Shenzhen World Industrial Co.,Ltd. Soft-Bridge®

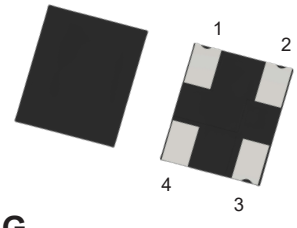
WRPLB12K

01-Jul-2026

Ultrasoft Recovery Bridge

VF:0.63V@1A/125°C

PLB Package



Features

- Reverse Voltage - 800 V
- Iorward Current - 12.0 A
- Lead free products, RoHS compliant
- High forward surge current capability

PINNING

PIN	DESCRIPTION
1	Input Pin（~）
2	Input Pin（~）
3	Output Anode（+）
4	Output Cathode（-）

Applications

- Switching Power Supply
- Home Appliances, Office Devices
- Industrial Auto-equipments

Maximum Ratings and Electrical characteristics

Ratings at 25 °C ambient temperature unless otherwise specified.
Single phase half-wave 60 Hz, resistive or inductive load, for capacitive load current derate by 20 %.

Parameter	Symbols	WRPLB12K	Units
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	800	V
Maximum RMS voltage	V_{RMS}	560	V
Maximum DC Blocking Voltage	V_{DC}	800	V
Average Rectified Output Current	I_o	12.0	A
Reverse Recovery Time. IF=0.5A,IR=1A,IRR=0.25A	Trr	10	us
Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load (JEDEC Method)	I_{FSM}	280	A
I^2t rating for fusing (1ms< t < 8.3ms)	I^2t	325	A^2S
Maximum Forward Voltage at 6.0 A	V_F	0.95	V
Maximum DC Reverse Current @TA=25 °C at Rated DC Blocking Voltage @TA=125 °C	I_R	10 500	μA
Operating and Storage Temperature Range	T_j, T_{stg}	-55 ~ +150	°C
Typical thermal resistance (Note 1)	$R_{\theta JC}$	6.0	°C/W
	$R_{\theta JA}$	35	

Note: 1. Thermal Resistance : Heat-sink case mounted or if PCB mounted.

Ratings And Characteristics Curves (TA = 25 ˚C unless otherwise noted)

FIG.1 Derating Curve Output Rectified Current

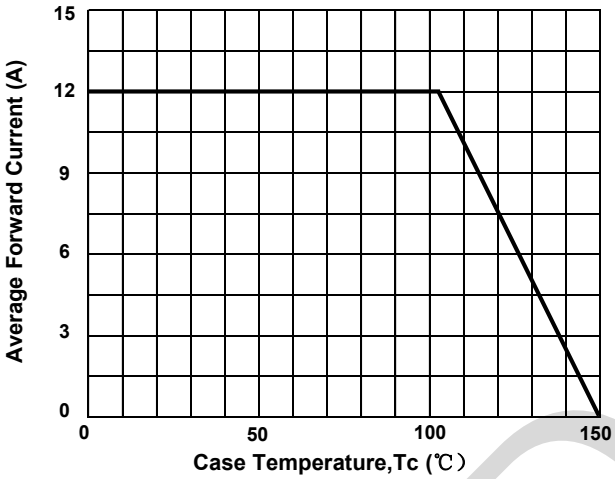


FIG.2 Typical Forward Characteristics per Diode

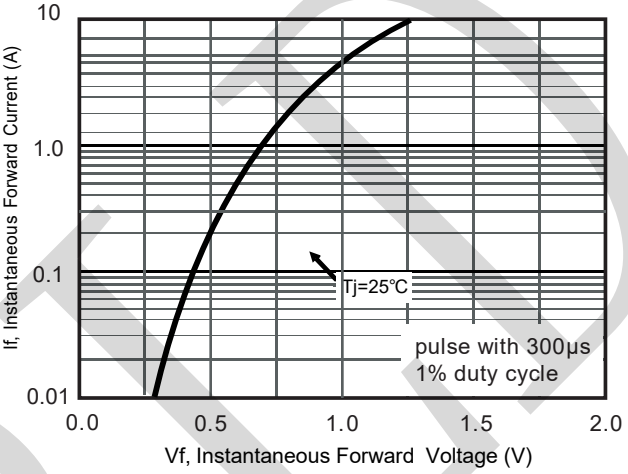


FIG.3 Maximum Non-Repetitive Peak Forward Surge Current per Diode

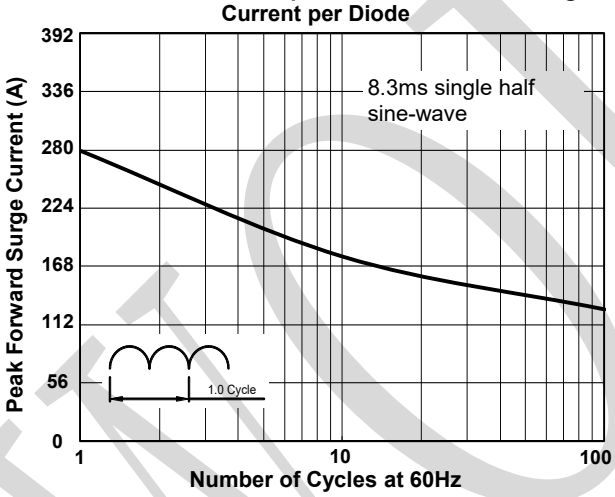


FIG.4 Typical Reverse Characteristics per Diode

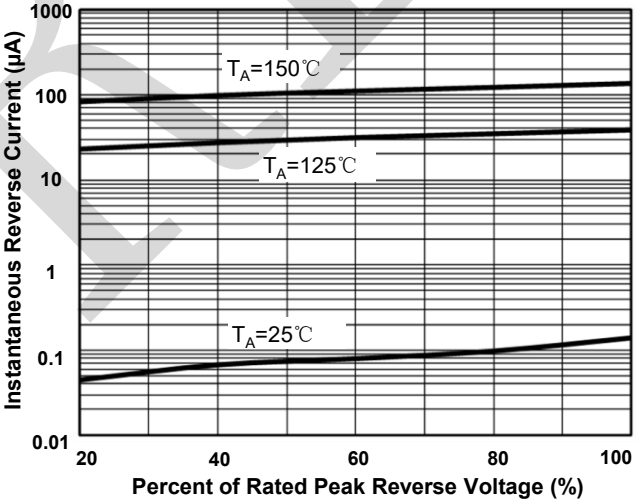
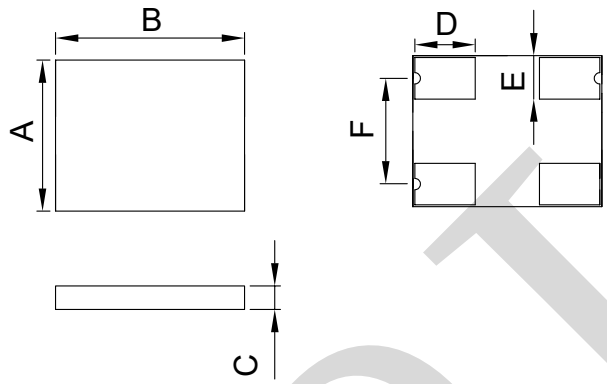


FIG.5 Typical Junction Capacitance per Diode

Package Outline Dimensions

Note:unit In(mm)

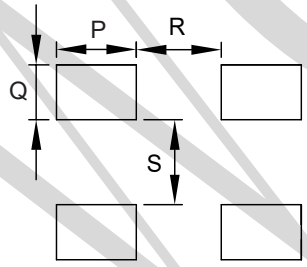
PLB



PLB mechanical data

UNIT		A	B	C	D	E	F
mm	max	8.2	10.2	1.20	3.2	2.2	5.4
	min	7.8	9.8	1.10	2.8	2.0	5.2

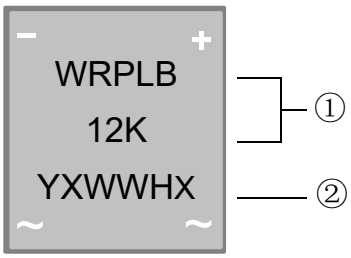
PLB Suggested Pad Layout



UNIT		P	Q	R	S
mm	min	3.2	2.2	3.8	3.2

WORLD

Marking Information



①Product model : WRPLB12K

②PDC information：

Y X WW H X

M:Internal identification code 2

H:Halogen-free

WW:Week code(01 to 53)

X:Internal identification code 1

Y:Year code(ex:0=2020)

WORLD

Revision Histor			
Date	Revision	Description & changes	Author
2019.11.23	1.0	Initial version	Sun
2025.06.20	1.1	Add printed characters	Ren
2026.07.01	1.2	Version updating	Tang

WORLD