

FEATURES

- High hFE
- Low noise
- Complementary to KTA1504

KTC3875(NPN)

Maximum Ratings (TA=25 °C unless otherwise noted)

| Parameter | Symbol | Value | Unit |
|-------------------------------|------------------|------------|------|
| Collector-Base Voltage | V _{CBO} | 60 | V |
| Collector-Emitter Voltage | V _{CEO} | 50 | V |
| Emitter-Base Voltage | V _{EBO} | 5 | V |
| Collector Current -Continuous | I _C | 0.15 | A |
| Collector Power dissipation | P _C | 0.15 | W |
| Junction Temperature | T _J | 150 | °C |
| Storage Temperature | T _{stg} | -55to +150 | °C |

ELECTRICAL CHARACTERISTICS (@ Ta=25 °C unless otherwise specified)

| Parameter | Symbol | Test conditions | Min | Typ | Max | Unit |
|--------------------------------------|----------------------|--|-----|-----|------|------|
| Collector-base breakdown voltage | V _{CBO} | I _C =100μA, I _E =0 | 60 | | | V |
| Collector-emitter breakdown voltage | V _{CEO} | I _C = 1mA, I _B =0 | 50 | | | V |
| Emitter-base breakdown voltage | V _{EBO} | I _E = 100μA, I _C =0 | 5 | | | V |
| Collector cut-off current | I _{CBO} | V _{CB} = 60V, I _E =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 | | 700 | |
| Collector-emitter saturation voltage | V _{CE(sat)} | I _C =100mA, I _B = 10mA | | 0.1 | 0.25 | V |
| base-emitter saturation voltage | V _{BE(sat)} | I _C =100mA, I _B = 10mA | | | 1 | V |
| Transition frequency | f _T | V _{CE} =10V, I _C = 1mA | 80 | | | MHz |
| Collector output capacitance | C _{ob} | V _{CB} =10V, I _E =0, f=1MHz | | 2.0 | 3.5 | pF |
| Noise figure | NF | V _{CE} =6V, I _C =0.1mA, R _g =10k , f=1KHz | | 1.0 | 10 | dB |

CLASSIFICATION OF hFE

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

KTC3875 Typical Characteristics

