin
- All the prepregs are rheology tested and controlled to achieve consistent dielectric thickness
- Tg: 180±5°C (DSC)

Prepreg specifications

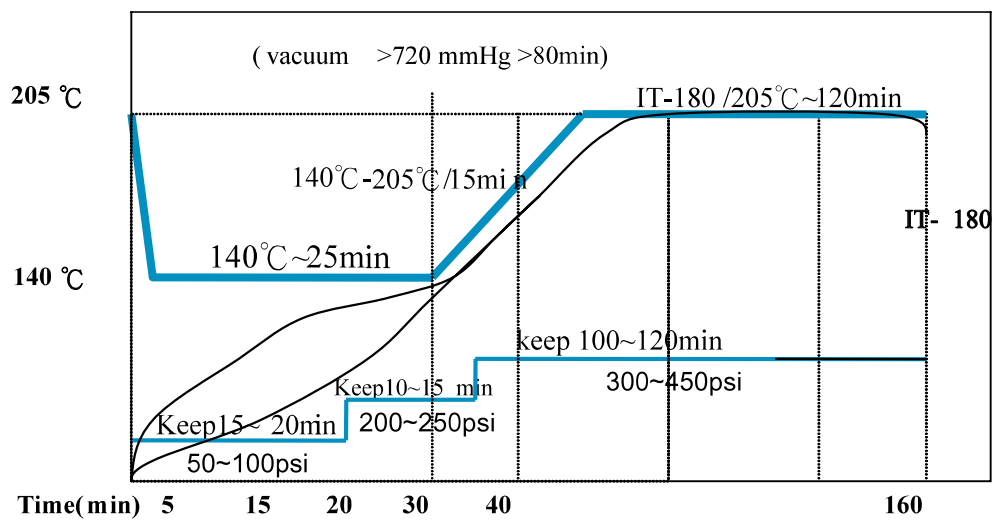
Type	Resin Content ±2(%)	Resin Flow ±5 (%)	Gel Time ±20 (sec)	Scaled Flow ±0.4(mils/ply)	Volatile Content (%)
7628UF	47	24	130	7.2	< 1.2
7628MF	43	21	130	6.9	
7628TF	44	23	130	7	
7628HF	46	25	130	7.3	
7628SF	48	27	130	7.5	
7628LF	46	25	130	7.3	
7629HF	47	29	130	7.2	
7630MF	50.5	31	130	7.7	
7631MF	52	32	130	7.9	
1506MF	48	27	130	5.8	
1506HF	50	29	130	6.1	
1506SF	52	31	130	6.2	
2165HF	52	32	130	5.1	
2116MF	53	30	130	4.1	
2116HF	55	33	130	4.2	
2116TF	50	26	130	4	
2116SF	57	34	130	4.3	
2116UF	47.5	24	130	3.9	
2125MF	50	28	130	4.5	
2125HF	57	36	130	5.8	
2112MF	57	35	130	3.3	
2113HF	56	33	130	3.4	
2113SF	60	37	130	3.5	
3313MF	58	35	130	3.6	
3313IF	54	30	130	3.3	
3313HF	53	31	130	3.3	
1080MF	62	39	130	2.1	
1080LF	63	39	130	2.2	
1080HF	65	42	130	2.3	
1080UF	67	43	130	2.4	
1081	71	50	130	2.6	
106MF	71.5	46	130	1.8	

Recommended Press Cycle for IT-180

(a) Cold Press Cycle



(b) Hot Press Cycle



Suggestion :

1. Heating rate of material between 80°C and 140°C is 1.3~1.8°C/min
2. Curing Condition : 180°C and above for >90min



IT-180TC

Features

- Multifunctional epoxy resin
- Tg 180±5°C (DSC)
- Low Z-axis coefficient of thermal expansion
- Excellent dimensional stability and heat resistance
- Low moisture absorption
- Good drilling properties
- Processable as IT-140
- UL94 V-0
- AOI and UV blocking characteristics

Applications

- Burn-in board
- BGA and CSP substrate
- High layers count (> 10 layers) MLB
- Automotive electronics
- Communication equipment
- Special applications

Laminate Properties

Characteristics	Condition	Units	Value
Tg	DSC	°C	182
Tg	DMA	°C	198
Tg	TMA	°C	172
Z-axis CTE (< Tg)	TMA	ppm/°C	41
Z-axis CTE (> Tg)	TMA	ppm/°C	210
CTE	TMA (50-260°C)	%	2.8
Delamination	TMA (260°C)	min	> 60
Moisture Absorption	PCT/1 hr	%	0.31
Solder Float (Cu)	288°C	min	> 10
Peel Strength (1 oz)	A	lb/in	> 6
Volume Resistivity	A	MΩ-cm	> 7 x 10 ⁶
Surface Resistivity	A	MΩ	> 5 x 10 ⁶
Dielectric Constant	1 M Hz	-	4.6
Dissipation Factor	1 M Hz	-	0.019
Flammability	A	-	94 V-0

* Data shown above are for reference only (1.6mm).

Property Comparison of IT180 Laminate with Various Materials

Test Item	Condition	Unit	Test Results		
			IT-180	FR-5	High Tg FR-4
Tg	DSC	°C	182	178	168
Degradation Temperature	TGA (5% wt. loss)	°C	378	356	316
Decomposition Test	TMA (300°C)	min	29	21	6
Solder Float	288°C	min	> 10	> 10	4
Moisture Absorption	PCT/1 hr	%	0.31	0.32	0.42
Peel Strength (1 oz)	IPC-TM-650	lb/in	8.6	8.5	11.4

Peeling Strength Stability at Elevated Temperature

