

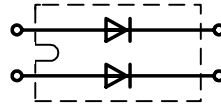
Fast Recovery Epitaxial Diode (FRED)

$$V_{RRM} = 1800 \text{ V}$$

$$I_{FAVM} = 2 \times 60 \text{ A}$$

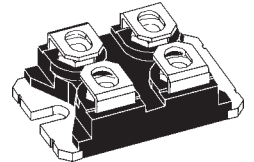
$$t_{rr} = 350 \text{ ns}$$

V_{RSM}	V_{RRM}	Type
V	V	
1800	1800	DH 2x 61-18A



miniBLOC, SOT-227 B

E72873



Symbol	Conditions	Maximum Ratings	
$I_{F(RMS)}$	$T_{VJ} = T_{VJM}$	100	A
$I_{F(AVM)}$	$T_C = 25^\circ\text{C}$; rectangular, $d = 0.5$	60	A
I_{FSM}	$T_{VJ} = 45^\circ\text{C}$; $t = 10 \text{ ms}$ (50 Hz), sine	650	A
E_{AS}	$T_{VJ} = 25^\circ\text{C}$; non-repetitive $I_{AS} = \text{tbd A}$; $L = 100 \mu\text{H}$	tbd	mJ
I_{AR}	$V_A = 1.25 \cdot V_R$ typ.; $f = 10 \text{ kHz}$; repetitive	tbd	A
T_{VJ}		-40...+150	$^\circ\text{C}$
T_{VJM}		150	$^\circ\text{C}$
T_{stg}		-40...+150	$^\circ\text{C}$
P_{tot}	$T_C = 25^\circ\text{C}$	200	W
V_{ISOL}	50/60 Hz, RMS; $I_{ISOL} \leq 1 \text{ mA}$	2500	V~
M_d	Mounting torque	1.1-1.5	Nm
	Terminal connection torque (M4)	1.1-1.5	Nm
Weight		30	g

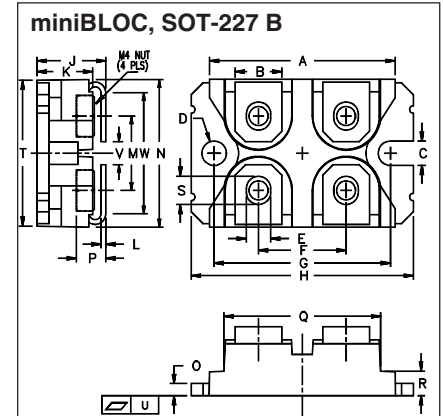
Features

- International standard package
- miniBLOC (ISOTOP compatible)
- Isolation voltage 2500 V~
- matched diodes f. parallel operation
- Planar passivated chips
- two independent diodes
- Very short recovery time
- Extremely low switching losses
- Low I_{RM} -values
- Soft recovery behaviour

Symbol	Conditions	Characteristic Values	
		typ.	max.
I_R	$V_R = V_{RRM}$; $T_{VJ} = 25^\circ\text{C}$		200 μA
	$V_R = V_{RRM}$; $T_{VJ} = 125^\circ\text{C}$		2 mA
V_F	$I_F = 60 \text{ A}$; $T_{VJ} = 150^\circ\text{C}$		2.61 V
	$I_F = 60 \text{ A}$; $T_{VJ} = 25^\circ\text{C}$		2.63 V
R_{thJC}		0.1	0.6 K/W
R_{thCH}			K/W
t_{rr}	$I_F = 100 \text{ A}$; $-di/dt = 600 \text{ A}/\mu\text{s}$;	350	ns
I_{RM}	$V_R = 1200 \text{ V}$; $T_{VJ} = 125^\circ\text{C}$	55	A

Pulse test: ① Pulse Width = 5 ms, Duty Cycle < 2.0 %
 ② Pulse Width = 300 μs , Duty Cycle < 2.0 %

Data according to IEC 60747 and per diode unless otherwise specified.



M4 screws (4x) supplied

Dim.	Millimeter		Inches	
	Min.	Max.	Min.	Max.
A	31.50	31.88	1.240	1.255
B	7.80	8.20	0.307	0.323
C	4.09	4.29	0.161	0.169
D	4.09	4.29	0.161	0.169
E	4.09	4.29	0.161	0.169
F	14.91	15.11	0.587	0.595
G	30.12	30.30	1.186	1.193
H	37.80	38.20	1.489	1.505
J	11.68	12.22	0.460	0.481
K	8.92	9.60	0.351	0.378
L	0.76	0.84	0.030	0.033
M	12.60	12.85	0.496	0.506
N	25.15	25.42	0.990	1.001
O	1.98	2.13	0.078	0.084
P	4.95	5.97	0.195	0.235
Q	26.54	26.90	1.045	1.059
R	3.94	4.42	0.155	0.174
S	4.72	4.85	0.186	0.191
T	24.59	25.07	0.968	0.987
U	-0.05	0.1	-0.002	0.004
V	3.30	4.57	0.130	0.180
W	0.780	0.830	0.031	0.033

IXYS reserves the right to change limits, test conditions and dimensions