

Description

Silicon PNP transistor in a TO-126F Plastic Package

Features

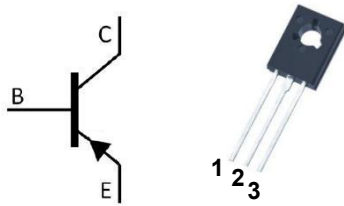
- Low saturation voltage
- Excellent h_{FE} linearity and high h_{FE} .

Applications

Output stage of 3 watts audio amplifier, voltage regulator, DC-DC converter and relay driver.

| Symbol | Parameter | Max | Unit |
|-----------|---------------------------|------|------|
| V_{CE0} | collector-emitter voltage | -30 | V |
| I_c | collector current (DC) | -3.0 | A |

Equivalent Circuit & Pinning



PIN1: Emitter

PIN 2: Collector

PIN 3: Base

h_{FE} Classifications & Marking

| h_{FE} Classifications Symbol | R | Q | P | E |
|------------------------------------|--------|---------|---------|---------|
| h_{FE} Range | 60~120 | 100~200 | 160~320 | 200~400 |

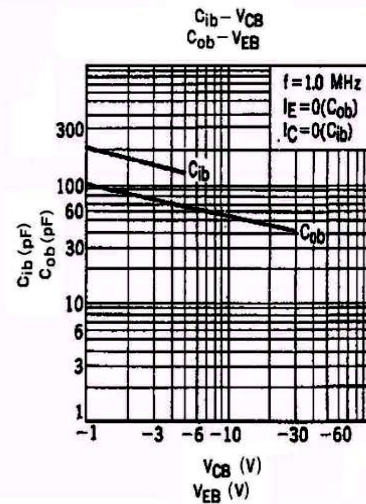
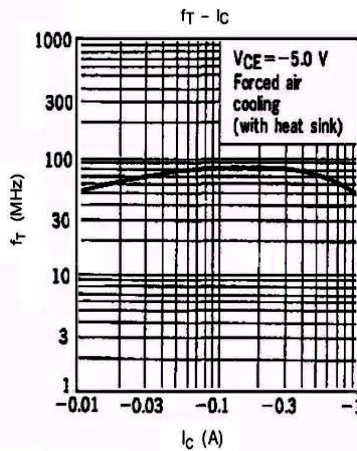
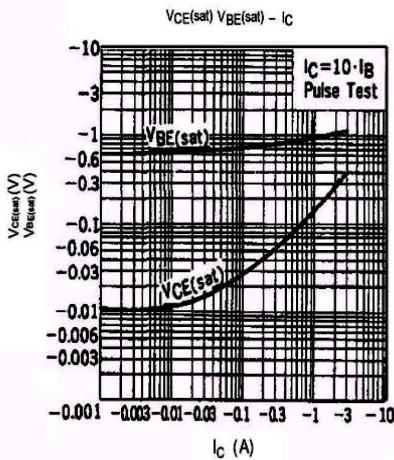
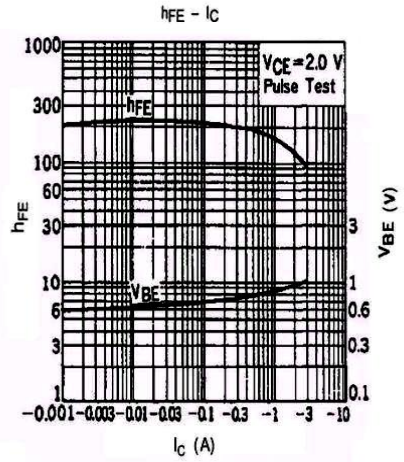
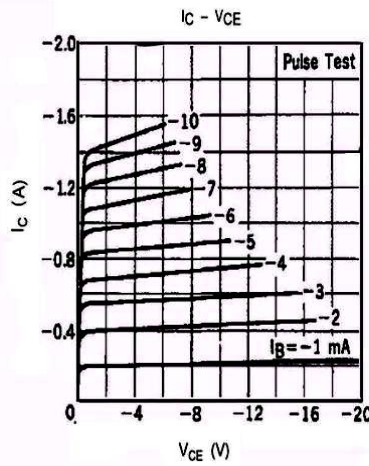
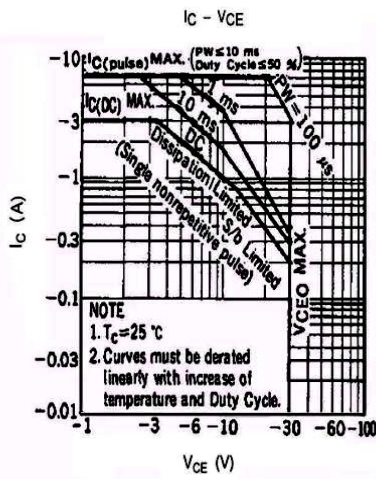
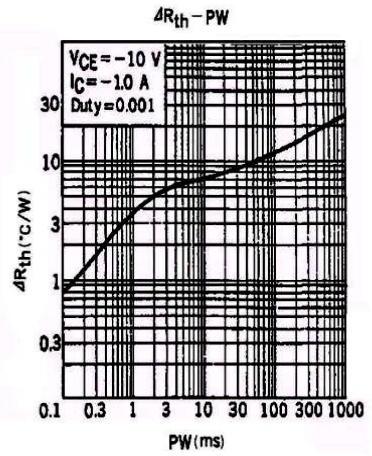
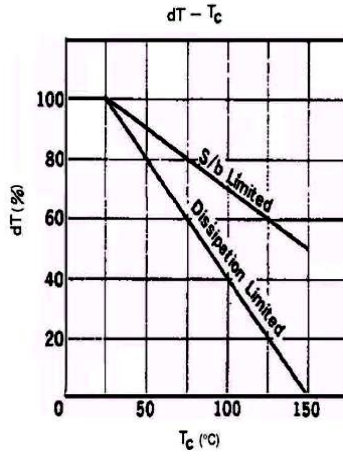
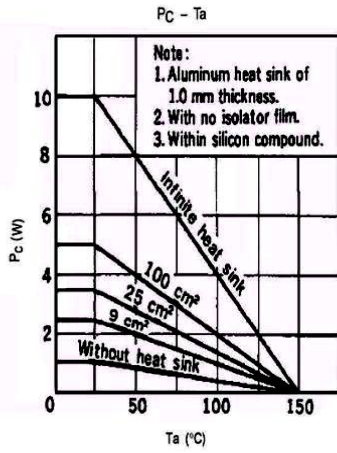
Absolute Maximum Ratings(Ta=25°C)

| Parameter | Symbol | Rating | Unit |
|--------------------------------|-----------------------------|---------|------|
| Collector to Base Voltage | V_{CB0} | -40 | V |
| Collector to Emitter Voltage | V_{CEO} | -30 | V |
| Emitter to Base Voltage | V_{EBO} | -5.0 | V |
| Collector Current - Continuous | I_C | -3.0 | A |
| Peak Collector Current | I_{cp} | -7.0 | A |
| Collector Power Dissipation | P_C | 1.0 | W |
| | $P_C(T_C=25^\circ\text{C})$ | 10 | W |
| Junction Temperature | T_j | 150 | °C |
| Storage Temperature Range | T_{stg} | -55~150 | °C |

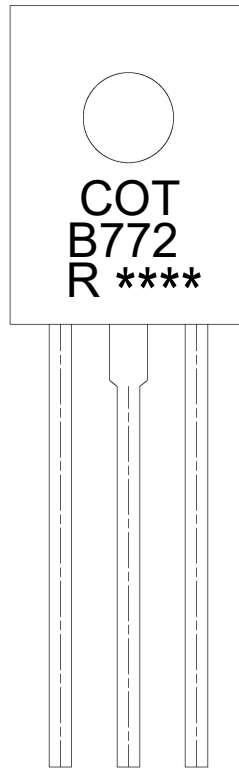
Electrical Characteristics(Ta=25°C)

| Parameter | Symbol | Test Conditions | | Min | Typ | Max | Unit |
|---|---------------|-----------------|----------------|-----|------|------|---------------|
| Collector Cut-Off Current | I_{CBO} | $V_{CB}=-30V$ | $I_E=0$ | | | -1.0 | μA |
| Emitter Cut-Off Current | I_{EBO} | $V_{EB}=-3.0V$ | $I_C=0$ | | | -1.0 | μA |
| DC Current Gain | $h_{FE(1)}$ | $V_{CE}=-2.0V$ | $I_C=-1.0A$ | 60 | 160 | 400 | |
| | $h_{FE(2)}$ | $V_{CE}=-2.0V$ | $I_C=-20mA$ | 30 | 220 | | |
| Collector to Emitter Saturation Voltage | $V_{CE(sat)}$ | $I_C=-2.0A$ | $I_B=-0.2A$ | | -0.3 | -0.5 | V |
| Base to Emitter Saturation Voltage | $V_{BE(sat)}$ | $I_C=-2.0A$ | $I_B=-0.2A$ | | -1.0 | -2.0 | V |
| Transition Frequency | f_T | $I_C=-0.1A$ | $V_{CE}=-5.0V$ | | 80 | | MHz |
| Collector Output Capacitance | C_{ob} | $V_{CB}=-10V$ | $I_E=0$ | | 55 | | pF |

Electrical Characteristic Curve



Marking Instructions



Note:

COT: Company Code

B772: Product Type

R: h_{FE} Classifications Symbol

**: Lot No. Code, code change with Lot No

| h_{FE} Classifications Symbol | R | Q | P | E |
|---------------------------------|--------|---------|---------|---------|
| h_{FE} Range | 60~120 | 100~200 | 160~320 | 200~400 |

Packaging SPEC.

BULK

| Package Type | Units | | | | | Dimension (unit: mm ³) | | |
|--------------|------------|-----------------|-----------------|-----------------------|-----------------|------------------------------------|-------------|-------------|
| | Units/Tube | Tubes/Inner Box | Units/Inner Box | Inner Boxes/Outer Box | Units/Outer Box | Tube | Inner Box | Outer Box |
| TO-126/F | 500 | 6 | 3,000 | 5 | 15,000 | 135×190 | 237×172×102 | 560×245×195 |

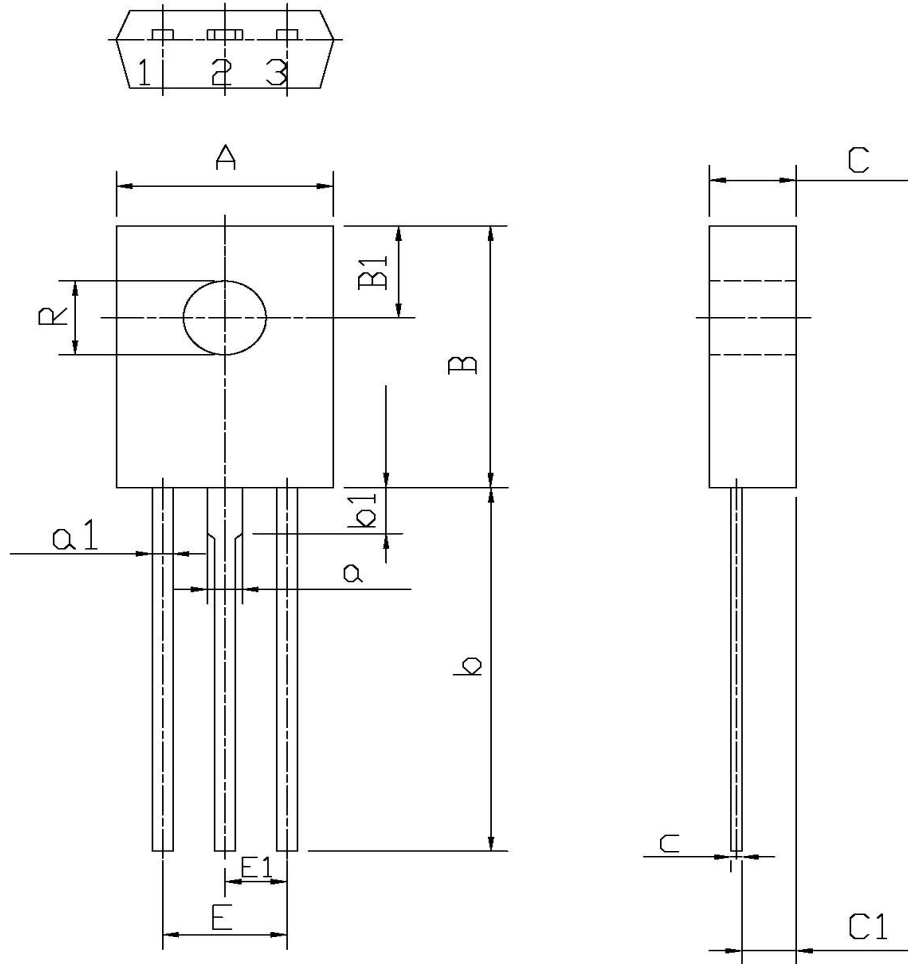
TUBE

| Package Type | Units | | | | | Dimension (unit: mm ³) | | |
|--------------|------------|-----------------|-----------------|-----------------------|-----------------|------------------------------------|------------|-------------|
| | Units/Tube | Tubes/Inner Box | Units/Inner Box | Inner Boxes/Outer Box | Units/Outer Box | Tube | Inner Box | Outer Box |
| TO-126/F | 65 | 26 | 1,690 | 5 | 8,450 | 532×31×5.6 | 555×164×50 | 575×290×180 |

Package Outline Dimensions

TO-126F

单位: mm



| Symbol | Dimensions In Millimeters | | Symbol | Dimensions In Millimeters | |
|--------|---------------------------|------|--------|---------------------------|------|
| | Min | Max | | Min | Max |
| A | 7.8 | 8.2 | a1 | 0.66 | 0.86 |
| B | 10.8 | 11.2 | E | 4.4 | 4.8 |
| B1 | 3.8 | 4.2 | C | 3.1 | 3.3 |
| R | 2.95 | 3.15 | C1 | 1.9 | 2.1 |
| b | 14 | 16 | c | 0.3 | 0.6 |
| b1 | 1.9 | | a | 1.27 | |
| E1 | 2.1 | 2.5 | | | |