# S2A/A - S2M/A

## 1.5A SURFACE MOUNT GLASS PASSIVATED RECTIFIER

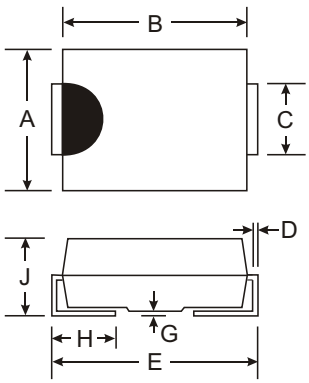
**SPICE MODELS: S2A S2B S2D S2G S2J S2K S2M S2AA S2BA S2DA S2GA S2JA S2KA S2MA**

## Features

- Glass Passivated Die Construction
- Low Forward Voltage Drop and High Current Capability
- Surge Overload Rating to 50A Peak
- Ideally Suited for Automated Assembly
- **Available in Lead Free Finish/RoHS Compliant Version (Note 3)**

## Mechanical Data

- Case: SMA/SMB
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020C
- Also Available in Lead Free Plating (Matte Tin Finish). Please see Ordering Information, Note 5, on Page 2
- Polarity: Cathode Band or Cathode Notch
- Marking: Type Number, See Page 2
- Ordering Information: See Page 2
- Approx. Weight: SMA 0.064 grams
  SMB 0.093 grams




| Dim | SMA | | SMB | |
|---|---|---|---|---|
| | Min | Max | Min | Max |
| A | 2.29 | 2.92 | 3.30 | 3.94 |
| B | 4.00 | 4.60 | 4.06 | 4.57 |
| C | 1.27 | 1.63 | 1.96 | 2.21 |
| D | 0.15 | 0.31 | 0.15 | 0.31 |
| E | 4.80 | 5.59 | 5.00 | 5.59 |
| G | 0.10 | 0.20 | 0.10 | 0.20 |
| H | 0.76 | 1.52 | 0.76 | 1.52 |
| J | 2.01 | 2.62 | 2.00 | 2.62 |
| All Dimensions in mm | | | | |

A Suffix Designates SMA Package
No Suffix Designates SMB Package

## Maximum Ratings and Electrical Characteristics

@$T_A$ = 25°C unless otherwise specified

Single phase, half wave, 60Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

| Characteristic | Symbol | S2 A/AA | S2 B/BA | S2 D/DA | S2 G/GA | S2 J/JA | S2 K/KA | S2 M/MA | Unit |
|---|---|---|---|---|---|---|---|---|---|
| Peak Repetitive Reverse Voltage<br>Working Peak Reverse Voltage<br>DC Blocking Voltage | $V_{RRM}$<br>$V_{RWM}$<br>$V_R$ | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| RMS Reverse Voltage | $V_{R(RMS)}$ | 35 | 70 | 140 | 280 | 420 | 560 | 700 | V |
| Average Rectified Output Current @ $T_T$ = 100°C | $I_{(AV)}$ | 1.5 | | | | | | | A |
| Non-Repetitive Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) | $I_{FSM}$ | 50 | | | | | | | A |
| Forward Voltage @ $I_F$ = 1.5A | $V_{FM}$ | 1.15 | | | | | | | V |
| Peak Reverse Current @$T_A$ = 25°C<br>at Rated DC Blocking Voltage @$T_A$ = 125°C | $I_{RM}$ | 5.0<br>125 | | | | | | | μA |
| Typical Total Capacitance (Note 1) | $C_T$ | 20 | | | | | | | pF |
| Typical Thermal Resistance, Junction to Terminal (Note 2) | $R_{\theta JT}$ | 20 | | | | | | | °C/W |
| Operating and Storage Temperature Range | $T_j$, $T_{STG}$ | -65 to +150 | | | | | | | °C |

Notes:
1. Measured at 1.0 MHz and applied reverse voltage of 4.0V DC.
2. Thermal Resistance Junction to Terminal, unit mounted on PC board with 5.0 $mm^2$ (0.013 mm thick) copper pads as heat sink.
3. RoHS revision 13.2.2003. Glass and High Temperature Solder Exemptions Applied, see *EU Directive Annex Notes 5 and 7*.

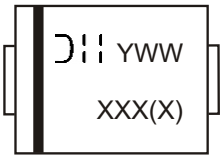
## Ordering Information (Note 4)

| Device* | Packaging | Shipping |
|---|---|---|
| S2xA-13<br>S2x-13 | SMA<br>SMB | 5000/Tape & Reel<br>3000/Tape & Reel |

* x = Device type, e.g. S2AA-13 (SMA package); S2A-13 (SMB package).

Notes: 4. For Packaging Details, go to our website at http://www.diodes.com/datasheets/ap02007.pdf.
5. For Lead Free Finish/RoHS Compliant version part number, please add "-F" suffix to the part number above. Example: S2A-13-F.

## Marking Information




XXX = Product type marking code, ex: S2A (SMB package)
XXXX = Product type marking code, ex: S2AA (SMA package)
= Manufacturers' code marking
YWW = Date code marking
Y = Last digit of year ex: 2 for 2002
WW = Week code 01 to 52

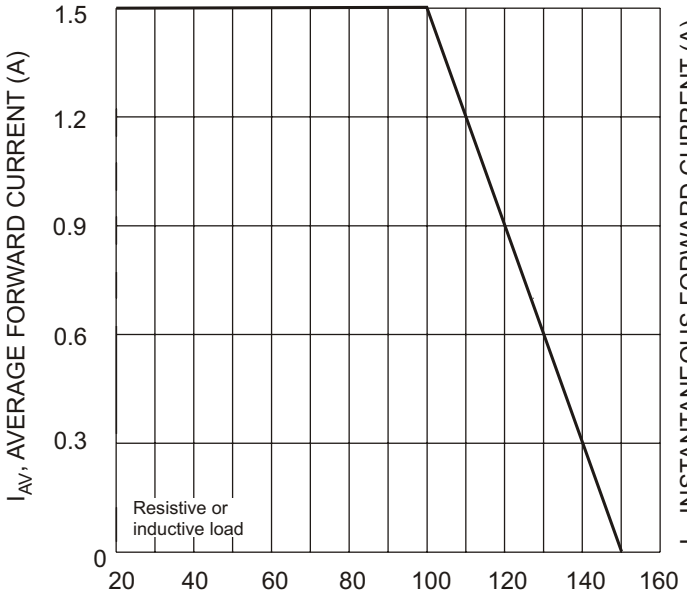



Fig. 1 Forward Current Derating Curve

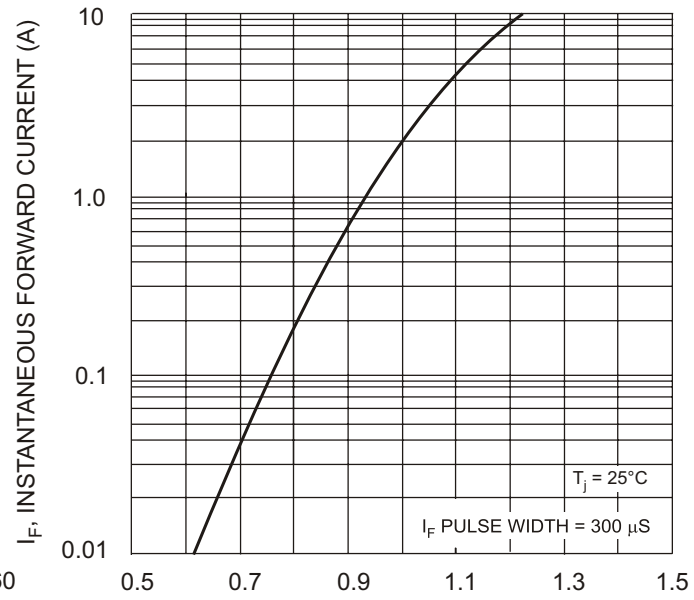



Fig. 2 Typical Forward Characteristics

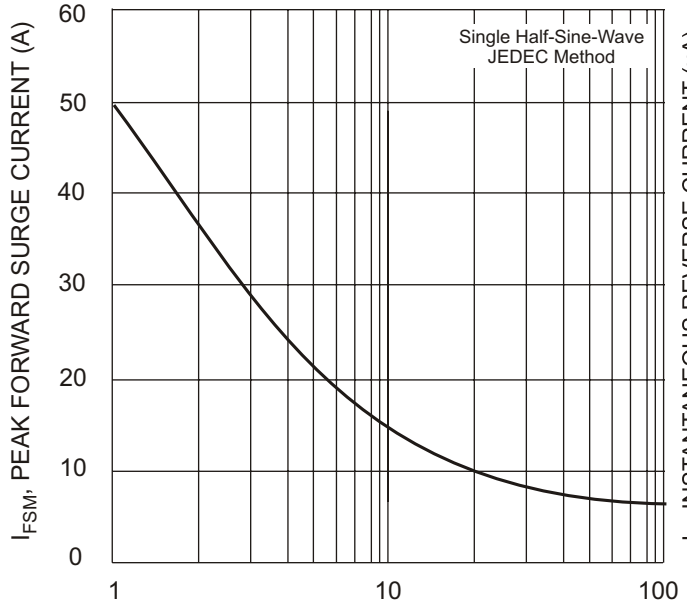



Fig. 3 Forward Surge Current Derating Curve

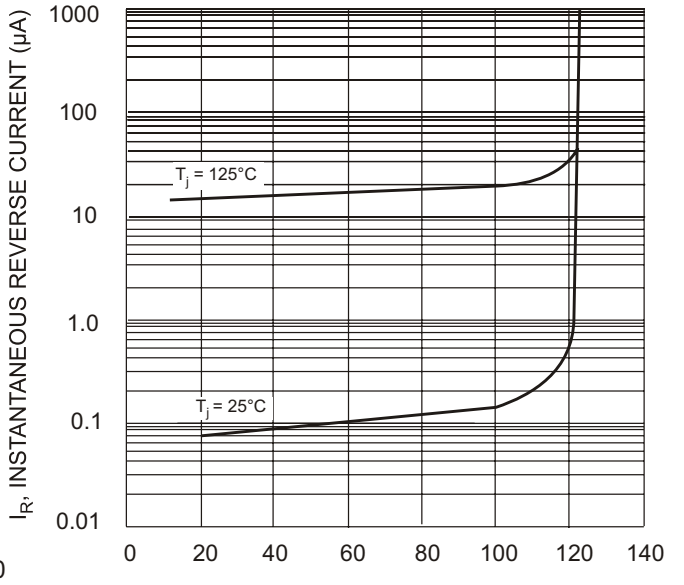



Fig. 4 Typical Reverse Characteristics

单击下面可查看定价，库存，交付和生命周期等信息

>>Diodes Incorporated(达迩科技（美台）)