

Schottky Barrier Rectifier

STPS30M60ST

FEATURES

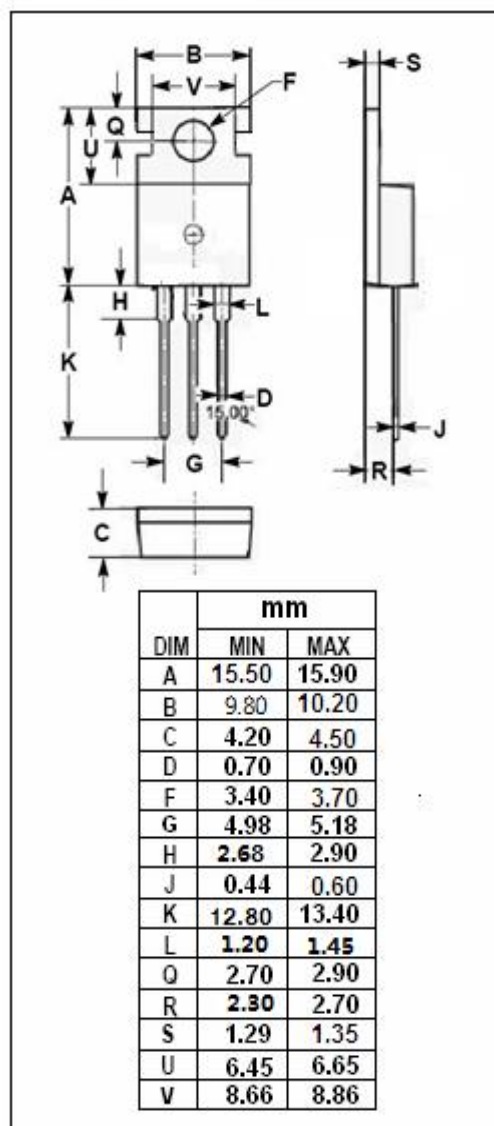
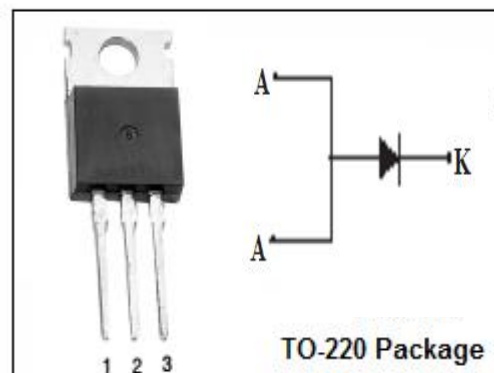
- With TO-220 packaging
- Low leakage current, low power loss, high efficiency
- High frequency operation
- High current capability
- Low stored charge majority carrier conduction
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

- Switching power supply
- High frequency inverters
- Freewheeling diodes
- Reverse battery protection
- Polarity protection applications

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{RRM} V_{RWM} V_R	Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	100	V
$I_{F(AV)}$	Average Rectified Forward Current @ $T_c=125^{\circ}\text{C}$	30	A
$I_{F(RMS)}$	RMS Forward Current	60	A
I_{FSM}	Nonrepetitive Peak Surge Current (Surge applied at rated load conditions half-wave, single phase, 60Hz)	300	A
T_J	Junction Temperature	-65~150	$^{\circ}\text{C}$
T_{stg}	Storage Temperature Range	-65~175	$^{\circ}\text{C}$



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THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	1	°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	$I_F=15\text{A}; T_j=25^\circ\text{C}$ $I_F=15\text{A}; T_j=125^\circ\text{C}$ $I_F=30\text{A}; T_j=25^\circ\text{C}$ $I_F=30\text{A}; T_j=125^\circ\text{C}$	0.66 0.56 0.80 0.65	V
I_R^*	Maximum Instantaneous Reverse Current	$V_R=V_{RWM};$ $V_R=V_{RWM}; T_j=25^\circ\text{C}$	0.175 50	mA

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