

SILICON PNP TRANSISTOR EPITAXIAL PLANAR TYPE (PCT PROCESS)

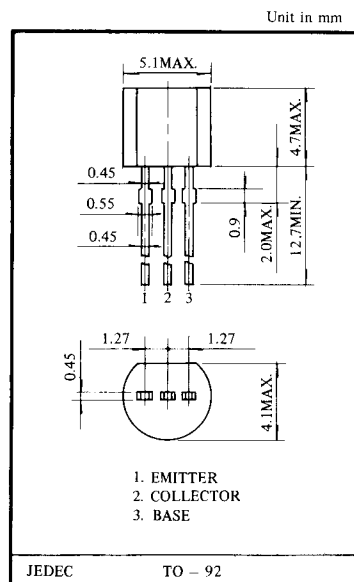
2SA1271

APPLICATIONS

- Low Frequency Power Amplifiers
(B-Class Push-pull, $P_o=1W$)
- General Purpose Switching Circuits

FEATURES

- Excellent h_{FE} vs. Collector Current Characteristics
- $P_c=600mW$, $I_c=-800mA$ max
- $V_{CE(sat.)}=-0.7V$ max. at $I_c=-500mA$, $I_b=-20mA$
- Complementary to the 2SC3203



■ MAXIMUM RATINGS ($T_a=25^\circ C$)

| CHARACTERISTIC | SYMBOL | RATING | UNIT |
|-----------------------------|-----------|--------|------|
| Collector - Base Voltage | V_{CB0} | -35 | V |
| Collector - Emitter Voltage | V_{CE0} | -30 | V |
| Emitter - Base Voltage | V_{EB0} | -5 | V |
| Collector - Current | I_c | -800 | mA |

| CHARACTERISTIC | SYMBOL | RATING | UNIT |
|-----------------------------|-----------|---------|------------|
| Emitter Current | I_E | 800 | mA |
| Collector Power Dissipation | P_c | 600 | mW |
| Junction Temperature | T_j | 150 | $^\circ C$ |
| Storage Temperature Range | T_{stg} | -55~150 | $^\circ C$ |

■ ELECTRICAL CHARACTERISTICS ($T_a=25^\circ C$)

| CHARACTERISTIC | SYMBOL | TEST CONDITION | MIN. | TYP. | MAX. | UNIT |
|--|---------------|-----------------------------|------|------|------|------|
| Collector Cut off Current | I_{CB0} | $V_{CB}=-35V$, $I_E=0$ | - | - | -100 | nA |
| Emitter Cut off Current | I_{EB0} | $V_{EB}=-5V$, $I_c=0$ | - | - | -100 | nA |
| Collector - Emitter Breakdown Voltage | $V_{(BR)CE0}$ | $I_c=-10mA$ | -30 | - | - | V |
| DC Current Gain (1) | $h_{FE(1)}$ | $V_{CE}=-1V$, $I_c=-100mA$ | 100 | - | 320 | |
| DC Current Gain (2) | $h_{FE(2)}$ | $V_{CE}=-1V$, $I_c=-700mA$ | 35 | - | - | |
| Collector - Emitter Saturation Voltage | $V_{CE(sat)}$ | $I_c=-500mA$, $I_b=-20mA$ | - | - | -0.7 | V |
| Base - Emitter Voltage | V_{BE} | $V_{CE}=-1V$, $I_c=-10mA$ | -0.5 | - | -0.8 | V |
| Transition Frequency | f_T | $V_{CE}=-5V$, $I_c=-10mA$ | - | 120 | - | MHz |
| Output Capacitance | C_{ob} | $V_{CB}=-10V$, $f=1MHz$ | - | 19 | - | pF |

■ NOTE: According to $h_{FE(1)}$, Classified as follows

| | | | |
|---|---------|---|-----------|
| 0 | 100~200 | Y | 160 - 320 |
|---|---------|---|-----------|