

**PNP SILICON TRANSISTOR**  
**2SA1627**

**DESCRIPTION** The 2SA1627 is designed for general purpose amplifier and high speed switching applications.

- FEATURES**
- High Voltage.
  - High Speed Switching.
  - Low Collector Saturation Voltage.

**ABSOLUTE MAXIMUM RATINGS**

Maximum Temperatures

Storage Temperature ..... -55 to +150 °C

Junction Temperature ..... 150 °C Maximum

Maximum Power Dissipation ( $T_a = 25\text{ °C}$ )

Total Power Dissipation ..... 1.0 W

Maximum Voltages and Currents ( $T_a = 25\text{ °C}$ )

$V_{CBO}$  Collector to Base Voltage ..... -600 V

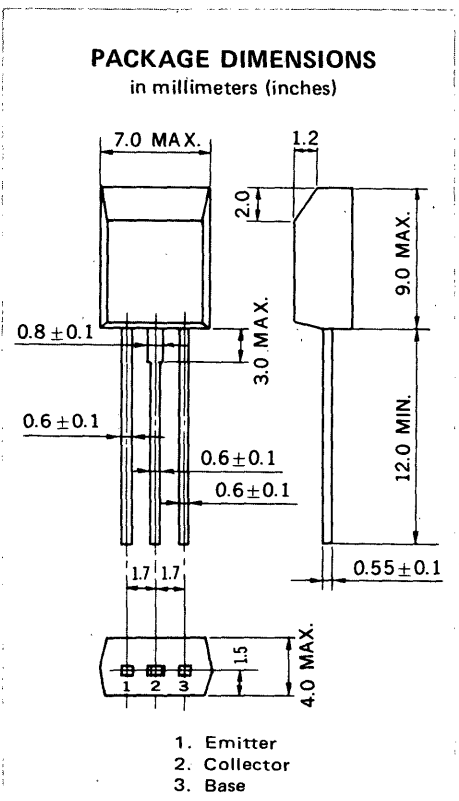
$V_{CEO}$  Collector to Emitter Voltage ..... -600 V

$V_{EBO}$  Emitter to Base Voltage ..... -7.0 V

$I_C$  Collector Current (DC) ..... -1.0 A

$I_C$  Collector Current (pulse)\* ..... -2.0 A

\*  $PW \leq 10\text{ ms}$ , Duty Cycle  $\leq 50\%$



**ELECTRICAL CHARACTERISTICS ( $T_a = 25\text{ °C}$ )**

| SYMBOL             | CHARACTERISTIC               | MIN. | TYP.  | MAX. | UNIT          | TEST CONDITIONS   |
|--------------------|------------------------------|------|-------|------|---------------|---|
| $h_{FE1}^{**}$     | DC Current Gain              | 30   | 58    | 120  | —             | $V_{CE} = -5.0\text{ V}$ , $I_C = -0.1\text{ A}$  |
| $h_{FE2}^{**}$     | DC Current Gain              | 5    | 19    |      | —             | $V_{CE} = -5.0\text{ V}$ , $I_C = -0.5\text{ A}$  |
| $f_T$              | Gain Bandwidth Product       | 10   | 28    |      | MHz           | $V_{CE} = -10\text{ V}$ , $I_E = 0.1\text{ A}$  |
| $C_{ob}$           | Output Capacitance           |      | 42    | 50   | pF            | $V_{CB} = -10\text{ V}$ , $I_E = 0$ , $f = 1.0\text{ MHz}$  |
| $I_{CBO}$          | Collector Cutoff Current     |      |       | -10  | $\mu\text{A}$ | $V_{CB} = -600\text{ V}$ , $I_E = 0$  |
| $I_{EBO}$          | Emitter Cutoff Current       |      |       | -10  | $\mu\text{A}$ | $V_{EB} = -7.0\text{ V}$ , $I_C = 0$  |
| $V_{CE(sat)}^{**}$ | Collector Saturation Voltage |      | -0.28 | -0.5 | V             | $I_C = -0.3\text{ A}$ , $I_B = -0.06\text{ A}$  |
| $V_{BE(sat)}^{**}$ | Base Saturation Voltage      |      | -0.85 | -1.2 | V             | $I_C = -0.3\text{ A}$ , $I_B = -0.06\text{ A}$  |
| $t_{on}$           | Turn On Time                 |      | 0.1   | 0.5  | $\mu\text{s}$ | $I_C = -0.5\text{ A}$ , $R_L = 500\ \Omega$<br>$I_{B1} = -I_{B2} = -0.1\text{ A}$<br>$V_{CC} = -250\text{ V}$ |
| $t_{stg}$          | Storage Time                 |      | 3.5   | 5.0  | $\mu\text{s}$ |   |
| $t_f$              | Fall Time                    |      | 0.08  | 0.5  | $\mu\text{s}$ |   |

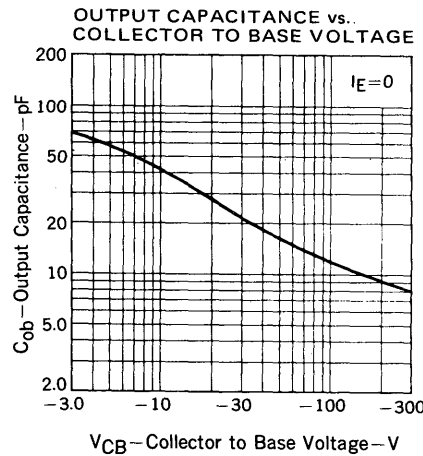
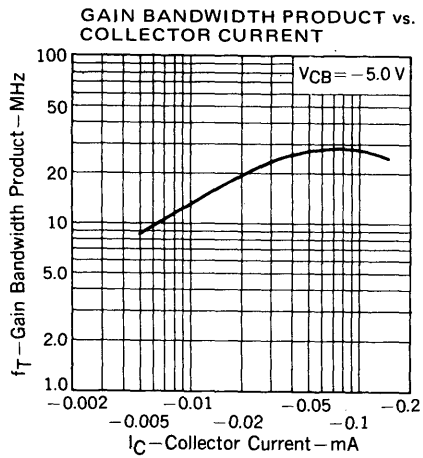
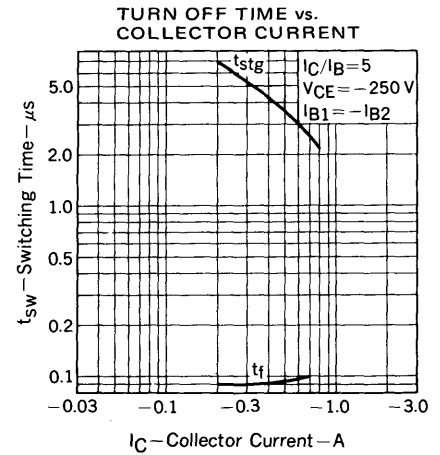
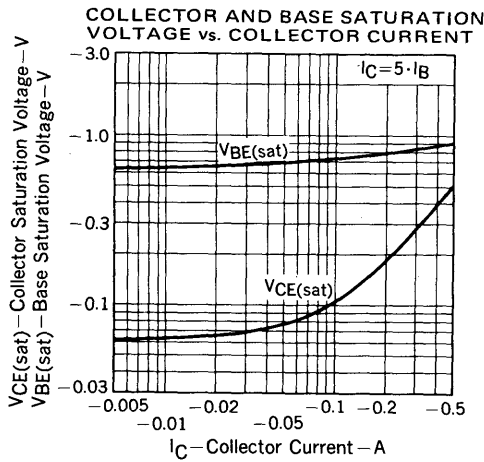
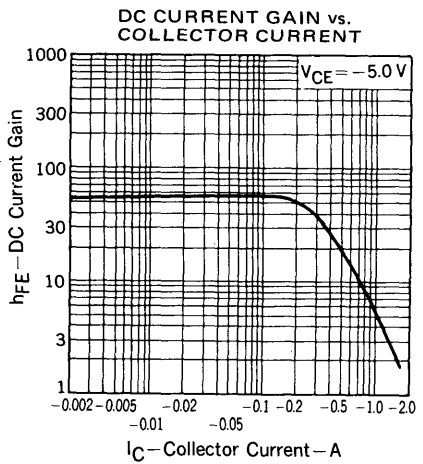
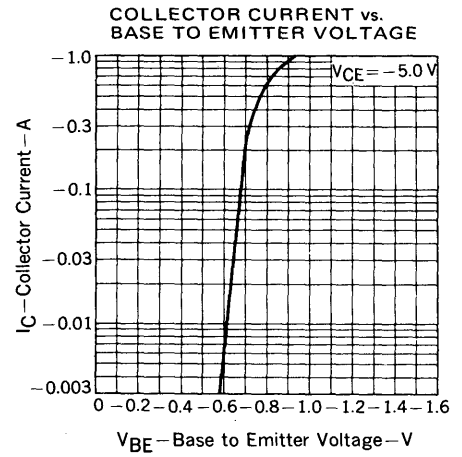
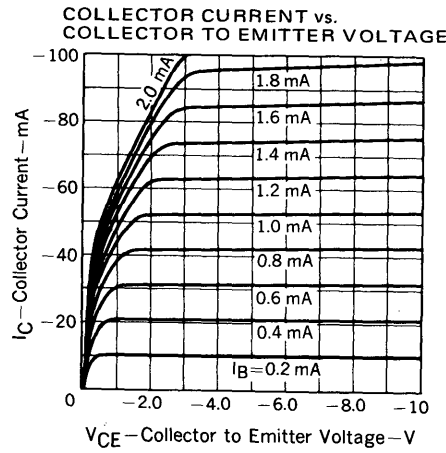
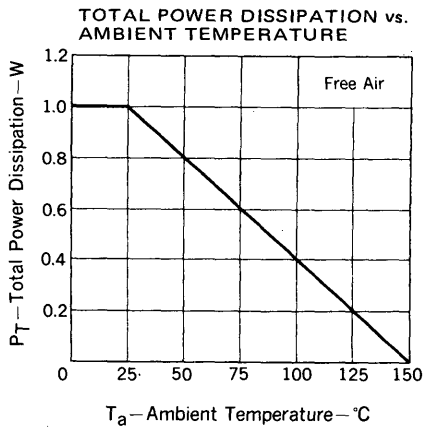
\*\* Pulsed  $PW \leq 350\ \mu\text{s}$ , Duty Cycle  $\leq 2\%$

Classification of  $h_{FE1}$

| Rank  | M        | L        | K         |
|-------|----------|----------|-----------|
| Range | 30 to 60 | 40 to 80 | 60 to 120 |

Test Conditions:  $V_{CB} = -5.0\text{ V}$ ,  $I_C = -0.1\text{ A}$

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



This datasheet has been download from:

[www.datasheetcatalog.com](http://www.datasheetcatalog.com)

Datasheets for electronics components.