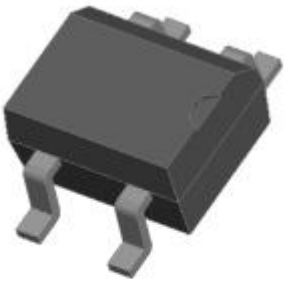
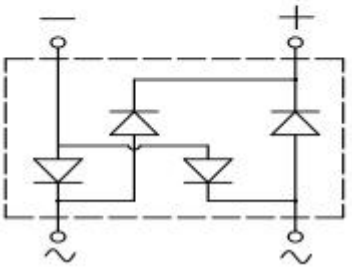
# Bridge Rectifiers





## 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 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, RoHS-compliant
- **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 | HD1S | HD2S | HD4S | HD6S | HD8S | HD10S |
|---|---|---|---|---|---|---|---|---|---|
| Device marking code | | | | HD1S | HD2S | HD4S | HD6S | HD8S | HD10S |
| Repetitive peak reverse voltage | | $V_{RRM}$ | V | 100 | 200 | 400 | 600 | 800 | 1000 |
| Average rectified output current @60Hz sine wave, R-load, Ta=40℃ | On alumina substrate | $I_O$ | A | 0.8 | | | | | |
| | On glass-epoxi substrate | | | 0.5 | | | | | |
| Surge(non-repetitive)forward current @60Hz half sine wave, 1 cycle, $T_j$=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 | | Tstg | ℃ | -55 ~+150 | | | | | |
| Junction temperature | | Tj | ℃ | -55 ~+150 | | | | | |

## ■Electrical Characteristics ($T_a$=25℃ Unless otherwise specified)

| PARAMETER | SYMBOL | UNIT | TEST CONDITIONS | HD1S | HD2S | HD4S | HD6S | HD8S | HD10S |
|---|---|---|---|---|---|---|---|---|---|
| Maximum instantaneous forward voltage drop per diode | $V_F$ | V | $I_{FM}$=0.4A | 1.00 | | | | | |
| Maximum DC reverse current at rated DC blocking voltage per diode | $I_{RRM}$ | μA | $V_{RM}=V_{RRM}$ | 5 | | | | | |

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

| PARAMETER | | SYMBOL | UNIT | HD1S | HD2S | HD4S | HD6S | HD8S | HD10S |
|---|---|---|---|---|---|---|---|---|---|
| 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 |
|---|---|---|---|---|---|---|
| HD1S-HD10S | F1 | Approximate 0.12 | 2500 | 5000 | 40000 | 13’ reel |

## ■ Characteristics(Typical)

FIG1:Io-Ta Curve

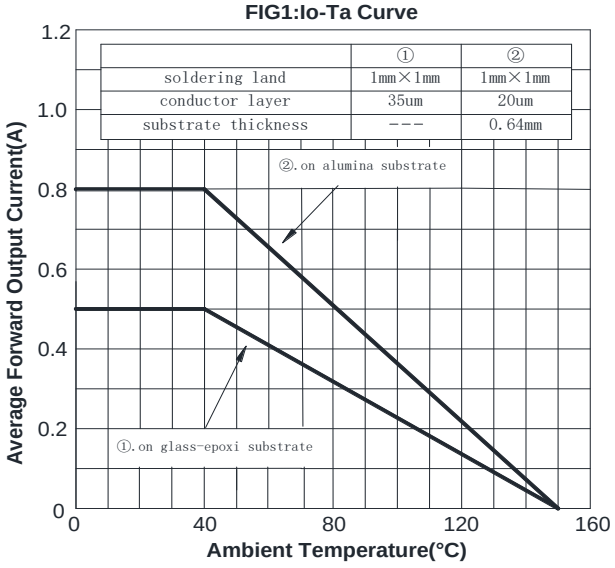



FIG2:Surge Forward Current Capability

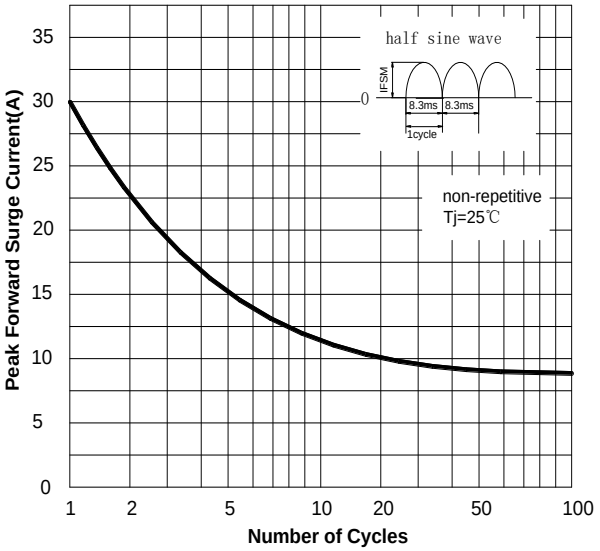



FIG3: Forward Voltage

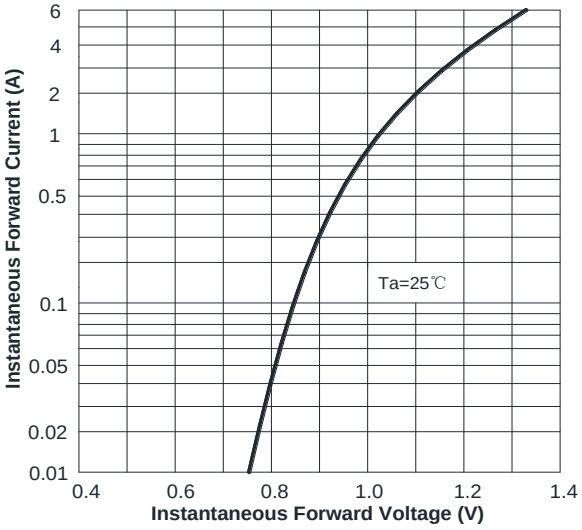
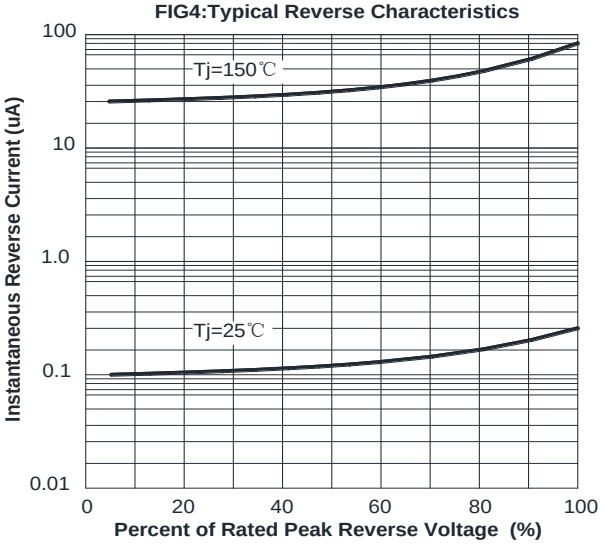
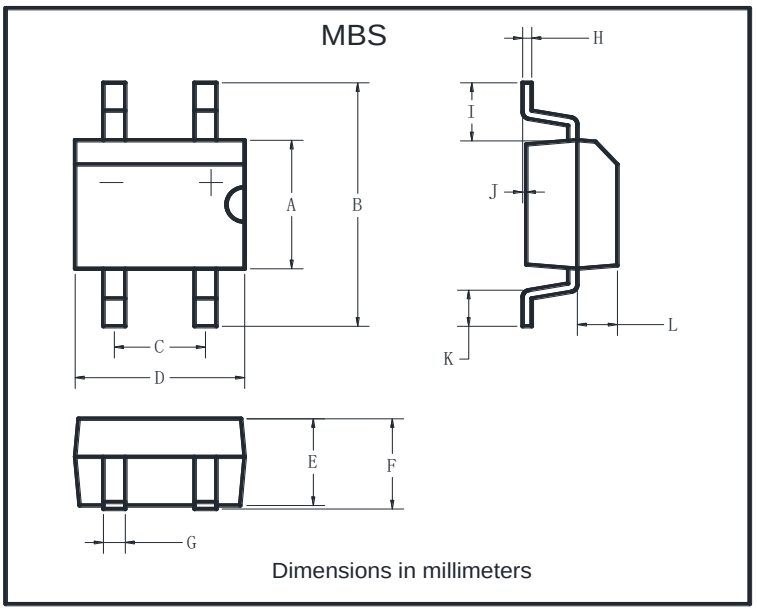



FIG4:Typical Reverse Characteristics

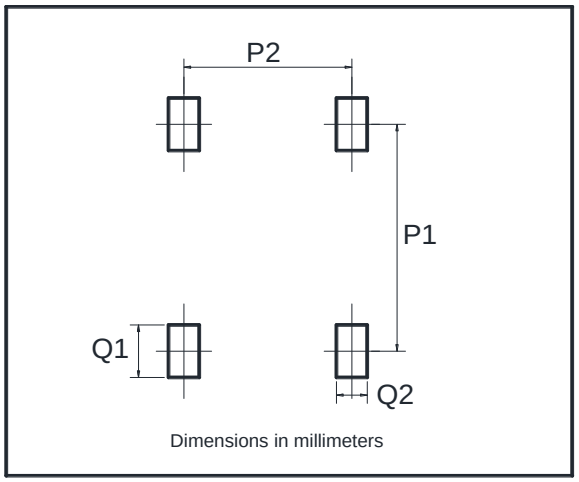


## ■ Outline Dimensions




| 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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