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## RENESAS SEMICONDUCTOR RELIABILITY REPORT

APPLICATION: Standard

SERIES: BCR20FM-14RA

DEVICE: BCR20FM-14RA#BG0

Quality Assurance Div. Renesas Electronics Corporation

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## 1.RELIABILITY TEST

ITEM	TEST CONDITION	Test Results	
		NUMBER OF SAMPLES	NUMBER OF FAILURE
Soldering Heat	Lead Solder DIP (260℃max, 10s)	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℃, $I_{T(RMS)}$ =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 $^{\circ}$ C to +125 $^{\circ}$ 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 •Tj= 55℃ •Ea = 0.7eV •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.)

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