



# SF1010CT THRU SF1060CT

Reverse Voltage - 100 to 600 Volts Forward Current - 10.0 Ampere

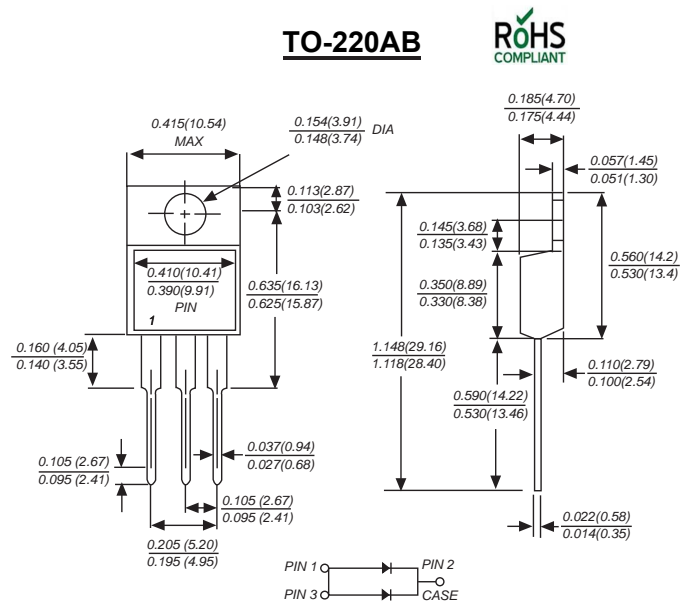
## ULTRAFAST RECOVERY RECTIFIER

### Features

- ◆ The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- ◆ Construction utilizes void-free molded plastic technique
- ◆ Low reverse leakage
- ◆ High forward surge current capability
- ◆ High temperature soldering guaranteed: 250°C, 0.25" (6.35mm) from case for 10 seconds

### Mechanical Data

**Case** : JEDEC TO-220AB Molded plastic body  
**Terminals** : Solder plated, solderable per MIL-STD-750, Method 2026  
**Polarity** : As marked  
**Mounting Position** : Any  
**Weight** : 0.080 ounce, 2.24 grams



Dimensions in inches and (millimeters)

### 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 current derate by 20%.

Parameter	SYMBOLS	SF1010CT	SF1020CT	SF1040CT	SF1040CT	SF050CT	SF1060CT	UNITS
		MDD	MDD	MDD	MDD	MDD	MDD	
Marking Code		SF1010CT	SF1020CT	SF1040CT	SF1040CT	SF1050CT	SF1060CT	
Maximum repetitive peak reverse voltage	$V_{RRM}$	100	200	300	400	500	600	V
Maximum RMS voltage	$V_{RMS}$	70	140	210	280	350	420	V
Maximum DC blocking voltage	$V_{DC}$	100	200	300	400	500	600	V
Maximum average forward rectified current (see fig.1)	$I_{AV}$	10.0						A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	$I_{FSM}$	90						A
Maximum instantaneous forward voltage at 5.0A	$V_F$	1.0	1.3	1.7				V
Maximum DC reverse current at rated DC blocking voltage	$I_R$	10						uA
		500						
Typical junction capacitance (NOTE 1)	$C_J$	170				130		pF
Typical thermal resistance (NOTE 2)	$R_{\theta JC}$	3.5						°C/W
Maximum Reverse Recovery time (NOTE 3)	$T_{rr}$	35						nS
storage temperature range	$T_{JSTG}$	-50 to +150						°C

**Note:** 1. Measured at 1MHz and applied reverse voltage of 4.0V D.C.

2. Thermal resistance from junction to case.

3. Reverse Recovery Test Conditions:  $I_F=0.5A$ ,  $I_R=1A$ ,  $I_{rr}=0.25A$ .



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## Ratings And Characteristic Curves

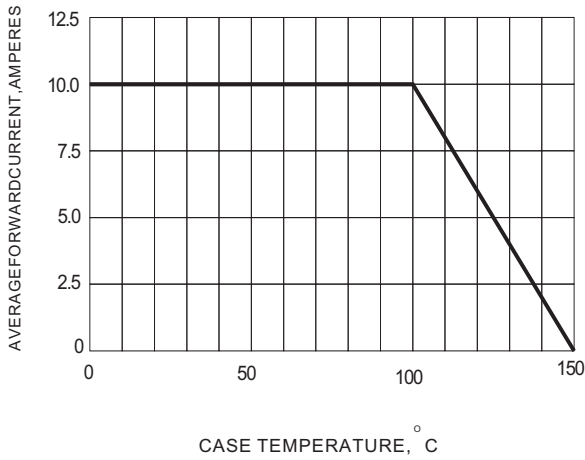


Fig.1 FORWARD CURRENT DERATING CURVE

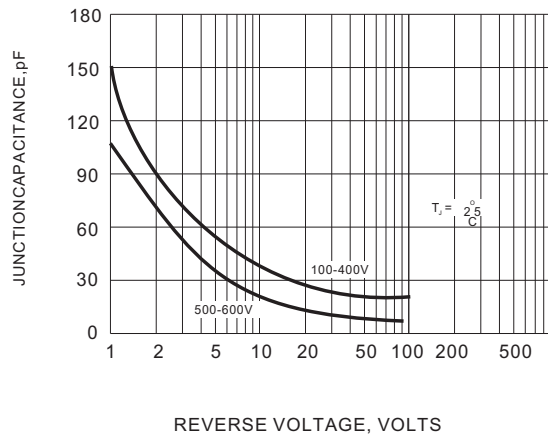


Fig.2 TYPICAL JUNCTION CAPACITANCES

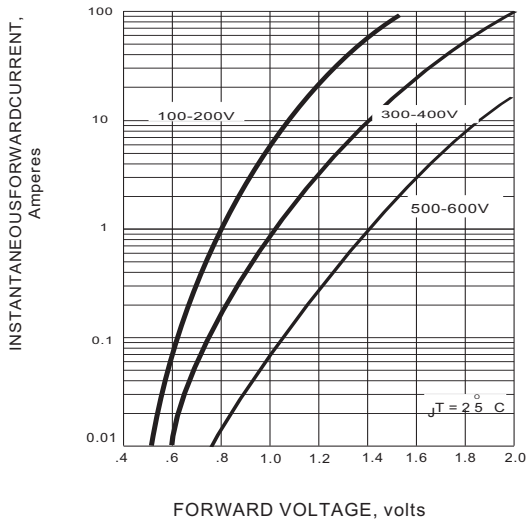


Fig.3 FORWARD CHARACTERISTICS

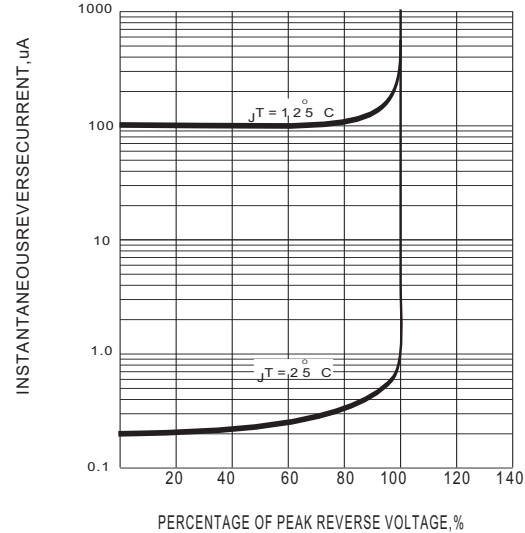


Fig.4 TYPICAL REVERSE CHARACTERISTICS

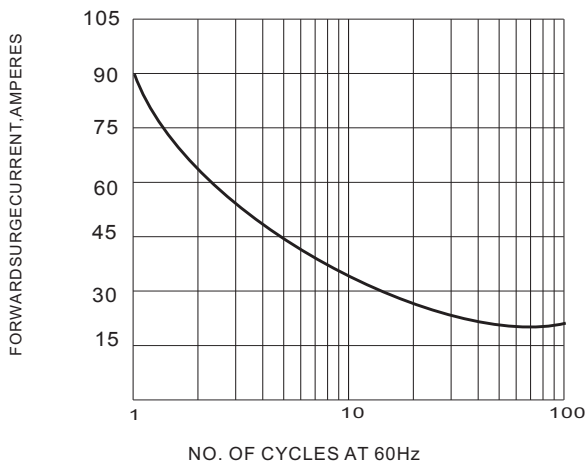


Fig.5 PEAK FORWARD SURGE CURRENT