

# DATA SHEET



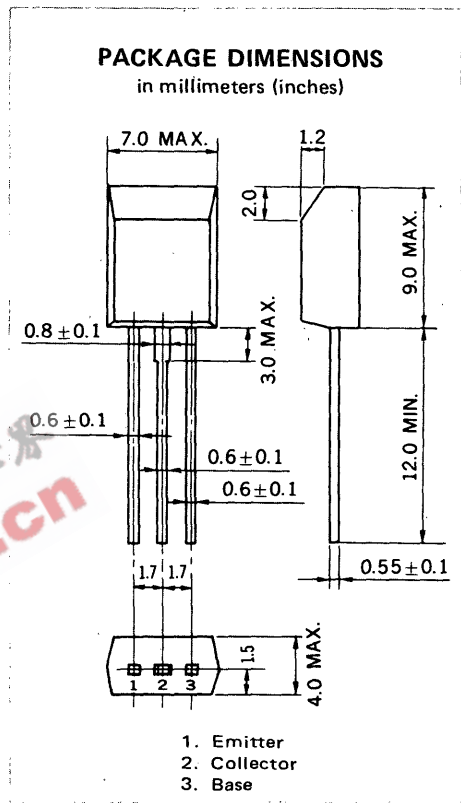
# PNP SILICON TRANSISTOR 2SA1627

**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<sub>a</sub> = 25 °C)**
- Total Power Dissipation . . . . . 1.0 W
- Maximum Voltages and Currents (T<sub>a</sub> = 25 °C)**
- V<sub>CBO</sub> Collector to Base Voltage . . . . . -600 V
  - V<sub>CEO</sub> Collector to Emitter Voltage . . . . . -600 V
  - V<sub>EBO</sub> Emitter to Base Voltage . . . . . -7.0 V
  - I<sub>C</sub> Collector Current (DC) . . . . . -1.0 A
  - I<sub>C</sub> Collector Current (pulse)\* . . . . . -2.0 A
- \* PW ≤ 10 ms, Duty Cycle ≤ 50 %



**ELECTRICAL CHARACTERISTICS (T<sub>a</sub> = 25 °C)**

SYMBOL	CHARACTERISTIC	MIN.	TYP.	MAX.	UNIT	TEST CONDITIONS
h <sub>FE1</sub> **	DC Current Gain	30	58	120	-	V <sub>CE</sub> = -5.0 V, I <sub>C</sub> = -0.1 A
h <sub>FE2</sub> **	DC Current Gain	5	19		-	V <sub>CE</sub> = -5.0 V, I <sub>C</sub> = -0.5 A
f <sub>T</sub>	Gain Bandwidth Product	10	28		MHz	V <sub>CE</sub> = -10 V, I <sub>E</sub> = 0.1 A
C <sub>ob</sub>	Output Capacitance		42	50	pF	V <sub>CB</sub> = -10 V, I <sub>E</sub> = 0, f = 1.0 MHz
I <sub>CBO</sub>	Collector Cutoff Current			-10	μA	V <sub>CB</sub> = -600 V, I <sub>E</sub> = 0
I <sub>EBO</sub>	Emitter Cutoff Current			-10	μA	V <sub>EB</sub> = -7.0 V, I <sub>C</sub> = 0
V <sub>CE(sat)</sub> **	Collector Saturation Voltage		-0.28	-0.5	V	I <sub>C</sub> = -0.3 A, I <sub>B</sub> = -0.06 A
V <sub>BE(sat)</sub> **	Base Saturation Voltage		-0.85	-1.2	V	I <sub>C</sub> = -0.3 A, I <sub>B</sub> = -0.06 A
t <sub>on</sub>	Turn On Time		0.1	0.5	μs	I <sub>C</sub> = -0.5 A, R <sub>L</sub> = 500 Ω I <sub>B1</sub> = -I <sub>B2</sub> = -0.1 A V <sub>CC</sub> = -250 V
t <sub>stg</sub>	Storage Time		3.5	5.0	μs	
t <sub>f</sub>	Fall Time		0.08	0.5	μs	

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

**Classification of h<sub>FE1</sub>**

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

Test Conditions: V<sub>CB</sub> = -5.0 V, I<sub>C</sub> = -0.1 A

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

