

Ultra fast Rectifier

STTH802D

FEATURES

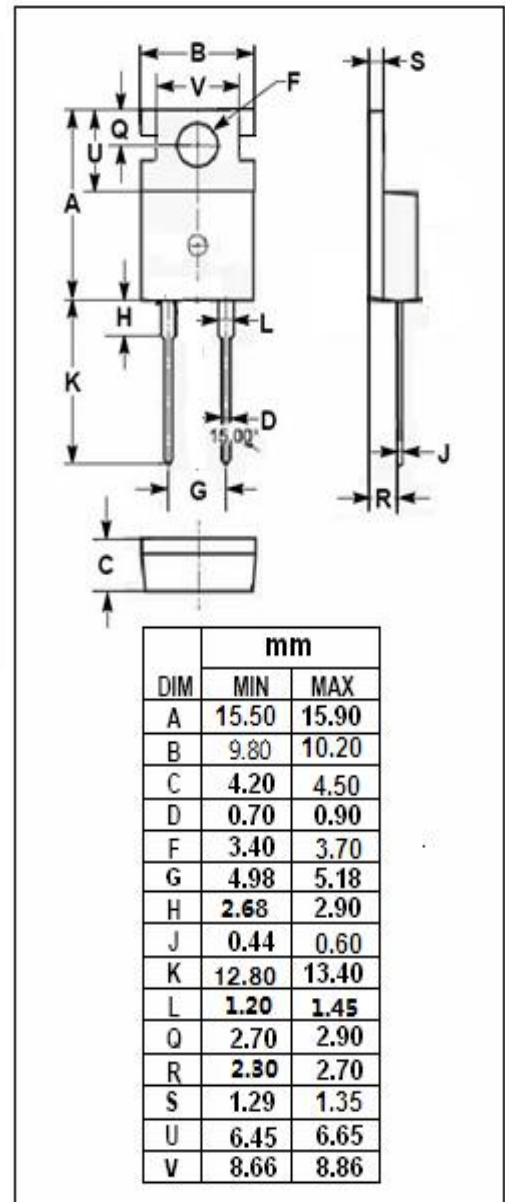
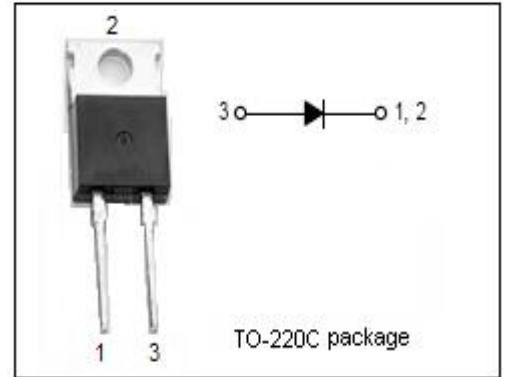
- With TO-220 packaging
- Metal silicon junction, majority carrier conduction
- Low power loss, high efficiency
- Guardring for over voltage protection
- High surge capability
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

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

ABSOLUTE MAXIMUM RATINGS($T_a=25^{\circ}\text{C}$)

SYMBOL	PARAMETER	VALUE	UNIT
V_{RRM} V_{RMS} V_R	Peak Repetitive Reverse Voltage RMS Voltage DC Blocking Voltage	200	V
$I_{F(AV)}$	Average Rectified Forward Current @ $T_c=145^{\circ}\text{C}$	8	A
I_{FRM}	Repetitive Peak Forward Current@ $T_c=121^{\circ}\text{C}$	16	A
I_{FSM}	Nonrepetitive Peak Surge Current 10 ms single half sine-wave superimposed on rated load conditions;One shot(50Hz)	100	A
T_j	Junction Temperature	-65~175	$^{\circ}\text{C}$
T_{stg}	Storage Temperature Range	-65~175	$^{\circ}\text{C}$



Ultra fast Rectifier**STTH802D****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 μ 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	μA
t_{rr}	Maximum Reverse Recovery Time	$I_F = 1A; dI_F/dt = -100A/\mu s; V_R = 30V$	22	ns

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