

Schottky Barrier Rectifier

STPS30150CW

FEATURES

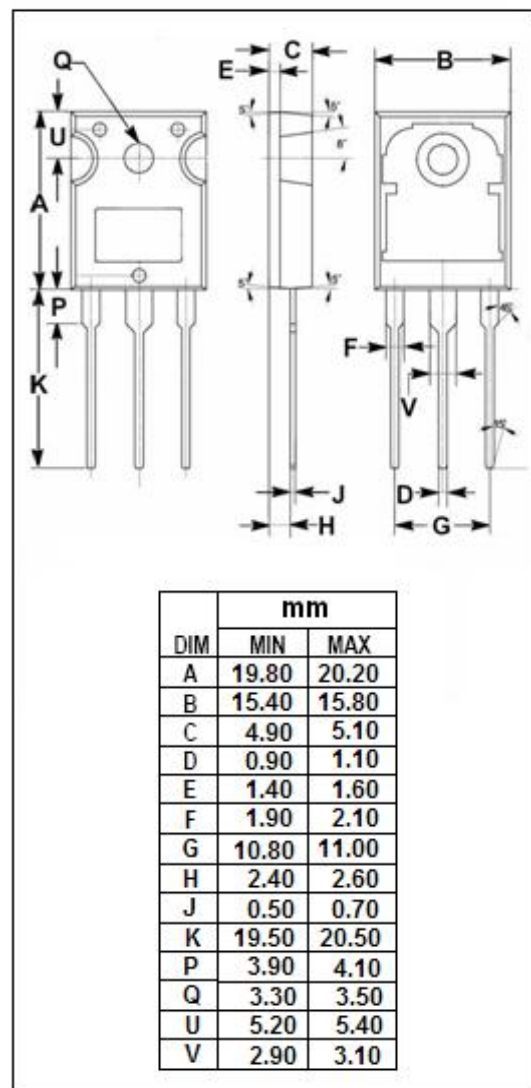
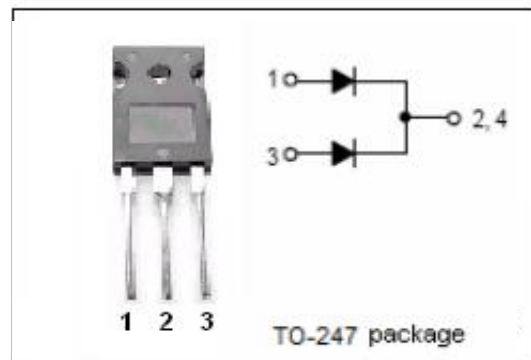
- With TO-247 packaging
- High Junction Temperature Capability
- Low forward voltage, high current capability
- High current capability
- Low power loss, high efficiency
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

- Switching power supply
- Free-Wheeling diodes
- Reverse battery protection
- Center tap configuration

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{RRM} V_{RMS} V_R	Peak Repetitive Reverse Voltage RMS Voltage DC Blocking Voltage	150	V
$I_{F(AV)}$	Average Rectified Forward Current @ $T_c=110^{\circ}\text{C}$	15	A
I_{FSM}	RMS Forward Current	30	A
I_{FSM}	Nonrepetitive Peak Surge Current (10ms single half sine-wave superimposed on rated load conditions)	220	A
T_J	Junction Temperature	-55~150	$^{\circ}\text{C}$
T_{stg}	Storage Temperature Range	-55~175	$^{\circ}\text{C}$



Schottky Barrier Rectifier**STPS30150CW****THERMAL CHARACTERISTICS**

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	1.5	°C/W

ELECTRICAL CHARACTERISTICS (Pulse Test: Pulse Width=300 μ s, Duty Cycle \leq 1%)

SYMBOL	PARAMETER	CONDITIONS	MAX	UNIT
V_F	Maximum Instantaneous Forward Voltage	$I_F = 15A ; T_C = 25^\circ C$ $I_F = 15A ; T_C = 125^\circ C$ $I_F = 30A ; T_C = 25^\circ C$ $I_F = 30A ; T_C = 125^\circ C$	0.92 0.75 1.00 0.86	V
I_R	Maximum Instantaneous Reverse Current	$V_R = \text{rated } V_{RRM}; T_j = 25^\circ C$ $V_R = \text{rated } V_{RRM}; T_j = 125^\circ C$	6.8 8.0	μ A mA

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