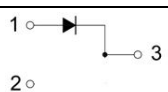
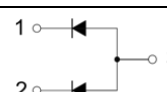


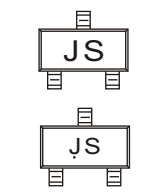
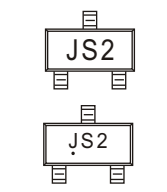
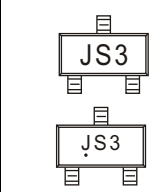
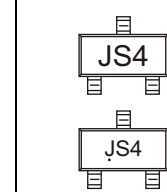


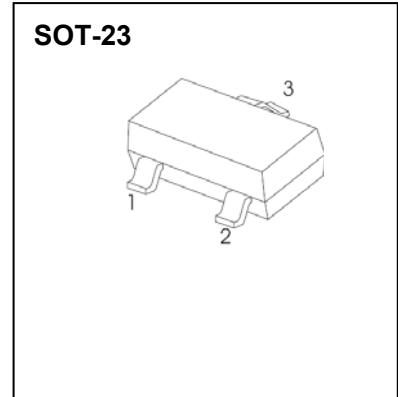
SOT-23 Plastic-Encapsulate Diodes

BAS21/A/C/S SWITCHING DIODE

FEATURES

- Fast Switching Speed
- Surface Mount Package Ideally Suited for Automatic Insertion
- For General Purpose Switching Applications
- High Conductance

| BAS21 | BAS21A | BAS21C | BAS21S |
|--|--|--|--|
|  |  |  |  |
| MARKING: JS | MARKING: JS2 | MARKING: JS3 | MARKING: JS4 |
|  |  |  |  |



Solid dot = Green molding compound device, if none, the normal device

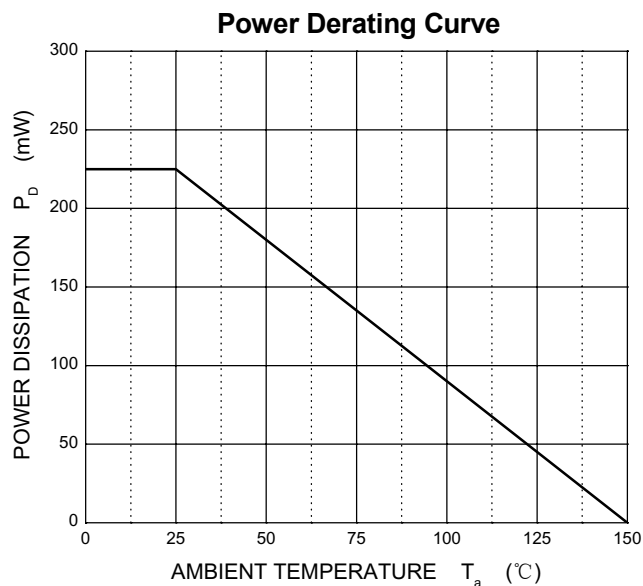
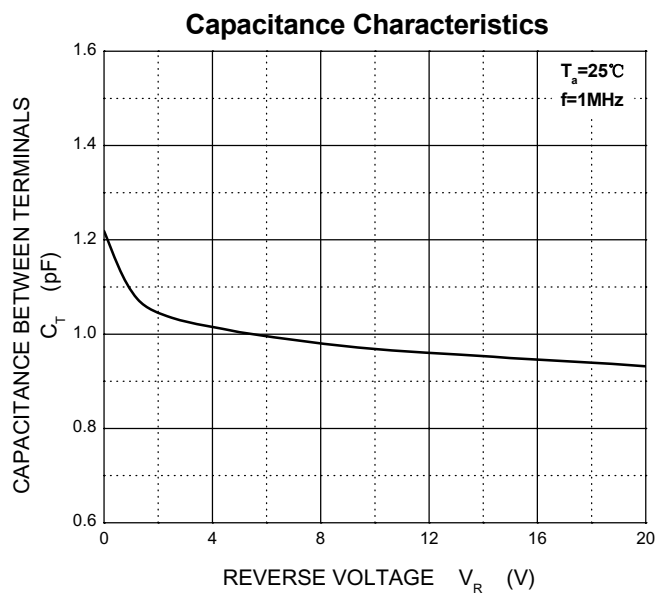
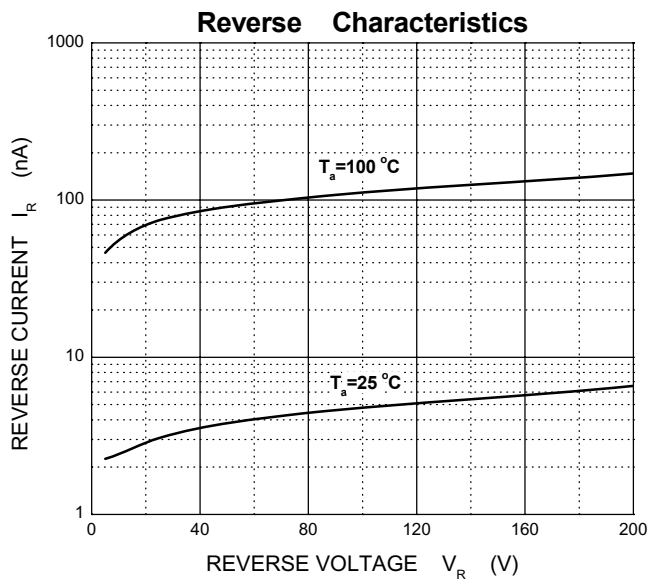
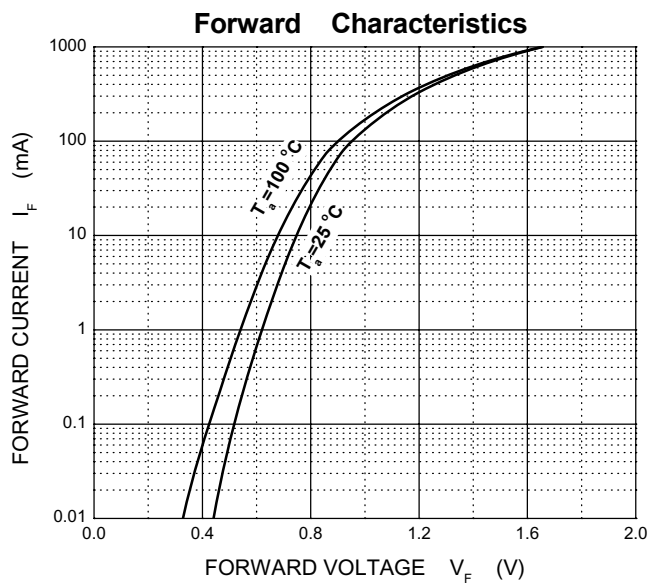
Maximum Ratings @Ta=25°C

| Parameter | Symbol | Limit | Unit |
|--|-----------------|----------|------|
| Repetitive peak reverse voltage | V_{RRM} | 250 | V |
| Working peak reverse voltage | V_{RWM} | | |
| DC blocking voltage | V_R | | |
| Forward continuous current | I_{FM} | 400 | mA |
| Average rectified output current | I_O | 200 | mA |
| Non-Repetitive Peak Forward Surge Current @t=8.3ms | I_{FSM} | 2.5 | A |
| Repetitive peak forward surge current | I_{FRM} | 625 | mA |
| Power dissipation | P_D | 225 | mW |
| Thermal resistance junction to ambient | $R_{\theta JA}$ | 555 | °C/W |
| Junction temperature | T_J | 150 | °C |
| Storage temperature range | T_{STG} | -55~+150 | °C |

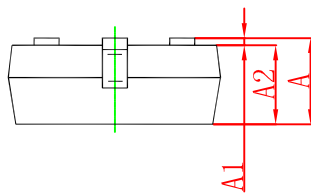
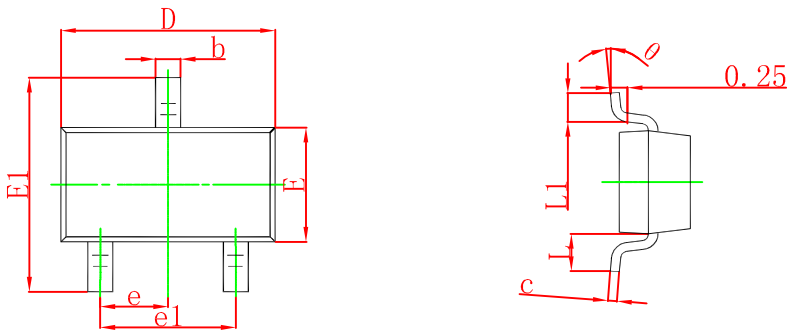
ELECTRICAL CHARACTERISTICS (Ta=25°C unless otherwise specified)

| Parameter | Symbol | Test conditions | Min | Max | Unit |
|---------------------------------|------------|--|-----|--------------|---------|
| Reverse breakdown voltage | $V_{(BR)}$ | $I_R=100\mu A$ | 250 | | V |
| Reverse voltage leakage current | I_R | $V_R=200V$ | | 0.1 | μA |
| Forward voltage | V_F | $I_F=100mA$ $I_F=200mA$ | | 1000 1250 | mV |
| Diode capacitance | C_D | $V_R=0V, f=1MHz$ | | 5 | pF |
| Reverse recovery time | t_{rr} | $I_F=I_R=30mA, I_{rr}=0.1 \times I_R, R_L=100\Omega$ | | 50 | 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



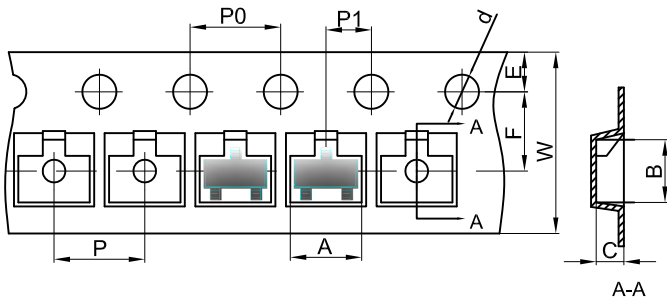
- Note:
1. Controlling dimension: in millimeters.
 2. General tolerance: ± 0.05 mm.
 3. The pad layout is for reference purposes only.

NOTICE

JCET reserve the right to make modifications, enhancements, improvements, corrections or other changes without further notice to any product herein. JCET does not assume any liability arising out of the application or use of any product described herein.

SOT-23 Tape and Reel

SOT-23 Embossed Carrier Tape



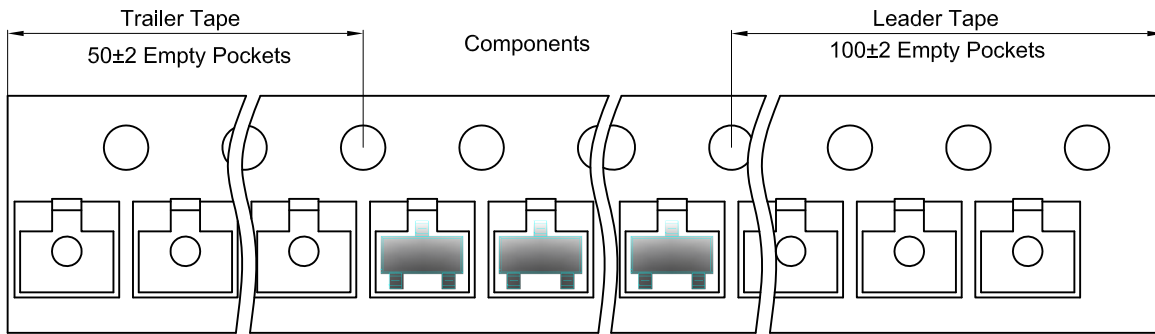
Packaging Description:

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).

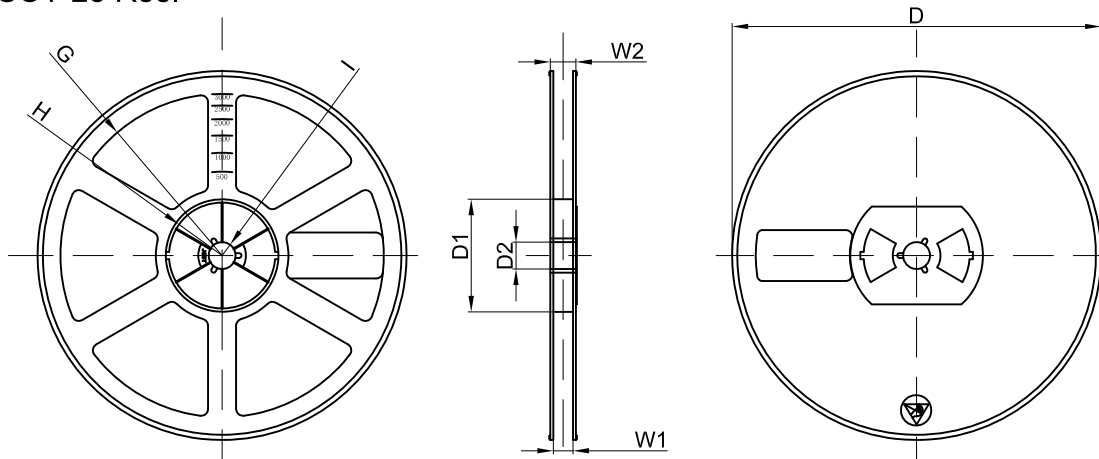
Dimensions are in millimeter

| 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 | |

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