

## HSM8-C320, HSM9-C320

### Top-Mount Infrared Emitter

#### 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.

Test Name	Reference	Test Conditions	Units Tested	Units Failed
High Temperature Operating Life	JESD22-A108	$T_A = 55^{\circ}\text{C}$ , $I_F = 45\text{ mA}$ for 1000 hours	56	0
Low Temperature Operating Life	JESD22-A108	$T_A = -40^{\circ}\text{C}$ , $I_F = 70\text{ mA}$ for 1000 hours	56	0
Temperature Humidity Operating Life	JEITA ED- 4701/ 100 102	$T_A = 60^{\circ}\text{C}$ , 90% RH, $I_F = 40\text{ mA}$ for 500 hours	56	0
Temperature Cycle	JESD22-A104	$-40^{\circ}\text{C}/100^{\circ}\text{C}$ , 15-minute dwell, 5-minute transfer, 100 cycles	336	0
High Temperature Storage Life	JESD22-A103	$T_A = 100^{\circ}\text{C}$ for 1000 hours	56	0
Low Temperature Storage Life	JESD22-A119	$T_A = -40^{\circ}\text{C}$ for 1000 hours	56	0
Temperature Humidity Storage Life	JEITA ED- 4701/ 100 103	$T_A = 60^{\circ}\text{C}$ , 90% RH for 1000 hours	56	0
Pulse Test	JESD22-A108	$T_S = 25^{\circ}\text{C}$ , frequency = 100 Hz, peak current = 350 mA, duty factor = 1% for 500 hours	56	0
Mechanical Shock	JESD22-B104	5 shocks each X1, X2, Y1, Y2, Z1, Z2, 1500G, 0.5-ms pulse	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
Solderability	J-STD-002	$245^{\circ}\text{C}$ for 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).

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