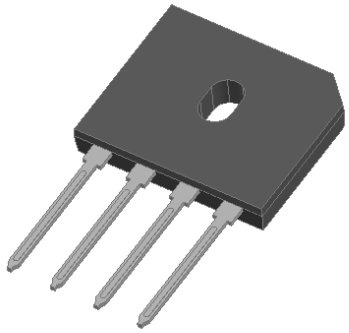
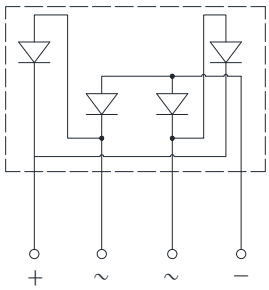
Low VF Bridge Rectifiers





Features

- UL recognition, file #E230084
- Thin single in-line package
- High surge current capability
- Solder dip 275 °C max. 7 s, per JESD 22-B106

Typical Applications

General purpose use in AC/DC bridge full wave rectification for switching power supply, home appliances, office equipment, industrial automation applications.

Mechanical Data

- **Package**: GBU
  Molding compound meets UL 94 V-0 flammability rating, RoHS-compliant
- **Terminals**: Tin plated leads, solderable per J-STD-002 and JESD22-B102
- **Polarity:** As marked on body

■Maximum Ratings (Ta=25℃ Unless otherwise specified)

PARAMETER		SYMBOL	UNIT	GBUU2506
Device marking code				GBUU2506
Repetitive peak reverse voltage		V_{RRM}	V	600
Average rectified output current @60Hz sine wave, R-load	With heatsink Tc =120℃	I_O	A	25.0
	Without heatsink Ta =25℃			4.0
Surge(non-repetitive)forward current @60Hz half sine wave, 1 cycle, Tj=25℃		I_{FSM}	A	360
Surge(non-repetitive)forward current @1ms, square wave, 1 time, Tj=25℃				720
Current squared time @1ms≤t≤8.3ms Tj=25℃, Rating of per diode		I^2t	A^2S	538
Reverse Surge Current @20ms, Tj =25℃		SI	mA	6
Storage temperature		T_{stg}	℃	-55 ~+150
Junction temperature		Tj	℃	-55 ~+150
Dielectric strength @ terminals to case, AC 1 minute		Vdis	KV	2.5
Mounting torque @recommend torque：5kg·cm		Tor	kg·cm	8

■Electrical Characteristics（T_a=25℃ Unless otherwise specified）

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	Min	Typ	Max
Instantaneous forward voltage drop per diode	V_F	V	I_{FM}=12.5A Tj=25℃	-	0.88	0.92
			I_{FM}=12.5A Tj=125℃	-	0.77	-
DC reverse current at rated DC blocking voltage per diode	I_{RRM}	μA	V_{RM}=V_{RRM} Tj=25℃	-	0.5	10
Reverse Recovery time	T_{RR}	ns	I_F=0.5A I_R=1A I_{RR}=0.25A	-	-	500

■Thermal Characteristics （T_a=25℃ Unless otherwise specified）

PARAMETER		SYMBOL	UNIT	GBUU2506
Thermal Resistance	Between junction and ambient, Without heatsink	$R_{\theta J-A}$	℃/W	23.0
	Between junction and case, With heatsink	$R_{\theta J-C}$		1.2
	Between junction and Lead With heatsink	$R_{\theta J-L}$		4.0

Note： Unit Mounted on 175mm*100mm*5mm+8*100mm*18mm*1.67mm aluminum Plate Heatsink

■Ordering Information (Example)

PREFERED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
GBUU2506	B1	Approximate 6.5	15	750	1500	TUBE

■ Characteristics(Typical)

FIG1:Io-Tc Curve

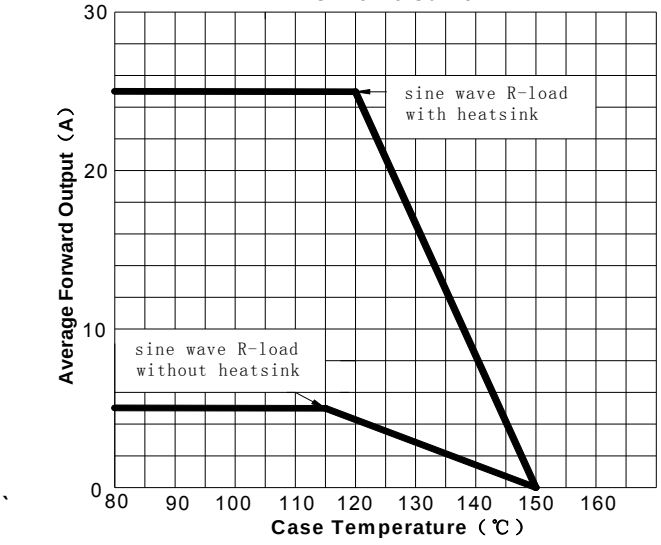


FIG2:Surge Forward Current Capability

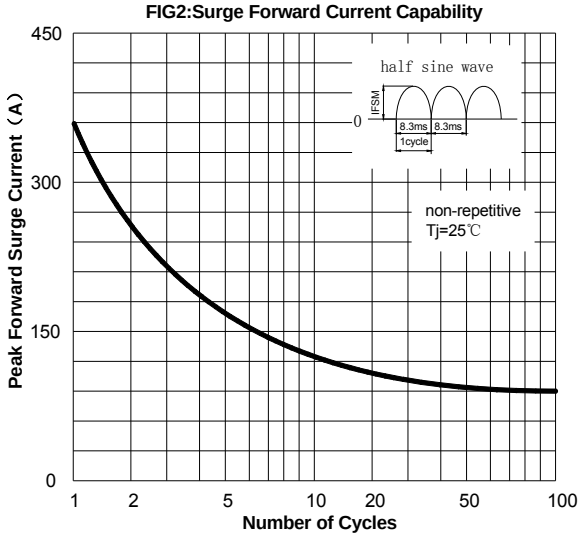


FIG3: Forward Voltage

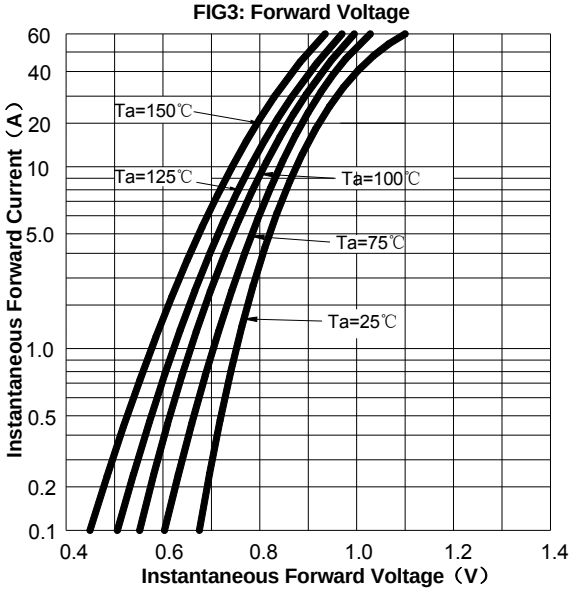


FIG4:Typical Reverse Characteristics

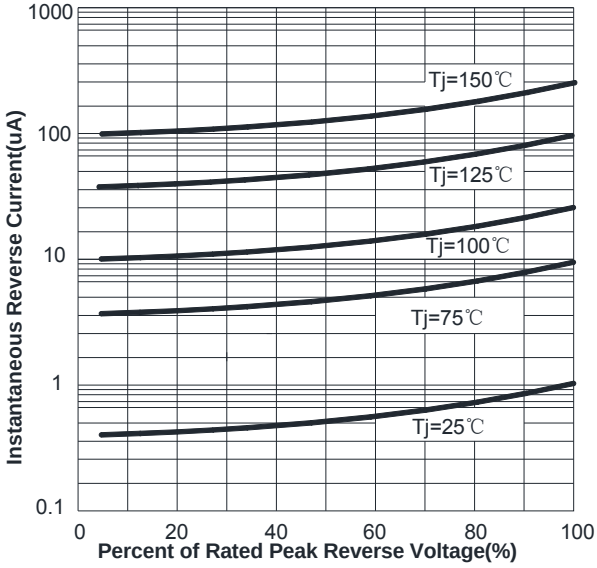


FIG.5: Diagram of circuit and Testing wave form of reverse recovery time

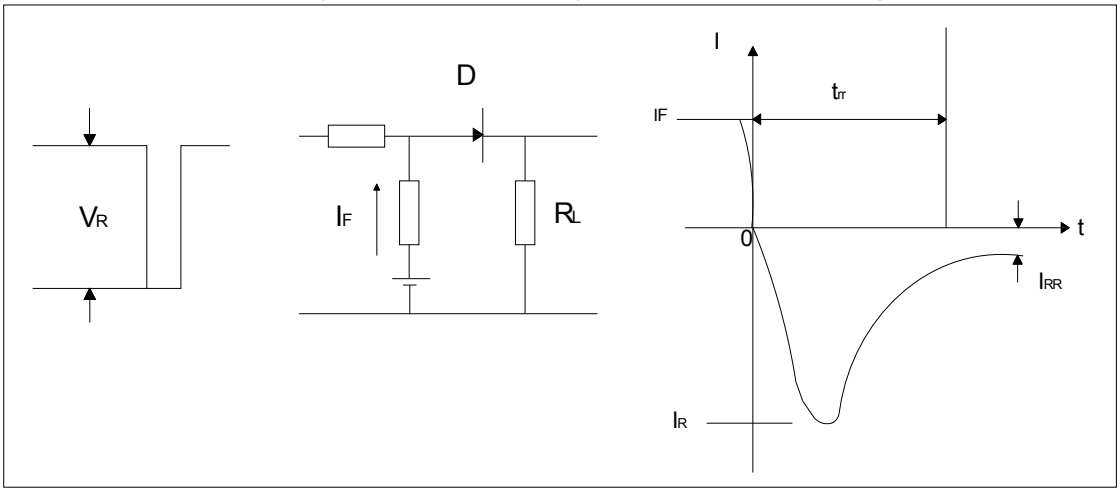


FIG6:Cd-VR

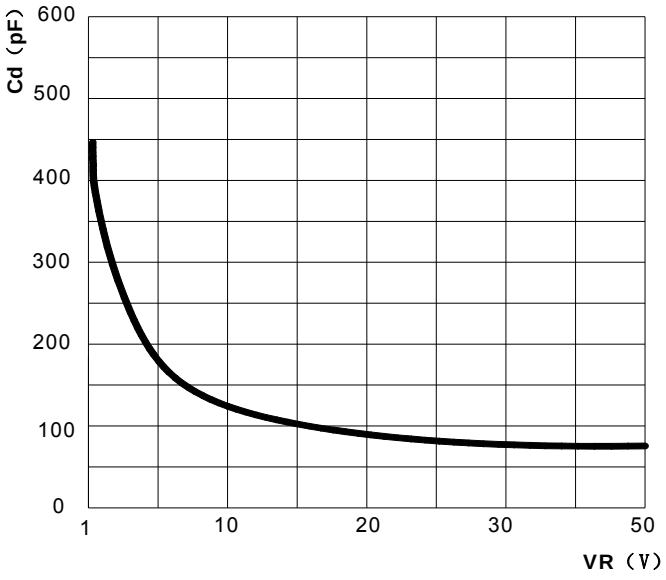
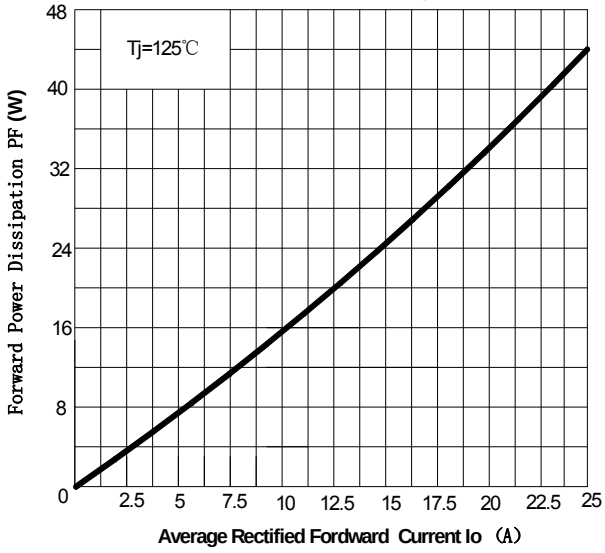
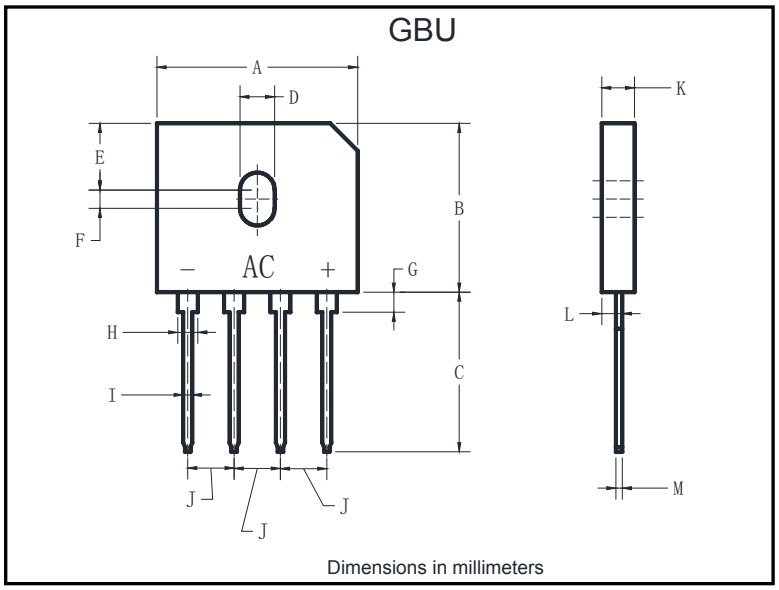


FIG7:Forward Power Dissipation



■ Outline Dimensions



GBU		
Dim	Min	Max
A	21.80	22.30
B	18.30	18.80
C	17.50	18.00
D	3.50	4.10
E	7.40	7.90
F	1.65	2.16
G	1.91	2.54
H	2.06	2.54
I	1.02	1.27
J	4.83	5.33
K	3.30	3.56
L	2.40	2.66
M	0.46	0.56

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