

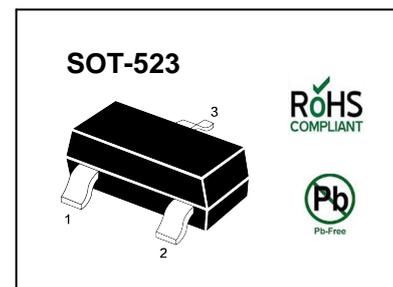
### Plastic-Encapsulate Diode

SWITCHING DIODE

#### FEATURES

- Small surface mounting type
- Two diode elements are connected in series

MARKING:BA1



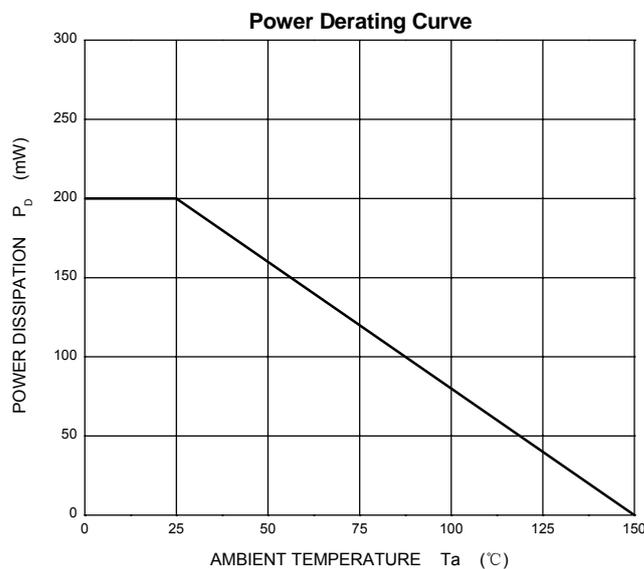
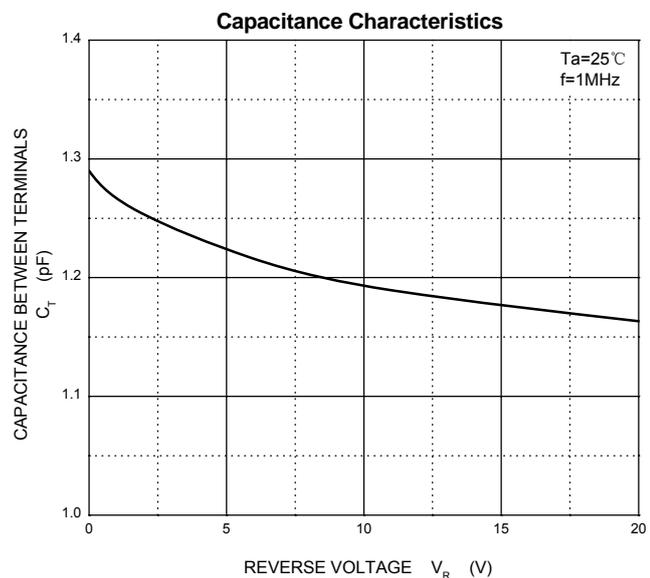
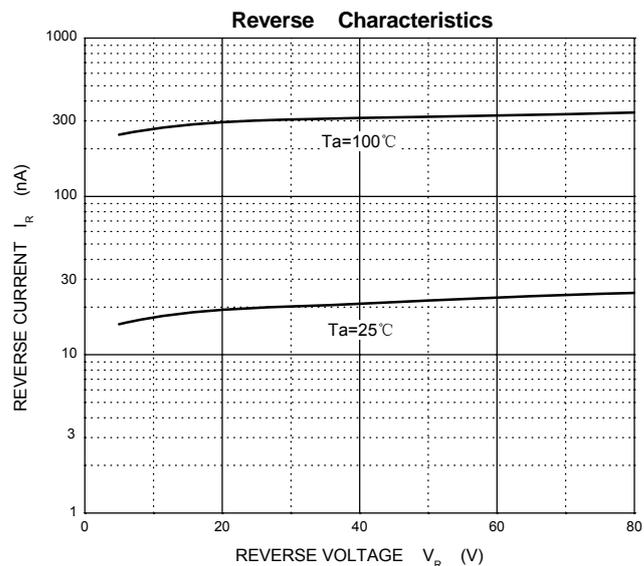
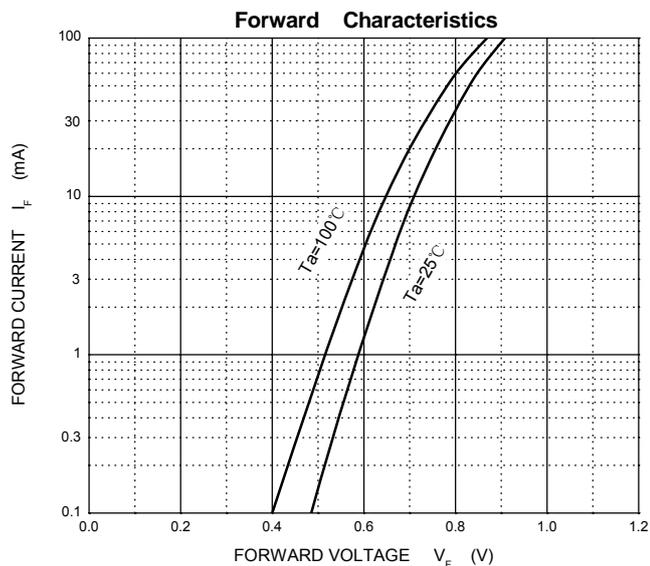
#### Maximum Ratings @Ta=25°C

| Parameter  | Symbol          | Limit    | Unit |
|--|-----------------|----------|------|
| Non-Repetitive Peak Reverse Voltage                | $V_{RM}$        | 80       | V    |
| DC Blocking Voltage                                | $V_R$           | 80       | V    |
| Forward Continuous Current                         | $I_{FM}$        | 300      | mA   |
| Non-Repetitive Peak Forward Surge Current @t=8.3ms | $I_{FSM}$       | 2.0      | A    |
| Average Rectified Output Current                   | $I_O$           | 100      | mA   |
| Power Dissipation                                  | $P_D$           | 200      | mW   |
| Thermal resistance From Junction to ambient        | $R_{\theta JA}$ | 625      | °C/W |
| Junction Temperature                               | $T_J$           | 150      | °C   |
| Storage Temperature Range                          | $T_{STG}$       | -55~+150 | °C   |

#### ELECTRICAL CHARACTERISTICS (Ta=25°C unless otherwise specified)

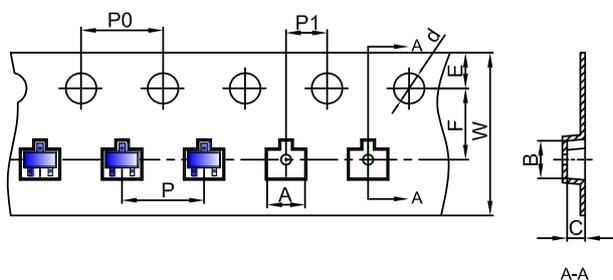
| Parameter                        | Symbol     | Test conditions | Min | Max | Unit    |
|----------------------------------|------------|-----------------|-----|-----|---------|
| Reverse breakdown voltage        | $V_{(BR)}$ | $I_R=100\mu A$  | 80  |     | V       |
| Reversen voltage leakage current | $I_R$      | $V_R=70V$       |     | 0.2 | $\mu A$ |
| Forward voltage                  | $V_F$      | $I_F=100mA$     |     | 1.2 | V       |

## Typical Characteristics



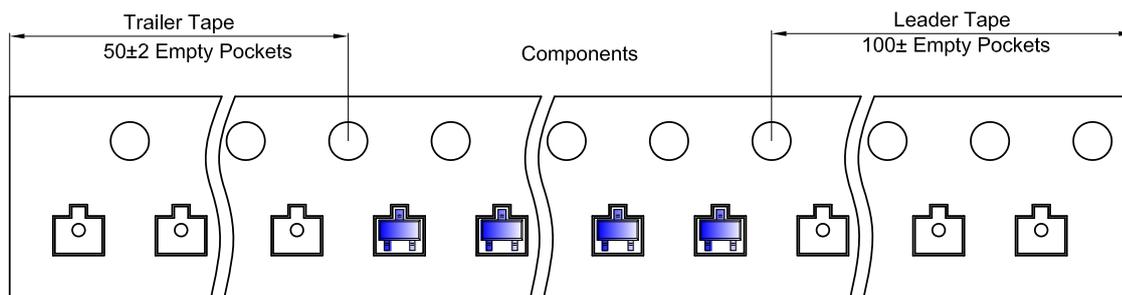
## SOT-523 Tape and Reel

### SOT-523 Embossed Carrier Tape

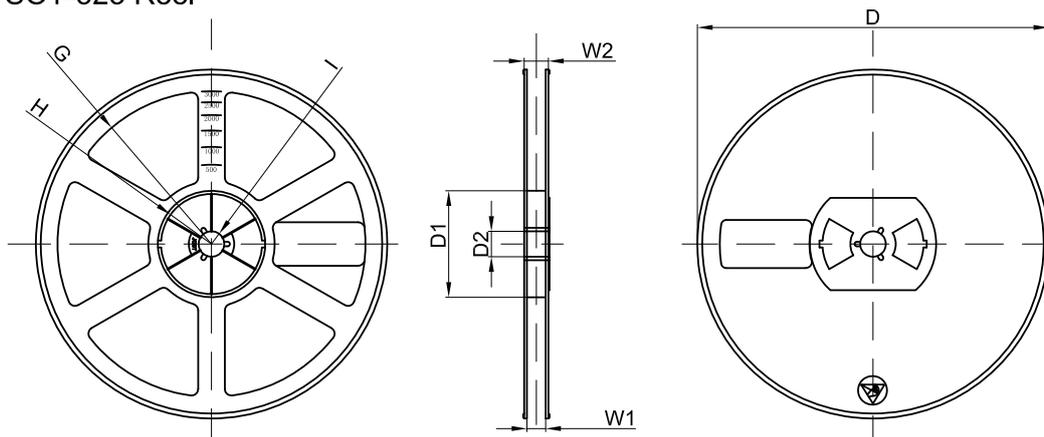


| Dimensions are in millimeter |      |      |       |       |      |      |      |      |      |      |
|------------------------------|------|------|-------|-------|------|------|------|------|------|------|
| Pkg type                     | A    | B    | C     | d     | E    | F    | P0   | P    | P1   | W    |
| SOT-523                      | 1.85 | 1.85 | 0.875 | Ø1.50 | 1.75 | 3.50 | 4.00 | 4.00 | 2.00 | 8.00 |

### SOT-523 Tape Leader and Trailer

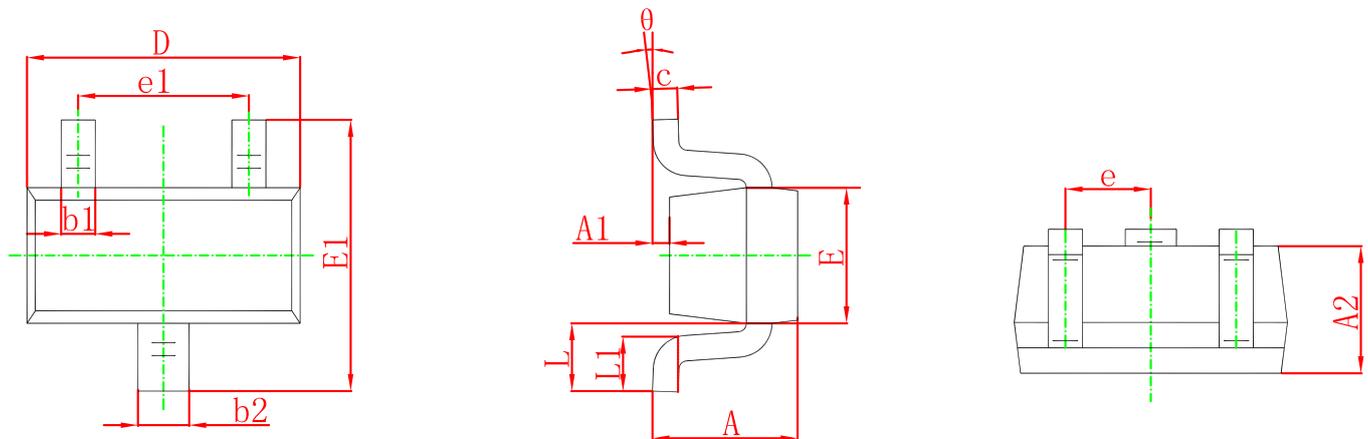


### SOT-523 Reel



| 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) |
|----------|-----------|------------|--------------|-------------|-----------------|----------|
| 3000 pcs | 7 inch    | 45,000 pcs | 203×203×195  | 180,000 pcs | 438×438×220     |          |



| Symbol | Dimensions In Millimeters |       | 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      | 0.500 TYP.                |       | 0.020 TYP.           |       |
| e1     | 0.900                     | 1.100 | 0.035                | 0.043 |
| L      | 0.400 REF.                |       | 0.016 REF.           |       |
| L1     | 0.260                     | 0.460 | 0.010                | 0.018 |
| θ      | 0°                        | 8°    | 0°                   | 8°    |

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