

# High Voltage Power Schottky Rectifier

## STPS20H100CT

### FEATURES

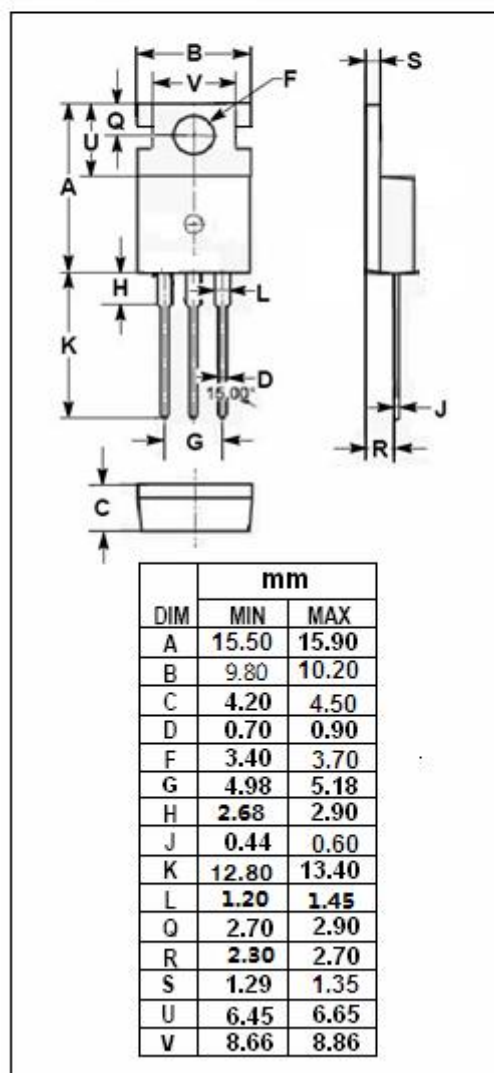
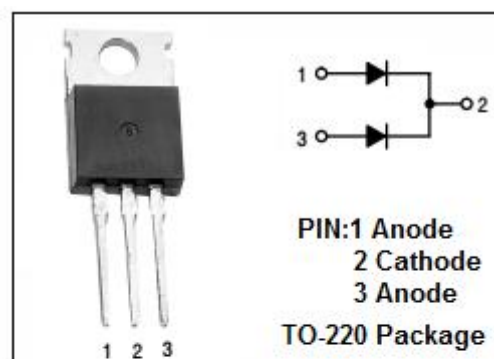
- Plastic material used carriers Underwriter Laboratory
- Metal silicon junction, majority carrier conduction
- Low Power Loss,high Efficiency
- Guard ring for overvoltage protection
- High Surge Capability,High Current Capability
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

### APPLICATIONS

- For use in low voltage,high frequency inverters,free wheeling and polarity protection applications.

### ABSOLUTE MAXIMUM RATINGS(Ta=25°C)

SYMBOL	PARAMETER		VALUE	UNIT
V <sub>RRM</sub> V <sub>RWM</sub> V <sub>R</sub>	Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage		100	V
I <sub>F</sub> (RMS)	RMS Forward current		30	A
I <sub>F</sub> (AV)	Average Rectified Forward Current Tc=160°C	per diode per device	10 20	A
I <sub>FSM</sub>	Nonrepetitive Peak Surge Current 8.3ms single half sine-wave superimposed on rated load conditions tp=10 ms sinusoidal		250	A
T <sub>J</sub>	Junction Temperature		175	°C
T <sub>stg</sub>	Storage Temperature Range		-65~175	°C
dv/dt	Voltage Rate of Change (Rated V <sub>R</sub> )		10000	V/μs



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## THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	1.6	°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	$I_F = 8A ; T_c = 25^\circ C$	0.71	V
		$I_F = 8A ; T_c = 125^\circ C$	0.58	
		$I_F = 10A ; T_c = 25^\circ C$	0.77	
		$I_F = 10A ; T_c = 125^\circ C$	0.64	
		$I_F = 16A ; T_c = 25^\circ C$	0.81	
		$I_F = 16A ; T_c = 125^\circ C$	0.68	
		$I_F = 20A ; T_c = 25^\circ C$	0.88	
		$I_F = 20A ; T_c = 125^\circ C$	0.73	
$I_R$	Maximum Instantaneous Reverse Current	$V_R = V_{RWM} ; T_c = 25^\circ C$	0.0045	mA
		$V_R = V_{RWM} ; T_c = 125^\circ C$	6	

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