

ASMT-QWBX, ASMT-QYBX
0.5W Cool/Warm White Power PLCC4
Surface Mount LED
Reliability Datasheet



Reliability Datasheet

Description

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

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

Table 1. Environmental Tests

Test Name	Reference	Test Conditions	Units Tested	Units Failed
Temperature Cycle	Avago Requirement	-40/100°C 30 min dwell, 5 min transfer, 100 cycles	1080	0
High Temperature Operating Life	JESD22-A108	T _A = 85°C, I _F = 81 mA for 1000 hours	84	0
High Temperature Operating Life	JESD22-A108	T _A = 55°C, I _F = 142mA for 1000 hours	168	0
Temperature Humidity Operating Life	JESD22-A101	T _A = 60°C/ 90%RH, I _F = 147 mA for 1000 hours	84	0
Low Temperature Operating Life	JESD22-A108	T _A = -40°C, I _F = 180 mA for 1000 hours	84	0
Temperature Humidity Storage Life	Avago Requirement	T _a = 60°C, 90%RH, for 500 hours	168	0
Low Temperature Storage	JESD22-A119	T _a = -40°C for 1000 hours	84	0
High Temperature Storage	JESD 22-103	T _a =100°C for 1000 hours	84	0
Pulse Test	Avago Req	T _A = 25°C, Duty factor = 10%, 300 mA, Frequency = 1kHz, 500 hours	84	0

Table 2. Mechanical and Other Tests

Test Name	Reference	Test Conditions	Units Tested	Units Failed
Solderability	JESD 22-B102	1hrs Steam Aging 245°C for 5 seconds	30	0
Mechanical shock	JESD-B104	5 shocks each X1, X2, Y1, Y2, Z1, Z2, 1500G, 0.5msec pulse	30	0
Vibration	JESD-B103	4 cycles, 4 mins each X, Y and Z at 0.06inch @ 20Hz-100Hz, 50g @ 100Hz- 2000Hz	30	0
Salt Spray	ASMT-B117- 2003	Ambient Temperature: 35°C +/- 1.7°C Salt Concentration: 5%+/-1%	40	0