

## Bridge Rectifiers

### Features

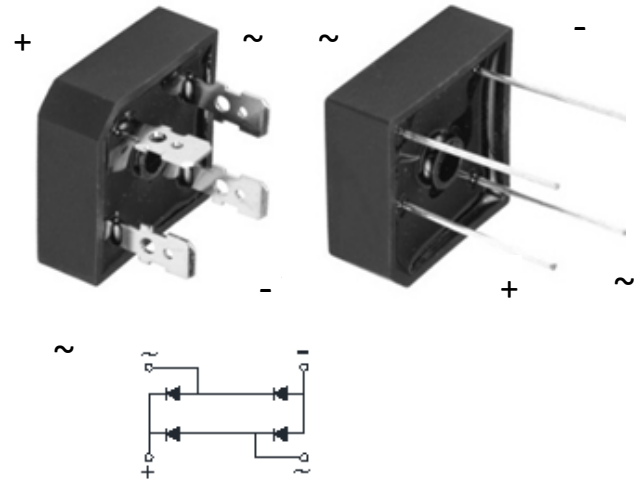
- UL recognition, file #E230084
- Universal 3-way terminals: snap-on, wire wrap-around, or PCB mounting
- High surge current capability
- Low thermal resistance
- Solder dip 275 °C max. 7 s, per JESD 22-B106

### Typical Applications

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

### Mechanical Data

- Package:** BR, BR-W
- Molding compound meets UL 94 V-0 flammability rating, RoHS-compliant
- Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102
- Suffix letter "W" added to indicate wire leads(e.g. BR5010W).



### ■ Maximum Ratings ( $T_a=25^\circ\text{C}$ Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	BR50005	BR5001	BR5002	BR5004	BR5006	BR5008	BR5010
Device marking code			BR50005	BR5001	BR5002	BR5004	BR5006	BR5008	BR5010
Repetitive Peak Reverse Voltage	VRRM	V	50	100	200	400	600	800	1000
Average Rectified Output Current @60Hz sine wave, R-load, With heatsink, $T_c=55^\circ\text{C}$	$I_O$	A	50						
Surge(Non-repetitive)Forward Current @60HZ Half- sine Wave, 1 cycle, $T_a=25^\circ\text{C}$	IFSM	A	500						
Current Squared Time @1ms $\leq$ t $\leq$ 8.3ms $T_j=25^\circ\text{C}$ , Rating of per diode	$i^2t$	A <sup>2</sup> S	1040						
Storage Temperature	Tstg	°C	-55 ~+150						
Junction Temperature	$T_j$	°C	-55 ~+150						
Dielectric Strength, Terminals to case, AC 1 minute	$V_{dis}$	KV	2.5						
Mounting Torque	TOR	kg·cm	10						

### ■ Electrical Characteristics ( $T_a=25^\circ\text{C}$ Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	BR50005	BR5001	BR5002	BR5004	BR5006	BR5008	BR5010
Maximum instantaneous forward voltage drop per diode	VFM	V	IFM=25A	1.1						
Maximum DC reverse current at rated DC blocking voltage per diode	I <sub>RRM</sub>	μA	V <sub>RM</sub> =V <sub>RRM</sub>	10						

■ Thermal Characteristics ( $T_a=25^\circ\text{C}$  Unless otherwise specified)

PARAMETER		SYMBOL	UNIT	BR50005	BR5001	BR5002	BR5004	BR5006	BR5008	BR5010
Thermal Resistance	Between junction and case, With heatsink	$R_{\theta J-C}$	$^\circ\text{C/W}$	1.2						

■ Ordering Information (Example)

PREFERRED P/N	PACKAGE CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
BR50005~BR5010	A1	Approximate 18.6	50	50	500	Paper Box
BR50005W~BR5010W	A1	Approximate 16.5	50	50	500	Paper Box

■ Characteristics (Typical)

FIG1:  $I_o$ - $T_c$  Curve

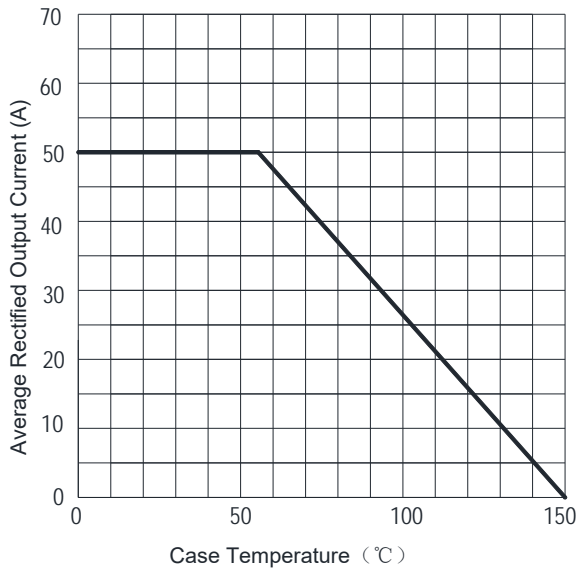


FIG2: Surge Forward Current Capability

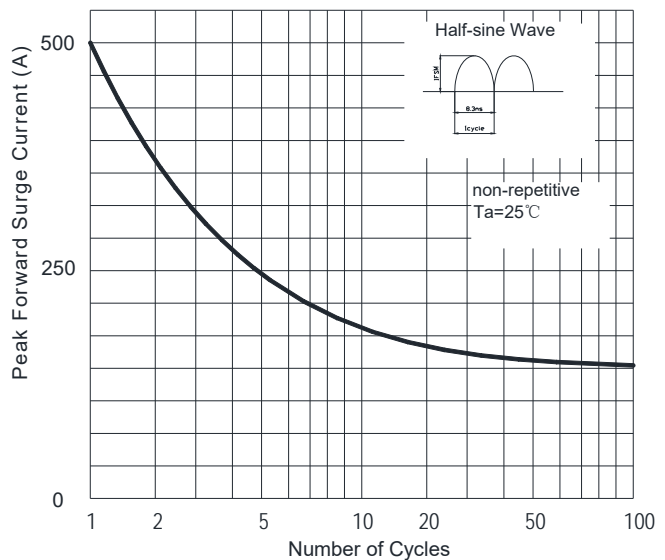


FIG3: Instantaneous Forward Voltage

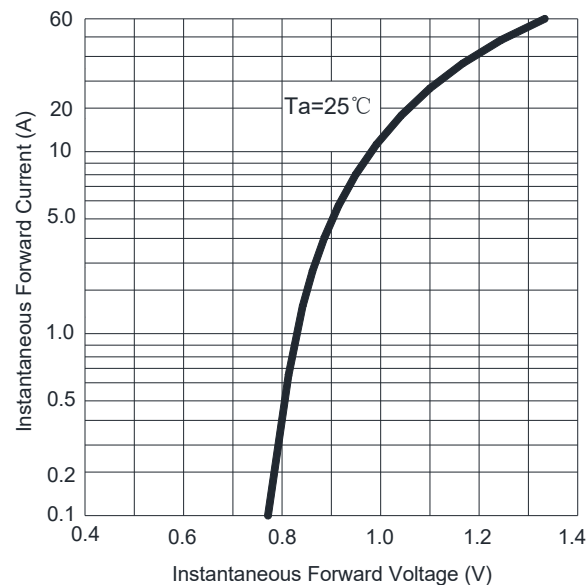
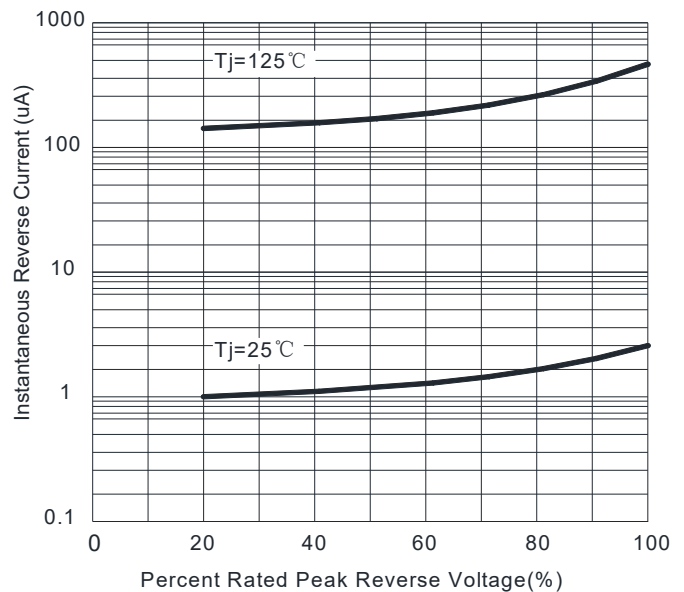
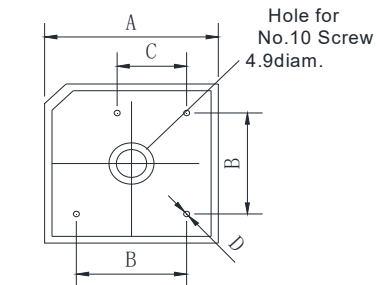


FIG4: Typical Reverse Characteristics

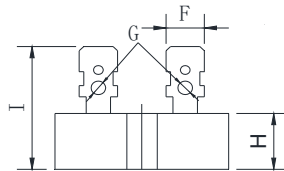
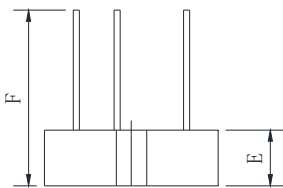
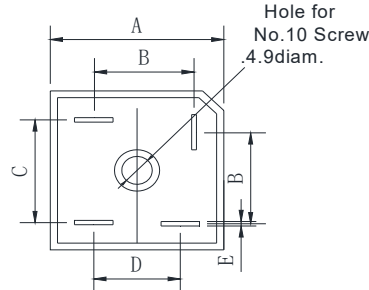


■ Outline Dimensions

BR-W



BR



Dimensions in millimeters

BR-W		
Dim	Min	Max
A	28.2	28.8
B	17.1	19.1
C	10.4	12.4
D	0.95	1.05
E	10.8	11.2
F	30	/

BR		
Dim	Min	Max
A	28.2	28.8
B	15.3	17.3
C	17.1	19.1
D	13.2	15.2
E	0.75	0.85
F	6.2	6.4
G	2.3	2.5
H	10.8	11.2
I	19	/

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