

FEATURES

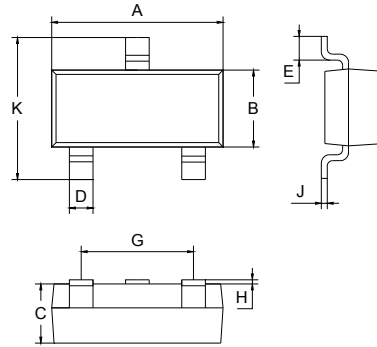
- Complementary To KTA1504.
- Excellent h_{FE} Linearity.
- Low noise.

APPLICATIONS

- General purpose application, switching application.

ORDERING INFORMATION

| Type No. | Marking | Package Code |
|----------|-----------------|--------------|
| KTC3875 | ALO/ALY/ALG/ALL | SOT-23 |



| SOT-23 | | |
|----------------------|-------------|------|
| Dim | Min | Max |
| A | 2.70 | 3.10 |
| B | 1.10 | 1.50 |
| C | 1.0 Typical | |
| D | 0.4 Typical | |
| E | 0.35 | 0.48 |
| G | 1.80 | 2.00 |
| H | 0.02 | 0.1 |
| J | 0.1 Typical | |
| K | 2.20 | 2.60 |
| All Dimensions in mm | | |

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

| Symbol | Parameter | Value | Units |
|----------------|----------------------------------|-------------|------------------|
| V_{CBO} | Collector-Base Voltage | 60 | V |
| V_{CEO} | Collector-Emitter Voltage | 50 | V |
| V_{EBO} | Emitter-Base Voltage | 5 | V |
| I_C | Collector Current -Continuous | 150 | mA |
| I_B | Base Current | 30 | mA |
| P_C | Collector Power Dissipation | 150 | mW |
| T_j, T_{stg} | Junction and Storage Temperature | -55 to +150 | $^\circ\text{C}$ |

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

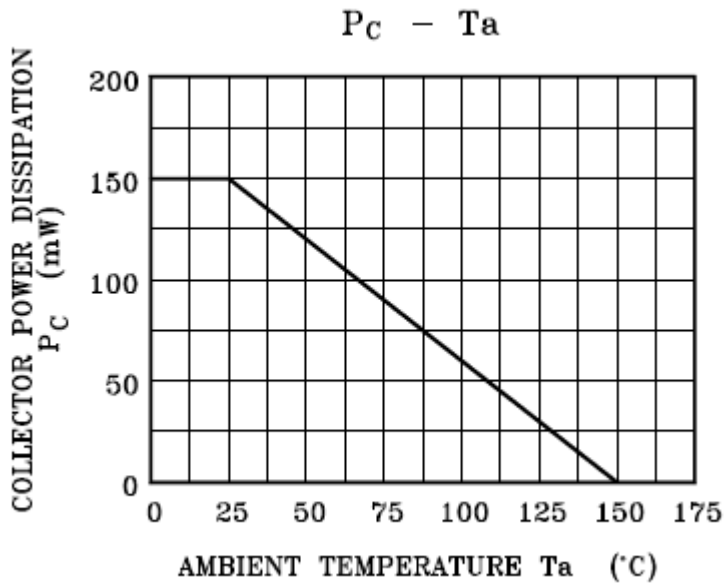
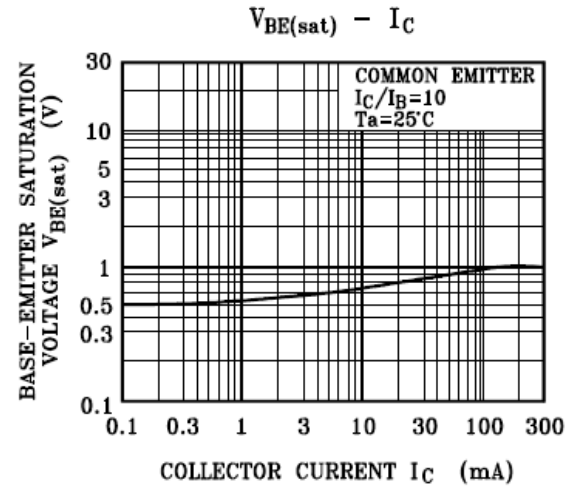
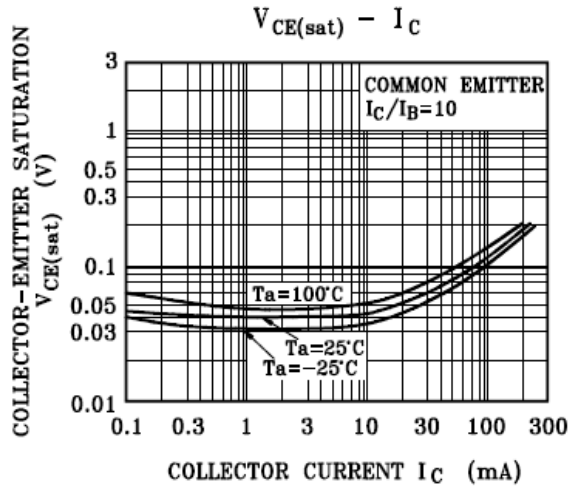
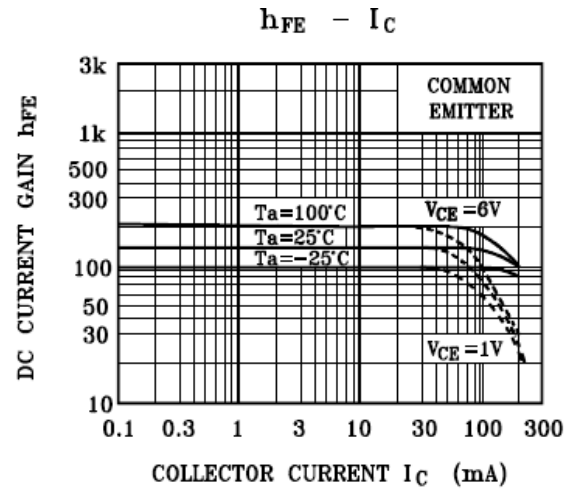
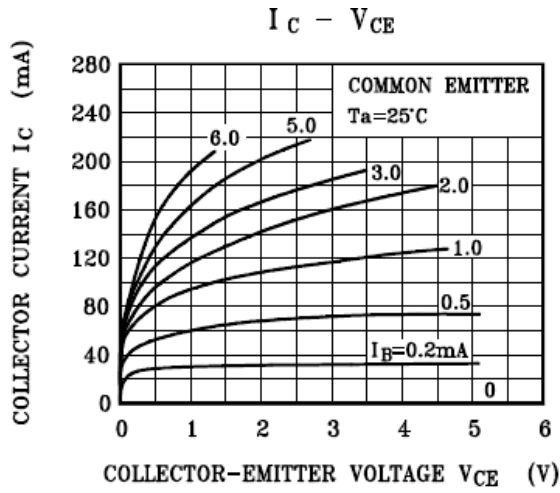
| Parameter | Symbol | Test conditions | MIN | TYP | MAX | UNIT |
|--------------------------------------|---------------|---|-----|-----|------|---------------|
| Collector-base breakdown voltage | $V_{(BR)CBO}$ | $I_C=100\mu\text{A}, I_E=0$ | 60 | | | V |
| Collector-emitter breakdown voltage | $V_{(BR)CEO}$ | $I_C=1\text{mA}, I_B=0$ | 50 | | | 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} | $V_{CB}=60\text{V}, I_E=0$ | | | 0.1 | μA |
| Emitter cut-off current | I_{EBO} | $V_{EB}=5\text{V}, I_C=0$ | | | 0.1 | μA |
| DC current gain | h_{FE} | $V_{CE}=6\text{V}, I_C=2\text{mA}$ | 70 | | 700 | |
| Collector-emitter saturation voltage | $V_{CE(sat)}$ | $I_C=100\text{mA}, I_B=10\text{mA}$ | | 0.1 | 0.25 | V |
| Transition frequency | f_T | $V_{CE}=10\text{V}, I_C=1\text{mA}$ | 80 | | | MHz |
| Collector output capacitance | C_{ob} | $V_{CB}=10\text{V}, I_E=0, f=1\text{MHz}$ | | 2.0 | 3.5 | pF |
| Noise figure | NF | $V_{CE}=6\text{V}, I_C=0.1\text{mA}, F=1\text{KHz}, R_G=10\text{K}\Omega$ | | 1.0 | 10 | dB |

CLASSIFICATION OF h_{FE}

| Rank | O | Y | GR | BL |
|---------|--------|---------|---------|---------|
| Range | 70-140 | 120-240 | 200-400 | 350-700 |
| Marking | ALO | ALY | ALG | ALL |



TYPICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified



| Package | Reel | Reel Size | Box | Box Size(mm) | Carton | Carton Size(mm) |
|---------|---------|-----------|-----------|--------------|------------|-----------------|
| SOT-23 | 3000pcs | 7inch | 45,000pcs | 203×203×195 | 180,000pcs | 438×438×220 |