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RENESAS SEMICONDUCTOR RELIABILITY REPORT

DEVICE: RMWV6416AGSD-5S2#AA0
RMWV6416AGSD-5S2#HA0

APPLICATION: Standard

Quality Assurance Div.
Renesas Electronics Corporation

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Reliability test result

Test Items	Reference	Test Conditions	Results Reject/Size
High Temperature Operating Life	JESD22-A108	Ta = 125 °C, Vcc max, 1000 h	0/228
Low Temperature Operating Life	JESD22-A108	Tj = -40 °C, Vcc max, 1000 h	0/32
High Temperature Storage Life	JESD22-A103	Ta = 150 °C, 1000 h	0/75
Temperature Humidity Bias (HAST)	JESD22-A110	Ta = 130 °C, 85% RH, Vcc max, 96 h	0/75
Temperature Cycling	JESD22-A104	Ta = -65 °C to +150 °C, 300 cycles	0/75
Unbiased Temperature Humidity (Unbiased HAST)	JESD22-A118	Ta = 130 °C, 85%RH, 96h	0/75
Resistance to Soldering Heat	JESD22-A113, J-STD-020	Bake:125 °C, 24 h Moisture Soak: 30 °C 70% RH, 192h (JEDEC-MSL3 Equivalent) Reflow: 260 °C peak, 255 °C 30 s, 3 times	0/33
Solderability	J-STD-002	245 °C, 5 s 95% solder coverage minimum	0/5
Electrostatic discharge (HBM Method)	JS-001	C = 100 pF, R = 1.5 kΩ, ±1000 V	0/3
Electrostatic discharge (CDM Method)	JESD22-C101	±500 V	0/3
Latch-up (I-Test)	JESD78	±150 mA	0/3
Tin Whisker Acceptance (Temperature Humidity Storage)	JESD22-A121	Ta = 30 °C, 60% RH, 4000 h	0/3
Tin Whisker Acceptance (High Temperature Humidity Storage)	JESD22-A121	Ta = 55 °C, 85% RH, 4000 h	0/3
Tin Whisker Acceptance (Temperature Cycling)	JESD22-A121	Ta = -40/85 °C, 1500 cycles	0/3
Estimated Failure Rate	-	6.3 FIT or less Prerequisites: Ta = 55 °C, Ea = 0.7 eV, C.L. = 60%	
System Soft Error Testing (SSER)	JESD89-1	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)

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