

**Ultra fast Rectifier**
**MUR8120**
**FEATURES**

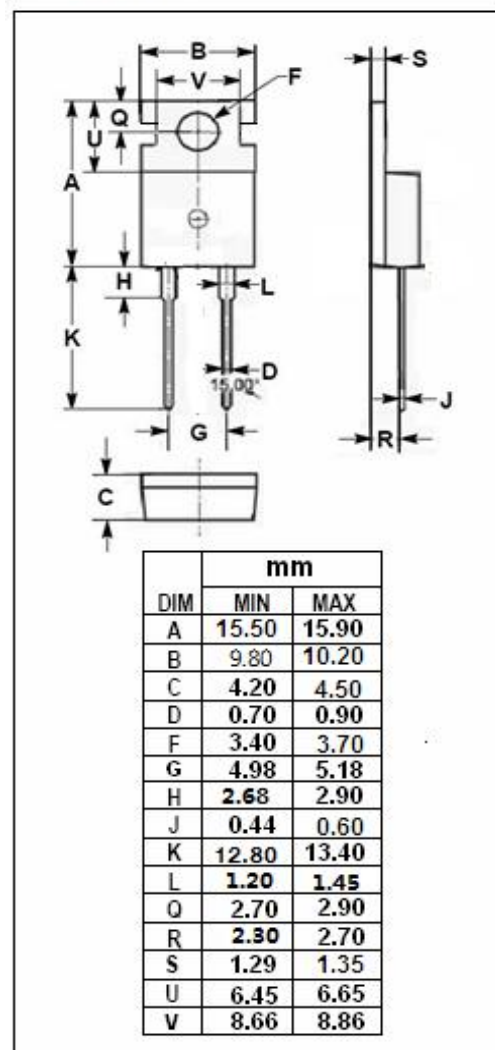
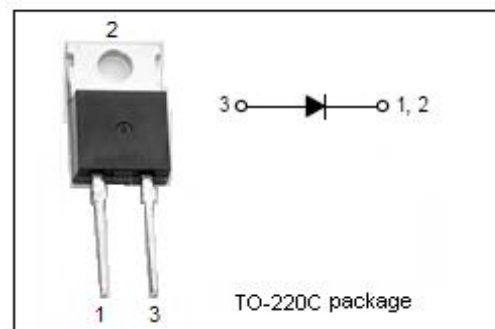
- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Fast switching for high efficiency
- Low forward voltage drop
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

**APPLICATIONS**

- Freewheeling, Snubber, Clamp
- Inversion Welder
- PFC
- Plating Power Supply
- Ultrasonic Cleaner and Welder
- Converter & Chopper
- UPS

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

SYMBOL	PARAMETER	VALUE	UNIT
V <sub>RRM</sub> V <sub>RWM</sub> V <sub>R</sub>	Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	1200	V
I <sub>F(AV)</sub>	Average Rectified Forward Current T <sub>c</sub> =110°C	8	A
I <sub>F(RSM)</sub>	RMS Forward Current T <sub>c</sub> =110°C	15	A
I <sub>FSM</sub>	Nonrepetitive Peak Surge Current T <sub>j</sub> =45°C; t=10ms;50HZ;sine	100	A
T <sub>J</sub>	Junction Temperature	-40~150	°C
T <sub>stg</sub>	Storage Temperature Range	-40~150	°C



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## THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{thj-c}$	Thermal Resistance, Junction to Case	1.8	°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	$I_F=10\text{A}; T_j=25^{\circ}\text{C}$ $I_F=10\text{A}; T_j=125^{\circ}\text{C}$	2.4 1.85	V
$I_R$	Maximum Instantaneous Reverse Current	$V_R=1200\text{V}; T_j=25^{\circ}\text{C}$ $V_R=1200\text{V}; T_j=125^{\circ}\text{C}$	100 500	$\mu$ A
$t_{rr}$	Maximum Reverse Recovery Time	$I_F=1\text{A}; V_R=30\text{V}; diF/dt=200\text{A}/\mu\text{s}$	22	ns

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