

HSMF-C113/C114/C115/C118/C128

Miniature Right-Angle Tricolor Surface-Mount ChipLEDs

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 | $T_A = 55^\circ\text{C}$, $I_F = 9\text{ mA}$ for 500 hours (all chips on) | 56 | 0 |
| Low Temperature Operating Life | JESD22-A108 | $T_A = -40^\circ\text{C}$, $I_F = 15\text{ mA}$ for 500 hours (all chips on) | 56 | 0 |
| Temperature Humidity Operating Life | JEITA ED-4701/100 102 | $T_A = 60^\circ\text{C}$, 90% RH, $I_F = 6\text{ mA}$ for 500 hours (all chips on) | 56 | 0 |
| Temperature Cycle | JESD22-A104 | $-40^\circ\text{C}/85^\circ\text{C}$, 15-minute dwell, 5-minute transfer, 100 cycles | 336 | 0 |
| High Temperature Storage Life | JESD22-A103 | $T_A = 85^\circ\text{C}$ for 500 hours | 56 | 0 |
| Low Temperature Storage | JESD22-A119 | $T_A = -40^\circ\text{C}$ for 500 hours | 56 | 0 |
| Temperature Humidity Storage Life | JEITA ED-4701/100 103 | $T_A = 60^\circ\text{C}$, 90% RH 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°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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