LITE-ON SEMICONDUCTOR

MB120E

SURFACE MOUNT
SCHOTTKY BARRIER RECTIFIERS

REVERSE VOLTAGE - **20** Volts
FORWARD CURRENT - 1.0 Ampere

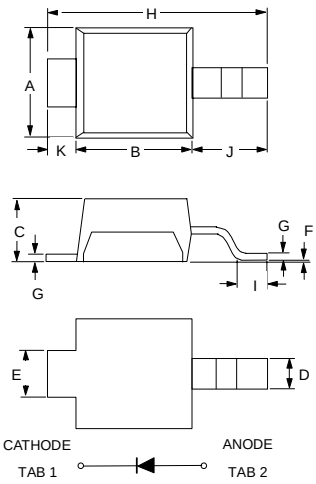
FEATURES

- For surface mounted applications
- Metal-Semiconductor junction with guardring
- Epitaxial construction
- Low VF&IR provides higher efficiency and extends battery life
- Plastic material has UL flammability classification 94V-0
- For use in portable and battery powered product
- Typical applications are ac/ac and dc/dc converters, reverse battery protection, and "Oring" of multiple supply voltage

MECHANICAL DATA

- Case : JEDEC DO-216AA Molded plastic
- Polarity : Cathode designated by TAB 1
- Approx Weight : 0.016grams
- Mounting position : Any

DO-216AA



DO-216AA		
DIM.	MIN.	MAX.
A	1.75	2.05
B	1.80	2.20
C	0.95	1.25
D	0.42	0.68
E	0.70	1.00
F	-0.05	+0.10
G	0.10	0.25
H	3.65	3.95
I	0.40	0.70
J	1.10	1.50
K	0.20	0.80

All Dimensions in millimeter

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

Characteristics	Symbol	MB120E		Units
Maximum recurrent peak reverse voltage	Vrrm	20		V
Maximum RMS voltage	Vrms	14		V
Maximum DC blocking voltage	V_{DC}	20		V
Maximum average forward rectified current @T_L=130℃	$I_{(AV)}$	1.0		A
Peak forward surge current 8.3 ms single half-sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	50		A
Maximum instantaneous forward voltage (Note 1)	V_F	@ T_J = 25℃	@ T_J = 100℃	V
(@ IF=0.1A)		0.455	0.360	
(@ IF=1.0A)		0.530	0.455	
(@ IF=2.0A)		0.595	0.540	
Maximum instantaneous reverse current	I_R	@ T_J = 25℃	@ T_J = 100℃	uA
(@ VR=20V)		10	1600	
(@ VR=10V)		1.0	500	
(@ VR= 5V)		0.5	300	
Thermal resistance - Junction to Lead (Anode)	Rtjl	35		℃/W
Thermal resistance - Junction to Tab (Cathode)	Rttab	20		
Thermal resistance - Junction to Ambient	Rtja	250		
Operating Temperature Range	T_J	-55 to +150		℃
Storage Temperature Range	T_{STG}	-55 to +150		℃

NOTE: 1.Pulse Test: Pulse Width = 300us , Duty Cycle = 2%

Fig.1 - Forward Current Derating Curve

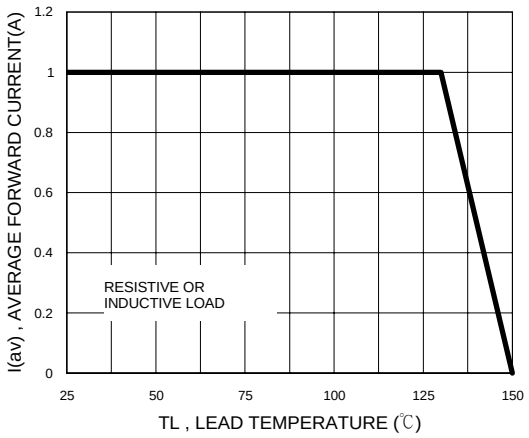


Fig.2 - Typical Reverse Characteristics

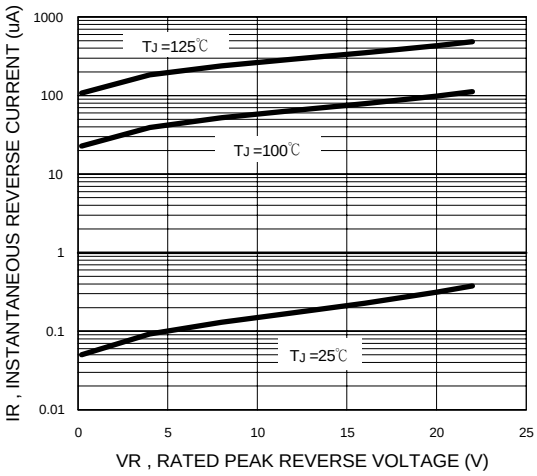


Fig.3 - Maxmun Non-Repetitive Peak
Forward Surge Current

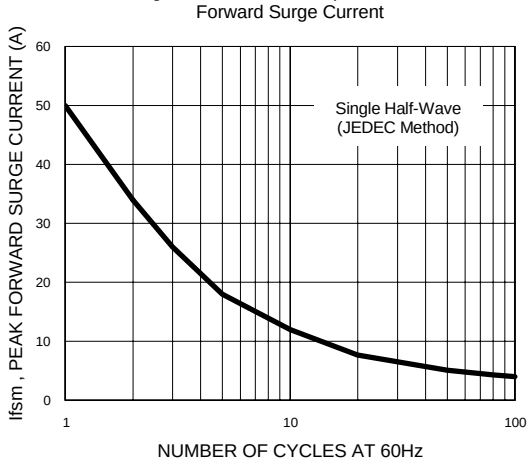


Fig.4 - Typical Junction Capacitance

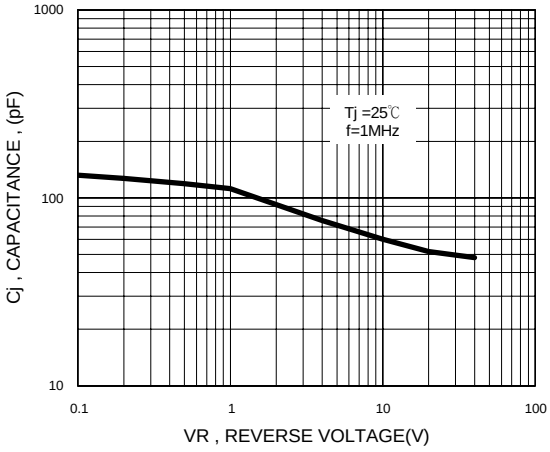
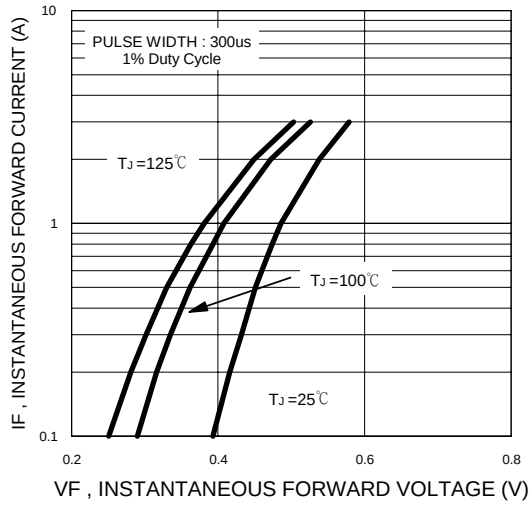


Fig.5 - Typical Forward Characteristics



FOOTPRINTS FOR SOLDERING