

**Ultrafast Rectifier**
**STTH3003CW**
**FEATURES**

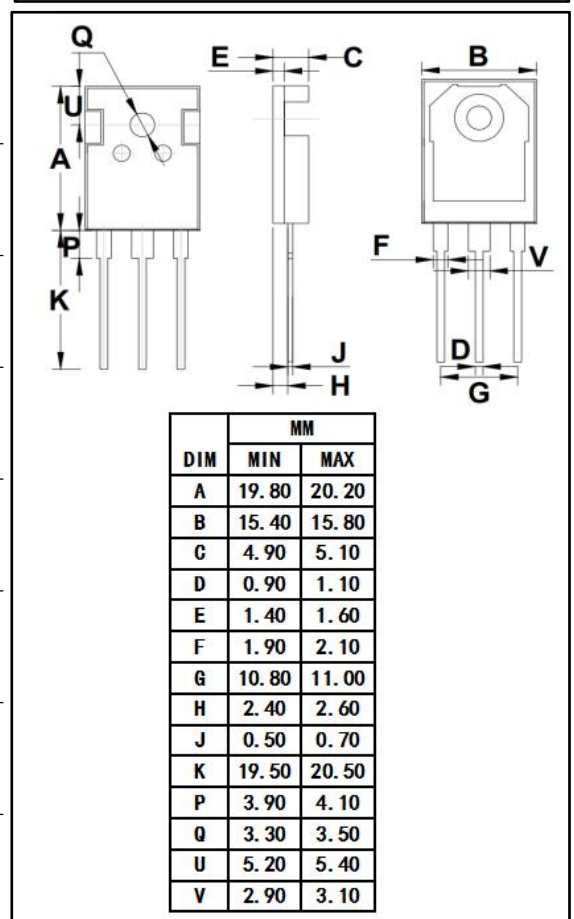
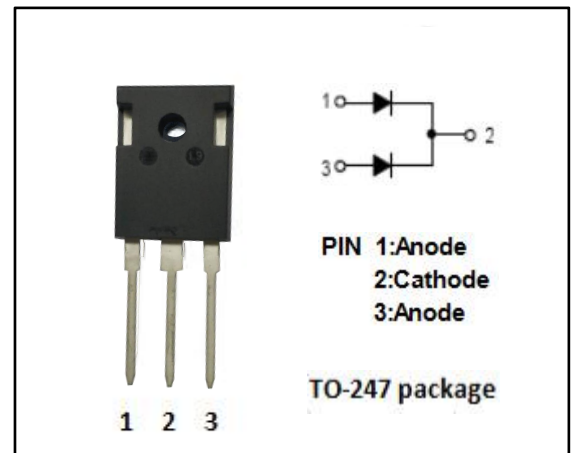
- Guarding for over voltage protection
- Dual rectifier construction, positive center tap
- Metal of silicon rectifier, majority carrier conduction
- Low forward voltage, high efficiency
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

**APPLICATIONS**

- Switching power supply
- Rectifier in switch mode supplies

**ABSOLUTE MAXIMUM RATINGS (T<sub>a</sub>=25°C)**

SYMBOL	PARAMETER	VALUE	UNIT
V <sub>RRM</sub> V <sub>VRWM</sub> V <sub>R</sub>	Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	300	V
I <sub>F(AV)</sub>	Average Rectified Forward Current Per Leg  Total device	15 30	A
I <sub>FSM</sub>	Nonrepetitive Peak Surge Current (Surge applied at rated load conditions half-wave, single phase, 60Hz)	140	A
P <sub>D</sub>	Maximum power dissipation	140	W
T <sub>J</sub>	Junction Temperature	-65~175	°C
T <sub>stg</sub>	Storage Temperature Range	-65~175	°C



## Fast Recovery Rectifier

## STTH3003CW

## THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{thj-c}$	Thermal Resistance, Junction to Case	1.05	°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	$I_F=15\text{A}; T_j=25^{\circ}\text{C}$ $I_F=15\text{A}; T_j=125^{\circ}\text{C}$	1.3 1.0	V
$I_R$	Maximum Instantaneous Reverse Current	$V_R=V_{RWM}; T_j=25^{\circ}\text{C}$ $V_R=V_{RWM}; T_j=125^{\circ}\text{C}$	40 400	$\mu$ A
$t_{rr}$	Maximum Reverse Recovery Time	$I_F=1\text{A};$	40	ns

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