

Reliability Data Sheet

Description

The following cumulative test results have been obtained from testing performed at Broadcom in accordance with JEDEC.

Broadcom tests parts at the absolute maximum rated conditions recommended for the device. The actual performance you obtain from Broadcom parts depends on the electrical and environmental characteristics of your application but will probably be better than the performance outlined in the following tables.

Table 1 Environmental Tests

Test Name	Reference	Test Conditions	Units Tested	Units Failed
Temperature Cycle	JESDA104	-40°C/120°C, 30 min dwell, 5 min transfer, 100 cycles	160	0
High Temperature Operating Life	JESDA108	Tb=108°C, If=350 mA, 1000 hrs	40	0
Low Temperature Operating Life	JESDA108	Tb=-40°C, If=350 mA, 1000 hrs	40	0
Temperature Humidity Operating Life	JESDA101	Tb= 60°C, RH = 90%RH, If= 350 mA, 500 hrs	40	0
Temperature Humidity Storage Life	JESDA101	Tb=60°C, RH = 90%RH, 1000 hrs	40	0
High Temperature Storage Life	JESDA103	Tb=125°C, 1000 hrs	40	0

Table 2 Other Tests

Test Name	Reference	Test Conditions	Units Tested	Units Failed
Mechanical Shock	JESDB104	5 shocks each X1, X2, Y1, Y2, Z1, Z2, 1500g, 0.5 ms pulse	30	0
Vibration	JESDB103	4 cycles, 4 mins each X, Y and Z at 0.06 in. @ 20 Hz-100 Hz, 50g @ 100 Hz-2000 Hz	30	0
Resistance to Solder Heat	JESDB106	260°C ±5°C, 10s ±1s	40	0

NOTE A failure is any LED that is open, shorted, or failed to emit light (except solderability test).

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