SZCJ

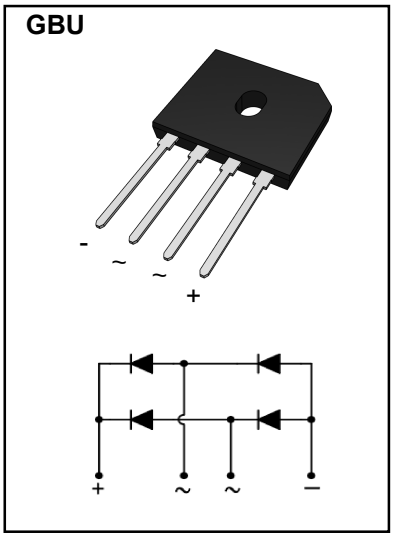
Shenzhen Changji Semiconductor Co., LTD.

GBU Plastic-Encapsulate Bridge Rectifier

GBU4005 THRU GBU410

General Purpose Bridge Rectifier

PRIMARY CHARACTERISTICS		
PARAMETER	**VALUE**	**UNIT**
$I_{F(AV)}$	4	A
V_{RWM}	50-1000	V
I_{FSM}	120	A
T_j	150	℃
V_F	1.1	V



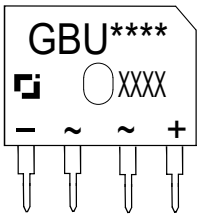
FEATURES

- 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: GBU
- 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



GBU**** = Device code，****：From 4005 to 410

XXXX = Code

Typical Characteristics

Limiting Values (Absolute Maximum Rating)

Symbol	Item	Unit	GBU4						
			005	01	02	04	06	08	10
V_{RRM}	Peak Repetitive Reverse Voltage	V	50	100	200	400	600	800	1000
V_R	DC Blocking Voltage	V							
V_{RMS}	RMS Reverse Voltage	V	35	70	140	320	420	560	700
$I_{F(AV)}$	Average Forward Rectified Current @60Hz sine wave, R-load	A	4						
I_{FSM}	Non-Repetitive Surge Forward Current @8.3 ms single half sine-wave,1 cycle, Tj=25℃	A	120						
I^2t	Current squared time @1ms≤t≤8.3ms,Tj=25℃, Rating of per diode	A^2S	60						
T_{STG}	Storage Temperature range	℃	-55 to +150						
T_J	Operating junction temperature	℃	-55 to +150						

Electrical Characteristics(Ta=25℃ Unless otherwise specified)

Symbol	Item	Unit	Test Conditions		TYP.	Max.
V_F	Maximum instantaneous forward voltage drop per diode (Note 1)	V	IF=2A		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℃		5
				T_j=125℃		500
C_{tot}	Total capacitance per Element (Note 3)	pF	VR=4V,f=1MHz		37	
$R_{\theta JC}$	Thermal resistance	℃/W	Between junction and case, With heatsink			3
$R_{\theta JA}$		℃/W	Between junction and ambient, Without heatsink			60

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

Typical Characteristics

Figure 1. Current Derating

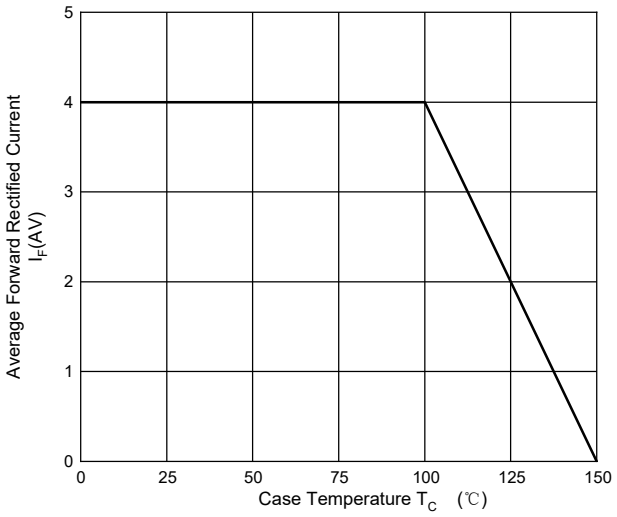


Figure 2. Maximum Non-Repetitive Forward Surge Current

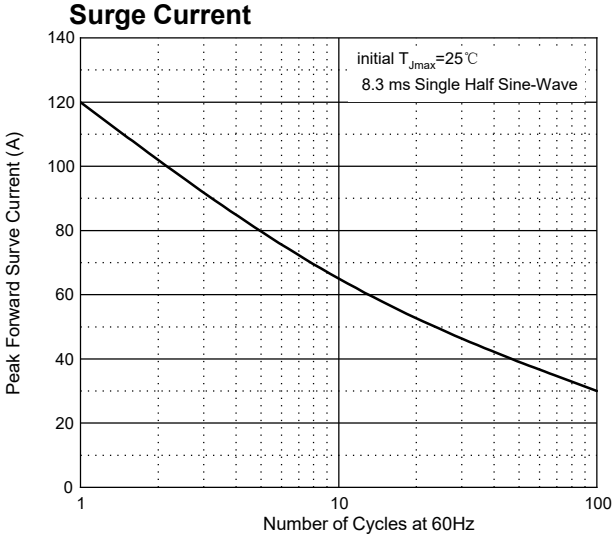


Figure 3. Forward Characteristics

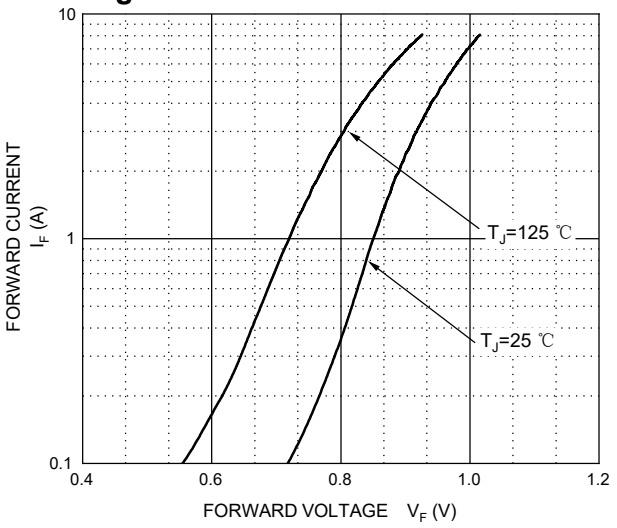
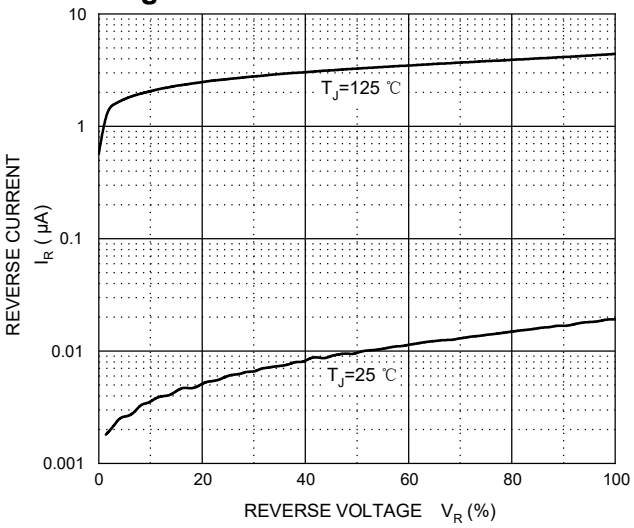
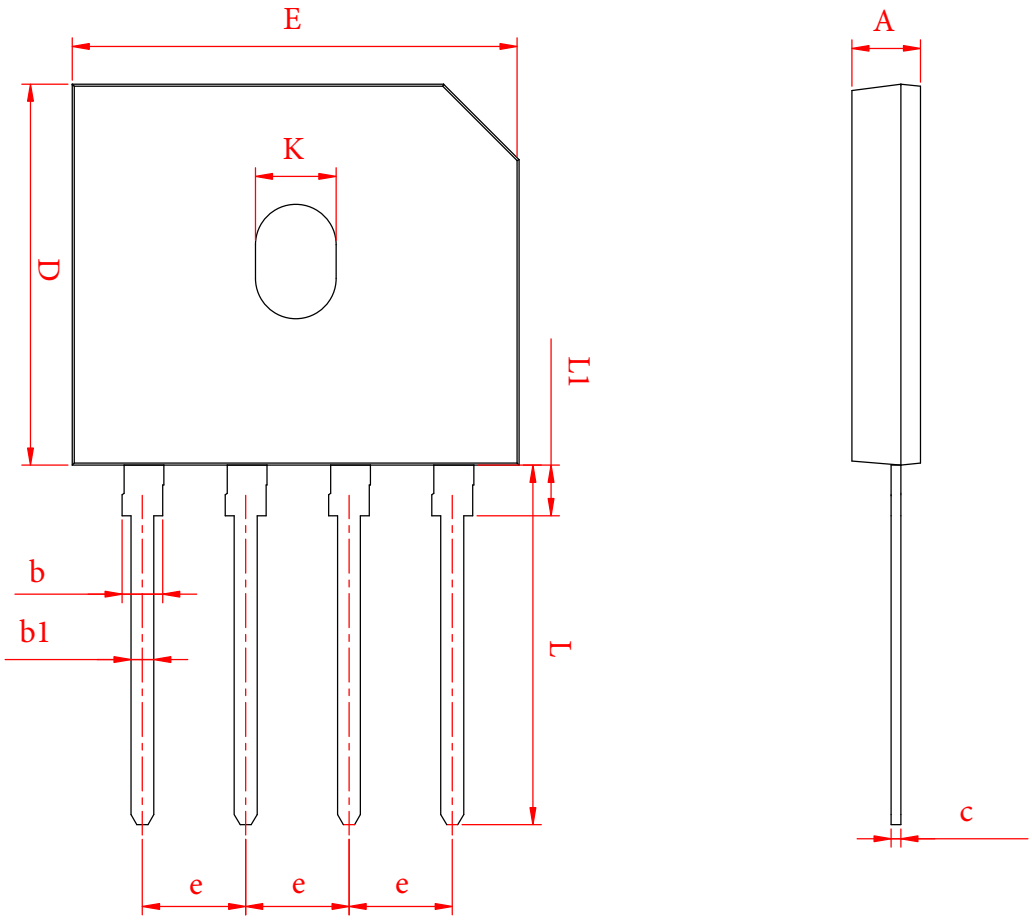


Figure 4. Reverse Characteristics



GBU Package Outline Dimensions



DIM	Unit:mm		Unit:inch	
	MIN	MAX	MIN	MAX
A	3.30	3.60	0.130	0.142
b	1.95	2.40	0.077	0.094
b1	1.00	1.20	0.039	0.047
c	0.45	0.55	0.018	0.022
D	18.30	18.20	0.720	0.717
e	4.80	5.30	0.189	0.209
E	21.80	22.20	0.858	0.874
L	17.50	18.00	0.689	0.709
L1	2.25	2.75	0.089	0.108
K	3.50	4.10	0.138	0.161

NOTICE

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