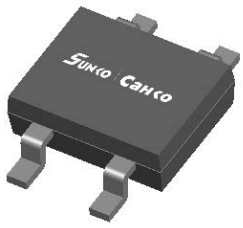
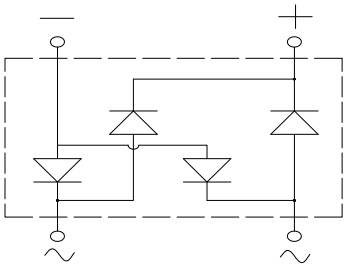
MBL1SA THRU MBL10SA

Bridge Rectifiers





Features

- UL recognition, file #E313149
- Ideal for automated placement
- Glass passivated chip junction
- High surge current capability
- Meets MSL level 1, per J-STD-020, LF maximum peak of 260 °C

Typical Applications

General purpose use in AC/DC bridge full wave rectification for power supply, lighting ballast, battery charger, home appliances, office equipment, and telecommunication applications.

Mechanical Data

- **Package**: MBLS
  Molding compound meets UL 94 V-0 flammability rating, -
- **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	MBL1SA	MBL2SA	MBL4SA	MBL6SA	MBL8SA	MBL10SA
Device marking code			MBL1SA	MBL2SA	MBL4SA	MBL6SA	MBL8SA	MBL10SA
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	V	100	200	400	600	800	1000
Maximum RMS Voltage	V_{RMS}	V	70	140	280	420	560	700
Maximum DC blocking Voltage	V_{DC}	V	100	200	400	600	800	1000
Average rectified output current @60Hz sine wave, R-load, Tc=120℃	I_O	A	1.0					
Forward Surge Current (Non-repetitive) @8.3ms Half-sine wave,1 cycle, Tj=25℃	I_{FSM}	A	35					
Current squared time @1ms≤t<8.3ms Tj=25℃，Rating of per diode	I^2t	A^2s	5.1					
Storage temperature	T_{stg}	℃	-55 ~ +150					
Junction temperature	T_j	℃	-55 ~ +150					

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

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	MBL1SA	MBL2SA	MBL4SA	MBL6SA	MBL8SA	MBL10SA
Maximum instantaneous forward voltage drop per diode	V_F	V	I_{FM}=0.5A	1.0					
Maximum DC reverse current at rated DC blocking voltage per diode	I_R	μA	T_j =25℃	5					
			T_j =125℃	50					
Typical junction capacitance	Cj	pF	Measured at 1MHz and Applied Reverse Voltage of 4.0 V.D.C	12					

MBL1SA THRU MBL10SA

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

PARAMETER		SYMBOL	UNIT	MBL1SA	MBL2SA	MBL4SA	MBL6SA	MBL8SA	MBL10SA
Typical Thermal Resistance	Between junction and ambient	RθJ-A	℃/W	65.0					
	Between junction and lead	RθJ-L		28.0					
	Between junction and case	RθJ-C		18.0					

Note: Device mounted on P.C.B with 35mm*25mm*1.7mm.

■Ordering Information (Example)

PREFERED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
MBL1SA ~ MBL10SA	F1	Approximate 0.083	4000	/	64000	13’ reel
MBL1SA ~ MBL10SA	F3	Approximate 0.083	5000	/	80000	13’ reel

■ Characteristics(Typical)

FIG1:Io-Tc Curve

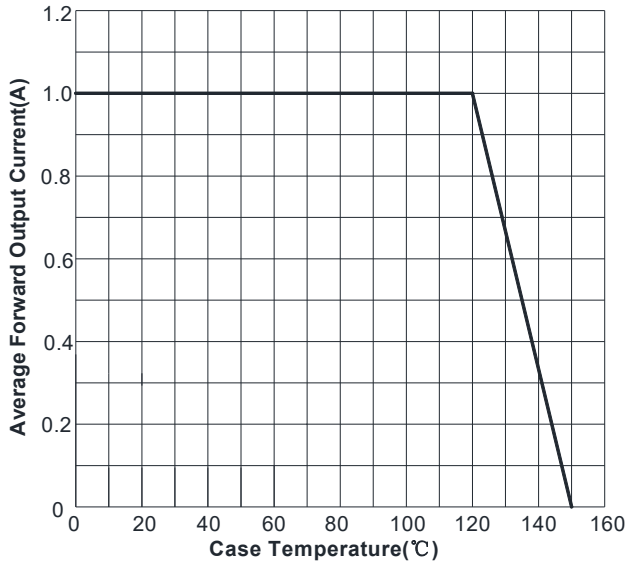


FIG2:Surge Forward Current Capability

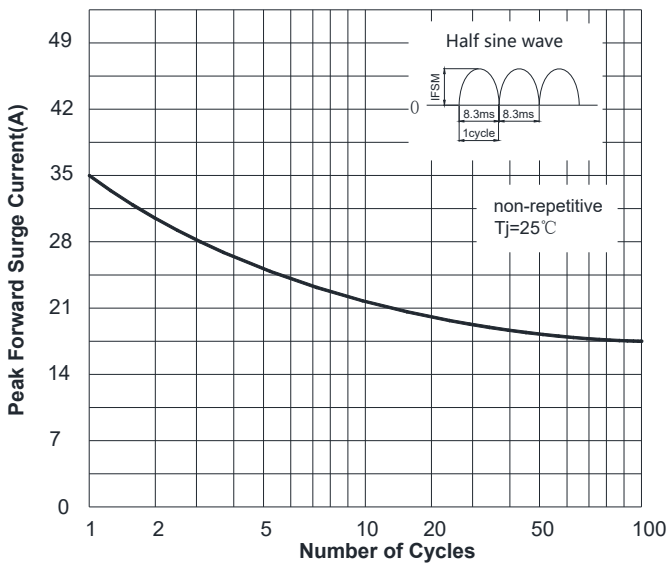


FIG3: Typical Forward Voltage

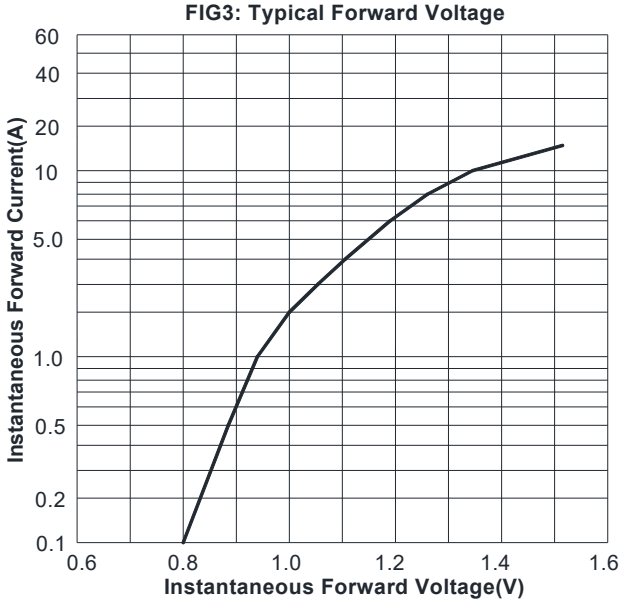
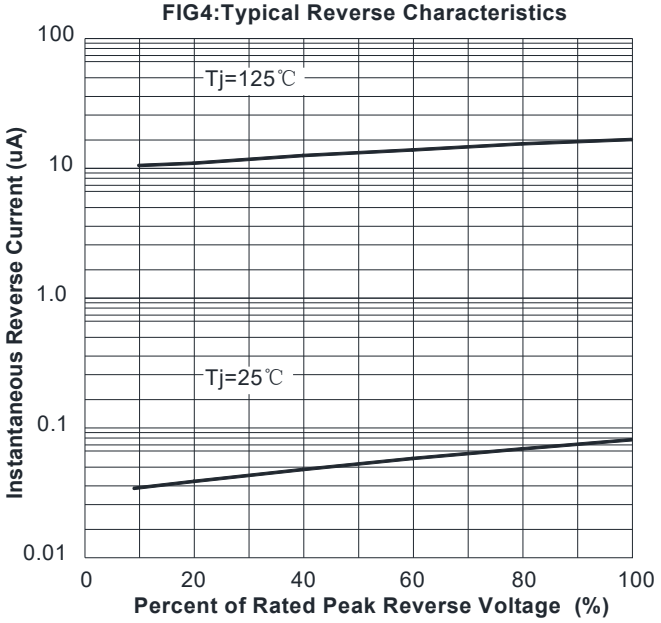
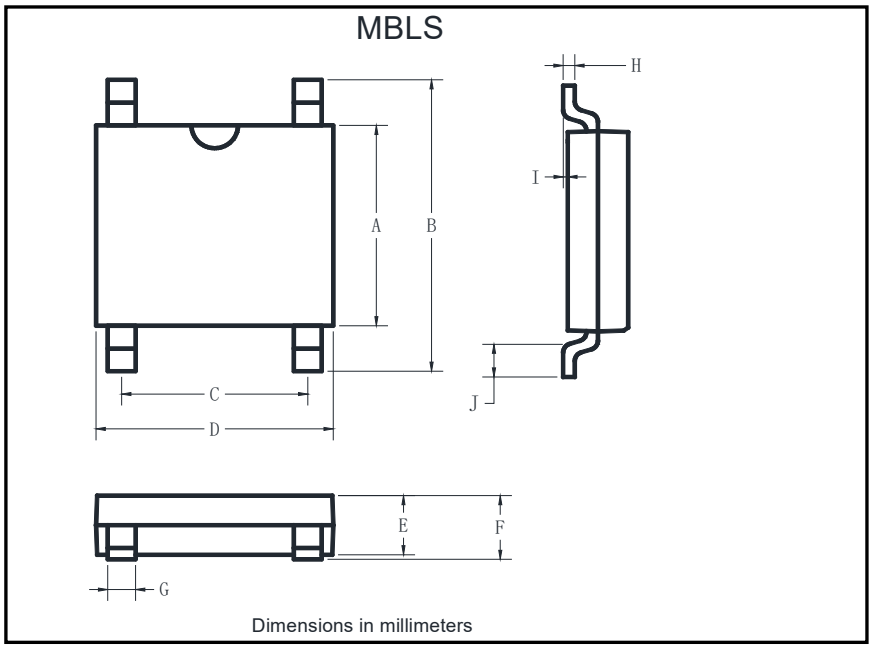


FIG4:Typical Reverse Characteristics

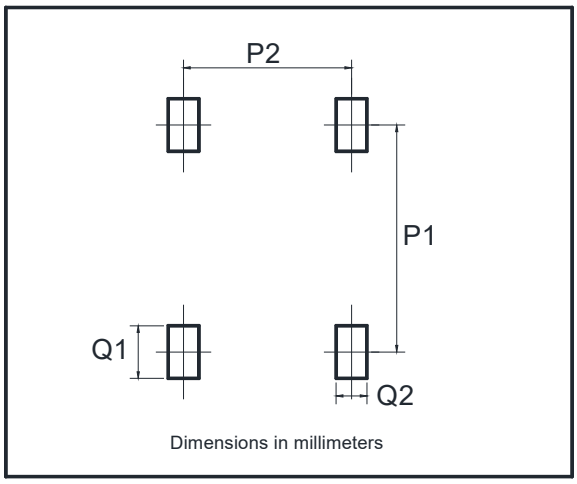


■ Outline Dimensions



MBLS		
Dim	Min	Max
A	3.60	4.00
B	6.40	7.00
C	2.20	2.60
D	4.50	4.90
E	1.30	1.50
F	1.40	1.60
G	0.56	0.84
H	0.15	0.35
I	0.20Max	
J	0.70	1.10

■ Suggested pad layout



Dim	Min
P1	6.00
P2	2.40
Q1	1.84
Q2	1.20

Disclaimer

The information presented in this document is for reference only. Shanghai Sunco Electronics Co., Ltd reserves the right to make changes without notice for the specification of the products displayed herein to improve reliability, function or design or otherwise.

The product listed herein is designed to be used with ordinary electronic equipment or devices, and not designed to be used with equipment or devices which require high level of reliability and the malfunction of with would directly endanger human life (such as medical instruments, transportation equipment, aerospace machinery, nuclear-reactor controllers, fuel controllers and other safety devices), Russiansunco or anyone on its behalf, assumes no responsibility or liability for any damages resulting from such improper use of sale.

This publication supersedes & replaces all information previously supplied. For additional information, please visit our website http:// www.russiansunco.com , or consult your nearest Russiansunco's sales office for further assistance.