

isc Silicon PNP Power Transistor

2SA1145

DESCRIPTION

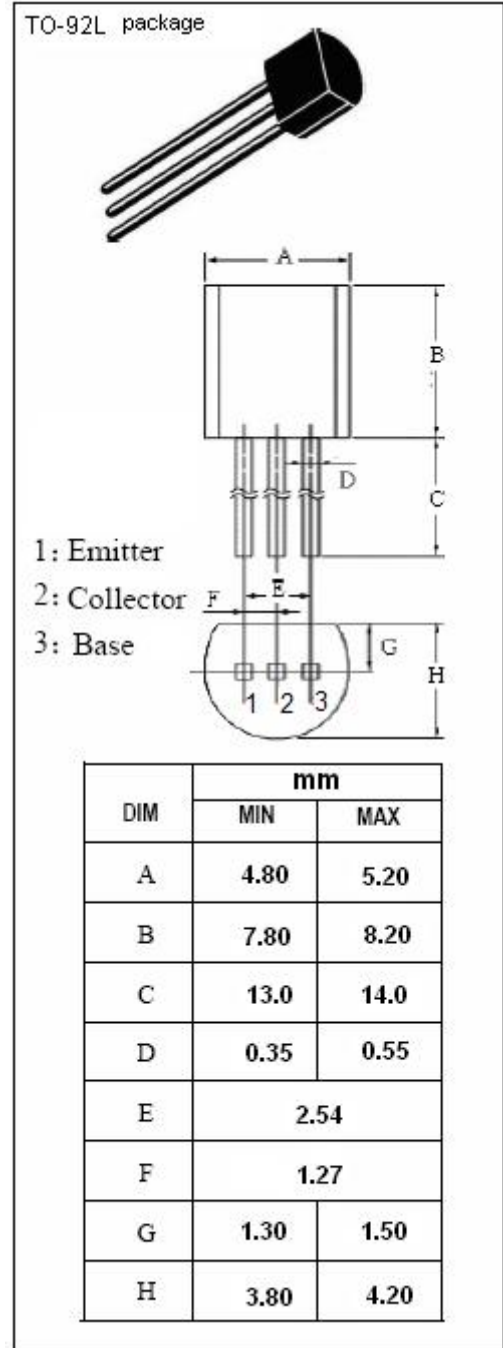
- Low collector output capacitance
- High frequency
- Complement to 2SC2705
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

- Audio frequency amplifier application

ABSOLUTE MAXIMUM RATINGS(Ta=25°C)

| SYMBOL | PARAMETER | VALUE | UNIT |
|------------------|---|---------|------|
| V _{CBO} | Collector-Base Voltage | -150 | V |
| V _{CEO} | Collector-Emitter Voltage | -150 | V |
| V _{EBO} | Emitter-Base Voltage | -5 | V |
| I _C | Collector Current-Continuous | -50 | mA |
| P _C | Total Power Dissipation @ T _C =25°C | 0.8 | W |
| T _J | Junction Temperature | 150 | °C |
| T _{stg} | Storage Temperature Range | -55~150 | °C |



isc Silicon PNP Power Transistor**2SA1145****ELECTRICAL CHARACTERISTICS** $T_c=25^\circ\text{C}$ unless otherwise specified

| SYMBOL | PARAMETER | CONDITIONS | MIN | TYP. | MAX | UNIT |
|---------------|--------------------------------------|--|------|------|------|---------------|
| $V_{(BR)CEO}$ | Collector-Emitter Breakdown Voltage | $I_C = -1\text{mA}; I_B = 0$ | -150 | | | V |
| $V_{CE(sat)}$ | Collector-Emitter Saturation Voltage | $I_C = -10\text{mA}; I_B = -1\text{mA}$ | | | -1 | V |
| $V_{BE(on)}$ | Base-Emitter Voltage | $I_C = -10\text{mA}; V_{CE} = -5\text{V}$ | | | -0.8 | V |
| I_{CBO} | Collector Cutoff Current | $V_{CB} = -150\text{V}; I_E = 0$ | | | -0.1 | μA |
| I_{EBO} | Emitter Cutoff Current | $V_{EB} = -5\text{V}; I_C = 0$ | | | -0.1 | μA |
| h_{FE} | DC Current Gain | $I_C = -10\text{mA}; V_{CE} = -5\text{V}$ | 80 | | 240 | |
| f_T | Current-Gain—Bandwidth Product | $I_C = -10\text{mA}; V_{CE} = -10\text{V}$ | | 200 | | MHz |
| C_{OB} | Output Capacitance | $I_E = 0; V_{CB} = -10\text{V}; f = 1\text{MHz}$ | | 2.5 | | pF |

◆ **h_{FE} Classifications**

| O | Y |
|--------|---------|
| 80-160 | 120-240 |

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2SA1381

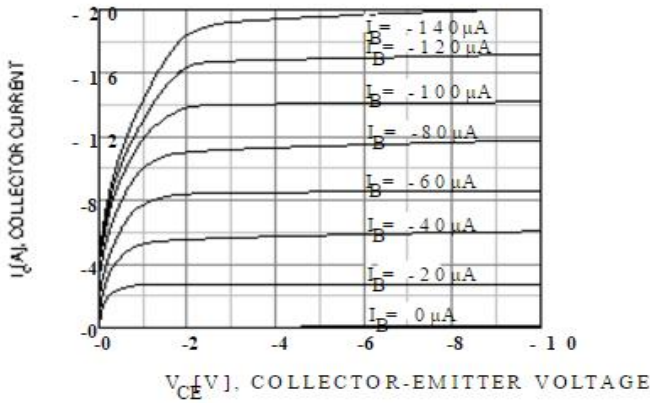


Figure 1. Static Characteristic

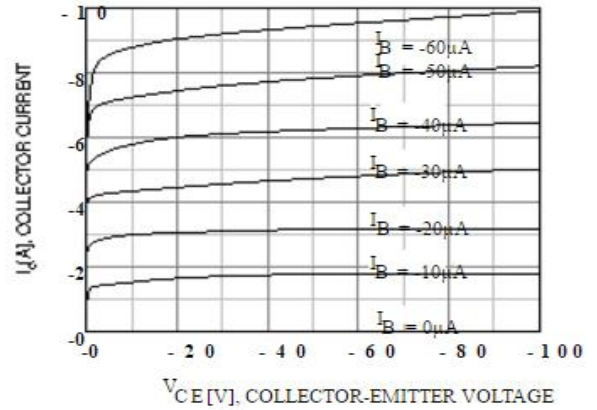


Figure 2. Static Characteristic

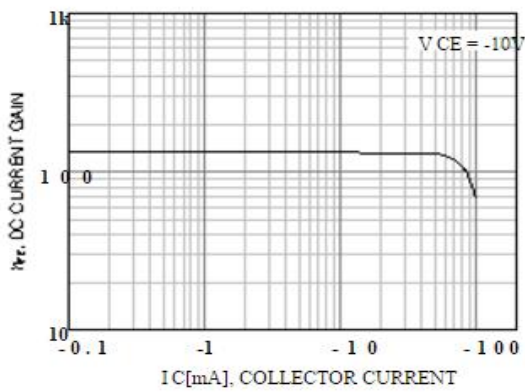


Figure 3. DC current Gain

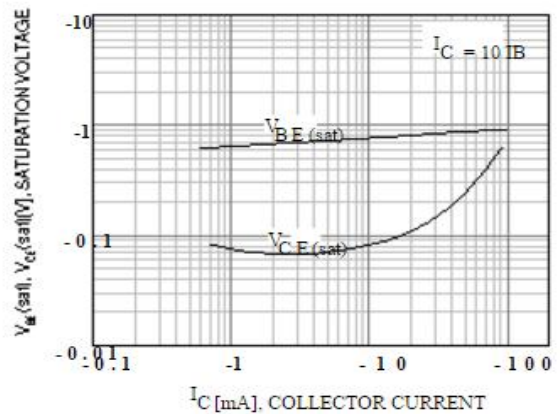


Figure 4. Base-Emitter Saturation Voltage
Collector-Emitter Saturation Voltage

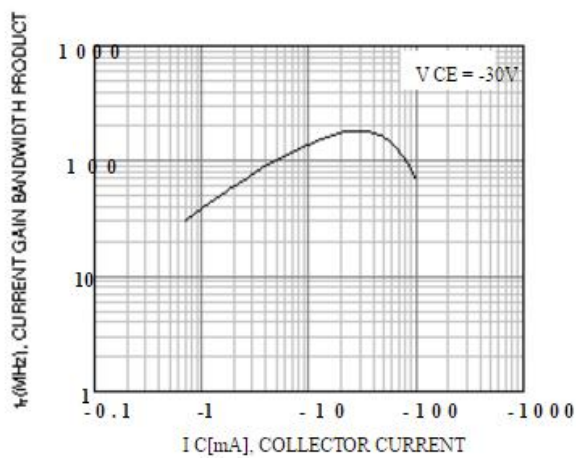


Figure 5. Current Gain Bandwidth Product

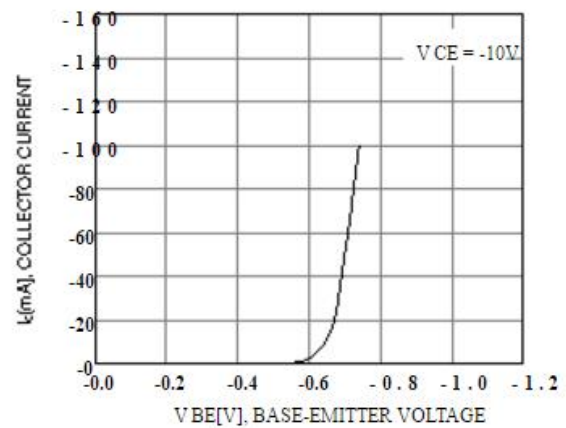


Figure 6. Base-Emitter On Voltage