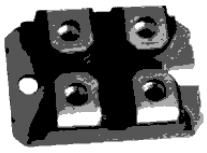
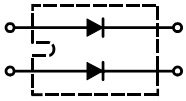
MBR2*60

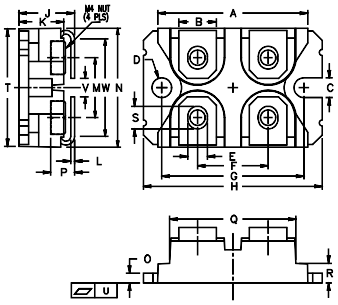
Wide Temperature Range and High T_{jm} Schottky Barrier Rectifiers





	V_{RSM}	V_{RRM}
	V	V
MBR2*60-30	30	30
MBR2*60-40	40	40
MBR2*60-45	45	45

Dimensions SOT-227(ISOTOP)



Dim.	Millimeter Min.	Millimeter Max.	Inches Min.	Inches 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	19.81	21.08

Symbol	Test Conditions	Maximum Ratings	Unit
I_{FRMS}		100	A
I_{FAVM}	T_C=105°C; rectangular, d=0.5	60	
I_{FAVM}	T_C=105°C; rectangular, d=0.5; per device	120	
I_{FSM}	T_{VJ}=45°C; t_p=10ms (50Hz), sine	800	A
E_{AS}	I_{AS}=20A; L=180uH; T_{VJ}=25°C; non-repetitive	57	mJ
I_{AR}	V_A=1.5·V_{RRM} typ.; f=10kHz; repetitive	2	A
$(dv/dt)_{cr}$		1000	V/us
T_{VJ}		-40...+150	°C
T_{VJM}		150	
T_{stg}		-40...+150	
P_{tot}	T_C=25°C	150	W
V_{ISOL}	50/60Hz, RMS; I_{ISOL}≤1mA	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 typ.	Characteristic Values max.	Unit
I_R	T_{VJ}=25°C; V_R=V_{RRM}		20	mA
	T_{VJ}=125°C; V_R=V_{RRM}		200	
V_F	I_F=60A; T_{VJ}=125°C		0.66	V
	I_F=60A; T_{VJ}=25°C		0.74	
	I_F=120A; T_{VJ}=125°C		0.86	
R_{thJC}			0.8	K/W
R_{thCH}		0.1		

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

Sirectifier®

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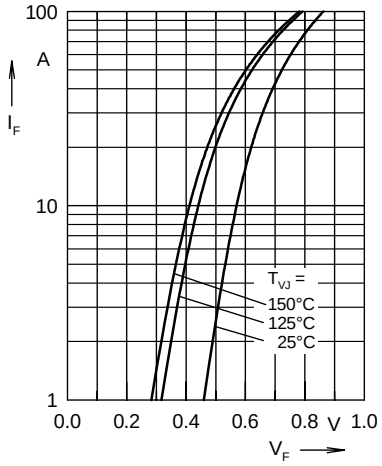

Fig. 1 Maximum forward voltage drop characteristics

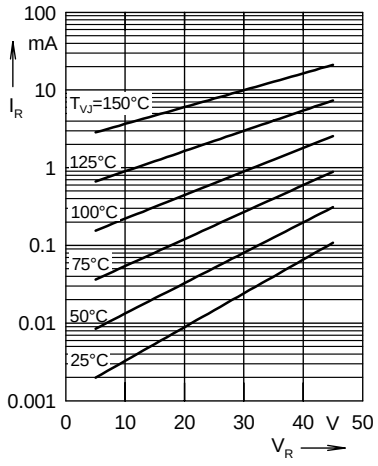

Fig. 2 Typ. value of reverse current I_R versus reverse voltage V_R

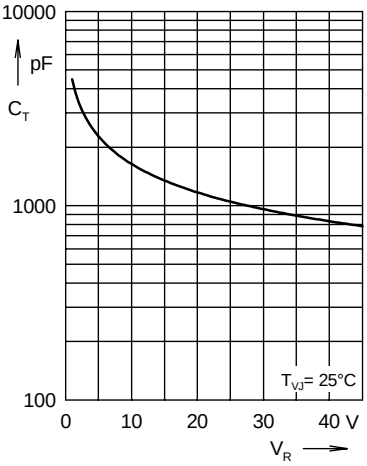

Fig. 3 Typ. junction capacitance C_T versus reverse voltage V_R

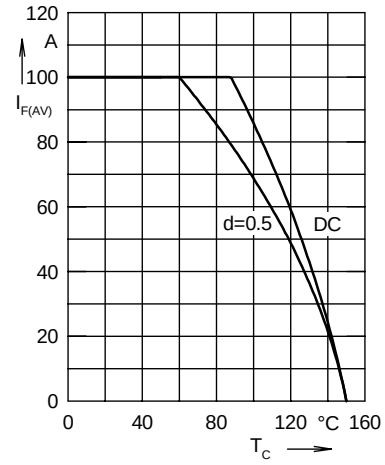

Fig. 4 Average forward current $I_{F(AV)}$ versus case temperature T_C

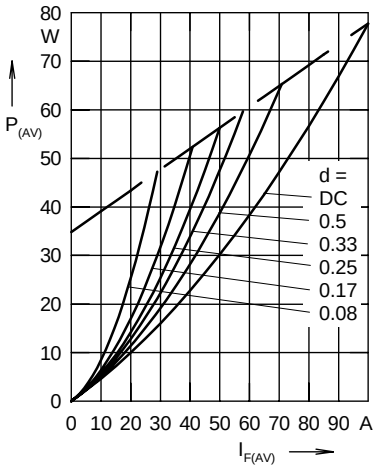

Fig. 5 Forward power loss characteristics

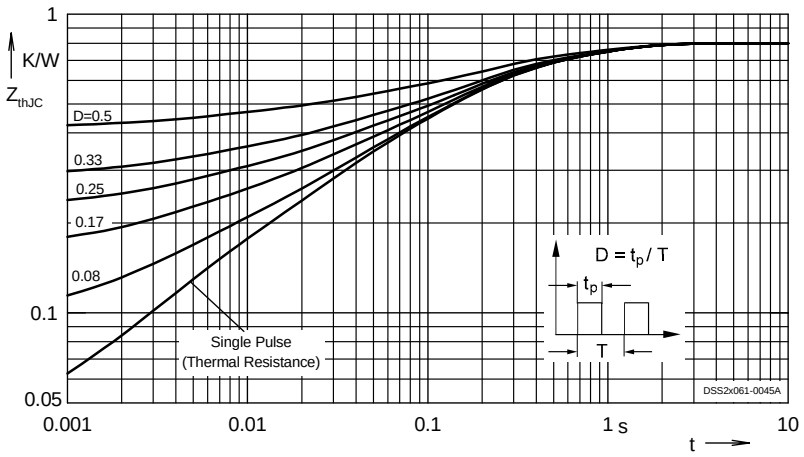

Fig. 6 Transient thermal impedance junction to case at various duty cycles

Note: All curves are per diode

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