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## RENESAS SEMICONDUCTOR RELIABILITY REPORT

APPLICATION: Standard

SERIES: CR12CM-12B

DEVICE: CR12CM-12B#BH0

Quality Assurance Div. Renesas Electronics Corporation

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## 1.RELIABILITY TEST

|   | TEST CONDITION  | Test Results            |                         |
|---|---|-------------------------|-------------------------|
| ITEM  |   | NUMBER<br>OF<br>SAMPLES | NUMBER<br>OF<br>FAILURE |
| Soldering Heat  | Lead Solder DIP (260°Cmax, 10s)   | 22                      | 0                       |
| Solderability   | 245℃, 5s (Solder wetting area 95% or more)                                  | 22                      | 0                       |
| High Temperature Bias   | Ta=150°C, V <sub>DRM</sub> =Maximum Rating (AC-peak), 1,000h                | 22                      | 0                       |
| Continuous<br>Operation   | Tj=150℃, I <sub>T(AV)</sub> =Maximum Rating, 1,000h                         | 22                      | 0                       |
| High Temperature<br>Storage Life  | Ta=150℃, 1,000h   | 22                      | 0                       |
| Temperature<br>Humidity Storage   | Ta=85℃, 85%RH, 1,000h   | 22                      | 0                       |
| Temperature Cycle   | Ta=-40℃ to +150℃, 200cycles   | 22                      | 0                       |
| Electrostatic-<br>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°C •Ea = 0.7eV •C.L. = 60% |                         |                         |
| Reliability test results may include data from family representative products.  |   |                         |                         |
| <judgement criteria=""><br/>Electrical characteristic<br/>(Solderability test is ex<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</judgement> |   |                         |                         |