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# RENESAS SEMICONDUCTOR RELIABILITY REPORT

APPLICATION: Standard

SERIES: BCR16FM-12LB

DEVICE: BCR16FM-12LB#BG0  
BCR16FM-12LB#BH0

Reliability & Failure Analysis Department  
Quality Assurance Div.  
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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.<br><br><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. |   |                   |                   |