

AS20-M42M-Series Miniature Encoder

Magnetic Absolute Kit Encoder with Energy Harvesting Multi-Turn

Description

The following cumulative test results have been obtained from testing performed at Broadcom® in accordance with the latest revisions of the IEC standard. 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 [Table 1](#).

Table 1: Life Tests

Test Name	Reference	Test Conditions	Units Tested	Units Failed
Dry Heat	IEC 60068-2-2	Ta = 125°C for 1000 hours, VCC = 5.5V ± 0.5V	30	0
Damp Heat Steady State	IEC 60068-2-78	Preconditioning + Ta = 60°C, RH = 90% for 1000 hours, VCC = 5.5V ± 0.5V	30	0
Cold Test	IEC 60068-2-1	Ta = -40°C for 1000 hours, VCC = 5.5V ± 0.5V	22	0

Table 2: Environmental Tests

Test Name	Reference	Test Conditions	Units Tested	Units Failed
Change of Temperature	IEC 60068-2-14Nb	-40°C to 125°C, 500 cycles	22	0

Table 3: Mechanical Tests

Test Name	Reference	Test Conditions	Units Tested	Units Failed
Vibration Test (Non-Operating)	IEC 60068-2-6	10 Hz to 2000 Hz at 30g	3	0
Mechanical Shock (Non-Operating)	IEC 60068-2-27	200g at 6 ms half-sine pulse 3 shocks per 3 perpendicular axes	3	0

Table 4: Electrical Tests

Test Name	Reference	Test Conditions	Units Tested	Units Failed
Electrostatic Discharge Immunity Test (drive system level)	IEC 61000-4-2	±8 kV (contact), ±12 kV (air)	3	0

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