

Ultra fast Rectifier

RURP8100

FEATURES

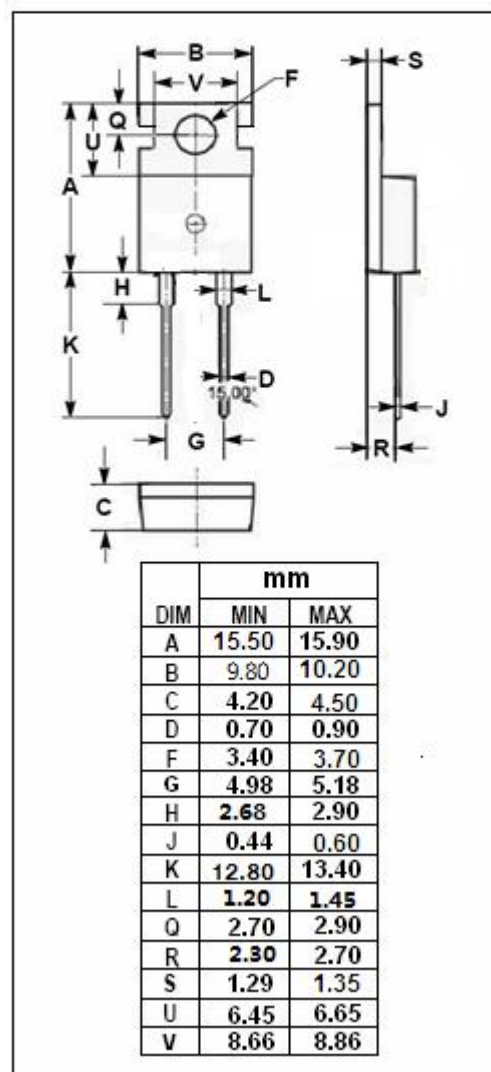
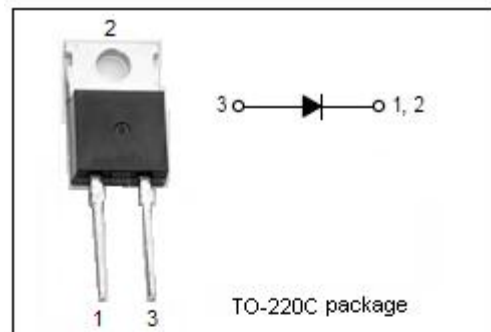
- With TO-220 packaging
- High current capability
- High reliability
- High surge current capability
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

- Switching power supply
- Power switching circuits
- General purpose

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

SYMBOL	PARAMETER	VALUE	UNIT
VRRM VRWM VR	Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage $t_w=500\text{ns}; \text{duty}=1/40$	1000 1000 1000	V
IF(AV)	Average Rectified Forward Current @ $T_c=100^{\circ}\text{C}$	8	A
I_{FRM}	Peak Repetitive Forward Current (Rated V_R , 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_D	Maximum Power Dissipation	75	W
T_J	Junction Temperature	-55~175	$^{\circ}\text{C}$
T_{stg}	Storage Temperature Range	-55~175	$^{\circ}\text{C}$



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THERMAL CHARACTERISTICS

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

ELECTRICAL CHARACTERISTICS ($T_a=25^{\circ}\text{C}$) (Pulse Test: Pulse Width=300 μ 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	μ 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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