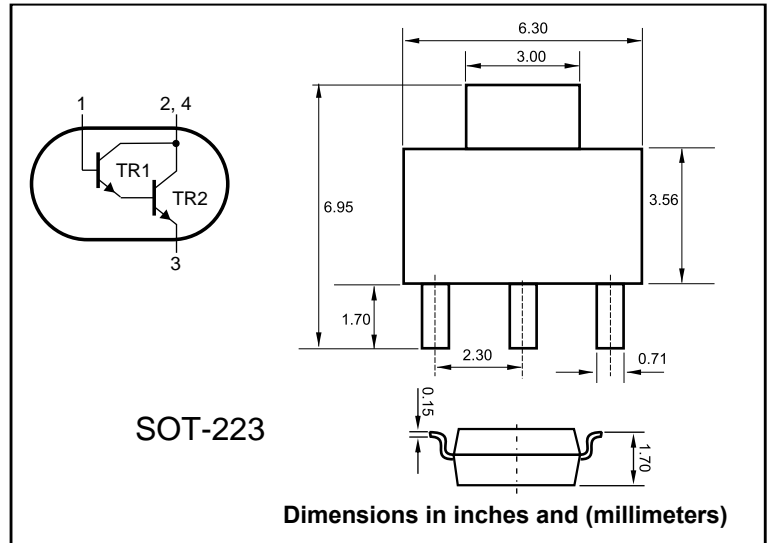


1. BASE
2. COLLECTOR
3. EMITTER

Features

- ◇ High current (max. 500 mA)
- ◇ Low voltage (max. 30 V).
- ◇ Pre-amplifiers requiring high input impedance.



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

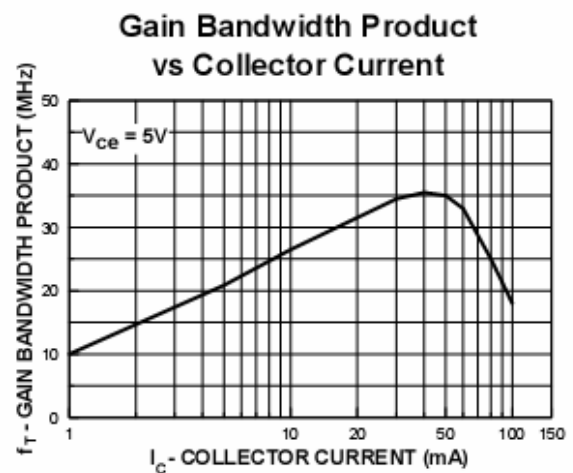
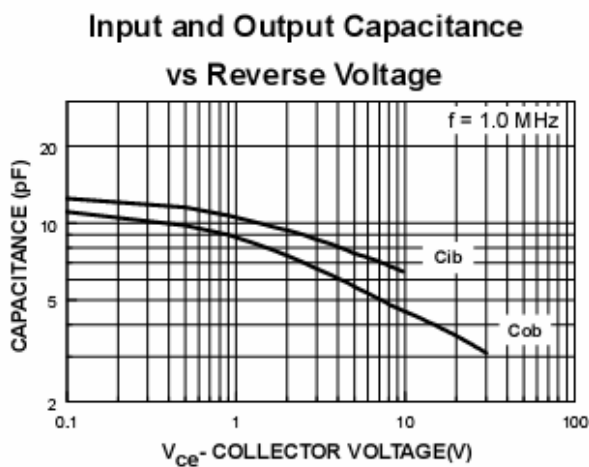
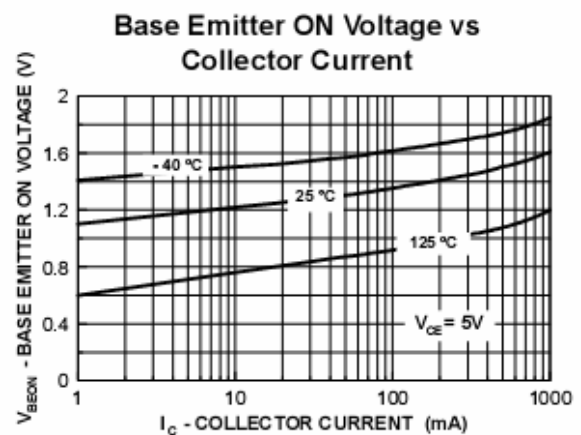
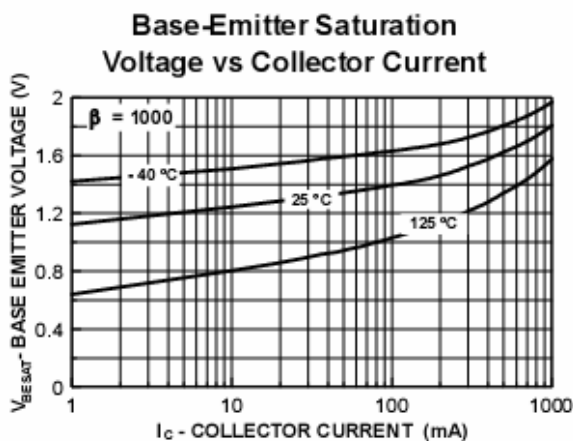
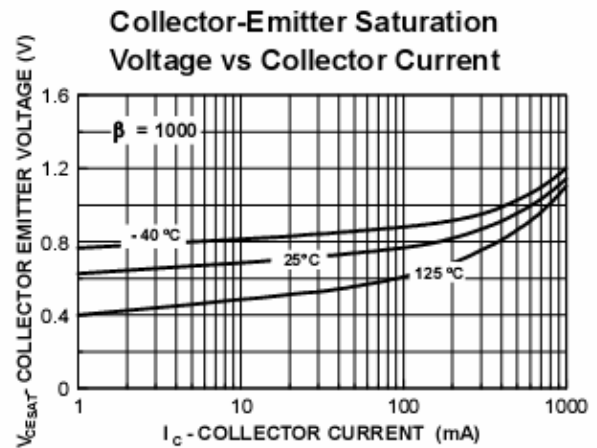
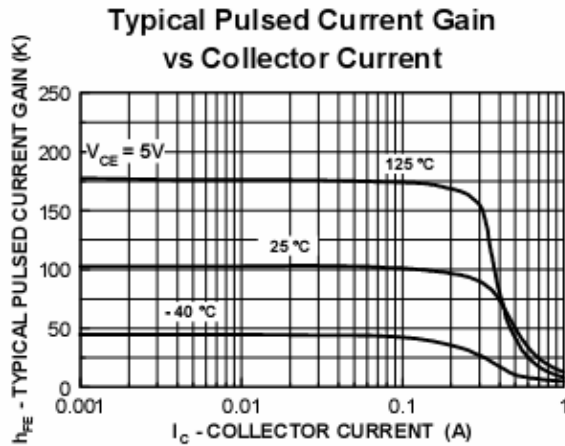
| Symbol | Parameter | Value | Units |
|-----------|-------------------------------|---------|--------------------|
| V_{CB0} | Collector-Base Voltage | 30 | V |
| V_{CE0} | Collector-Emitter Voltage | 30 | V |
| V_{EBO} | Emitter-Base Voltage | 10 | V |
| I_c | Collector Current -Continuous | 500 | mA |
| P_c | Collector Power Dissipation | 2 | W |
| T_j | Junction Temperature | 150 | $^{\circ}\text{C}$ |
| T_{stg} | Storage Temperature | -65-150 | $^{\circ}\text{C}$ |

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

| Parameter | Symbol | Test conditions | MIN | TYP | MAX | UNIT |
|--------------------------------------|---------------|--|-------|-----|-----|---------------|
| Collector-base breakdown voltage | $V_{(BR)CBO}$ | $I_C=100\mu\text{A}, I_E=0$ | 30 | | | V |
| Collector-emitter breakdown voltage | $V_{CE(SUS)}$ | $I_C=100\mu\text{A}, I_B=0$ | 30 | | | V |
| Emitter-base breakdown voltage | $V_{(BR)EBO}$ | $I_E=100\mu\text{A}, I_C=0$ | 10 | | | V |
| Collector cut-off current | I_{CBO} | $V_{CB}=30\text{V}, I_E=0$ | | | 0.1 | μA |
| base cut-off current | I_{CEO} | $V_{EB}=10\text{V}, I_C=0$ | | | 0.1 | μA |
| DC current gain | $h_{FE(1)}$ | $V_{CE}=5.0\text{V}, I_C=10\text{mA}$ | 10000 | | | |
| | $h_{FE(2)}$ | $V_{CE}=5.0\text{V}, I_C=100\text{mA}$ | 20000 | | | |
| Collector-emitter saturation voltage | $V_{CE(sat)}$ | $I_C=100\text{mA}, I_B=0.1\text{mA}$ | | | 1.5 | V |
| Base-emitter voltage | V_{BE} | $V_{CE}=5\text{V}, I_C=100\text{mA}$ | | | 2 | V |
| Transition frequency | f_T | $V_{CE}=5\text{V}, I_C=10\text{mA}, f=100\text{MHz}$ | 125 | | | MHz |



Typical Characteristics



| Package | Reel | Reel Size | Box | Box Size(mm) | Carton | Carton Size(mm) |
|----------|---------|-----------|---------|--------------|-----------|-----------------|
| SOT -223 | 2500pcs | 13inch | 2500pcs | 336×336×48 | 20,000pcs | 445×355×365 |