

**Ultra fast Rectifier**
**SF1020CT**
**FEATURES**

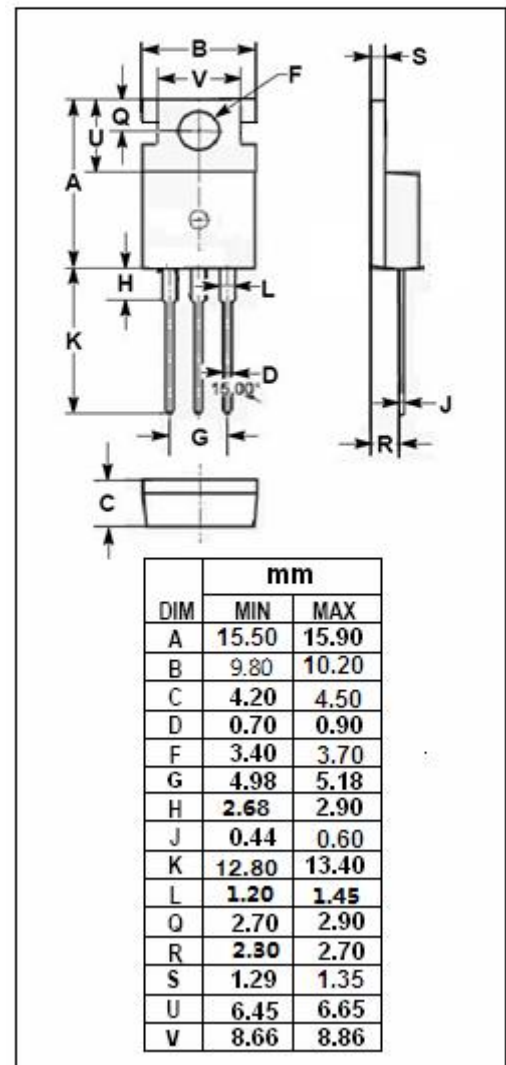
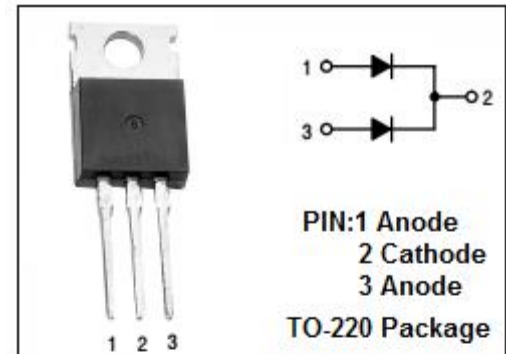
- Ultrafast with soft recovery
- 150°C Operating temperature
- Popular TO-220 package
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

**APPLICATIONS**

- Switching power supply
- Power switching circuits
- General purpose

**ABSOLUTE MAXIMUM RATINGS(T<sub>a</sub>=25°C)**

SYMBOL	PARAMETER	VALUE	UNIT
V <sub>RRM</sub>	Peak Repetitive Reverse Voltage	200	V
V <sub>RWM</sub>	Working Peak Reverse Voltage	140	
V <sub>R</sub>	DC Blocking Voltage	200	
I <sub>F(AV)</sub>	Average Rectified Forward Current T <sub>c</sub> =75°C	10	A
I <sub>FSM</sub>	Nonrepetitive Peak Surge Current (Surge applied at rated load conditions half-wave, single phase, 60Hz)	100	A
T <sub>J</sub>	Junction Temperature	-55~150	°C
T <sub>stg</sub>	Storage Temperature Range	-65~175	°C



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**THERMAL CHARACTERISTICS**

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	2.5	$^{\circ}C/W$

**ELECTRICAL CHARACTERISTICS ( $T_a=25^{\circ}C$ ) (Pulse Test: Pulse Width=300  $\mu$  s, Duty Cycle  $\leq$  2%)**

SYMBOL	PARAMETER	CONDITIONS	MAX	UNIT
$V_{F^*}$	Maximum Instantaneous Forward Voltage	$I_F=5A; T_j=25^{\circ}C$	0.98	V
$I_{R^*}$	Maximum Instantaneous Reverse Current	$V_R=V_{RWM}; T_j=25^{\circ}C$ $V_R=V_{RWM}; T_j=125^{\circ}C$	5 250	$\mu$ A
$t_{rr}$	Maximum Reverse Recovery Time	$I_F=0.5A; I_R=1A; I_{RR}=0.25A$	35	ns

\*:Pulse test ,Pulse width=300us,duty cycle $\leq$ 2%

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