

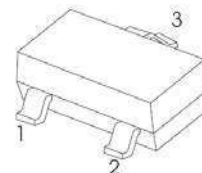
## SOT-23 Plastic-Encapsulate Diodes

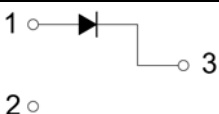
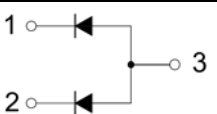
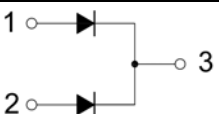
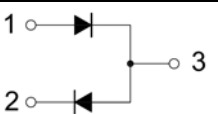
SCHOTTKY BARRIER DIODE

SOT-23

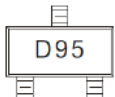
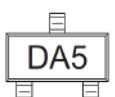
### FEATURES

- Low Current Leakage
- For General Purpose Switching Applications



| BAR43                                                                             | BAR43A                                                                            | BAR43C                                                                            | BAR43S                                                                             |
|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|
|  |  |  |  |
| MARKING:D95                                                                       | MARKING: DB1                                                                      | MARKING:DB2                                                                       | MARKING:DA5                                                                        |

MARKING:

| BAR43                                                                               | BAR43A                                                                              | BAR43C                                                                              | BAR43S                                                                               |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
|  |  |  |  |

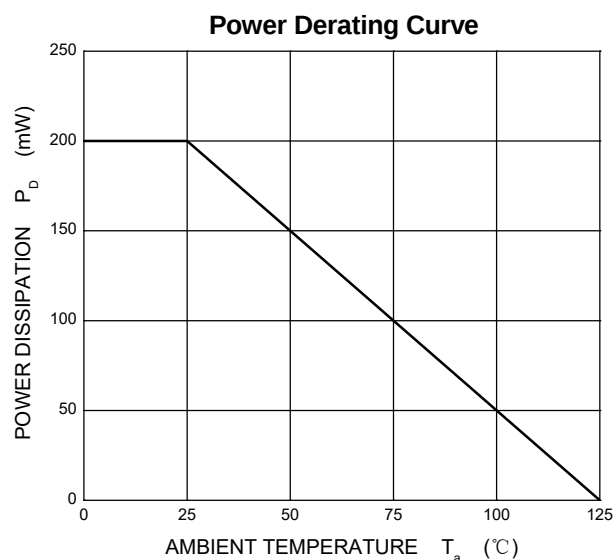
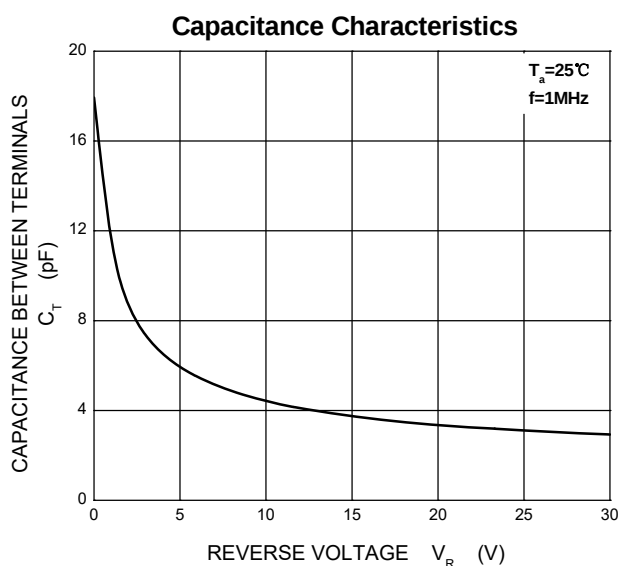
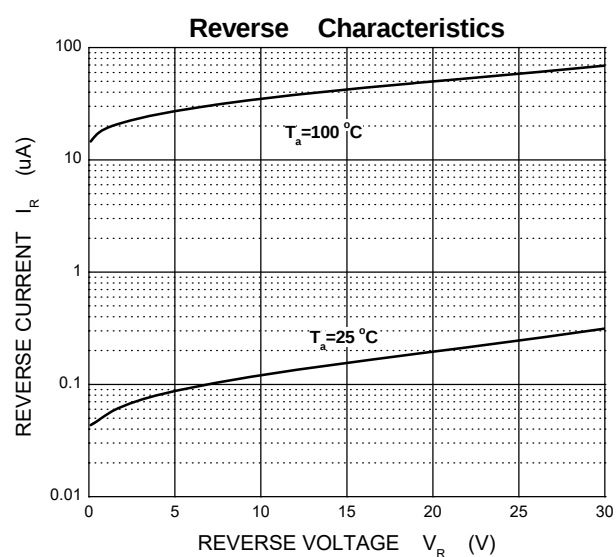
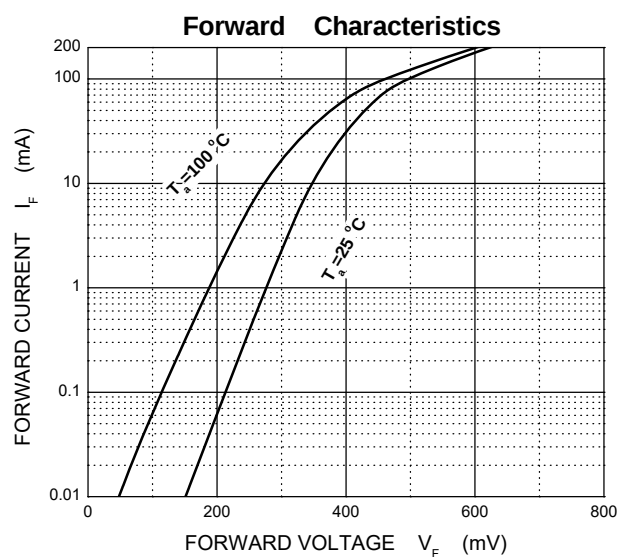
### MAXIMUM RATINGS ( $T_a=25^{\circ}\text{C}$ unless otherwise noted )

| Symbol          | Parameter                                                    | Value      | Unit                 |
|-----------------|--------------------------------------------------------------|------------|----------------------|
| $V_{RRM}$       | Peak Repetitive Reverse Voltage                              | 30         | V                    |
| $V_{RWM}$       | Working Peak Reverse Voltage                                 |            |                      |
| $V_{R(RMS)}$    | RMS Reverse Voltage                                          | 21         | V                    |
| $I_{F(AV)}$     | Average Rectified Forward Current                            | 200        | mA                   |
| $I_{FSM}$       | Non-repetitive Peak Forward Surge Current @ $t=8.3\text{ms}$ | 0.75       | A                    |
| $P_D$           | Power Dissipation                                            | 200        | mW                   |
| $R_{\theta JA}$ | Thermal Resistance from Junction to Ambient                  | 500        | $^{\circ}\text{C/W}$ |
| $T_j$           | Operating Junction Temperature Range                         | -40 ~ +125 | $^{\circ}\text{C}$   |
| $T_{stg}$       | Storage Temperature Range                                    | -55 ~ +150 | $^{\circ}\text{C}$   |

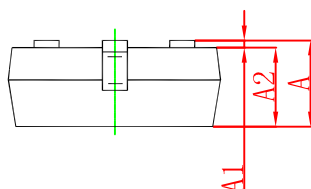
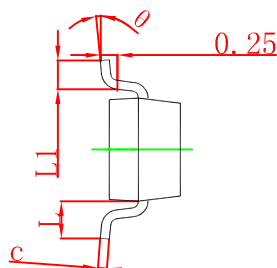
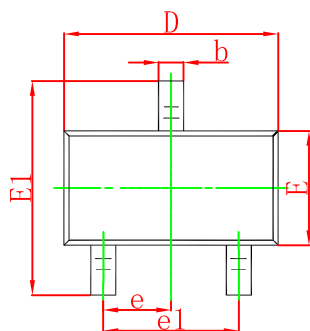
### ELECTRICAL CHARACTERISTICS( $T_a=25^{\circ}\text{C}$ unless otherwise specified)

| Parameter             | Symbol     | Test conditions                                                  | Min  | Typ | Max  | Unit          |
|-----------------------|------------|------------------------------------------------------------------|------|-----|------|---------------|
| Reverse voltage       | $V_{(BR)}$ | $I_R=100\mu\text{A}$                                             | 30   |     |      | V             |
| Reverse current       | $I_R$      | $V_R=25\text{V}$                                                 |      |     | 0.5  | $\mu\text{A}$ |
| Forward voltage       | $V_F$      | $I_F=2\text{mA}$                                                 | 0.26 |     | 0.33 | V             |
|                       |            | $I_F=15\text{mA}$                                                |      |     | 0.45 |               |
|                       |            | $I_F=100\text{mA}$                                               |      |     | 0.8  |               |
| Reverse recovery time | $t_{rr}$   | $I_F=I_R=10\text{mA}$ , $I_{rr}=0.1\times I_R$ , $R_L=100\Omega$ |      |     | 5    | ns            |

## Typical Characteristics

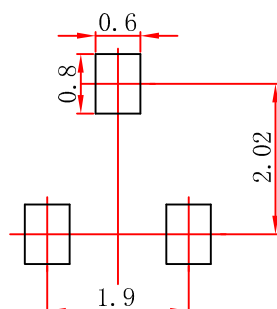


## SOT-23 Package Outline Dimensions



| Symbol | Dimensions In Millimeters |       | Dimensions In Inches |       |
|--------|---------------------------|-------|----------------------|-------|
|        | Min                       | Max   | Min                  | Max   |
| A      | 0.900                     | 1.150 | 0.035                | 0.045 |
| A1     | 0.000                     | 0.100 | 0.000                | 0.004 |
| A2     | 0.900                     | 1.050 | 0.035                | 0.041 |
| b      | 0.300                     | 0.500 | 0.012                | 0.020 |
| c      | 0.080                     | 0.150 | 0.003                | 0.006 |
| D      | 2.800                     | 3.000 | 0.110                | 0.118 |
| E      | 1.200                     | 1.400 | 0.047                | 0.055 |
| E1     | 2.250                     | 2.550 | 0.089                | 0.100 |
| e      | 0.950 TYP                 |       | 0.037 TYP            |       |
| e1     | 1.800                     | 2.000 | 0.071                | 0.079 |
| L      | 0.550 REF                 |       | 0.022 REF            |       |
| L1     | 0.300                     | 0.500 | 0.012                | 0.020 |
| θ      | 0°                        | 8°    | 0°                   | 8°    |

## SOT-23 Suggested Pad Layout

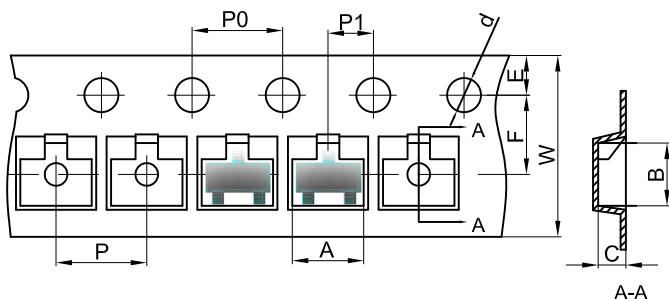


Note:

1. Controlling dimension: in millimeters.
2. General tolerance:  $\pm 0.05\text{mm}$ .
3. The pad layout is for reference purposes only.

## SOT-23 Tape and Reel

### SOT-23 Embossed Carrier Tape

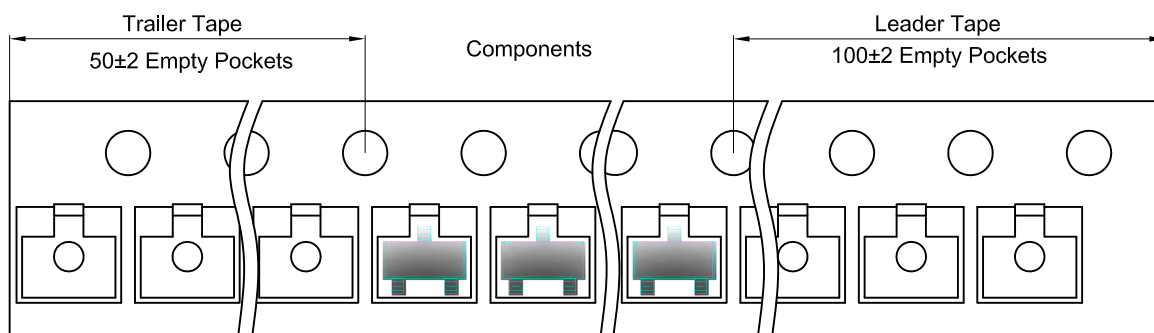


#### Packaging Description:

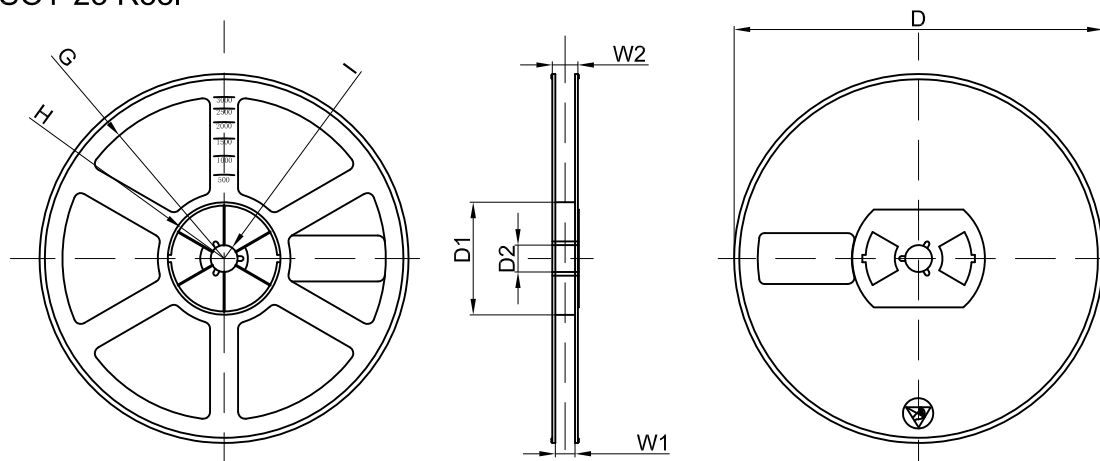
SOT-23 parts are shipped in tape. The carrier tape is made from a dissipative (carbon filled) polycarbonate resin. The cover tape is a multilayer film (Heat Activated Adhesive in nature) primarily composed of polyester film, adhesive layer, sealant, and anti-static sprayed agent. These reeled parts in standard option are shipped with 3,000 units per 7" or 17.8cm diameter reel. The reels are clear in color and is made of polystyrene plastic (anti-static coated).

| Dimensions are in millimeter |      |      |      |       |      |      |      |      |      |      |
|------------------------------|------|------|------|-------|------|------|------|------|------|------|
| Pkg type                     | A    | B    | C    | d     | E    | F    | P0   | P    | P1   | W    |
| SOT-23                       | 3.15 | 2.77 | 1.22 | Ø1.50 | 1.75 | 3.50 | 4.00 | 4.00 | 2.00 | 8.00 |

### SOT-23 Tape Leader and Trailer



### SOT-23 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     |          |