

SBD
Schottky Barrier Diode, 200V, 2×5A
Description

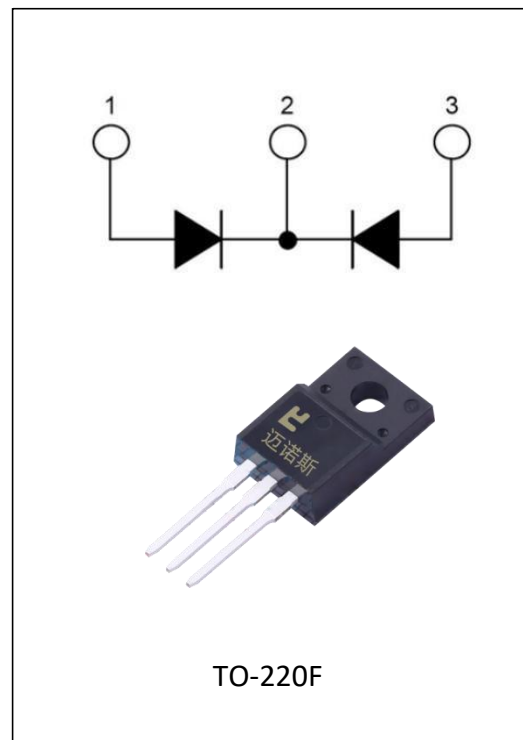
These diodes are optimized to get low forward voltage and low reverse leakage current. These devices are suited for high frequency switched mode power supplies.

General Features

- ① High ESD capability
- ② 150°C operating junction temperature
- ③ High frequency operation
- ④ Low IR value
- ⑤ High surge capacity

Application

- ① Switched mode power supply


Absolute Maximum Ratings

Parameter	Symbol	Test Conditions	Values	Units
Repetitive peak reverse voltage	V_{RRM}		200	V
Continuous forward current	$I_{F(AV)}$	$T_A=110^{\circ}\text{C}$	10	A
Single pulse forward current	I_{FSM}	$T_A=25^{\circ}\text{C}$	150	A
Maximum repetitive forward current	I_{FRM}	Square wave, 20kHz	25	A
Operating junction	T_j		150	$^{\circ}\text{C}$
Storage temperatures	T_{stg}		-55 to +175	$^{\circ}\text{C}$

Electrical characteristics ($T_A=25^{\circ}\text{C}$ unless otherwise specified)

Parameter	Symbol	Test Conditions	Min.	Typ.	Max.	Units
Breakdown voltage Blocking voltage	V_{BR} V_R	$I_R=100\mu\text{A}$	200			V
Forward voltage	V_F	$I_F=3.0\text{A}$		0.79	0.85	V
		$I_F=5.0\text{A}$		0.86	0.93	
		$I_F=3.0\text{A}, T_j=125^{\circ}\text{C}$		0.69	0.80	
		$I_F=5.0\text{A}, T_j=125^{\circ}\text{C}$		0.74	0.85	
Reverse leakage current	I_R	$V_R=V_{RRM}$			10	μA
		$T_j=125^{\circ}\text{C}, V_R=200\text{V}$			2000	μA

Thermal characteristics

Parameter	Symbol	Typ.	Max.	Units
Junction-to-Case	R_{thJC}	-	4.2	$^{\circ}\text{C}/\text{W}$

Characteristics Curves

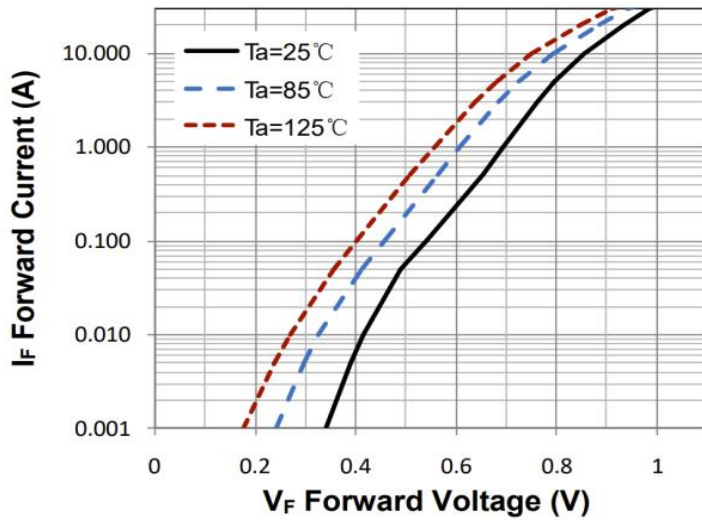


Figure 1. Forward Characteristic(typ.)

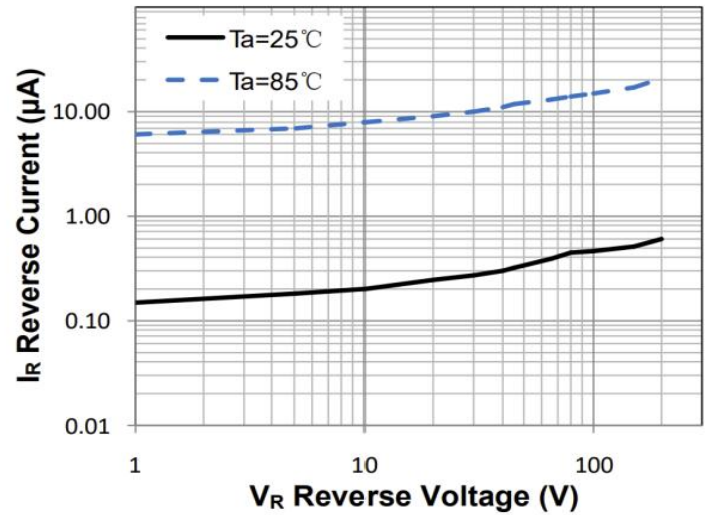
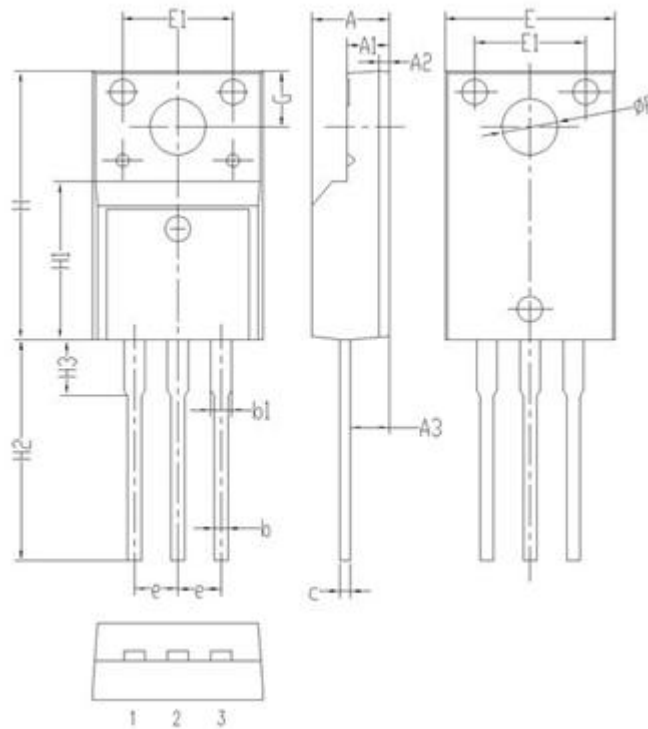


Figure 2. Reverse Characteristic (typ.)

Package Description



Symbol	Values(mm)	
	MIN	MAX
A	4.35	4.75
A1	2.30	2.70
A2	0.40	0.80
A3	2.10	2.50
b	0.60	1.00
b1	1.00	1.40
c	0.30	0.70
e	2.30	2.70
E	9.80	10.2
E1	6.30	6.70
H	15.6	16.0
H1	8.80	9.20
H2	12.9	13.5
H3	3.10	3.50
G	3.10	3.50
ϕp	3.10	3.50

TO-220F Package



迈诺斯科技

MBRF10200CT

NOTE:

1. Exceeding the maximum ratings of the device in performance may cause damage to the device, even the permanent failure, which may affect the dependability of the machine. Please do not exceed the absolute maximum ratings of the device when circuit designing.
2. When installing the heat sink, please pay attention to the torsional moment and the smoothness of the heat sink.
3. MOSFETs is the device which is sensitive to the static electricity, it is necessary to protect the device from being damaged by the static electricity when using it.
4. Shenzhen Minos reserves the right to make changes in this specification sheet and is subject to change without prior notice.

CONTACT:

深圳市迈诺斯科技有限公司（总部）

地址：深圳市福田区华富街道田面社区深南中路4026号田面城市大厦22B-22C

邮编：518025

电话：0755-83273777