

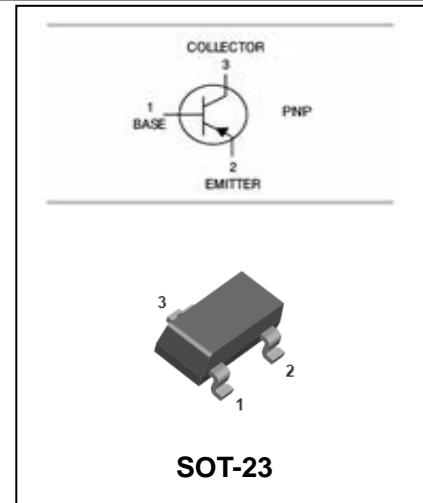
Silicon Epitaxial Planar Transistor

2SA1015

FEATURES

- Complementary to 2SC1815
- Excellent h_{FE} linearity
- High voltage and high current
- Low noise
- Collector-Emitter voltage $BV_{CEO}=-50V$

HF



APPLICATIONS

- Low frequency, low noise amplifier

ORDERING INFORMATION

| Type No. | Marking | Package Code |
|----------|---------|--------------|
| 2SA1015 | BA | SOT-23 |

MAXIMUM RATING @ $T_A = 25^\circ\text{C}$ unless otherwise specified

| Symbol | Parameter | Value | Units |
|----------------|----------------------------------|-------------|------------------|
| V_{CBO} | Collector-Base Voltage | -50 | V |
| V_{CEO} | Collector-Emitter Voltage | -50 | V |
| V_{EBO} | Emitter-Base Voltage | -5 | V |
| I_C | Collector Current -Continuous | -150 | mA |
| P_C | Collector Dissipation | 400 | mW |
| T_J, T_{STG} | Junction and Storage Temperature | -55 to +150 | $^\circ\text{C}$ |

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ELECTRICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified

| Parameter | Symbol | Test conditions | MIN | TYP | MAX | UNIT |
|--------------------------------------|---------------|--------------------------------------|-----|------|------|---------|
| Collector-base breakdown voltage | $V_{(BR)CBO}$ | $I_C=-100\mu A, I_E=0$ | -50 | | | V |
| Collector-emitter breakdown voltage | $V_{(BR)CEO}$ | $I_C=-0.1mA, I_B=0$ | -50 | | | V |
| Emitter-base breakdown voltage | $V_{(BR)EBO}$ | $I_E=-10\mu A, I_C=0$ | -5 | | | V |
| Collector cut-off current | I_{CBO} | $V_{CB}=-50V, I_E=0$ | | | -0.1 | μA |
| Collector cut-off current | I_{CEO} | $V_{CE}=-50V, I_B=0$ | | | -0.1 | μA |
| Emitter cut-off current | I_{EBO} | $V_{EB}=-5V, I_C=0$ | | | -0.1 | μA |
| DC current gain | h_{FE} | $V_{CE}=-6V, I_C=-2mA$ | 70 | | 400 | |
| | | $V_{CE}=-6V, I_C=-150mA$ | 25 | 80 | | |
| Collector-emitter saturation voltage | $V_{CE(sat)}$ | $I_C=-100mA, I_B=-10mA$ | | -0.1 | -0.3 | V |
| Base-emitter saturation voltage | $V_{BE(sat)}$ | $I_C=-100mA, I_B=-10mA$ | | | -1.1 | V |
| Transition frequency | f_T | $V_{CE}=-10V, I_C=-1mA$ $f=30MHz$ | 80 | | | MHz |

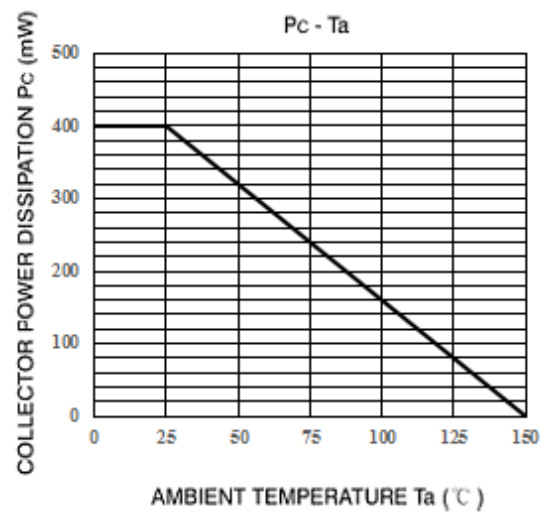
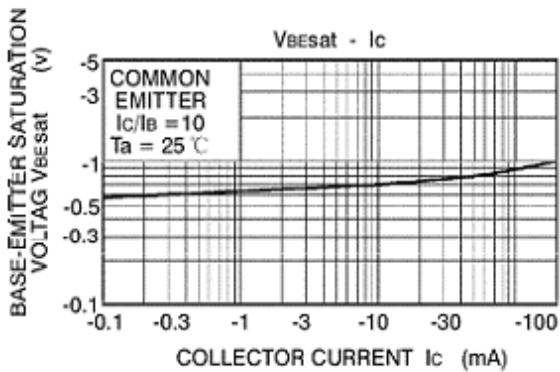
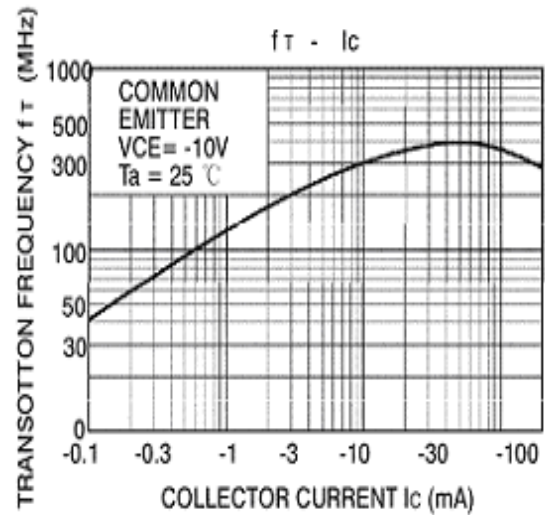
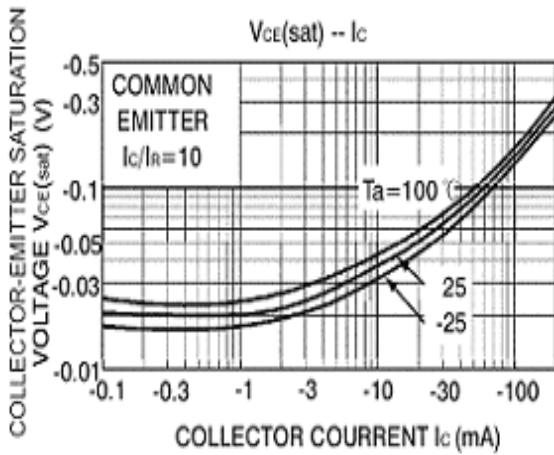
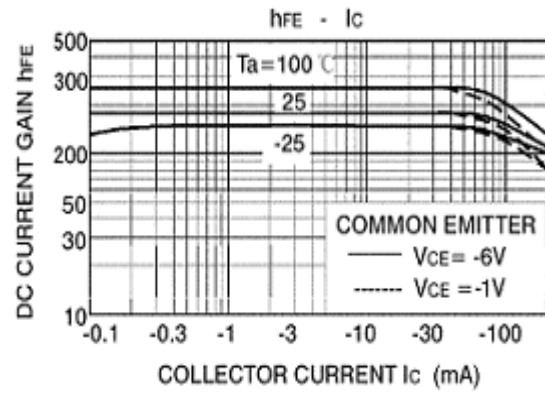
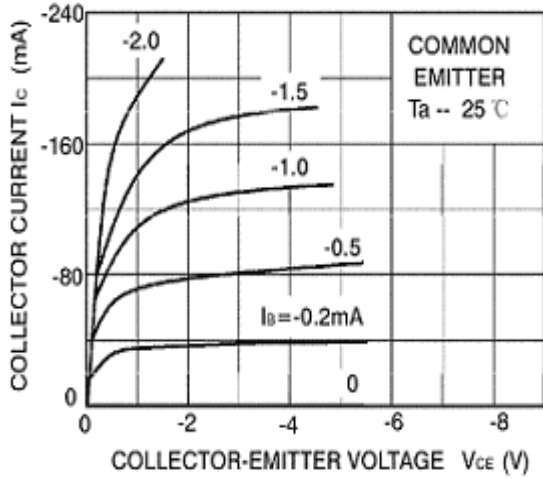
CLASSIFICATION OF $h_{FE(1)}$

| Rank | L | H |
|-------|---------|---------|
| Range | 130-200 | 200-400 |

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TYPICAL CHARACTERISTICS @ $T_a=25^\circ\text{C}$ unless otherwise specified



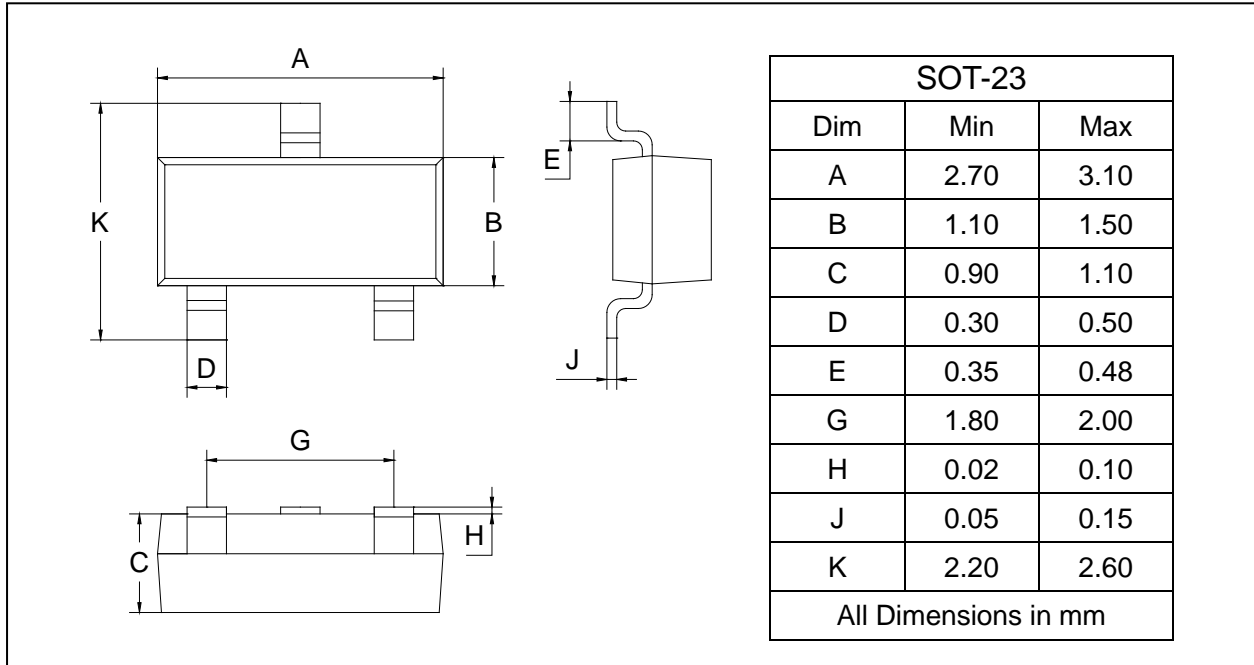
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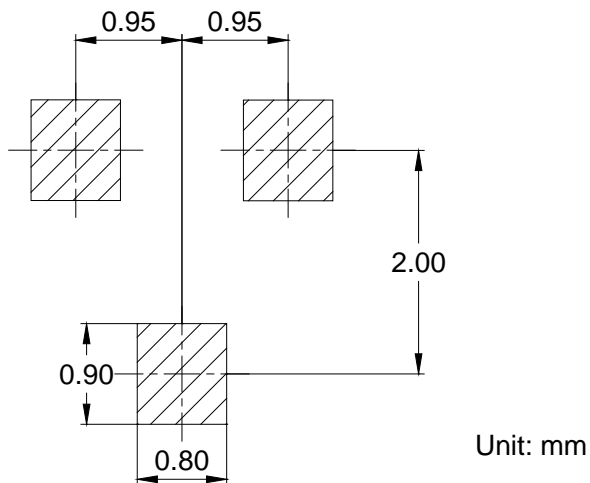
PACKAGE OUTLINE

Plastic surface mounted package

SOT-23



SOLDERING FOOTPRINT



PACKAGE INFORMATION

| Device | Package | Shipping |
|---------|---------|-----------------------|
| 2SA1015 | SOT-23 | 3000pcs / Tape & Reel |