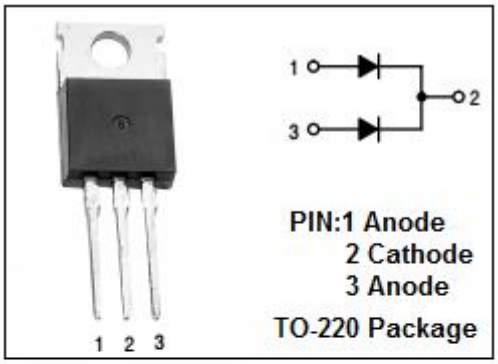
High Voltage Power Schottky Rectifier STPS20100CT

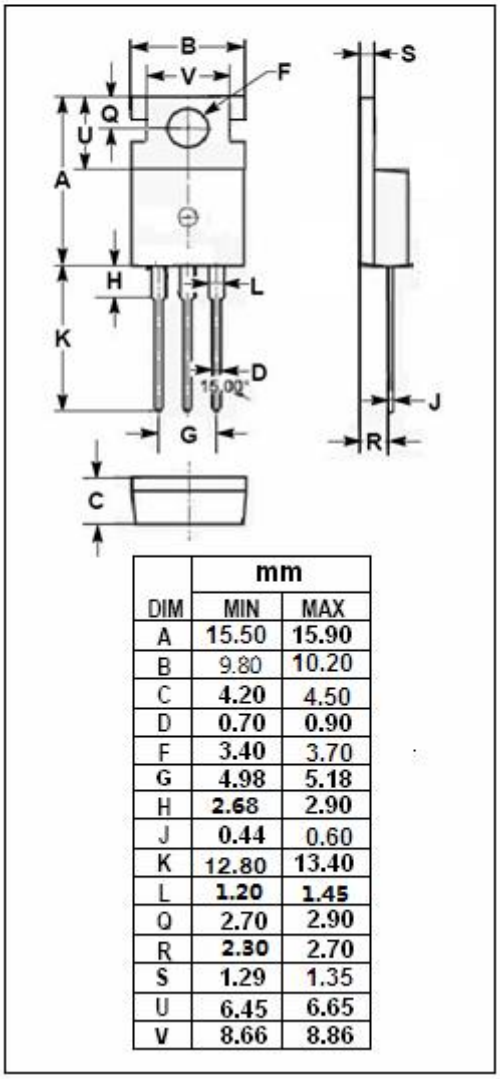
FEATURES

- 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.



DIM	mm MIN	mm MAX
A	15.50	15.90
B	9.80	10.20
C	4.20	4.50
D	0.70	0.90
F	3.40	3.70
G	4.98	5.18
H	2.68	2.90
J	0.44	0.60
K	12.80	13.40
L	1.20	1.45
Q	2.70	2.90
R	2.30	2.70
S	1.29	1.35
U	6.45	6.65
V	8.66	8.86

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		100	V
IF(RMS)	RMS Forward current		30	A
$I_{F(AV)}$	Average Rectified Forward Current Tc=110℃ VR=60V	per diode per device	10 20	A
I_{FSM}	Nonrepetitive Peak Surge Current 8.3ms single half sine-wave superimposed on rated load conditions tp=10 ms sinusoidal		200	A
T_J	Junction Temperature		175	℃
T_{stg}	Storage Temperature Range		-65~175	℃
dv/dt	Voltage Rate of Change (Rated V_R)		1000	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	1.6 0.9	℃/W
$R_{th(c)}$	Coupling		0.15	℃/W

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

SYMBOL	PARAMETER	CONDITIONS	MAX	UNIT
V_F	Maximum Instantaneous Forward Voltage	I_F= 20A ; Tc= 25℃	0.95	V
		I_F=20A ; Tc=125℃	0.70	
I_R	Maximum Instantaneous Reverse Current	V_R= $V_{RWM;}$Tc= 25℃	0.15	mA
		V_R= $V_{RWM;}$Tc= 125℃	100	