

**Ultra fast Rectifier**
**STTH1602CT**
**FEATURES**

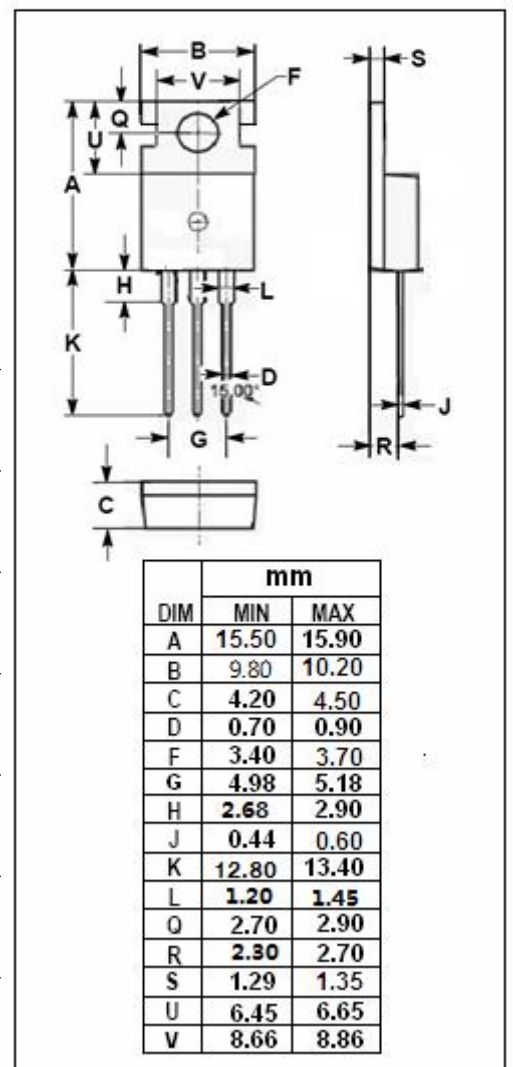
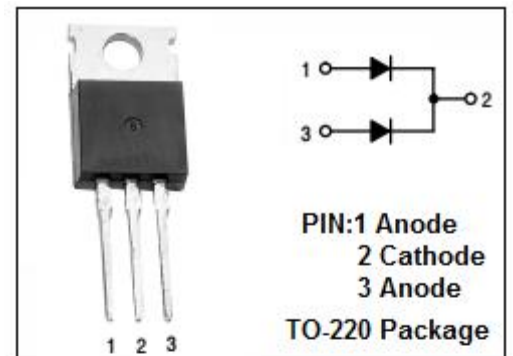
- Ultrafast with soft recovery
- 175°C Operating temperature
- Popular TO-220F package
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

**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	30	A
I <sub>FSM</sub>	Nonrepetitive Peak Surge Current (Surge applied at rated load conditions half-wave, single phase, 60Hz)	80	A
T <sub>J</sub>	Junction Temperature	-65~175	°C
T <sub>stg</sub>	Storage Temperature Range	-65~175	°C



## Ultra fast Rectifier

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## THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case per diode Per device	3.0 1.9	°C/W

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

SYMBOL	PARAMETER	CONDITIONS	MAX	UNIT
$V_F$	Maximum Instantaneous Forward Voltage	$I_F=8\text{A}; T_j=25^\circ\text{C}$ $I_F=16\text{A}; T_j=25^\circ\text{C}$ $I_F=8\text{A}; T_j=125^\circ\text{C}$ $I_F=16\text{A}; T_j=125^\circ\text{C}$	1.1 1.25 0.89 1.05	V
$I_R$	Maximum Instantaneous Reverse Current	$V_R=V_{RWM}; T_j=25^\circ\text{C}$ $V_R=V_{RWM}; T_j=125^\circ\text{C}$	6 60	$\mu$ A
$t_{rr}$	Maximum Reverse Recovery Time	$I_F=1\text{A}; V_R=30\text{V}; dI_F/dt=100\text{A}/\mu\text{s}$	26	ns

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