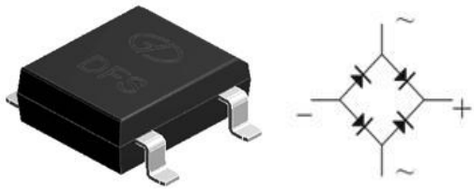
# Reverse Voltage 200~1000V  Forward Current 2.0A

## Features

- ●Glass passivated Bridge Rectifiers
- ●Ideal for automated placement
- ●High surge current capability
- ●Moisture sensitivity: level 1, per J-STD-020
- ●High temperature soldering guaranteed: 260°C/10 seconds



DFS

## Typical Applications

●General purpose use in ac-to dc bridge full wave rectification for SMPS,
lighting, adapter, charger, home appliances, office equipment, and telecommunication applications

## Mechanical Data

- ●Case: DFS, Epoxy meets UL-94V-0 Flammablity rating
- ●Terminals : Matte tin plated(E3 Suffix) leads, solderable per J-STD-002B and JESD22-B102D
- ●Polarity : As marked on body

**Maximum Ratings** (TA = 25 °C unless otherwise noted)

| Parameter | | Symbol | DB203S | DB204S | DB205S | DB206S | DB207S | Unit |
|---|---|---|---|---|---|---|---|---|
| Maximum repetitive peak reverse voltage | | $V_{RRM}$ | 200 | 400 | 600 | 800 | 1000 | V |
| Maximum RMS voltage | | $V_{RMS}$ | 140 | 280 | 420 | 560 | 700 | V |
| Maximum DC blocking voltage | | $V_{DC}$ | 200 | 400 | 600 | 800 | 1000 | V |
| Maximum average forward rectified current | | $I_{F(AV)}$ | 2.0 | | | | | A |
| Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load | | $I_{FSM}$ | 60 | | | | | A |
| Rating for fusing (t≤8.3ms) | | $I^2t$ | 15.0 | | | | | $A^2s$ |
| Operating junction and storage temperature range | | $T_J$, $T_{STG}$ | - 55 to + 150 | | | | | °C |
| Typical junction capacitance | 4.0 V, 1 MHz | $C_J$ | 16 | | | | | pF |

| **Electrical Characteristics** (TA = 25 °C unless otherwise noted) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Parameter** | **Test Conditions** | **Symbol** | **DB203S** | **DB204S** | **DB205S** | **DB206S** | **DB207S** | **Unit** |
| Maximum instantaneous forward voltage | IF=1A,Ta=25°C | $V_F$ | 1.0 | | | | | Volts |
| | IF=2A,Ta=125°C | | 1.1 | | | | | |
| Maximum DC reverse current at rated DC blocking voltage | TA=25°C | $I_R$ | 5 | | | | | μA |
| | TA=125°C | | 50 | | | | | |
| Typical thermal resistance[1)] | juntion to ambient | $R_{\theta JA}$ | 49 | | | | | °C/W |
| | juntion to case | $R_{\theta JC}$ | 21 | | | | | |

Note:

1)The thermal resistance from junction to ambient,case or mount,mounted on P.C.B with 13×13mm copper pads,2 OZ,FR4 PCB

## Ratings and Characteristics Curves

(TA = 25°C unless otherwise noted)

FIG.1-DERATING CURVE FOR OUTPUT RECTIFIED CURRENT

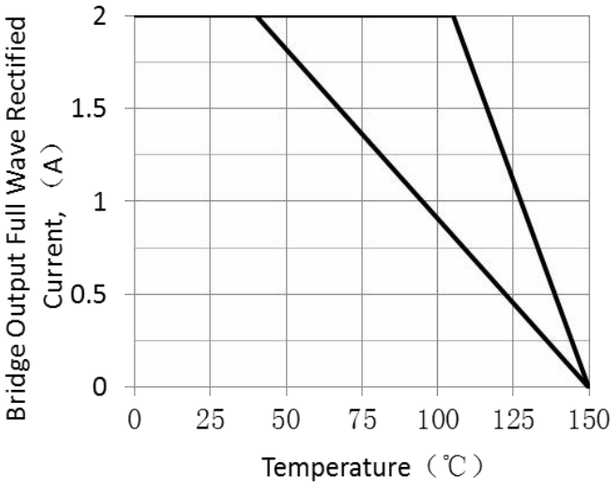



FIG.2-TYPICAL INSTANTANEOUS FORWARD CHARACTERISITCS

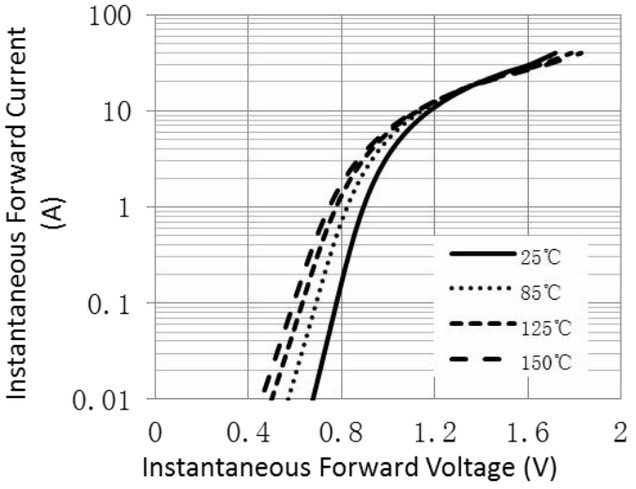



FIG.3-TYPICAL REAK REVERSE VOLTAGE CHARACTERISTICS

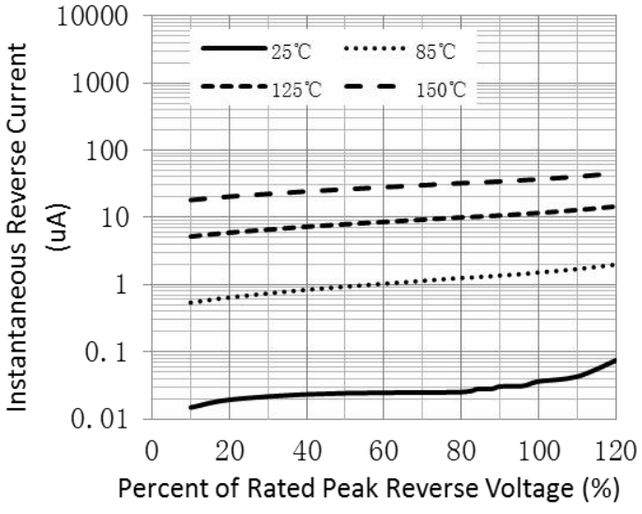
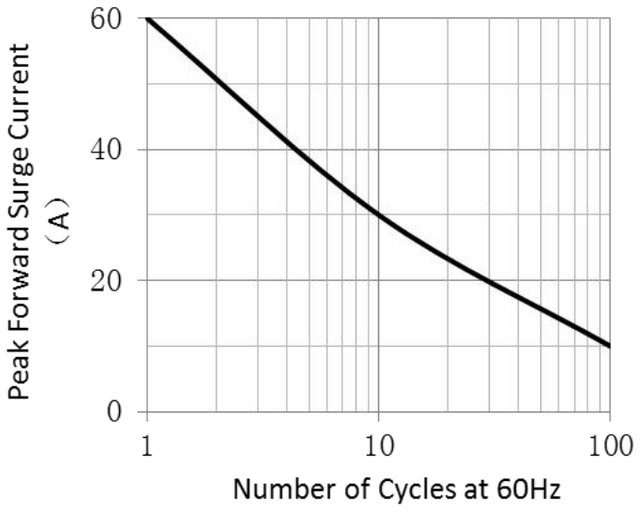


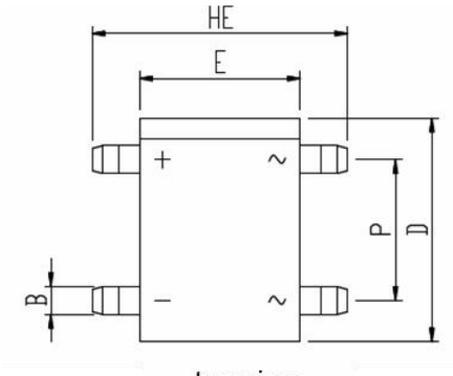

FIG.4-MAXIMUM NON-REPETITEVE PEAK FORWARD SUGER CURRENT



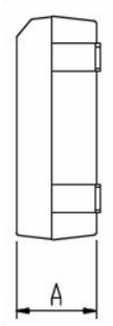
## Package Outline Dimensions

in inches (millimeters)

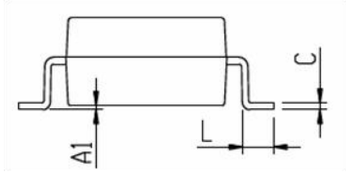
First angle projection




top view




right elevation




elevation view

| | unit:mm | | unit:inch | |
|---|---|---|---|---|
| Dim | Min | Max | Min | Max |
| A | 3.05 | 3.30 | 0.120 | 0.130 |
| A1 | 0.08 | 0.33 | 0.003 | 0.013 |
| B | 1.02 | 1.20 | 0.040 | 0.047 |
| C | 0.22 | 0.33 | 0.009 | 0.013 |
| D | 8.00 | 8.51 | 0.315 | 0.335 |
| E | 6.20 | 6.50 | 0.244 | 0.256 |
| HE | 9.80 | 10.30 | 0.386 | 0.406 |
| L | 1.02 | 1.52 | 0.040 | 0.060 |
| P | 5.00 | 5.20 | 0.197 | 0.205 |

## Revision History

| Document Version | Date of release | Discroption of changes |
|---|---|---|
| Rev.A | 2021/3/21 | Released Datasheet |
| Rev.B | 2023/12/21 | Modify document format |

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