HDSP-4830, HDSP-4840, HDSP-4850, HDSP-4832, HDSP-4836, HLCP-J100

10-Element Bar Graph Array

Description

Broadcom® tests parts at the absolute maximum rated conditions recommended for the device. The actual performance that 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 table.

Table 1: Reliability Tests

Test Name	Reference	Test Conditions	Units Tested	Units Failed
High Temperature Operating Life	JESD22-A108	T_A = 55°C for 1000 hours Deep Red I_F = 15 mA Red I_F = 26 mA Green I_F = 21 mA Yellow I_F = 20 mA	40	0
Low Temperature Operating Life	JESD22-A108	T_A = –40°C for 1000 hours Deep Red I_F = 15 mA Red I_F = 30 mA Green I_F = 30 mA Yellow I_F = 20 mA	40	0
Temperature Humidity Operating Life	JEITA ED-4701/ 100 102	T_A = 85°C, 85% RH for 500 hours Deep Red I_F = 15 mA Red I_F = 9 mA Green I_F = 7 mA Yellow I_F = 10 mA	40	0
Temperature Cycle	JESD22-A104	–55°C/100°C, 15-minute dwell, 5-minute transfer, 100 cycles	180	0
High Temperature Storage Life	JESD22-A103	T_A = 85°C for 1000 hours	40	0
Low Temperature Storage	JESD22-A119	T_A = –40°C for 1000 hours	40	0
Temperature Humidity Storage Life	JEITA ED-4701/ 100 103	T_A = 85°C, 85% RH for 1000 hours	40	0
Mechanical Shock	JESD22-B104	1500G, 0.5 ms, 5 shocks in each of orientation (X1, X2, Y1, Y2, Z1, Z2)	28	0
Vibration	JESD22-B103	4 cycles, 4 minutes each X, Y, and Z at 0.06 in. at 20 Hz to 2000 Hz, peak acceleration 20G	28	0

Table 1: Reliability Tests (Continued)

Test Name	Reference	Test Conditions	Units Tested	Units Failed
Solderability	J-STD-002	245°C for 5 seconds	28	0
Solder Heat Resistance	JESD22-B106	260 ± 5°C for 10 ± 5 seconds	28	0

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

Disclaimer

Broadcom products are not specifically designed, manufactured, or authorized for sale as parts, components, or assemblies for the planning, construction, maintenance, or direct operation of a nuclear facility or for use in medical devices or applications. The customer is solely responsible, and waives all rights to make claims against Broadcom or its suppliers, for all loss, damage, expense, or liability in connection with such use.