

Ultrafast Rectifier

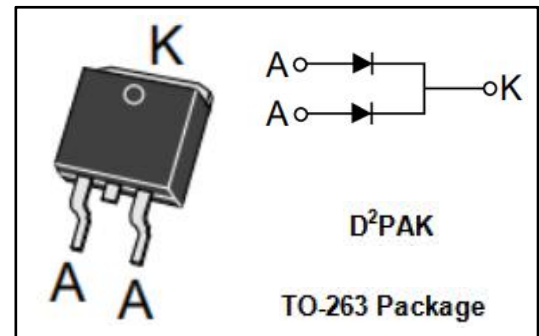
STTH2002CG

FEATURES

- Super fast switching for high efficiency.
- Low reverse leakage.
- High forward surge current capability.
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

- Switching power supply
- Power switching circuits

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

SYMBOL	PARAMETER	VALUE	UNIT
VRRM VRWM VR	Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	200	V
IF(AV)	Average Rectified Forward Current Per Leg Total device	10 20	A
IFSM	Nonrepetitive Peak Surge Current (Surge applied at rated load conditions half-wave, single phase, 60Hz)	90	A
PD	Maximum power dissipation	75	W
TJ	Junction Temperature	-55~175	°C
Tstg	Storage Temperature Range	-55~175	°C

THERMAL CHARACTERISTICS

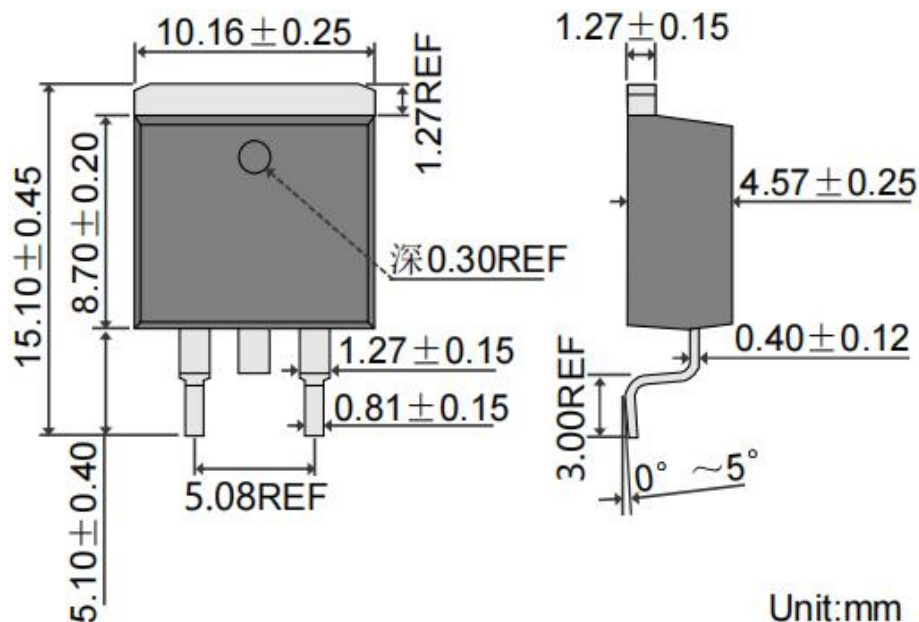
SYMBOL	PARAMETER	MAX	UNIT
Rth j-c	Thermal Resistance, Junction to Case	2.0	°C/W

Fast Recovery Rectifier

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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	$I_F=10\text{A}; T_j=25^\circ\text{C}$ $I_F=10\text{A}; T_j=125^\circ\text{C}$	1.1 0.95	V
I_R	Maximum Instantaneous Reverse Current	$V_R=V_{RWM};$ $V_R=V_{RWM}, T_j=125^\circ\text{C}$	10 100	μA
t_{rr}	Maximum Reverse Recovery Time	$I_F=0.5\text{A}$ $I_R=1.0\text{A}$ $I_{REC}=0.25\text{A}$	25	ns

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