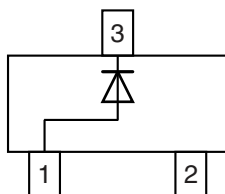


## Small Signal Switching Diode



### FEATURES

- Silicon epitaxial planar diode
- Fast switching diode in case SOT-23, especially suited for automatic insertion.
- 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](http://www.vishay.com/doc?99912)


**RoHS**  
COMPLIANT

### 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       |
|---------|----------------------------------|-----------------------|--------------|---------------|
| MMBD914 | MMBD914-E3-08 or MMBD914-E3-18   | Single diode          | 5D           | Tape and reel |
|         | MMBD914-HE3-08 or MMBD914-HE3-18 |                       |              |               |

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

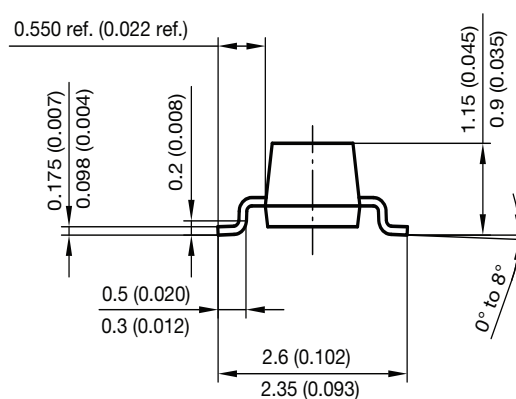
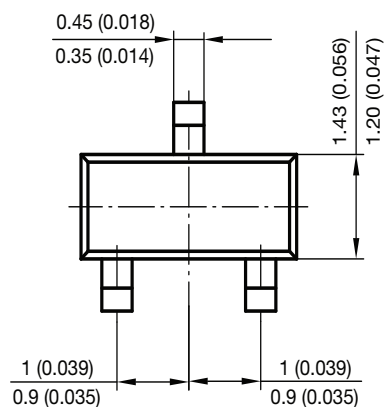
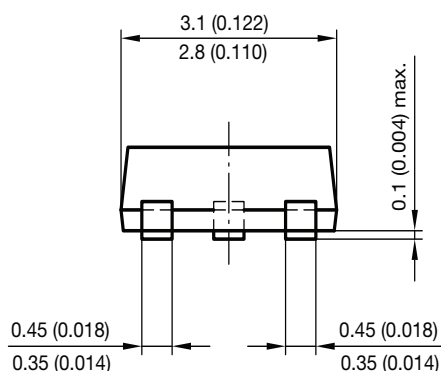
| PARAMETER                                 | TEST CONDITION                         | SYMBOL      | VALUE | UNIT |
|-------------------------------------------|----------------------------------------|-------------|-------|------|
| Peak reverse voltage                      |                                        | $V_{RM}$    | 100   | V    |
| Maximum average forward rectified current |                                        | $I_{F(AV)}$ | 200   | mA   |
| Maximum power dissipation                 | $T_{amb} = 25\text{ }^{\circ}\text{C}$ | $P_{tot}$   | 225   | mW   |

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

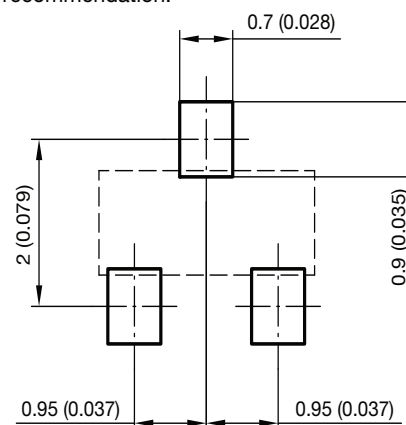
| PARAMETER                    | TEST CONDITION | SYMBOL    | VALUE         | UNIT               |
|------------------------------|----------------|-----------|---------------|--------------------|
| Maximum junction temperature |                | $T_j$     | 150           | $^{\circ}\text{C}$ |
| Storage temperature range    |                | $T_{stg}$ | - 55 to + 150 | $^{\circ}\text{C}$ |
| Operating temperature range  |                | $T_{op}$  | - 55 to + 150 | $^{\circ}\text{C}$ |

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

| PARAMETER             | TEST CONDITION                                                                                  | SYMBOL   | MIN. | TYP. | MAX. | UNIT          |
|-----------------------|-------------------------------------------------------------------------------------------------|----------|------|------|------|---------------|
| Forward voltage drop  | $I_F = 10\text{ mA}$                                                                            | $V_F$    |      |      | 1    | V             |
| Reverse current       | $V_R = 20\text{ V}$                                                                             | $I_R$    |      |      | 25   | nA            |
|                       | $V_R = 75\text{ V}$                                                                             | $I_R$    |      |      | 5    | $\mu\text{A}$ |
| Reverse recovery time | $I_F = 10\text{ mA}$ to $i_R = 1\text{ mA}$ ,<br>$V_R = 6\text{ V}$ , $R_L = 100\text{ }\Omega$ | $t_{rr}$ |      |      | 4    | ns            |
| Diode capacitance     | $V_R = 0\text{ V}$ , $f = 1\text{ MHz}$                                                         | $C_D$    |      |      | 4    | pF            |

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

Foot print recommendation:



Document no.: 6.541-5014.01-4  
Rev. 8 - Date: 23.Sept.2009  
17418



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