



SF1010CT THRU SF1060CT

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

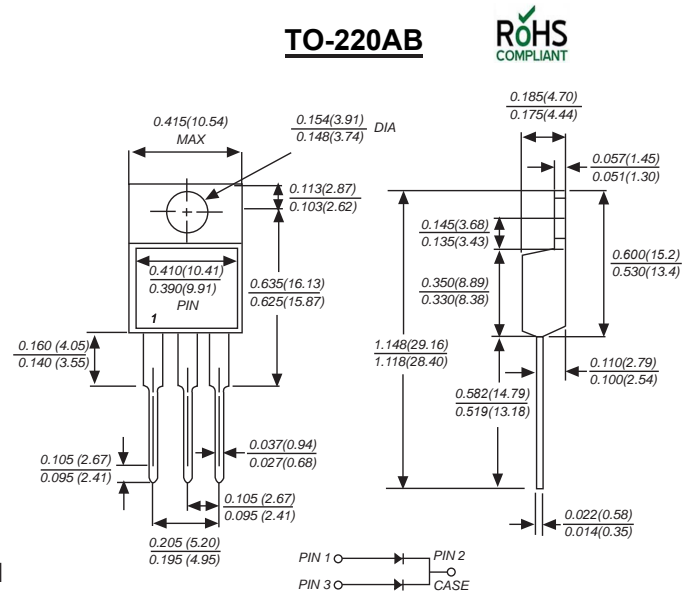
ULTRAFAST RECOVERY RECTIFIER

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	MDD SF1010CT	MDD SF1020CT	MDD SF1030CT	MDD SF1040CT	MDD SF1050CT	MDD SF1060CT	UNITS
Marking Code								
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 $T_A=25^\circ C$ $T_A=100^\circ C$	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_{JTSTG}	-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

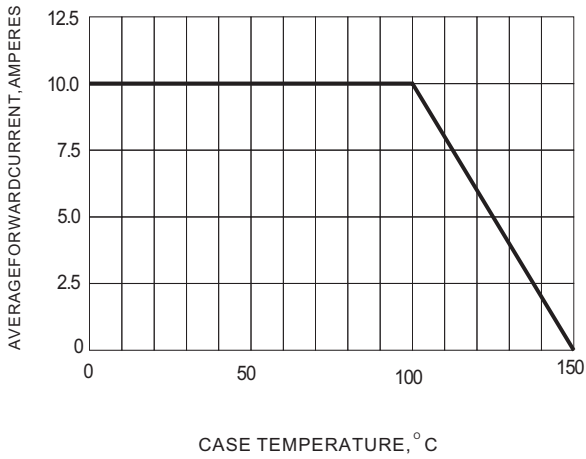


Fig.2 TYPICAL JUNCTION CAPACITANCES

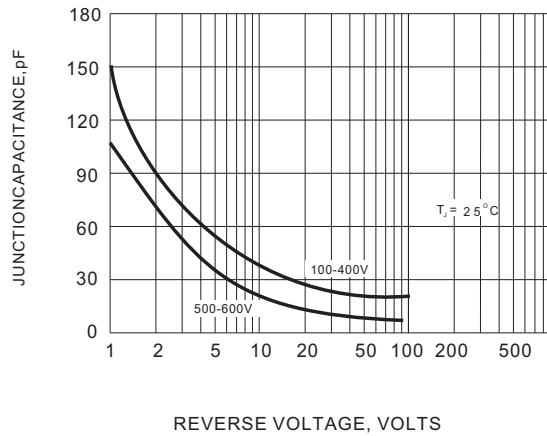


Fig.3 FORWARD CHARACTERISTICS

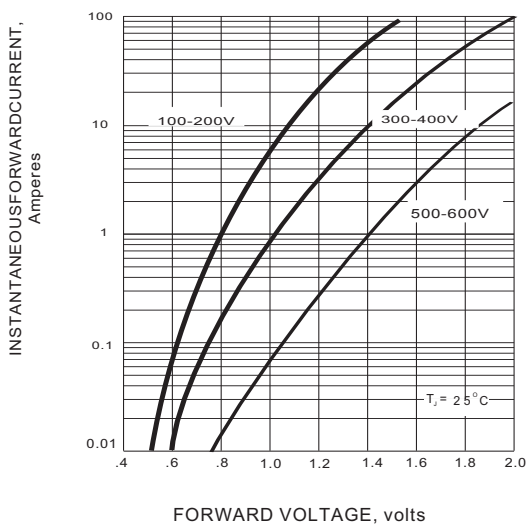


Fig.4 TYPICAL REVERSE CHARACTERISTICS

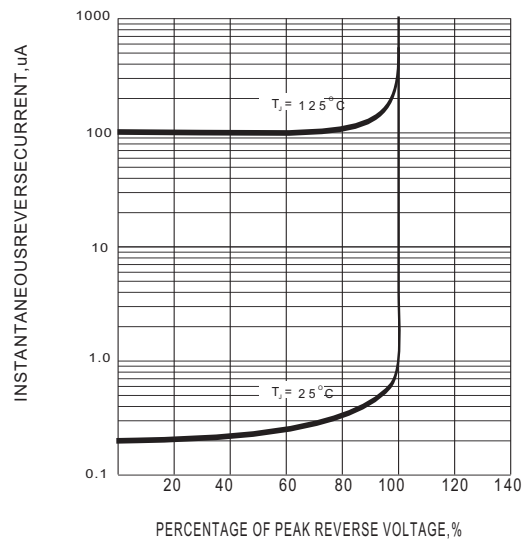


Fig.5 PEAK FORWARD SURGE CURRENT

