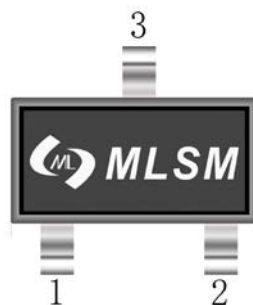
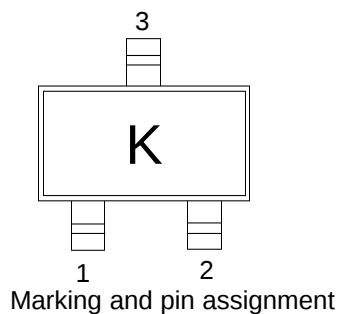
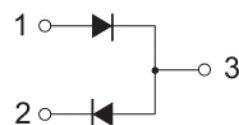


## Features

- Bias circuits
- Protection circuits



SOT-523 top view



Schematic diagram



Halogen-Free

## Maximum Ratings( $T_a=25^{\circ}\text{C}$ unless otherwise noted)

| Symbol          | Parameter                                                    | Limit    | Unit                 |
|-----------------|--------------------------------------------------------------|----------|----------------------|
| $V_{RM}$        | Non-Repetitive Peak Reverse Voltage                          | 20       | V                    |
| $V_{RRM}$       | Peak Repetitive Peak Reverse Voltage                         | 20       | V                    |
| $V_R$           | DC Blocking Voltage                                          | 20       | V                    |
| $I_{FM}$        | Forward Continuous Current                                   | 200      | mA                   |
| $I_O$           | Average Rectified Output Current                             | 100      | mA                   |
| $I_{FSM}$       | Non-repetitive Peak Forward Surge Current @ $t=8.3\text{ms}$ | 2        | A                    |
| $P_D$           | Power Dissipation                                            | 150      | mW                   |
| $R_{\theta JA}$ | Thermal Resistance Junction to Ambient                       | 833      | $^{\circ}\text{C/W}$ |
| $T_J, T_{STG}$  | Operation Junction and Storage Temperature Range             | -55~+150 | $^{\circ}\text{C}$   |

## ELECTRICAL CHARACTERISTICS( $T_a=25^{\circ}\text{C}$ unless otherwise spe

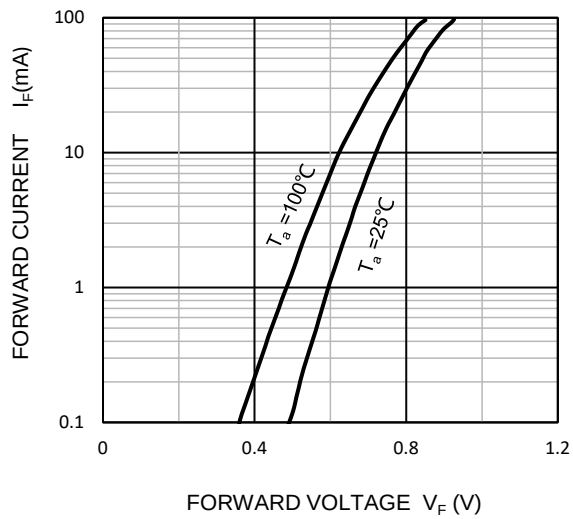
| Symbol     | Parameter                 | Condition            | Min | Typ | Max | Unit          |
|------------|---------------------------|----------------------|-----|-----|-----|---------------|
| $V_{(BR)}$ | Reverse breakdown voltage | $I_R=100\mu\text{A}$ | 20  | --  | --  | V             |
| $V_F$      | Forward voltage           | $I_F=10\text{mA}$    | --  | --  | 1   | V             |
| $I_R$      | Reverse current           | $V_R=15\text{V}$     | --  | --  | 0.1 | $\mu\text{A}$ |

## Ordering Information (Example)

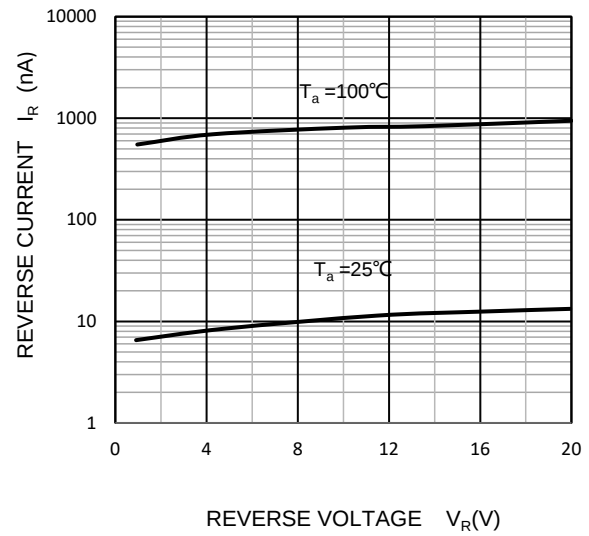
| Type  | Package | Marking | Minimum Package(pcs) | Inner Box Quantity(pcs) | Outer Carton Quantity(pcs) | Delivery Mode |
|-------|---------|---------|----------------------|-------------------------|----------------------------|---------------|
| DA221 | SOT-523 | K       | 3,000                | 45,000                  | 180,000                    | 7"reel        |

### Typical Operating Characteristics

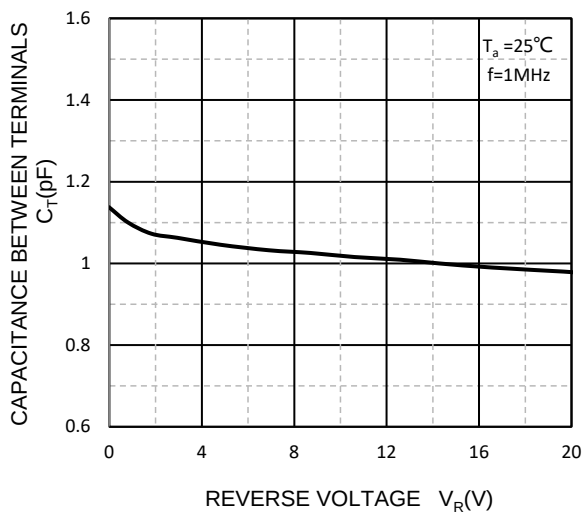
**Forward Characteristics**



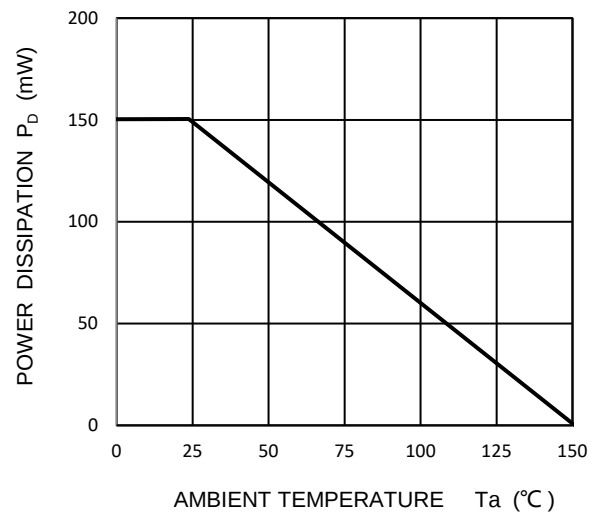
**Reverse Characteristics**



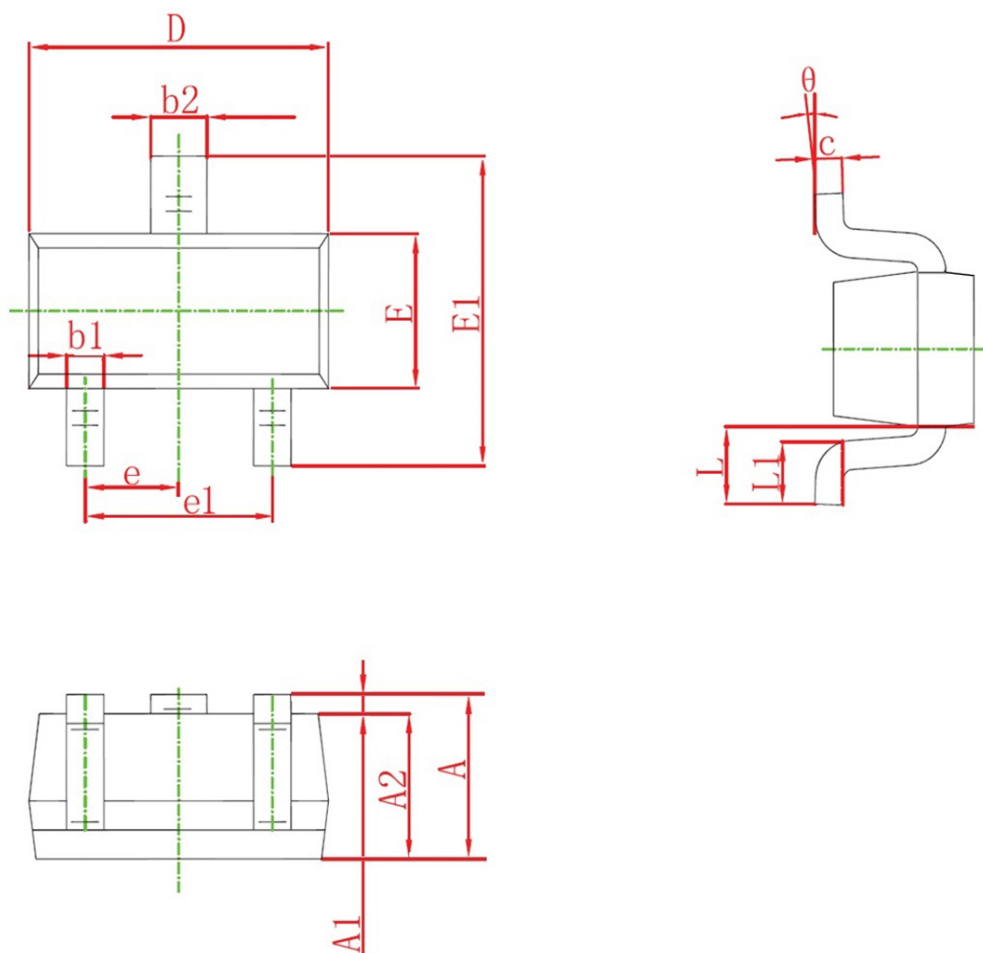
**Capacitance Characteristics**



**Power Derating Curve**



**SOT-523 Package information**



| Symbol | Dimensions in Millimeters(mm) |       | Dimensions In Inches |       |
|--------|-------------------------------|-------|----------------------|-------|
|        | Min                           | Max   | Min                  | Max   |
| A      | 0.700                         | 0.900 | 0.028                | 0.035 |
| A1     | 0.000                         | 0.100 | 0.000                | 0.004 |
| A2     | 0.700                         | 0.800 | 0.028                | 0.031 |
| b1     | 0.150                         | 0.250 | 0.006                | 0.010 |
| b2     | 0.250                         | 0.350 | 0.010                | 0.014 |
| c      | 0.100                         | 0.200 | 0.004                | 0.008 |
| D      | 1.500                         | 1.700 | 0.059                | 0.067 |
| E      | 0.700                         | 0.900 | 0.028                | 0.035 |
| E1     | 1.450                         | 1.750 | 0.057                | 0.069 |
| e      | 0.500TYP                      |       | 0.020TYP             |       |
| e1     | 0.900                         | 1.100 | 0.035                | 0.043 |
| L      | 0.400REF                      |       | 0.016REF             |       |
| L1     | 0.260                         | 0.460 | 0.010                | 0.018 |
| θ      | 0°                            | 8°    | 0°                   | 8°    |