

# RENESAS SEMICONDUCTOR RELIABILITY REPORT

APPLICATION: Standard

SERIES: CR12CS-16B-TO2

DEVICE: CR12CS-16B#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 <sub>DRM</sub> =Maximum Rating (AC-peak), 1,000h                | 22                | 0                 |
| Continuous Operation   | Tj=150℃, I <sub>T(AV)</sub> =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><br>Electrical characteristics described in the delivery specification.<br>(Solderability test is excluded.)<br>I <sub>RRM</sub> , I <sub>DRM</sub> , V <sub>TM</sub> , V <sub>GT</sub> , I <sub>GT</sub><br>*However, I <sub>GT</sub> item free judgment. |  |                   |                   |