

Reliability Report

Part Number: IGBT Discrete THT Series

Yearly Reliability monitoring:2024
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 $T_j = T_{jmax}, 80\% \text{ VDS}$	1000 hours	77Pcs	0
HTGB High Temperature Gate Bias	JESD22-A-108 $T_j = T_{jmax}, 100\% \text{ Vge(th)}$	1000 hours	77Pcs	0
TC Temperature Cycling	JESD22-A104 $-55\text{ }^{\circ}\text{C} (+0,-10)/15\text{Min} \sim$ $150(+15,-0)/15\text{Min},$	1000Cycles (500hours)	77Pcs	0
AC Autoclave	JESD22-A102 $T_a = 121\text{ }^{\circ}\text{C} \pm 2\text{ }^{\circ}\text{C}, \text{ RH} = 100\%,$ 15psig	96 hours	77Pcs	0
H3TRB High Humidity High Temperature Reverse Bias	JESD22-A101 $T_a = 85\text{ }^{\circ}\text{C} \pm 2\text{ }^{\circ}\text{C}, \text{ RH} = 85\% \pm 5\%,$ 80 % VDS (VDS MAX=100V)	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 $260\text{ }^{\circ}\text{C} (+5, -0)$	10 s	30Pcs	0
SD Solderability	J-STD-002 $235\text{ }^{\circ}\text{C} \pm 5\text{ }^{\circ}\text{C}$	3 s	10Pcs	0
HTSL High Temperature Storage Life	JESD22-A103 TstgMax	1000 hours	77Pcs	0