



SUPER FAST RECOVERY RECTIFIER

SF161C THRU SF166C

VOLTAGE RANGE
CURRENT

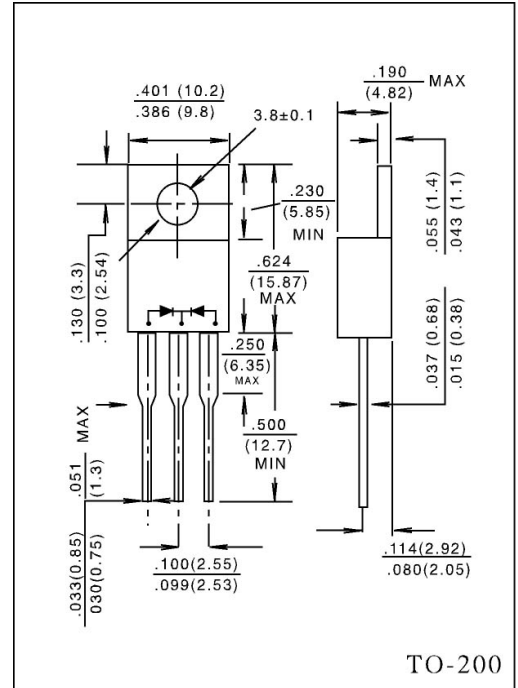
50 to 400 Volts
16 Ampere

FEATURES

- Glass passivated chip, junction.
- Super fast switching speed.
- Low leakage.
- High current capability.
- High surge capability
- High temperature soldering guaranteed:
250°C/10 seconds, 0.16" (4.06mm) lead length from case.

MECHANICAL DATA

- Case: Transfer molded plastic
- Epoxy: UL94V - 0 rate flame retardant.
- Polarity: As marked
- Lead: Plastic axial lead, solderable per MIL - STD - 202E method 208C
- Mounting torque : 5in. - lbs. max.
- Weight: 0.08 ounce, 2.24 gram



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	SF161C	SF162C	SF163C	SF164C	SF165C	SF166C	UNIT
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	50	10	150	200	300	400	Volts
Maximum RMS Voltage	V_{RMS}	35	70	105	140	210	280	Volts
Maximum DC Blocking Voltage	V_{DC}	50	100	150	200	300	400	Volts
Maximum Average Forward Rectified Current, at $T_C = 100^\circ C$	$I_{(AV)}$	16						Amps
Peak Forward Surge Current 8.3ms single half sine - wave superimposed on rated load (JEDEC method)	I_{FSM}	125						Amps
Maximum Instantaneous Forward Voltage at 8.0A	V_F	0.975			1.30			Volts
Maximum DC Reverse Current at rated DC blocking voltage per element	$T_A = 25^\circ C$	10						μA
	$T_C = 100^\circ C$	500						
Maximum Reverse Recovery Time (Note 1)	t_{rr}	35			50			nS
Typical Junction Capacitance (Note 2)	C_j	50			30			pF
Typical Thermal Resistance (Note 3)	$R_{\theta JA}$	3.0						$^\circ C/W$
Operating and Storage Temperature Range	T_J, T_{STG}	(-65 to +150)						$^\circ C$

NOTES:

1. Test condition: $I_F = 0.5A, I_R = 1.0A, I_{RR} = 0.25A$.
2. Measured at 1MHz and applied reverse voltage of 4.0 volts.
3. Unit mounted on heatsink.
4. Suffix "A" = Common Anode, "C" = Common Cathode, "D" = Double Connection.

RATINGS AND CHARACTERISTIC CURVES SF161C THRU SF166C

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

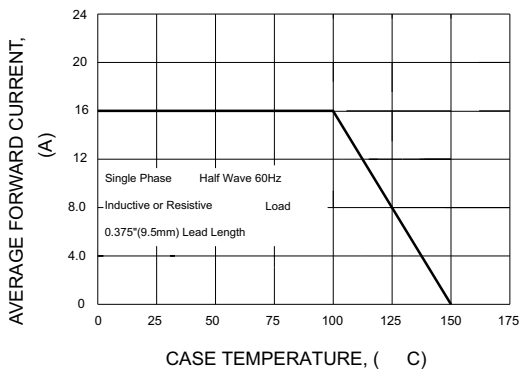


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

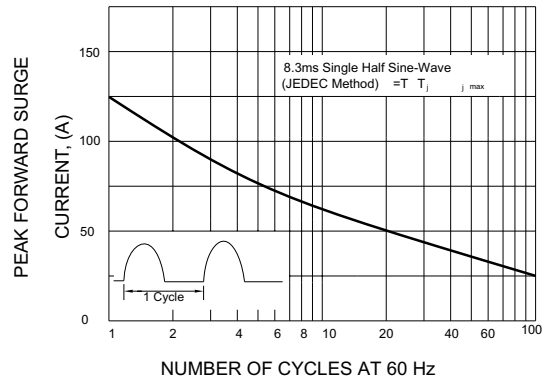


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS PER LEG

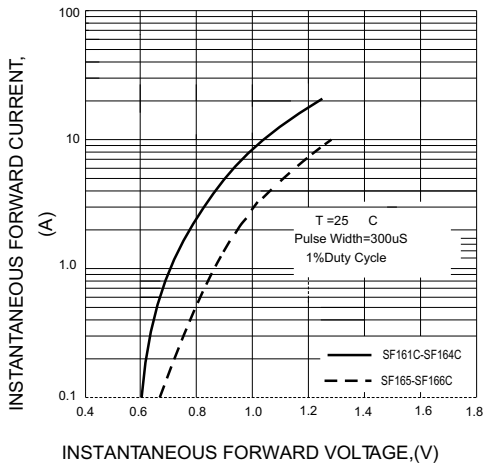


FIG.4-TYPICAL REVERSE CHARACTERISTICS PER LEG

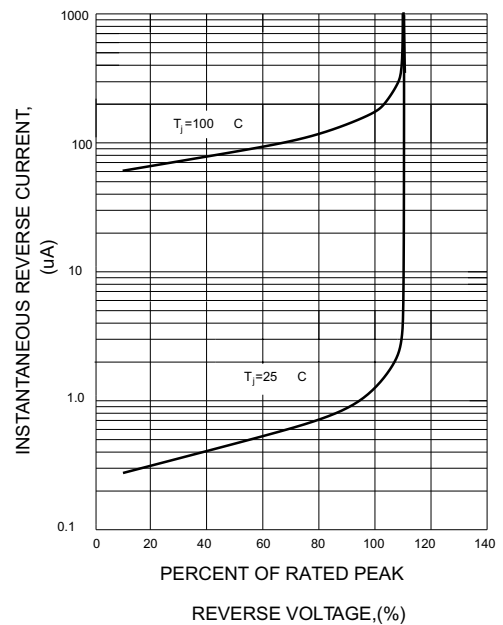


FIG.5-TYPICAL JUNCTION CAPACITANCE PER LEG

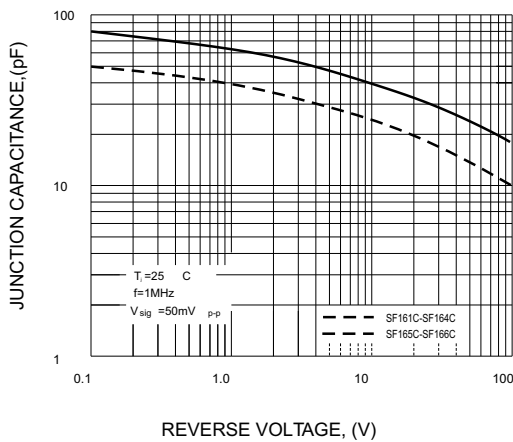
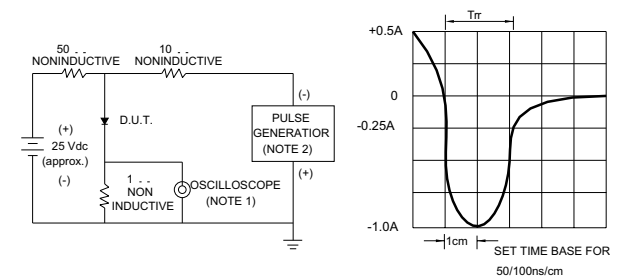


FIG.6-TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC



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