

## Schottky Barrier Rectifier

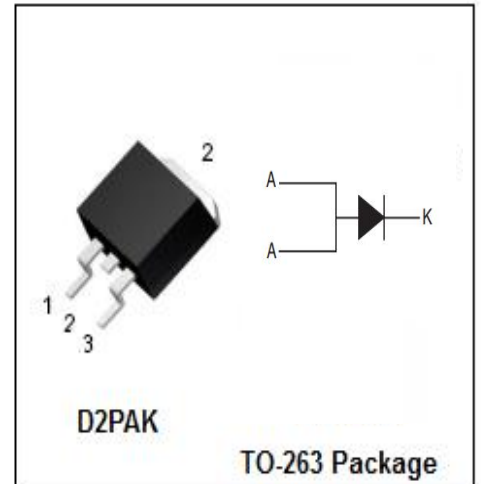
## STPS5045SG-TR

### FEATURES

- With TO-263(D2PAK) 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

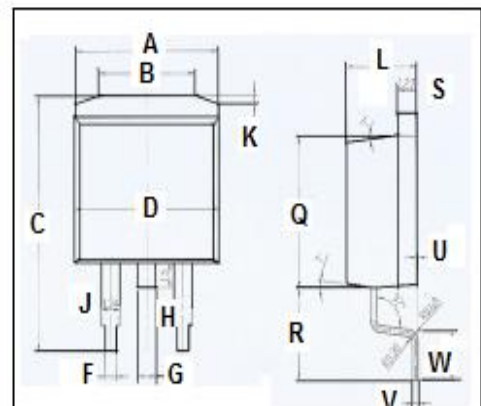
### APPLICATIONS

- 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	45	V
$I_{F(AV)}$	Average Rectified Forward Current@ $T_c=125^{\circ}\text{C}$	50	A
$I_{FSM}$	Nonrepetitive Peak Surge Current (8.3ms single half sine-wave superimposed on rated load conditions)	600	A
$P_T$	Repetitive peak avalanche power	1200	W
$T_J$	Junction Temperature	-65~175	$^{\circ}\text{C}$
$T_{stg}$	Storage Temperature Range	-65~200	$^{\circ}\text{C}$



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****STPS5045SG-TR****THERMAL CHARACTERISTICS**

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	1.0	$^{\circ}C/W$

**ELECTRICAL CHARACTERISTICS** (Pulse Test: Pulse Width=300  $\mu$  s, Duty Cycle  $\leq$  1%)

SYMBOL	PARAMETER	CONDITIONS	MAX	UNIT
$V_F$	Maximum Instantaneous Forward Voltage	$I_F = 50A ; T_c = 25^{\circ}C$ $I_F = 50A ; T_c = 125^{\circ}C$	0.51 0.55	V
$I_R$	Maximum Instantaneous Reverse Current	$V_R = \text{rated } V_{RRM} ; T_c = 25^{\circ}C$ $V_R = \text{rated } V_{RRM} ; T_c = 125^{\circ}C$	0.61 0.56	mA

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