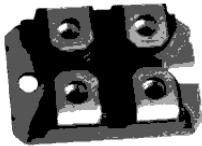


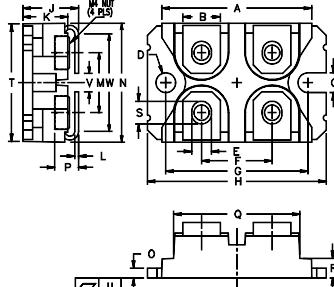
MBR2*80

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



	V _{RSM} V	V _{RRM} V
MBR2*80-30	30	30
MBR2*80-40	40	40
MBR2*80-45	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	0.466	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		
I _{FAVM}	T _c =75°C; rectangular, d=0.5	80		A
I _{FAVM}	T _c =75°C; rectangular, d=0.5; per device	160		
I _{FSM}	T _{VJ} =45°C; t _p =10ms (50Hz), sine	900		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		
T _{VJM}		150		°C
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		Unit
		typ.	max.	
I _R	T _{VJ} =25°C; V _R =V _{RRM} T _{VJ} =100°C; V _R =V _{RRM}		60 250	mA
V _F	I _F =80A; T _{VJ} =125°C I _F =80A; T _{VJ} =25°C I _F =160A; T _{VJ} =125°C		0.64 0.66 1.07	V
R _{thJC} R _{thCH}		0.1	0.8	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

Silicon Rectifier®

MBR2*80

Wide Temperature Range and High $T_{j\text{m}}$ Schottky Barrier Rectifiers

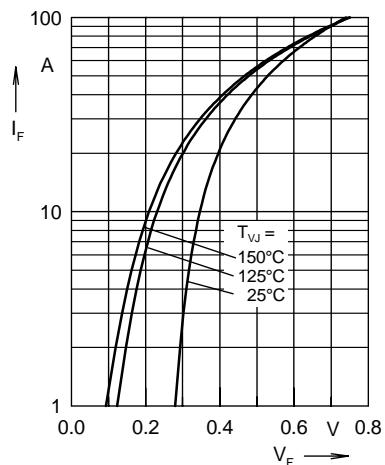


Fig. 1 Maximum forward voltage drop characteristics

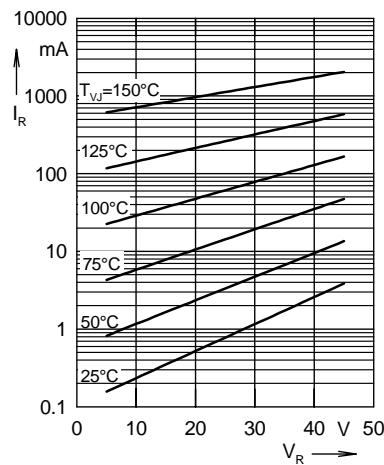


Fig. 2 Typ. value of reverse current I_R versus reverse voltage V_R

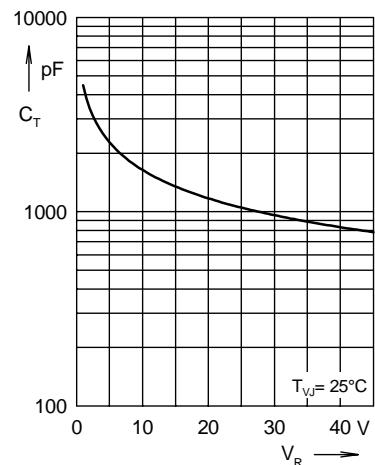


Fig. 3 Typ. junction capacitance C_T versus reverse voltage V_R

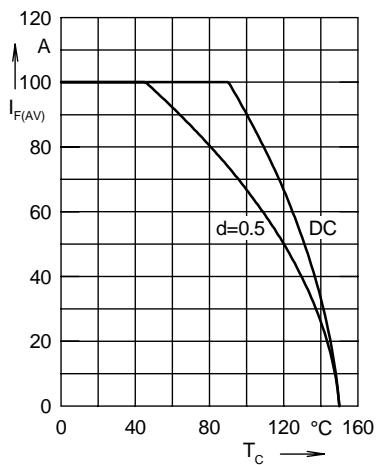


Fig. 4 Average forward current $I_{F(\text{AV})}$ versus case temperature T_c

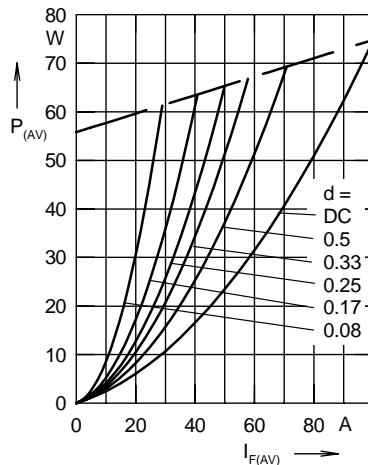


Fig. 5 Forward power loss characteristics

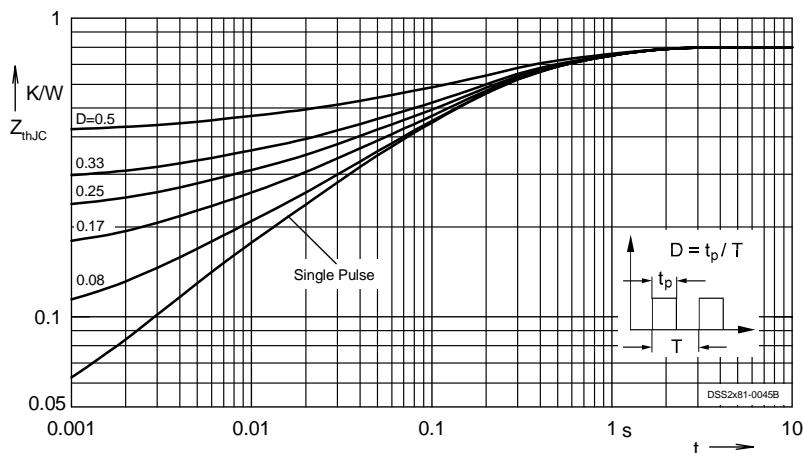


Fig. 6 Transient thermal impedance junction to case at various duty cycles

Note: All curves are per diode