

# Schottky Barrier Rectifier

# STPS40L45CG

### FEATURES

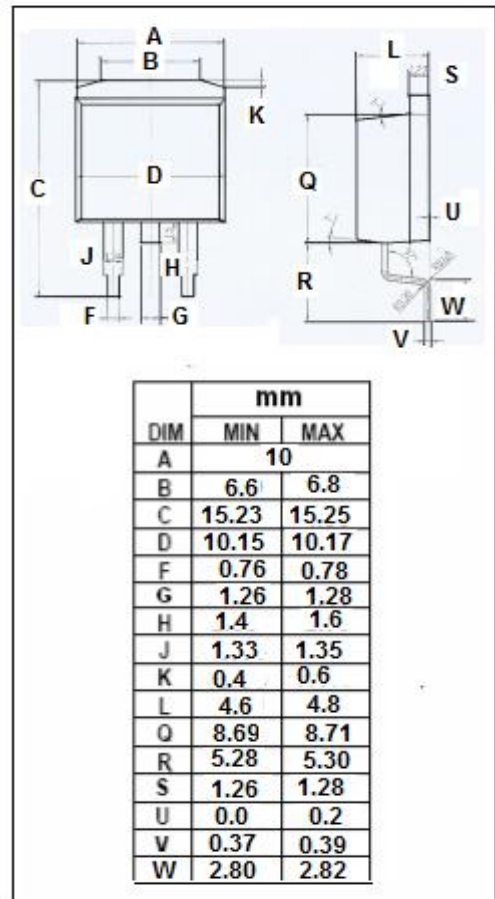
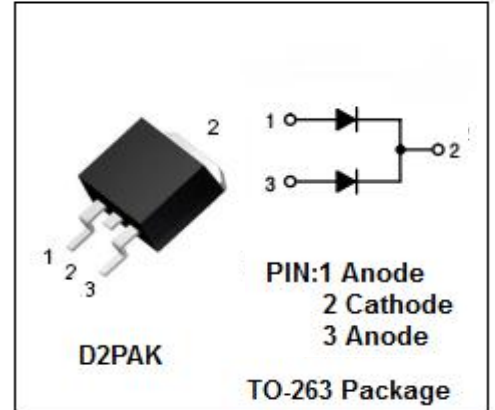
- With TO-263 packaging
- High junction temperature capability
- Low forward voltage drop
- High current capability
- Low power loss, high efficiency
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

### APPLICATIONS

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

### ABSOLUTE MAXIMUM RATINGS(Ta=25°C)

SYMBOL	PARAMETER	VALUE	UNIT
V <sub>RRM</sub> V <sub>RWM</sub> V <sub>R</sub>	Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	45	V
I <sub>F(AV)</sub>	Average Rectified Forward Current@Tc=136°C	30	A
I <sub>FSM</sub>	Nonrepetitive Peak Surge Current ( 8.3ms single half sine-wave superimposed on rated load conditions )	230	A
T <sub>J</sub>	Junction Temperature	150	°C
T <sub>stg</sub>	Storage Temperature Range	-65~150	°C



**Schottky Barrier Rectifier****STPS40L45CG****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	$I_F = 20A ; T_c = 25^{\circ}C$	0.53	V
		$I_F = 20A ; T_c = 125^{\circ}C$	0.49	
		$I_F = 40A ; T_c = 25^{\circ}C$	0.69	
		$I_F = 40A ; T_c = 125^{\circ}C$	0.70	
$I_R$	Maximum Instantaneous Reverse Current	$V_R = V_{RWM} ; T_c = 25^{\circ}C$	0.6	mA
		$V_R = V_{RWM} ; T_c = 125^{\circ}C$	280	