

SBD

Schottky Barrier Diode, 45V, 2×15A

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.

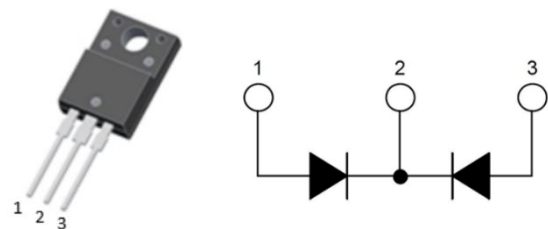
Features:

- High ESD capability
- 150°C operating junction temperature
- High frequency operation
- Low IR value
- High surge capacity

Product Summary	
V_R	45 V
$I_{F(AV)}$	2×15 A

Applications:

- Switched mode power supply



Absolute Maximum Ratings

Parameter		Symbol	Test Conditions	Values	Units
Repetitive peak reverse voltage		V_{RRM}		45	V
Continuous forward current	Per device	$I_{F(AV)}$	$T_A=110^\circ\text{C}$	15	A
	Per diode			30	
Single pulse forward current		I_{FSM}	$T_A=25^\circ\text{C}$	120	A
Maximum repetitive forward current		I_{FRM}	Square wave, 20kHz	30	A
Operating junction		T_j		150	$^\circ\text{C}$
Storage temperatures		T_{stg}		-55 to +150	$^\circ\text{C}$

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

Parameter	Symbol	Test Conditions	Min.	Typ.	Max.	Units
Breakdown voltage	V_{BR}	$I_R=100\mu\text{A}$	45			V
Blocking voltage	V_R					
Forward voltage	V_F	$I_F=10\text{A}$		0.55	0.60	V
		$I_F=15\text{A}$		0.61	0.70	
		$I_F=10\text{A}, T_j=125^\circ\text{C}$		0.50	0.55	
		$I_F=15\text{A}, T_j=125^\circ\text{C}$		0.55	0.65	
Reverse leakage current	I_R	$V_R=V_{RRM}$			50	μA
		$T_j=125^\circ\text{C}, V_R=45\text{V}$			20	mA

Thermal characteristics

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

Typical Characteristics

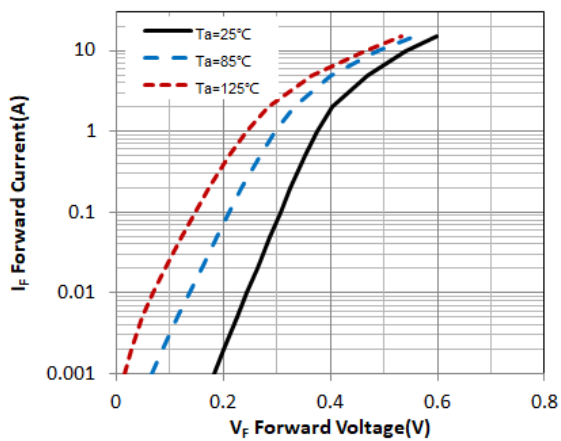


Figure 1. Forward Characteristic (typ.)

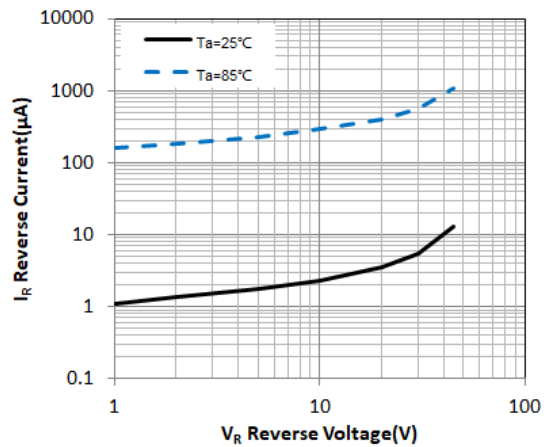
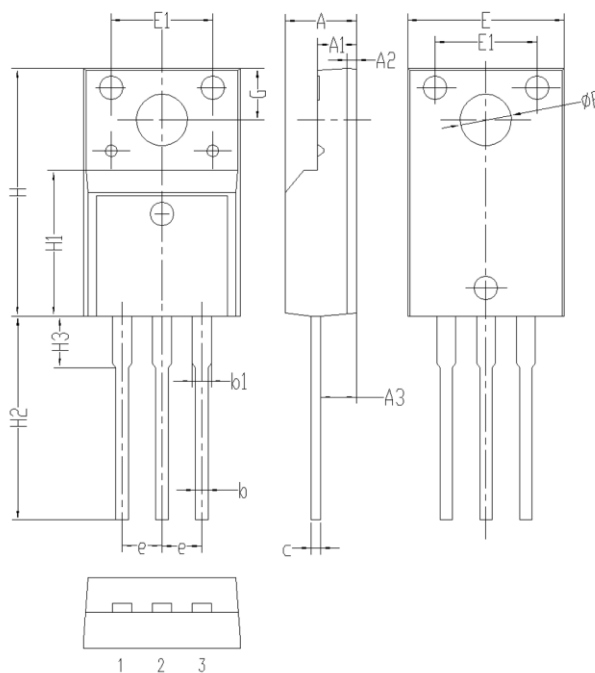


Figure 2. Reverse Characteristic (typ.)

Package Information

TO-220F PACKAGE



Symbol	Dimensions (millimeters)	
	Min.	Max.
A	4.60	5.00
A1	2.40	2.80
A2	0.60	1.00
A3	2.50	2.90
b	0.70	0.90
b1	1.20	1.60
c	0.40	0.60
e	2.34	2.74
E	9.85	10.45
E1	6.80	7.20
H	15.80	16.20
H1	9.00	9.40
H2	12.70	13.30
H3	3.10	3.50
G	2.80	3.20
ΦP	3.00	3.40