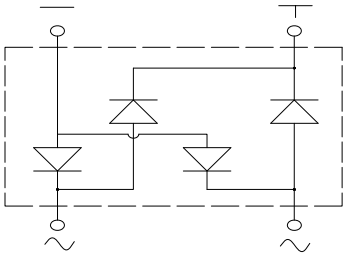
MBSK12S THRU MBSK120S

Bridge Rectifiers



Features

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

Typical Applications

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

Mechanical Data

- **Package**: MBS
  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	MBSK12S	MBSK14S	MBSK16S	MBSK18S	MBSK110S	MBSK115S	MBSK120S
Device marking code			MBSK12S	MBSK14S	MBSK16S	MBSK18S	MBSK110S	MBSK115S	MBSK120S
Repetitive peak reverse voltage	V_{RRM}	V	20	40	60	80	100	150	200
Average rectified output current @60Hz Half-sine wave, Resistance load, Ta (FIG.1)	I_O	A	1.0						
Surge(non-repetitive)forward current @ 60Hz half-sine wave,1 cycle, Tj=25℃	I_{FSM}	A	30						
Current squared time @1ms≤t≤8.3ms Tj=25℃,rating of per diode	I^2t	A^2S	3.7						
Storage temperature	T_{stg}	℃	-55 ~+150						
Junction temperature	Tj	℃	-55 ~+125		-55 ~+150				

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

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	MBSK12S	MBSK14S	MBSK16S	MBSK18S	MBSK110S	MBSK115S	MBSK120S
Maximum instantaneous forward voltage drop per diode	VF	V	I_{FM}=0.5A	0.50		0.70	0.85		0.90	
Maximum DC reverse current at rated DC blocking voltage per diode@ V_{RM}=V_{RRM}	I_{RRM}	uA	Ta=25℃	500			100			
			Ta=100℃	10000			5000			

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

PARAMETER		SYMBOL	UNIT	MBSK12S	MBSK14S	MBSK16S	MBSK18S	MBSK110S	MBSK115S	MBSK120S
Thermal Resistance	Between junction and ambient, On alumina substrate	RθJ-A	℃/W	76.0						
	Between junction and ambient, On glass-epoxi substrate	RθJ-A		134.0						
	Between junction and lead	RθJ-L		20.0						

■ Ordering Information (Example)

PREFERED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
MBSK12S-MBSK120S	F1	Approximate 0.12	2500	5000	40000	13’ reel
MBSK12S-MBSK120S	F2	Approximate 0.12	3000	6000	48000	13’ reel

■ Characteristics (Typical)

FIG1:Io-Ta Curve

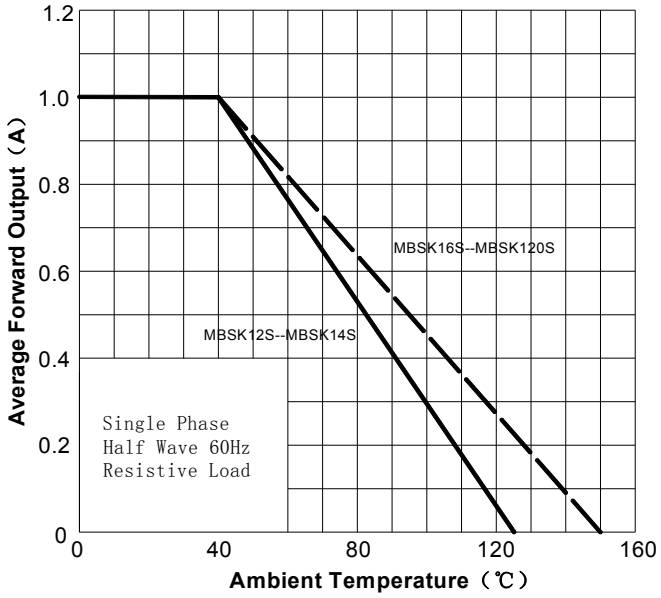


FIG2:Surge Forward Current Capability

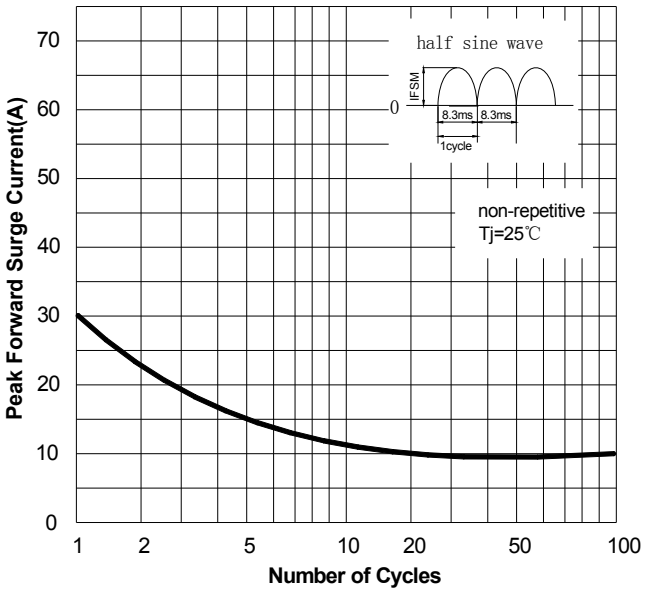


FIG3: Forward Voltage

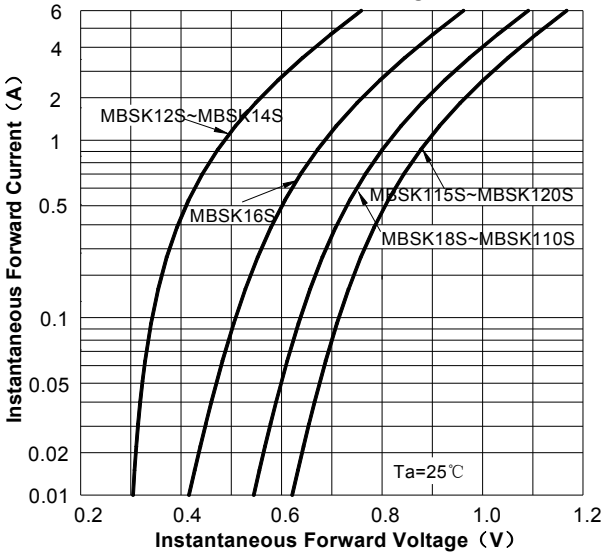
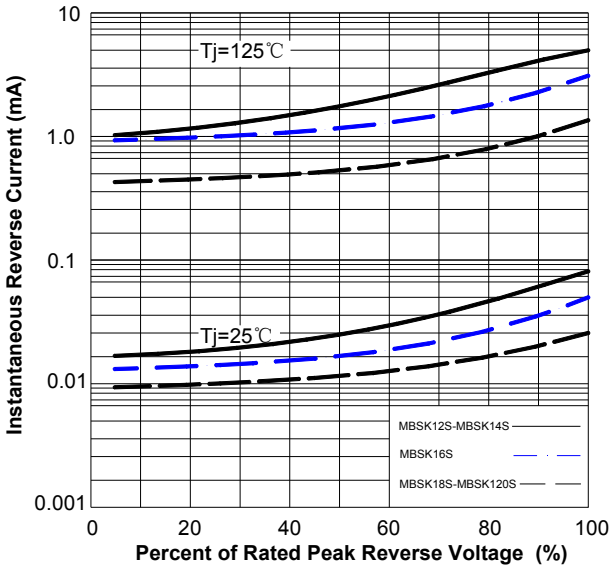
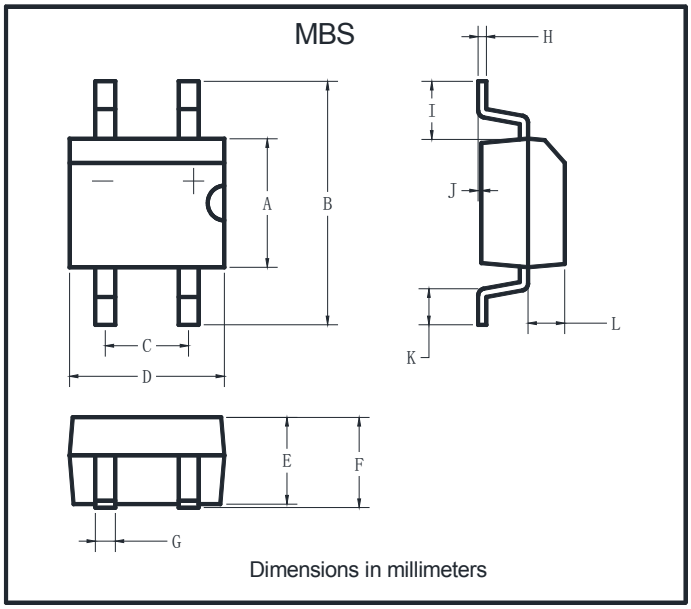


FIG4:Typical Reverse Characteristics

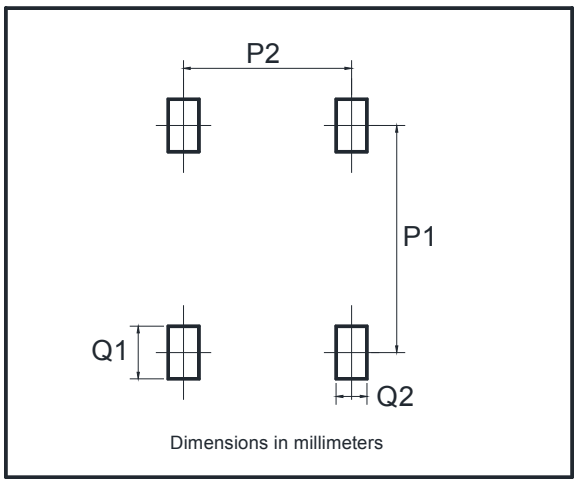


■ Outline Dimensions



MBS		
Dim	Min	Max
A	3.60	4.00
B	7.00 Max	
C	2.20	2.60
D	4.50	4.90
E	2.30	2.70
F	3.00 Max	
G	0.56	0.84
H	0.15	0.35
I	1.10	2.12
J	0.20 Max	
K	0.70	1.10
L	0.95	1.53

■ Suggested pad layout



Dim	Min
P1	6.00
P2	2.40
Q1	1.84
Q2	1.20

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