

BCR16FM-14LJ

700V - 16A - Triac

Medium Power Use

R07DS0959EJ0400


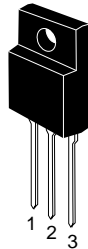
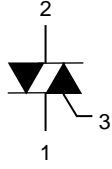
Rev.4.00

May 31, 2018

Features

- $I_T (RMS)$: 16 A
- V_{DRM} : 800 V ($T_j=125^\circ\text{C}$)
- T_j : 150°C
- I_{FGTI} , I_{RGTI} , $I_{RGT III}$: 30 mA
- Insulated Type
- Planar Passivation Type
- Viso: 2000V

Outline

| | | |
|---|--|---|
| <p>RENESAS Package code: PRSS0003AG-A (Package name: TO-220FP)</p>  <p>To be EOled PKG</p> | <p>RENESAS Package code: PRSS0003AP-A (Package name: TO-220FPA)</p>  |  <p>1. T₁ Terminal 2. T₂ Terminal 3. Gate Terminal</p> |
|---|--|---|

Application

Power supply, motor control, heater control, solid state relay, and other general purpose AC control applications.

Maximum Ratings

| Parameter | Symbol | Voltage class | Unit | Conditions |
|--|-----------|---------------|------|-------------------------|
| | | 14 | | |
| Repetitive peak off-state voltage ^{Note1} | V_{DRM} | 800 | V | $T_j=125^\circ\text{C}$ |
| | | 700 | V | $T_j=150^\circ\text{C}$ |
| Non-repetitive peak off-state voltage ^{Note1} | V_{DSM} | 840 | V | |

| Parameter | Symbol | Ratings | Unit | Conditions |
|------------------------------------|-------------|-------------|------------------|---|
| RMS on-state current | $I_T (RMS)$ | 16 | A | Commercial frequency, sine full wave 360°conduction, $T_c = 87^\circ\text{C}$ (#BB0, #BH0) ^{Note2} $T_c = 81^\circ\text{C}$ (#BG0) ^{Note2} |
| Surge on-state current | I_{TSM} | 160 | A | 60 Hz sinewave 1 full cycle, peak value, non-repetitive |
| I^2t for fusion | I^2t | 106.5 | A ² s | Value corresponding to 1 cycle of half wave 60 Hz, surge on-state current |
| Peak gate power dissipation | P_{GM} | 5 | W | |
| Average gate power dissipation | $P_{G(AV)}$ | 0.5 | W | |
| Peak gate voltage | V_{GM} | 10 | V | |
| Peak gate current | I_{GM} | 2 | A | |
| Junction Temperature | T_j | -40 to +150 | °C | |
| Storage temperature | T_{stg} | -40 to +150 | °C | |
| Isolation voltage ^{Note6} | V_{iso} | 2000 | V | $T_a=25^\circ\text{C}$, AC 1 minute, $T_1 \cdot T_2 \cdot G$ terminal to case |

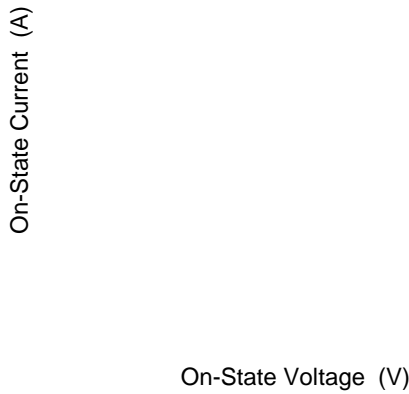
- Notes: 1. Gate open.
2. Please refer to the Ordering Information.

Electrical Characteristics

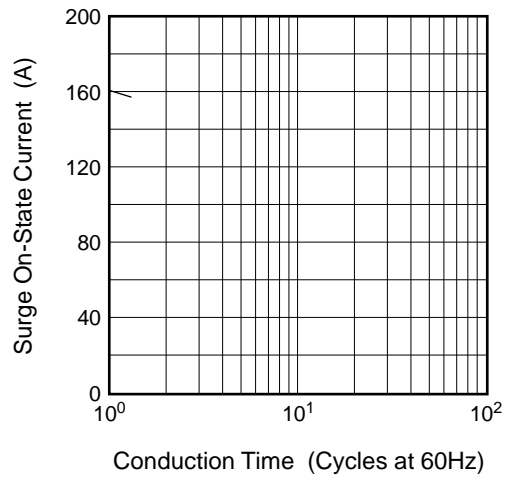
| Parameter | Symbol | Min. | Typ. | Max. | Unit | Test conditions |
|-----------|--------|------|------|------|------|-----------------|
|-----------|--------|------|------|------|------|-----------------|

Performance Curves

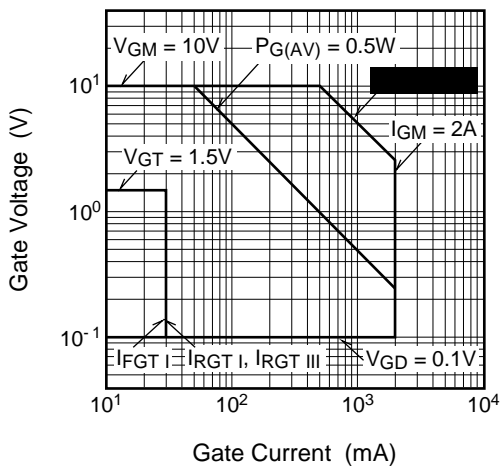
Maximum On-State Characteristics



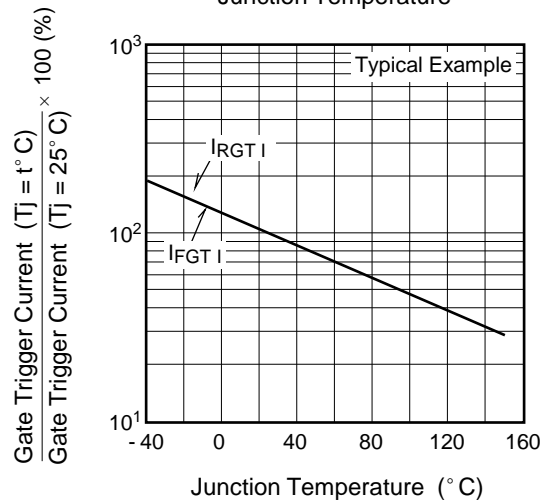
Rated Surge On-State Current



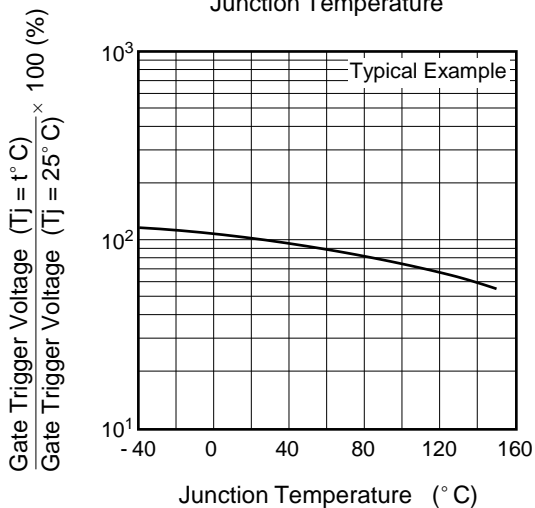
Gate Characteristics (I, II and III)

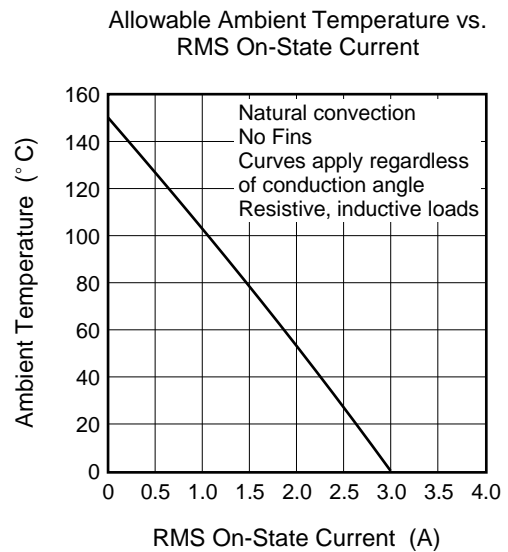
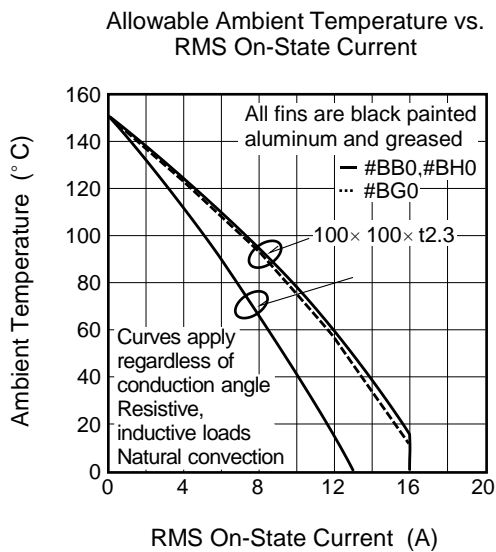
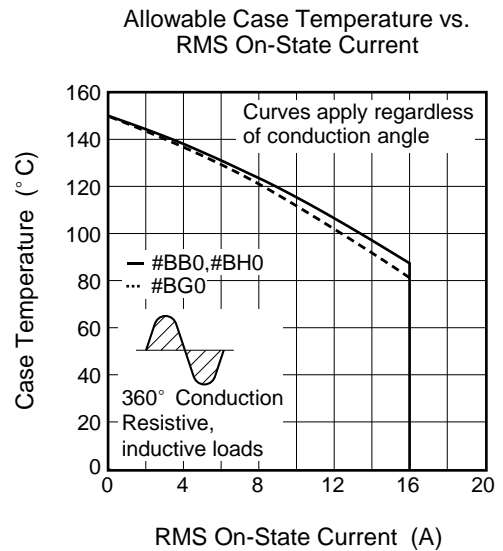
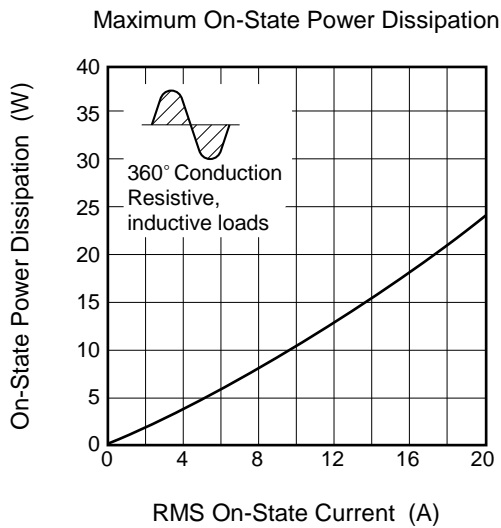
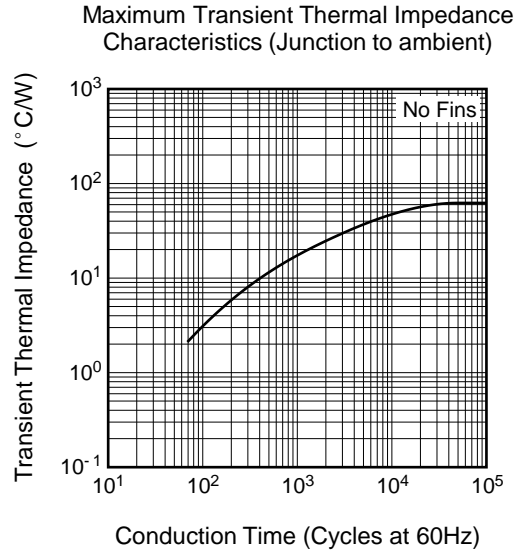


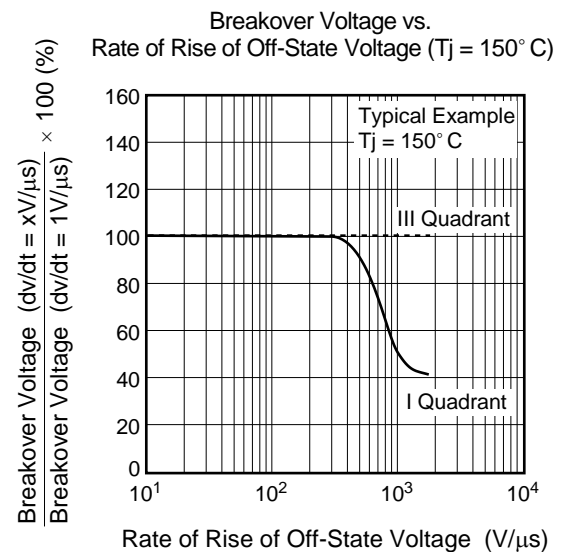
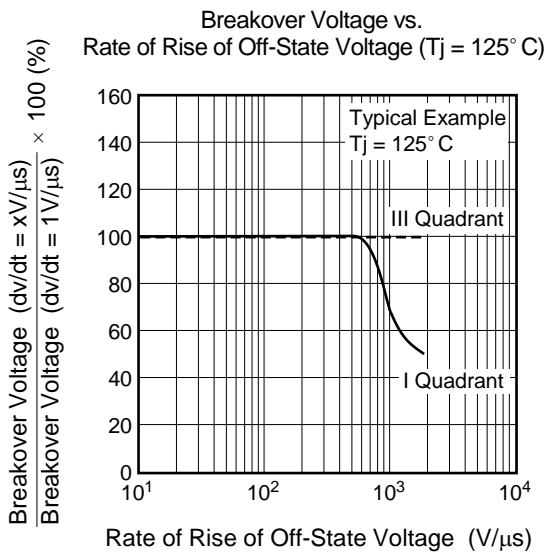
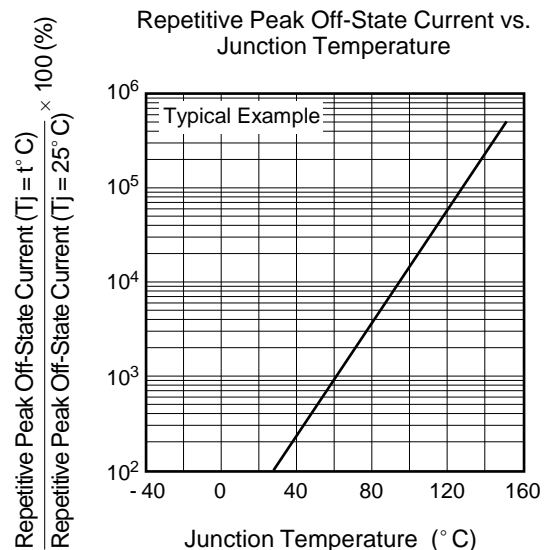
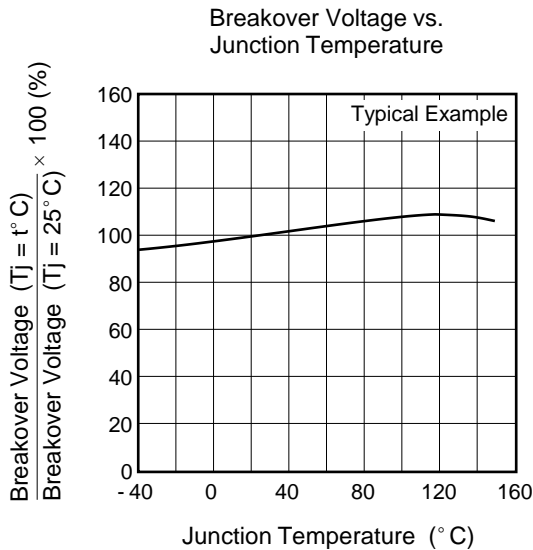
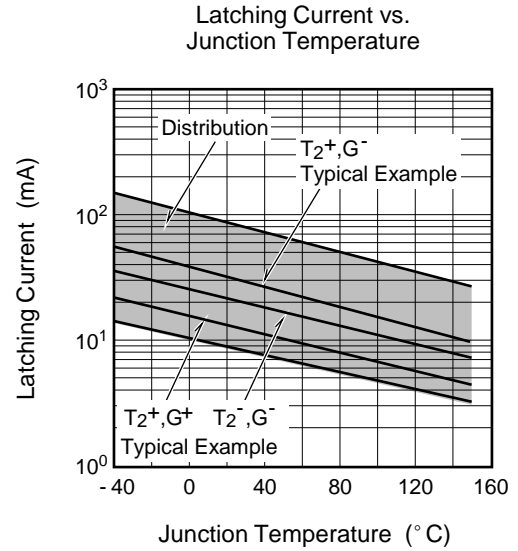
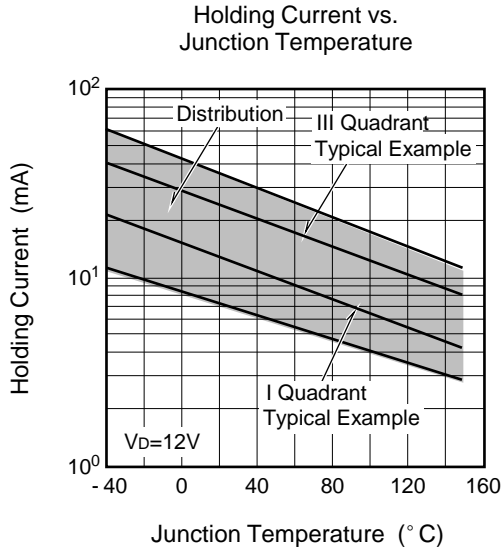
Gate Trigger Current vs. Junction Temperature



Gate Trigger Voltage vs. Junction Temperature







Gate Trigger Characteristics Test Circuits

330Ω

330Ω

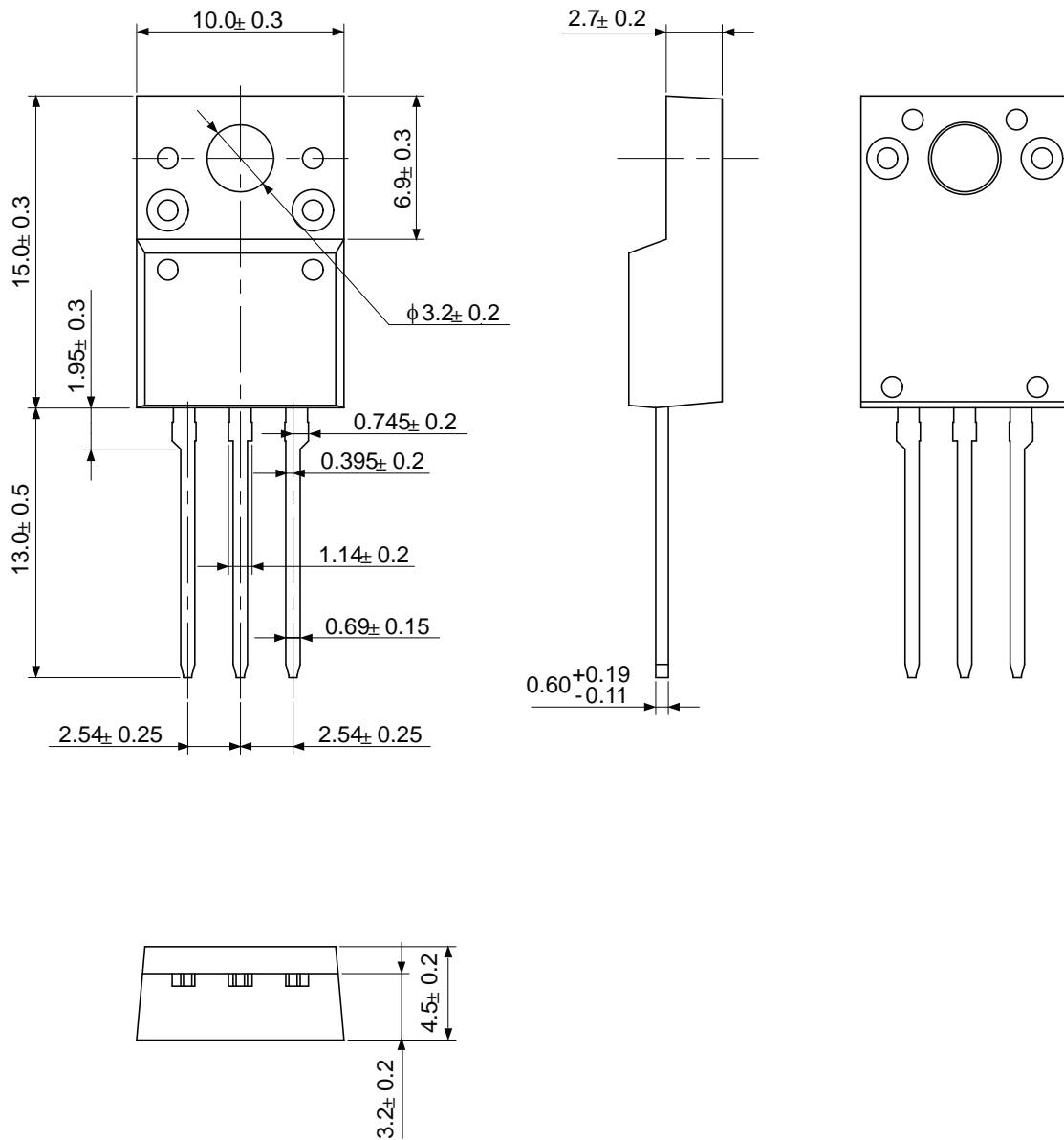
330Ω

Package Dimensions

Ordering code: #BH0, #BG0

| JEITA Package Code | RENESAS Code | Previous Code | MASS (Typ) [g] |
|--------------------|--------------|---------------|----------------|
| - | PRSS0003AP-A | TO-220FPA | 1.65 |

Unit: mm



Package Dimensions

Ordering code: #BB0 <To be EOLed>

Ordering Information

| Orderable Part Number | Package | Quantity ^{Note7} | Remark | Status |
|-----------------------|---------|---------------------------|--------|--------|
| BCR16FM-14LJ | | | | |

