

### SCHOTTKY BARRIER DIODE

#### Features

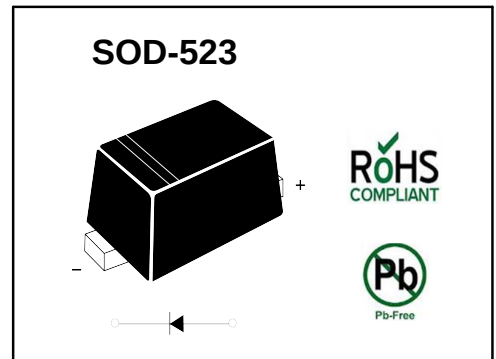
- Ultra small SMD package
- Very low forward voltage

#### Applications

- Ultra high speed switching
- Voltage clamping
- Low current rectification

#### PINNING

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



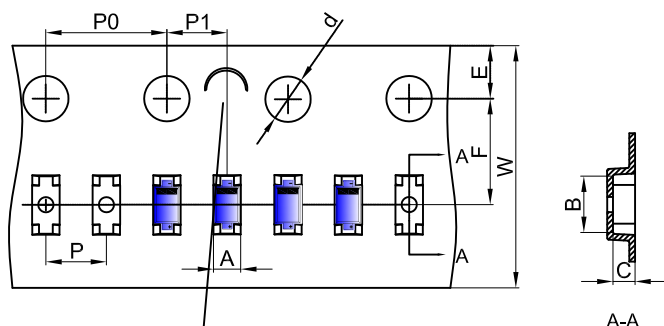
#### Absolute Maximum Ratings ( $T_a = 25^\circ\text{C}$ )

| Parameter                                                                  | Symbol    | Value         | Unit             |
|----------------------------------------------------------------------------|-----------|---------------|------------------|
| Reverse Voltage                                                            | $V_R$     | 20            | V                |
| Continuous Forward Current                                                 | $I_F$     | 500           | mA               |
| Repetitive Peak Forward Current (at $t_p = 1\text{ ms}$ )                  | $I_{FRM}$ | 3.5           | A                |
| Non-Repetitive Peak Forward Surge Current ( $t = 8\text{ ms}$ square wave) | $I_{FSM}$ | 6             | A                |
| Junction Temperature                                                       | $T_j$     | 125           | $^\circ\text{C}$ |
| Storage Temperature Range                                                  | $T_{stg}$ | - 65 to + 150 | $^\circ\text{C}$ |

#### Characteristics at $T_a = 25^\circ\text{C}$

| Parameter                                                                                                                                                | Symbol | Max.                            | Unit          |
|----------------------------------------------------------------------------------------------------------------------------------------------------------|--------|---------------------------------|---------------|
| Forward Voltage<br>at $I_F = 0.1\text{ mA}$<br>at $I_F = 1\text{ mA}$<br>at $I_F = 10\text{ mA}$<br>at $I_F = 100\text{ mA}$<br>at $I_F = 500\text{ mA}$ | $V_F$  | 180<br>240<br>290<br>380<br>650 | mV            |
| Reverse Current<br>at $V_R = 10\text{ V}$                                                                                                                | $I_R$  | 30                              | $\mu\text{A}$ |
| Diode Capacitance<br>at $V_R = 1\text{ V}$ , $f = 1\text{ MHz}$                                                                                          | $C_d$  | 30                              | pF            |

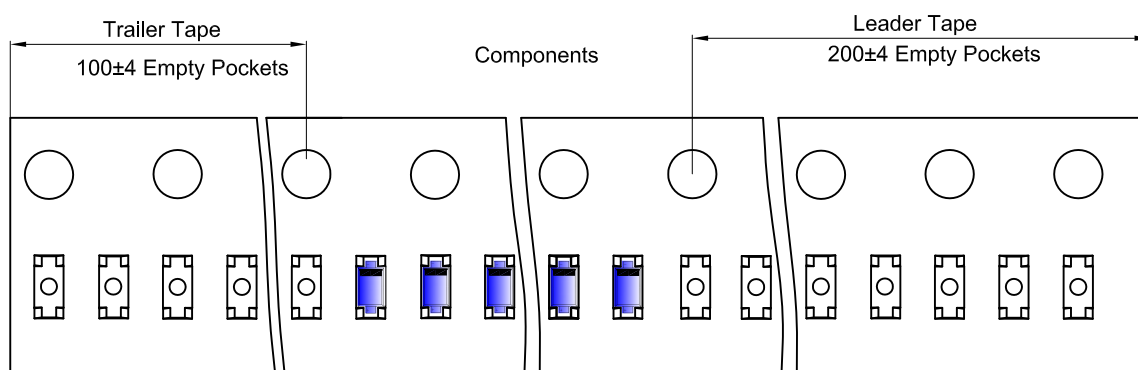
### SOD-523 Embossed Carrier Tape



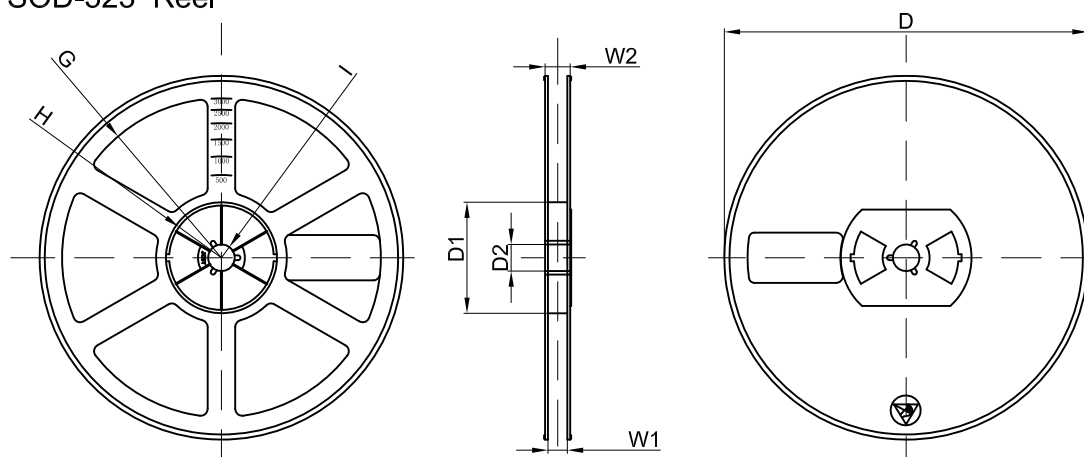
NOTE: TO CAVE 'C' ON CARRIER TAPE PER 120MM

| 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



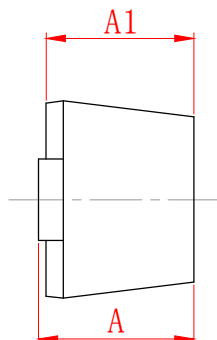
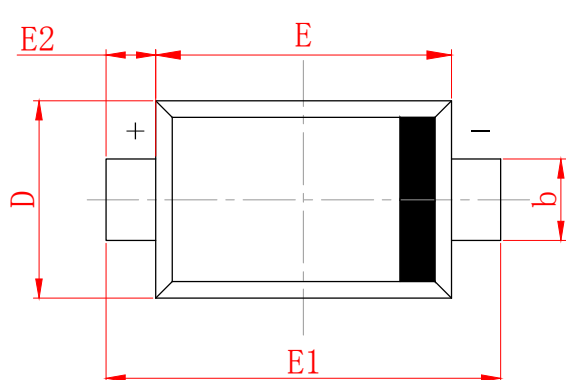
### SOD-523 Reel



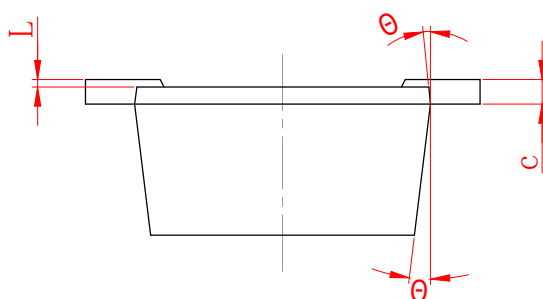
| Dimensions are in millimeter |         |       |       |        |        |       |      |       |
|------------------------------|---------|-------|-------|--------|--------|-------|------|-------|
| Reel Option                  | D       | D1    | D2    | G      | H      | I     | W1   | W2    |
|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