

Reliability Data Sheet

Description

The following cumulative test results have been obtained from testing performed at Avago Technologies in accordance with the latest revision of MIL-STD-883.

The actual performance you obtain from Avago Technologies' parts depends on the electrical and environmental characteristics of your application but will probably be better than the performance outlined in Table 1.

**Table 1. Life Tests
 Demonstrated Performance**

Colors	Stress Test	Stress Test Conditions	Total Device Hrs.	Units Tested	Units Failed	Point Typical Performance	
						MTBF	Failure Rate (% /1K Hours)
Green HER Yellow AlGaAs	Room Temperature Operating Life	$T_A = 25^{\circ}\text{C}$ $I_{f,Green} = 25\text{ mA}$ $I_{f,HER} = 15\text{ mA}$ $I_{f,Yellow} = 20\text{ mA}$ $I_{f,AIG} = 15\text{ mA}$	20,000	20	0	20,000	< 5.00
Green HER Yellow AlGaAs	High Temperature Storage Life	$T_A = +85^{\circ}\text{C}$	20,000	20	0	20,000	< 5.00
Green HER Yellow AlGaAs	Low Temperature Storage Life	$T_A = -35^{\circ}\text{C}$	20,000	20	0	20,000	< 5.00
Green HER Yellow AlGaAs	Wet High Temperature Storage Life	$T_A = +65^{\circ}\text{C}$ R.H. = 95%	20,000	20	0	20,000	< 5.00
Green HER Yellow AlGaAs	Wet High Temperature Reverse Bias	$T_A = +65^{\circ}\text{C}$ R.H. = 95% $V_r = 5\text{ V}$	20,000	20	0	20,000	< 5.00

Table 2. Environmental Tests

Test Name	Reference	Test Conditions	Units Tested	Units Failed
Temperature Cycle	MIL-STD-883 Method 1010	-35°C to +85°C, 30 min. dwell, 5 min. transfer, up to 10 cycles.	2300	0
Solder Heat Resistance	Avago technologies reference	Solder dip at 260°C for 10 ±1 seconds.	20	0
Solderability Test	MIL-STD-883 Method 2003	16 hours steam aging followed by solder dip at 230°C for 5 seconds.	20	0
Thermal Shock	MIL-STD-883 Method 1011	-35°C to +85°C, 10 min. dwell, 10 min. transfer, up to 10 cycles.	200	0

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