

# RENESAS SEMICONDUCTOR RELIABILITY REPORT

APPLICATION: Standard

SERIES: BCR8FM-12LB

DEVICE: BCR8FM-12LB#BG0  
BCR8FM-12LB#BH0  
BCR8FM-12LB-1#BG0  
BCR8FM-12LB-1#BH0  
BCR8FM-12LB1A8#BG0  
BCR8FM-12LB1A8#BH0  
BCR8FM-12LB1AR#BG0  
BCR8FM-12LB1AS#BG0  
BCR8FM-12LB-A8#BG0  
BCR8FM-12LB-A8#BH0  
BCR8FM-12LB-AS#BG0  
BCR8FM-12LB-AS#BH0

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## 1.RELIABILITY TEST

| ITEM                                                                                                                                                                                                                                                                                                                                                                                                         | TEST CONDITION                                                              | Test Results      |                   |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|-------------------|-------------------|
|                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                             | NUMBER OF SAMPLES | NUMBER OF FAILURE |
| Soldering Heat                                                                                                                                                                                                                                                                                                                                                                                               | Lead Solder DIP (260°Cmax, 10s)                                             | 22                | 0                 |
| Solderability                                                                                                                                                                                                                                                                                                                                                                                                | 245°C, 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 Operation                                                                                                                                                                                                                                                                                                                                                                                         | Tj=150°C, I <sub>T(RMS)</sub> =Maximum Rating, 1,000h                       | 22                | 0                 |
| High Temperature Storage Life                                                                                                                                                                                                                                                                                                                                                                                | Ta=150°C, 1,000h                                                            | 22                | 0                 |
| Temperature Humidity Storage                                                                                                                                                                                                                                                                                                                                                                                 | Ta=85°C, 85%RH, 1,000h                                                      | 22                | 0                 |
| Temperature Cycle                                                                                                                                                                                                                                                                                                                                                                                            | Ta=-40°C to +150°C, 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°C ・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>DRM</sub> , V <sub>TM</sub> , V <sub>FGT1</sub> , V <sub>RGT1</sub> , V <sub>RGT3</sub> , I <sub>FGT1</sub> , I <sub>RGT1</sub> , I <sub>RGT3</sub><br>*However, I <sub>FGT1</sub> , I <sub>RGT1</sub> , I <sub>RGT3</sub> is I <sub>GT</sub> item free judgment. |                                                                             |                   |                   |