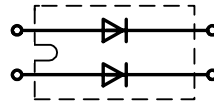


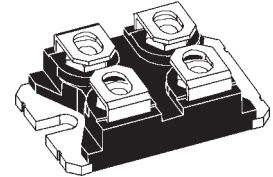
Power Schottky Rectifier

$I_{FAV} = 2x40 \text{ A}$
 $V_{RRM} = 100 \text{ V}$
 $V_F = 0.70 \text{ V}$

| 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.

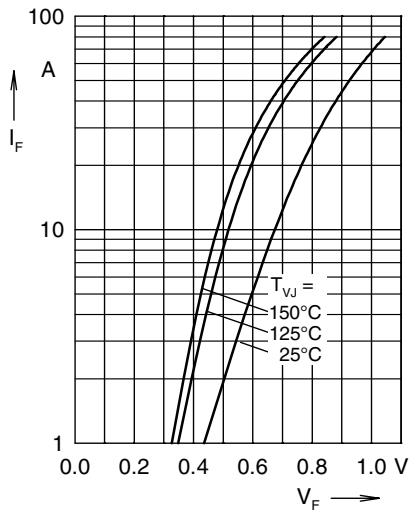


Fig. 1 Max. forward voltage drop characteristics

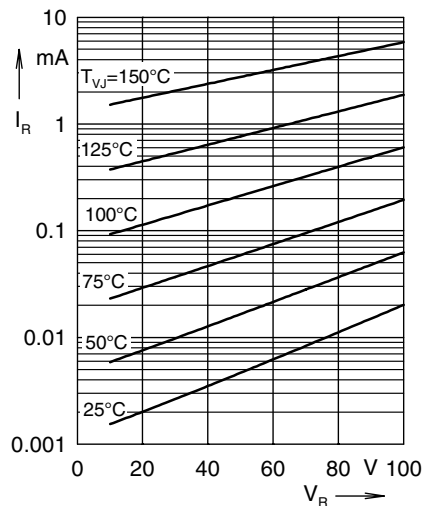


Fig. 2 Typ. reverse current I_R versus reverse voltage

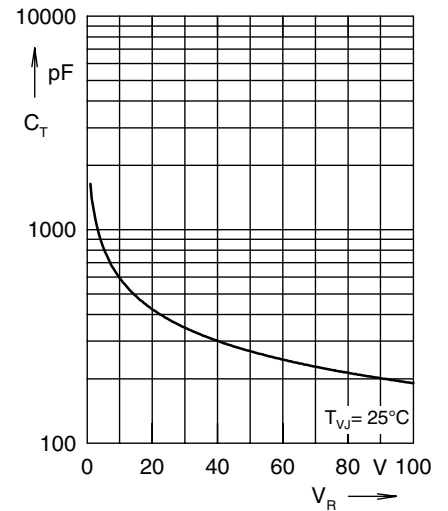


Fig. 3 Typ. junction capacitance C_T vs. reverse voltage V_R

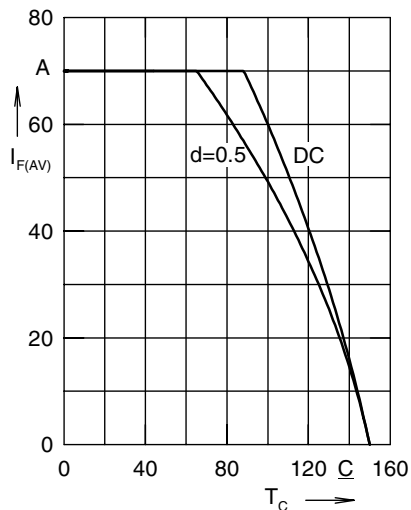


Fig. 4 Avg. forward current $I_{F(AV)}$ vs. case temperature T_C

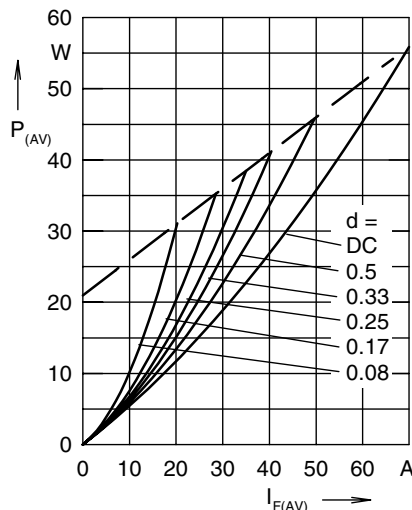


Fig. 5 Forward power loss characteristics

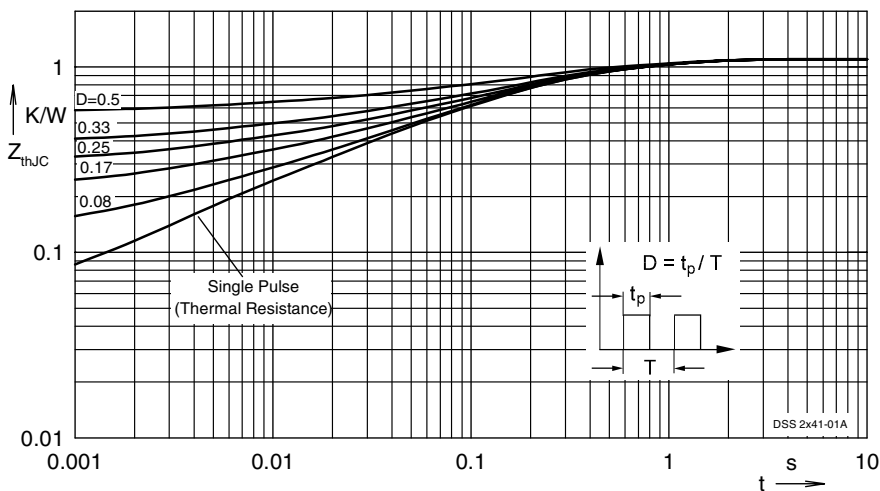


Fig. 6 Transient thermal impedance junction to case at various duty cycles

Note: All curves are per diode