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RENESAS SEMICONDUCTOR RELIABILITY REPORT

DEVICE: RMLV3216AGSD-5S2#AA0
RMLV3216AGSD-5S2#HA0

APPLICATION: Standard

IoT and Infrastructure Quality Assurance Department
Quality Assurance Division
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	Estimated Failure Rate	6.3 FIT or less Prerequisites: Ta = 55 °C, Ea = 0.7 eV, C.L. = 60%	
13	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)