

Reliability Report

Part Number: IGBT Discrete THT Series

Yearly Reliability monitoring:2023
Based on similar Structural

Test Results : PASS

Test Item	Conditions	Duration	Quantity	Rejects
TEST Pre- and Post-Stress Electrical Test	$T_a = 25\text{ }^{\circ}\text{C}$	N/A	all parts	see below
HTRB High Temperature Reverse Bias	MIL-STD-750 Method 1038 $T_j = T_{jmax}, 100\% \text{ VDS}$	1000 hours	77Pcs	0
HTGB High Temperature Gate Bias	JESD22-A-108 $T_j = T_{jmax}, 100\% \text{ Vgs(th)}$	1000 hours	77Pcs	0
TC Temperature Cycling	JESD22-A104 -55 $^{\circ}\text{C}$ (+0,-10)/15Min~ 150(+15,-0)/15Min,	1000Cycles (500hours)	77Pcs	0
AC Autoclave	JESD22-A102 $T_a = 121\text{ }^{\circ}\text{C} \pm 2\text{ }^{\circ}\text{C}$, RH = 100 %, 15psig	96 hours	77Pcs	0
H3TRB High Humidity High Temperature Reverse Bias	JESD22-A101 $T_a = 85\text{ }^{\circ}\text{C} \pm 2\text{ }^{\circ}\text{C}$, RH = 85% \pm 5%, 80 % Vcemax	1000 hours	77Pcs	0
IOL Intermittent Operating Life	MIL-STD-750 Method 1037 ON 2Min/OFF 2min, $\Delta T_j \geq 100\text{ }^{\circ}\text{C}$	15000 cycles (1000 hours)	77Pcs	0
RSH Resistance to Solder Heat	JESD22-B106 270 \pm 5 $^{\circ}\text{C}$	7s (+2, -0)	30Pcs	0
SD Solderability	J-STD-002 235 $^{\circ}\text{C} \pm 5\text{ }^{\circ}\text{C}$	3 s	10Pcs	0
HTSL High Temperature Storage Life	JESD22-A103 TstgMax	1000 hours	77Pcs	0