

HDSP-H1x1/H1x3

1.0-in. Single-Digit PCB-Based LED Display

Description

The following cumulative test results have been obtained from testing performed at Broadcom® in accordance with the JEDEC standards.

Broadcom tests parts at the absolute maximum rated conditions recommended for the device. The actual performance 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 following tables.

Table 1. Product Information

| Red | Green | Yellow | Orange | AlGaAs Red | Description |
|-----------|-----------|-----------|-----------|------------|------------------------------------|
| HDSP-H1E1 | HDSP-H1G1 | HDSP-H1Y1 | HDSP-H1L1 | HDSP-HC1A1 | Common Anode, Right Hand Decimal |
| HDSP-H1E3 | HDSP-H1G3 | HDSP-H1Y3 | HDSP-H1L3 | HDSP-H1A3 | Common Cathode, Right Hand Decimal |

Table 2. Environmental Tests

| Test Name | Reference | Test Conditions | Units Tested | Units Failed |
|-----------------------------------------------|---------------|--------------------------------------------------------------|--------------|--------------|
| Temperature Cycle | Broadcom Req. | –40°C/85°C, 15 minutes dwell, 5 minutes transfer, 100 cycles | 300 | 0 |
| High Temperature High Humidity Operating Life | Broadcom Req. | 85°C/85%, 5 mA, 500 hours | 26 | 0 |
| High Temperature High Humidity Storage Life | Broadcom Req. | 85°C/85% RH, 500 hours | 26 | 0 |
| Low Temperature Operating Life | JESD22-A108 | –40°C, 25 mA, 500 hours | 26 | 0 |
| High Temperature Operating Life | JESD22-A108 | 85°C, 5 mA, 500 hours | 26 | 0 |

Table 3. Mechanical Tests

| Test Name | Reference | Test Conditions | Units Tested | Units Failed |
|--------------------|---------------|-----------------------------------------------------------|--------------|--------------|
| Mechanical shock | JESD22-B104 | 1500G for 0.5 ms, 5 shocks each \pm X, Y, and Z | 30 | 0 |
| Solderability | JESD22-B102 | 245°C for 5 seconds | 30 | 0 |
| Marking Permanency | JESD22-B107 | 3× immersions /10 strokes, pass solution A and C | 12 | 0 |
| Drop test | Broadcom Req. | 1.2m drop on ceramic, concrete or steel surface, 10× drop | 30 | 0 |

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