

Pb Free Plating Product

2SA1837



20 Watt Silicon Epitaxial Planar Process PNP Power Transistor

DESCRIPTION

- With TO-220F package outline
- Complement to type 2SC4793

APPLICATIONS

- Power amplifier applications
- Recommended for Driver Stage Amplifier Applications

PINNING

| PIN | DESCRIPTION |
|-----|---------------------------------------|
| 1 | Base |
| 2 | Collector; connected to mounting base |
| 3 | Emitter |

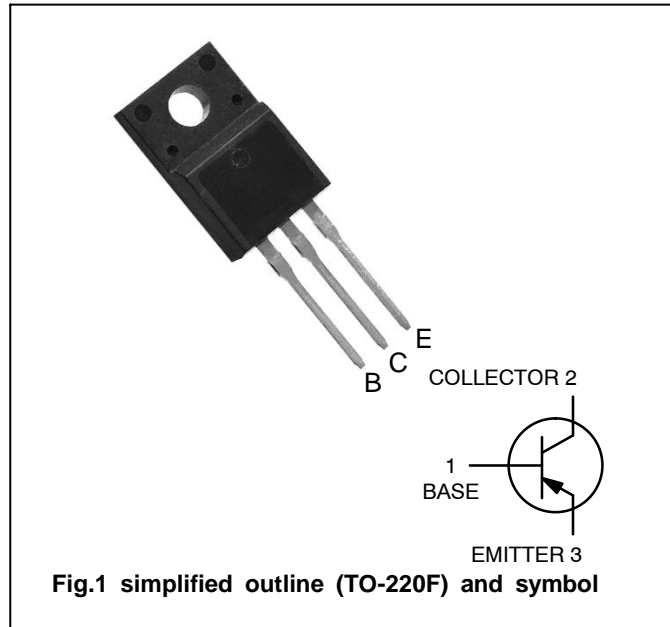


Fig.1 simplified outline (TO-220F) and symbol

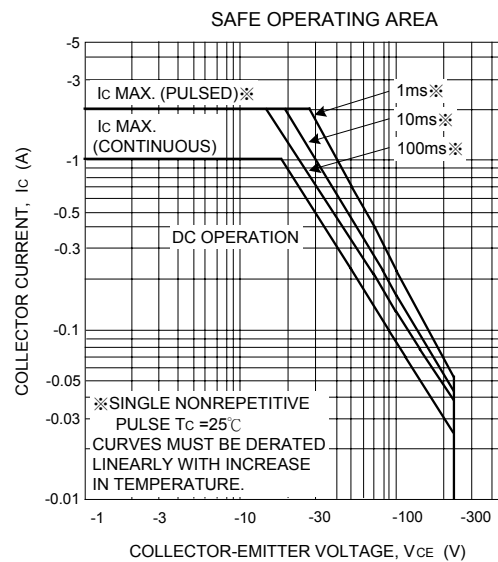
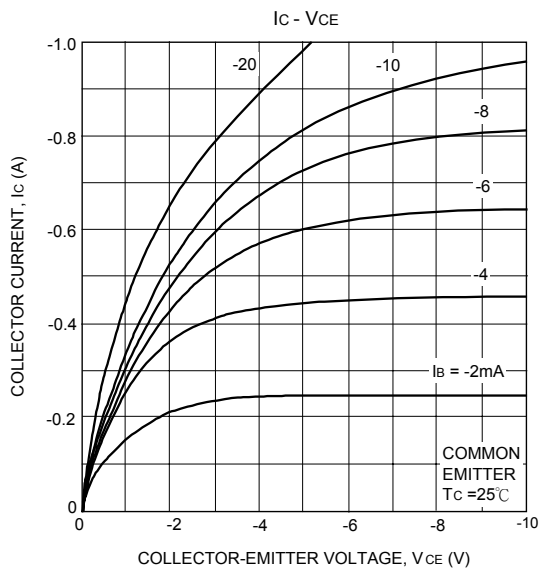
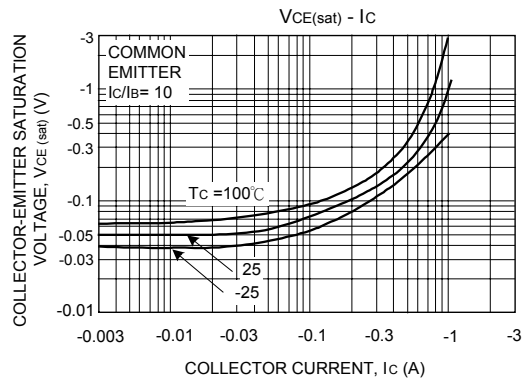
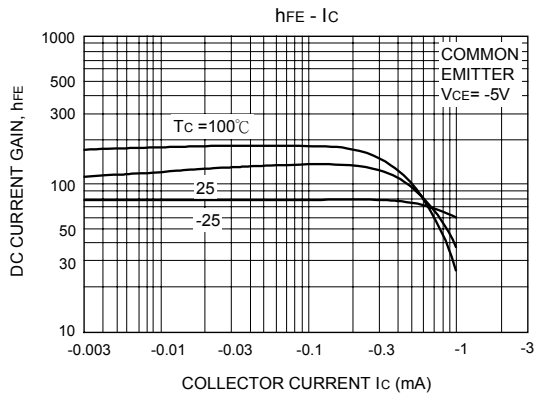
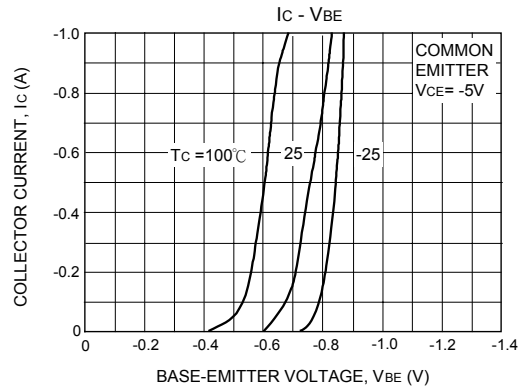
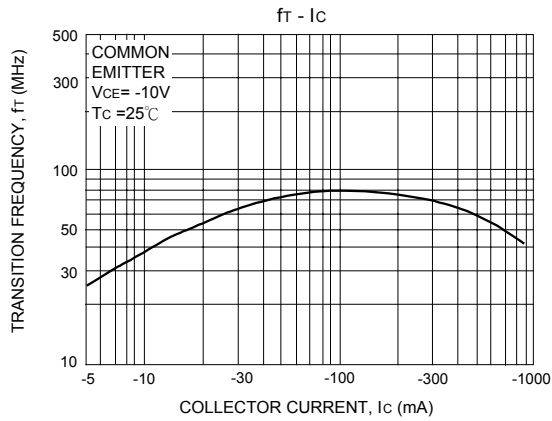
ABSOLUTE MAXIMUM RATINGS ($T_a = 25^\circ\text{C}$)

| PARAMETER | SYMBOL | RATINGS | UNIT |
|-----------------------------|-----------|------------------------|------------------|
| Collector-Base Voltage | V_{CBO} | -230 | V |
| Collector-Emitter Voltage | V_{CEO} | -230 | V |
| Emitter-Base Voltage | V_{EBO} | -5 | V |
| Collector Current | I_C | -1 | A |
| Base Current | I_B | -0.1 | A |
| Collector Power Dissipation | P_C | 2.0 20 | W |
| | | $T_a=25^\circ\text{C}$ | |
| | | $T_c=25^\circ\text{C}$ | |
| Junction Temperature | T_J | 150 | $^\circ\text{C}$ |
| Storage Temperature Range | T_{stg} | -55 ~ 150 | $^\circ\text{C}$ |

ELECTRICAL CHARACTERISTICS ($T_a=25^\circ\text{C}$)

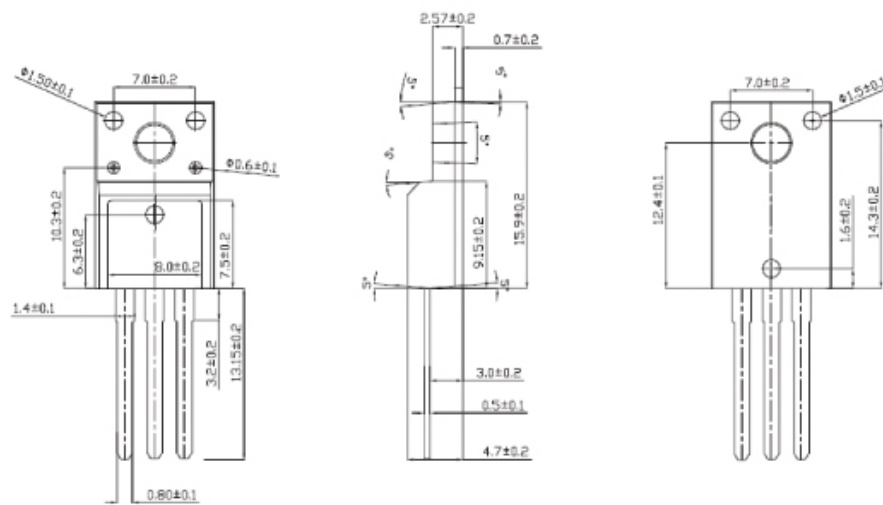
| PARAMETER | SYMBOL | TEST CONDITIONS | MIN | TYP | MAX | UNIT |
|--------------------------------------|---------------|--|------|-----|------|---------------|
| Collector-Emitter Breakdown Voltage | $V_{(BR)CEO}$ | $I_C = -10\text{mA}$, $I_B = 0$ | -230 | | | V |
| Collector Cut-off Current | I_{CBO} | $V_{CB} = -230\text{V}$, $I_E = 0$ | | | -1.0 | μA |
| Emitter Cut-off Current | I_{EBO} | $V_{EB} = -5\text{V}$, $I_C = 0$ | | | -1.0 | μA |
| DC Current Gain | h_{FE} | $V_{CE} = -5\text{V}$, $I_C = -100\text{mA}$ | 100 | | 320 | |
| Collector-Emitter Saturation Voltage | $V_{CE(sat)}$ | $I_C = -500\text{mA}$, $I_B = -50\text{mA}$ | | | -1.5 | V |
| Base -Emitter Voltage | V_{BE} | $V_{CE} = -5\text{V}$, $I_C = -500\text{mA}$ | | | -1.0 | V |
| Transition Frequency | f_T | $V_{CE} = -10\text{V}$, $I_C = -100\text{mA}$ | | 70 | | MHz |
| Collector Output Capacitance | C_{ob} | $V_{CB} = -10\text{V}$, $I_C = 0$, $f = 1\text{MHz}$ | | 30 | | pF |

TYPICAL CHARACTERISTICS



Mechanical Dimensions

TO-220F(ITO-220AB)



Dimensions in Millimeters