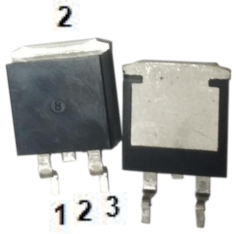
Ultrafast Rectifier

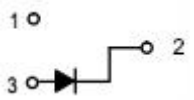
STTH3002G

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



D²PAK



PIN 1:NC
2:Cathode
3:Anode

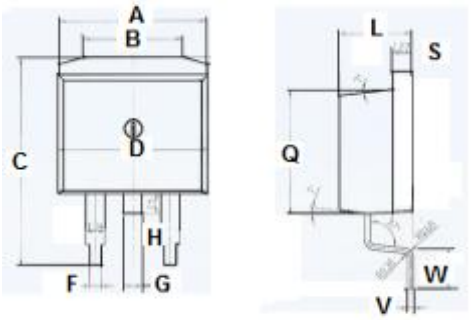
TO-263 package

APPLICATIONS

- Switching power supply
- Rectifier in switch mode supplies

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	200	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)	300	A
P_D	Maximum power dissipation	100	W
T_J	Junction Temperature	-65~175	℃
T_{stg}	Storage Temperature Range	-65~175	℃



DIM	mm	
	MIN	MAX
A	9.8	10.2
B	6.6	6.8
C	15.1	15.3
D	9.6	10
F	0.7	0.9
G	1.26	1.3
H	1.2	1.45
L	4.4	4.6
Q	9.2	9.3
S	1.25	1.35
V	0.4	0.6
W	2.6	2.8

Fast Recovery Rectifier STTH3002G

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j\text{-}c}$	Thermal Resistance,Junction to Case	1.2	℃/W

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

SYMBOL	PARAMETER	CONDITIONS	MAX	UNIT
V_F	Maximum Instantaneous Forward Voltage	I_F= 30A ;Tj=25℃	1.05	V
I_R	Maximum Instantaneous Reverse Current	V_R= $V_{RWM;}$Tj=25℃ V_R= $V_{RWM;}$Tj=125℃	20 200	μA
t_{rr}	Maximum Reverse Recovery Time	I_F=0.5A, I_R=1A, Irr=0.25A I_F=1A, V_R=30V, di_F/dt=200A/μs	50 50	ns

NOTICE：

ISC reserves the rights to make changes of the content herein the datasheet at any time without notification. The information contained herein is presented only as a guide for the applications of our products.

ISC products are intended for usage in general electronic equipment. The products are not designed for use in equipment which require specialized quality and/or reliability, or in equipment which could have applications in hazardous environments, aerospace industry, or medical field. Please contact us if you intend our products to be used in these special applications.

ISC makes no warranty or guarantee regarding the suitability of its products for any particular purpose, nor does ISC assume any liability arising from the application or use of any products, and specifically disclaims any and all liability, including without limitation special, consequential or incidental damages.