

AEAT-9955-XXX Series

10-Bit to 18-Bit Programmable Angular Magnetic Encoder with Safety

Description

The following cumulative test results have been obtained from testing performed at Broadcom® in accordance with the latest revisions of the JEDEC 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
High Temperature Operating Life	JESD22A-108	$T_A = 125^{\circ}\text{C}$ for 1000 hours, $V_{DD} = 5.0\text{V} \pm 0.5\text{V}$	30	0
High Temperature Operating Life	AEC-Q100/ JESD22A-108	$T_A = 150^{\circ}\text{C}$ for 1000 hours, $V_{DD} = 5.0\text{V} \pm 0.5\text{V}$	231	0
Temperature Humidity Bias	AEC-Q100/ JESD22A-101	Preconditioning + $T_A = 85^{\circ}\text{C}$, RH = 85% for 1000 hours, $V_{DD} = 5.0\text{V} \pm 0.5\text{V}$	261	0
Low Temperature Operating Life	JESD22A-108	$T_A = -40^{\circ}\text{C}$ for 1000 hours, $V_{DD} = 5.0\text{V} \pm 0.5\text{V}$	30	0
Early Life Failure Rate	AEC-Q100-008	$T_A = 150^{\circ}\text{C}$ for 48 hours, $V_{DD} = 5.0\text{V} \pm 0.5\text{V}$	2400	0

Table 2: Environmental Tests

Test Name	Reference	Test Conditions	Units Tested	Units Failed
Temperature Cycling	JESD22A-104 JESD22-A113	-40°C to 125°C (Condition G), Preconditioning + 1000 cycles	30	0
Temperature Cycling	AEC-Q100/ JESD22A-104 JESD22-A113	-55°C to 150°C (Condition H), Preconditioning + 2000 cycles	231	0
High Temperature Storage Life	AEC-Q100/ JESD22A-103	$T_A = 150^{\circ}\text{C}$ for 2000 hours	231	0
Unbiased Temperature Humidity Test (Unbiased HAST)	JESD22A-118	Preconditioning + $T_A = 130^{\circ}\text{C}$, RH = 85% for 96 hours	243	0

Table 3: Electrical Tests

Test Name	Reference	Test Conditions	Units Tested	Units Failed
Human Body Model ESD	AEC-Q100-002	3000V	3	0
Charged Device Model ESD	AEC-Q100-011	1000V	3	0
Latch-Up	AEC-Q100-004	Class II ($T_A = +125^{\circ}\text{C}$)	6	0

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