

## SURFACE MOUNT BRIDGE RECTIFIER

### MBL06S

#### FEATURES

- High current capability
- High surge current capability
- High reliability
- Low forward voltage drop

#### APPLICATIONS:

- Input rectification for LED lighting
- Power over Ethernet (PoE) peripherals
- General purpose full wave rectification

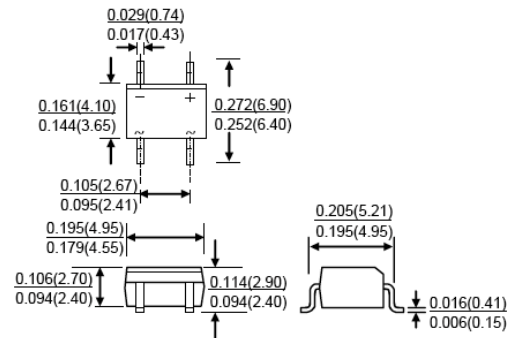
#### MECHANICAL DATA

Case: MBS

Epoxy: UL94V-O rate flame retardant

Lead: Lead Formed for Surface Mount

### MBS (TO-269AA)



Dimensions in inches and ( millimeters )



### Maximum Ratings (Tc=25°C unless otherwise noted)

| Parameter   | Symbol | MBL106S     | Unit |
|---|--------|-------------|------|
| Maximum repetitive peak reverse voltage                               | VRRM   | 600         | V    |
| Working peak reverse voltage  | VRWM   | 420         | V    |
| Maximum DC blocking voltage   | VDC    | 600         | V    |
| Maximum average forward rectified current                             | IF(AV) | 0.8         | A    |
| Peak forward surge current  | IFSM   | 50          | A    |
| 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) |        |             |      |
| Operating junction temperature range                                  | TJ     | -55 to +150 | °C   |
| Storage temperature range   | TSTG   | -55 to +150 | °C   |

### Electrical characteristics (Tc=25°C unless otherwise noted)

| Parameter                                | Symbol | TYP  | Max  | Unit |
|--|--------|------|------|------|
| Maximum instantaneous                    | VF     | 0.78 | 0.85 | V    |
| Maximum reverse current                  | IR     | 1    | 5    | u'A  |
| at working peak reverse voltage Tj=125°C |        | -    | 500  | u'A  |

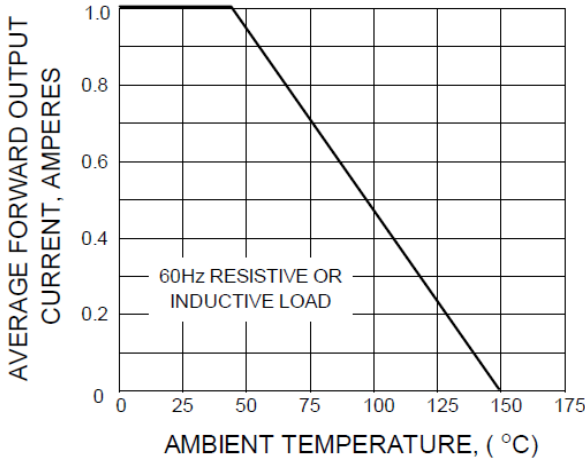
### Thermal characteristics (Tc=25°C unless otherwise noted)

| Parameter                  | Symbol | Unit |
|----------------------------|--------|------|
| Typical thermal resistance | RθJA   | 75   |
|                            | Rthjl  | 28   |

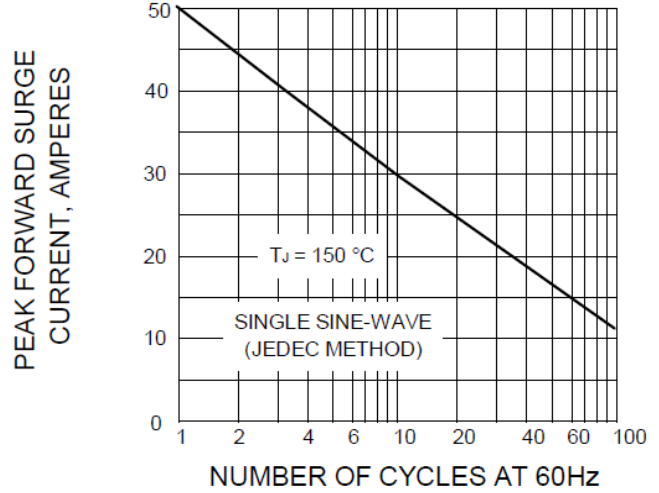
(1) Pulse test: 300 μs pulse width, 1 % duty cycle

(2) Pulse test: Pulse width ≤ 40 ms

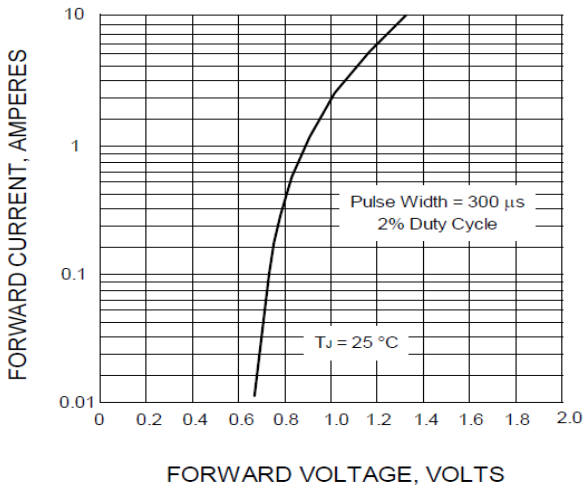
**FIG.1 - DERATING CURVE FOR OUTPUT RECTIFIED CURRENT**



**FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PER BRIDGE ELEMENT**



**FIG.3 - TYPICAL FORWARD CHARACTERISTICS**



**FIG.4 - TYPICAL REVERSE CHARACTERISTICS PER BRIDGE ELEMENT**

