

TRANSISTOR (NPN)
Plastic-Encapsulate Transistor
FEATURES

Power dissipation

$$P_{CM}: 0.625W (T_{amb}=25^{\circ}C)$$

Collector current

$$I_{CM}: 0.05A$$

Collector-base voltage

$$V_{(BR)CBO}: 35V$$

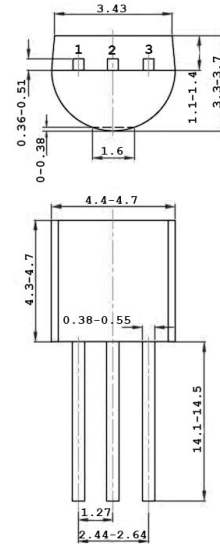
Operating and storage junction temperature range

$$T_{stg}: -55^{\circ}C \text{ to } +150^{\circ}C$$

$$T_J: 150^{\circ}C$$

TO-92

1. EMITTER
2. COLLECTOR
3. BASE



UNIT:mm

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

ELECTRICAL CHARACTERISTICS

| Parameters | Symbol | Test conditions | MIN | MAX | UNIT |
|--------------------------------------|---------------|------------------------|-----|-----|---------|
| Collector-base breakdown voltage | $V_{(BR)CBO}$ | $I_C=100 \mu A, I_E=0$ | 35 | | V |
| Collector-emitter breakdown voltage | $V_{(BR)CEO}$ | $I_C=1mA, I_B=0$ | 30 | | V |
| Emitter-base breakdown voltage | $V_{(BR)EBO}$ | $I_E=100 \mu A, I_C=0$ | 4 | | V |
| Collector cut-off current | I_{CBO} | $V_{CB}=35V, I_E=0$ | | 0.1 | μA |
| Emitter cut-off current | I_{EBO} | $V_{EB}=4V, I_C=0$ | | 1.0 | μA |
| DC current gain | h_{FE} | $V_{CE}=12V, I_C=2mA$ | 40 | 240 | |
| Collector-emitter saturation voltage | V_{CEsat} | $I_C=10mA, I_B=1mA$ | | 0.4 | V |
| Base-emitter voltage | V_{BEsat} | $I_C=10mA, I_B=1mA$ | | 1.0 | V |
| Transition frequency | f_r | $V_{CE}=10V, I_C=1mA$ | 100 | | MHz |

CLASSIFICATION OF h_{FE}

| Rank | R | O | Y |
|-------|-------|--------|---------|
| Range | 40-80 | 70-140 | 120-240 |