



MBR20100L

Low VF Schottky Barrier Rectifiers

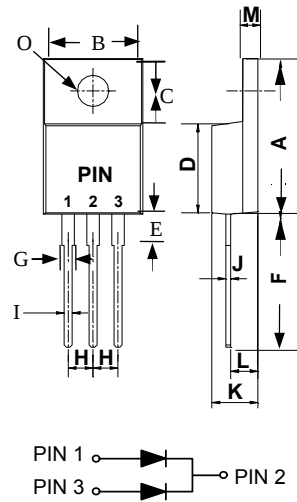
FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-O. Flame Retardant Epoxy Molding Compound.
- Metal silicon junction, majority carrier conduction
- Low power loss, high efficiency.
- High current capability
- For use in low voltage, high frequency inverters free wheeling, and polarity protection applications.
- Lead free in comply with EU RoHS

MECHANICAL DATA

- Case: TO-220AB molded plastic
- Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity: As marked.
- Mounting Position: Any

TO-220AB



TO-220AB		
DIM.	MIN.	MAX.
A	15.10	15.90
B	9.90	10.40
C	6.35	6.65
D	8.60	9.40
E	3.60	4.40
F	13.00	—
G	1.10	1.40
H	2.35	2.55
I	0.45	0.95
J	0.35	0.55
K	4.35	4.75
L	2.55	3.15
M	1.25	1.45
O	Ø3.65	Ø3.95
All Dimensions in millimeter		

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified. Single phase, half wave, 60 Hz, resistive or inductive load.
For capacitive load, derate current by 20%

PARAMETER	SYMBOL	VALUE	UNIT
Maximum repetitive peak reverse voltage	V_{RRM}	100	V
Maximum rms voltage	V_{RMS}	70	V
Maximum average forward rectified current	$I_{F(AV)}$	20 10	A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load	I_{FSM}	150	A
Typical junction capacitance ($V_R=4V$, $f=1MHz$)	C_J	620	pF
Typical thermal resistance per diode (Note 1)	$R_{\theta JC}$	2	°C/W
Operating junction temperature range	T_J	-55 to + 150	°C
Storage temperature range	T_{STG}	-55 to + 150	°C

Note : 1. Mounted on infinite heatsink.





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ELECTRICAL CHARACTERISTICS($T_A=25^\circ\text{C}$ unless otherwise noted)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN.	TYP.	MAX.	UNIT
Breakdown voltage per diode	V_{BR}	$I_R=0.5\text{mA}$	100	-	-	V
Instantaneous forward voltage per diode	V_F	$I_F=3\text{A}$	-	0.50	-	V
		$I_F=5\text{A}$	-	0.58	-	
		$I_F=10\text{A}$	-	0.74	0.78	
		$I_F=3\text{A}$	-	0.45	-	V
		$I_F=5\text{A}$	-	0.54	-	
		$I_F=10\text{A}$	-	0.68	-	
Reverse current per diode	I_R	$V_R=70\text{V}$	-	50	-	μA
		$V_R=100\text{V}$	-	-	100	μA
		$T_J=25^\circ\text{C}$	-	-	-	mA
		$T_J=125^\circ\text{C}$	-	7.2	-	

RATING AND CHARACTERISTIC CURVES

Fig.1 Forward Current Derating Curve

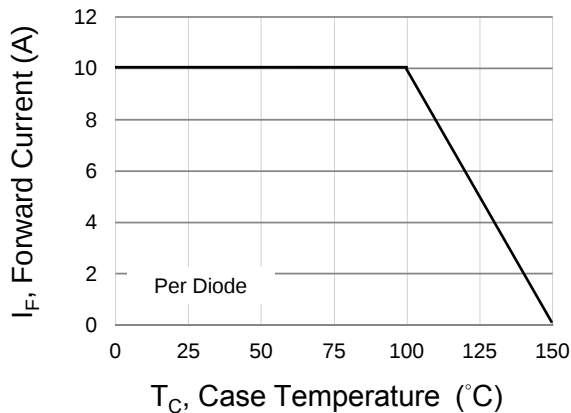


Fig.2 Typical Junction Capacitance

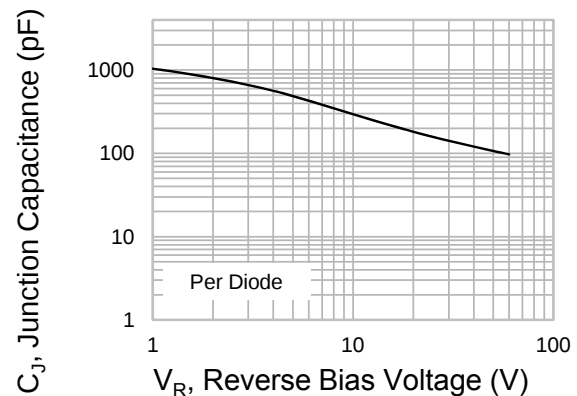


Fig.3 Typical Reverse Characteristics

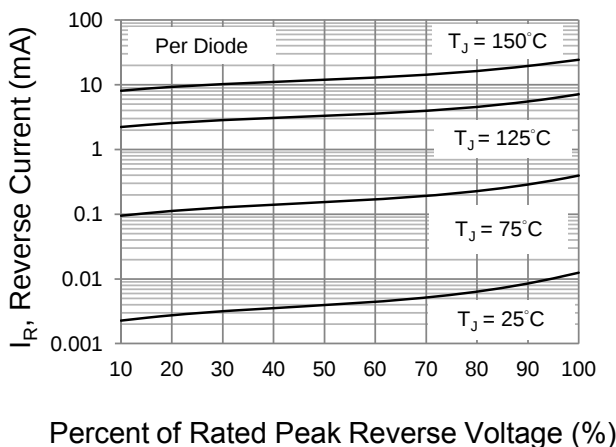


Fig.4 Typical Forward Characteristics

