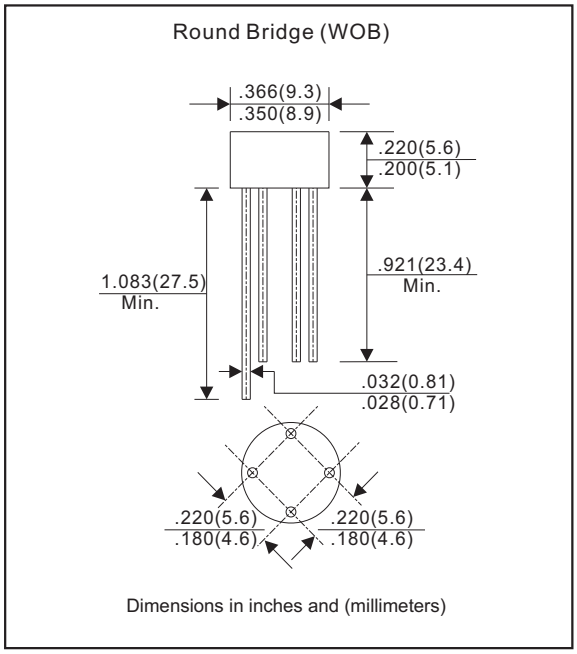
2W005G THRU 2W10G

List

2W005G THRU 2W10G

2.0A Glass Passivated Single-Phase Bridge Rectifiers-50-1000V

Package outline



Features

- Surge overload rating 60 amperes peak
- Ideal for printed circuit board
- Reliable low cost construction utilizing molded plastic technique results in expensive product
- Lead-free parts for green partner, meet RoHS requirements
- Suffix "-H" indicates Halogen-free parts, ex. 2W005G-H.

Mechanical data

- Case: Potted plastic round body
- Epoxy: UL94-V0 rated flame retardant
- Terminals: Solderable per MIL-STD-750 Method 2026
- Polarity: As marked
- Mounting Position: Any

Maximum ratings and Electrical characteristics (AT T_A=25°C unless otherwise noted)

PARAMETER	CONDITIONS	Symbol	MIN.	TYP.	MAX.	UNIT
Forward rectified current	See Fig.1	I_O			2.0	A
Forward surge current	8.3ms single half sine-wave (JEDEC methode)	I_{FSM}			60	A
Reverse current	V_R = V_{RRM} T_J = 25°C	I_R			10.0	uA
	V_R = V_{RRM} T_J = 100°C				1000	
I^2t Rating for fusing	t < 8.3 ms	I^2t			15	A^2s
Typical Junction capacitance	Note 1	C_J		30		pF
Storage temperature		T_{STG}	-65		+175	°C

Note 1: Measured at 1.0MHz and applied reverse voltage of 4.0V

SYMBOLS	V_{RRM} *1 (V)	V_{RMS} *2 (V)	V_R *3 (V)	V_F *4 (V)	Operating temperature T_J, (°C)
2W005G	50	35	50	1.10	-55 to +150
2W01G	100	70	100		
2W02G	200	140	200		
2W04G	400	280	400		
2W06G	600	420	600		
2W08G	800	560	800		
2W10G	1000	700	1000		

*1 Repetitive peak reverse voltage

*2 RMS voltage

*3 Continuous reverse voltage

*4 Maximum forward voltage @I_F=2.0A

Rating and characteristic curves (2W005G THRU 2W10G)

Fig.1 - Forward Current Derating Curve

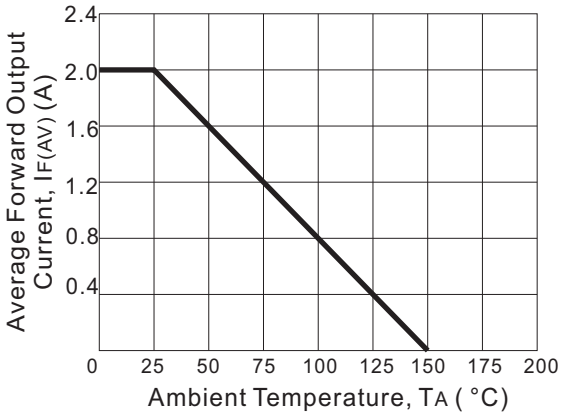


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

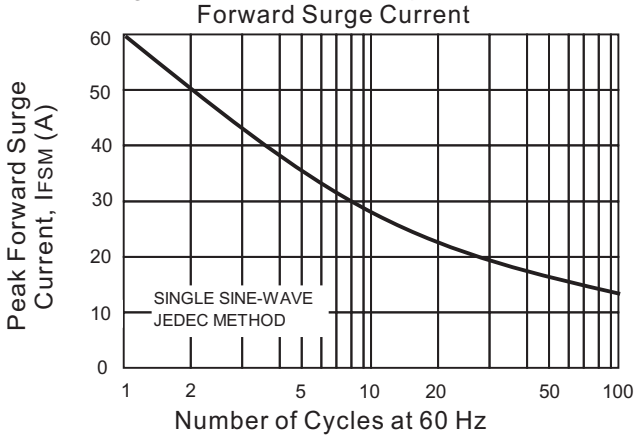


Fig. 3 - Typical Instantaneour Forward Characteristics (Per Leg)

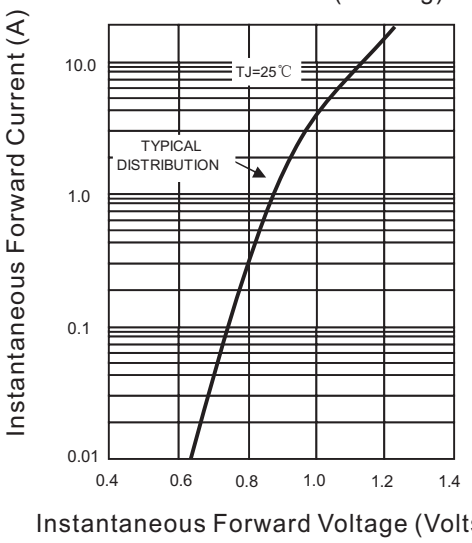


Fig. 4 - Typical Reverse Characteristics Per Leg

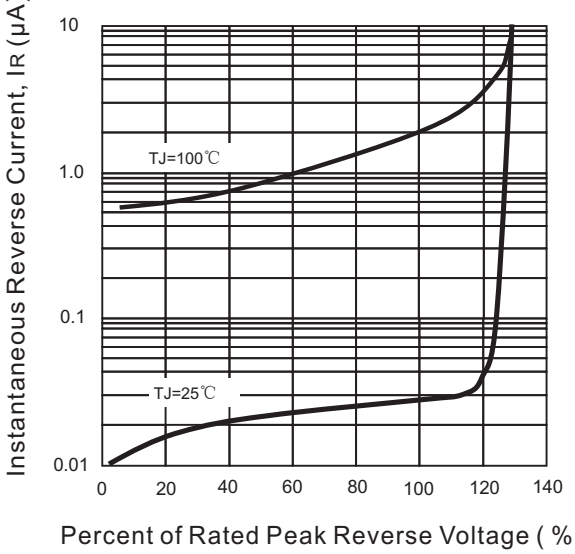
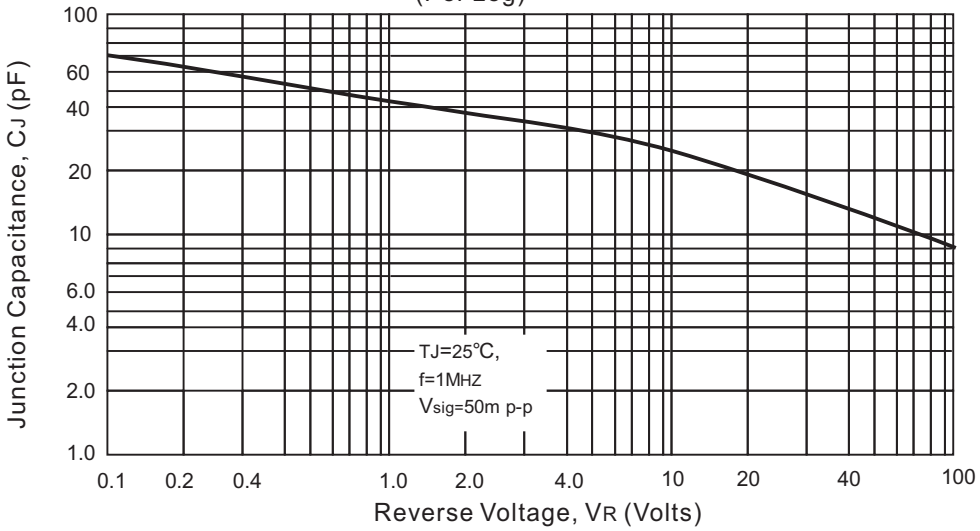
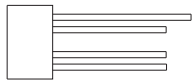
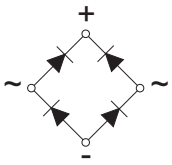


Fig. 5 - Typical Junction Capacitance (Per Leg)



2W005G THRU 2W10G

Pinning information

Simplified outline	Symbol
	

Marking

Type number	Marking code
2W005G	2W005G
2W01G	2W01G
2W02G	2W02G
2W04G	2W04G
2W06G	2W06G
2W08G	2W08G
2W10G	2W10G

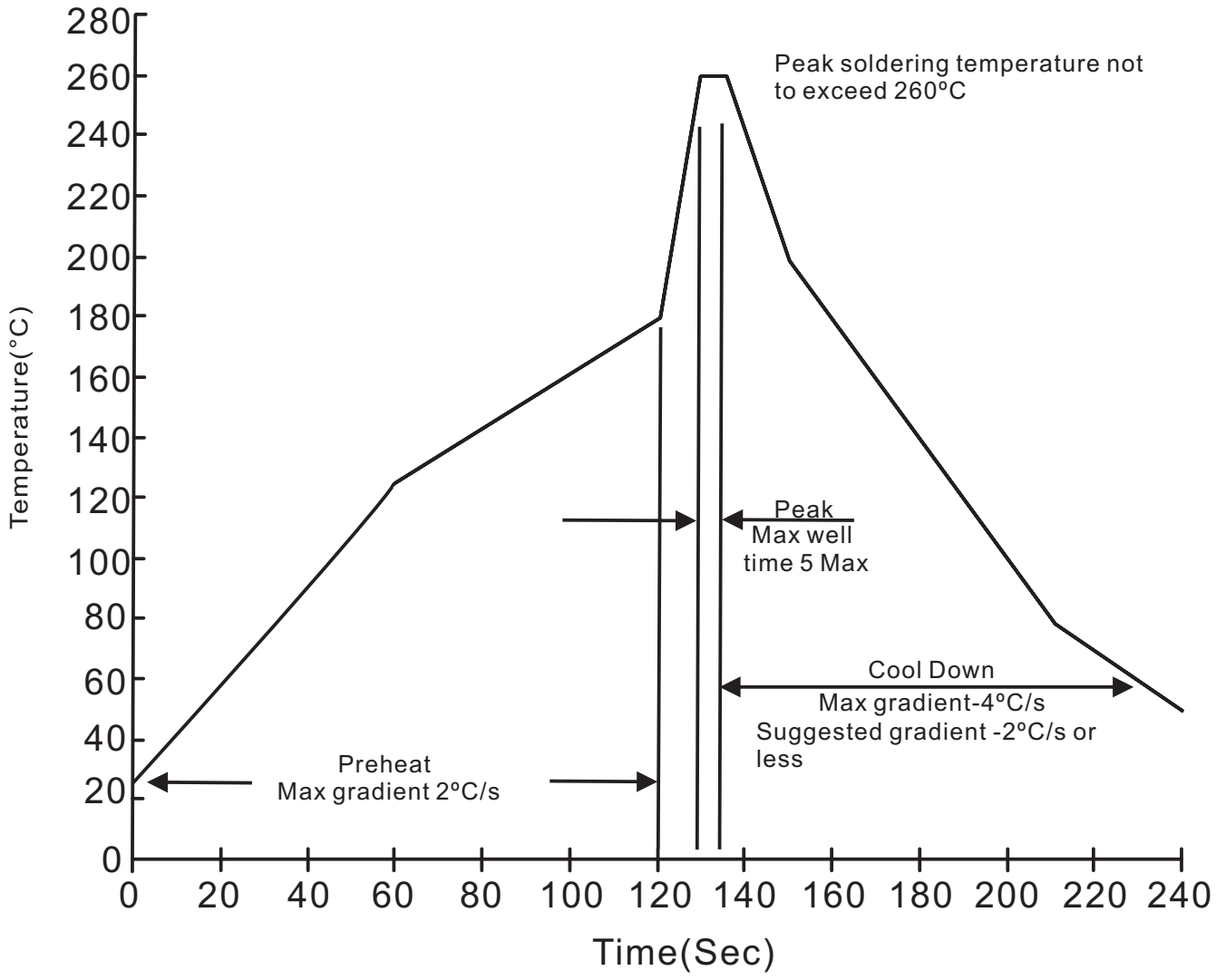
Bulk packing

PACKAGE	BOX (pcs)	INNER BOX (m/m)	CARTON SIZE (m/m)	CARTON (pcs)	APPROX. GROSS WEIGHT (kg)
WOB	1,000	230*230*49	490*240*310	10,000	13.3

2W005G THRU 2W10G

Suggested thermal profiles for soldering processes

1.Lead free temperature profile wave-soldering



2W005G THRU 2W10G

High reliability test capabilities

Item Test	Conditions	Reference
1. Solder Resistance	at 260±5°C for 10±2sec. immerse body into solder 1/16"±1/32"	MIL-STD-750D METHOD-2031
2. Solderability	at 245±5°C for 5 sec.	MIL-STD-202F METHOD-208
3. High Temperature Reverse Bias	V_R=80% rate at T_J=150°C for 168 hrs.	MIL-STD-750D METHOD-1038
4. Forward Operation Life	Rated average rectifier current at T_A=25°C for 500hrs.	MIL-STD-750D METHOD-1027
5. Intermittent Operation Life	T_A = 25°C, I_F = I_O On state: power on for 5 min. off state: power off for 5 min. on and off for 500 cycles.	MIL-STD-750D METHOD-1036
6. Pressure Cooker	15P_{SIG} at T_A=121°C for 4 hrs.	JESD22-A102
7. Temperature Cycling	-55°C to +125°C dwelled for 30 min. and transferred for 5min. total 10 cycles.	MIL-STD-750D METHOD-1051
8. Forward Surge	8.3ms single half sine-wave s, one surge.	MIL-STD-750D METHOD-4066-2
9. Humidity	at T_A=85°C, RH=85% for 1000hrs.	MIL-STD-750D METHOD-1021
10. High Temperature Storage Life	at 175°C for 1000 hrs.	MIL-STD-750D METHOD-1031