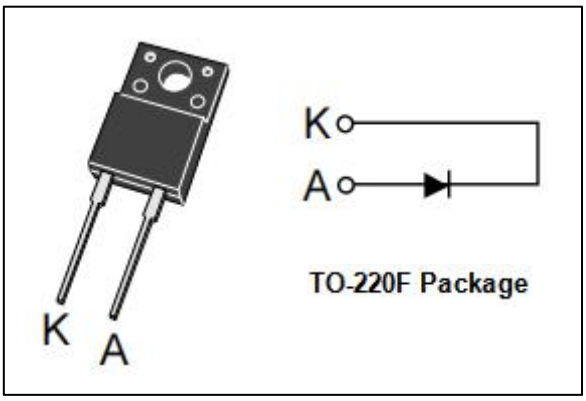
Ultra-fast Rectifier

STTH20R04FP



FEATURES

- 400V blocking voltage
- Very short recovery time
- Soft recovery behaviour
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

- Power Supply-Output Rectification
- Power Management
- Instrumentation

ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

SYMBOL	PARAMETER	VALUE	UNIT
V_{RRM} V_{RWM} V_R	Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	400	V
$I_{F(AV)}$	Average Rectified Forward Current	20	A
I_{FSM}	Nonrepetitive Peak Surge Current@45℃ (Surge applied at rated load conditions half-wave, single phase, 60Hz)	150	A
T_J	Junction Temperature	175	℃
T_{stg}	Storage Temperature Range	-65~175	℃

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j\text{-}c}$	Thermal Resistance,Junction to Case	5.0	℃/W

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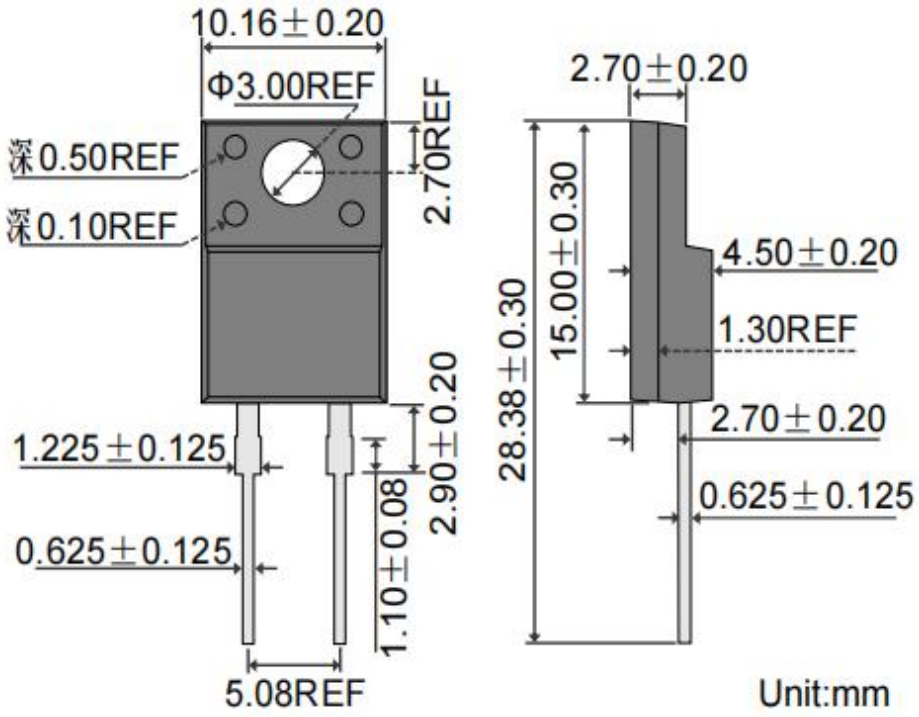
ELECTRICAL CHARACTERISTICS(T_a=25℃) (Pulse Test: Pulse Width=300 μ s,Duty Cycle≤2%)

SYMBOL	PARAMETER	CONDITIONS	MAX	UNIT
V_{F*}	Maximum Instantaneous Forward Voltage	I_F= 20A ;Tj= 25℃ I_F= 20A ;Tj= 125℃	1.7 1.35	V
I_{R*}	Maximum Instantaneous Reverse Current	V_R= V_{RWM} V_R= $V_{RWM;}$Tj=125℃	20 200	μ A
t_{rr}	Maximum Reverse Recovery Time	I_F= 0.5A, I_R=1.0A,Irr=0.25A	35	ns



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