

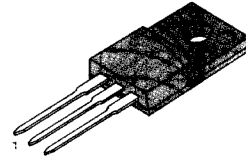
**KSA1304****PNP EPITAXIAL SILICON TRANSISTOR****VERTICAL OUTPUT APPLICATIONS  
POWER AMPLIFIER APPLICATIONS**

- Complement to KSC3296

**ABSOLUTE MAXIMUM RATINGS**

| Characteristic                                   | Symbol    | Rating     | Unit             |
|--------------------------------------------------|-----------|------------|------------------|
| Collector Base Voltage                           | $V_{CBO}$ | - 150      | V                |
| Collector Emitter Voltage                        | $V_{CEO}$ | - 150      | V                |
| Emitter Base Voltage                             | $V_{EBO}$ | - 5        | V                |
| Collector Current                                | $I_C$     | - 1.5      | A                |
| Base Current                                     | $I_B$     | - 0.5      | A                |
| Collector Dissipation ( $T_C=25^\circ\text{C}$ ) | $P_C$     | 20         | W                |
| Junction Temperature                             | $T_J$     | 150        | $^\circ\text{C}$ |
| Storage Temperature                              | $T_{STG}$ | - 55 ~ 150 | $^\circ\text{C}$ |

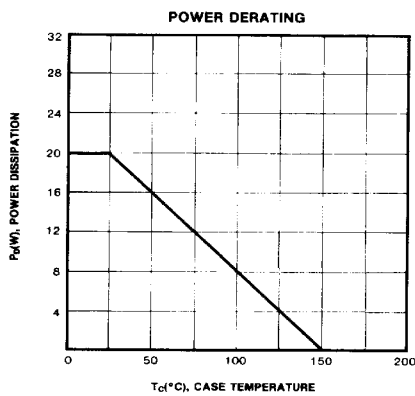
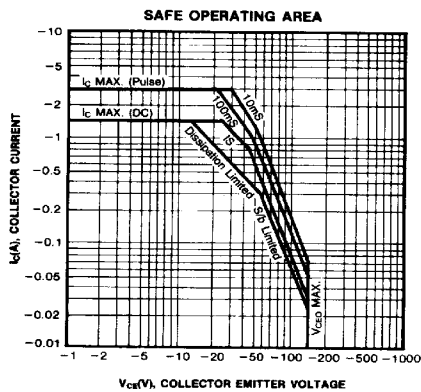
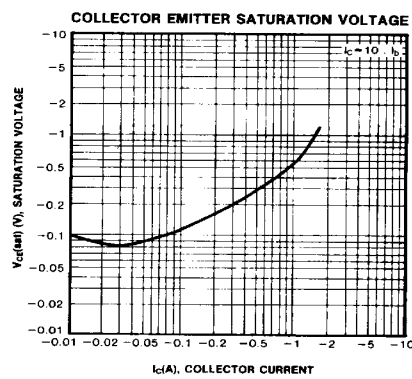
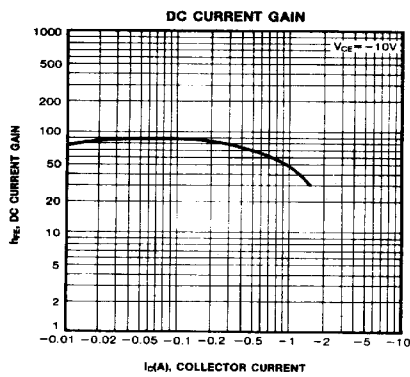
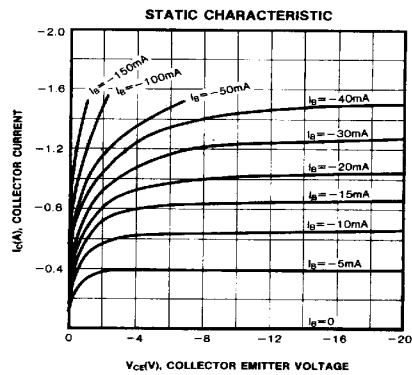
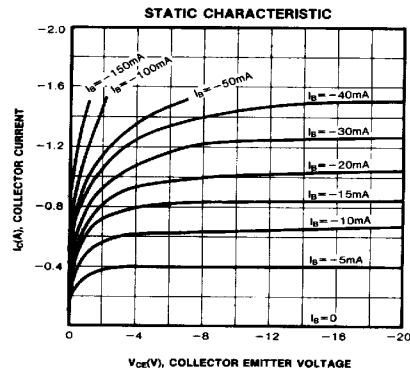
TO-220F



1. Base 2. Collector 3. Emitter

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

| Characteristic                       | Symbol        | Test Condition                              | Min    | Typ    | Max    | Unit          |
|--------------------------------------|---------------|---------------------------------------------|--------|--------|--------|---------------|
| Collector Cutoff Current             | $I_{CBO}$     | $V_{CB} = -120\text{V}, I_E = 0$            |        |        | - 10   | $\mu\text{A}$ |
| Emitter Cutoff Current               | $I_{EBO}$     | $V_{EB} = -5\text{V}, I_C = 0$              |        |        | - 10   | $\mu\text{A}$ |
| DC Current Gain                      | $h_{FE}$      | $V_{CE} = -10\text{V}, I_C = -500\text{mA}$ | 40     | 75     | 140    |               |
| Collector Emitter Saturation Voltage | $V_{CE(sat)}$ | $I_C = -500\text{mA}, I_B = -50\text{mA}$   |        |        | - 1.5  | V             |
| Base Emitter On Voltage              | $V_{BE(on)}$  | $V_{CE} = -10\text{V}, I_C = -500\text{mA}$ | - 0.65 | - 0.75 | - 0.85 | V             |
| Current Gain Bandwidth Product       | $f_T$         | $V_{CE} = -10\text{V}, I_C = -500\text{mA}$ |        | 4      |        | MHz           |
| Output Capacitance                   | $C_{OB}$      | $V_{CB} = -10\text{V}, f = 1\text{MHz}$     |        | 55     |        | pF            |



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