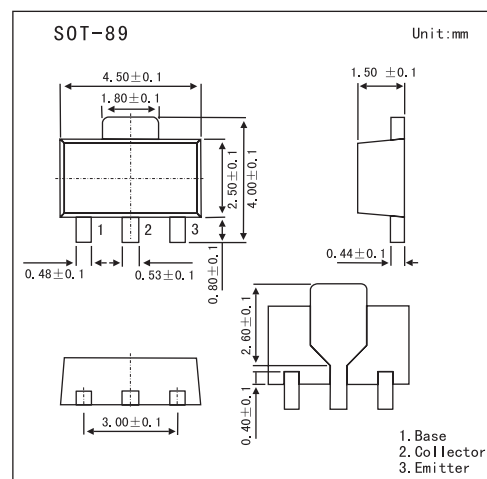


NPN Epitaxial Planar Silicon Transistor

2SC4390

■ Features

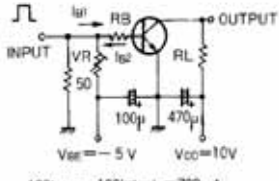
- Adoption of MBIT process.
- High DC current gain ($h_{FE}=800$ to 3200).
- Large current capacity ($I_C=2A$).
- Low collector-to-emitter saturation voltage ($V_{CE(sat)} \leq 0.3V$).
- High V_{EBO} ($V_{EBO} \geq 15V$).

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

Parameter	Symbol	Rating	Unit
Collector-base voltage	V_{CBO}	20	V
Collector-emitter voltage	V_{CEO}	10	V
Emitter-base voltage	V_{EBO}	15	V
Collector current	I_C	2	A
Collector current (pulse)	I_{CP}	4	A
Base current	I_B	0.4	A
Collector dissipation	P_C	500	mW
Junction temperature	T_j	150	$^\circ C$
Storage temperature	T_{stg}	-55 to +150	$^\circ C$

2SC4390

■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit
Collector cutoff current	I_{CBO}	$V_{CB} = 15V, I_E = 0$			0.1	μA
Emitter cutoff current	I_{EBO}	$V_{EB} = 10V, I_C = 0$			0.1	μA
DC current gain	h_{FE}	$V_{CE} = 2V, I_C = 500mA$	800	1500	3200	
Gain bandwidth product	f_T	$V_{CE} = 10V, I_C = 50mA$		260		MHz
Output capacitance	C_{ob}	$V_{CB} = 10V, f = 1.0MHz$		280		pF
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 1A, I_B = 20mA$		0.11	0.5	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C = 1A, I_B = 20mA$		0.87	1.2	V
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C = 10\mu A, I_E = 0$	20			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C = 1mA, R_{BE} = \infty$	10			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E = 10\mu A, I_C = 0$	15			V
Turn-on time	t_{on}	Switching Time Test Circuit PW = 20μs DC $\leq 1\%$  $100I_{B1} = -100I_{B2} = I_C = 700mA$		0.13		μs
Storage time	t_{stg}			0.8		μs
Fall time	t_f			0.1		μs