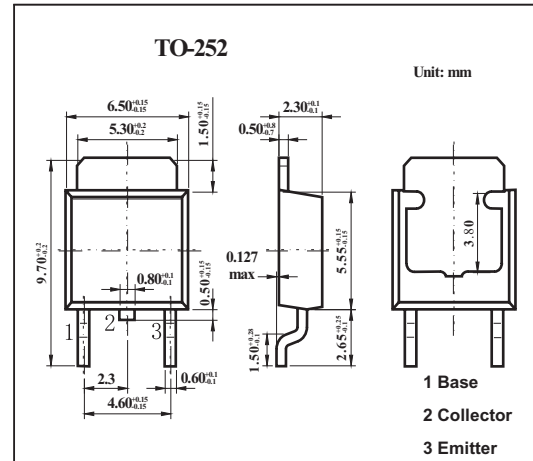


## Silicon PNP Transistor

## 2SA1923

## ■ Features

- High Voltage:  $V_{CB0} = -400V$
- Low Saturation Voltage:  $V_{CE(sat)} = -1V(\text{Max.})$   
 $I_C = -100mA, I_B = -10mA$

■ Absolute Maximum Ratings  $T_a = 25^\circ C$ 

Parameter	Symbol	Rating	Unit
Collector-to-Base Voltage	$V_{CB0}$	-400	V
Collector-to-Emitter Voltage	$V_{CEO}$	-400	V
Emitter-to-Base Voltage	$V_{EBO}$	-7	V
Collector Current	$I_C$	-0.5	A
Collector Current (Pulse)	$I_{CP}$	-1	A
Base Current	$I_B$	-0.25	A
Collector Dissipation $T_c = 25^\circ C$	$P_C$	1	W
		10	W
Junction Temperature	$T_j$	150	$^\circ C$
Storage Temperature	$T_{stg}$	-55 to 150	$^\circ C$

## 2SA1923

## ■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit	
Collector Cutoff Current	ICBO	V <sub>CB</sub> =-400V, I <sub>E</sub> =0			-10	μA	
Emitter Cutoff Current	IEBO	V <sub>EB</sub> =-7V, I <sub>C</sub> =0			-1	μA	
Collector-to-Emitter Breakdown Voltage	V <sub>(BR)CEO</sub>	I <sub>C</sub> =-10mA, I <sub>B</sub> =0	-400			V	
DC Current Gain	h <sub>FE</sub>	V <sub>CE</sub> =-5V, I <sub>C</sub> =-20mA	140		450		
		V <sub>CE</sub> =-5V, I <sub>C</sub> =-100mA	140		400		
Collector-to-Emitter Saturation Voltage	V <sub>CE(sat)</sub>	I <sub>C</sub> =-100mA, I <sub>B</sub> =-10mA		-0.4	-1.0	V	
Base-to-Emitter Saturation Voltage	V <sub>BE(sat)</sub>	I <sub>C</sub> =-100mA, I <sub>B</sub> =-10mA		-0.76	-0.9	V	
Transition Frequency	f <sub>T</sub>	V <sub>CE</sub> =-5V, I <sub>C</sub> =-50mA		35		MHz	
Collector Output Capacitance	C <sub>ob</sub>	V <sub>CB</sub> =-10V, f=1MHz, I <sub>E</sub> =0		18		pF	
Switching Time Turn-on Time	t <sub>on</sub>	<p> <math>20\ \mu\text{s}</math> INPUT <math>I_{B1}</math> OUTPUT  <math>I_{B2}</math> <math>I_{B2}</math> <math>2\ \text{k}\Omega</math>  <math>V_{CC} = -200\ \text{V}</math>  <math>I_{B1} = 10\ \text{mA}, I_{B2} = 20\ \text{mA},</math>  DUTY CYCLE <math>\leq 1\%</math> </p>		0.2		μs	
Switching Time Storage Time	t <sub>stg</sub>				2.3		μs
Switching Time Fall Time	t <sub>f</sub>				0.2		μs