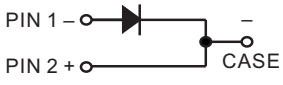
FR8A01 thru FR8A07

8.0A Fast Recovery Power Rectifiers - *50- 1000V*

Case Positive



Case Negative Suffix "R"

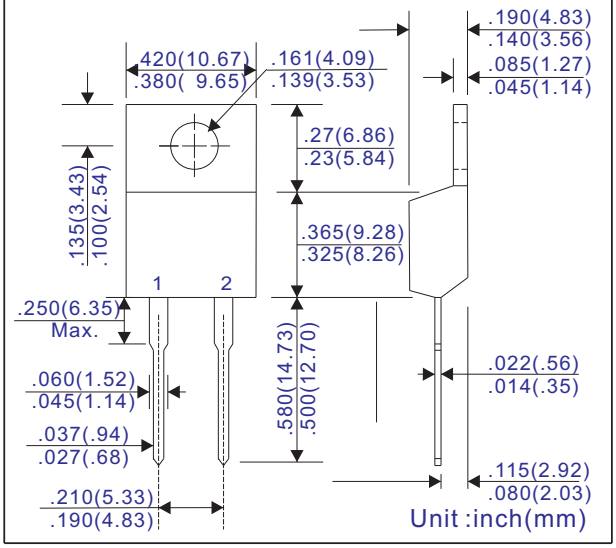
FEATURES

- Low forward drop down voltage
- Very Low reverse leakage current
- High current capability
- High reliability
- High surge current capability
- Glass passivated chip junction
- Lead free parts for green partner, meet RoHS requirements

MECHANICAL DATA

- Case: JEDEC TO-220AC molded plastic
- Epoxy: UL94-V0 rated flame retardant
- Terminals: Solderable per MIL-STD-750 Method 2026
- Polarity: As marked
- Mounting Position: Any
- Weight: 0.08 ounces, 2.24 grams
- Torque: 5 in. lbs. Max.

TO-220AC



MAXIMUM RATING AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified

FR-	Symbols	8A01	8A02	8A03	8A04	8A05	8A06	8A07	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 See Figure 1	$I_{(AV)}$	8.0							Amps
Peak Forward Surge Current 8.3mS single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	150.0							Amps
Maximum Instantaneous Forward Voltage at 8.0A	V_F	1.3							Volts
Maximum DC Reverse Current T_A= 25°C at Rated DC Blocking Voltage T_A=125°C	I_R	5.0 100.0							μA
Typical Reverse Recovery Time (Note 1)	Trr	150				250	500		nS
Typical Junction Capacitance (Note 2)	C_J	65							pF
Typical Thermal Resistance (Note 3)	$R_{\theta JC}$	2.2							°C/W
Operating Junction Temperature Range	TJ	-65 ~ +150							°C
Storage Temperature Range	TSTG	-65 ~ +150							°C

Note 1. Measured with I_F=0.5A, I_R=1A, I_{RR}=0.25A
2. Measured at 1.0MHz and applied reverse voltage of 4.0V_{DC}
3. Thermal resistance junction to case

Rating and Characteristic Curves

FR8A01 thru FR8A07

Fig.1 - Forward Current Derating Curve

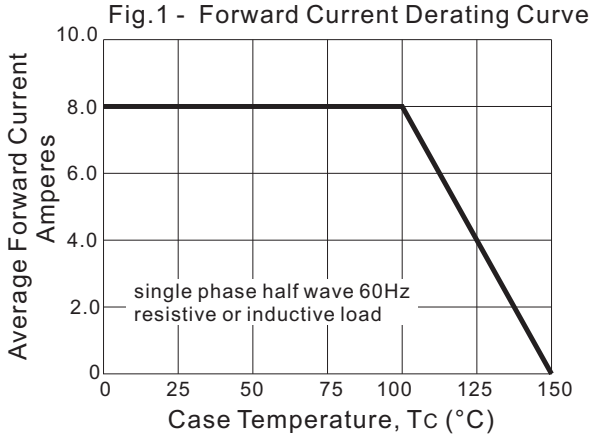


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

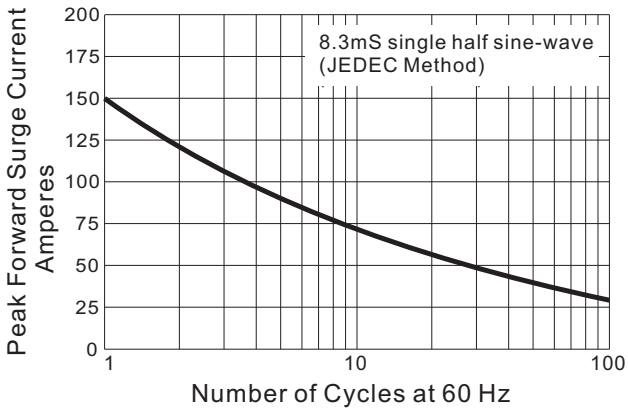


Fig. 3 - Typical Instantaneour Forward Characteristics

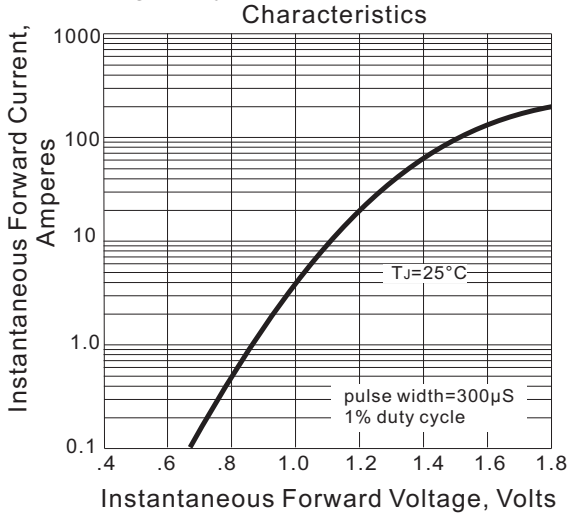


Fig. 4 - Typical Instantaneous Reverse Characteristics

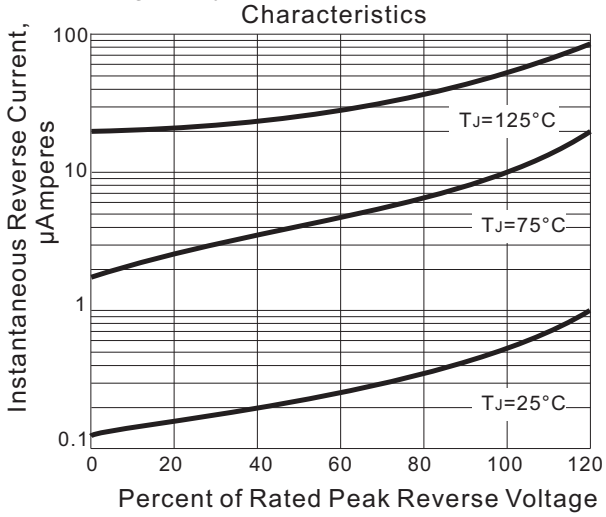


Fig. 5 - Typical Junction Capacitance

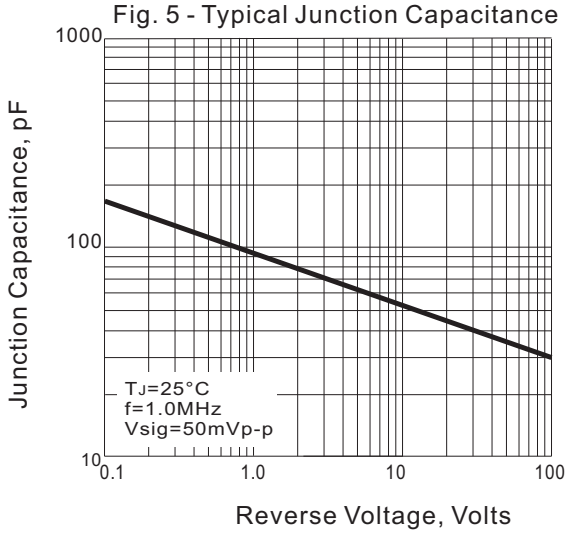
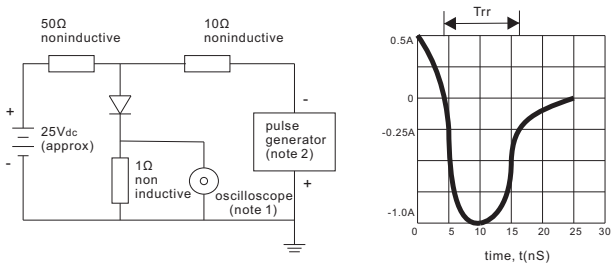


Fig. 6 - Test Circuit Diagram and Reverse Recovery Time Characteristic



Note: 1. rise time=7nS Max. input impedance=1MΩ, 22pF
2. rise time=10nS Max. source impedance=80Ω