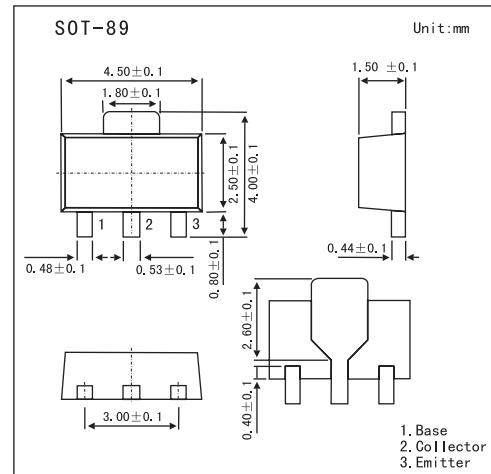


## NPN Silicon Transistors

## 2SC4942



## ■ Features

- New package with dimensions in between those of small signal and power signal package
- High voltage
- Fast switching speed

## ■ Absolute Maximum Ratings Ta = 25°C

Parameter	Symbol	Rating	Unit
Collector to base voltage	V <sub>CBO</sub>	600	V
Collector to emitter voltage	V <sub>C EO</sub>	600	V
Emitter to base voltage	V <sub>EBO</sub>	7	V
Collector current (DC)	I <sub>D(DC)</sub>	1	A
Collector current (pulse)	I <sub>D(pulse)</sub> *1	2	A
Total power dissipation	P <sub>T</sub> *2	2	W
Junction temperature	T <sub>j</sub>	150	°C
Storage temperature	T <sub>stg</sub>	-55 to 150	°C

\*1 PW ≤ 10 ms, duty cycle ≤ 50 %

\*2 7.5 cm<sup>2</sup> X 0.7 mm ceramic board mounted

## ■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Testconditons	Min	Typ	Max	Unit
Collector cutoff current	I <sub>CB0</sub>	V <sub>CB</sub> = 600 V, I <sub>E</sub> = 0			10	µA
Emitter cutoff current	I <sub>EB0</sub>	V <sub>EB</sub> = 7.0 V, I <sub>C</sub> = 0			10	µA
DC current gain	h <sub>FE</sub>	V <sub>CE</sub> = 5.0 V, I <sub>C</sub> = 0.1 A	30	55	120	
		V <sub>CE</sub> = 5.0 V, I <sub>C</sub> = 0.5 A	5	10		
Collector saturation voltage	V <sub>CE(sat)</sub>	I <sub>C</sub> = 400 mV, I <sub>B</sub> = 80 mA		0.35	1.0	V
Base saturation voltage	V <sub>BE(sat)</sub>	I <sub>C</sub> = 400 mV, I <sub>B</sub> = 80 mA		0.9	1.2	V
Gain bandwidth product	f <sub>T</sub>	V <sub>CE</sub> = 5.0 V, I <sub>E</sub> = 250 mA	30			MHz
Output capacitance	C <sub>ob</sub>	V <sub>CB</sub> = 10 V, I <sub>E</sub> = 0, f = 1.0 MHz		15		pF
Turn-on time	t <sub>ON</sub>	I <sub>C</sub> = 0.5 A, V <sub>CC</sub> = 250 V		0.1	0.5	µs
Storage time	t <sub>stg</sub>	I <sub>B1</sub> = ?I <sub>B2</sub> = 0.1 A		4.0	5.0	µs
Fall time	t <sub>f</sub>	R <sub>L</sub> = 500Ω		0.2	0.5	µs

## ■ hFE Classification

Marking	AA1	AA2	AA3
hFE	30 to 60	40 to 80	60 to 120