

RL1601 THRU RL1607

GLASS PASSIVATED SILICON RECTIFIERS TO-220A

Reverse Voltage – 50 to 1000 Volts

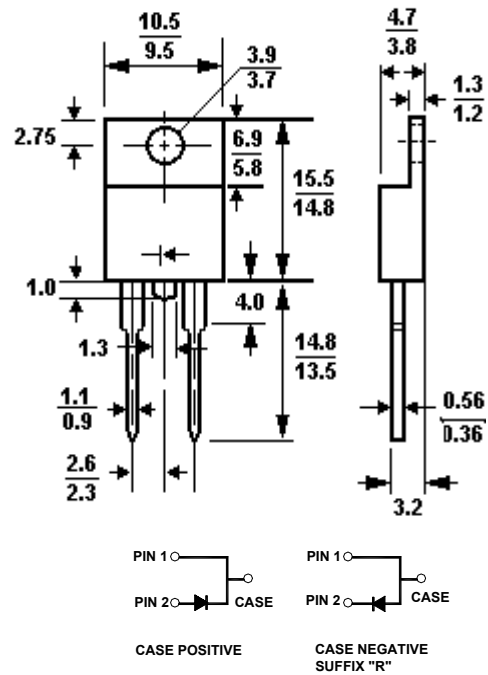
Forward Current – 16.0 Amperes

Features

- Low forward voltage drop
- High current capability
- High capability
- High surge current capability

Mechanical Data

- **Case:** Molded plastic, TO-220A
- **Terminals:** leads solderable per MIL-STD-202, method 208 guaranteed
- **Polarity:** As marked
- **Mounting Position:** Any



Absolute Maximum Ratings and Characteristics

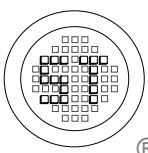
Dimensions in mm

Ratings at 25°C ambient temperature unless otherwise specified. Single phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.

| | Symbols | RL 1601 | RL 1602 | RL 1603 | RL 1604 | RL 1605 | RL 1606 | RL 1607 | Units |
|---|-----------------------|-------------|---------|---------|---------|---------|---------|---------|-------|
| Maximum recurrent peak reverse voltage | V_{RRM} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | Volts |
| Maximum RMS voltage | V_{RMS} | 35 | 70 | 140 | 280 | 420 | 560 | 700 | Volts |
| Maximum DC blocking voltage | V_{DC} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | Volts |
| Maximum average forward Rectified current 0.375"(9.5mm) Lead Length at $T_C = 100^\circ C$ | $I_{(AV)}$ | 16.0 | | | | | | | Amps |
| Peak forward surge current 8.3ms single half -sine-wave superimposed on rated load (JEDEC method) | I_{FSM} | 250 | | | | | | | Amps |
| Maximum forward voltage at 16.0A DC and 25°C | V_F | 1.1 | | | | | | | Volts |
| Typical junction Capacitance (Note1) | C_J | 100 | | | | | | | pF |
| Typical thermal resistance (Note2) | $R_{\theta JC}$ | 2.0 | | | | | | | °C/W |
| Maximum reverse current at rated DC blocking voltage | @ $T_C = 25^\circ C$ | 10 | | | | | | | µAmps |
| | @ $T_C = 125^\circ C$ | I_R | 250 | | | | | | µAmps |
| Operating and storage temperature range | T_J, T_s | -55 to +150 | | | | | | | °C |

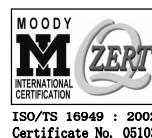
Notes :1. Measured at 1 MHz and applied reverse voltage of 4.0 VDC.

2. Thermal resistance from junction to case mounted on heatsink.



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Dated : 12/12/2003

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FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

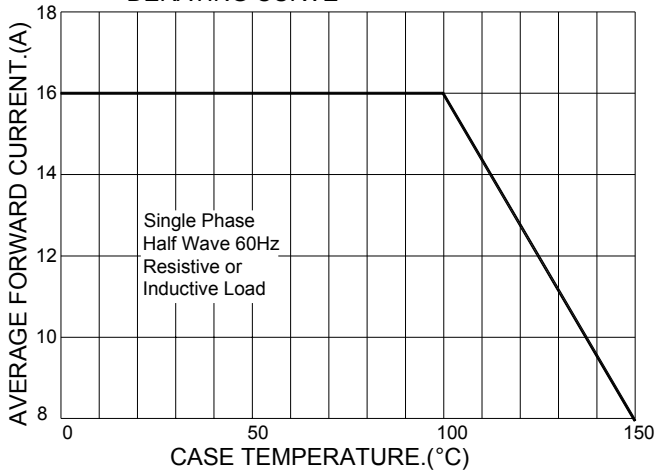


FIG.2- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

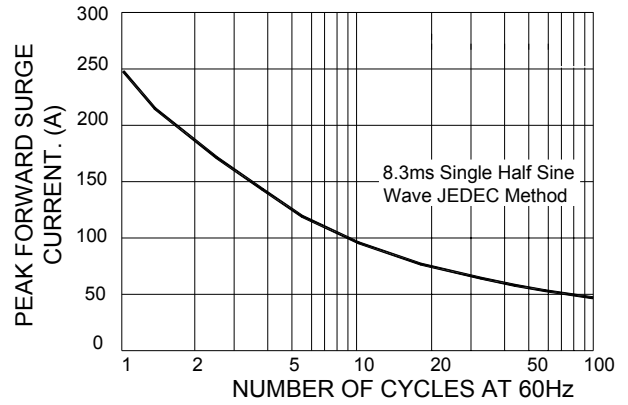


FIG.3- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

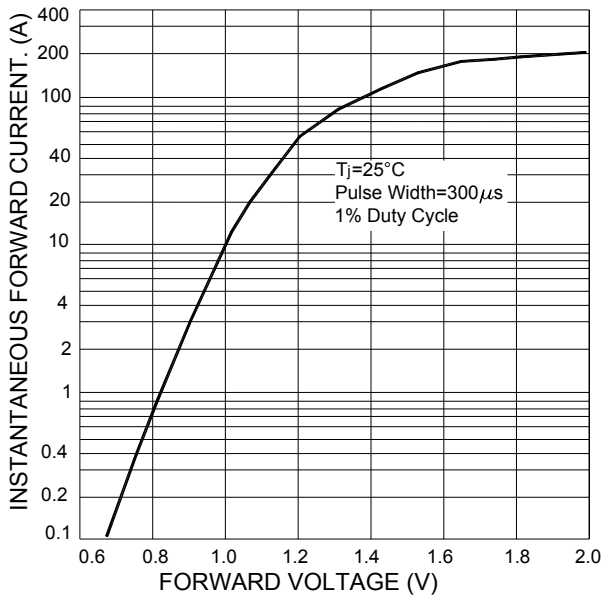


FIG.4- TYPICAL REVERSE CHARACTERISTICS

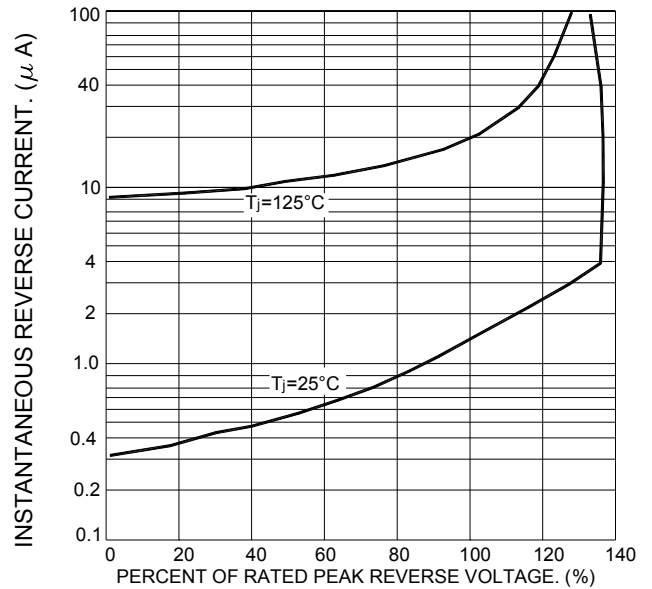
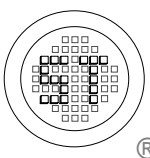
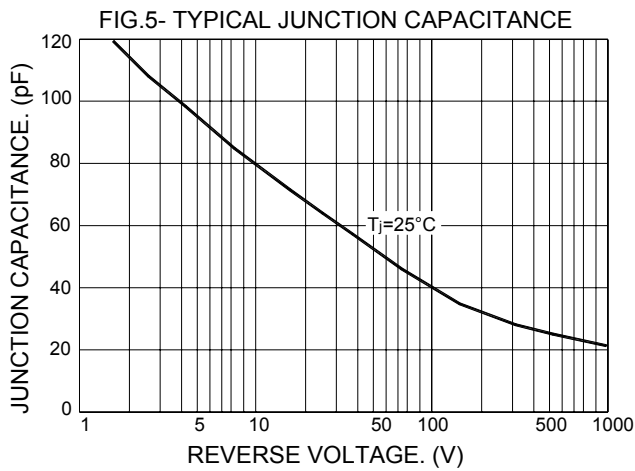
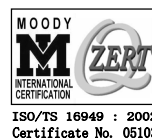


FIG.5- TYPICAL JUNCTION CAPACITANCE



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