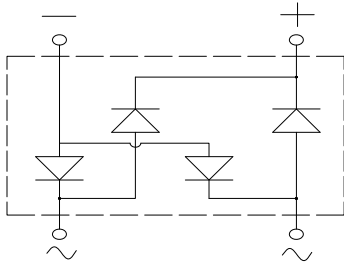
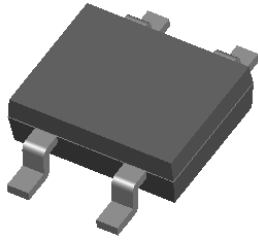


Bridge Rectifiers



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:** MBLS
Molding compound meets UL 94 V-0 flammability rating, RoHS-compliant
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102
- **Polarity:** As marked on body

■ Maximum Ratings (Ta=25°C Unless otherwise specified)

| PARAMETER | SYMBOL | UNIT | MBLSK 12S | MBLSK 14S | MBLSK 16S | MBLSK 18S | MBLSK 110S | MBLSK 115S | MBLSK 120S |
|--|------------------|------------------|------------------|------------------|------------------|------------------|-------------------|-------------------|-------------------|
| Device marking code | | | MBLSK 12S | MBLSK 14S | MBLSK 16S | MBLSK 18S | MBLSK 110S | MBLSK 115S | MBLSK 120S |
| Repetitive peak reverse voltage | VRRM | V | 20 | 40 | 60 | 80 | 100 | 150 | 200 |
| Average rectified output current @60Hz Half-sine wave, Resistance load, Ta (FIG.1) | IO | A | 1.0 | | | | | | |
| Surge(non-repetitive)forward current @ 60Hz half-sine wave, 1 cycle, Tj=25°C | IFSM | A | 30 | | | | | | |
| Current squared time @1ms≤t≤8.3ms Tj=25°C, rating of per diode | I ² t | A ² S | 3.7 | | | | | | |
| Storage temperature | Tstg | °C | -55 ~+150 | | | | | | |
| Junction temperature | Tj | °C | -55 ~+125 | | | -55 ~+150 | | | |

■ Electrical Characteristics (Ta=25°C Unless otherwise specified)

| PARAMETER | SYMBOL | UNIT | TEST CONDITIONS | MBLSK 12S | MBLSK 14S | MBLSK 16S | MBLSK 18S | MBLSK 110S | MBLSK 115S | MBLSK 120S |
|--|--------|------|-----------------|-----------|-----------|-----------|-----------|------------|------------|------------|
| Maximum instantaneous forward voltage drop per diode | VF | V | IFM=0.5A | 0.50 | | 0.70 | 0.85 | | 0.90 | |
| Maximum DC reverse current at rated DC blocking voltage per diode @ VRM=VRRM | IRRM | uA | Ta=25°C | 500 | | | 100 | | | |
| | | | Ta=100°C | 10000 | | | 5000 | | | |



MBLSK12S THRU MBLK120S

■ Thermal Characteristics (T_a=25°C Unless otherwise specified)

| PARAMETER | | SYMBOL | UNIT | MBLSK 12S | MBLSK 14S | MBLSK 16S | MBLSK 18S | MBLSK 110S | MBLSK 115S | MBLSK 120S |
|--------------------|--|-------------------|------|-----------|-----------|-----------|-----------|------------|------------|------------|
| Thermal Resistance | Between junction and ambient, On alumina substrate | R _{θJ-A} | °C/W | 76.0 | | | | | | |
| | Between junction and ambient, On glass-epoxy substrate | R _{θJ-A} | | 134.0 | | | | | | |
| | Between junction and lead | R _{θJ-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 |
|-------------------|--------------|-------------------|-----------------------|-------------------------|----------------------------|---------------|
| MBLSK12S-MBLK120S | F1 | Approximate 0.083 | 4000 | 8000 | 64000 | 13' reel |
| MBLSK12S-MBLK120S | F3 | Approximate 0.083 | 5000 | 10000 | 80000 | 13' reel |

■ Characteristics(Typical)

FIG1: I_o-T_a Curve

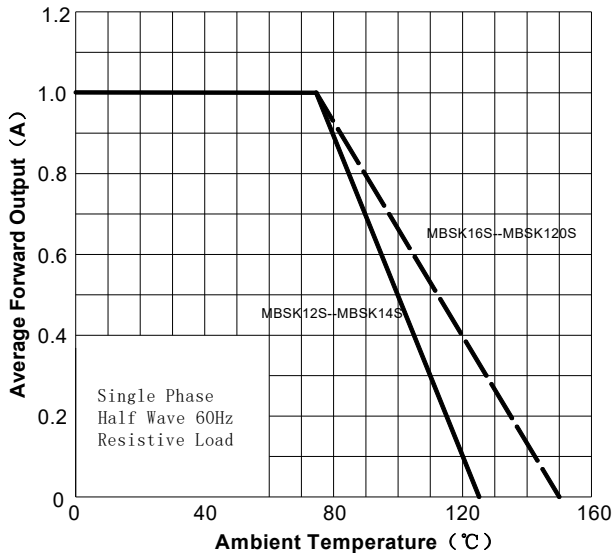


FIG2: Surge Forward Current Capability

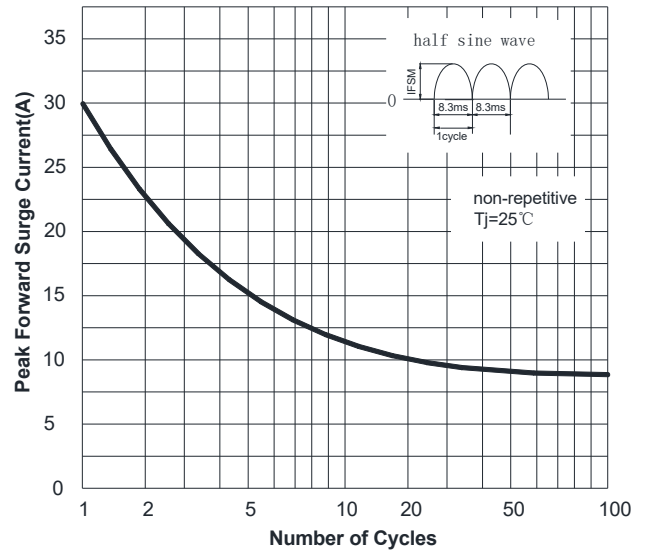


FIG3: Forward Voltage

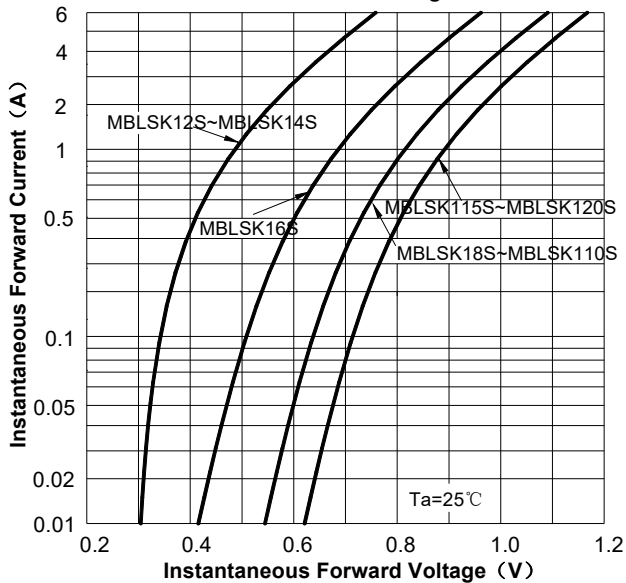
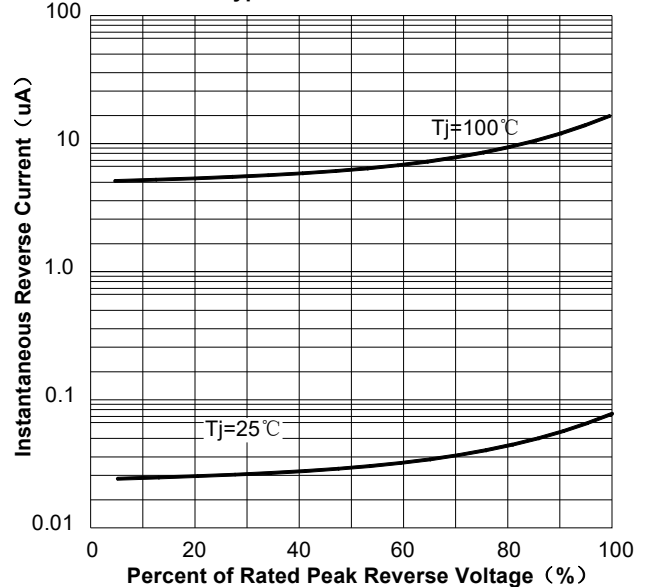


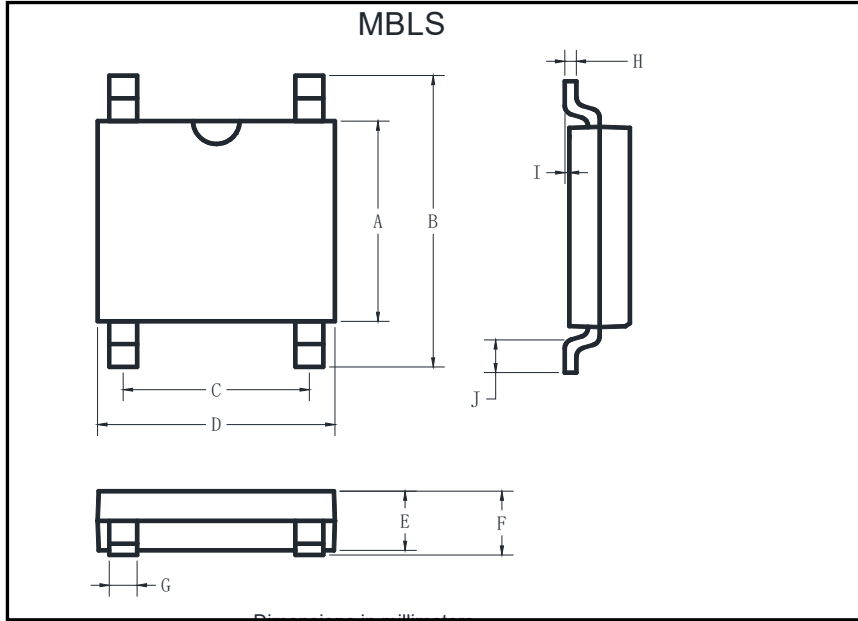
FIG4: Typical Reverse Characteristics





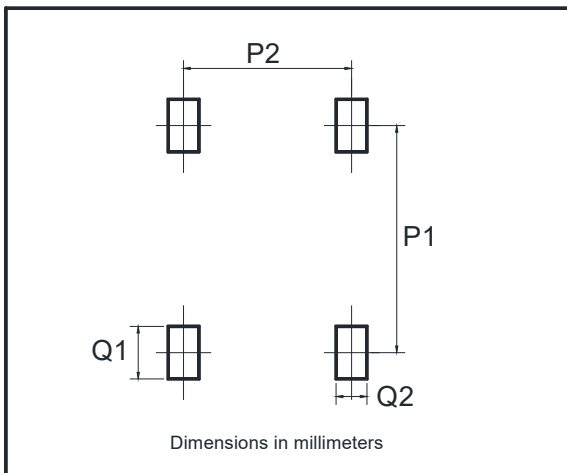
MBLSK12S THRU MBLSK120S

■ 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 |



MBLSK12S THRU MBLSK120S

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