



Report No. APR-24-H0368
Date: Dec. 27, 2024

RENESAS SEMICONDUCTOR RELIABILITY REPORT

APPLICATION: Standard

SERIES: Thermal FET

DEVICE: Refer to Product List

Quality Assurance Div.
Renesas Electronics Corporation

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1.RELIABILITY TEST

| ITEM | TEST CONDITION | Test Results (NUMBER OF FAILURE/NUMBER OF SAMPLES) |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|-------------------------------------------------------|
| Soldering Heat | Bake:125°C, 24h Moisture Soak:85°C, 85%RH, 168h(JEDEC MSL1) Reflow:260°Cmax,255°C×30s, 3time | 0/22 |
| Solderability | 245°C, 5s (Solder wetting area 95% or more) | 0/22 |
| High Temperature Reverse Bias | Tch=150°C, VDSS of Maximum Rating, 1,000h | 0/22 |
| High Temperature Storage Life | Ta=150°C, 1,000h | 0/22 |
| Temperature Humidity Bias | Ta=85°C, 85%RH, VDSS of Maximum Rating, 1,000h | 0/22 |
| Temperature Cycle | Ta=-55°C to +150°C, 500cycles | 0/22 |
| Intermittent operating Life | ΔTc=100°C, 10kcycles | 0/22 |
| Electrostatic-Discharge(ESD)HBM | C=100pF, R=1.5kΩ, ±1,000V | 0/3 |
| Electrostatic-Discharge(ESD)CDM | ±500V | 0/3 |
| Estimated failure rate | Estimated failure rate : 10Fit or less •Tch= 55°C •Ea = 0.8eV •C.L. = 60% | |
| <p>Reliability test results may include data from family representative products. MSL Preconditioning was performed prior to TC & THB & IOL.</p> <p><Judgement criteria> Electrical characteristics described in the delivery specification. (Solderability test is excluded.)</p> <p><Preconditioning Details> 125°C, 24h→85°C, 85%RH, 168h(JEDEC MSL1)→Reflow(260°Cmax,255°C×30s, 3time)</p> | | |

