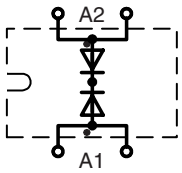
Power Schottky Rectifier

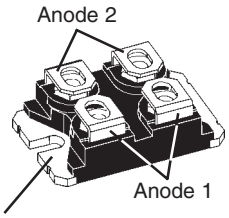
Non isolated

I_{FAVM} = 2x160 A
V_{RRM} = 100 V
V_F = 0.81 V

V_{RSM} V	V_{RRM} V	Type
100	100	DSS 2x160-01A



miniBLOC, SOT-227 B



Symbol	Conditions	Maximum Ratings	
I_{FRMS}		200	A
I_{FAVM}	T_C = 95°C; rectangular, d = 0.5	160	A
I_{FAVM}	T_C = 95°C; rectangular, d = 0.5; per device	320	A
I_{FSM}	T_{VJ} = 45°C; t_p = 10 ms (50 Hz), sine	1400	A
E_{AS}	I_{AS} = 15 A; L = 100 µH; T_{VJ} = 25°C; non repetitive	11.3	mJ
I_{AR}	V_A =1.5 • V_{RRM} typ.; f=10 kHz; repetitive	1.5	A
$(dv/dt)_{cr}$		5000	V/µs
T_{VJ}		-40...+150	°C
T_{VJM}		150	°C
T_{stg}		-40...+150	°C
P_{tot}	T_C = 25°C	410	W
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	$V_R = V_{RRM}$; T_{VJ} = 25°C		4	mA
	$V_R = V_{RRM}$; T_{VJ} = 125°C		40	mA
V_F	I_F = 160 A; T_{VJ} = 125°C		0.81	V
	I_F = 160 A; T_{VJ} = 25°C		0.98	V
	I_F = 320 A; T_{VJ} = 125°C		1.08	V
R_{thJC}			0.30	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
- Epoxy meets UL 94V-0
- 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

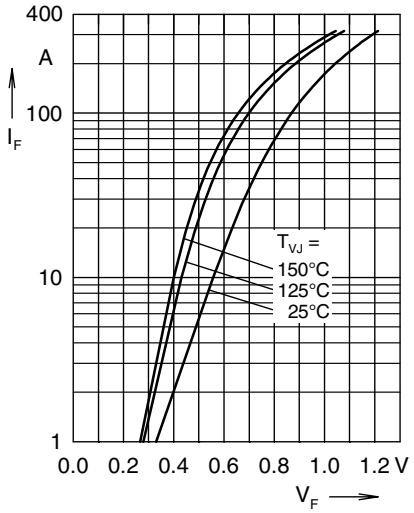


Fig. 1 Max. forward voltage drop characteristics

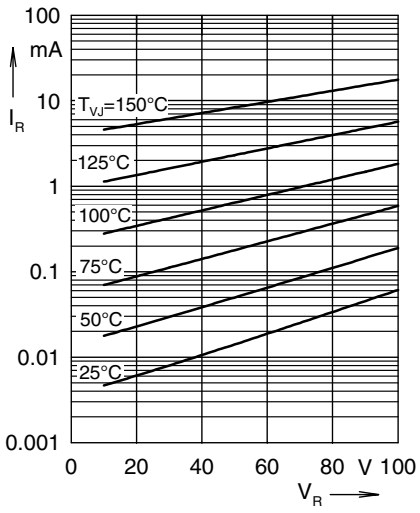


Fig. 2 Typ. reverse current I_R vs. reverse voltage V_R

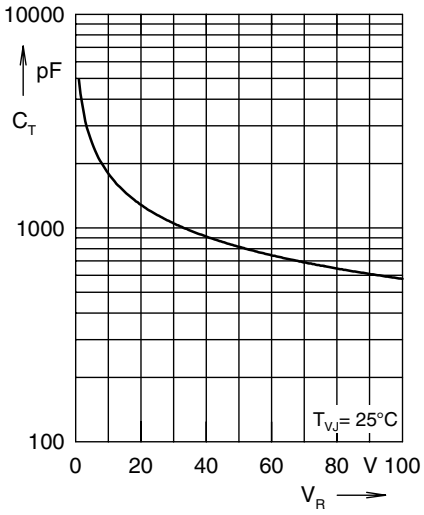


Fig. 3 Typ. junction capacitance C_T versus reverse voltage V_R

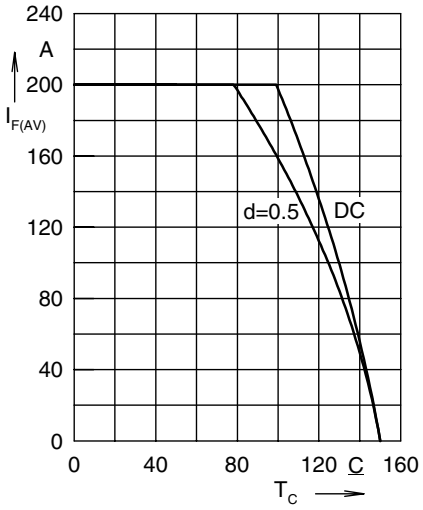


Fig. 4 Avg. forward current $I_{F(AV)}$ vs. case temperature T_C

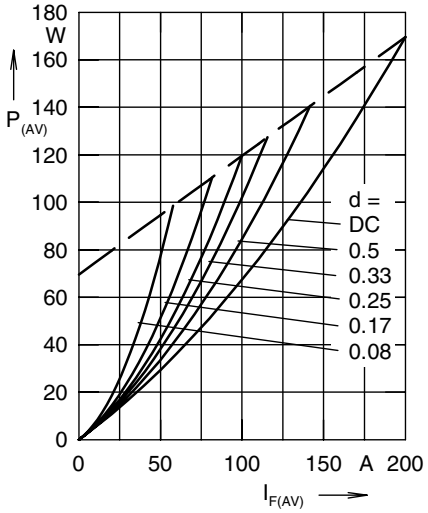


Fig. 5 Forward power loss characteristics

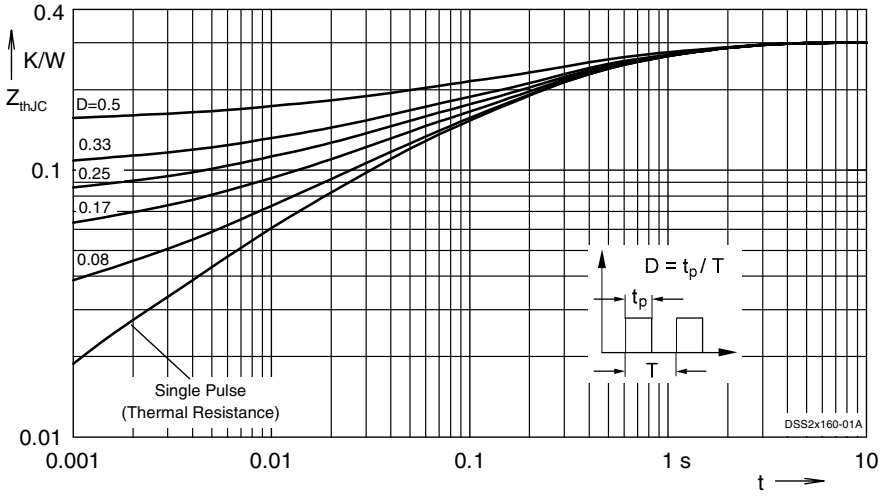


Fig. 6 Transient thermal impedance junction to case at various duty cycles

Note: All curves are per diode

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