

**Ultrafast Rectifier**
**STTH2002CT**
**FEATURES**

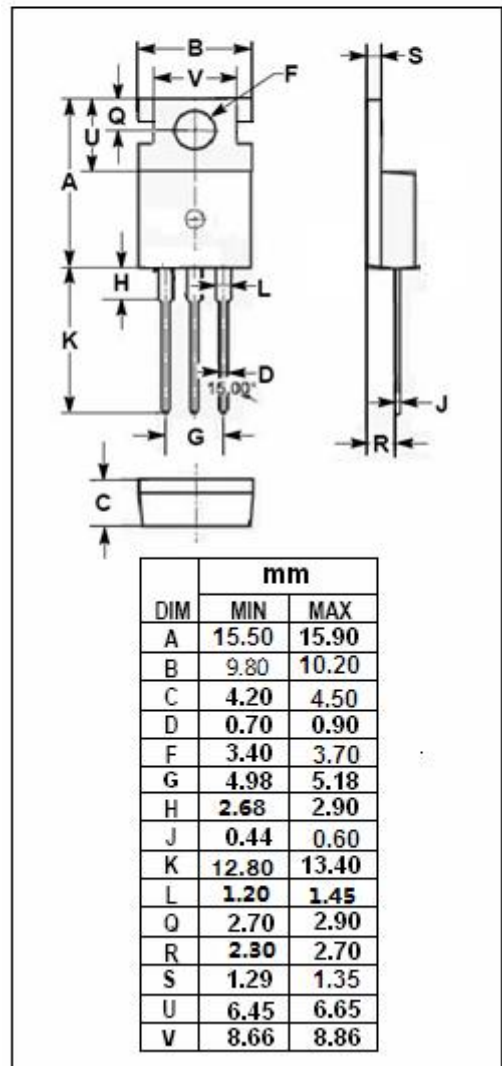
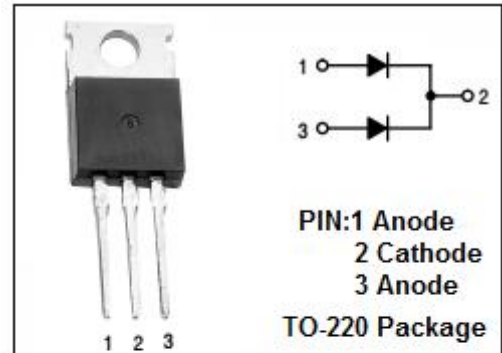
- Ultrafast recovery time
- 175°C Operating temperature
- Popular TO-220 package
- Low forward voltage drop
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

**APPLICATIONS**

- Switching power supply
- Power switching circuits
- General purpose

**ABSOLUTE MAXIMUM RATINGS(T<sub>a</sub>=25°C)**

SYMBOL	PARAMETER	VALUE	UNIT
V <sub>RRM</sub> V <sub>RWM</sub> V <sub>R</sub>	Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	200	V
I <sub>F(AV)</sub>	Average Rectified Forward Current Per Leg Total device	10 20	A
I <sub>FSM</sub>	Nonrepetitive Peak Surge Current (Surge applied at rated load conditions half-wave, single phase, 60Hz)	90	A
P <sub>D</sub>	Maximum power dissipation	75	W
T <sub>J</sub>	Junction Temperature	-65~175	°C
T <sub>stg</sub>	Storage Temperature Range	-65~175	°C



**Fast Recovery Rectifier**
**STTH2002CT**
**THERMAL CHARACTERISTICS**

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	2.5	$^{\circ}C/W$

**ELECTRICAL CHARACTERISTICS ( $T_a=25^{\circ}C$ ) (Pulse Test: Pulse Width=300  $\mu$  s, Duty Cycle  $\leq$  2%)**

SYMBOL	PARAMETER	CONDITIONS	MAX	UNIT
$V_F$	Maximum Instantaneous Forward Voltage	$I_F=10A; T_j=25^{\circ}C$ $I_F=20A; T_j=25^{\circ}C$ $I_F=10A; T_j=150$ $I_F=20A; T_j=150^{\circ}C$	1.1 1.25 0.89 1.05	V
$I_R$	Maximum Instantaneous Reverse Current	$V_R=V_{RWM}; T_j=125^{\circ}C$ $V_R=V_{RWM}$	100 10	$\mu A$
$t_{rr}$	Maximum Reverse Recovery Time	$I_F=1A; di/dt=50A/\mu s$	27	ns

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