

Schottky Barrier Rectifier

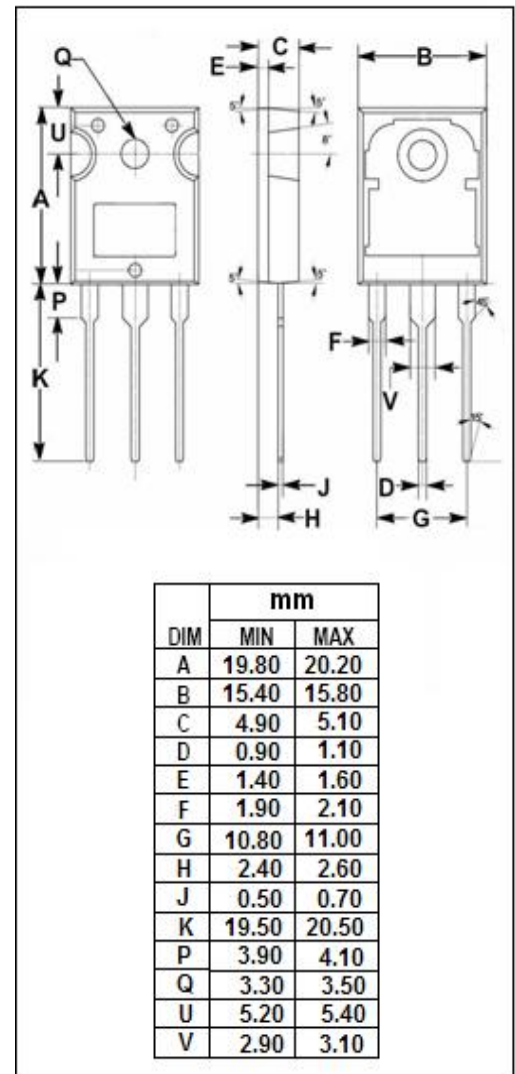
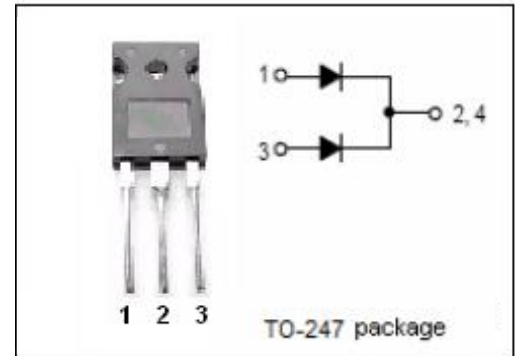
STPS80170CW

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	°C/W

ELECTRICAL CHARACTERISTICS (Pulse Test: Pulse Width=300 μs, Duty Cycle≤1%)

SYMBOL	PARAMETER	CONDITIONS	MAX	UNIT
V _F	Maximum Instantaneous Forward Voltage	I _F =40; T _j =25°C	0.84	V
		I _F =40; T _j =125°C	0.74	
		I _F =80; T _j =25°C	0.96	
		I _F =80; T _j =125°C	0.86	
I _R	Maximum Instantaneous Reverse Current	V _R = rated V _{RRM} ; T _j =25°C	0.08	mA
		V _R = rated V _{RRM} ; T _j =125°C	80	

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