



MBR20100L

Low VF Schottky Barrier Rectifiers

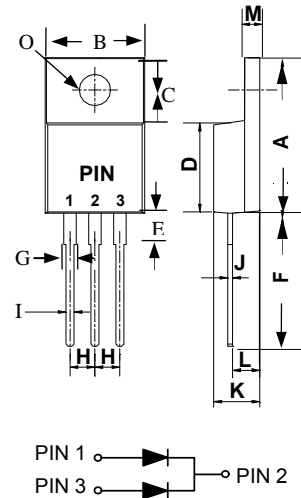
FEATURES

- 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	15.00	16.00
B	9.90	10.40
C	6.35	6.65
D	8.55	9.35
E	3.00	---
F	12.80	---
G	1.10	1.40
H	2.45	2.65
I	0.45	0.95
J	0.35	0.45
K	4.35	4.75
L	2.55	3.15
M	1.25	1.45
O	∅3.65	∅3.95

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%

Characteristics	Symbol	Value	Unit
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	100	V
Working Peak Reverse Voltage	V_{RWM}	100	V
Maximum DC Blocking Voltage	V_{DC}	100	V
Maximum Average Forward Rectified Current	Per Leg	10	A
	Total	20	
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave	I_{FSM}	180	A
Operating Temperature Range	T_J	-50 to +150	°C
Storage Temperature Range	T_{STG}	-50 to +150	°C
Typical Thermal Resistance (Note1)	$R_{\theta JC}$	4	°C/W

Note1: Thermal resistance from Junction to case per leg mounted on heatsink.



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ELECTRICAL CHARACTERISTICS (TA=25°C unless otherwise noted)

Characteristics		Symbol	Value		Unit
Forward Voltage Drop (Note2)		V _F	Typ.	Max.	V
at I _F =3A	TA=25°C		0.49	-	
	TA=125°C		0.43	-	
at I _F =5A	TA=25°C		0.55	0.58	
	TA=125°C		0.51	-	
at I _F =10A	TA=25°C		0.67	0.70	
	TA=125°C		0.62	-	
Maximum Reverse Current at V _R =100V			I _R	5	
		5		-	mA

Note2: Pulse test: 300 μs pulse width, 1 % duty cycle

RATING AND CHARACTERISTIC CURVES

FIG. 1 MAXIMUM FORWARD CURRENT DERATING CURVE

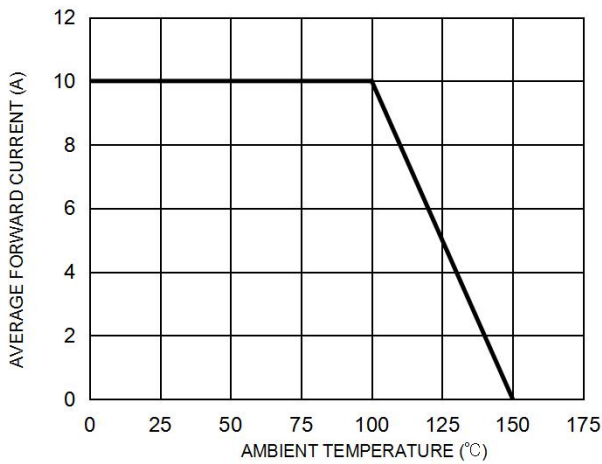


FIG. 2 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER LEG

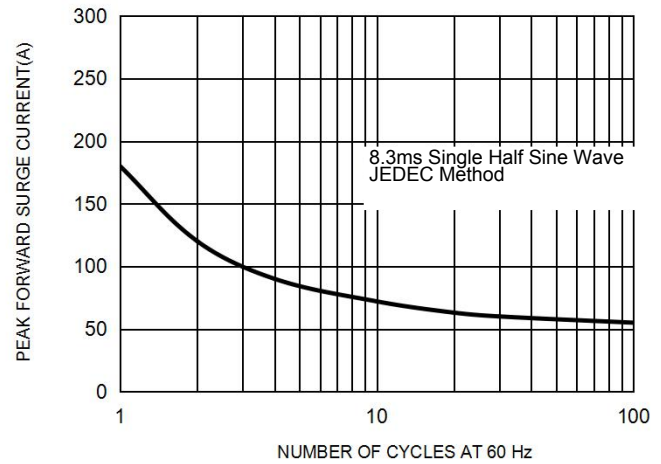


FIG. 3 TYPICAL FORWARD CHARACTERISTICS PER LEG

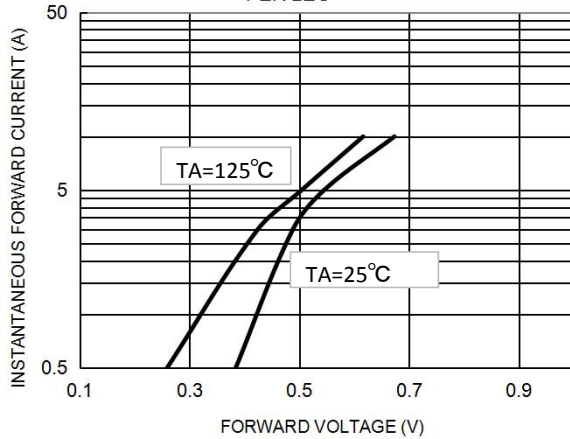


FIG. 4 TYPICAL REVERSE CHARACTERISTICS PER LEG

