

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

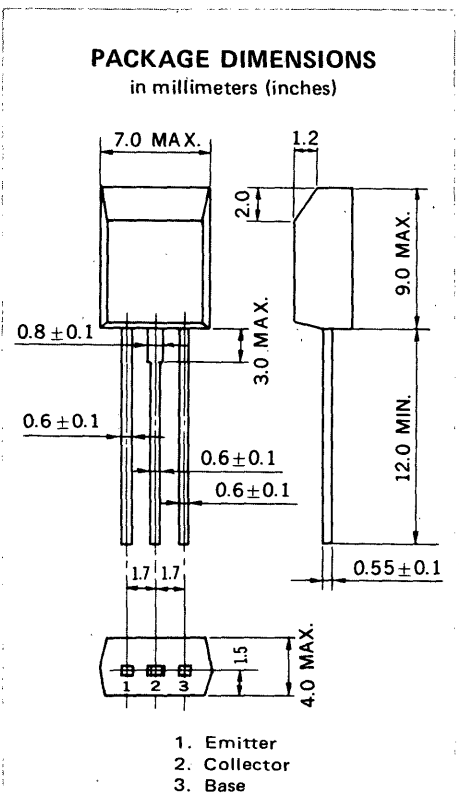
V_{CEO} Collector to Emitter Voltage -600 V

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	μA	$V_{CB} = -600\text{ V}$, $I_E = 0$
I_{EBO}	Emitter Cutoff Current			-10	μA	$V_{EB} = -7.0\text{ V}$, $I_C = 0$
$V_{CE(sat)}^{**}$	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	μs	$I_C = -0.5\text{ A}$, $R_L = 500\ \Omega$ $I_{B1} = -I_{B2} = -0.1\text{ A}$ $V_{CC} = -250\text{ V}$
t_{stg}	Storage Time		3.5	5.0	μs	
t_f	Fall Time		0.08	0.5	μs	

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

