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## RENESAS SEMICONDUCTOR RELIABILITY REPORT

APPLICATION: Standard

SERIES: BCR10FM-12LB

DEVICE: BCR10FM-12LB#BG0

BCR10FM-12LB#BH0 BCR10FM-12LB+CH3 BCR10FM-12LB-1#BG0 BCR10FM-12LB-1#BH0 BCR10FM12LB1A8#BG0 BCR10FM12LB1A8#BH0 BCR10FM-12LBA8#BH0 BCR10FM-12LBA8#BH0 BCR10FM-12LBAR#BH0 BCR10FM-12LBAS#BG0 BCR10FM-12LBAS#BG0 BCR10FM-12LBAS#BH0 BCR10FM-12LBAS#BH0

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## 1.RELIABILITY TEST

| ITEM                                | TEST CONDITION  | Test Results            |                         |
|-------------------------------------|---|-------------------------|-------------------------|
|                                     |   | 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℃, V <sub>DRM</sub> =Maximum Rating (AC-peak), 1,000h                                   | 22                      | 0                       |
| Continuous<br>Operation             | Tj=150℃, I <sub>T(RMS)</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 $^{\circ}$ to +150 $^{\circ}$ C, 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 $\cdot$ Tj= 55°C $\cdot$ Ea = 0.7eV $\cdot$ C.L. = 60% |                         |                         |

Reliability test results may include data from family representative products.

<Judgement criteria>

Electrical characteristics described in the delivery specification.

(Solderability test is excluded.)

$$\begin{split} &I_{\text{DRM}},\,V_{\text{TM}},\,V_{\text{FGT1}},\,V_{\text{RGT1}},\,V_{\text{RGT3}},\,I_{\text{FGT1}},\,I_{\text{RGT1}},\,I_{\text{RGT3}}\\ * &\text{However,}\,\,I_{\text{FGT1}},\,I_{\text{RGT1}},\,I_{\text{RGT3}}\,\text{is}\,\,I_{\text{GT}}\,\text{item free judgment.} \end{split}$$