



Report APR-22-H0441-A
Date: 29/Dec./2022

RENESAS SEMICONDUCTOR RELIABILITY REPORT

SERIES: RAA808013

DEVICE: RAA808013GP3#JA0

APPLICATION: Standard

Quality Assurance Division.
Renesas Electronics Corporation

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Reliability test result

Test Items	Reference	Test Conditions	Results		
			Lot	Sample Size	Failure
High temperature operating life	JESD22-A108	Tj=125°C, Vcc max, t=1000h	3	231	0
Temperature humidity bias	JESD22-A110	Ta=130°C, RH=85%, Vcc max, t=96h	3	75	0
Unbiased temperature humidity	JESD22-A118	Ta=130°C, RH=85%, t=96h	3	75	0
High temperature storage	JESD22-A103	Ta=150°C, t=1000h	3	75	0
Temperature cycle	JESD22-A104	-40°C~125°C, 850cycles	3	75	0
Electrostatic discharge (HBM Method)	JS-001	C=100pF, 1.5kΩ, ±1000 V	1	3	0
Electrostatic discharge (CDM Method)	JESD22-C101	±500 V	1	3	0
Latch-up (Pulse Current Injection)	JESD78	±100 mA	1	3	0
Solderability	J-STD-002	245°C,5s Wet area 95% or more	3	15	0
Resistance to Soldering Heat	JESD22-A113, J-STD-020	Bake: 125°C, 24h Moisture Soak: 85°C85%RH, 168h(MSL1) Reflow:260°Cmax, 255°Cx30s, 3 times)	2	50	0
Estimated failure rate	Estimated failure rate: 10Fit Ta= 55°C, Ea=0.7eV, C.L.=60%				

Reliability test results may include data from family representative products.

MSL Preconditioning was performed prior to Temperature humidity bias, Unbiased temperature humidity and Temperature cycling.

Preconditioning Details: 125°C, 24h + 85°C, 85%RH, 168h -> Reflow 260°Cmax, 255°Cx30s, 3times)

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