

**Ultra fast Rectifier**

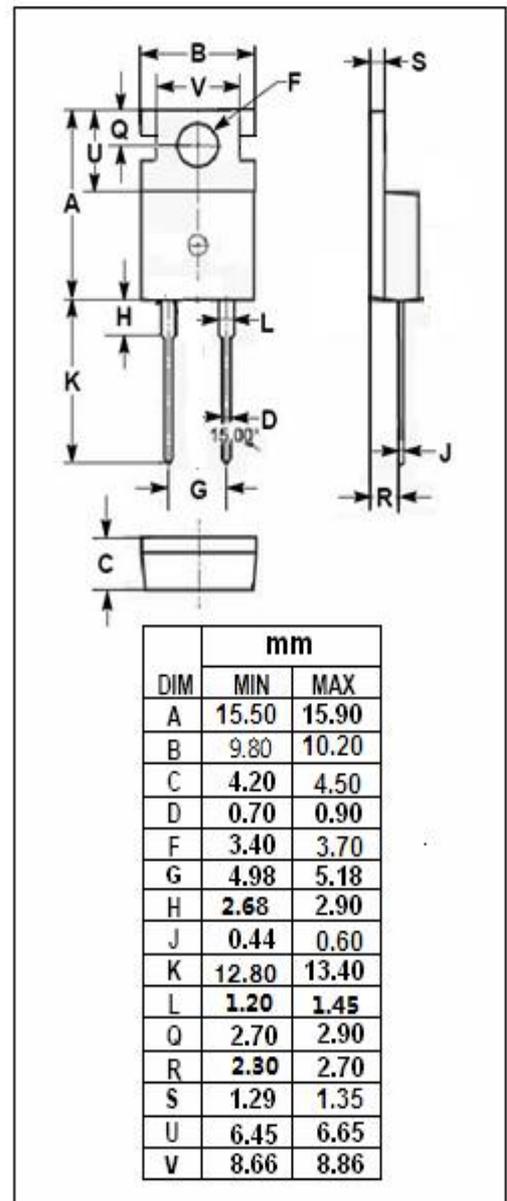
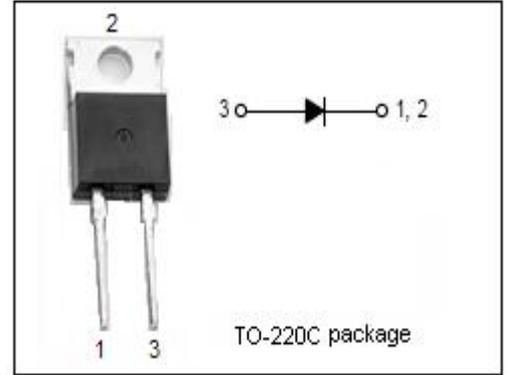
**STTA1206D**

**FEATURES**

- With TO-220 packaging
- Metal silicon junction, majority carrier conduction
- Low power loss, high efficiency
- Guardring for overvoltage 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<sub>a</sub>=25°C)**

SYMBOL	PARAMETER	VALUE	UNIT
V <sub>RRM</sub> V <sub>RMS</sub> V <sub>R</sub>	Peak Repetitive Reverse Voltage RMS Voltage DC Blocking Voltage	600	V
I <sub>FRM</sub>	Repetitive Peak Forward Current	30	A
I <sub>FSM</sub>	Nonrepetitive Peak Surge Current	50Hz 110	A
P <sub>t</sub>	Total Power Dissipation @T <sub>c</sub> =104°C	24	W
T <sub>j</sub>	Junction Temperature	-65~150	°C
T <sub>stg</sub>	Storage Temperature Range	-65~150	°C

## Ultra fast Rectifier

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## THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	1.9	$^{\circ}C/W$

ELECTRICAL CHARACTERISTICS (Pulse Test: Pulse Width=300  $\mu$  s, Duty Cycle $\leq$ 1%)

SYMBOL	PARAMETER	CONDITIONS	MAX	UNIT
$V_F$	Maximum Instantaneous Forward Voltage	$I_F=12A; T_c=25^{\circ}C$ $I_F=12A; T_c=125^{\circ}C$	1.75 1.5	V
$I_R$	Maximum Instantaneous Reverse Current	$V_R=0.8*V_{RRM}; T_c=25^{\circ}C$ $T_c=125^{\circ}C$	0.1 5	mA
$t_{rr}$	Maximum Reverse Recovery Time	$I_F=0.5A; dI_F/dt=-50A/\mu s; V_R=30V$	55	ns

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