

## 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.

**Table 1: Reliability Tests**

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).

## Disclaimer

Broadcom's 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.

Copyright © 2022–2026 Broadcom. All Rights Reserved. The term “Broadcom” refers to Broadcom Inc. and/or its subsidiaries. For more information, go to [www.broadcom.com](http://www.broadcom.com). All trademarks, trade names, service marks, and logos referenced herein belong to their respective companies.

Broadcom reserves the right to make changes without further notice to any products or data herein to improve reliability, function, or design. Information furnished by Broadcom is believed to be accurate and reliable. However, Broadcom does not assume any liability arising out of the application or use of this information, nor the application or use of any product or circuit described herein, neither does it convey any license under its patent rights nor the rights of others.



Lead (Pb) Free  
RoHS Compliant