

TO-92 Plastic-Encapsulate Transistors

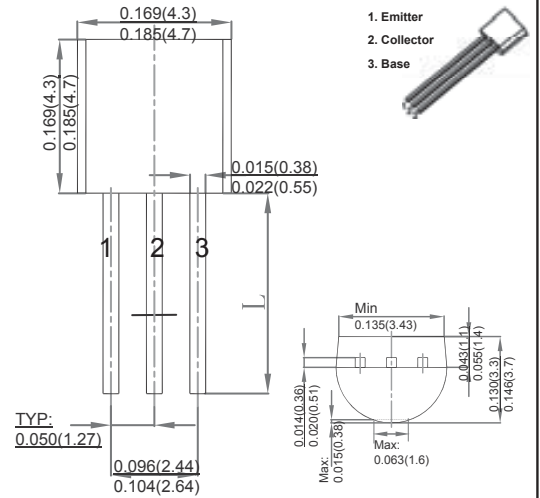
FEATURE

- Excellent h_{FE} linearity
- Low noise
- Complementary to A733
- TRANSISTOR (NPN)

MECHANICAL DATA

- Case style:TO-92 molded plastic
- Mounting position:any

TO-92



MAXIMUM RATINGS AND CHARACTERISTICS

@ 25°C Ambient Temperature (unless otherwise noted)

| Symbol | Parameter | Value | Unit |
|------------------|-------------------------------|----------|------|
| V _{CB0} | 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 |
| P _C | Collector Power Dissipation | 400 | mW |
| T _J | Junction Temperature | 150 | °C |
| T _{stg} | Storage Temperature | -55~+150 | °C |

ELECTRICAL CHARACTERISTICS T_A =25 °C unless otherwise specified

| Parameter | Symbol | Test conditions | Min | Typ | Max | Unit |
|--------------------------------------|----------------------|--|-----|-----|-----|------|
| Collector-base breakdown voltage | V _{(BR)CBO} | I _C =1mA , I _E =0 | 60 | | | V |
| Collector-emitter breakdown voltage | V _{(BR)CEO} | I _C =100μA , I _B =0 | 50 | | | V |
| Emitter-base breakdown voltage | V _{(BR)EBO} | I _E =100 μA , I _C =0 | 5 | | | V |
| Collector cut-off current | I _{CBO} | V _{CB} =60V, I _E =0 | | | 0.1 | μA |
| Collector cut-off current | I _{CEO} | V _{CE} =45V, 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(1)} | V _{CE} =6V , I _C =1mA | 70 | | 700 | |
| | h _{FE(2)} | V _{CE} =6V , I _C =0.1mA | 40 | | | |
| Collector-emitter saturation voltage | V _{CE(sat)} | I _C =100mA, I _B =10mA | | | 0.3 | V |
| Base-emitter saturation voltage | V _{BE(sat)} | I _C =100mA, I _B =10mA | | | 1 | V |
| Transition frequency | f _T | V _{CE} =6V,I _C =10mA,f=30MHz | 200 | | | MHz |
| Collector output capacitance | C _{ob} | V _{CB} =10V,I _E =0,f=1MHz | | | 3.0 | pF |
| Noise figure | NF | V _{CE} =6V,I _C =0.1mA R _G =10kΩ,f=1MHz | | | 10 | dB |

CLASSIFICATION OF h_{FE(1)}

| Rank | O | Y | GR | BL |
|-------|--------|---------|---------|---------|
| Range | 70-140 | 120-240 | 200-400 | 350-700 |

Typical Characteristics

