

Ultra fast Rectifier

STTA512F

FEATURES

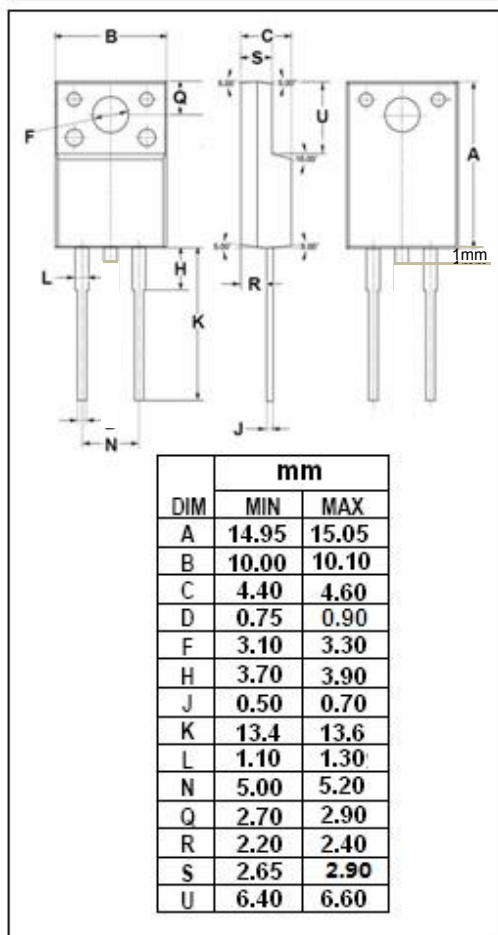
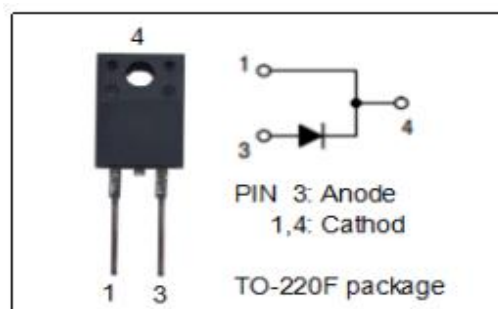
- High reverse voltage capability
- Low switching loss
- High surge current capability
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

- Switching power supply
- Power switching circuits
- General rectification

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{RRM}	Peak Repetitive Reverse Voltage	1200	V
$I_{F(AV)}$	Average Rectified Forward Current	5	A
I_{FSM}	Nonrepetitive Peak Surge Current	45	A
T_J	Junction Temperature	-65~150	$^{\circ}\text{C}$
T_{stg}	Storage Temperature Range	-65~150	$^{\circ}\text{C}$



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THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	4.6	°C/W

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

SYMBOL	PARAMETER	CONDITIONS	MAX	UNIT
V_F	Maximum Instantaneous Forward Voltage	$I_F=5\text{A}; T_j=25^{\circ}\text{C}$ $I_F=5\text{A}; T_j=125^{\circ}\text{C}$	2.2 2	V
I_R	Maximum Instantaneous Reverse Current	$V_R=V_{RWM}; T_j=25^{\circ}\text{C}$ $V_R=V_{RWM}; T_j=125^{\circ}\text{C}$	100 2	μA mA
t_{rr}	Maximum Reverse Recovery Time	$I_F=1\text{A}; di/dt=-50\text{A}/\mu\text{s}; V_R=30\text{V}$	95	ns

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