

Schottky Barrier Rectifier

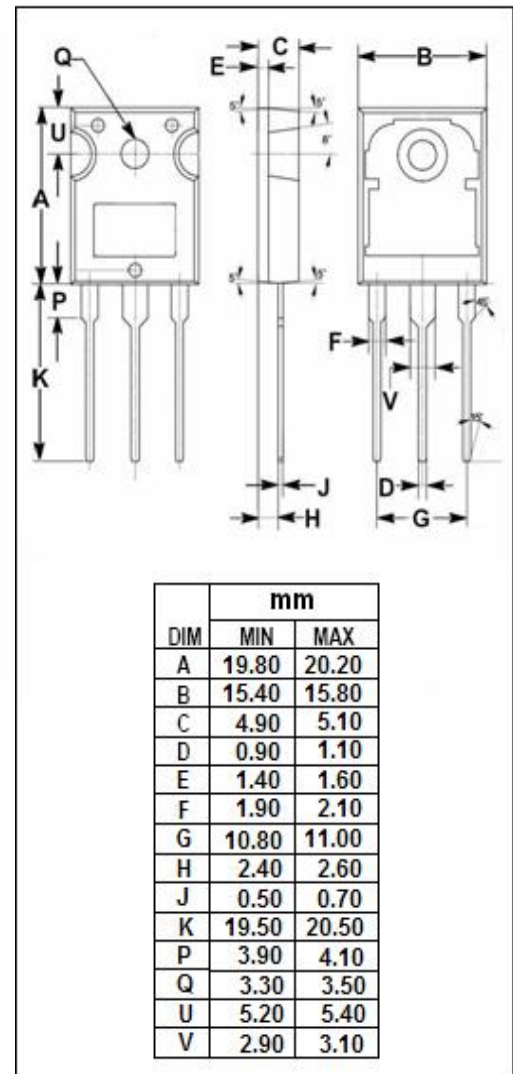
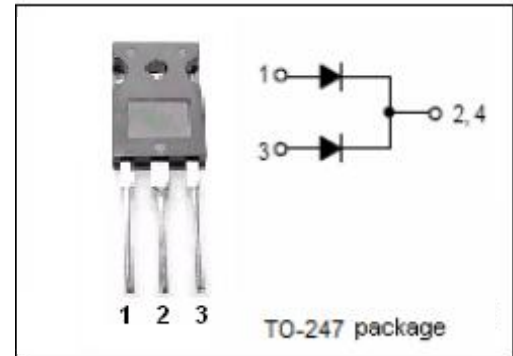
STPS80170CW

FEATURES

- With TO-247 packaging
- Low leakage current, low power loss, high efficiency
- High frequency operation
- High surge 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_{RMS} V_R	Peak Repetitive Reverse Voltage RMS Voltage DC Blocking Voltage	170	V
$I_{F(AV)}$	Average Rectified Forward Current@ $T_c=150^{\circ}\text{C}$	80	A
I_{FSM}	Nonrepetitive Peak Surge Current (8.3ms single half sine-wave superimposed on rated load conditions) $t_p=10\text{ms}$	500	A
T_J	Junction Temperature	-65~175	$^{\circ}\text{C}$
T_{stg}	Storage Temperature Range	-65~175	$^{\circ}\text{C}$

Schottky Barrier Rectifier**STPS80170CW****THERMAL CHARACTERISTICS**

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	0.5	$^{\circ}C/W$

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

SYMBOL	PARAMETER	CONDITIONS	MAX	UNIT
V_F	Maximum Instantaneous Forward Voltage	$I_F=40; T_j=25^{\circ}C$	0.84	V
		$I_F=40; T_j=125^{\circ}C$	0.74	
		$I_F=80; T_j=25^{\circ}C$	0.96	
		$I_F=80; T_j=125^{\circ}C$	0.86	
I_R	Maximum Instantaneous Reverse Current	$V_R=$ rated $V_{RRM}; T_j=25^{\circ}C$	0.08	mA
		$V_R=$ rated $V_{RRM}; T_j=125^{\circ}C$	80	