

## DIODE SPECIFICATION

### W Band ZBD

**Table I ELECTRICAL CHARACTERISTICS**

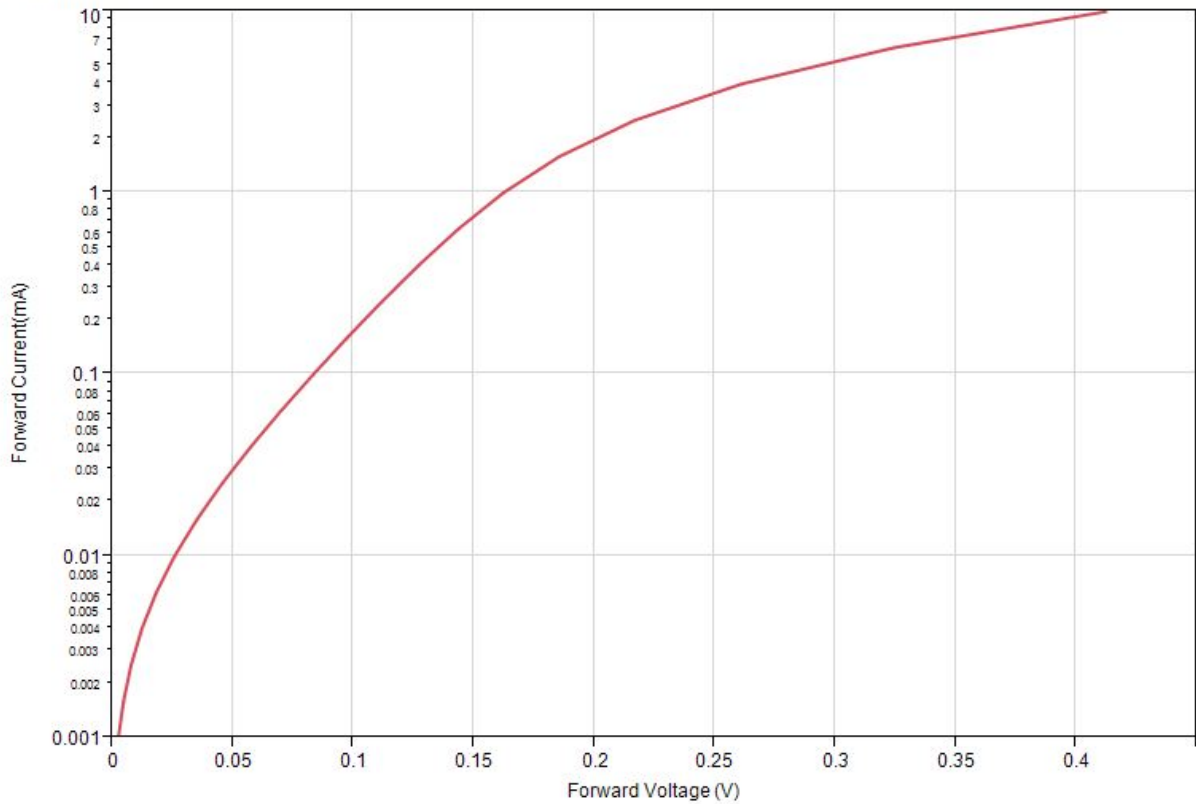
|  | Test Conditions         | Minimum Value | Maximum Value | Units |
|--|-------------------------|---------------|---------------|-------|
| V <sub>F</sub> Forward Turn-on Voltage | I <sub>F</sub> = 100 μA | 45            | 95            | mV    |
| ΔV                                     | 1 mA – 100 μA           | 65            | 90            | mV    |
| I <sub>sat</sub> Saturation Current    |                         | 4             | 24            | μA    |
| R <sub>v</sub> Video Resistance        |                         | 2500          | 6500          | Ω     |
| C <sub>T</sub> Total Capacitance       |                         |               | 25            | fF    |
| C <sub>PP</sub> Pad to Pad Capacitance | V = 0V                  |               | 15            | fF    |

**Table II PHYSICAL DIMENSIONS**

|                     | Minimum Value | Maximum Value | Units |
|---------------------|---------------|---------------|-------|
| Chip Length         | 580           | 630           | μm    |
| Chip Width          | 230           | 280           | μm    |
| Substrate Thickness | 90            | 120           | μm    |



Typical Forward IV Curve



The following are explanations of the parameters listed above in the diode specification:

- $V_f$  Forward Turn-on Voltage = Voltage measured at either 100  $\mu$ A forward current
- $\Delta V$  = Voltage measured at 1 mA forward current - Voltage measured at 100  $\mu$ A forward current
- $I_{sat}$  Saturation Current and  $R_v$  Video Resistance are calculated from IV curves