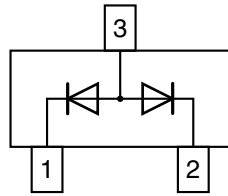


Small Signal Switching Diode, Dual



FEATURES

- Silicon epitaxial planar diode
- Fast switching dual diode with common anode
- AEC-Q101 qualified
- Base P/N-E3 - RoHS-compliant, commercial grade
- Base P/N-HE3 - RoHS-compliant, AEC-Q101 qualified
- Material categorization: For definitions of compliance please see www.vishay.com/doc?99912



MECHANICAL DATA

Case: SOT-23

Weight: approx. 8.8 mg

Packaging codes/options:

18/10K per 13" reel (8 mm tape), 10K/box

08/3K per 7" reel (8 mm tape), 15K/box

| PARTS TABLE | | | | |
|-------------|------------------------------|--------------------------|--------------|---------------|
| PART | ORDERING CODE | INTERNAL CONSTRUCTION | TYPE MARKING | REMARKS |
| BAW56 | BAW56-E3-08 or BAW56-E3-18 | Dual diodes common anode | JD | Tape and reel |
| | BAW56-HE3-08 or BAW56-HE3-18 | | | |

| ABSOLUTE MAXIMUM RATINGS ($T_{amb} = 25\text{ }^{\circ}\text{C}$, unless otherwise specified) | | | | |
|---|------------------------------|-----------------|-------|------|
| PARAMETER | TEST CONDITION | SYMBOL | VALUE | UNIT |
| Repetitive peak reverse voltage = working peak reverse voltage = DC blocking voltage | | $V_R = V_{RRM}$ | 70 | V |
| Forward continuous current | | I_F | 250 | mA |
| Non repetitive peak forward current | $t_p = 1\text{ }\mu\text{s}$ | I_{FSM} | 2 | A |
| | $t_p = 1\text{ ms}$ | I_{FSM} | 1 | A |
| | $t_p = 1\text{ s}$ | I_{FSM} | 0.5 | A |
| Power dissipation ⁽¹⁾ | | P_{tot} | 350 | 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 | | R_{thJA} | 430 | K/W |
| Junction temperature | | T_j | 150 | $^{\circ}\text{C}$ |
| Storage temperature range | | T_{stg} | - 65 to + 150 | $^{\circ}\text{C}$ |
| Operating temperature range | | T_{op} | - 55 to + 150 | $^{\circ}\text{C}$ |

Note

⁽¹⁾ Device on fiberglass substrate, see layout

| ELECTRICAL CHARACTERISTICS ($T_{amb} = 25\text{ }^{\circ}\text{C}$, unless otherwise specified) | | | | | | |
|--|--|----------|------|------|-------|---------------|
| PARAMETER | TEST CONDITION | SYMBOL | MIN. | TYP. | MAX. | UNIT |
| Forward voltage | $I_F = 1\text{ mA}$ | V_F | | | 0.715 | V |
| | $I_F = 10\text{ mA}$ | V_F | | | 0.855 | V |
| | $I_F = 50\text{ mA}$ | V_F | | | 1 | V |
| | $I_F = 150\text{ mA}$ | V_F | | | 1.25 | V |
| Reverse current | $V_R = 70\text{ V}$ | I_R | | | 2500 | nA |
| | $V_R = 70\text{ V}, T_J = 150\text{ }^{\circ}\text{C}$ | I_R | | | 100 | μA |
| | $V_R = 25\text{ V}, T_J = 150\text{ }^{\circ}\text{C}$ | I_R | | | 30 | μA |
| Diode capacitance | $V_F = V_R = 0\text{ V}, f = 1\text{ MHz}$ | C_D | | | 2 | pF |
| Reverse recovery time | $I_F = 10\text{ mA}$ to $i_R = 1\text{ mA}$, $V_R = 6\text{ V}, R_L = 100\text{ }\Omega$ | t_{rr} | | | 6 | ns |

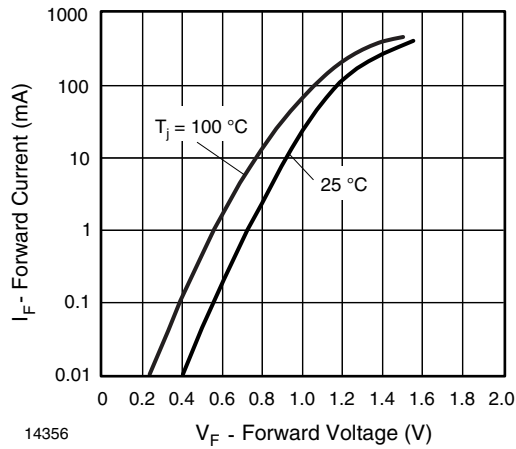
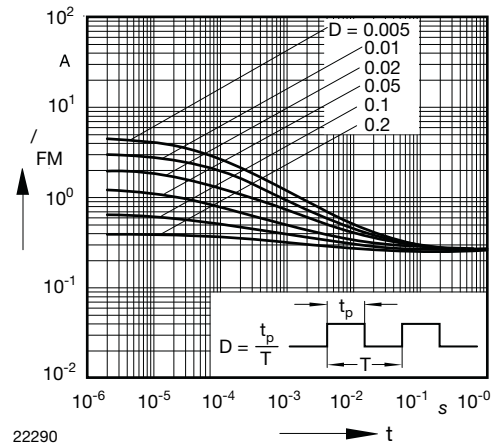
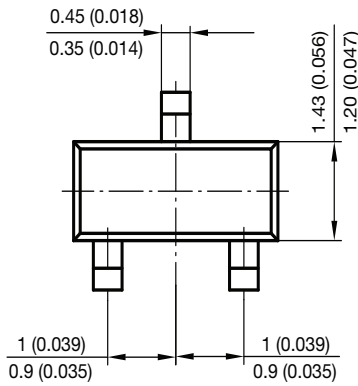
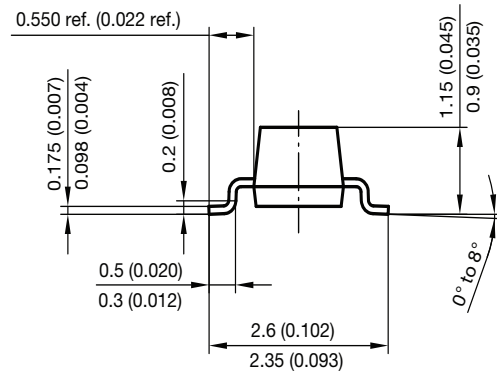
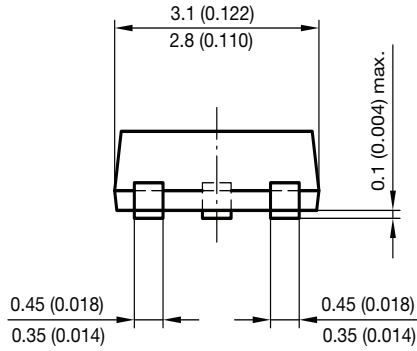
TYPICAL CHARACTERISTICS ($T_{amb} = 25\text{ }^{\circ}\text{C}$, unless otherwise specified)


Fig. 1 - Forward Current vs. Forward Voltage

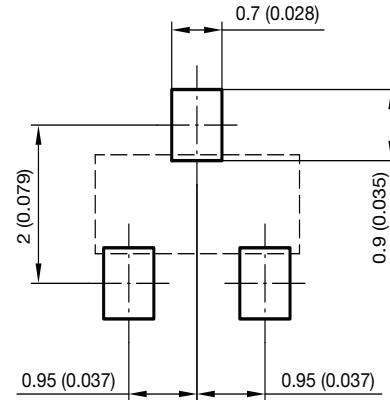

 Fig. 2 - Peak Forward Current $I_{FM} = f(t_p)$



PACKAGE DIMENSIONS in millimeters (inches): **SOT-23**



Foot print recommendation:



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17418



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