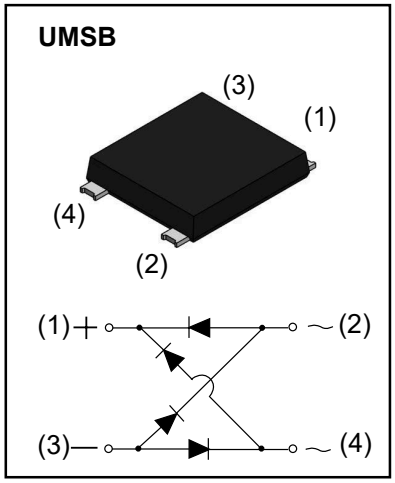
SZCJ

Shenzhen Changji Semiconductor Co., LTD.

UMSB Plastic-Encapsulate Bridge Rectifier

MSB40M Bridge Rectifier

PRIMARY CHARACTERISTICS		
PARAMETER	**VALUE**	**UNIT**
$I_{F(AV)}$	4	A
V_{RWM}	1000	V
I_{FSM}	100	A
T_j	150	℃
V_F	1.1	V



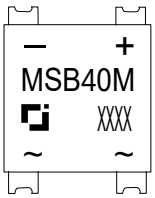
FEATURES

- Idea for printed circuit board
- Glass passivated junction chip
- Low reverse leakage
- High forward surge current capability
- High temperature soldering guaranteed 260℃/10 seconds at terminals

Mechanical Data

- Case: UMSB
- The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- Terminals: Solder plated, solderable per MIL-STD-750,Method 2026
- Polarity: Polarity symbol marking on body

MARKING



MSB40M = Device code

XXXX = Code

Limiting Values (Absolute Maximum Rating)

Symbol	Item	Unit	MSB40M
V_{RRM}	Peak Repetitive Reverse Voltage	V	1000
V_R	DC Blocking Voltage	V	
V_{RMS}	RMS Reverse Voltage	V	700
$I_{F(AV)}$	Average Forward Rectified Current @60Hz sine wave, R-load, T_L=110℃	A	4
I_{FSM}	Non-Repetitive Surge Forward Current @8.3 ms single half sine-wave,1 cycle, Tj=25℃	A	100
I^2t	Current squared time @1ms≤t≤8.3ms,Tj=25℃, Rating of per diode	A^2S	41.5
T_{STG}	Storage Temperature range	℃	-55 to +150
T_J	Operating junction temperature	℃	-55 to +150

Electrical Characteristics (T_C=25℃ unless otherwise noted)

Symbol	Item	Unit	Test Conditions		TYP.	Max.
V_F	Maximum instantaneous forward voltage drop per diode (note 1)	V	IF=4A		0.9	1.1
IR	Peak reverse current at rated DC blocking voltage per diode(Note 2)	μA	V_{RM}=V_{RRM}	T_j=25℃		2
				T_j=125℃		200
C_{tot}	Total capacitance per Element (Note 3)	pF	VR=4V,f=1MHz		35	
$R_{\theta JL}$	Thermal resistance (note 4)	℃/W	Between junction and lead, With heatsink			15
$R_{\theta JA}$		℃/W	Between junction and ambient, Without heatsink			55

Notes:

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

(2) Pulse test: pulse width ≤ 40 ms

(3) Per element, measured at 1.0MHz and applied reverse voltage of 4.0V DC

(4) Thermal resistance from junction to case per element. Unit mounted on 75 x 75 x 1.6mm aluminum plate heat sink.

Typical Characteristics

Figure 1. Current Derating

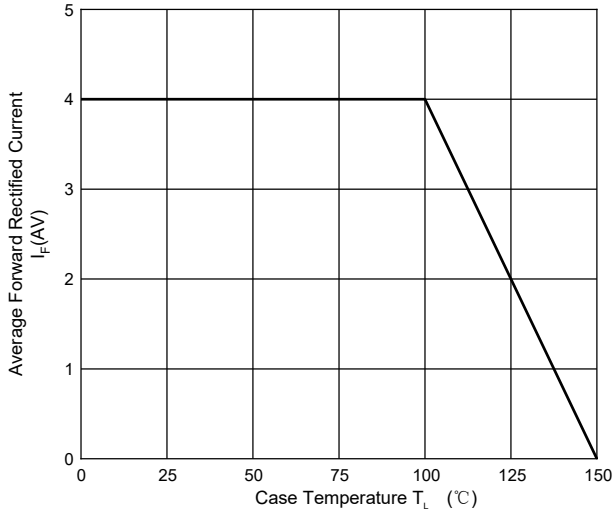
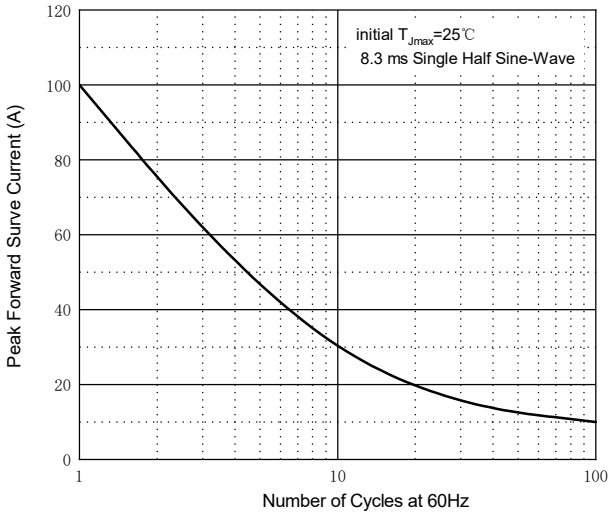
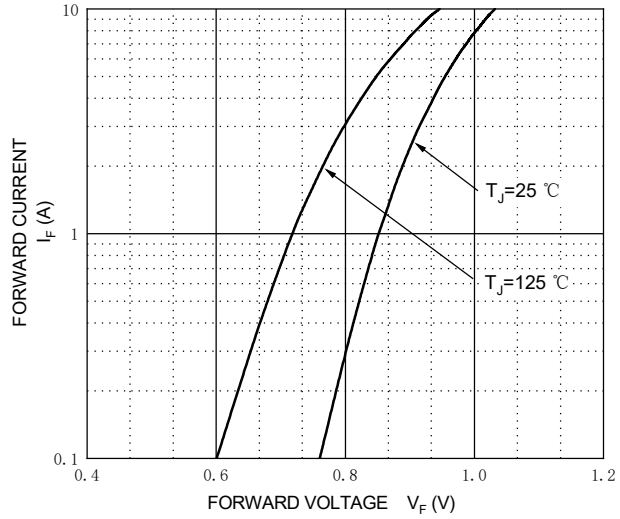


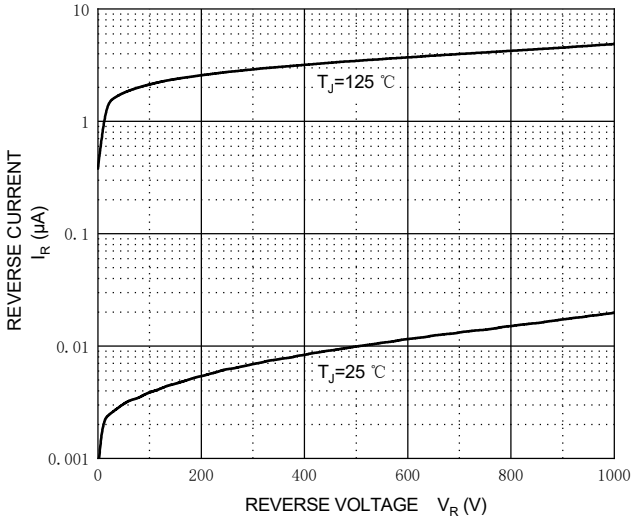
Figure 2. Maximum Non-Repetitive Forward Surge Current



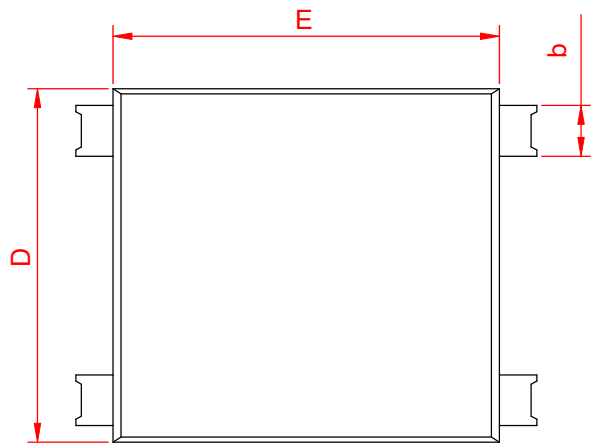
Forward Characteristics

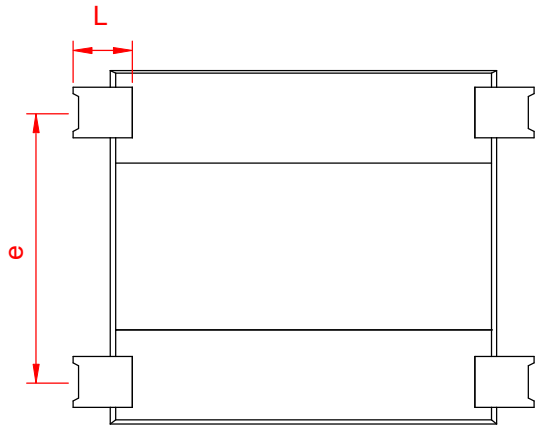


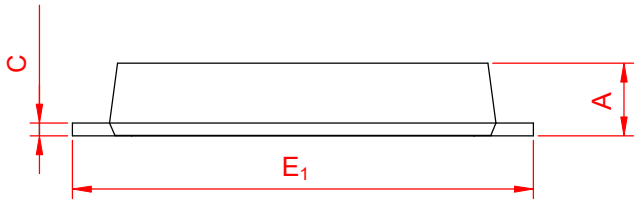
Reverse Characteristics



UMSB Package Outline Dimensions

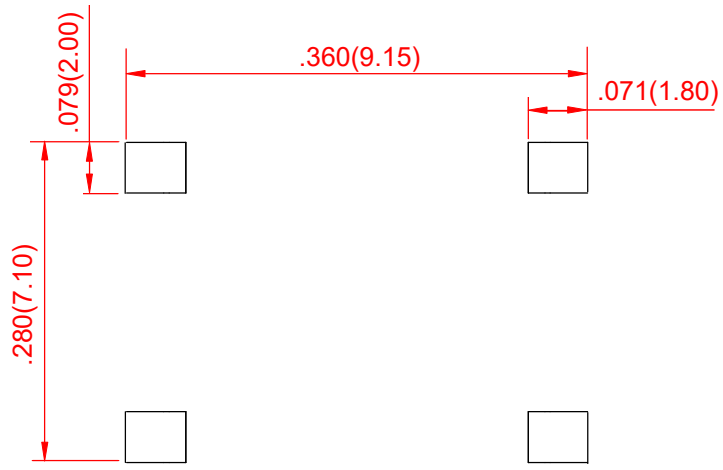






DIM	Unit:mm		Unit:inch	
	MIN	MAX	MIN	MAX
A	1.3	1.5	0.051	0.059
C	0.17	0.29	0.007	0.011
D	6.4	6.9	0.252	0.272
E	7.1	7.6	0.280	0.299
E1	8.4	8.9	0.331	0.350
L	1.0	1.6	0.039	0.063
e	4.9	5.2	0.193	0.205
b	0.95	1.15	0.037	0.045

UMSB Package Outline Dimensions



Dimensions in inches and (millimeters)

Note:
1.Controlling dimension:in millimeters.
2.General tolerance:±0.05mm.
3.The pad layout is for reference purposes only

NOTICE

SZCJ reserves the right to make modifications,enhances,improvements,corrections or other changes without further notice to any product herein. SZCJ does not assume any liability arising out of the application or use of any product described .