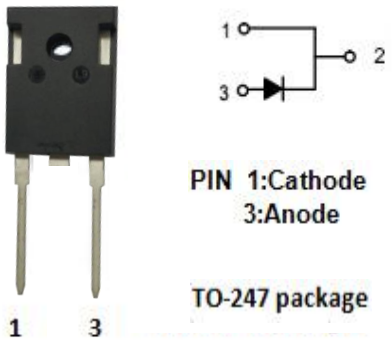
Ultrafast Rectifier

STTH30S12W

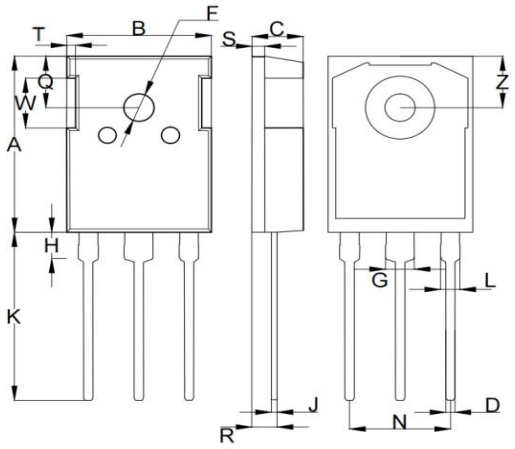


FEATURES

- 1200V blocking voltage
- Ultrafast, soft recovery
- Very low conduction and switching losses
- High frequency and/or high pulsed current operation
- High junction temperature
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

- This power rectifier is specifically designed for use as damper diode in horizontal deflection circuits for high and very high resolution monitors



DIM	mm	
	MIN	MAX
A	19.80	21.50
B	15.40	15.90
C	4.70	5.30
D	0.90	1.26
F	3.50	3.90
G	2.70	3.30
H	3.90	4.10
J	0.500	0.700
K	19.50	20.50
L	1.90	2.20
N	10.80	11.00
Q	6.00	6.30
R	2.90	3.30
S	1.80	2.20
T	2.15	2.35
W	4.90	5.10
Z	6.00	6.30

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	1200	V
$I_{F(AV)}$	Average Rectified Forward Current	30	A
I_{FSM}	Nonrepetitive Peak Surge Current (Surge applied at rated load conditions half-wave, single phase, 60Hz)	180	A
T_J	Junction Temperature	-65~175	℃
T_{stg}	Storage Temperature Range	-65~175	℃

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j\text{-}c}$	Thermal Resistance,Junction to Case	0.95	℃/W

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

SYMBOL	PARAMETER	CONDITIONS	TYP	MAX	UNIT
V_{F*}	Maximum Instantaneous Forward Voltage	I_F= 30A ;Tj=25℃ I_F= 5A ;Tj=150℃	2.9 1.9	-- 2.7	V
I_{R*}	Maximum Instantaneous Reverse Current	V_R= V_{RWM} V_R= $V_{RWM;}$Tj=150℃	-- --	15 600	μA
t_{rr}	Maximum Reverse Recovery Time	IF =1A;di/dt = 50A/μs	--	50	ns

*:Pulse test ,Pulse width=380us,duty cycle≤2%

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