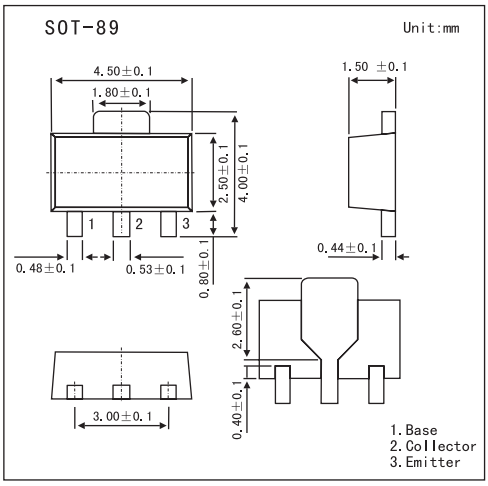
NPN Epitaxial Planar Silicon Transistor

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℃

Parameter	Symbol	Rating	Unit
Collector-base voltage	V_{CBO}	60	V
Collector-emitter voltage	V_{CEO}	45	V
Emitter-base voltage	V_{EBO}	5	V
Collector current	I_C	3	A
Collector current (pulse)	I_{CP}	6	A
Collector dissipation,mounted on ceramic board($250mm^2$X0.8mm)	P_C	1.5	W
Junction temperature	T_j	150	℃
Storage temperature	T_{stg}	-55 to +150	℃

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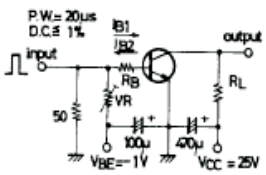
■ Electrical Characteristics Ta = 25℃

Parameter	Symbol	Testconditons	Min	Typ	Max	Unit
Collector cutoff current	I_{CBO}	V_{CB} = 45V, I_E=0			1	μA
Emitter cutoff current	I_{EBO}	V_{EB} = 2V, I_C=0			10	μA
DC current gain	h_{FE}	V_{CE} = 2V , I_C = 500mA	100		400	
Gain bandwidth product	f_T	V_{CE} = 2V , I_C = 500mA		300		MHz
Output capacitance	C_{ob}	V_{CB} = 10V , f = 1.0MHz		25		pF
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C = 1.5 A , I_B = 75 mA		0.25	0.7	V
Base-emitter saturation voltage	$V_{BE(sat)}$	I_C = 1.5 V , I_B = 75 mA		0.95	1.3	V
Collector-base breakdown voltage	$V_{(BR)CBO}$	I_C = 10μA , I_E = 0	60			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	I_C = 1mA , R_{BE} = ∞	45			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	I_E = 100μA , I_C = 0	5			V
Turn-on time	t_{on}	 $20I_{B1} = -20I_{B2} = I_C = 1.5A$ Unit (resistance : Ω, capacitance : F)		50	100	ns
Storage time	t_{stg}			150	270	ns
Fall time	t_f			180	350	ns

■ h_{FE} Classification

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