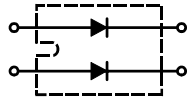
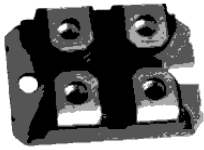
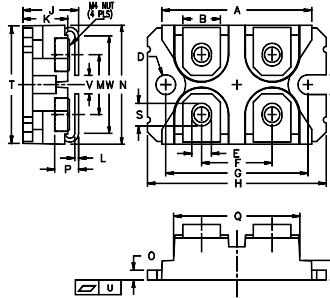


MBR2*120

Wide Temperature Range and High T_{jm} Schottky Barrier Rectifiers



Dimensions SOT-227(ISOTOP)



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

	V_{RSM}	V_{RRM}
	V	V
MBR2*120-30	30	30
MBR2*120-40	40	40
MBR2*120-45	45	45

Symbol	Test Conditions	Maximum Ratings	Unit
I_{FRMS}		150	
I_{FAVM}	$T_C=100^\circ\text{C}$; rectangular, $d=0.5$	120	A
I_{FAVM}	$T_C=100^\circ\text{C}$; rectangular, $d=0.5$; per device	240	
I_{FSM}	$T_{VJ}=45^\circ\text{C}$; $t_p=10\text{ms}$ (50Hz), sine	1800	A
E_{AS}	$I_{AS}=28\text{A}$; $L=180\mu\text{H}$; $T_{VJ}=25^\circ\text{C}$; non-repetitive	112	mJ
I_{AR}	$V_A=1.5 \cdot V_{RRM}$ typ.; $f=10\text{kHz}$; repetitive	2.8	A
$(dv/dt)_{cr}$		1000	V/us
T_{VJ}		-40...+150	$^\circ\text{C}$
T_{VJM}		150	
T_{stg}		-40...+150	
P_{tot}	$T_C=25^\circ\text{C}$	310	W
V_{ISOL}	50/60Hz, RMS; $I_{ISOL} \leq 1\text{mA}$	2500	V~
M_d	mounting torque (M4); terminal connection torque (M4)	1.1-1.5/9-13	Nm/lb.in.
Weight	typical	30	g

Symbol	Test Conditions	Characteristic Values		Unit
		typ.	max.	
I_R	$T_{VJ}=25^\circ\text{C}$; $V_R=V_{RRM}$ $T_{VJ}=100^\circ\text{C}$; $V_R=V_{RRM}$		120 500	mA
V_F	$I_F=120\text{A}$; $T_{VJ}=125^\circ\text{C}$ $I_F=120\text{A}$; $T_{VJ}=25^\circ\text{C}$ $I_F=240\text{A}$; $T_{VJ}=125^\circ\text{C}$		0.59 0.62 0.97	V
R_{thJC} R_{thCH}		0.1	0.4	K/W

FEATURES

- * International standard package miniBLOC
- * Isolation voltage 2500 V~
- * 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

MBR2*120

Wide Temperature Range and High T_{jm} Schottky Barrier Rectifiers

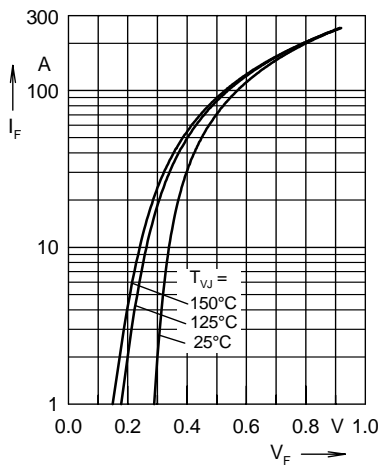


Fig. 1 Maximum forward voltage drop characteristics

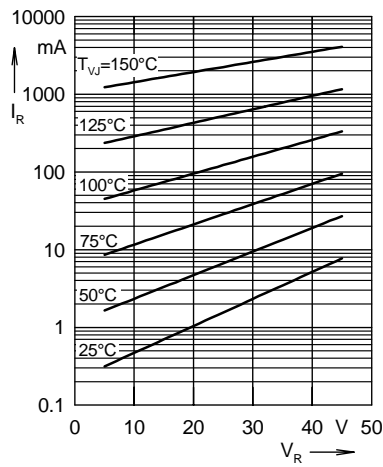


Fig. 2 Typ. value of reverse current I_R versus reverse voltage V_R

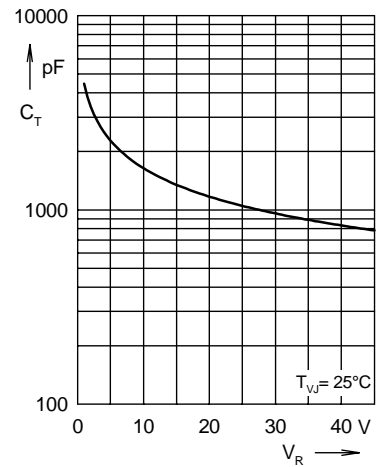


Fig. 3 Typ. junction capacitance C_T versus reverse voltage V_R

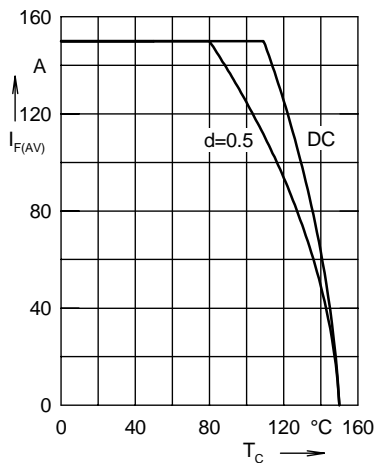


Fig. 4 Average forward current $I_{F(AV)}$ versus case temperature T_C

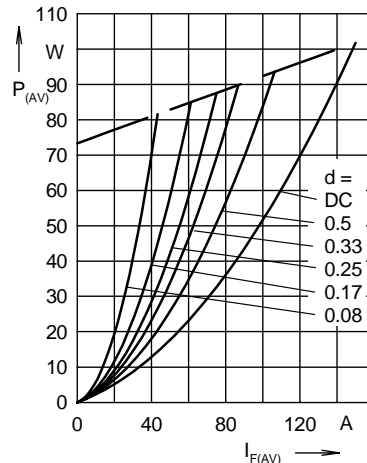


Fig. 5 Forward power loss characteristics

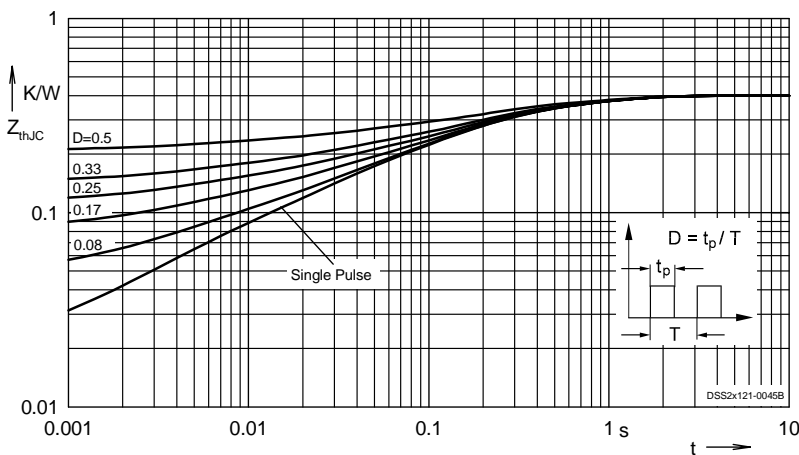


Fig. 6 Transient thermal impedance junction to case at various duty cycles

Note: All curves are per diode