

# Ultrafast Rectifier

# BY239-800

**FEATURES**

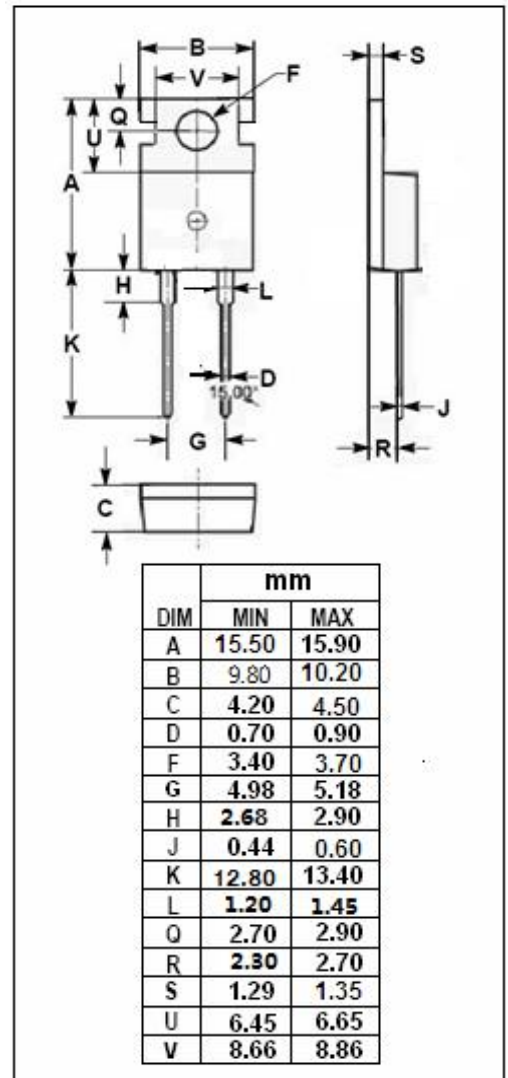
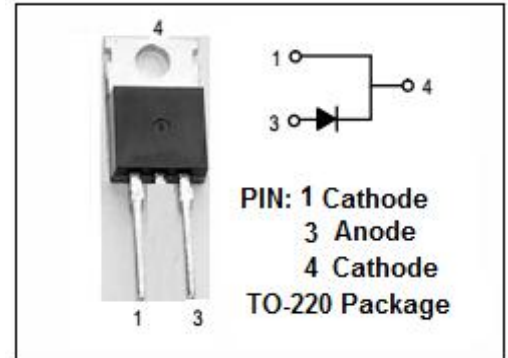
- High surge current capability
- Popular TO-220 package
- Low forward voltage drop
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

**APPLICATIONS**

- Switching power supply
- Power switching circuits
- General purpose

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

SYMBOL	PARAMETER	VALUE	UNIT
V <sub>R</sub> RM V <sub>R</sub> WM V <sub>R</sub>	Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	800	V
I <sub>F</sub> (AV)	Average Rectified Forward Current @T <sub>c</sub> =100°C	10	A
I <sub>FRM</sub>	Surge non repetitive forward current t <sub>p</sub> =10ms sinusoidal	140	A
P <sub>tot</sub>	Power dissipation @T <sub>c</sub> =100°C	12.5	W
T <sub>J</sub>	Junction Temperature	-40~125	°C
T <sub>stg</sub>	Storage Temperature Range	-40~125	°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  $\mu$  s, Duty Cycle  $\leq$  2%)

SYMBOL	PARAMETER	CONDITIONS	MAX	UNIT
$V_F$	Maximum Instantaneous Forward Voltage	$I_F=30\text{A}; T_j=25^{\circ}\text{C}$	1.45	V
$I_R$	Maximum Instantaneous Reverse Current	$V_R=V_{RWM}; T_j=150^{\circ}\text{C}$	500	$\mu$ A

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