

# Schottky Barrier Rectifier

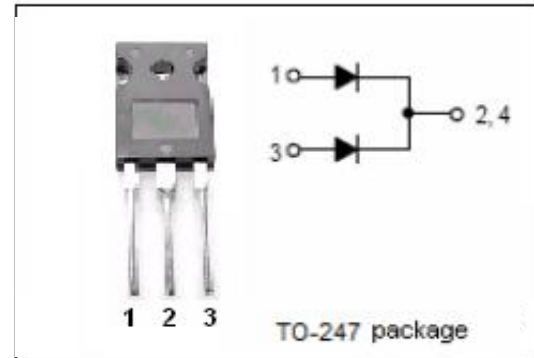
# STPS30150CW

**FEATURES**

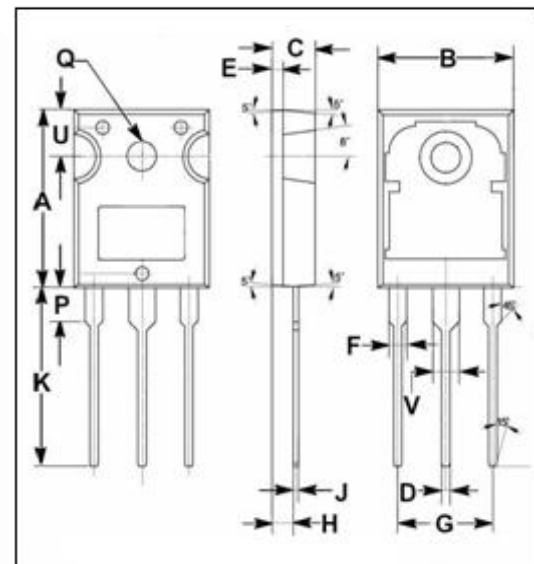
- With TO-247 packaging
- High Junction Temperature Capability
- Low forward voltage, high current capability
- High current capability
- Low power loss, high efficiency
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

**APPLICATIONS**

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


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

SYMBOL	PARAMETER	VALUE	UNIT
V <sub>RRM</sub> V <sub>RMS</sub> V <sub>R</sub>	Peak Repetitive Reverse Voltage RMS Voltage DC Blocking Voltage	150	V
I <sub>F(AV)</sub>	Average Rectified Forward Current @T <sub>c</sub> =110°C	15	A
I <sub>FSM</sub>	RMS Forward Current	30	A
I <sub>FSM</sub>	Nonrepetitive Peak Surge Current (10ms single half sine-wave superimposed on rated load conditions)	220	A
T <sub>J</sub>	Junction Temperature	-55~150	°C
T <sub>stg</sub>	Storage Temperature Range	-55~175	°C



DIM	mm	
	MIN	MAX
A	19.80	20.20
B	15.40	15.80
C	4.90	5.10
D	0.90	1.10
E	1.40	1.60
F	1.90	2.10
G	10.80	11.00
H	2.40	2.60
J	0.50	0.70
K	19.50	20.50
P	3.90	4.10
Q	3.30	3.50
U	5.20	5.40
V	2.90	3.10

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

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

**ELECTRICAL CHARACTERISTICS** (Pulse Test: Pulse Width=300  $\mu$  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	$\mu$ A mA