

# SF1040CT

## Ultra fast Plastic Power Rectifiers

VOLTAGE: 400V

CURRENT:10.0A

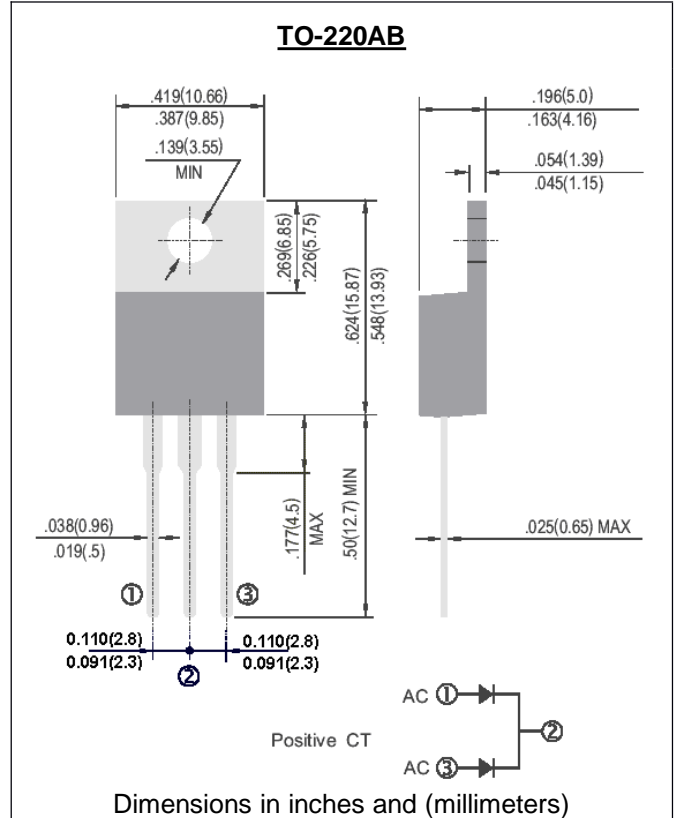


### FEATURE

Plastic package has Underwriters Laboratories Flammability Classification 94V-0  
Ideally suited for use in very high frequency switching power supplies, inverters and as free wheeling diodes  
Ultra fast recovery time for high efficiency  
Excellent high temperature switching  
Glass passivated junction  
High voltage and high reliability  
High speed switching  
Low forward voltage

### MECHANICAL DATA

Case: JEDEC TO-220 molded plastic body over passivated chip  
Terminals: Plated axial leads, solderable per MIL-STD-750, Method 2026  
Polarity: Color band denotes cathode end  
Mounting Position: Any



### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

(single-phase, half-wave, 60HZ, resistive or inductive load rating at 25°C, unless otherwise stated)

	SYMBOL	SF1040CT	units
Maximum Recurrent Peak Reverse Voltage	V <sub>rrm</sub>	400	V
Maximum RMS Voltage	V <sub>rms</sub>	280	V
Maximum DC blocking Voltage	V <sub>dc</sub>	400	V
Maximum Average Forward Rectified at T <sub>c</sub> =100°C	I <sub>f(av)</sub>	10.0	A
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load	I <sub>fsm</sub>	60	A
Maximum Forward Voltage at Forward Current 5.0A and 25°C (Note 1)	V <sub>f</sub>	1.3	V
Maximum Reverse Recovery Time (Note 2)	T <sub>rr</sub>	35	nS
Typical thermal resistance junction to case	R <sub>th(jc)</sub>	4.5	°C/W
Maximum DC Reverse Current Ta =25°C at rated DC blocking voltage Ta =100°C	I <sub>r</sub>	10 200	μA μA
Storage and Operating Temperature Range	T <sub>stg</sub> , T <sub>j</sub>	-55 to +150	°C

Note:

1. Pulse test: 300μs pulse width, 1% duty cycle
2. Reverse Recovery Condition I<sub>f</sub> =0.5A, I<sub>r</sub> =1.0A, I<sub>rr</sub> =0.25A

## RATINGS AND CHARACTERISTIC CURVES SF1040CT

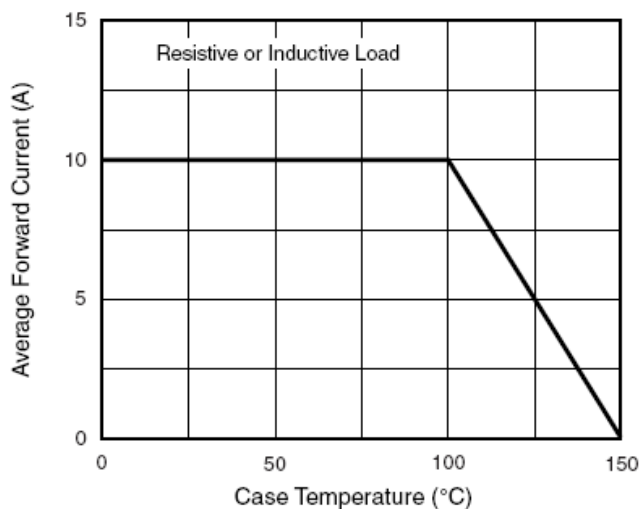


Figure 1. Forward Current Derating Curve

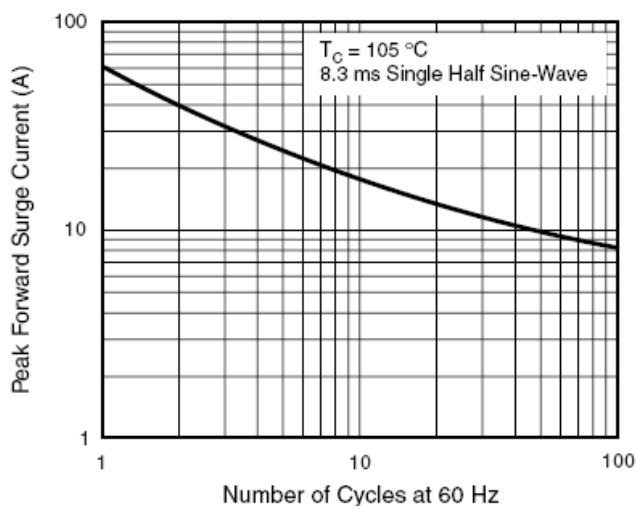


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current Per Diode

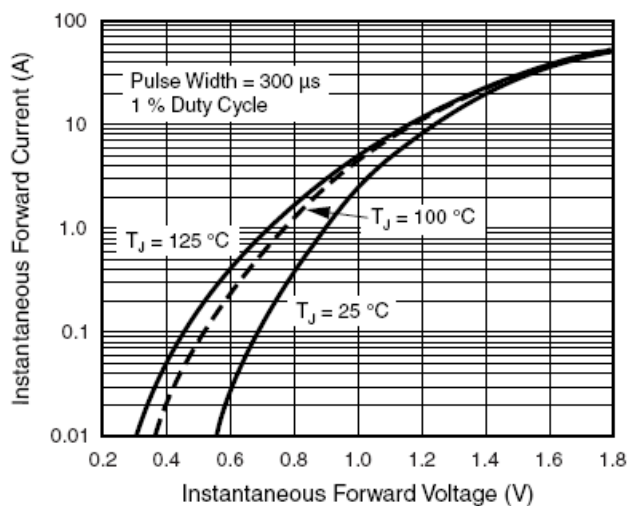


Figure 3. Typical Instantaneous Forward Characteristics Per Diode

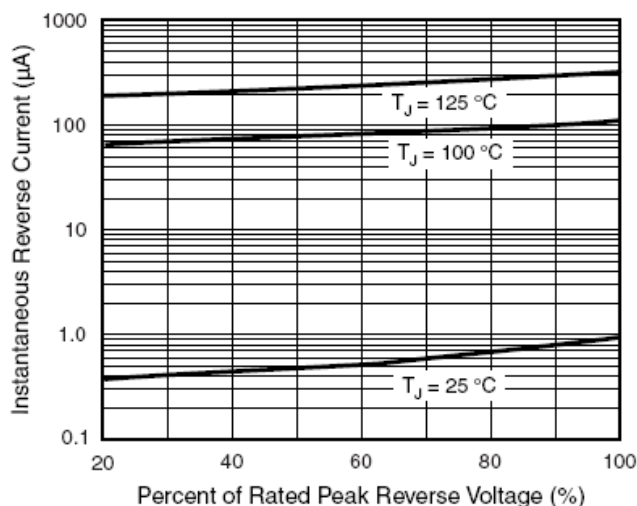


Figure 4. Typical Reverse Characteristics Per Diode

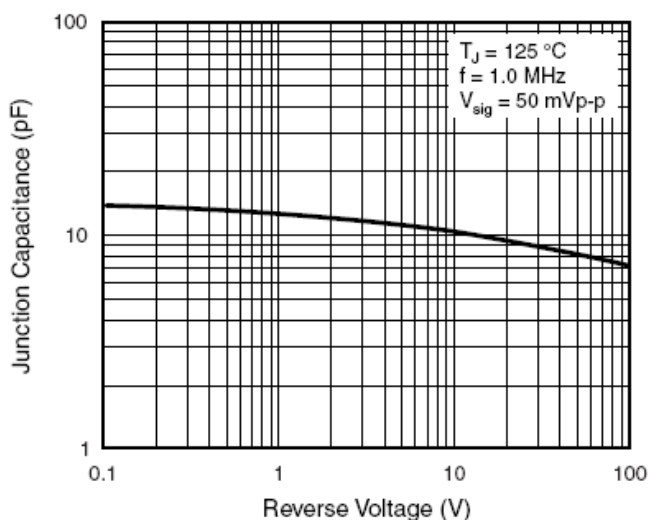


Figure 5. Typical Junction Capacitance Per Diode