

# Ultra fast Rectifier

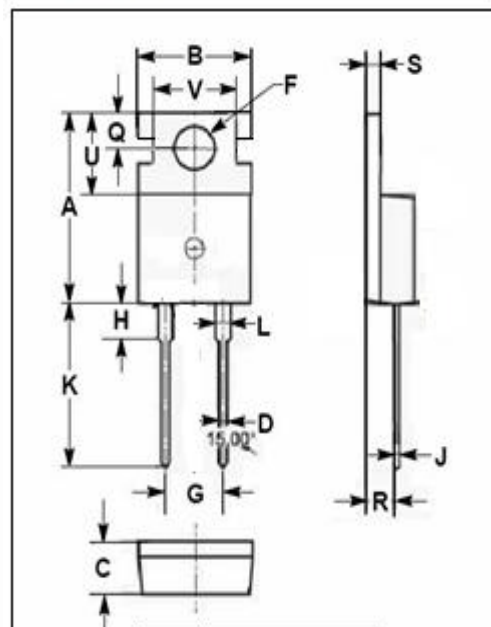
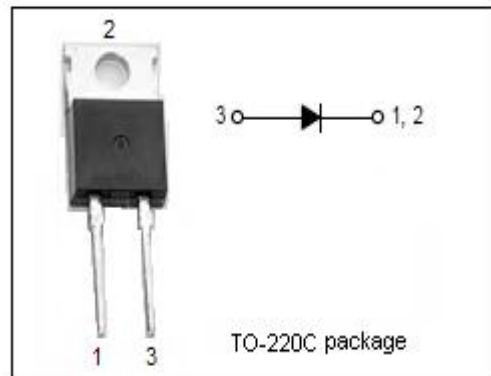
# STTH802D

### FEATURES

- With TO-220 packaging
- Metal silicon junction, majority carrier conduction
- Low power loss, high efficiency
- Guardring for over voltage protection
- High surge capability
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

### APPLICATIONS

- Switching power supply
- High frequency inverters
- Reverse battery protection
- Polarity protection applications



DIM	mm	
	MIN	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(T<sub>a</sub>=25°C)

SYMBOL	PARAMETER	VALUE	UNIT
V <sub>R</sub> RM V <sub>R</sub> RMS V <sub>R</sub>	Peak Repetitive Reverse Voltage RMS Voltage DC Blocking Voltage	200	V
I <sub>F(AV)</sub>	Average Rectified Forward Current @T <sub>c</sub> =145°C	8	A
I <sub>FRM</sub>	Repetitive Peak Forward Current@T <sub>c</sub> =121°C	16	A
I <sub>FSM</sub>	Nonrepetitive Peak Surge Current 10 ms single half sine-wave superimposed on rated load conditions;One shot(50Hz)	100	A
T <sub>j</sub>	Junction Temperature	-65~175	°C
T <sub>stg</sub>	Storage Temperature Range	-65~175	°C

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## THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	3.2	$^{\circ}C/W$

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

SYMBOL	PARAMETER	CONDITIONS	MAX	UNIT
$V_F$	Maximum Instantaneous Forward Voltage	$I_F = 8A; T_C = 25^{\circ}C$ $I_F = 8A; T_C = 150^{\circ}C$	1.05 0.90	V
$I_R$	Maximum Instantaneous Reverse Current	$V_R = \text{rated } V_{RRM}; T_C = 25^{\circ}C$ $T_C = 125^{\circ}C$	6 60	$\mu A$
$t_{rr}$	Maximum Reverse Recovery Time	$I_F = 1A; dI_F/dt = -100A/\mu s; V_R = 30V$	22	ns

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