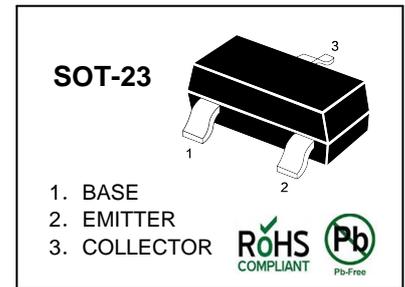


TRANSISTOR (NPN)

FEATURES

Complementary to S9015

MARKING: J6



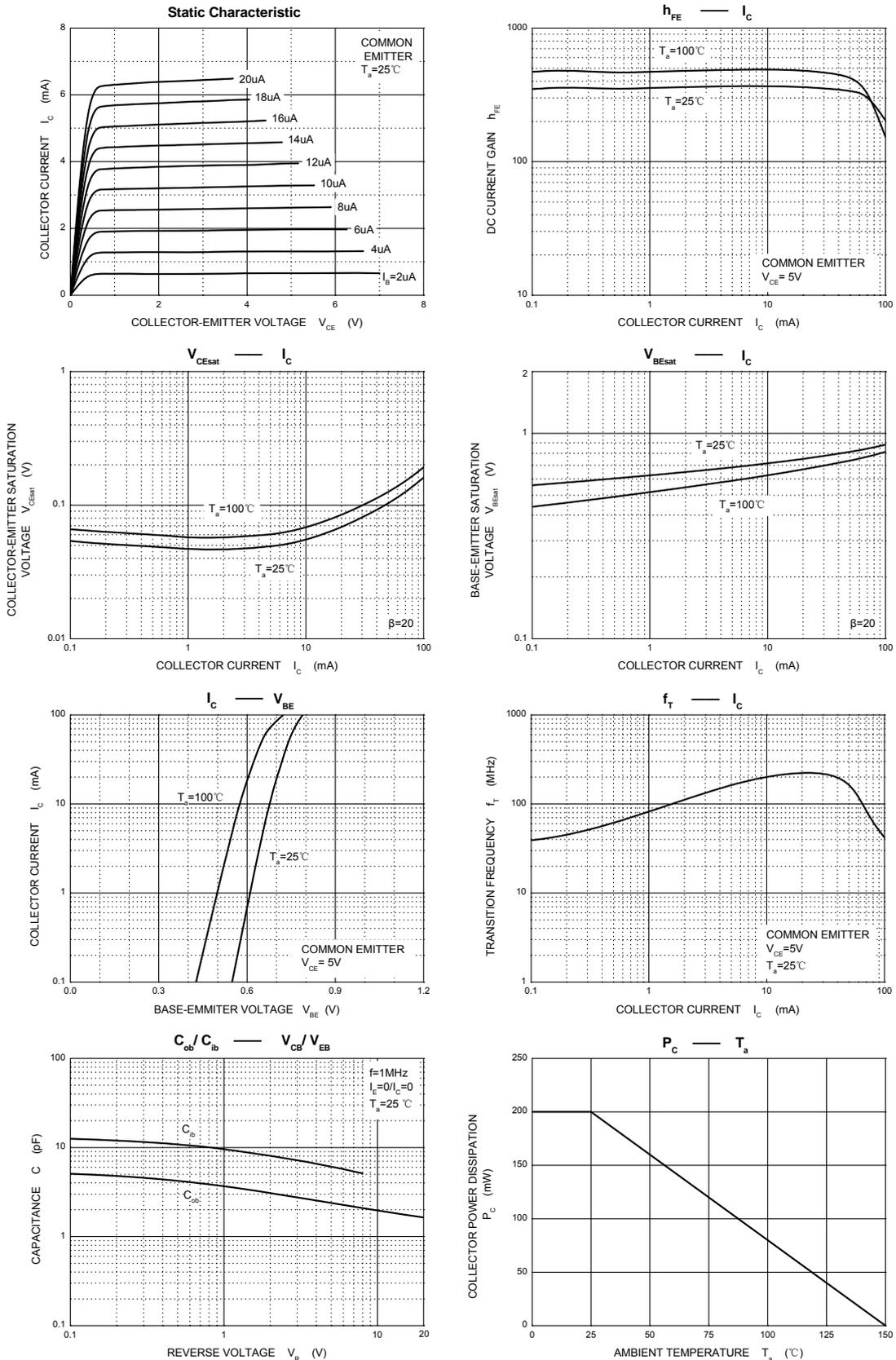
MAXIMUM RATINGS ($T_A=25^{\circ}\text{C}$ unless otherwise noted)

| Symbol | Parameter | value | units |
|-----------|------------------------------|---------|--------------------|
| V_{CBO} | Collector-Base Voltage | 50 | V |
| V_{CEO} | Collector-Emitter Voltage | 45 | V |
| V_{EBO} | Emitter-Base Voltage | 5 | V |
| I_C | Collector Current-Continuous | 0.1 | A |
| P_C | Collector Power Dissipation | 0.2 | W |
| T_J | Junction Temperature | 150 | $^{\circ}\text{C}$ |
| T_{STG} | Storage Temperature | -55-150 | $^{\circ}\text{C}$ |

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

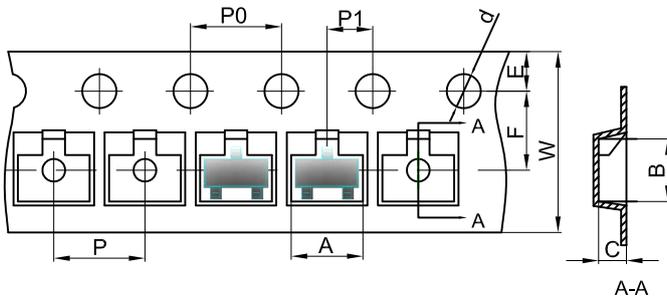
| Parameter | Symbol | Test conditions | MIN | TYP | MAX | UNIT |
|--------------------------------------|---------------|--|-----|-----|-----|---------------|
| Collector-base breakdown voltage | $V_{(BR)CBO}$ | $I_C=100\mu\text{A}$, $I_E=0$ | 50 | | | V |
| Collector-emitter breakdown voltage | $V_{(BR)CEO}$ | $I_C=0.1\text{mA}$, $I_B=0$ | 45 | | | V |
| Emitter-base breakdown voltage | $V_{(BR)EBO}$ | $I_E=100\mu\text{A}$, $I_C=0$ | 5 | | | V |
| Collector cut-off current | I_{CBO} | $V_{CB}=50\text{V}$, $I_E=0$ | | | 0.1 | μA |
| Collector cut-off current | I_{CEO} | $V_{CE}=35\text{V}$, $I_B=0$ | | | 0.1 | μA |
| Emitter cut-off current | I_{EBO} | $V_{EB}=3\text{V}$, $I_C=0$ | | | 0.1 | μA |
| DC current gain | h_{FE} | $V_{CE}=5\text{V}$, $I_C=1\text{mA}$ | 200 | | 450 | |
| Collector-emitter saturation voltage | $V_{CE(sat)}$ | $I_C=100\text{mA}$, $I_B=5\text{mA}$ | | | 0.3 | V |
| Base-emitter saturation voltage | $V_{BE(sat)}$ | $I_C=100\text{mA}$, $I_B=5\text{mA}$ | | | 1 | V |
| Transition frequency | f_T | $V_{CE}=5\text{V}$, $I_C=10\text{mA}$ $f=30\text{MHz}$ | 150 | | | MHz |

Typical Characteristics



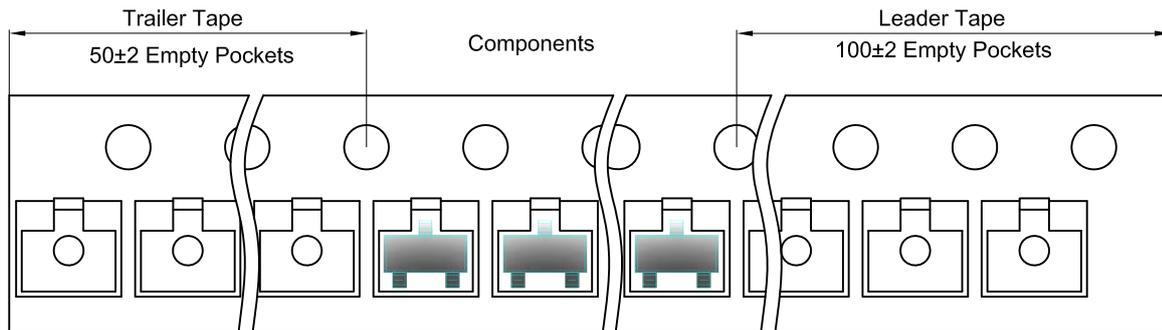
SOT-23 Tape and Reel

SOT-23 Embossed Carrier Tape

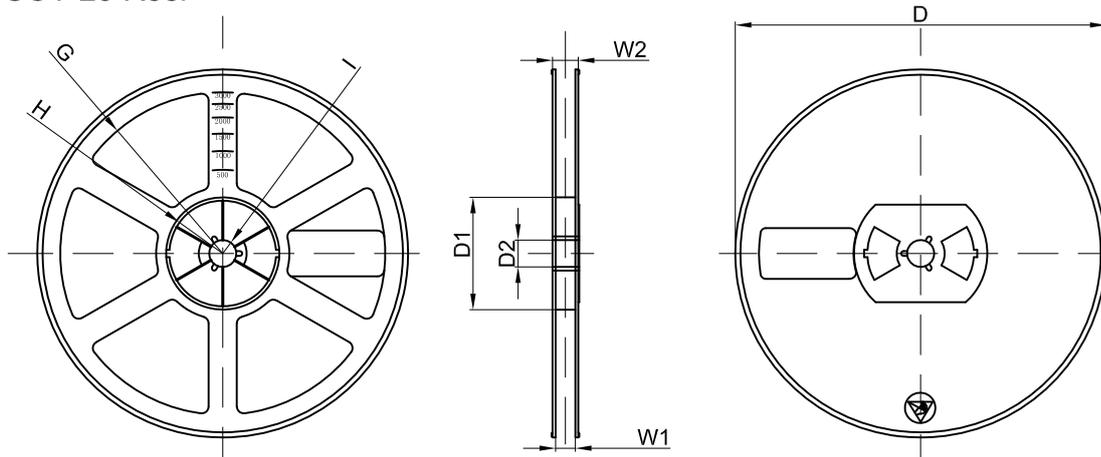


| Dimensions are in millimeter | | | | | | | | | | |
|------------------------------|------|------|------|-------|------|------|------|------|------|------|
| Pkg type | A | B | C | d | E | F | P0 | P | P1 | W |
| SOT-23 | 3.15 | 2.77 | 1.22 | Ø1.50 | 1.75 | 3.50 | 4.00 | 4.00 | 2.00 | 8.00 |

SOT-23 Tape Leader and Trailer

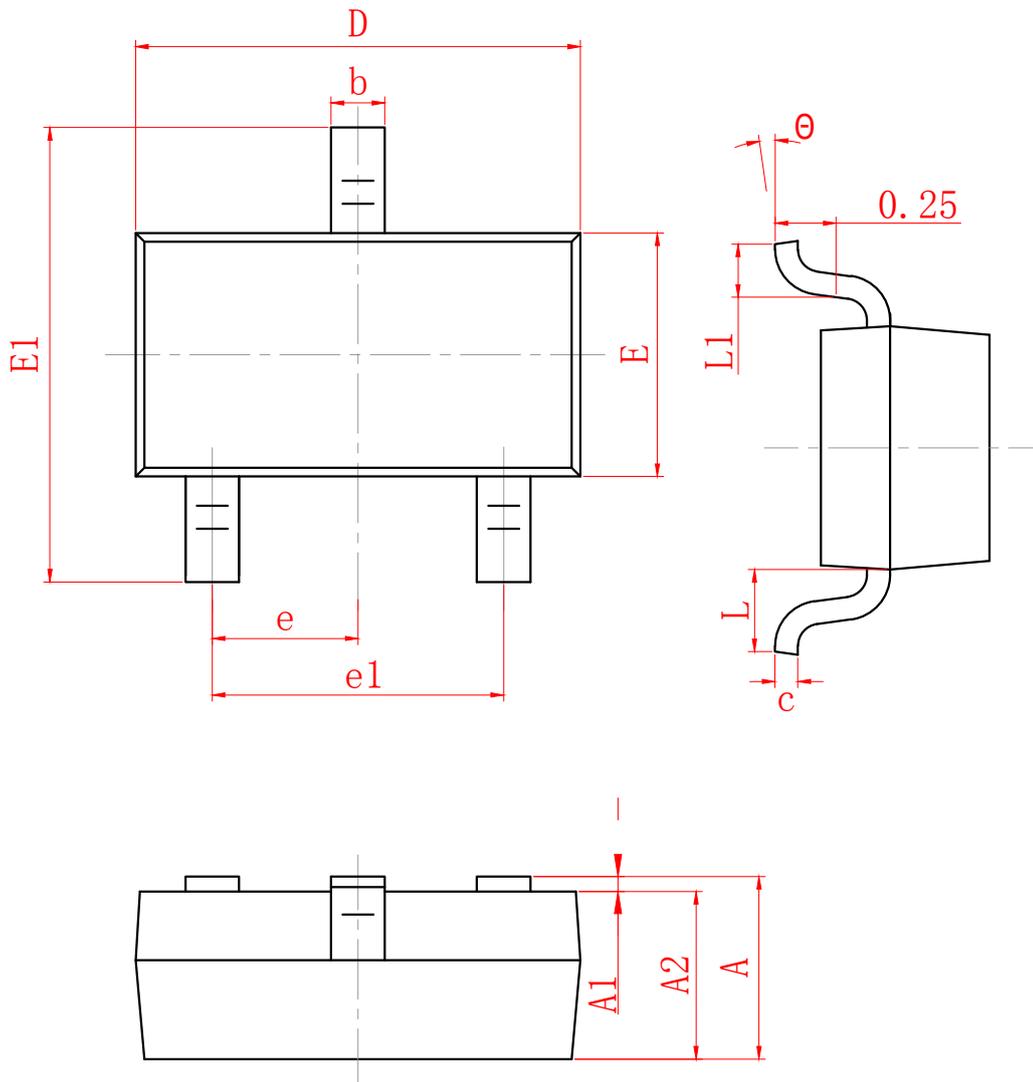


SOT-23 Reel



| 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 | |



| SYMBOL | MILLIMETER | |
|--------|------------|-------|
| | MIN | MAX |
| A | 0.900 | 1.150 |
| A1 | 0.000 | 0.100 |
| A2 | 0.900 | 1.050 |
| b | 0.300 | 0.500 |
| c | 0.080 | 0.150 |
| D | 2.800 | 3.000 |
| E | 1.200 | 1.400 |
| E1 | 2.250 | 2.550 |
| e | 0.950 TYP | |
| e1 | 1.800 | 2.000 |
| L | 0.550 REF | |
| L1 | 0.300 | 0.500 |
| theta | 0° | 8° |

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