

Ultra fast Rectifier

STTH1602CT

FEATURES

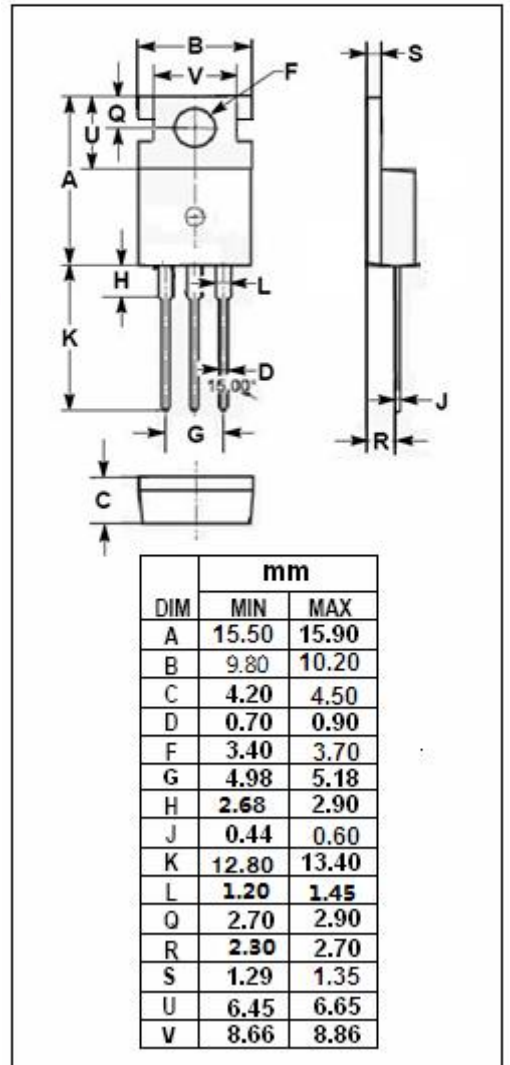
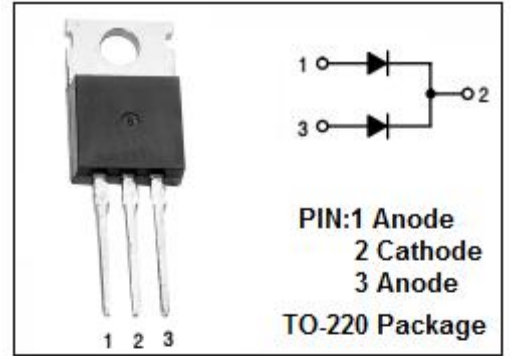
- Ultrafast with soft recovery
- 175°C Operating temperature
- Popular TO-220F package
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

- Switching power supply
- Power switching circuits
- General purpose

ABSOLUTE MAXIMUM RATINGS(T_a=25°C)

SYMBOL	PARAMETER	VALUE	UNIT
V _{RRM} V _{RWM} V _R	Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	200	V
I _{F(AV)}	Average Rectified Forward Current	30	A
I _{FSM}	Nonrepetitive Peak Surge Current (Surge applied at rated load conditions half-wave, single phase, 60Hz)	80	A
T _J	Junction Temperature	-65~175	°C
T _{stg}	Storage Temperature Range	-65~175	°C



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THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
R_{thj-c}	Thermal Resistance, Junction to Case per diode Per device	3.0 1.9	$^{\circ}\text{C}/\text{W}$

ELECTRICAL CHARACTERISTICS ($T_a=25^{\circ}\text{C}$) (Pulse Test: Pulse Width=300 μs , 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	μA
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