



FAST RECOVERY RECTIFIER

FR201 - FR207

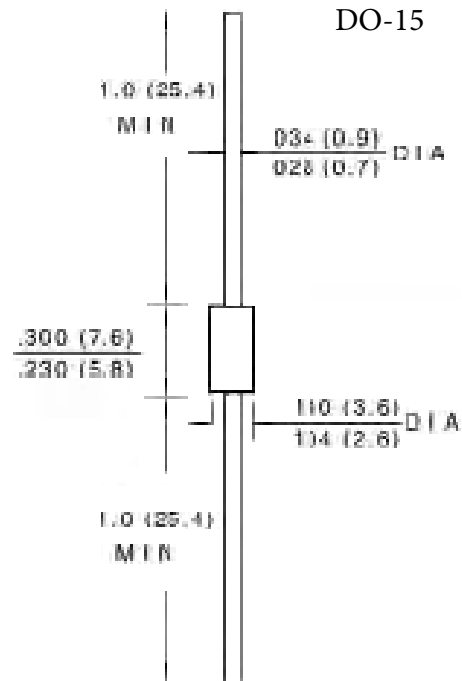
VOLTAGE RANGE - 50 to 1000 V
CURRENT - 2 A

FEATURES

- Low cost construction.
- Fast switching for high efficiency.
- Low reverse leakage
- High forward surge current capability.
- High temperature soldering guaranteed:
260/10 seconds, 0.375" (9.5mm) lead length at
5 lbs (2.3kg) tension.

MECHANICAL DATA

- Case: transfer molded plastic
- Epoxy: UL94V - 0 rate flame retardant.
- Polarity: Color band denotes cathode end.
- Lead: Plated axial lead, solderable per MIL - STD - 202E
method 208C
- Mounting position: Any
- Weight: 0.014 ounce, 0.39grams



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	FR201	FR202	FR203	FR204	FR205	FR206	FR207	UNIT
Maximum Repetitive 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 $T_A = 75^\circ\text{C}$	$I_{(AV)}$	2.0							Amps
Peak Forward Surge Current 8.3ms single half sine - wave superimposed on rated load (JEDEC method)	I_{FSM}	70							Amps
Maximum Instantaneous Forward Voltage at 2.0A	V_F	1.3							Volts
Maximum DC Reverse Current at rated DC blocking voltage	I_R	5.0 200							μA
Maximum Reverse Recovery Time (Note 3) $T_j = 25^\circ\text{C}$	t_{rr}	150				250	500		nS
Typical Junction Capacitance (Note 1)	C_j	25							pF
Typical Thermal Resistance (Note2)	$R_{\theta JA}$	40							$^\circ\text{C/W}$
Operating and Storage Temperature Range	T_j	(-55 to +150)							$^\circ\text{C}$
Storage Temperature Range	T_{STG}	(-55 to +150)							$^\circ\text{C}$

NOTES:

1. Measured at 1.0 MHz and applied reverse voltage of 4.0 Volts
2. Thermal Resistance from Junction to Ambient at 0.375" (9.5mm) lead length, PC board mounted
3. Reverse Recovery Test Condition: $I_F = 0.5\text{A}$, $I_R = 1.0\text{A}$, $I_{RR} = 0.25\text{A}$

RATINGS AND CHARACTERISTIC CURVES FR201 - FR207

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

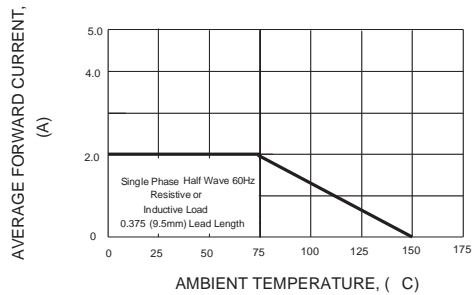


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

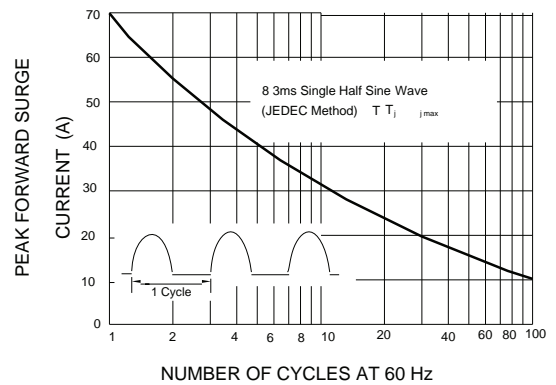


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

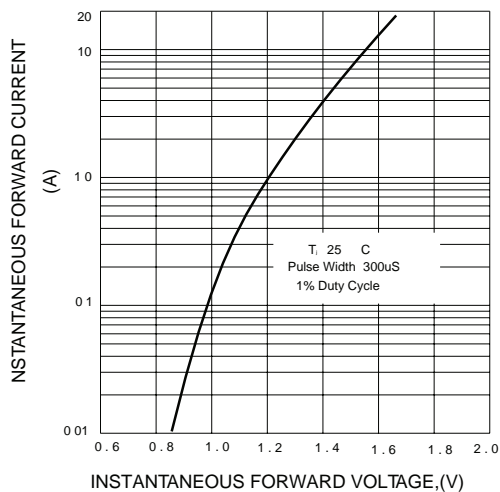


FIG.4-TYPICAL REVERSE CHARACTERISTICS

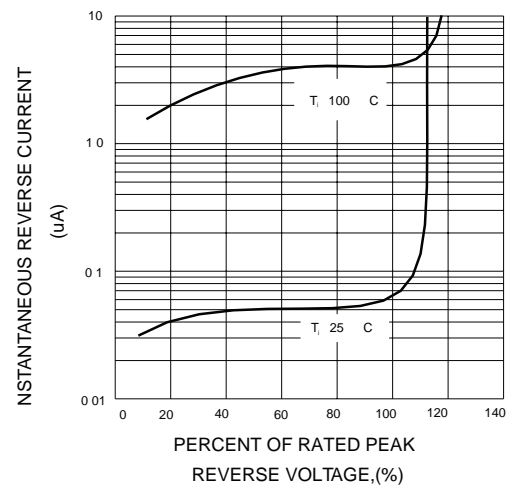


FIG.5-TYPICAL JUNCTION CAPACITANCE

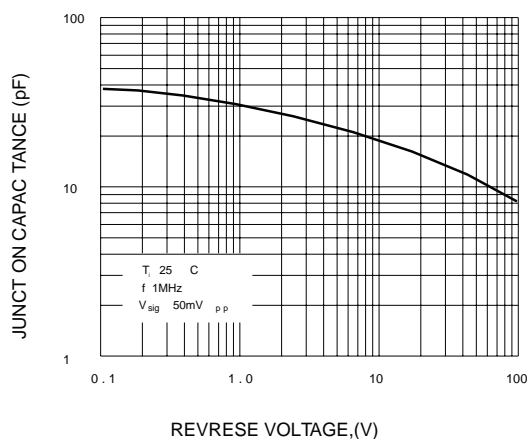
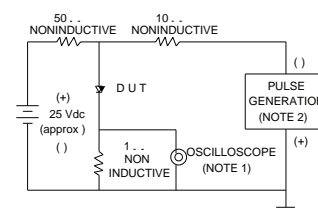


FIG.6-TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC



NOTES 1 Rise Time 7ns max Input Impedance 1 megohm 22pF
2 Rise time 10ns max Source Impedance 50 ohms

