

**Ultra fast Rectifier**
**RURP8100**
**FEATURES**

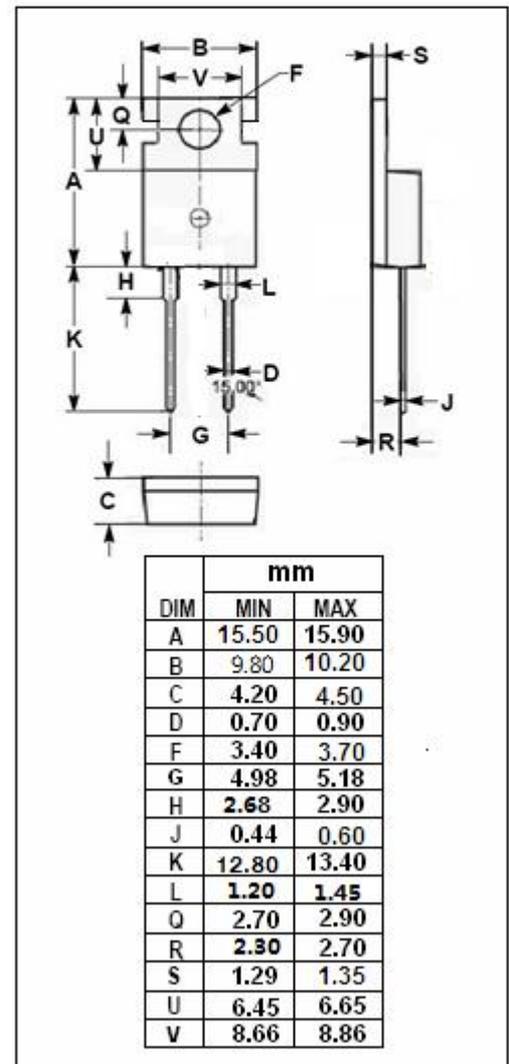
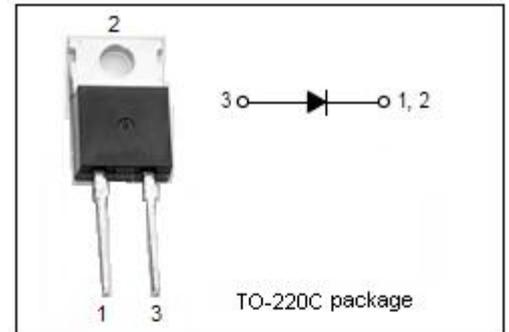
- With TO-220 packaging
- High current capability
- High reliability
- High surge current capability
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

**APPLICATIONS**

- Switching power supply
- Power switching circuits
- General purpose

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

SYMBOL	PARAMETER	VALUE	UNIT
VRRM	Peak Repetitive Reverse Voltage	1000	V
VRWM	Working Peak Reverse Voltage	1000	
VR	DC Blocking Voltage $t_w=500ns; duty=1/40$	1000	
IF(AV)	Average Rectified Forward Current @T <sub>c</sub> =100°C	8	A
I <sub>FRM</sub>	Peak Repetitive Forward Current (Rated V <sub>R</sub> , Square Wave, 20kHz)	16	A
IFSM	Nonrepetitive Peak Surge Current 8.3ms single half sine-wave superimposed on rated load conditions; One shot	100	A
P <sub>D</sub>	Maximum Power Dissipation	75	W
T <sub>J</sub>	Junction Temperature	-55~175	°C
T <sub>stg</sub>	Storage Temperature Range	-55~175	°C



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**THERMAL CHARACTERISTICS**

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	2	°C/W

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

SYMBOL	PARAMETER	CONDITIONS	MAX	UNIT
$V_F$	Maximum Instantaneous Forward Voltage	$I_F=8\text{A}$ $I_F=8\text{A}; T_j=150^\circ\text{C}$	1.8 1.5	V
$I_R$	Maximum Instantaneous Reverse Current	$V_R=V_{RWM};$ $V_R=V_{RWM}; T_j=150^\circ\text{C}$	100 500	$\mu$ A
$t_{rr}$	Maximum Reverse Recovery Time	$I_F=8\text{A}; di_F/dt=200\text{A}/\mu\text{s}$	100	ns

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