

Small Signal Switching Diode



FEATURES

- Silicon epitaxial planar diode
- Low forward voltage drop
- High forward current capability
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912



RoHS
COMPLIANT
HALOGEN
FREE

APPLICATIONS

- High speed switch and general purpose use in computer and industrial applications

LINKS TO ADDITIONAL RESOURCES



MECHANICAL DATA

Case: DO-35 (DO-204AH)

Weight: approx. 125 mg

Cathode band color: black

Packaging codes / options:

TR/10K per 13" reel (52 mm tape), 50K/box

TAP/10K per ammpack (52 mm tape), 50K/box

PARTS TABLE

| PART | ORDERING CODE | TYPE MARKING | CIRCUIT CONFIGURATION | REMARKS |
|-------|-----------------------|--------------|-----------------------|-------------------------|
| BAW27 | BAW27-TR or BAW27-TAP | BAW27 | Single | Tape and reel / ammpack |

ABSOLUTE MAXIMUM RATINGS ($T_{amb} = 25\text{ }^{\circ}\text{C}$, unless otherwise specified)

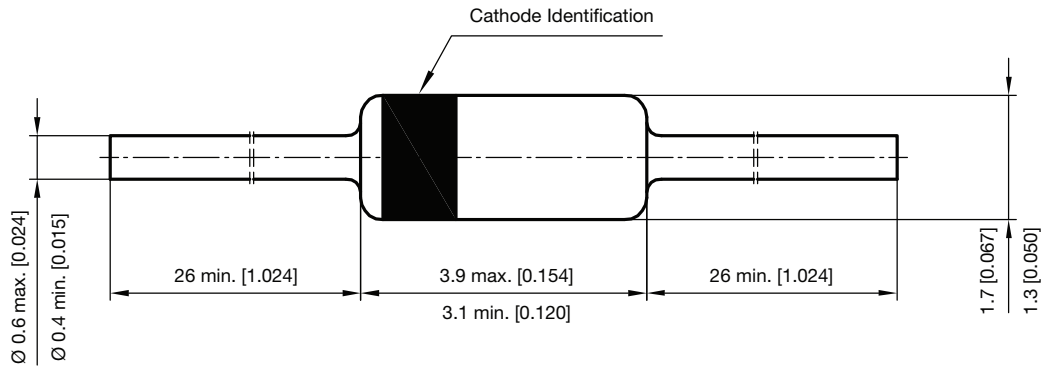
| PARAMETER | TEST CONDITION | SYMBOL | VALUE | UNIT |
|---------------------------------|--|-------------|-------|------|
| Repetitive peak reverse voltage | | V_{RRM} | 75 | V |
| Reverse voltage | | V_R | 60 | V |
| Peak forward surge current | $t_p = 1\text{ }\mu\text{s}$ | I_{FSM} | 4 | A |
| Forward continuous current | | I_F | 600 | mA |
| Average forward current | $V_R = 0$ | $I_{F(AV)}$ | 300 | mA |
| Power dissipation | $l = 4\text{ mm}, T_L = 45\text{ }^{\circ}\text{C}$ | P_{tot} | 440 | mW |
| | $l = 4\text{ mm}, T_L \leq 25\text{ }^{\circ}\text{C}$ | P_{tot} | 500 | mW |

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

| PARAMETER | TEST CONDITION | SYMBOL | VALUE | UNIT |
|--|--|------------|-------------|--------------------|
| Thermal resistance junction to ambient air | $l = 4\text{ mm}, T_L = \text{constant}$ | R_{thJA} | 350 | 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 | SYMBOL | MIN. | TYP. | MAX. | UNIT |
|-----------------------|--|------------|------|-------|-------|---------------|
| Forward voltage | $I_F = 10\text{ mA}$ | V_F | | 0.670 | 0.750 | V |
| | $I_F = 50\text{ mA}$ | V_F | | 800 | 850 | mV |
| | $I_F = 200\text{ mA}$ | V_F | | 950 | 1000 | mV |
| | $I_F = 400\text{ mA}$ | V_F | | 1120 | 1250 | mV |
| Reverse current | $V_R = 60\text{ V}$ | I_R | | | 100 | nA |
| | $V_R = 60\text{ V}, T_j = 100\text{ }^{\circ}\text{C}$ | I_R | | | 50 | μA |
| Breakdown voltage | $I_R = 5\text{ }\mu\text{A}, t_p/T = 0.01,$ $t_p = 0.3\text{ ms}$ | $V_{(BR)}$ | 75 | | | V |
| Diode capacitance | $V_R = 0\text{ V}, f = 1\text{ MHz},$ $V_{HF} = 50\text{ mV}$ | C_D | | | 4 | pF |
| Reverse recovery time | $I_F = I_R = 10\text{ mA},$ $i_R = 0.1 \times I_R$ | t_{rr} | | | 6 | ns |

PACKAGE DIMENSIONS in millimeters (inches): **DO-35 (DO-204AH)**


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