

Power Schottky Rectifier

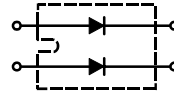
$$I_{FAV} = 2 \times 100 \text{ A}$$

$$V_{RRM} = 150 \text{ V}$$

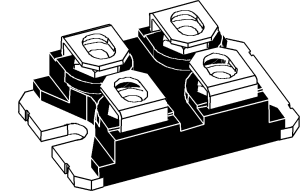
$$V_F = 0.78 \text{ V}$$

Preliminary Data

V_{RSM}	V_{RRM}	Type
V	V	
150	150	DSS 2x101-015A



miniBLOC, SOT-227 B



Symbol	Conditions	Maximum Ratings	
I_{FRMS}		150	A
I_{FAVM}	$T_C = 110^\circ\text{C}$; rectangular, $d = 0.5$	100	A
I_{FAVM}	$T_C = 110^\circ\text{C}$; rectangular, $d = 0.5$; per device	200	A
I_{FSM}	$T_{VJ} = 45^\circ\text{C}$; $t_p = 10 \text{ ms}$ (50 Hz), sine	1200	A
E_{AS}	$I_{AS} = \text{tbd A}$; $L = 180 \mu\text{H}$; $T_{VJ} = 25^\circ\text{C}$; non repetitive	tbd	mJ
I_{AR}	$V_A = 1.5 \cdot V_{RRM}$ typ.; $f = 10 \text{ kHz}$; repetitive	tbd	A
$(dv/dt)_{cr}$		18000	V/ μs
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	$T_{VJ} = 25^\circ\text{C}$ $V_R = V_{RRM}$ $T_{VJ} = 125^\circ\text{C}$ $V_R = V_{RRM}$	4	mA
		40	mA
V_F	$I_F = 100 \text{ A}$; $T_{VJ} = 125^\circ\text{C}$	0.78	V
	$I_F = 100 \text{ A}$; $T_{VJ} = 25^\circ\text{C}$	0.90	V
	$I_F = 200 \text{ A}$; $T_{VJ} = 125^\circ\text{C}$	0.99	V
R_{thJC}		0.4	K/W
R_{thCH}	0.1		K/W

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.

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

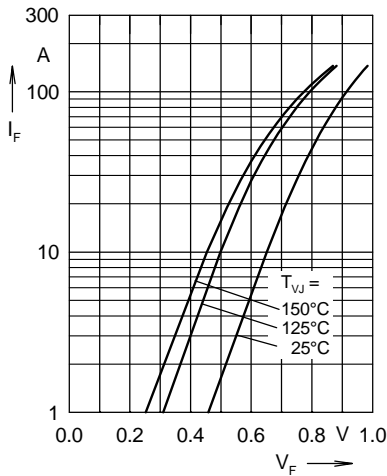


Fig. 1 Maximum forward voltage drop characteristics

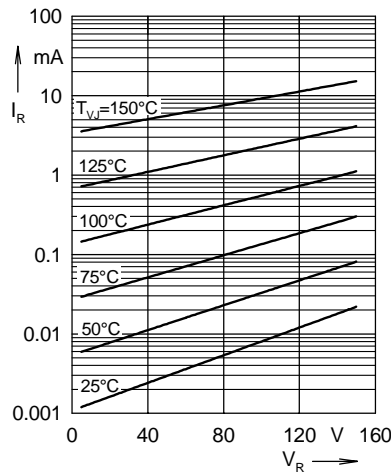


Fig. 2 Typ. value of reverse current I_R versus reverse voltage V_R

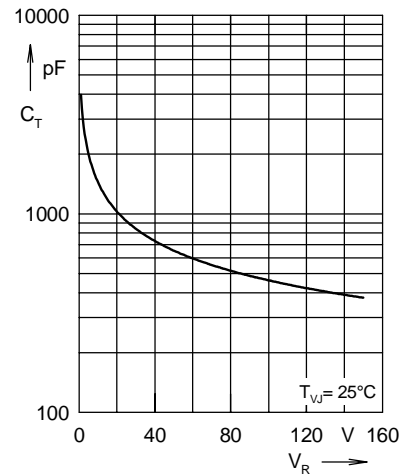


Fig. 3 Typ. junction capacitance C_T versus reverse voltage V_R

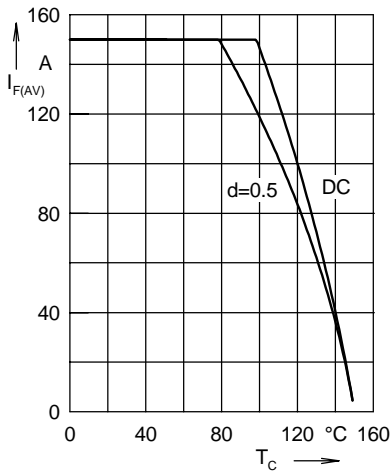


Fig. 4 Average forward current $I_{F(AV)}$ versus case temperature T_C

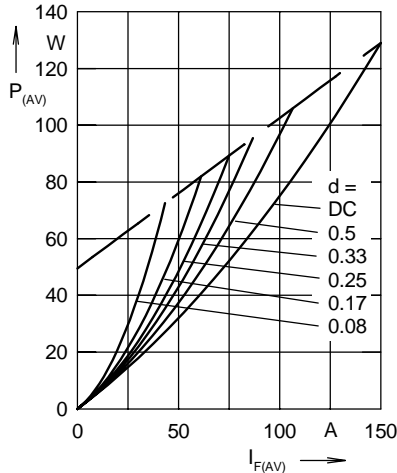


Fig. 5 Forward power loss characteristics

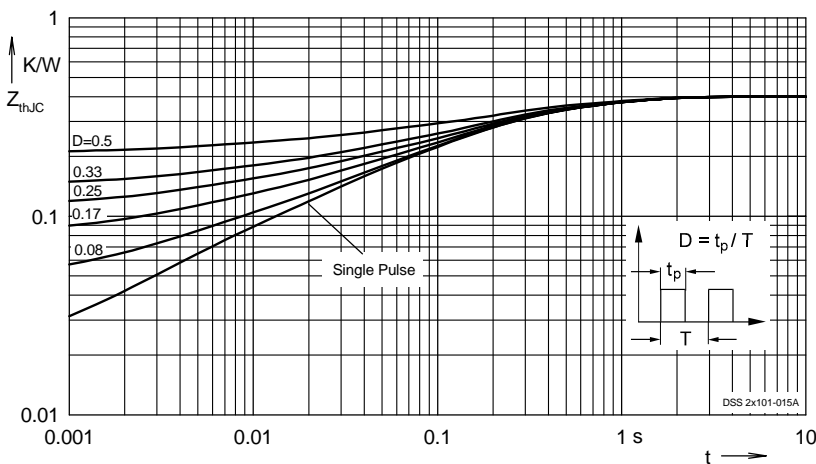


Fig. 6 Transient thermal impedance junction to case at various duty cycles

Note: All curves are per diode