

### PINNING

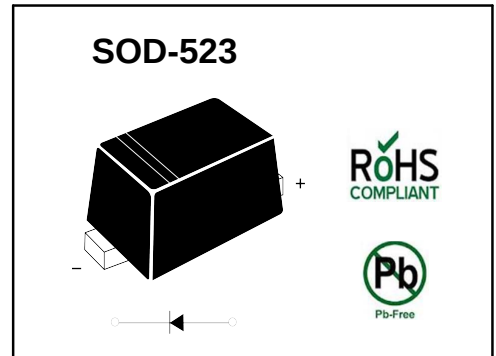
| PIN | DESCRIPTION |
|-----|-------------|
| 1   | Cathode     |
| 2   | Anode       |

## Plastic-Encapsulate Diodes

Switching Diode

### FEATURES

- High-Speed Switching Applications
- Lead Finish: 100% Matte Sn ( Tin )
- Qualified Reflow Temperature: 260 °C
- Extremely Small SOD-523 Package



MARKING: A6

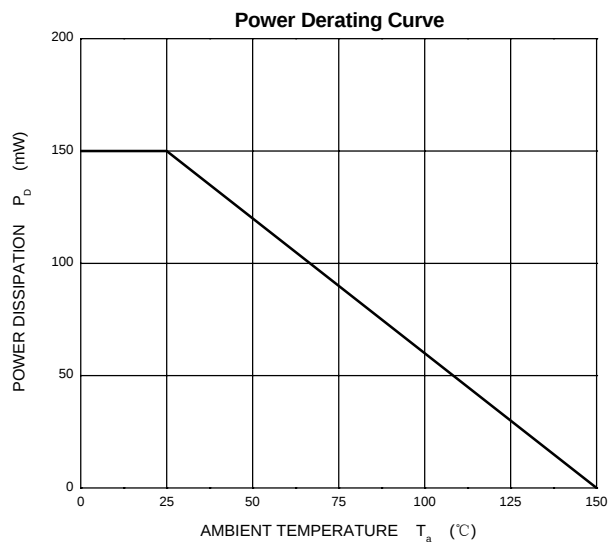
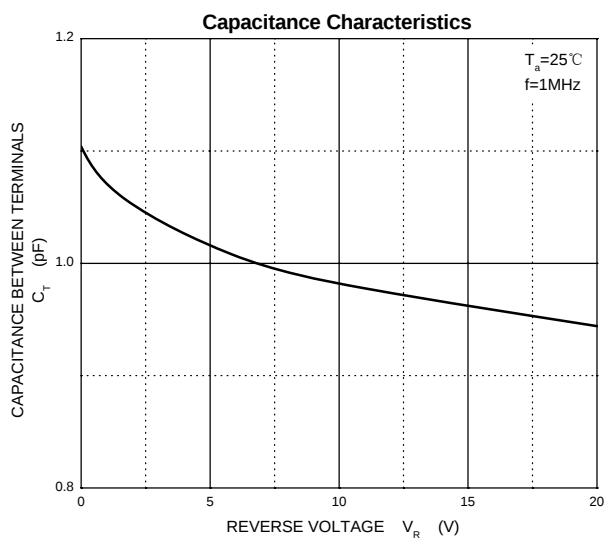
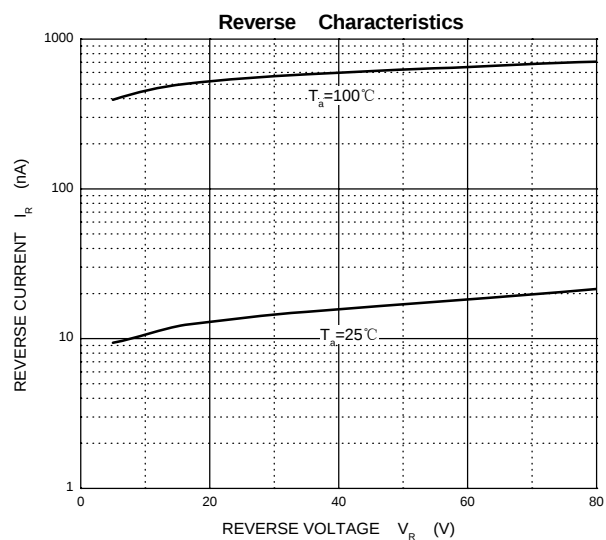
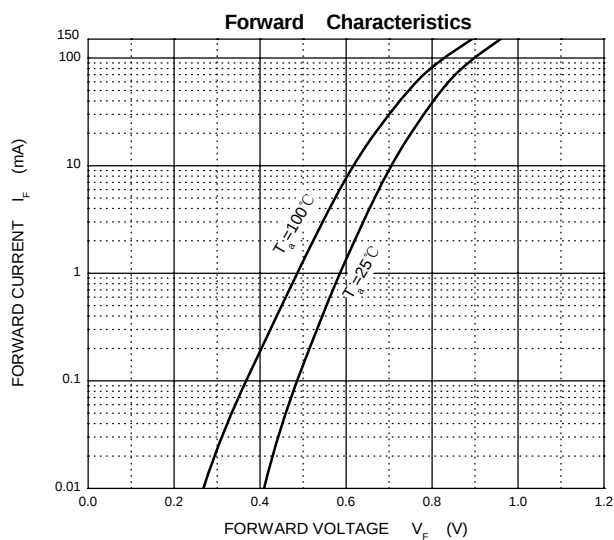
### Maximum Ratings and Electrical Characteristics, Single Diode @Ta=25°C

| Parameter                              | Symbol          | Limit | Unit |
|----------------------------------------|-----------------|-------|------|
| DC Reverse Voltage                     | $V_R$           | 75    | V    |
| Forward Current                        | $I_F$           | 200   | mA   |
| Pak Forward Surge Current              | $I_{FM(surge)}$ | 500   | mA   |
| Total Device Dissipation               | $P_D$           | 150   | mW   |
| Thermal Resistance Junction to Ambient | $R_{\theta JA}$ | 833   | °C/W |
| Junction and Storage Temperature       | $T_J, T_{stg}$  | 150   | °C   |

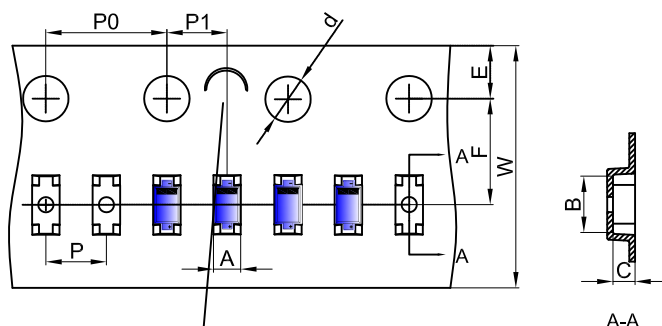
### Electrical Ratings @Ta=25°C

| Parameter                 | Symbol     | Min | Typ | Max  | Unit    | Conditions                          |
|---------------------------|------------|-----|-----|------|---------|-------------------------------------|
| Reverse breakdown voltage | $V_{(BR)}$ | 75  |     |      |         | $I_R=100\mu A$                      |
| Forward voltage           | $V_{F1}$   |     |     | 715  | mV      | $I_F=1mA$                           |
|                           | $V_{F2}$   |     |     | 855  |         | $I_F=10mA$                          |
|                           | $V_{F3}$   |     |     | 1000 |         | $I_F=50mA$                          |
|                           | $V_{F4}$   |     |     | 1250 |         | $I_F=150mA$                         |
| Reverse recovery Time     | $t_{rr}$   |     |     | 6.0  | ns      | $I_F=I_R=10mA_{dc}, R_L=50\Omega$   |
| Reverse current           | $I_R$      |     |     | 1.0  | $\mu A$ | $V_R=75V$                           |
| Forward recovery voltage  | $V_{FR}$   |     |     | 1.75 | V       | $I_F=10mA, t_r=20ns$                |
| Diode capacitance         | $C_D$      |     |     | 2.0  | pF      | $V_R=0V, f=1MHz$                    |
| Stored charge             | $Q_S$      |     |     | 45   | pC      | $I_F=10mA, V_R=5.0V, R_L=500\Omega$ |

### Typical Characteristics



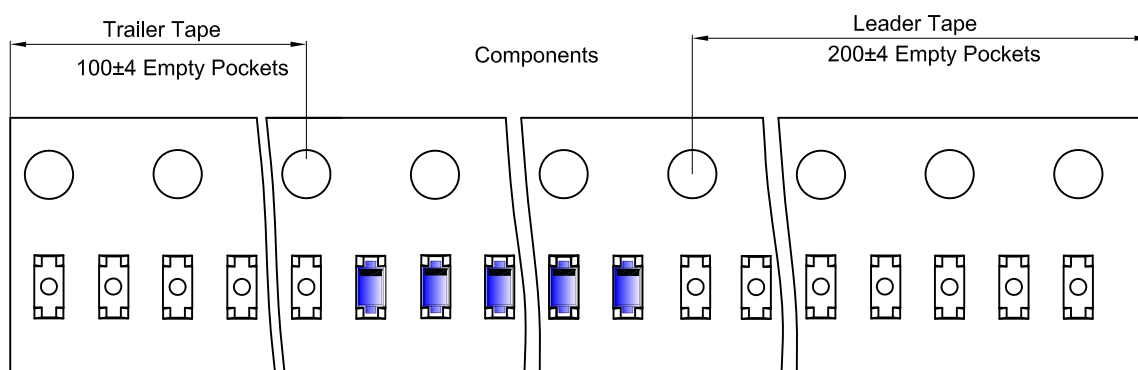
### SOD-523 Embossed Carrier Tape



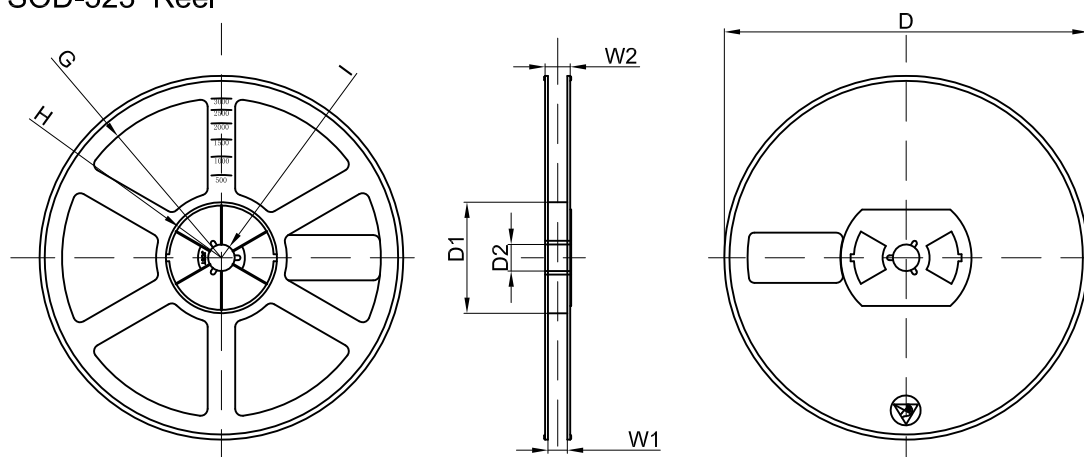
NOTE: TO CAVE 'C' ON CARRIER TAPE PER 120MM

| 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



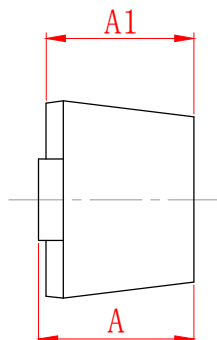
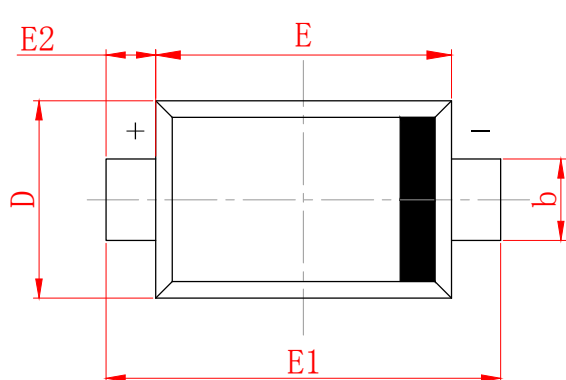
### SOD-523 Reel



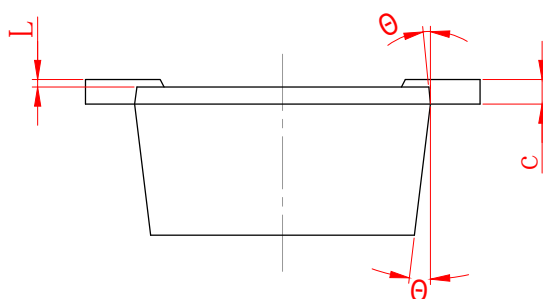
| Dimensions are in millimeter |         |       |       |        |        |       |      |       |
|------------------------------|---------|-------|-------|--------|--------|-------|------|-------|
| Reel Option                  | D       | D1    | D2    | G      | H      | I     | W1   | W2    |
| 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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