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RENESAS SEMICONDUCTOR RELIABILITY REPORT

DEVICE: RMLV1616AGSA-5S2#AA0
RMLV1616AGSA-5S2#KA0

APPLICATION: Standard

Quality Assurance Div.
Renesas Electronics Corporation

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1. Reliability test results

No	Test Item	Test Conditions	Results (Reject/Sample Size)
1	High Temperature Operating Life	Ta = 125 °C, Vcc max, 1000 h	0/228
2	Low Temperature Operating Life	Ta = -40 °C, Vcc max, 1000 h	0/32
3	High Temperature Storage Life	Ta = 150 °C, 1000 h	0/75
4	HAST	Ta = 130 °C, 85% RH, Vcc max, 96 h	0/75
5	Temperature Cycling	Ta = -65 °C to +150 °C, 300 cycles	0/75
6	Unbiased HAST	Ta = 130 °C, 85% RH, 96 h	0/75
7	Resistance to Soldering Heat	Bake: 125°C, 24h Moisture Soak: 30 °C 70% RH, 192h (JEDEC-MSL3 Equivalent) Reflow: 260 °C peak, 255 °C 30 s, 3 times	0/33
8	Solderability	245 °C, 5 s 95% solder coverage minimum	0/5
9	Electrostatic discharge (HBM Method)	C = 100 pF, R = 1.5 kΩ, ±1000 V	0/3
10	Electrostatic discharge (CDM Method)	±1000 V	0/3
11	Latch-up (Pulse Current Injection)	±150 mA	0/3
12	Whisker	Ta = 30 °C, 60% RH, 4000 h	0/3
13		Ta = 55 °C, 85% RH, 4000 h	0/3
14		Ta = -40/85 °C, 1500 cycles	0/3
15	Estimated Failure Rate	6.3 FIT or less Prerequisites: Ta = 55 °C, Ea = 0.7 eV, C.L. = 60%	
16	System Soft Error Rate (SSER)	0.62 FIT/Mbit or less (no error) Prerequisites: C.L. = 60%	

Reliability test results may include data from family representative products. MSL Preconditioning was performed prior to HAST, Temperature Cycling and Unbiased HAST.

The Criteria shall follow the electrical characteristics in Specifications, except for Solderability and SSER.

Preconditioning Details: Bake (125 °C, 24 h) -> Moisture Soak (30 °C 70% RH, 192 h) -> Reflow (260 °C peak, 3 times)