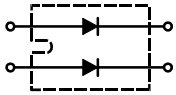
Power Schottky Rectifier

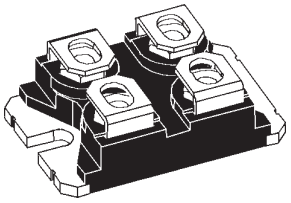
I_{FAVM} = 2x110 A
V_{RRM} = 80 V
V_F = 0.72 V

Preliminary data

V_{RSM} V	V_{RRM} V	Type
80	80	DSS 2x111-008A



miniBLOC, SOT-227 B



Symbol	Conditions	Maximum Ratings	
I_{FRMS}		150	A
I_{FAVM}	T_C = 105°C; rectangular, d = 0.5	110	A
I_{FAVM}	T_C = 105°C; rectangular, d = 0.5; per device	220	A
I_{FSM}	T_{VJ} = 45°C; t_p = 10 ms (50 Hz), sine	1400	A
E_{AS}	I_{AS} = 14; L = 180 µH; T_{VJ} = 25°C; non repetitive	19	mJ
I_{AR}	V_A =1.5 • V_{RRM} typ.; f=10 kHz; repetitive	1.4	A
$(dv/dt)_{cr}$		tbd	V/µs
T_{VJ}		-40...+150	°C
T_{VJM}		150	°C
T_{stg}		-40...+150	°C
P_{tot}	T_C = 25°C	310	W
V_{ISOL}	I_{ISOL} ≤ 1 mA; 50/60 Hz; t = 1 min	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

Symbol	Conditions	Characteristic Values typ.	max.	
I_R ①	T_{VJ} = 25°C; V_R = V_{RRM}		8	mA
	T_{VJ} = 125°C; V_R = V_{RRM}		20	mA
V_F	I_F = 100 A; T_{VJ} = 125°C		0.72	V
	T_{VJ} = 25°C		0.84	V
	I_F = 200 A; T_{VJ} = 125°C		0.94	V
R_{thJC}			0.4	K/W
R_{thCH}		0.15		K/W

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

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

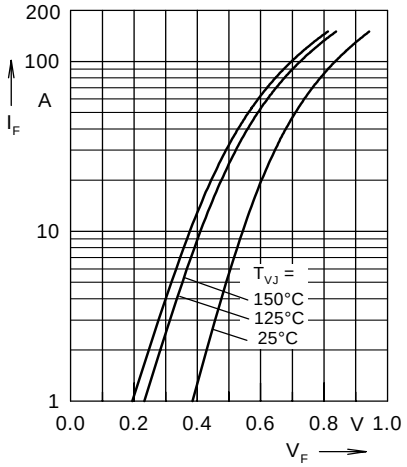


Fig. 1 Maximum forward voltage drop characteristics

Note: All curves are per diode.
Curves 2 and 5 will follow.

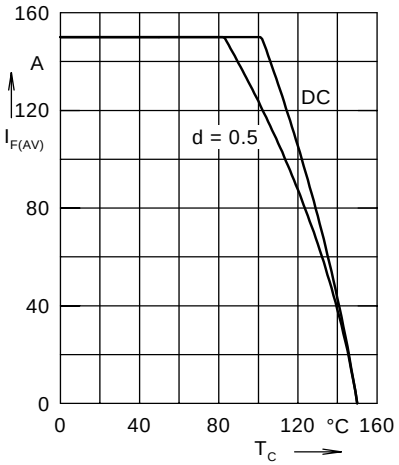


Fig. 3 Average forward current $I_{F(AV)}$ versus case temperature T_C

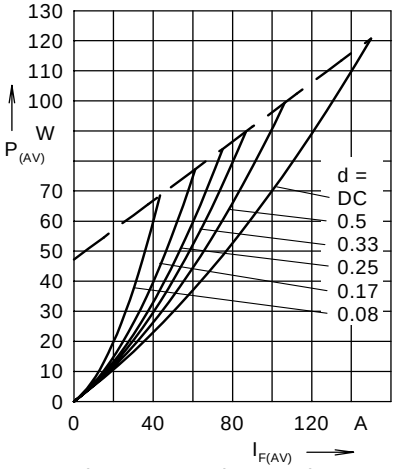


Fig. 4 Forward power loss characteristics

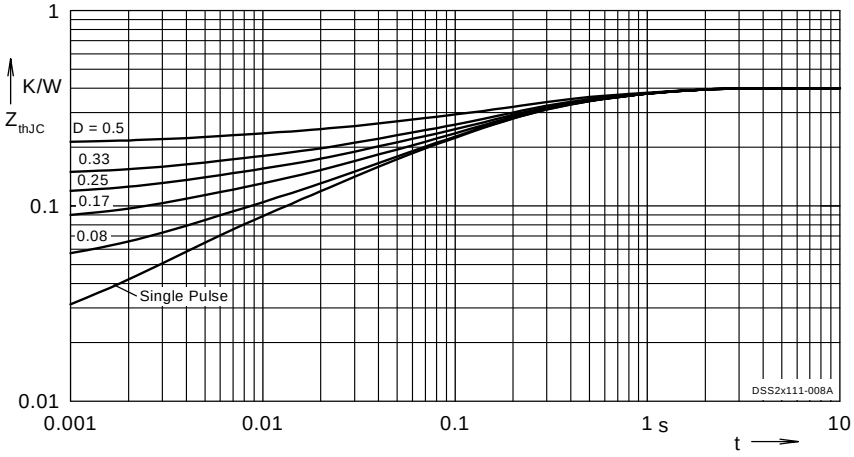


Fig. 6 Transient thermal impedance junction to case at various duty cycles