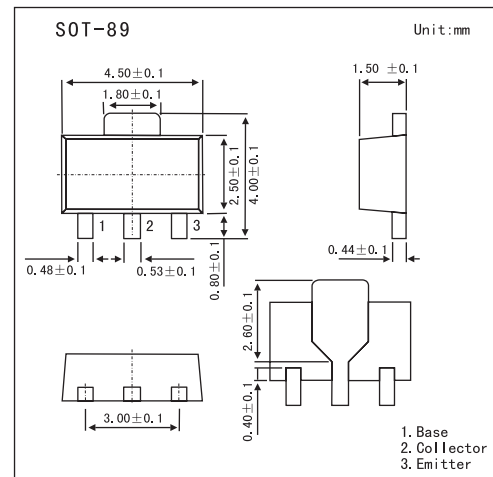


## PNP Epitaxial Planar Silicon

## 2SA1898

## ■ Features

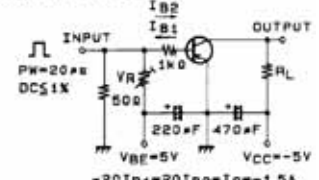
- Adoption of FBET and MBIT processes.
- Large current capacity.
- Low collector-to-emitter saturation voltage.
- Fast switching speed.

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

Parameter	Symbol	Rating	Unit
Collector-base voltage	$V_{CB0}$	-15	V
Collector-emitter voltage	$V_{CE0}$	-15	V
Emitter-base voltage	$V_{EB0}$	-5	V
Collector current	$I_C$	-3	A
Collector current (pulse)	$I_{CP}$	-5	A
Base current	$I_B$	-600	mA
Collector dissipation	$P_C$	1.3	W
Junction temperature	$T_j$	150	$^\circ\text{C}$
Storage temperature	$T_{stg}$	-55 to +150	$^\circ\text{C}$

## 2SA1898

## ■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit	
Collector cutoff current	IcBO	V <sub>CB</sub> = -12V, I <sub>E</sub> = 0			-1	nA	
Emitter cutoff current	I <sub>EBO</sub>	V <sub>EB</sub> = -3V, I <sub>C</sub> = 0			-1	nA	
DC current Gain	h <sub>FE</sub>	V <sub>CE</sub> = -2V, I <sub>C</sub> = -0.5A	100		280		
Gain bandwidth product	f <sub>T</sub>	V <sub>CE</sub> = -2V, I <sub>C</sub> = -0.3A		300		MHz	
Common base output capacitance	C <sub>ob</sub>	V <sub>CB</sub> = -10V, f = 1MHz		28		pF	
Collector-to-emitter saturation voltage	V <sub>CE(sat)</sub>	I <sub>C</sub> = -1.5A, I <sub>B</sub> = -75mA		-0.25	-0.5	mV	
Base-to-emitter saturation voltage	V <sub>BE(sat)</sub>	I <sub>C</sub> = -1.5A, I <sub>B</sub> = -75mA		-0.95	-1.2	V	
Collector-to-base breakdown voltage	V <sub>(BR)CBO</sub>	I <sub>C</sub> = -10μA, I <sub>E</sub> = 0	-15			V	
Collector-to-emitter breakdown voltage	V <sub>(BR)CEO</sub>	I <sub>C</sub> = -1mA, R <sub>BE</sub> = ∞	-15			V	
Emitter-to-base breakdown voltage	V <sub>(BR)EBO</sub>	I <sub>E</sub> = -10μA, I <sub>C</sub> = 0	-5			V	
Turn-on time	t <sub>on</sub>	<b>Switching Time Test Circuit</b> 		30	60	ns	
Storage time	t <sub>stg</sub>				100	200	ns
Turn-off time	t <sub>off</sub>				120	220	ns

■ h<sub>FE</sub> Classification

Marking	AN	
	R	S
h <sub>FE</sub>	100~200	140~280