

Ultrafast Recovery Rectifier

STTH506B

FEATURES

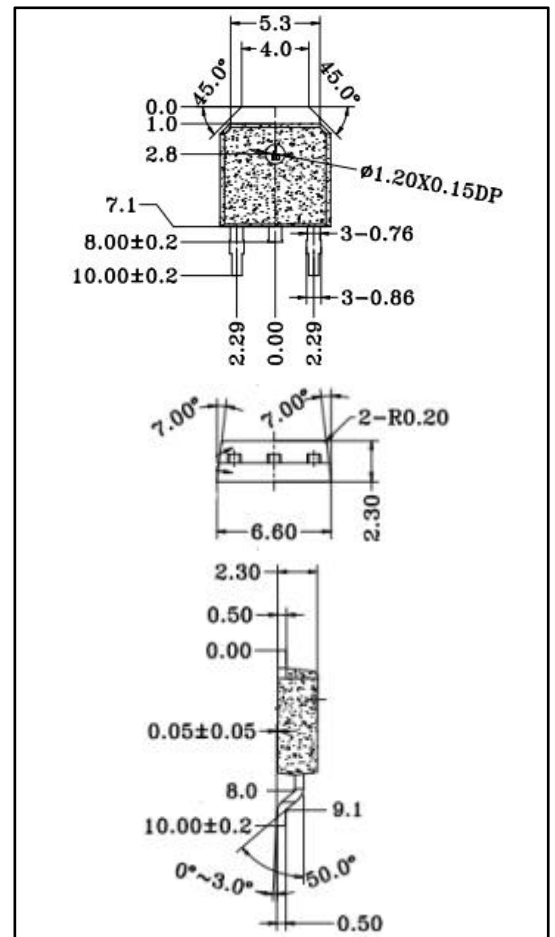
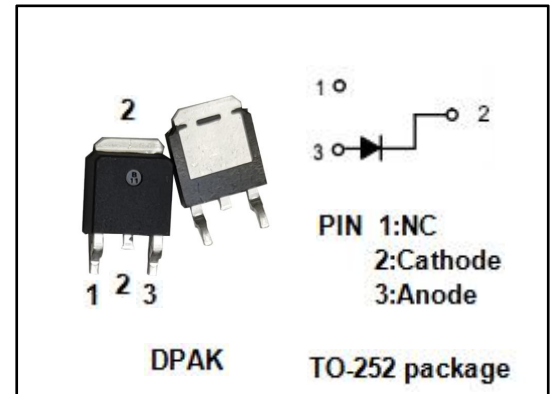
- Ultrafast Recovery Time
- Low Forward Voltage
- Low Leakage Current
- 175°C Operating Junction Temperature
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

- Switching power supplies
- Power switching circuits
- General purpose

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{RRM} V_{RWM} V_R	Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	600	V
$I_{F(AV)}$	Average Rectified Forward Current (Rated V_R)	5	A
$I_{F(RMS)}$	RMS forward current	10	A
T_J	Junction Temperature	-65~175	°C
T_{stg}	Storage Temperature Range	-65~175	°C



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THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	3.5	°C/W

ELECTRICAL CHARACTERISTICS

SYMBOL	PARAMETER	CONDITIONS	MAX	UNIT
V_F^*	Maximum Instantaneous Forward Voltage	$I_F = 5A, T_c = 25^\circ C$	1.85	V
		$I_F = 5A, T_c = 150^\circ C$	1.4	
I_R	Maximum Instantaneous Reverse Current	$V_{RRM} = 600V, T_c = 25^\circ C$	5	μA
		$V_{RRM} = 600V, T_c = 150^\circ C$	130	
t_{rr}	Maximum Reverse Recovery Time	$I_F = 0.5A, I_{rr} = 0.25A, I_R = 1A, T_j = 25^\circ C$	30	ns

*:Pulse test ,Pulse width=300us,duty cycle≤2%

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