DC COMPONENTS CO., LTD.

RECTIFIER SPECIALISTS

SF161 THRU SF168

TECHNICAL SPECIFICATIONS OF ISOLATION SUPER FAST RECTIFIER

VOLTAGE RANGE - 50 to 600 Volts *CURRENT - 16 Amperes*

FEATURES

* Low switching noise
* Low forward voltage drop
* High current capability
* Super fast switching speed
* High reliability
* Good for switching mode circuit

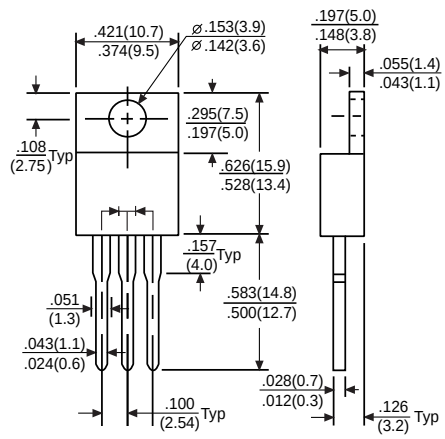
MECHANICAL DATA

* Case: Molded plastic
* Epoxy: UL 94V-0 rate flame retardant
* Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
* Mounting position: Any
* Weight: 2.24 grams

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%.

TO-220



Dimensions in inches and (millimeters)

		SYMBOL	SF161F	SF162F	SF163F	SF164F	SF165F	SF166F	SF168F	UNITS
Maximum Recurrent Peak Reverse Voltage		V_{RRM}	50	100	150	200	300	400	600	Volts
Maximum RMS Voltage		V_{RMS}	35	70	105	140	210	280	420	Volts
Maximum DC Blocking Voltage		V_{DC}	50	100	150	200	300	400	600	Volts
Maximum Average Forward Rectified Current at T_C =100°C		I_O	16							Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC Method)		I_{FSM}	150							Amps
Maximum Instantaneous Forward Voltage at 16A DC		V_F	0.975				1.35		1.70	Volts
Maximum DC Reverse Current	@T_C = 25°C	I_R	10							µAmps
at Rated DC Blocking Voltage	@T_C = 100°C		500							µAmps
Maximum Reverse Recovery Time (Note 1)		trr	35				50			nSec
Typical Junction Capacitance (Note 2)		C_J	120				70			pF
Operating and Storage Temperature Range		T_J , T_{STG}	-55 to +150							°C

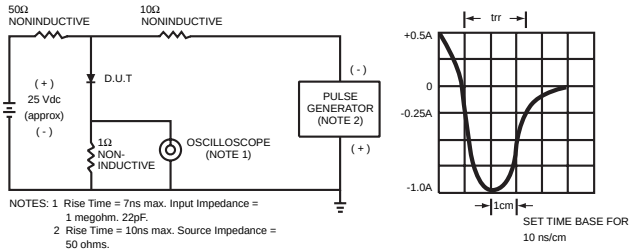
NOTES: 1. Test Conditions: I_F = 0.5A, I_R = 1.0A, I_{RR} = 0.25A

2. Measured at 1 MHz and applied reverse voltage of 4.0 volts.

3. Suffix "A" = Common Anode.

RATING AND CHARACTERISTIC CURVES (SF161 THRU SF168)

FIG. 1 - 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.

FIG. 2 - TYPICAL FORWARD CURRENT DERATING CURVE

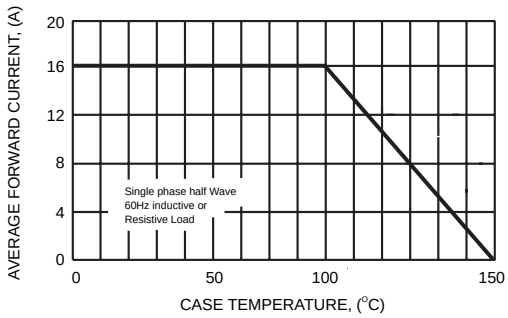


FIG. 3 - TYPICAL REVERSECHARACTERISTICS

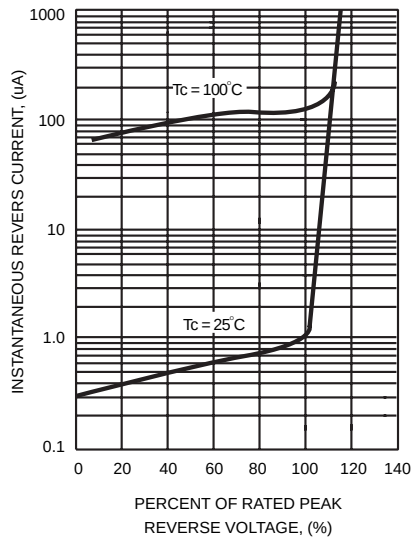


FIG. 4 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

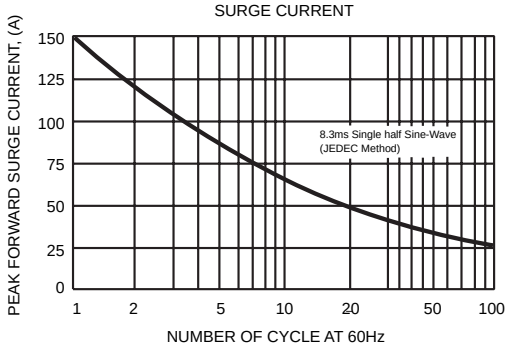


FIG. 5 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

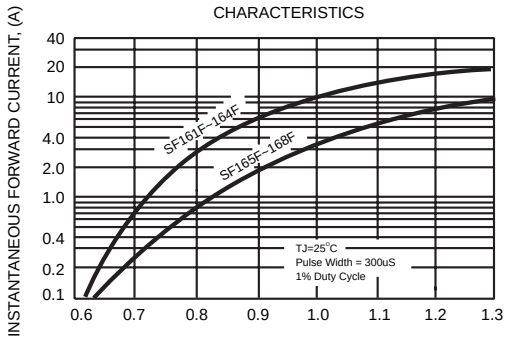
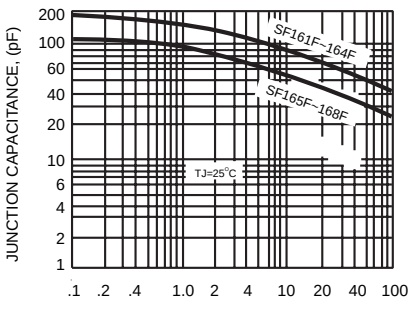


FIG. 6 - TYPICAL JUNCTION CAPACITANCE



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