

# Schottky Barrier Rectifier

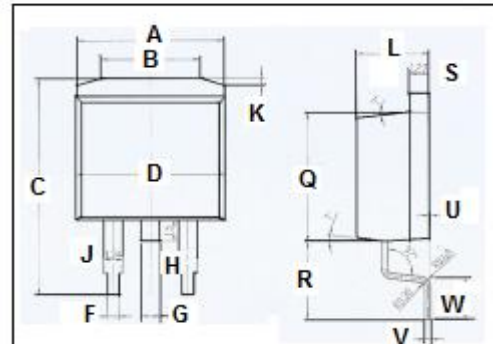
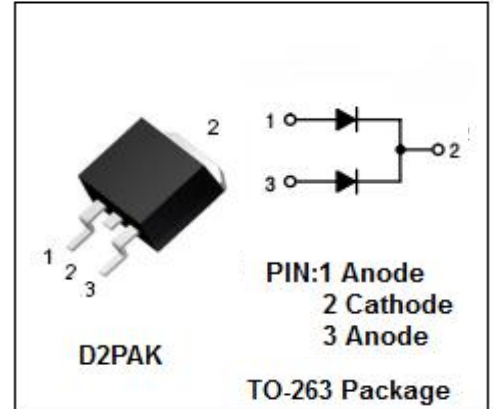
# STPS40L45CG

### 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@T <sub>c</sub> =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

DIM	mm	
	MIN	MAX
A	10	
B	6.6	6.8
C	15.23	15.25
D	10.15	10.17
F	0.76	0.78
G	1.26	1.28
H	1.4	1.6
J	1.33	1.35
K	0.4	0.6
L	4.6	4.8
Q	8.69	8.71
R	5.28	5.30
S	1.26	1.28
U	0.0	0.2
V	0.37	0.39
W	2.80	2.82

**Schottky Barrier Rectifier****STPS40L45CG****THERMAL CHARACTERISTICS**

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	1.5	°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	

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