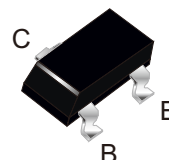


FEATURES

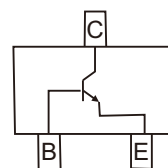
- Epoxy meets UL-94 V-0 flammability rating
- Power Dissipation of 200mW
- High Stability and High Reliability
- Low Cob, Cob=2.0pF(Typ)

SOT-23



MECHANICAL DATA

- Case: SOT-23(TO-236)
- Terminals: Plated solderable per MIL-STD-750, method 2026
- Mounting Position: Any



MAXIMUM RATINGS(T_A=25°C Unless otherwise specified)

| Parameter | Symbol | Unit | Value |
|---|------------------|------|-------------|
| Collector-Emitter Voltage | V _{CEO} | V | 50 |
| Collector-Base Voltage | V _{CB0} | V | 60 |
| Emitter-Base Voltage | V _{EB0} | V | 7 |
| Collector Current, Continuous | I _C | mA | 150 |
| Collector Power Dissipation | P _D | mW | 200 |
| Operation Junction Temperature | T _J | °C | -55 to +150 |
| Storage Temperature | T _{STG} | °C | -55 to +150 |
| Thermal resistance From junction to ambient | R _{θJA} | °C/W | 625 |

ELECTRICAL CHARACTERISTICS($T_A=25^{\circ}\text{C}$ Unless otherwise specified)

| Parameter | Symbol | Unit | Conditions | Min | Max |
|--------------------------------------|---------------|------|--|----------|-----|
| Collector-Emitter Breakdown Voltage | $V_{(BR)CEO}$ | V | $I_C=1\text{mA}, I_B=0$ | 50 | --- |
| Collector-Base Breakdown Voltage | $V_{(BR)CBO}$ | V | $I_C=50\mu\text{A}, I_E=0$ | 60 | --- |
| Emitter-Base Breakdown Voltage | $V_{(BR)EBO}$ | V | $I_E=50\mu\text{A}, I_C=0$ | 7 | --- |
| Collector cut-off Current | I_{CBO} | nA | $V_{CB}=60\text{V}, I_E=0$ | --- | 100 |
| Collector cut-off Current | I_{CEO} | nA | $V_{CE}=50\text{V}, I_B=0$ | --- | --- |
| Emitter cut-off Current | I_{EBO} | nA | $V_{EB}=7\text{V}, I_C=0$ | --- | 100 |
| DC Current Gain | h_{FE} | | $I_C=1\text{mA}, V_{CE}=6\text{V}$ | 120 | 560 |
| | | | $I_C=50\text{mA}, V_{CE}=1\text{V}$ | --- | --- |
| | | | $I_C=500\text{mA}, V_{CE}=1\text{V}$ | --- | --- |
| Collector-Emitter Saturation Voltage | $V_{CE(sat)}$ | V | $I_C=50\text{mA}, I_B=5\text{mA}$ | --- | 0.4 |
| | | | $I_C=100\text{mA}, I_B=5\text{mA}$ | --- | --- |
| Base-Emitter Saturation Voltage | $V_{BE(sat)}$ | V | $I_C=100\text{mA}, I_B=10\text{mA}$ | --- | --- |
| | | | $I_C=50\text{mA}, I_B=5\text{mA}$ | --- | --- |
| Output Capacitance | C_{ob} | pF | $V_{CB}=12\text{V}, f=1.0\text{MHz}, I_E=0$ | 2.0(Typ) | 3.5 |
| Current Gain-Bandwidth Product | f_T | MHz | $I_C=10\text{mA}, V_{CE}=6\text{V}$ $f=30\text{MHz}$ | 160(Typ) | --- |
| Noise Figure | NF | dB | $V_{CE}=5.0\text{V}, f=1.0\text{kHz}$, $I_C=100\mu\text{A}, R_S=1.0\text{K}$ | --- | --- |

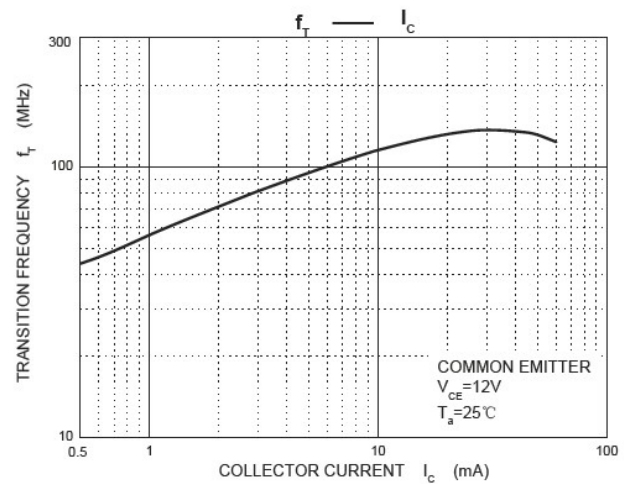
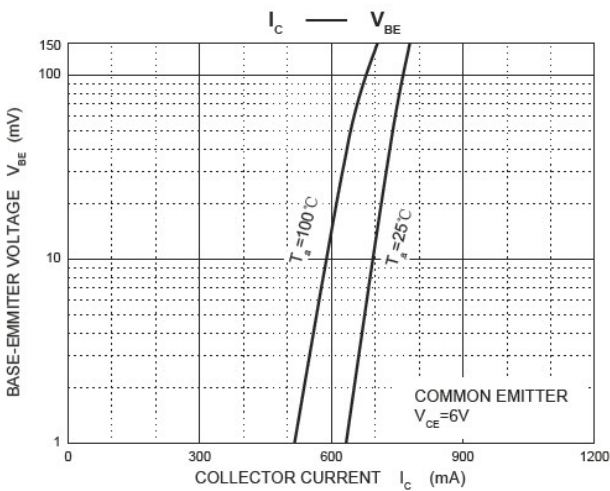
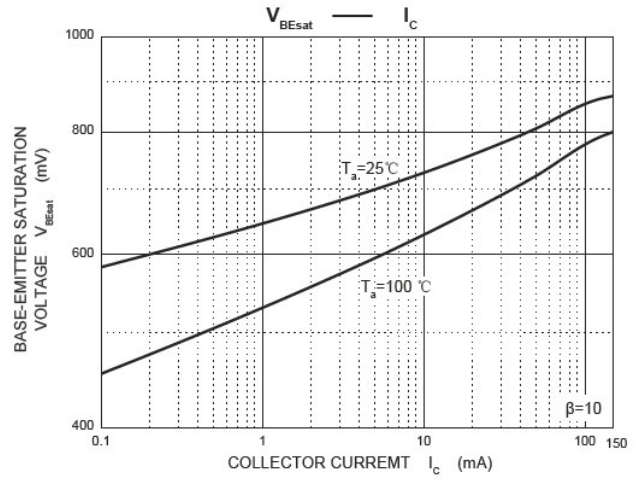
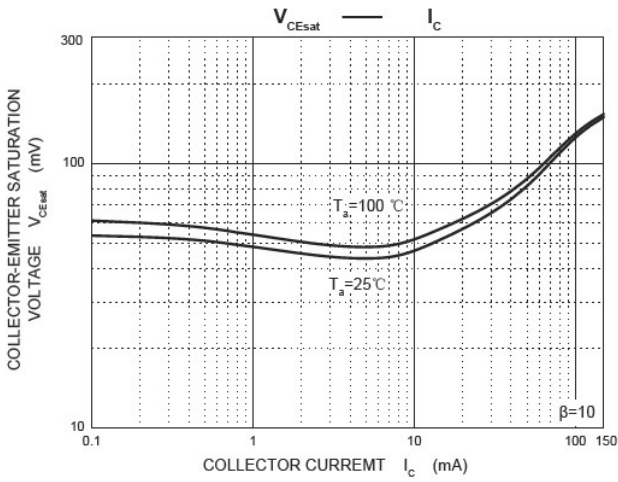
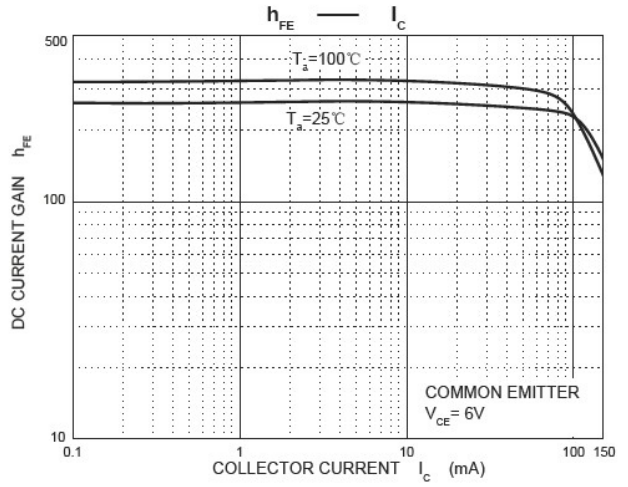
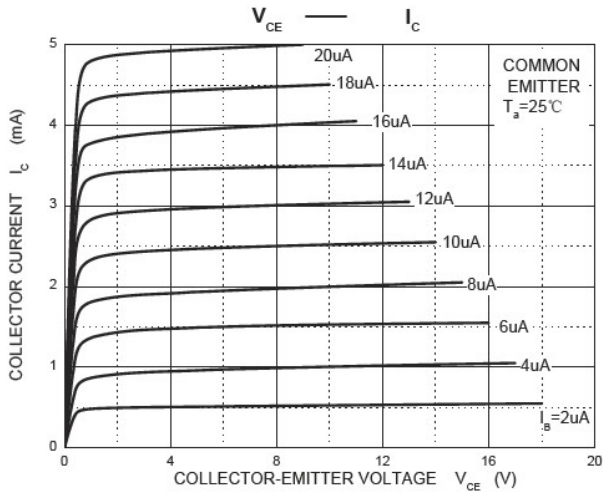
CLASSIFICATION OF $h_{FE(1)}$

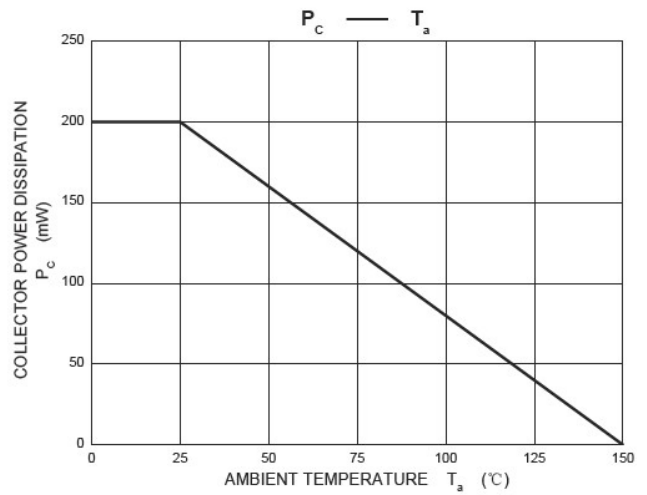
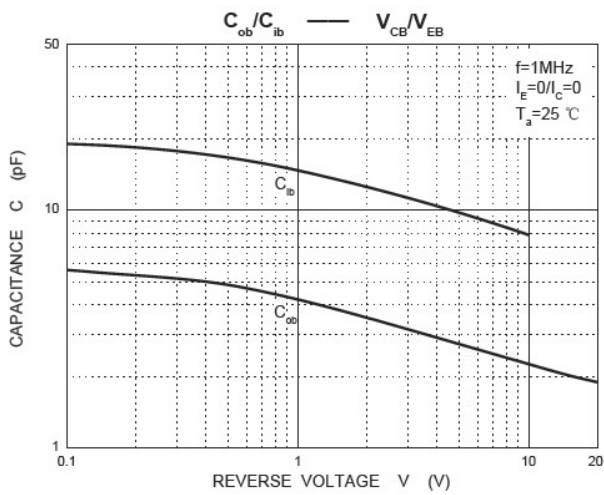
| Rank | Q | R | L7 |
|---------|---------|---------|---------|
| Range | 120-270 | 180-390 | 270-560 |
| Marking | BQ | BR | BS |

AVAILABLE PACK INFORMATION

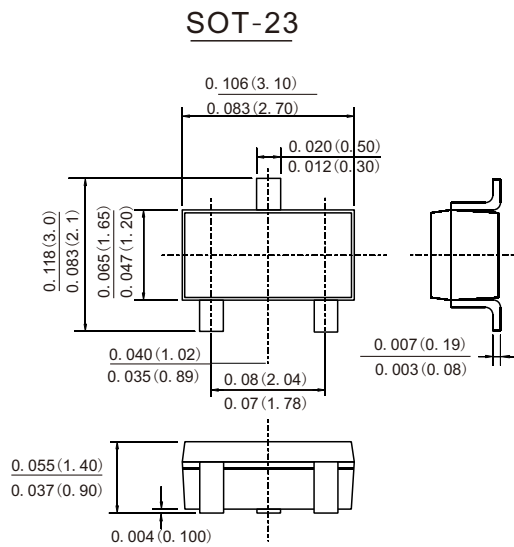
| Product code | Pack | Reel Size (mm) | Quantity (Pcs/reel) | Quantity (pcs/box) | Quantity (pcs/carton) |
|--------------|------|----------------|---------------------|--------------------|-----------------------|
| 2SC2412 | T/R | $\Phi 180$ | 3K | 30K | 120K |

Characteristics(Typical)



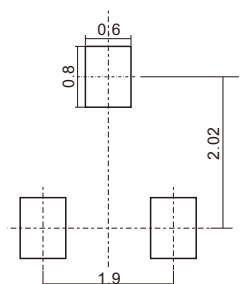


Outline Dimensions



Dimensions in inches and (millimeters)

Suggested pad layout



Dimensions in millimeters

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