

MD1S THRU MD7S

Miniature Glass Passivated Single Phase Surface Mount Bridge Rectifier

Reverse Voltage – 50 to 1000 Volts

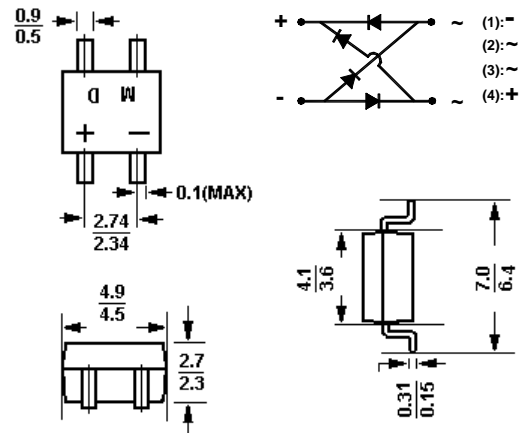
Forward Current – 0.5 Ampere

Features

- Surge overload rating: 30 amperes peak
- Ideal for printed circuit board
- Low leakage
- Reliable low cost construction utilizing molded
- Plastic package has Underwriters Laboratory Flammability Classification 94V-O

Mechanical Data

- **Case:** MD-S, molded plastic.
- **Terminals:** Leads solderable per MIL-STD-202, method 208.
- **Mounting position:** Any.
- **Weight:** 0.008 ounce, 0.22 grams.



Dimensions in mm

Absolute Maximum Ratings and Characteristics

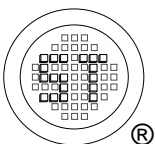
Ratings at 25°C ambient temperature unless otherwise specified. Single phase, half wave, 60 Hz, resistive or inductive load. For capacitive load, derate current by 20%.

| | Symbols | MD1S | MD2S | MD3S | MD4S | MD5S | MD6S | MD7S | Units |
|--|-----------------|------|------|------|-------------|------|------|------|--------------|
| Maximum recurrent peak reverse voltage | V_{RRM} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| Maximum RMS voltage | V_{RMS} | 35 | 70 | 140 | 280 | 420 | 560 | 700 | V |
| Maximum DC blocking voltage | V_{DC} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| Maximum average forward rectified current See Fig .1 On glass epoxy P.C.B ²⁾ On aluminum substrate ³⁾ | $I_{(AV)}$ | | | | 0.5 0.8 | | | | A |
| Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC method) | I_{FSM} | | | | 30 | | | | A |
| Maximum forward voltage at 0.4A DC | V_F | | | | 1.0 | | | | V |
| Maximum reverse current @ $T_A = 25^\circ C$ at rated DC blocking voltage @ $T_A = 125^\circ C$ | I_R | | | | 5.0 500 | | | | μA |
| Typical junction capacitance ¹⁾ | C_J | | | | 15 | | | | pF |
| Typical thermal resistance ³⁾ | $R_{\theta JA}$ | | | | 76 | | | | $^\circ C/W$ |
| Typical thermal resistance ²⁾ | $R_{\theta JL}$ | | | | 20 | | | | $^\circ C/W$ |
| Operating and storage temperature range | T_J, T_{Stg} | | | | -55 to +150 | | | | $^\circ C$ |

¹⁾ Measured at 1 MHz and applied $V_r = 4$ volts.

²⁾ On glass epoxy P.C.B. mounted on 0.05 x 0.05" (1.3 x 1.3 mm) pads.

³⁾ On aluminum substrate P.C.B. with an area of 0.8 x 0.8" (20 x 20mm) mounted on 0.05 x 0.05" (1.3 x 1.3mm) solder pad.

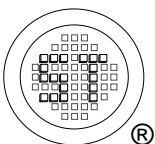
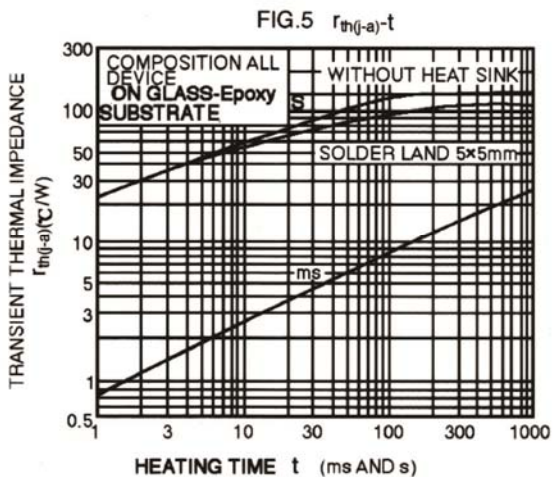
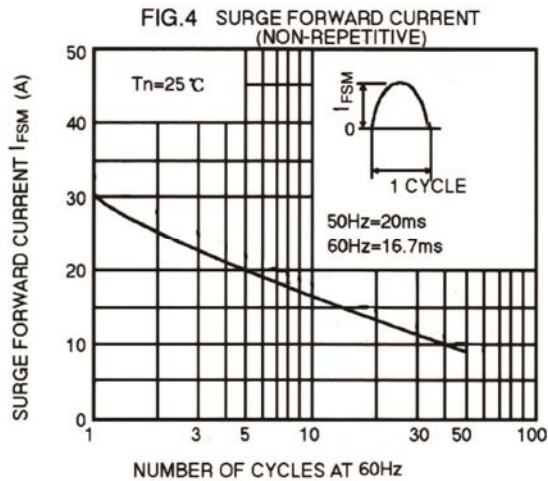
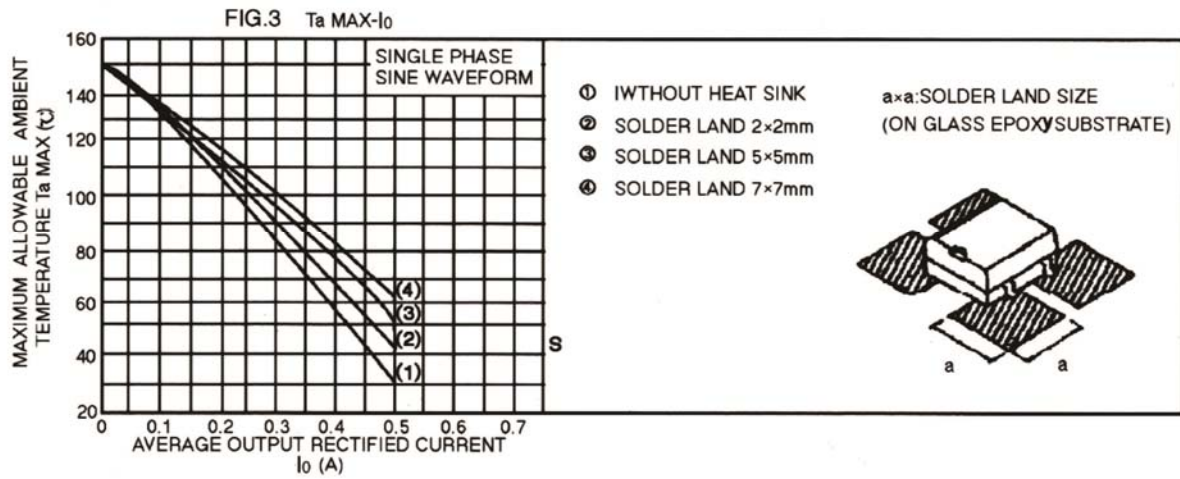
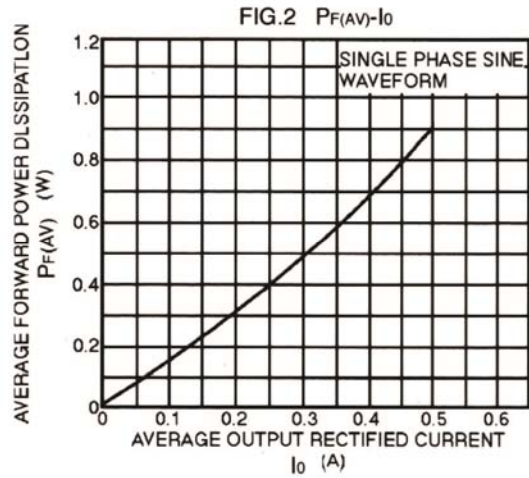
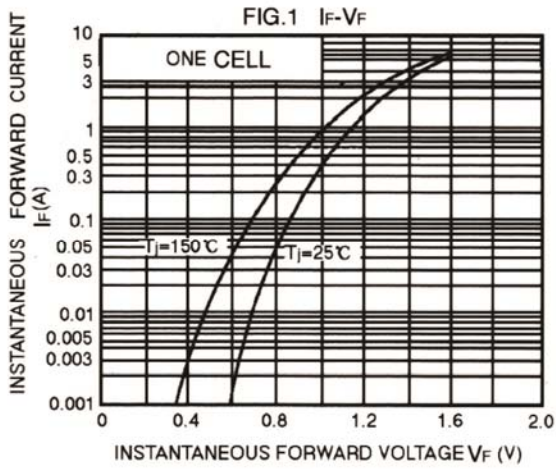


SEMTECH ELECTRONICS LTD.



Dated : 21/04/2016 JG Rev:01

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ISO 9001:2008
Certificate No. 160713000

ISO 14001:2004
Certificate No. 7116

ISO 9001:2008
Certificate No. 0719410

BS-OHSAS 18001:2007
Certificate No. 7116

IECQ QC 080000
Certificate No. PRC-18PM-1483-1

Dated : 21/04/2016 JG Rev:01