

FR80X SERIES

GLASS PASSIVATED FAST RECOVERY RECTIFIER

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FR801 THRU FR807

GLASS PASSIVATED FAST RECOVERY RECTIFIER



康比電子
HORNBY ELECTRONIC

REVERSE VOLTAGE: 50 to 1000 VOLTS

FORWARD CURRENT: 8.0 AMPERE

FEATURES

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

MECHANICAL DATA

Case: Molded plastic, TO-220A

Epoxy: UL 94V-O rate flame retardant

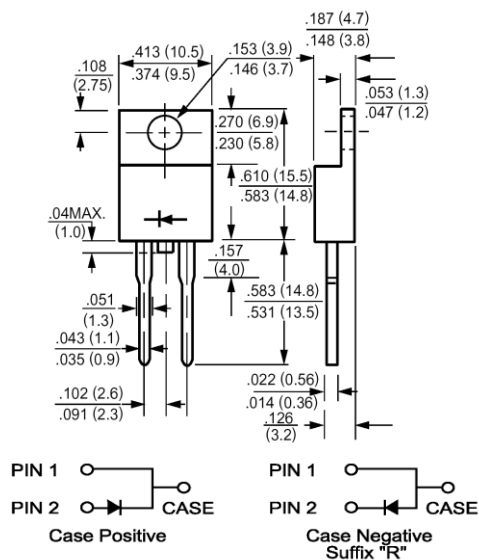
Terminals: Leads solderable per MIL-STD-202 method 208 guaranteed

Polarity: As marked

Mounting position: Any

Weight: 0.08ounce, 2.24gram

TO-220A



Maximum Ratings and Electrical Characteristics

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 | FR801 | FR802 | FR803 | FR804 | FR805 | FR806 | FR807 | 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 at T _C =100 | I _(AV) | 8.0 | | | | | | | Amp |
| Peak Forward Surge Current, 8.3ms single half-sine-wave superimposed on rated load (JEDEC method) | I _{FSM} | 150 | | | | | | | Amp |
| Maximum Forward Voltage at 8.0A DC and 25 | V _F | 1.3 | | | | | | | Volts |
| Maximum Reverse Current at T _C =25 at Rated DC Blocking Voltage T _C =125 | I _R | 5.0 100 | | | | | | | uAmp |
| Typical Junction Capacitance (Note 1) | C _J | 60 | | | | | | | pF |
| Typical Thermal Resistance (Note 2) | R _{θJC} | 3 | | | | | | | /W |
| Maximum Reverse Recovery Time (Note 3) | T _{RR} | 150 | | | | 250 | 500 | | nS |
| Operating and Storage Temperature Range | T _J , T _{stg} | -55 to +150 | | | | | | | |

NOTES:

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

2- Thermal Resistance from Junction to Case, Single Side Cooled.

3- Reverse Recovery Test Conditions : $I_F=.5A$, $I_R=1A$, $I_{RR}=.25A$.

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RATINGS AND CHARACTERISTIC CURVES

FIG.1- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

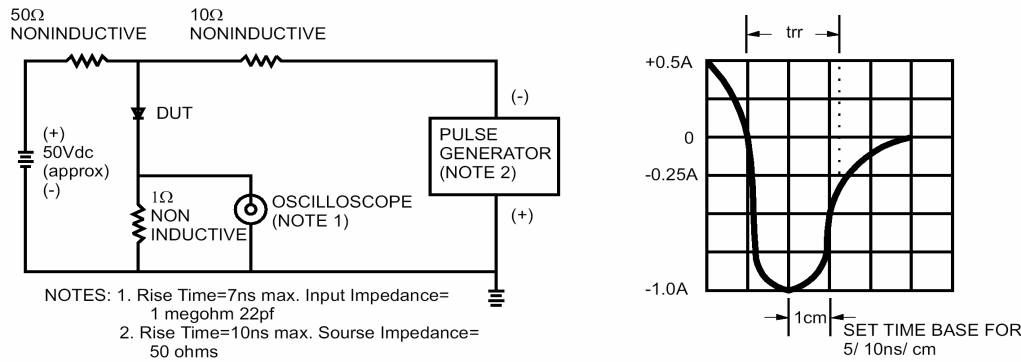


FIG.2- MAXIMUM FORWARD CURRENT DERATING CURVE

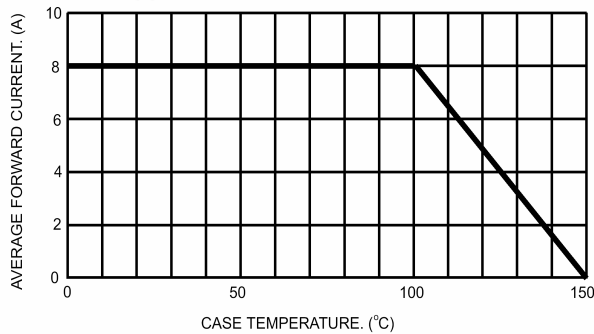


FIG.3- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

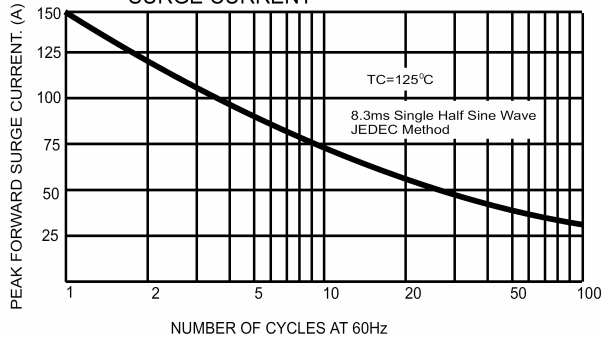


FIG.4- TYPICAL JUNCTION CAPACITANCE

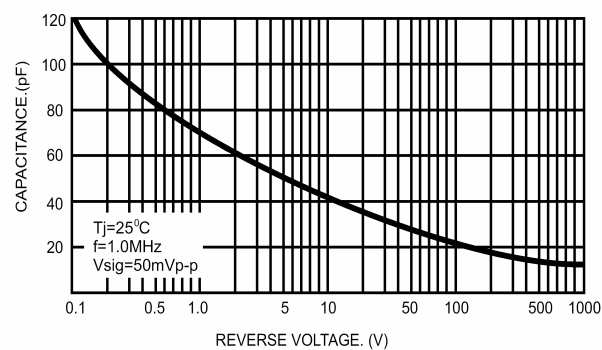


FIG.5- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

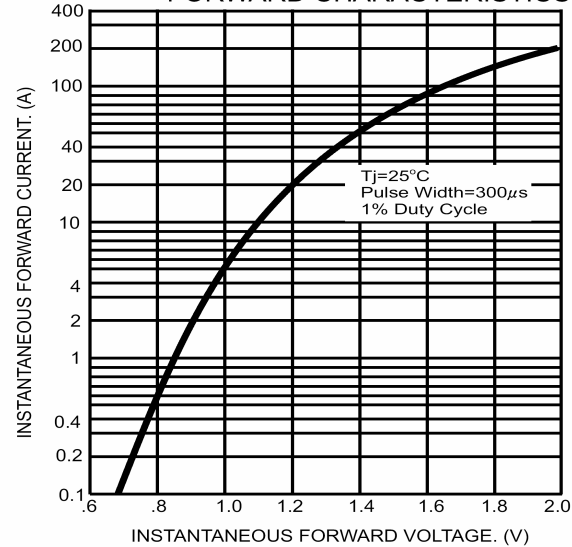


FIG.6- TYPICAL REVERSE CHARACTERISTICS

