

***SF16XCT SERIES***

***GLASS PASSIVATED SUPER FAST RECTIFIER***

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# SF161CT THRU SF168CT

## GLASS PASSIVATED SUPER FAST RECTIFIER



康比電子  
HORNBY ELECTRONIC

**REVERSE VOLTAGE:** 50 to 800 VOLTS  
**FORWARD CURRENT:** 16.0 AMPERE

### FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-O utilizing Flame Retardant Epoxy Molding Compound.
- Superfast switching time for high efficiency
- Low forward voltage drop and high current capability
- High surge capacity.
- Low reverse leakage current

### MECHANICAL DATA

Case: Molded plastic, TO-220

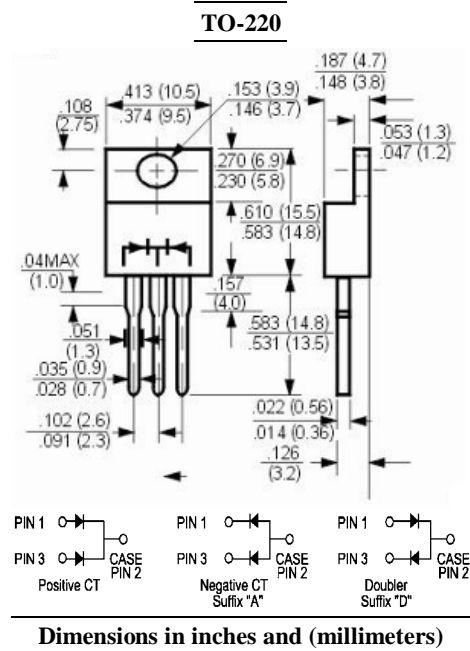
Epoxy: UL 94V-O rate flame retardant

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

Polarity: As marked

Mounting position: Any

Weight: 0.08ounce, 2.24gram



### 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	SF161CT	SF162CT	SF163CT	SF164CT	SF165CT	SF166CT	SF167CT	SF168CT	Units	
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	50	100	150	200	300	400	500	600	Volts	
Maximum RMS Voltage	$V_{RMS}$	35	70	105	140	210	280	350	420	Volts	
Maximum DC Blocking Voltage	$V_{DC}$	50	100	150	200	300	400	500	600	Volts	
Maximum Average Forward Rectified Current at $T_C=100^\circ\text{C}$	$I_{(AV)}$	16.0								Amp	
Peak Forward Surge Current, 8.3ms single half-sine-wave superimposed on rated load (JEDEC method)	$I_{FSM}$	125								Amp	
Maximum Forward Voltage at 8.0A and $T_A=25^\circ\text{C}$	$V_F$	0.95				1.3		1.7		Volts	
Maximum Reverse Current at $T_A=25^\circ\text{C}$ at Rated DC Blocking Voltage $T_A=100^\circ\text{C}$	$I_R$	10.0				100					uAmp
Typical Junction Capacitance (Note 1)	$C_J$	80				60				pF	
Maximum Reverse Recovery Time (Note 2)	$T_{RR}$	35				50				nS	
Typical Thermal Resistance (Note 3)	$R_{\theta JC}$	2.5								$^\circ\text{C}/\text{W}$	
Operating and Storage Temperature Range	$T_J, T_{stg}$	-55 to +150								$^\circ\text{C}$	

### NOTES:

- 1- Measured at 1 MHz and applied reverse voltage of 4.0 VDC.
- 2- Reverse Recovery Test Conditions:  $I_F=0.5\text{A}$ ,  $I_R=1\text{A}$ ,  $I_{RR}=0.25\text{A}$ .
- 3- Thermal Resistance from Junction to Case Per Leg Mounted on Heatsink.

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## GLASS PASSIVATED SUPER FAST RECTIFIER

### RATINGS AND CHARACTERISTIC CURVES

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

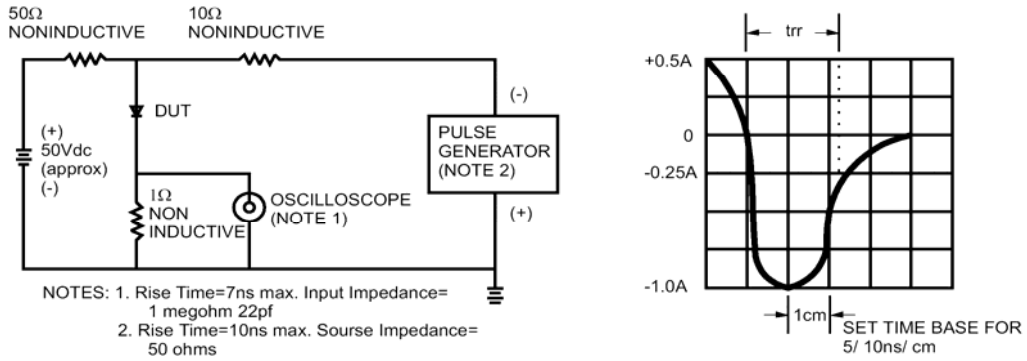


FIG.2- MAXIMUM FORWARD CURRENT DERATING CURVE

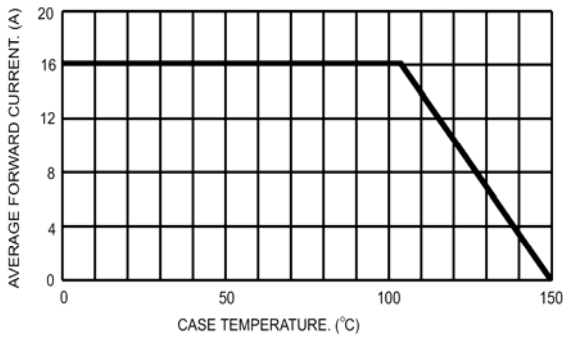


FIG.3- TYPICAL REVERSE CHARACTERISTICS

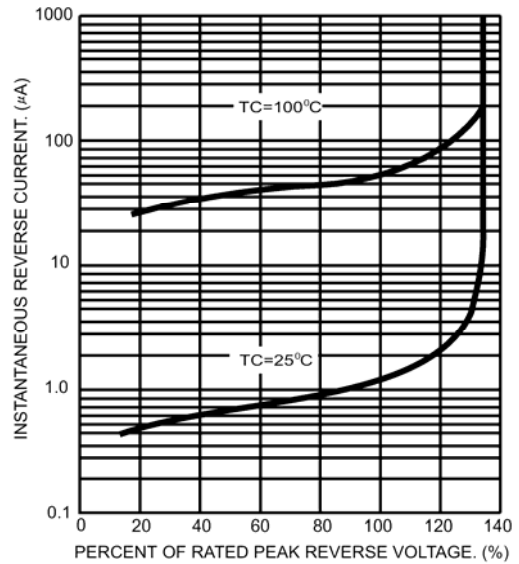


FIG.4- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER LEG

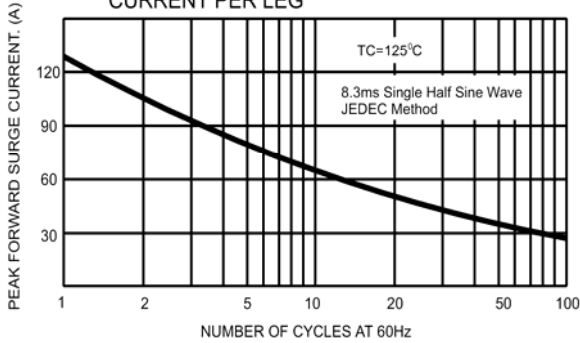


FIG.6- TYPICAL FORWARD CHARACTERISTICS PER LEG

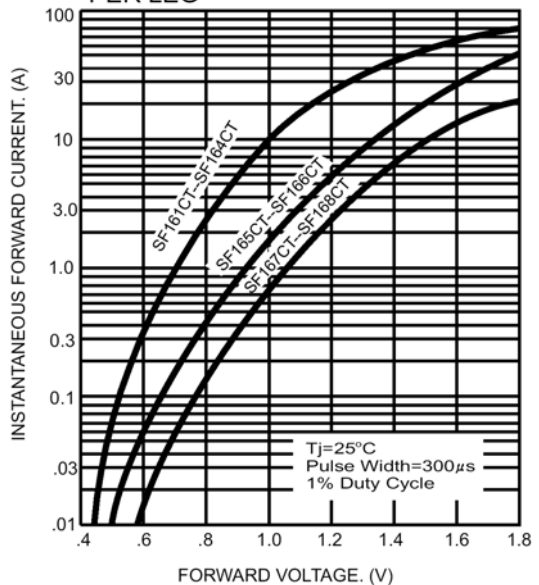


FIG.5- TYPICAL JUNCTION CAPACITANCE PER LEG

