

# RENESAS SEMICONDUCTOR RELIABILITY REPORT

APPLICATION: Standard

SERIES: CR2AS-16A

DEVICE: CR2AS-16A-T13#B00  
CR2AS-16A-T13#C01  
CR2AS-16A-T13#C02  
CR2AS-16A-T13#C03

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## 1.RELIABILITY TEST

| ITEM                                                                                                                                                                                                                                                                           | TEST CONDITION                                                             | Test Results      |                   |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------|-------------------|-------------------|
|                                                                                                                                                                                                                                                                                |                                                                            | NUMBER OF SAMPLES | NUMBER OF FAILURE |
| Soldering Heat                                                                                                                                                                                                                                                                 | Reflow(260℃max,255℃×10s, 2times)                                           | 22                | 0                 |
| Solderability                                                                                                                                                                                                                                                                  | 245℃, 5s (Solder wetting area 95% or more)                                 | 22                | 0                 |
| High Temperature Bias                                                                                                                                                                                                                                                          | Ta=125℃, V <sub>DRM</sub> =Maximum Rating (AC-peak), 1,000h                | 22                | 0                 |
| Continuous Operation                                                                                                                                                                                                                                                           | Tj=125℃, I <sub>T(AV)</sub> =Maximum Rating, 1,000h                        | 22                | 0                 |
| High Temperature Storage Life                                                                                                                                                                                                                                                  | Ta=125℃, 1,000h                                                            | 22                | 0                 |
| Temperature Humidity Storage                                                                                                                                                                                                                                                   | Ta=85℃, 85%RH, 1,000h                                                      | 22                | 0                 |
| Temperature Cycle                                                                                                                                                                                                                                                              | Ta=-40℃ to +125℃, 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. |                                                                            |                   |                   |