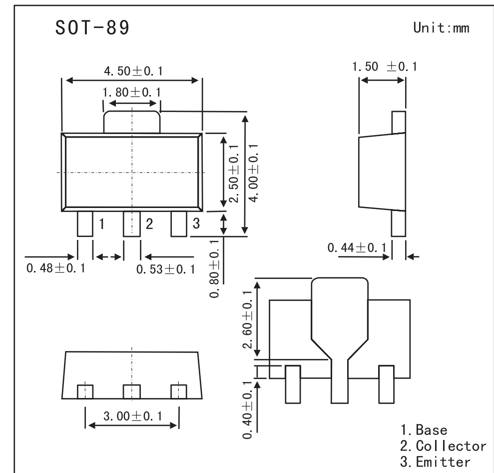
NPN Epitaxial Planar Silicon Transistor

2SC5069



■ Features

- High current capacity.
- Adoption of MBIT process.
- High DC current gain.
- Low collector-to-emitter saturation voltage.
- High V_{EBO}.

■ Absolute Maximum Ratings Ta = 25℃

Parameter	Symbol	Rating	Unit
Collector-base voltage	V_{CBO}	30	V
Collector-emitter voltage	V_{CEO}	25	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 *	1.5	W
Junction temperature	T_j	150	℃
Storage temperature	T_{stg}	-55 to +150	℃

* Mounted on ceramic board(250mm^{2}X0.8mm).

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■ Electrical Characteristics Ta = 25℃

Parameter	Symbol	Testconditons	Min	Typ	Max	Unit
Collector cutoff current	I_{CBO}	V_{CB} = 20 V, I_E=0			100	μA
Emitter cutoff current	I_{EBO}	V_{EB} = 10 V, I_C=0			100	μA
DC current gain	h_{FE}	V_{CE} = 5 V , I_C = 500 mA	800	1500	3200	
		V_{CE} = 5 V , I_C = 1A	600			
Gain bandwidth product	f_T	V_{CE} = 10 V , I_C = 50 mA		260		MHz
Output capacitance	C_{ob}	V_{CB} = 10V , f = 1.0MHz		27		pF
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C = 1A , I_B = 20 mA		0.15	0.5	V
Base-emitter saturation voltage	$V_{BE(sat)}$	I_C = 1A , I_B = 20 mA		0.85	1.2	V
Collector-base breakdown voltage	$V_{(BR)CBO}$	I_C = 10μA , I_E = 0	30			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	I_C = 1mA , R_{BE} = ∞	25			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	I_E = 10μA , I_C = 0	15			V
Turn-ON Time	t_{on}	INPUT, OUTPUT, I_{B1}, I_{B2}, R_B, R_L, VR, 50Ω, PW = 20 μs, DC ≤ 1%, 100 μF, 470 μF, V_{BE} = −5V, V_{CC} = 10V, $100I_{B1} = -100I_{B2} = I_C = 700mA$		0.14		μs
Strange Time	t_{stg}			1.35		μs
Fall Time	t_f			0.1		μs

■ Marking

Marking	CU