



**THE DATASHEET OF
BAQ35-GS08**





Small Signal Switching Diodes, Low Leakage Current



FEATURES

- Silicon planar diodes
- Very low reverse current
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912



RoHS COMPLIANT

APPLICATIONS

- Protection circuits, time delay circuits, peak follower circuits, logarithmic amplifiers

DESIGN SUPPORT TOOLS click logo to get started



MECHANICAL DATA

Case: MiniMELF (SOD-80)

Weight: approx. 31 mg

Cathode band color: black

Packaging codes / options:

GS18/10K per 13" reel (8 mm tape), 10K/box

GS18/10K per 13" reel (8 mm tape), 10K/box

| PARTS TABLE | | | | | |
|-------------|--------------------------|--------------------------|--------------|-----------------------|---------------|
| PART | TYPE DIFFERENTIATION | ORDERING CODE | TYPE MARKING | CIRCUIT CONFIGURATION | REMARKS |
| BAQ33 | $V_{RRM} = 40\text{ V}$ | BAQ33-GS18 or BAQ33-GS08 | - | Single | Tape and reel |
| BAQ34 | $V_{RRM} = 70\text{ V}$ | BAQ34-GS18 or BAQ34-GS08 | - | Single | Tape and reel |
| BAQ35 | $V_{RRM} = 140\text{ V}$ | BAQ35-GS18 or BAQ35-GS08 | - | Single | Tape and reel |

| ABSOLUTE MAXIMUM RATINGS ($T_{amb} = 25\text{ }^{\circ}\text{C}$, unless otherwise specified) | | | | | |
|---|------------------------------|-------|-----------|-------|------|
| PARAMETER | TEST CONDITION | PART | SYMBOL | VALUE | UNIT |
| Repetitive peak reverse voltage | | BAQ33 | V_{RRM} | 40 | V |
| | | BAQ34 | V_{RRM} | 70 | V |
| | | BAQ35 | V_{RRM} | 140 | V |
| Reverse voltage | | BAQ33 | V_R | 30 | V |
| | | BAQ34 | V_R | 60 | V |
| | | BAQ35 | V_R | 125 | V |
| Peak forward surge current | $t_p = 1\text{ }\mu\text{s}$ | | I_{FSM} | 2 | A |
| Forward continuous current | | | I_F | 200 | mA |

| THERMAL CHARACTERISTICS ($T_{amb} = 25\text{ }^{\circ}\text{C}$, unless otherwise specified) | | | | |
|--|---------------------------------------|------------|-------------|--------------------|
| PARAMETER | TEST CONDITION | SYMBOL | VALUE | UNIT |
| Thermal resistance junction to ambient air | On PC board 50 mm x 50 mm x 1.6 mm | R_{thJA} | 500 | K/W |
| Junction temperature | | T_j | 175 | $^{\circ}\text{C}$ |
| Storage temperature range | | T_{stg} | -65 to +175 | $^{\circ}\text{C}$ |



| ELECTRICAL CHARACTERISTICS ($T_{amb} = 25\text{ }^{\circ}\text{C}$, unless otherwise specified) | | | | | | | |
|--|--|-------|------------|------|------|------|---------------|
| PARAMETER | TEST CONDITION | PART | SYMBOL | MIN. | TYP. | MAX. | UNIT |
| Forward voltage | $I_F = 100\text{ mA}$ | | V_F | | | 1 | V |
| Reverse current | $E \leq 300\text{ lx}$, rated V_R | | I_R | | 1 | 3 | nA |
| | $E \leq 300\text{ lx}$, rated V_R , $T_j = 125\text{ }^{\circ}\text{C}$ | | I_R | | | 0.5 | μA |
| | $E \leq 300\text{ lx}$, $V_R = 15\text{ V}$ | BAQ33 | I_R | | 0.5 | 1 | nA |
| | $E \leq 300\text{ lx}$, $V_R = 30\text{ V}$ | BAQ34 | I_R | | 0.5 | 1 | nA |
| | $E \leq 300\text{ lx}$, $V_R = 60\text{ V}$ | BAQ35 | I_R | | 0.5 | 1 | nA |
| Breakdown voltage | $I_R = 5\text{ }\mu\text{A}$, $t_p/T = 0.01$, $t_p = 0.3\text{ ms}$ | BAQ33 | $V_{(BR)}$ | 40 | | | V |
| | $I_R = 5\text{ }\mu\text{A}$, $t_p/T = 0.01$, $t_p = 0.3\text{ ms}$ | BAQ34 | $V_{(BR)}$ | 70 | | | V |
| | | BAQ35 | $V_{(BR)}$ | 140 | | | V |
| Diode capacitance | $V_R = 0\text{ V}$, $f = 1\text{ MHz}$ | | C_D | | | 3 | pF |

TYPICAL CHARACTERISTICS ($T_{amb} = 25\text{ }^{\circ}\text{C}$, unless otherwise specified)

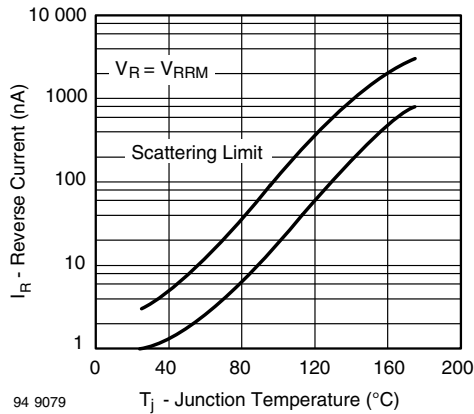


Fig. 1 - Reverse Current vs. Junction Temperature

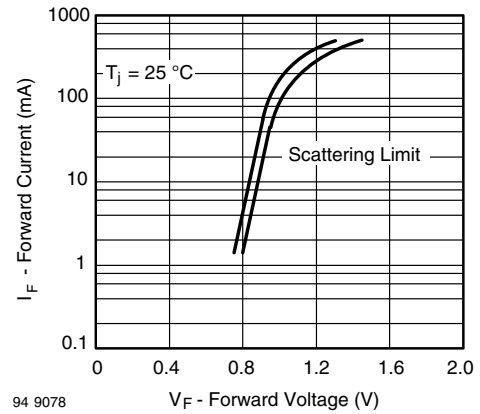
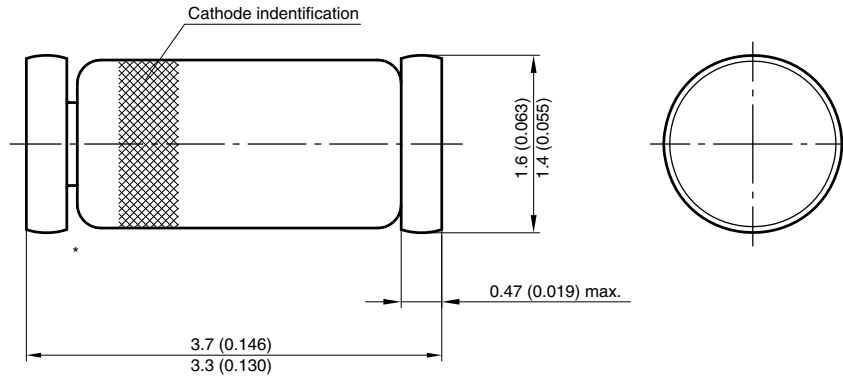


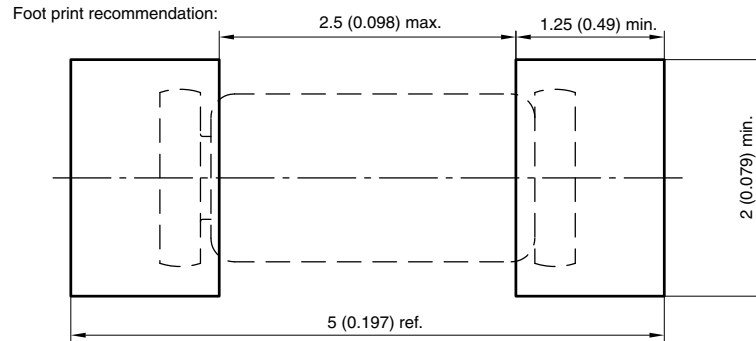
Fig. 2 - Forward Current vs. Forward Voltage



PACKAGE DIMENSIONS in millimeters (inches): MiniMELF (SOD-80)



* The gap between plug and glass can be either on cathode or anode side



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