# Small Signal Schottky Diode



## FEATURES

- Integrated protection ring against static discharge
- Very low forward voltage
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912

Pb e2 RoHS COMPLIANT

## LINKS TO ADDITIONAL RESOURCES

3D Models

## APPLICATIONS

- Applications where a very low forward voltage is required

## MECHANICAL DATA

**Case:** QuadroMELF (SOD-80)

**Weight:** approx. 34 mg

**Cathode band color:** black

**Packaging codes/options:**
GS18/10K per 13" reel (8 mm tape), 10K/box
GS08/2.5K per 7" reel (8 mm tape), 12.5K/box

**PARTS TABLE**

| PART | TYPE DIFFERENTIATION | ORDERING CODE | CIRCUIT CONFIGURATION | REMARKS |
|---|---|---|---|---|
| BAS285 | $V_R$ = 30 V | BAS285-GS18 or BAS285-GS08 | Single | Tape and reel |

**ABSOLUTE MAXIMUM RATINGS** ($T_{amb}$ = 25 °C, unless otherwise specified)

| PARAMETER | TEST CONDITION | SYMBOL | VALUE | UNIT |
|---|---|---|---|---|
| Reverse voltage | | $V_R$ | 30 | V |
| Peak forward surge current | $t_p$ = 10 ms | $I_{FSM}$ | 5 | A |
| Repetitive peak forward current | $t_p \leq 1$ s | $I_{FRM}$ | 300 | mA |
| Forward current | | $I_F$ | 200 | mA |
| Average forward current | | $I_{FAV}$ | 200 | mA |

**THERMAL CHARACTERISTICS** ($T_{amb}$ = 25 °C, unless otherwise specified)

| PARAMETER | TEST CONDITION | SYMBOL | VALUE | UNIT |
|---|---|---|---|---|
| Junction to ambient air | On PC board 50 mm x 50 mm x 1.6 mm | $R_{thJA}$ | 320 | K/W |
| Junction temperature | | $T_j$ | 125 | °C |
| Storage temperature range | | $T_{stg}$ | -65 to +150 | °C |

**ELECTRICAL CHARACTERISTICS** ($T_{amb}$ = 25 °C, unless otherwise specified)

| PARAMETER | TEST CONDITION | SYMBOL | MIN. | TYP. | MAX. | UNIT |
|---|---|---|---|---|---|---|
| Forward voltage | $I_F$ = 0.1 mA | $V_F$ | | | 240 | mV |
| | $I_F$ = 1 mA | $V_F$ | | | 320 | mV |
| | $I_F$ = 10 mA | $V_F$ | | | 400 | mV |
| | $I_F$ = 30 mA | $V_F$ | | | 500 | mV |
| | $I_F$ = 100 mA | $V_F$ | | | 800 | mV |
| Reverse current | $V_R$ = 25 V, $t_p$ = 300 µs | $I_R$ | | | 2.3 | µA |
| Diode capacitance | $V_R$ = 1 V, f = 1 MHz | $C_D$ | | | 10 | pF |



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**TYPICAL CHARACTERISTICS** ($T_{amb}$ = 25 °C, unless otherwise specified)

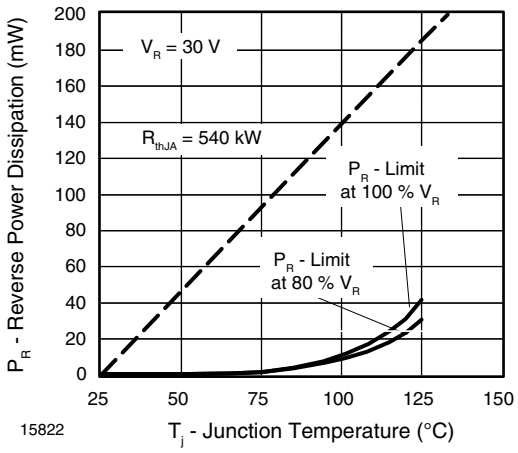



Fig. 1 - Max. Reverse Power Dissipation vs. Junction Temperature

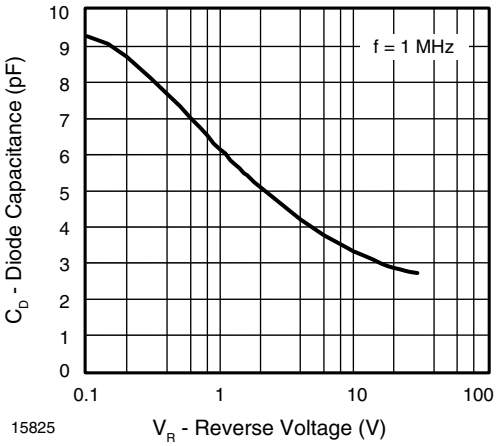



Fig. 4 - Diode Capacitance vs. Reverse Voltage

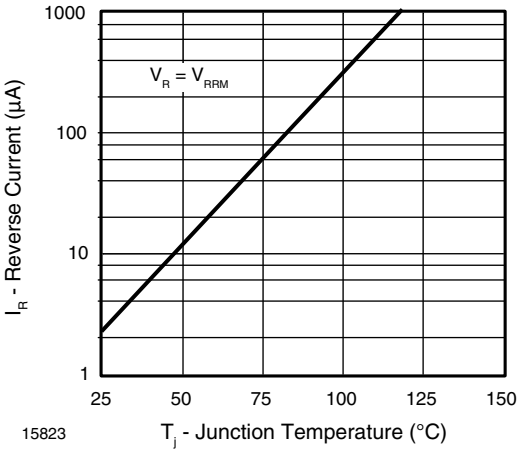



Fig. 2 - Reverse Current vs. Junction Temperature

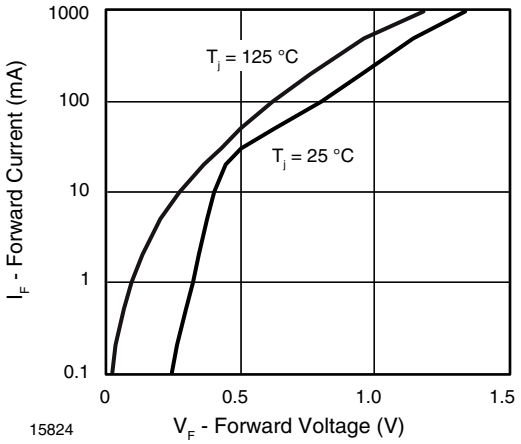
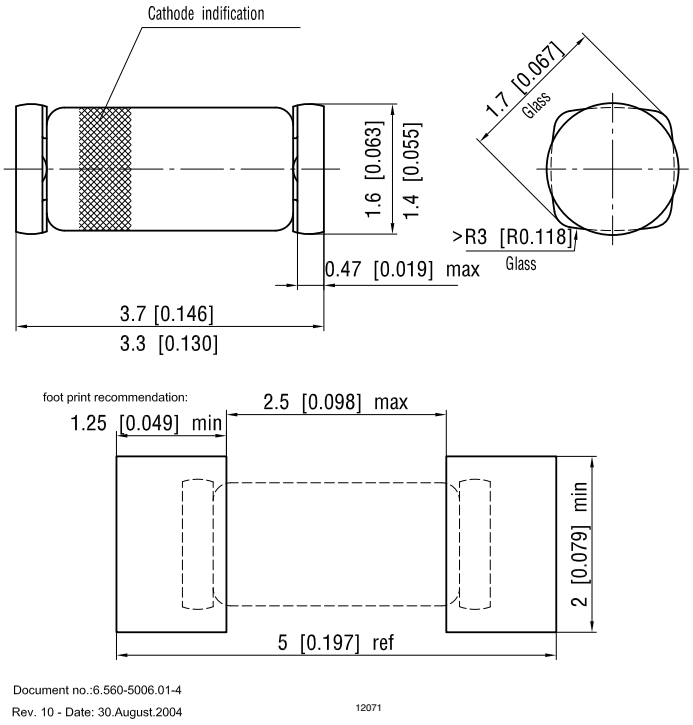



Fig. 3 - Forward Current vs. Forward Voltage


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**PACKAGE DIMENSIONS** in millimeters (inches): **QuadroMELF (SOD-80)**




Document no.:6.560-5006.01-4
Rev. 10 - Date: 30.August.2004

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