

AEAT-901x Magnetic Encoder

Absolute and Incremental Output Angular Detection Device

Description

The following cumulative test results have been obtained from testing performed by Broadcom.

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 [Table 1](#).

Table 1: Life Tests

Test Name	Reference	Test Conditions	Units Tested	Units Failed
Dry Heat (Biased)	IEC68-2-2	$T_A = 125^{\circ}\text{C}$ for 500 hours, $V_{CC} = 5.5\text{V}$	45	0
Damp Heat Steady State (Biased)	IEC68-2-3	$T_A = 85^{\circ}\text{C}$, RH = 85% for 500 hours, $V_{CC} = 5.5\text{V}$	45	0
Cold Test (Biased)	IEC68-2-1	$T_A = -40^{\circ}\text{C}$ for 500 hours, $V_{CC} = 5.5\text{V}$	45	0

Table 2: Environmental Tests

Test Name	Reference	Test Conditions	Units Tested	Units Failed
Change of Temperature	IEC68-2-14Nb	$-40^{\circ}\text{C} / 125^{\circ}\text{C}$, 30/55/30 minutes for 100 cycles	20	0
Damp Heat Steady State	IEC68-2-3	$T_A = 85^{\circ}\text{C}$, RH = 85% for 500 hours	5	0
Dry Heat	IEC68-2-2	$T_A = 125^{\circ}\text{C}$ for 500 hours	10	0
Cold Test	IEC68-2-1	$T_A = -40^{\circ}\text{C}$ for 500 hours	5	0

Table 3: Mechanical Tests

Test Name	Reference	Test Conditions	Units Tested	Units Failed
Vibration Test	IEC68-2-6	10 Hz to 500 Hz at 5G. After X, Y, and Z direction.	3	0
Mechanical Shock	IEC68-2-27	200G at 6 ms. After X, Y, and Z direction.	3	0

Table 4: Electrical Tests

Test Name	Reference	Test Conditions	Units Tested	Units Failed
Electrostatic Discharge Immunity Test	IEC61000-4-2	Charge at 8 KV at 10 pulses	6	0

Copyright © 2023-2024 Broadcom. All Rights Reserved. The term “Broadcom” refers to Broadcom Inc. and/or its subsidiaries. For more information, go to 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.