

# Schottky Barrier Rectifier

## STPS1017CB

### FEATURES

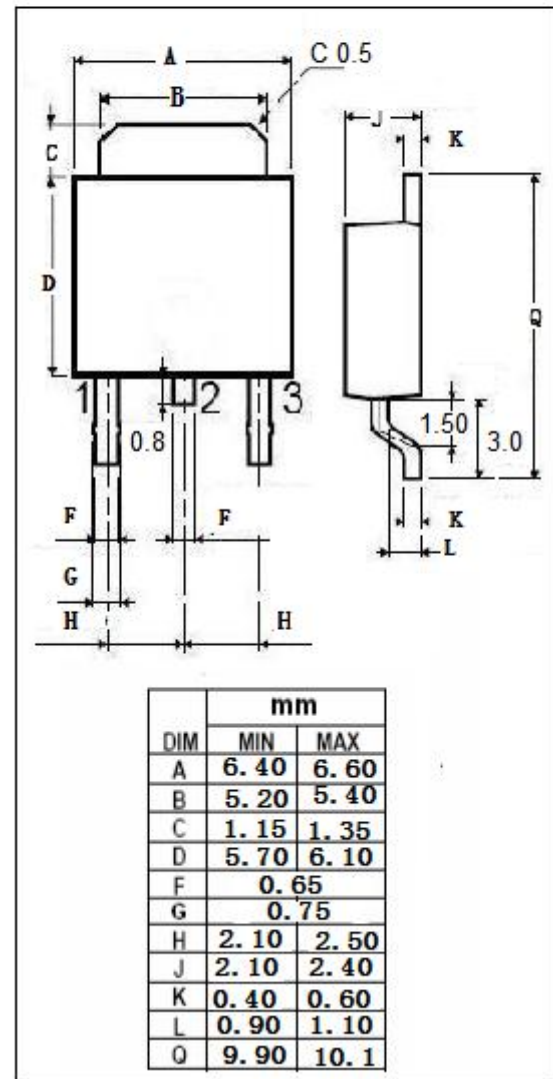
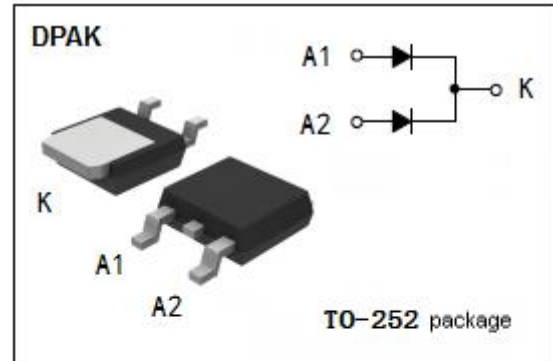
- Low leakage current
- Avalanche capability specified
- High junction temperature capability
- Good trade-off between leakage current and forward voltage drop
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

### MECHANICAL CHARACTERISTICS

- Dual centre tab schottky rectifier designed for high frequency switch mode power supplies

### ABSOLUTE MAXIMUM RATINGS( $T_a=25^{\circ}\text{C}$ )

SYMBOL	PARAMETER	VALUE	UNIT
$V_{RRM}$ $V_{RWM}$ $V_R$	Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	170	V
$I_{F(AV)}$	Average Rectified Forward Current (Rated $V_R$ )	10	A
$I_{F(RMS)}$	RMS Forward Current	10	A
$I_{FSM}$	Nonrepetitive Peak Surge Current (Surge applied at rated load conditions half-wave, single phase, 60Hz)	75	A
$T_J$	Junction Temperature	-65~150	$^{\circ}\text{C}$
$T_{stg}$	Storage Temperature Range	-65~175	$^{\circ}\text{C}$
$dv/dt$	Voltage Rate of Change (Rated $V_R$ )	10,000	V/ $\mu\text{s}$



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## THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	0.7	°C/W
$R_{th\ j-a}$	Thermal Resistance, Junction to Ambient	2.4	°C/W

ELECTRICAL CHARACTERISTICS (Pulse Test: Pulse Width=300  $\mu$ s, Duty Cycle  $\leq$  2%)

SYMBOL	PARAMETER	CONDITIONS	MAX	UNIT
$V_F$	Maximum Instantaneous Forward Voltage	$I_F = 5A ; T_C = 25^\circ C$ $I_F = 5A ; T_C = 125^\circ C$ $I_F = 10A ; T_C = 25^\circ C$ $I_F = 10A ; T_C = 125^\circ C$	0.92 0.75 1.0 0.85	V
$I_R$	Maximum Instantaneous Reverse Current	Rated DC Voltage, $T_C = 125^\circ C$ Rated DC Voltage, $T_C = 25^\circ C$	10 10	mA $\mu A$

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