

### PINNING

| PIN | DESCRIPTION |
|-----|-------------|
| 1   | Cathode     |
| 2   | Anode       |

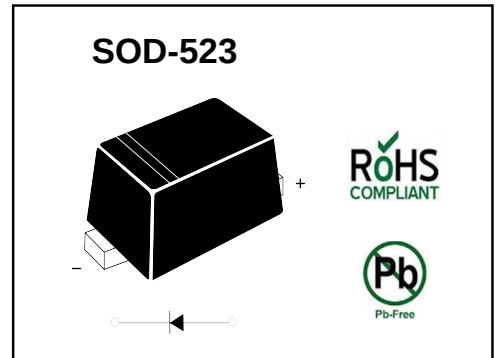
## Plastic-Encapsulate Diodes

### FAST SWITCHING DIODE

#### FEATURES

- Small Package
- Low Reverse Current
- Fast Switching Speed
- Surface Mount Package Ideally Suited for Automatic Insertion

#### MARKING:A



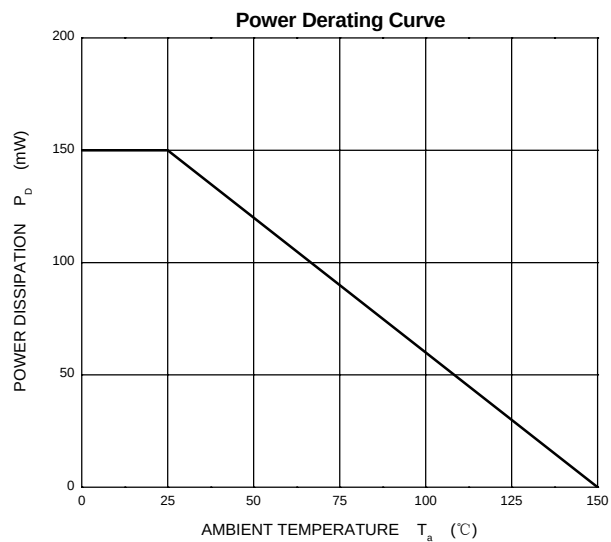
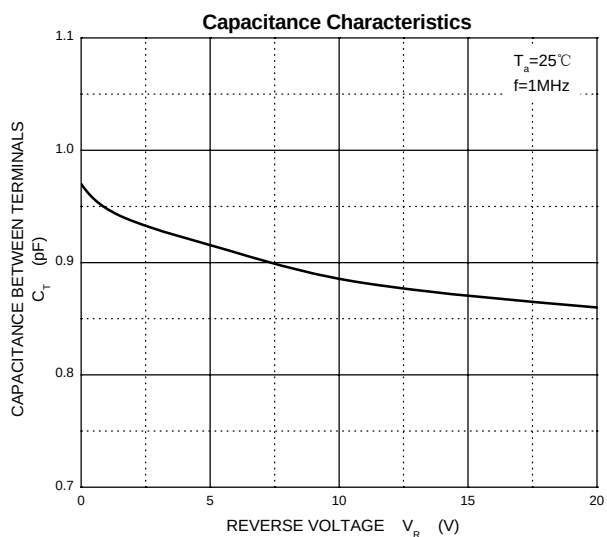
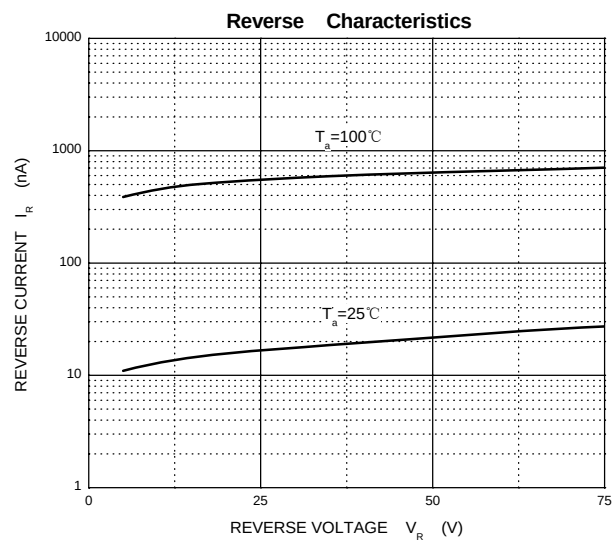
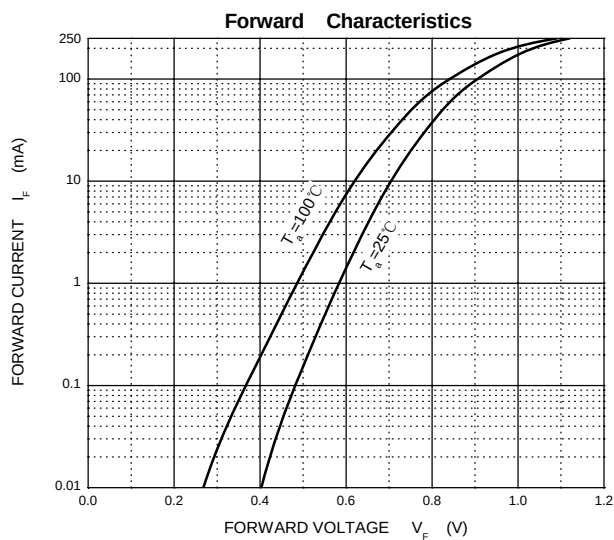
### MAXIMUM RATINGS ( $T_a=25^{\circ}\text{C}$ unless otherwise noted )

| Symbol          | Parameter                                     | Value    | Unit                 |
|-----------------|-----------------------------------------------|----------|----------------------|
| $V_{RM}$        | Non-Repetitive Peak Reverse Voltage           | 100      | V                    |
| $V_{RRM}$       | Peak Repetitive Reverse Voltage               | 75       | V                    |
| $V_{RWM}$       | Working Peak Reverse Voltage                  |          |                      |
| $V_{R(RMS)}$    | RMS Reverse Voltage                           | 53       | V                    |
| $I_O$           | Average Rectified Output Current              | 250      | mA                   |
| $I_{FSM}$       | Peak Forward Surge Current @ $t=1\mu\text{s}$ | 4        | A                    |
|                 | Peak Forward Surge Current @ $t=1\text{s}$    | 0.5      | A                    |
| $P_D$           | Power Dissipation                             | 150      | mW                   |
| $R_{\theta JA}$ | Thermal Resistance from Junction to Ambient   | 833      | $^{\circ}\text{C/W}$ |
| $T_j$           | Junction Temperature                          | 150      | $^{\circ}\text{C}$   |
| $T_{stg}$       | Storage Temperature                           | -55~+150 | $^{\circ}\text{C}$   |

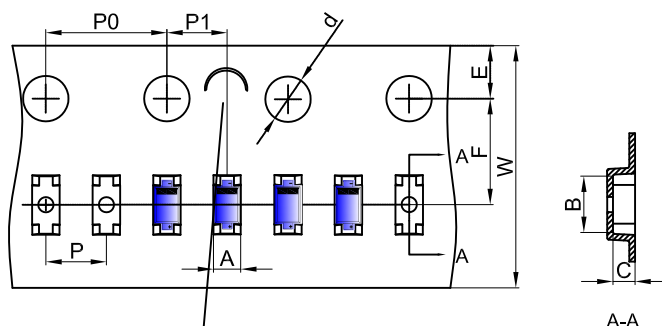
### ELECTRICAL CHARACTERISTICS( $T_a=25^{\circ}\text{C}$ unless otherwise specified)

| Parameter             | Symbol     | Test conditions                                            | Min | Typ | Max   | Unit          |
|-----------------------|------------|------------------------------------------------------------|-----|-----|-------|---------------|
| Reverse voltage       | $V_{(BR)}$ | $I_R=100\mu\text{A}$                                       | 75  |     |       | V             |
| Reverse current       | $I_R$      | $V_R=25\text{V}$                                           |     |     | 30    | nA            |
|                       |            | $V_R=75\text{V}$                                           |     |     | 1     | $\mu\text{A}$ |
| Forward voltage       | $V_F$      | $I_F=1\text{mA}$                                           |     |     | 0.715 | V             |
|                       |            | $I_F=10\text{mA}$                                          |     |     | 0.855 | V             |
|                       |            | $I_F=50\text{mA}$                                          |     |     | 1     | V             |
|                       |            | $I_F=150\text{mA}$                                         |     |     | 1.25  | V             |
| Total capacitance     | $C_{tot}$  | $V_R=0\text{V}, f=1\text{MHz}$                             |     |     | 1     | pF            |
| Reverse recovery time | $t_{rr}$   | $I_F=I_R=10\text{mA}, I_{rr}=0.1 \cdot I_R, R_L=100\Omega$ |     |     | 4     | ns            |

### Typical Characteristics



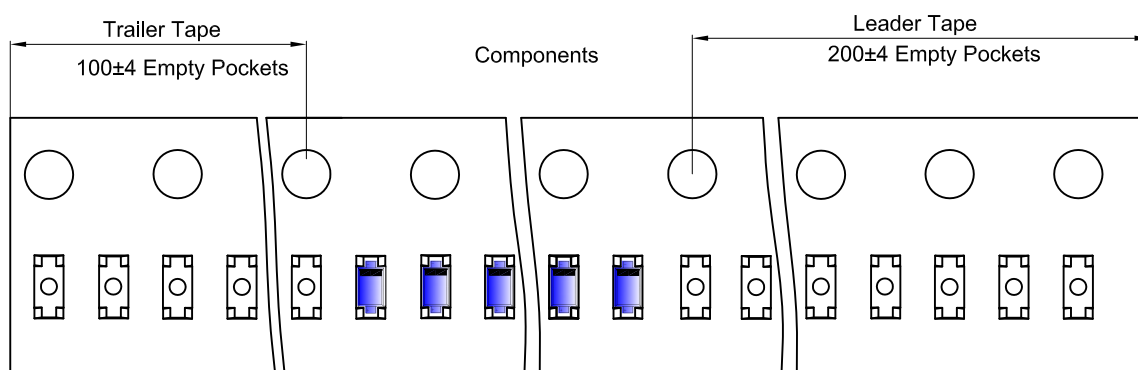
### SOD-523 Embossed Carrier Tape



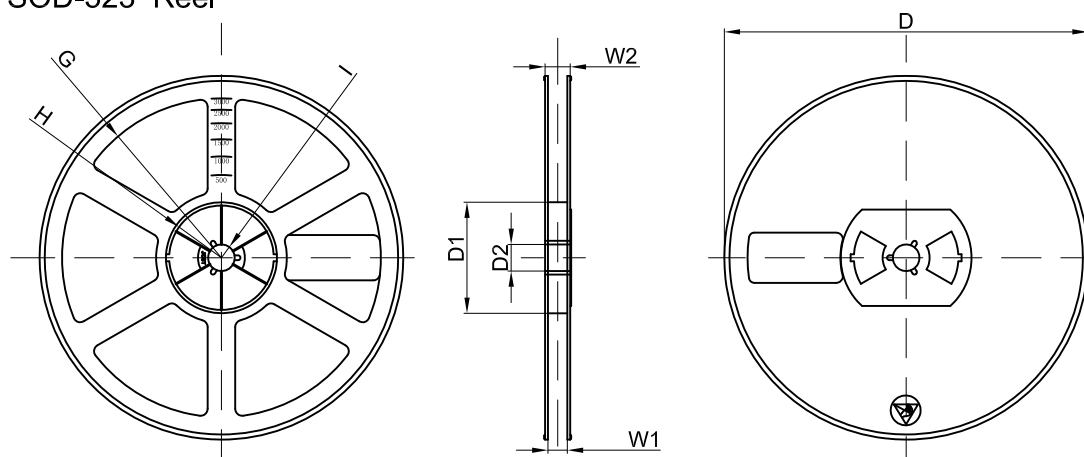
NOTE: TO CAVE 'C' ON CARRIER TAPE PER 120MM

| Dimensions are in millimeter |     |      |      |       |      |      |      |      |      |      |
|------------------------------|-----|------|------|-------|------|------|------|------|------|------|
| Pkg type                     | A   | B    | C    | d     | E    | F    | P0   | P    | P1   | W    |
| SOD-523                      | 0.9 | 1.94 | 0.73 | Ø1.50 | 1.75 | 3.50 | 4.00 | 2.00 | 2.00 | 8.00 |

### SOD-523 Tape Leader and Trailer



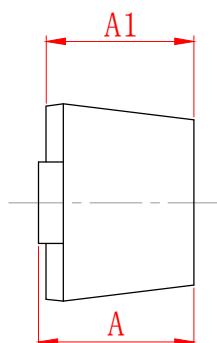
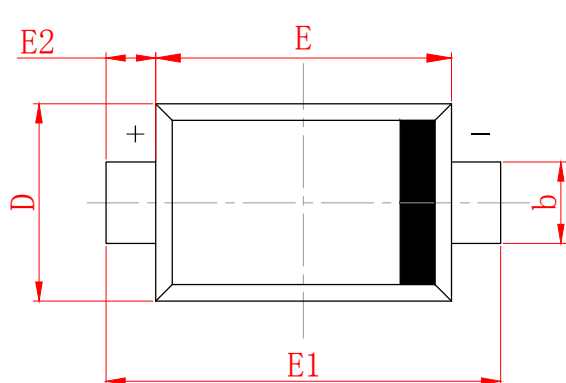
### SOD-523 Reel



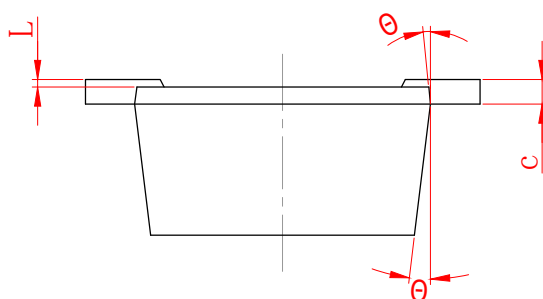
| Dimensions are in millimeter |         |       |       |        |        |       |      |       |
|------------------------------|---------|-------|-------|--------|--------|-------|------|-------|
| Reel Option                  | D       | D1    | D2    | G      | H      | I     | W1   | W2    |
| 7" Dia                       | Ø178.00 | 54.40 | 13.00 | R78.00 | R25.60 | R6.50 | 9.50 | 12.30 |

| REEL     | Reel Size | Box         | Box Size(mm) | Carton      | Carton Size(mm) | G.W.(kg) |
|----------|-----------|-------------|--------------|-------------|-----------------|----------|
| 8000 pcs | 7 inch    | 120,000 pcs | 203×203×195  | 480,000 pcs | 438×438×220     |          |

### SOD-523 Package Outline Dimensions



| SYMBOL   | MILLIMETER |       |
|----------|------------|-------|
|          | MIN        | MAX   |
| A        | 0.530      | 0.730 |
| A1       | 0.500      | 0.700 |
| b        | 0.280      | 0.380 |
| c        | 0.080      | 0.150 |
| D        | 0.750      | 0.850 |
| E        | 1.100      | 1.300 |
| E1       | 1.500      | 1.700 |
| E2       | 0.200 REF  |       |
| L        | 0.010      | 0.070 |
| $\theta$ | 7° REF     |       |



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