

## Ultra fast Rectifier

## SFF2004G

### FEATURES

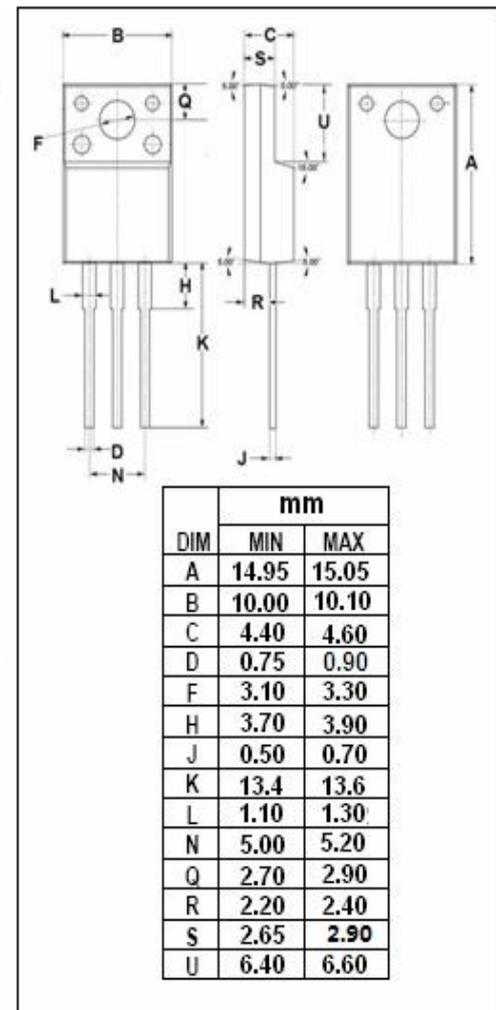
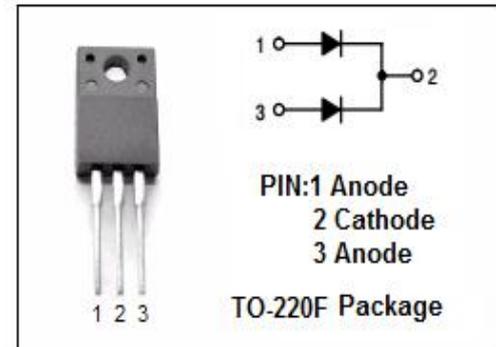
- With TO-220F packaging
- High junction temperature capability
- Low forward voltage, high current capability
- High current capability
- Low power loss, high efficiency
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

### APPLICATIONS

- Switching power supply
- Free-Wheeling diodes
- Reverse battery protection
- Center tap configuration

### ABSOLUTE MAXIMUM RATINGS( $T_a=25^\circ\text{C}$ )

SYMBOL	PARAMETER	VALUE	UNIT
$V_{RRM}$ $V_{RMS}$ $V_R$	Peak Repetitive Reverse Voltage RMS Voltage DC Blocking Voltage	200	V
$I_{F(AV)}$	Average Rectified Forward Current @ $T_c=105^\circ\text{C}$	20	A
$I_{FSM}$	Nonrepetitive Peak Surge Current (10ms single half sine-wave superimposed on rated load conditions)	180	A
$T_J$	Junction Temperature	-65~150	$^\circ\text{C}$
$T_{stg}$	Storage Temperature Range	-65~150	$^\circ\text{C}$



**Ultra fast Rectifier****SFF2004G****THERMAL CHARACTERISTICS**

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

**ELECTRICAL CHARACTERISTICS** (Pulse Test: Pulse Width=300  $\mu$  s, Duty Cycle $\leq$ 1%)

SYMBOL	PARAMETER	CONDITIONS	MAX	UNIT
$V_F$	Maximum Instantaneous Forward Voltage	$I_F=10A; T_c=25^{\circ}C$	0.975	V
$I_R$	Maximum Instantaneous Reverse Current	$V_R=$ rated $V_{RRM}; T_c=25^{\circ}C$ $V_R=$ rated $V_{RRM}; T_c=100^{\circ}C$	10 400	$\mu$ A
$t_{rr}$	Maximum Reverse Recovery Time	$I_F=0.5A; I_{RR}=0.25A; I_{rec}=1.0A$	35	ns

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