

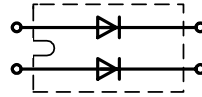
# Power Schottky Rectifier

$$I_{FAV} = 2x120 \text{ A}$$

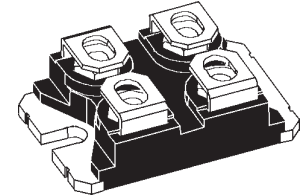
$$V_{RRM} = 45 \text{ V}$$

$$V_F = 0.59 \text{ V}$$

$V_{RSM}$	$V_{RRM}$	Type
V	V	
45	45	DSS 2x121-0045B



miniBLOC, SOT-227 B



Symbol	Conditions	Maximum Ratings	
$I_{FRMS}$		150	A
$I_{FAVM}$	$T_C = 100^\circ\text{C}$ ; rectangular, $d = 0.5$	120	A
$I_{FAVM}$	$T_C = 100^\circ\text{C}$ ; rectangular, $d = 0.5$ ; per device	240	A
$I_{FSM}$	$T_{VJ} = 45^\circ\text{C}$ ; $t_p = 10 \text{ ms}$ (50 Hz), sine	1600	A
$E_{AS}$	$I_{AS} = 28 \text{ A}$ ; $L = 180 \mu\text{H}$ ; $T_{VJ} = 25^\circ\text{C}$ ; non repetitive	112	mJ
$I_{AR}$	$V_A = 1.5 \cdot V_{RRM}$ typ.; $f = 10 \text{ kHz}$ ; repetitive	2.8	A
$(dv/dt)_{cr}$		1000	V/ $\mu\text{s}$
$T_{VJ}$		-40...+150	$^\circ\text{C}$
$T_{VJM}$		150	$^\circ\text{C}$
$T_{stg}$		-40...+150	$^\circ\text{C}$
$P_{tot}$	$T_C = 25^\circ\text{C}$	310	W
$V_{ISOL}$	50/60 Hz, RMS $I_{ISOL} \leq 1 \text{ mA}$	2500	V~
$M_d$	mounting torque (M4) terminal connection torque (M4)	1.1-1.5/9-13 1.1-1.5/9-13	Nm/lb.in. Nm/lb.in.
Weight	typical	30	g

Symbol	Conditions	Characteristic Values	
		typ.	max.
$I_R$ ①	$T_{VJ} = 25^\circ\text{C}$ $V_R = V_{RRM}$ $T_{VJ} = 100^\circ\text{C}$ $V_R = V_{RRM}$	120	mA
		500	mA
$V_F$	$I_F = 120 \text{ A}$ ; $T_{VJ} = 125^\circ\text{C}$	0.59	V
	$I_F = 120 \text{ A}$ ; $T_{VJ} = 25^\circ\text{C}$	0.62	V
	$I_F = 240 \text{ A}$ ; $T_{VJ} = 125^\circ\text{C}$	0.97	V
$R_{thJC}$		0.4	K/W
$R_{thCH}$	0.1		K/W

## Features

- International standard package miniBLOC
- Isolation voltage 2500 V~
- UL registered E 72873
- 2 independent Schottky diodes in 1 package
- Very low  $V_F$
- Extremely low switching losses
- Low  $I_{RM}$ -values

## Applications

- Rectifiers in switch mode power supplies (SMPS)
- Free wheeling diode in low voltage converters

## Advantages

- High reliability circuit operation
- Low voltage peaks for reduced protection circuits
- Low noise switching
- Low losses

Dimensions see Outlines.pdf

Pulse test: ① Pulse Width = 5 ms, Duty Cycle < 2.0 %  
Data according to IEC 60747 and per diode unless otherwise specified

IXYS reserves the right to change limits, Conditions and dimensions.

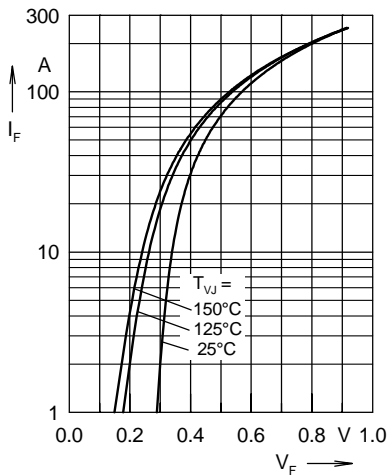


Fig. 1 Maximum forward voltage drop characteristics

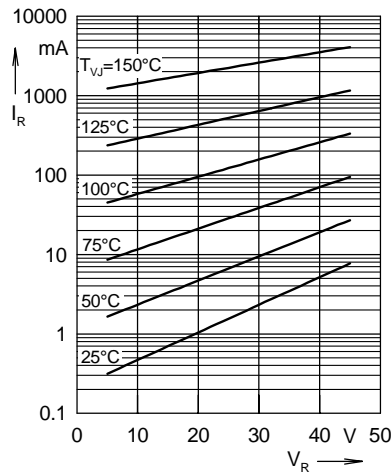


Fig. 2 Typ. value of reverse current  $I_R$  versus reverse voltage  $V_R$

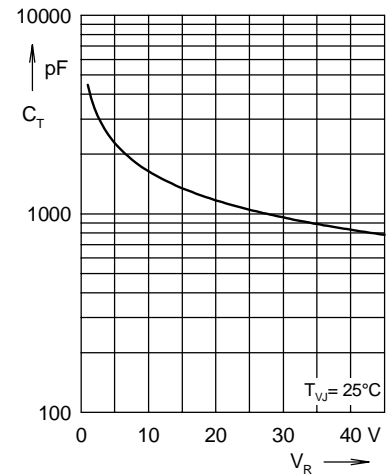


Fig. 3 Typ. junction capacitance  $C_T$  versus reverse voltage  $V_R$

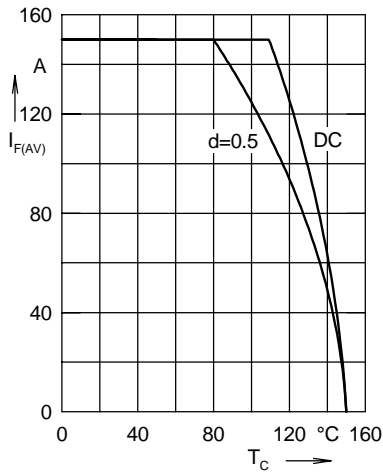


Fig. 4 Average forward current  $I_{F(AV)}$  versus case temperature  $T_C$

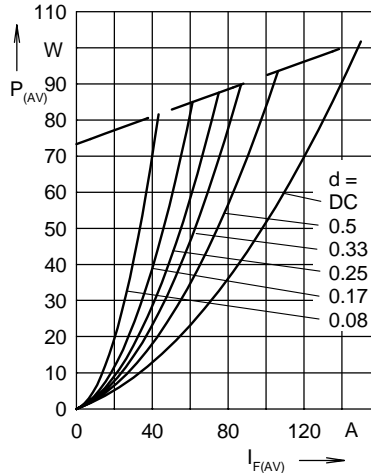


Fig. 5 Forward power loss characteristics

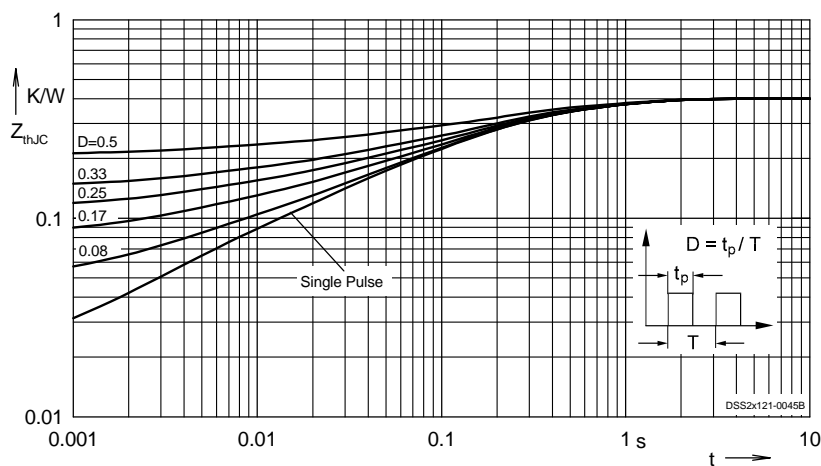


Fig. 6 Transient thermal impedance junction to case at various duty cycles

Note: All curves are per diode