Lead Free Material / High Tg

ITEQ

IT-180/IT-180A/IT-180I

Applications

Multilayer PCB
Automobile
Backplanes
Servers and Networking
Telecommunications
Storage

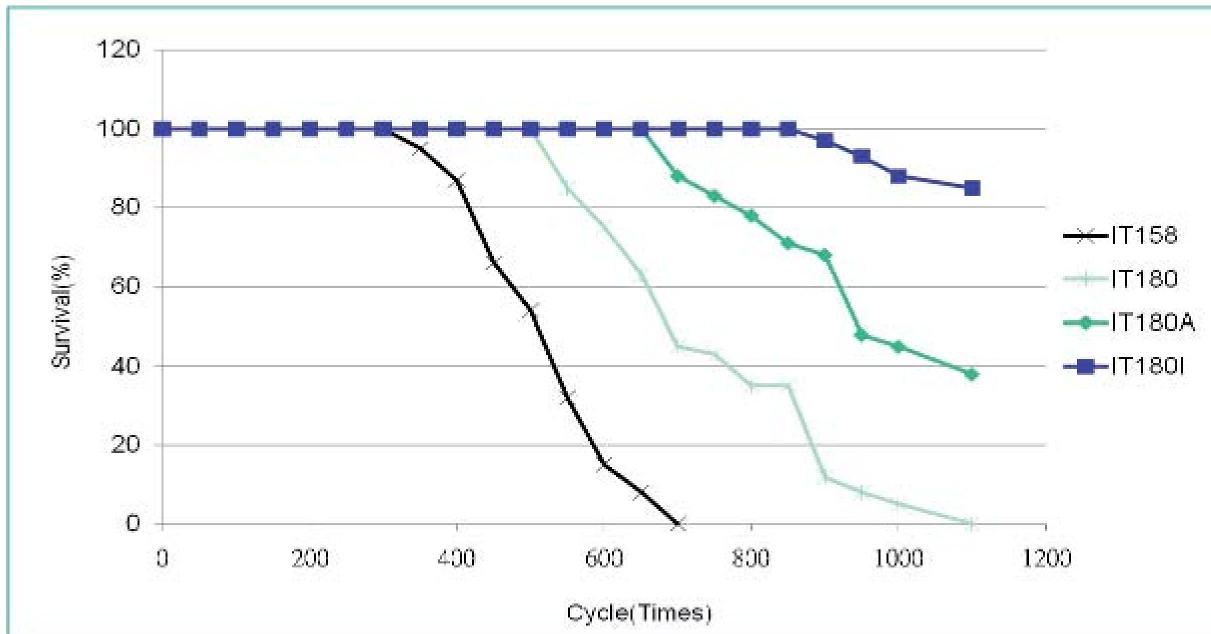
Features

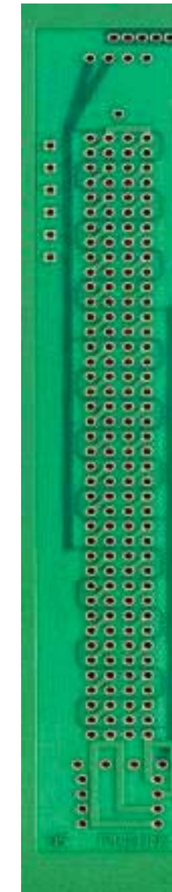
1. Tg ≧175 ℃(DSC)
2. Low Z-axis thermal expansion
3. Excellent dimension stability and heat resistance

Specification

Product info.		IT-180	IT-180A	IT-180I	3X0HX
		HTg	HTg, low-CTE	HTg, low-CTE Mid loss	HTg
Tg (℃)	DSC	170	170	170	170
T-288 (w/ 1 Oz Cu, min)	TMA	20+	20+	25+	20+
Td-5%(℃)	TGA 5% loss	350	345	350	340
CTE (ppm/℃)	a1/a2	50/250	45/210	40/210	45/230
CTE (%), 50-260℃	TMA	3.0	2.7	<2.5	2.8
Peeling (lb/in)	1 oz	8	8	8	7
Water absorption	D-24/23	0.12	0.12	0.12	0.15
Dk (50% RC)	1 GHz	4.2	4.4	4.3	4.2
Df (50% RC)	1 GHz	0.017	0.015	0.013	0.016

Interconnect Stress Test (IST) Result





Test Coupon Thickness = 110mil, 14 Layers,

Precondition: 6x @260℃

Hole/Pad：0.012"/0.025", Pitch=0.024", 364 holes

30℃ ←→150℃ thermal cycling test until the change of electrical resistance is over 10%.

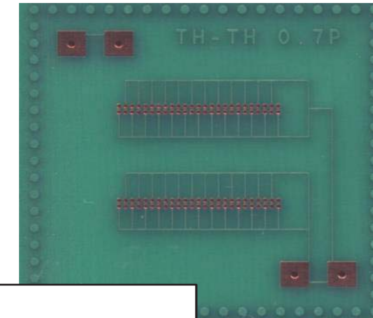
CAF Test (Conductive Anode Filament)

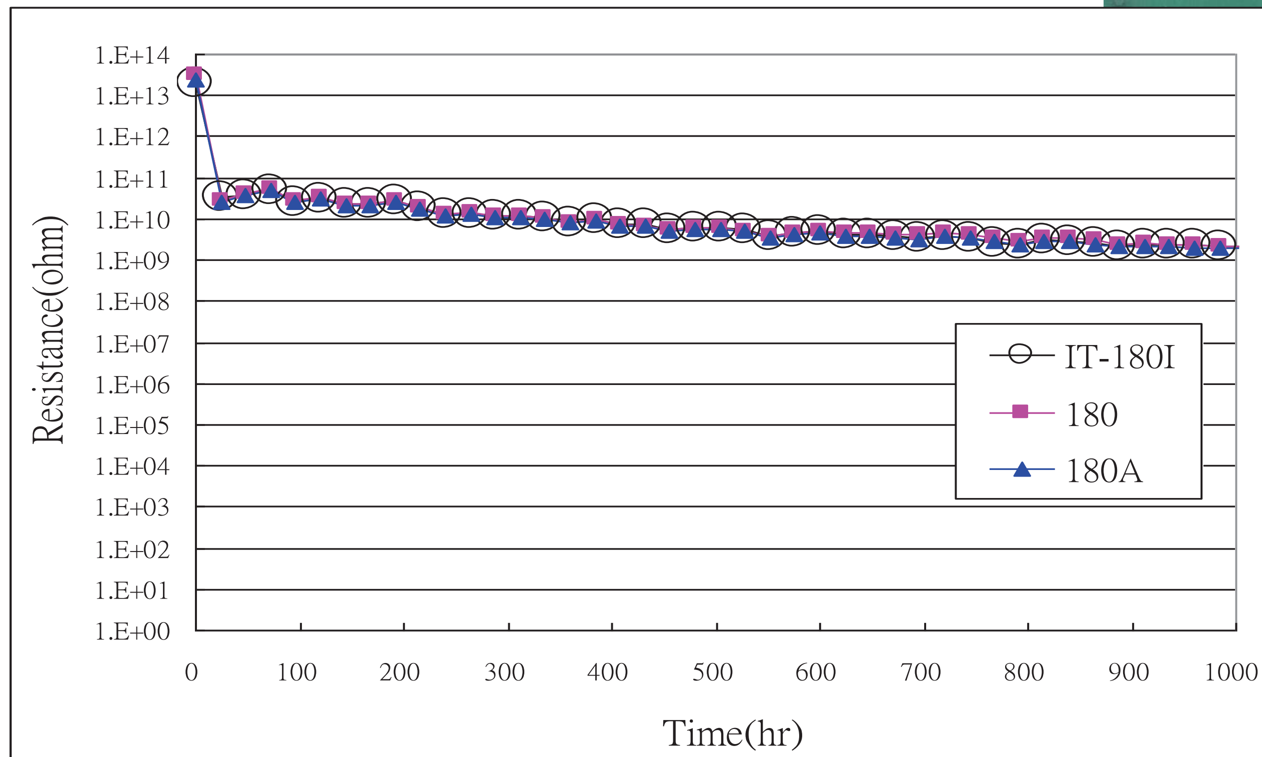
Test Coupon = 6 layers/1.6mm with totally 7 ply 7628

Pre condition: reflow 260 ℃ x6

Hole size:0.35 mm ,Pitch:0.7mm, wall to wall:0.35mm

Test Condition ：85℃/85%RH, Bias & Test 50V

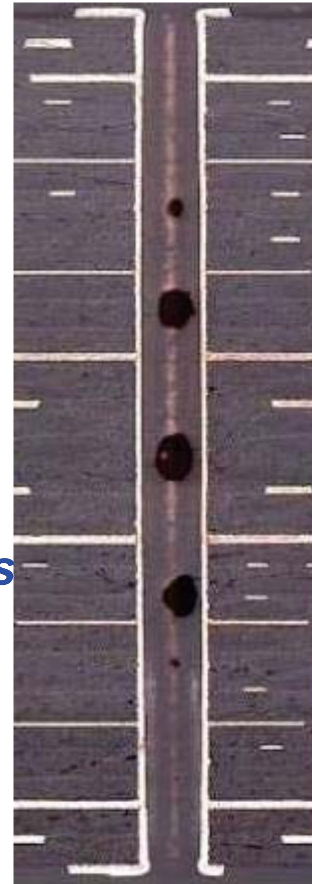




Thermal Ability : IT-180A/ IT-180I

- Evaluated board 26 layers
- Thickness .150”
- via hole .010”
- A/R 15.0

- *260C IR x 8 cycles pass*
- *288C thermal stress/10sec x 6 cycles*
  No de-lam, no Cu/resin crack



IT180A

IT180I