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# RENESAS SEMICONDUCTOR RELIABILITY REPORT

APPLICATION: Standard

SERIES: CR12CS-16B-TO8

DEVICE: CR12CS-16B-T2#BH0

Quality Assurance Div.
Renesas Electronics Corporation

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## 1.RELIABILITY TEST

| ITEM | TEST CONDITION | Test Results | |
|---|---|---|---|
| | | NUMBER OF SAMPLES | NUMBER OF FAILURE |
| Soldering Heat | Reflow(245℃max, 240℃×30s, 1time) | 22 | 0 |
| Solderability | 245℃, 5s (Solder wetting area 95% or more) | 22 | 0 |
| High Temperature Bias | Ta=150℃, $V_{DRM}$=Maximum Rating (AC-peak), 1,000h | 22 | 0 |
| Continuous Operation | Tj=150℃, $I_{T(AV)}$=Maximum Rating, 1,000h | 22 | 0 |
| High Temperature Storage Life | Ta=150℃, 1,000h | 22 | 0 |
| Temperature Humidity Storage | Ta=85℃, 85%RH, 1,000h | 22 | 0 |
| Temperature Cycle | Ta=-40℃ to +150℃, 200cycles | 22 | 0 |
| Electrostatic-Discharge(ESD)HBM | C=100pF, R=1.5k ohm, ±1,000V | 3 | 0 |
| Estimated failure rate | Estimated failure rate : 10Fit or less<br>・Tj= 55℃ ・Ea = 0.7eV ・C.L. = 60% | | |

Reliability test results may include data from family representative products.

<Judgement criteria>
Electrical characteristics described in the delivery specification.
(Solderability test is excluded.)
$I_{RRM}$, $I_{DRM}$, $V_{TM}$, $V_{GT}$, $I_{GT}$
*However, $I_{GT}$ item free judgment.