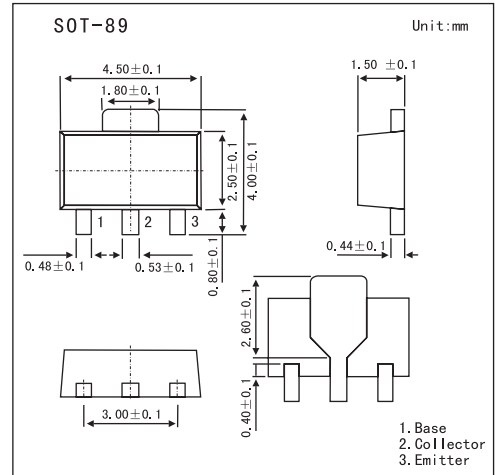


# 2SC4521

### ■ Features

- Adoption of FBET, MBIT process.
- Large current capacity.
- Low collector-to-emitter saturation voltage.
- Fast switching speed.
- Small-sized package.



### ■ Absolute Maximum Ratings Ta = 25°C

Parameter	Symbol	Rating	Unit
Collector-base voltage	V <sub>CB0</sub>	60	V
Collector-emitter voltage	V <sub>CE0</sub>	45	V
Emitter-base voltage	V <sub>EB0</sub>	5	V
Collector current	I <sub>C</sub>	3	A
Collector current (pulse)	I <sub>CP</sub>	6	A
Collector dissipation, mounted on ceramic board(250mm <sup>2</sup> X0.8mm)	P <sub>C</sub>	1.5	W
Junction temperature	T <sub>J</sub>	150	°C
Storage temperature	T <sub>stg</sub>	-55 to +150	°C

## 2SC4521

■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Testconditons	Min	Typ	Max	Unit	
Collector cutoff current	ICBO	V <sub>CB</sub> = 45V, I <sub>E</sub> =0			1	μA	
Emitter cutoff current	IEBO	V <sub>EB</sub> = 2V, I <sub>C</sub> =0			10	μA	
DC current gain	hFE	V <sub>CE</sub> = 2V, I <sub>C</sub> = 500mA	100		400		
Gain bandwidth product	f <sub>T</sub>	V <sub>CE</sub> = 2V, I <sub>C</sub> = 500mA		300		MHz	
Output capacitance	C <sub>ob</sub>	V <sub>CB</sub> = 10V, f = 1.0MHz		25		pF	
Collector-emitter saturation voltage	V <sub>CE(sat)</sub>	I <sub>C</sub> = 1.5 A, I <sub>B</sub> = 75 mA		0.25	0.7	V	
Base-emitter saturation voltage	V <sub>BE(sat)</sub>	I <sub>C</sub> = 1.5 V, I <sub>B</sub> = 75 mA		0.95	1.3	V	
Collector-base breakdown voltage	V <sub>(BR)CBO</sub>	I <sub>C</sub> = 10μA, I <sub>E</sub> = 0	60			V	
Collector-emitter breakdown voltage	V <sub>(BR)CEO</sub>	I <sub>C</sub> = 1mA, R <sub>BE</sub> = ∞	45			V	
Emitter-base breakdown voltage	V <sub>(BR)EBO</sub>	I <sub>E</sub> = 100μA, I <sub>C</sub> = 0	5			V	
Turn-on time	t <sub>on</sub>	<p>                     P.W. = 20μs                      D.C. = 1%                      V<sub>BE</sub> = 1V                      V<sub>CC</sub> = 25V                      20I<sub>B1</sub> = -20I<sub>B2</sub> = I<sub>C</sub> = 1.5A                      Unit (resistance : Ω, capacitance : F)                 </p>		50	100	ns	
Storage time	t <sub>stg</sub>				150	270	ns
Fall time	t <sub>f</sub>				180	350	ns

■ hFE Classification

Marking	CL		
	R	S	T
hFE	100~200	140~280	200~400