



Micro Commercial Components

Reliability Report

Part Number: IGBT Discrete SMD 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 °C	N/A	all parts	see below
* Pre-conditioning	JESD22A-113 1. Temperature Cycling:-40 °C~60 °C , 2. Bake:125 °C , 3.1 Moisture Soak:85 °C , 85%RH for MSL1 OR 3.2 Moisture Soak:30 °C , 60%RH for MSL3; 4. Reflow*3Cycles:260 °C	5Cycles; 24 hours; 168hours 192hours 3Cycles	308Pcs	0
HTRB High Temperature Reverse Bias	MIL-STD-750 Method 1038 T _j = T _{jmax} , 80% VDS	1000 hours	77Pcs	0
HTGB High Temperature Gate Bias	JESD22-A-108 T _j = T _{jmax} , 100% Vge(th)	1000 hours	77Pcs	0
TC Temperature Cycling	JESD22-A104 -55 °C (+0,-10)/15Min~ 150(+15,-0)/15Min,	1000Cycles (500hours)	77Pcs	0
AC Autoclave	JESD22-A102 T _a = 121 °C±2 °C, RH = 100 % , 15psig	96 hours	77Pcs	0
H3TRB High Humidity High Temperature Reverse Bias	JESD22-A101 T _a = 85 °C±2 °C , RH = 85%±5% , 80 % VDS (VDS MAX=100V)	1000 hours	77Pcs	0
IOL Intermittent Operating Life	MIL-STD-750 Method 1037 ON 2Min/OFF 2min, ΔT _j ≥ 100 °C	15000 cycles (1000 hours)	77Pcs	0
RSH Resistance to Solder Heat	JESD22-B106 260 °C (+5 , -0)	10 s	30Pcs	0
SD Solderability	J-STD-002 235 °C ± 5 °C	3 s	10Pcs	0
HTSL High Temperature Storage Life	JESD22-A103 TstgMax	1000 hours	77Pcs	0

* Remark : detail MSL of product refer to data sheet on MCC website.