

Super-Fast Rectifier -- 20Amp 200Volt

◆ Features:

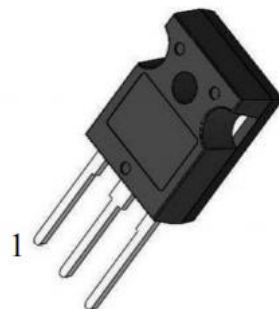
- ✧ Super fast recovery time. high voltage
快恢复时间，高电压
- ✧ Low forward voltage drop
正向压降低
- ✧ High efficiency and low power loss
高效低功耗
- ✧ High volume of current and good capability of surge current
大电流浪涌能力强

◆ Applications

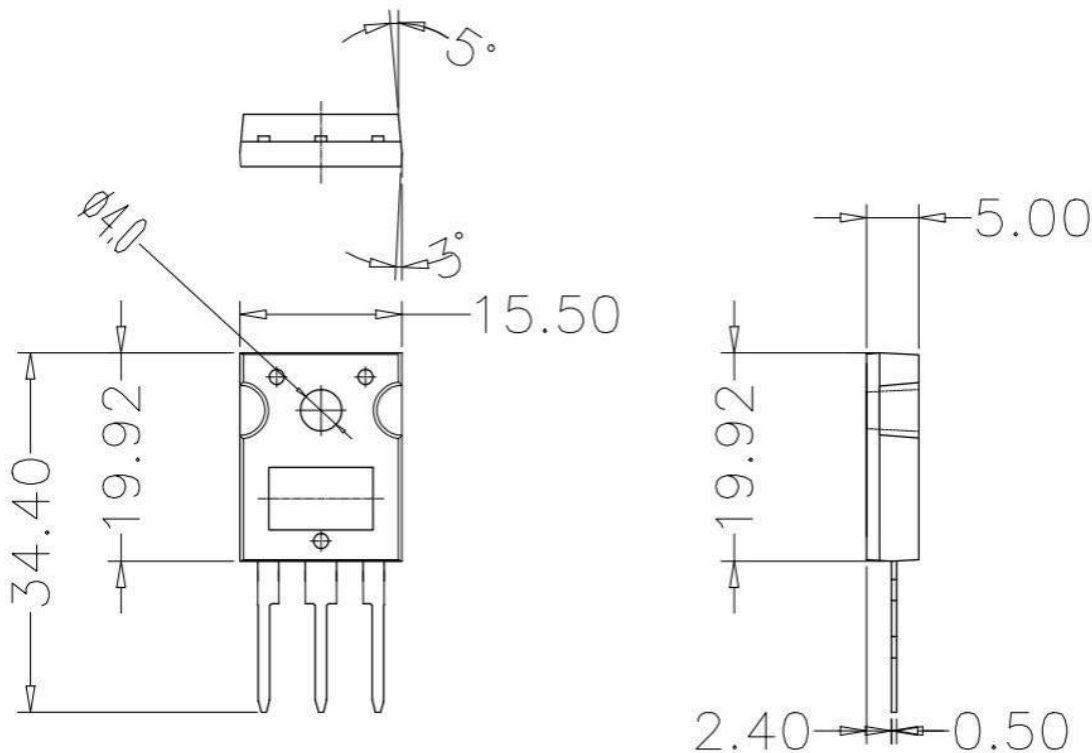
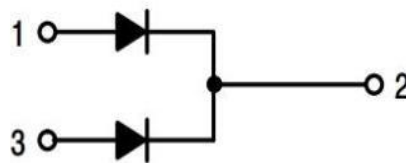
- ✧ High frequency rectifier of switching mode power supplies
高频整流器开关电源
- ✧ Freewheeling diodes
续流二极管
- ✧ Polarity protection application
极性保护应用
- ✧ DC-DC converters
直流-直流变换器



TO-247S



PIN CONNECTIONS



Super-Fast Rectifier -- 20Amp 200V

◆ Absolute Maximum Ratings (Tc=25°C)

Symbol	Parameters	Ratings	Unit
V_{RRM}	Repetitive Peak Reverse Voltage 最大反向重复峰值电压	200	V
V_{RWM}	Working peak reverse voltage 反向峰值工作电压	200	V
V_R	Maximum DC blocking voltage 最大直流反向电压	200	V
$I_F (AV)$	Maximum average forward rectified current Total device 最大正向平均电流	20	A
I_{FSM}	Peak Forward Surge Current 正向峰值浪涌电流	200	A
T_j	Operating junction temperature range 结温	175	°C
T_{stg}	Storage temperature range 贮存温度	-55~175	°C

◆ Electrical characteristics

Symbol	Parameters	Min	Typical	Max	Units	Conditions
I_R	Maximum Reverse Leakage Current (Note 1) 最大反向瞬态电流	--	--	2	μA	$V_R=200V, T_C=25\text{ }^{\circ}C$
V_F	Maximum Instantaneous Forward Voltage (Note 2) 最大瞬态正向压降	--	0.91	0.975	V	$I_F=20\text{ A}, T_C=25\text{ }^{\circ}C$
$R_{th(j-c)}$	Typical Thermal Resistance, Junction to Case 结到外壳的典型热阻	--	--	0.5	°C/W	
dV/dt	Voltage Rate of Change 电压变化率	--	--	10000	V/μs	
T_{rr}	Maximum Reverse recovery time 最大反转恢复时间	--	22	--	ns	$I_F=1A$ $V_R=30V,$ $di/dt=-200A/\mu s$

Note 1: 2.0μs Pulse Width, f=1.0KHz

Note 2: Pulse Test : 300μs Pulse Width, 1% Duty Cycle