

Schottky Barrier Rectifier

STPS2045CT

FEATURES

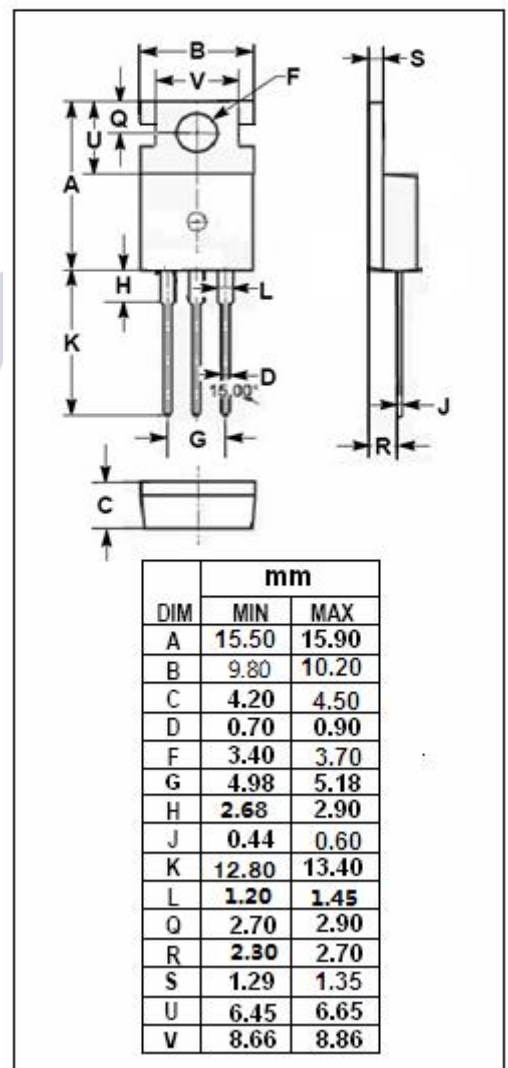
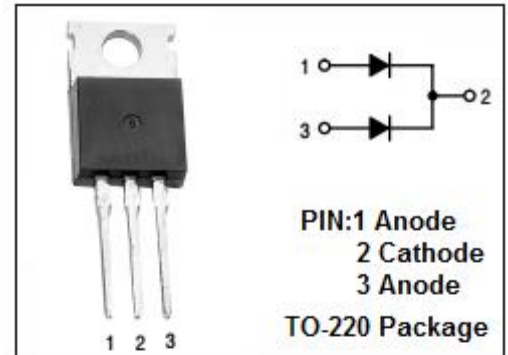
- With TO-220 packaging
- High junction temperature capability
- Low forward voltage drop
- High current capability
- Low power loss, high efficiency
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

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

ABSOLUTE MAXIMUM RATINGS(Ta=25°C)

SYMBOL	PARAMETER	VALUE	UNIT
V _R RM V _R WM V _R	Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	45	V
I _F (AV)	Average Rectified Forward Current@Tc=155°C	20	A
I _{FSM}	Nonrepetitive Peak Surge Current (8.3ms single half sine-wave superimposed on rated load conditions) tp=5 μs sine	180	A
T _J	Junction Temperature	175	°C
T _{stg}	Storage Temperature Range	-65~175	°C



Schottky Barrier Rectifier**STPS2045CT****THERMAL CHARACTERISTICS**

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	2.2	°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	$I_F = 10A ; T_c = 125^\circ C$	0.57	V
		$I_F = 20A ; T_c = 25^\circ C$	0.84	
		$I_F = 20A ; T_c = 125^\circ C$	0.72	
I_R	Maximum Instantaneous Reverse Current	$V_R = V_{RWM} ; T_c = 25^\circ C$	0.1	mA
		$V_R = V_{RWM} ; T_c = 125^\circ C$	15	

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