

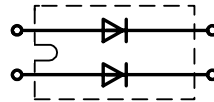
Power Schottky Rectifier

$$I_{FAV} = 2 \times 40 \text{ A}$$

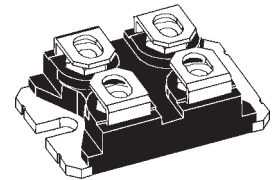
$$V_{RRM} = 100 \text{ V}$$

$$V_F = 0.70 \text{ V}$$

V_{RSM}	V_{RRM}	Type
V	V	
100	100	DSS 2x41-01A



miniBLOC, SOT-227 B



Symbol	Conditions	Maximum Ratings	
I_{FRMS}		70	A
I_{FAVM}	$T_C = 110^\circ\text{C}$; rectangular, $d = 0.5$	40	A
I_{FAVM}	$T_C = 110^\circ\text{C}$; rectangular, $d = 0.5$; per device	80	A
I_{FSM}	$T_{VJ} = 45^\circ\text{C}$; $t_p = 10 \text{ ms}$ (50 Hz), sine	450	A
E_{AS}	$I_{AS} = 10 \text{ A}$; $L = 100 \mu\text{H}$; $T_{VJ} = 25^\circ\text{C}$; non repetitive	5	mJ
I_{AR}	$V_A = 1.5 \cdot V_{RRM}$ typ.; $f = 10 \text{ kHz}$; repetitive	1	A
$(dv/dt)_{cr}$		5000	V/ μs
T_{VJ}		-40...+150	$^\circ\text{C}$
T_{VJM}		150	$^\circ\text{C}$
T_{stg}		-40...+150	$^\circ\text{C}$
P_{tot}	$T_C = 25^\circ\text{C}$	115	W
V_{ISOL}	50/60 Hz, RMS $I_{ISOL} \leq 1 \text{ mA}$	2500	V~
M_d	mounting torque (M4)	1.1-1.5/9-13	Nm/lb.in.
	terminal connection torque (M4)	1.1-1.5/9-13	Nm/lb.in.
Weight	typical	30	g

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

Symbol	Conditions	Characteristic Values	
		typ.	max.
I_R ①	$V_R = V_{RRM}$; $T_{VJ} = 25^\circ\text{C}$		1 mA
	$V_R = V_{RRM}$; $T_{VJ} = 125^\circ\text{C}$		10 mA
V_F	$I_F = 40 \text{ A}$; $T_{VJ} = 125^\circ\text{C}$		0.70 V
	$I_F = 40 \text{ A}$; $T_{VJ} = 25^\circ\text{C}$		0.88 V
	$I_F = 80 \text{ A}$; $T_{VJ} = 125^\circ\text{C}$		0.88 V
R_{thJC}		1.1	K/W
R_{thCH}	0.1		K/W

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.

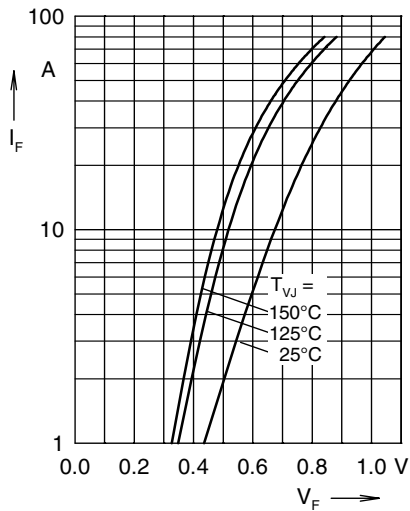


Fig. 1 Max. forward voltage drop characteristics

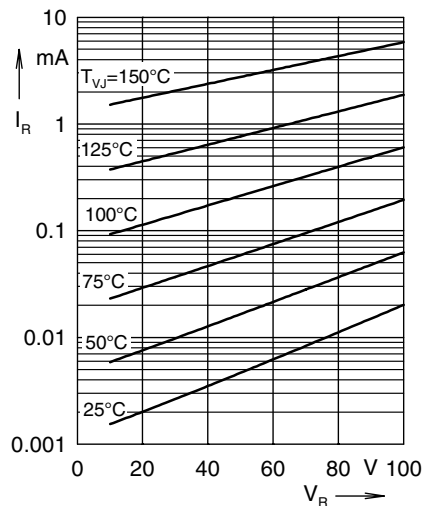


Fig. 2 Typ. reverse current I_R versus reverse voltage

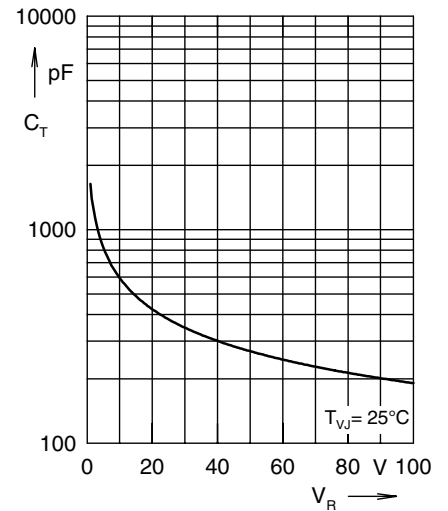


Fig. 3 Typ. junction capacitance C_T vs. reverse voltage V_R

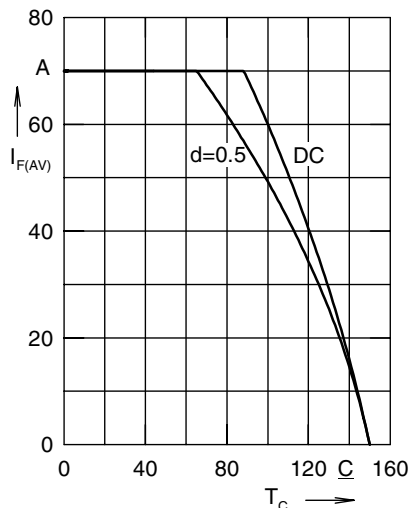


Fig. 4 Avg. forward current $I_{F(AV)}$ vs. case temperature T_C

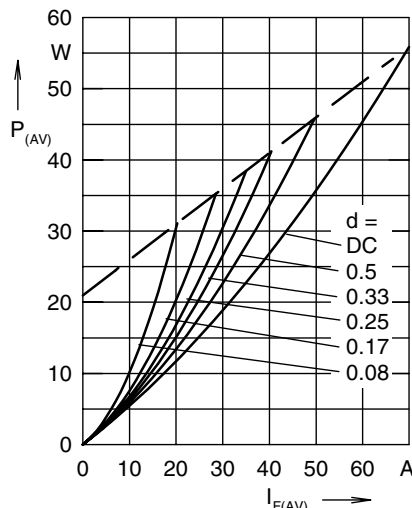


Fig. 5 Forward power loss characteristics

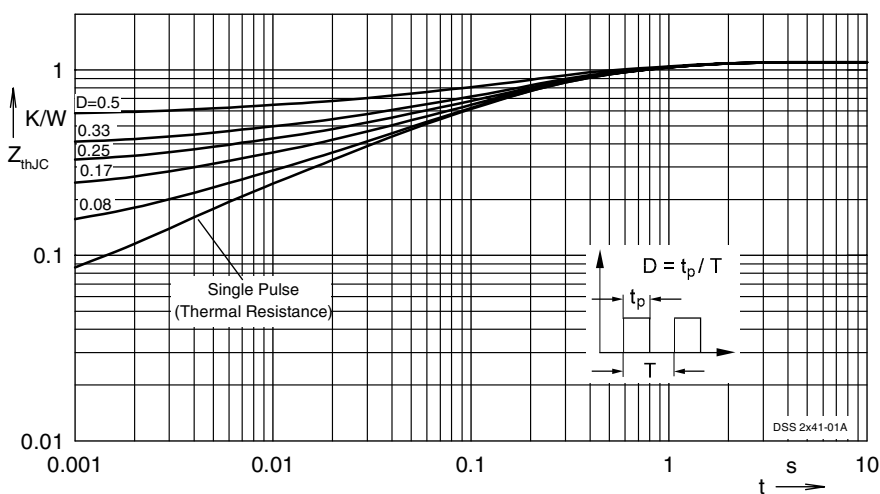


Fig. 6 Transient thermal impedance junction to case at various duty cycles

Note: All curves are per diode