

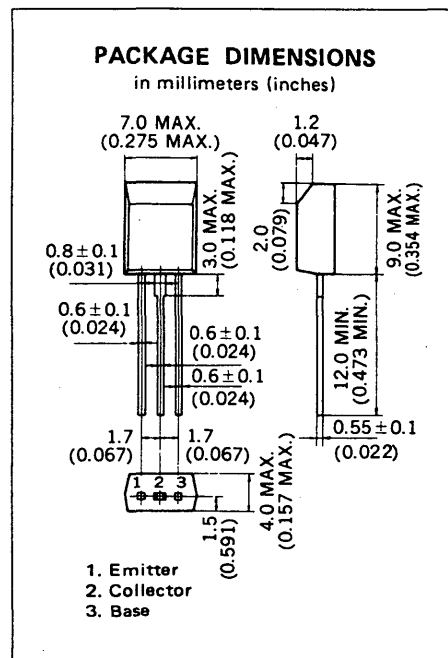
PNP SILICON TRANSISTOR 2SA1460

DESCRIPTION The 2SA1460 is designed for power amplifier and high speed switching applications.

- FEATURES**
- High speed, high voltage switching.
 - Low Collector Saturation Voltage.
 - Complementary to the NEC 2SC3733 NPN transistor.

ABSOLUTE MAXIMUM RATINGS

- Maximum Temperatures
- Storage Temperature -55 to +150 °C
 - Junction Temperature 150 °C Maximum
- Maximum Power Dissipation (T_a = 25 °C)
- Total Power Dissipation 1.0 W
- Maximum Voltages and Currents (T_a = 25 °C)
- V_{CB0} Collector to Base Voltage -60 V
 - V_{CEO} Collector to Emitter Voltage -45 V
 - V_{EB0} Emitter Base Voltage -5.0 V
 - I_{C(DC)} Collector Current (DC) -1.0 A
 - I_{C(pulse)} Collector Current (pulse)*. . . . -2.0 A
- * PW ≤ 10 ms, Duty Cycle ≤ 50 %



ELECTRICAL CHARACTERISTICS (T_a = 25 °C)

| SYMBOL | CHARACTERISTIC | MIN. | TYP. | MAX. | UNIT | TEST CONDITIONS |
|------------------------|------------------------------|------|-------|-------|------|--|
| t _{on} | Turn-on Time | | 25 | 40 | ns | V _{CC} = -10 V I _C = -500 mA I _{B1} = -I _{B2} = -50 mA |
| t _{stg} | Storage Time | | 46 | 70 | ns | |
| t _{off} | Turn-off Time | | 62 | 100 | ns | |
| f _T | Gain Bandwidth Product | 300 | 400 | | MHz | V _{CE} = -10 V, I _E = 100 mA |
| C _{ob} | Output Capacitance | | 11 | 25 | pF | V _{CB} = -10 V, I _E = 0, f = 1 MHz |
| h _{FE1} * | DC Current Gain | 60 | 120 | 200 | - | V _{CE} = -10 V, I _C = -50 mA |
| h _{FE2} * | DC Current Gain | 60 | 150 | | - | V _{CE} = -10 V, I _C = -500 mA |
| V _{CE(sat)} * | Collector Saturation Voltage | | -0.26 | -0.60 | V | I _C = -500 mA, I _B = -50 mA |
| V _{BE(sat)} * | Base Saturation Voltage | | -0.98 | -1.20 | V | I _C = -500 mA, I _B = -50 mA |
| I _{CES} | Collector Cutoff Current | | | -0.5 | μA | V _{CB} = -45 V, R _{BE} = 0 |
| I _{EBO} | Emitter Cutoff Current | | | -0.5 | μA | V _{EB} = -4.0 V, I _C = 0 |

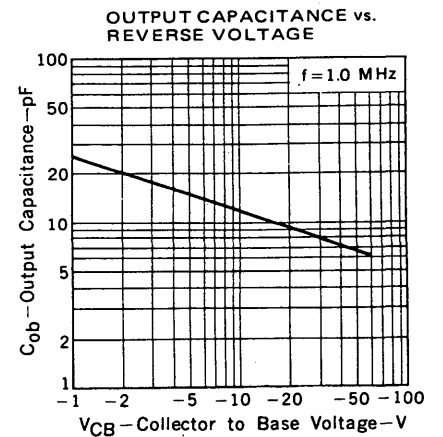
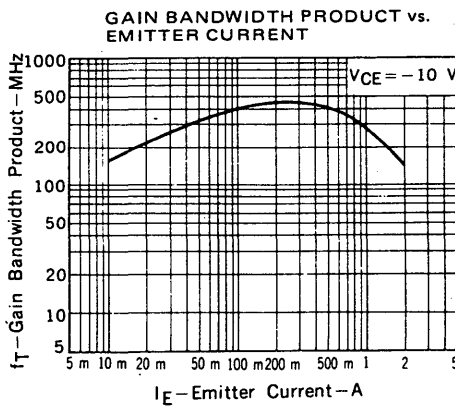
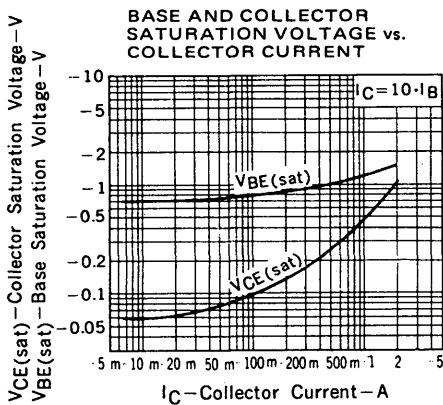
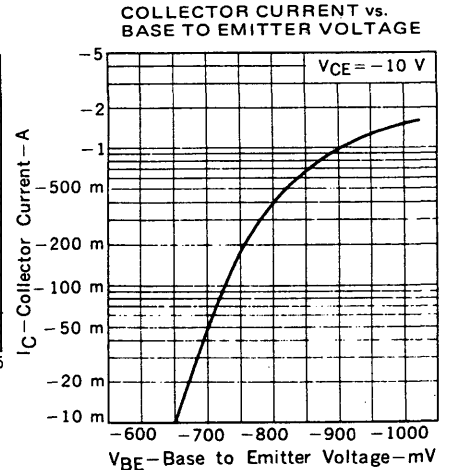
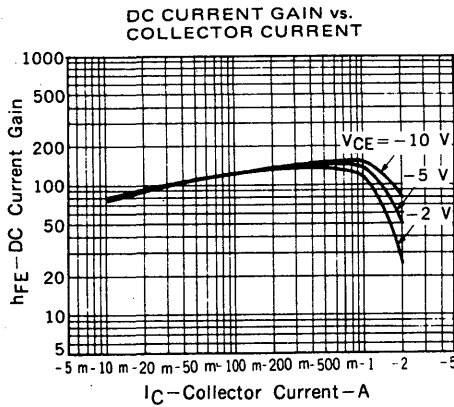
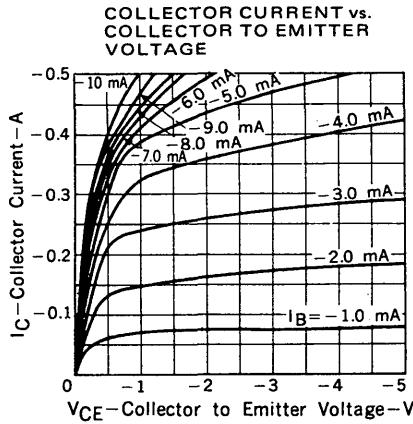
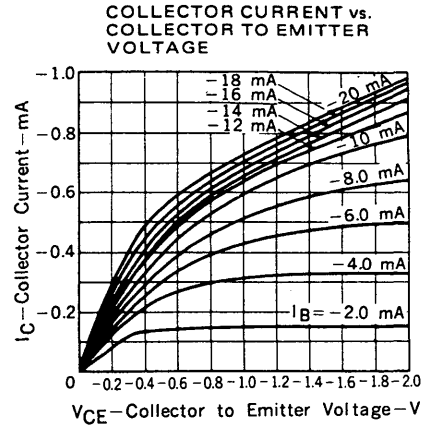
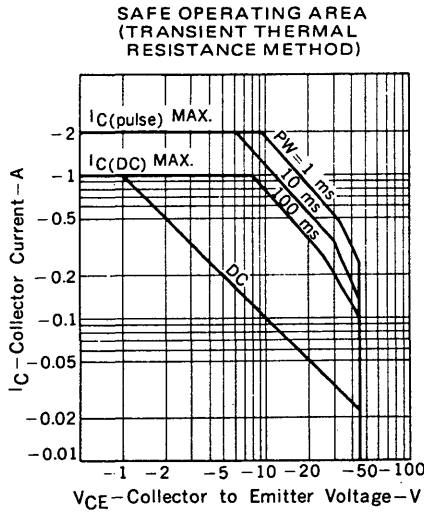
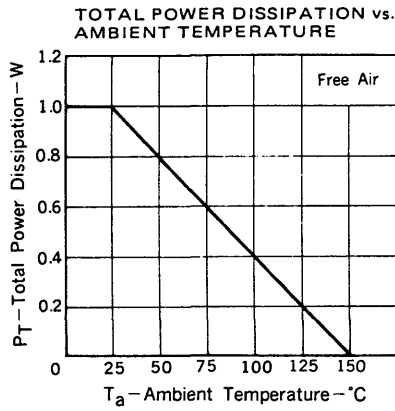
* Pulsed PW ≤ 350 μs, Duty Cycle ≤ 2 %

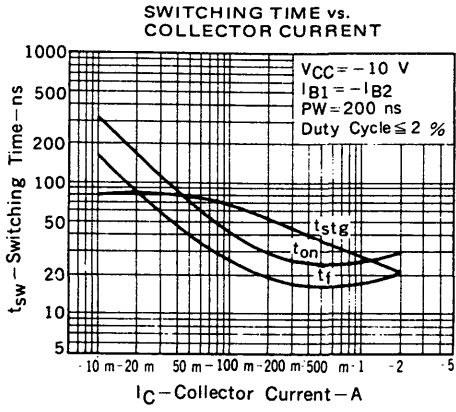
Classification of h_{FE1}

| Rank | L | K |
|-------|-----------|------------|
| Range | 60 to 120 | 100 to 200 |

h_{FE1} Test Conditions: V_{CE} = -10 V, I_C = -50 mA

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





SWITCHING TIME TEST CIRCUIT

