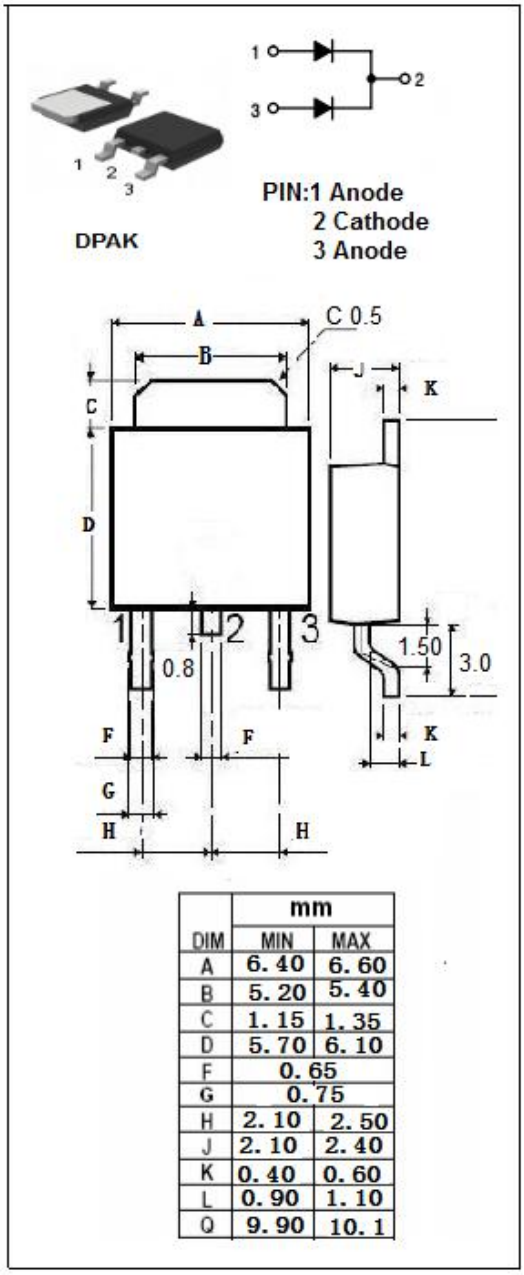
High Voltage Power Schottky Rectifier STPS16170CB

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



DIM	mm MIN	MAX
A	6.40	6.60
B	5.20	5.40
C	1.15	1.35
D	5.70	6.10
F	0.65	
G	0.75	
H	2.10	2.50
J	2.10	2.40
K	0.40	0.60
L	0.90	1.10
Q	9.90	10.1

APPLICATIONS

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

ABSOLUTE MAXIMUM RATINGS(Ta=25℃)

SYMBOL	PARAMETER		VALUE	UNIT
V_{RRM} V_{RWM} V_R	Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage		170	V
IF(RMS)	RMS Forward current		20	A
$I_{F(AV)}$	Average Rectified Forward Current Tc=150℃	per diode Total package	8 16	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	℃
T_{stg}	Storage Temperature Range		-65~175	℃
dv/dt	Voltage Rate of Change (Rated V_R)		10000	V/μs

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THERMAL CHARACTERISTICS

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

ELECTRICAL CHARACTERISTICS (Pulse Test: Pulse Width=300μs,Duty Cycle≤1%)

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

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