

High Voltage Power Schottky Rectifier

STPS16170CB

FEATURES

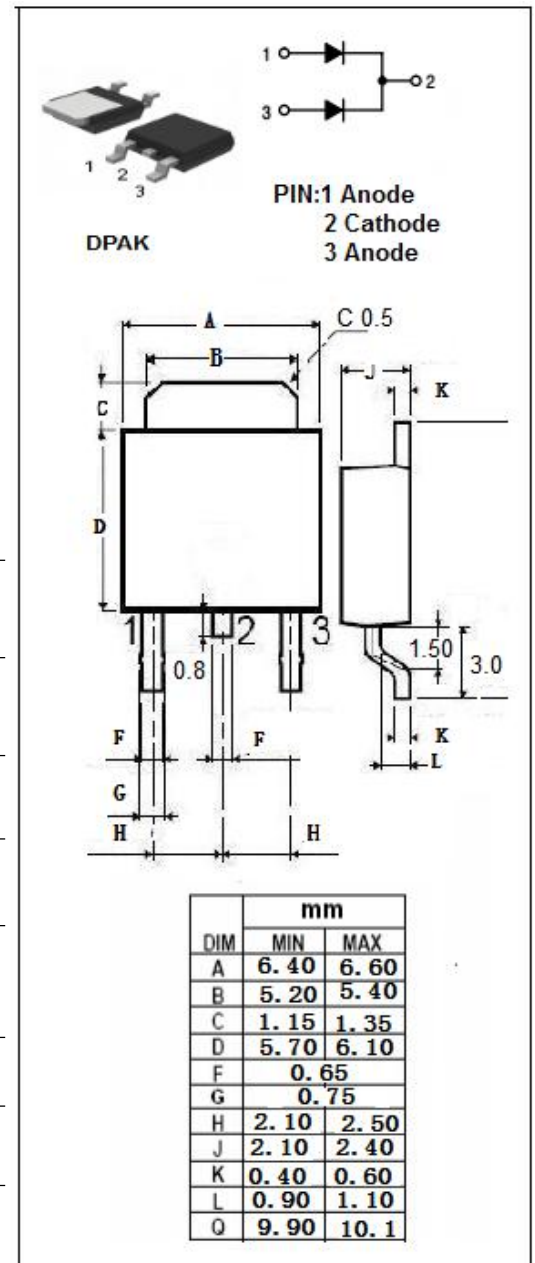
- Plastic material used carriers Underwriter Laboratory
- Metal silicon junction, majority carrier conduction
- Low Power Loss,high Efficiency
- Guard ring for overvoltage protection
- High Surge Capability,High Current Capability
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

- For use in low voltage,high frequency inverters,free wheeling and polarity protection applications.

ABSOLUTE MAXIMUM RATINGS(Ta=25°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 (RMS)	RMS Forward current	20	A
I _F (AV)	Average Rectified Forward Current Tc=150°C	8 16	A A
I _{FSM}	Nonrepetitive Peak Surge Current 8.3ms single half sine-wave superimposed on rated load conditions tp=10 ms sinusoidal	75	A
T _J	Junction Temperature	175	°C
T _{stg}	Storage Temperature Range	-65~175	°C
dv/dt	Voltage Rate of Change (Rated V _R)	10000	V/μs



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THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case Per diode Total	3 1.8	$^{\circ}C/W$
$R_{th(c)}$	Coupling	0.6	$^{\circ}C/W$

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

SYMBOL	PARAMETER	CONDITIONS	MAX	UNIT
V_F	Maximum Instantaneous Forward Voltage	$I_F = 8A ; T_c = 25^{\circ}C$	0.92	V
		$I_F = 8A ; T_c = 125^{\circ}C$	0.75	
		$I_F = 16A ; T_c = 25^{\circ}C$	1.00	
		$I_F = 16A ; T_c = 125^{\circ}C$	0.86	
I_R	Maximum Instantaneous Reverse Current	$V_R = V_{RWM} ; T_c = 25^{\circ}C$	0.015	mA
		$V_R = V_{RWM} ; T_c = 125^{\circ}C$	15	

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