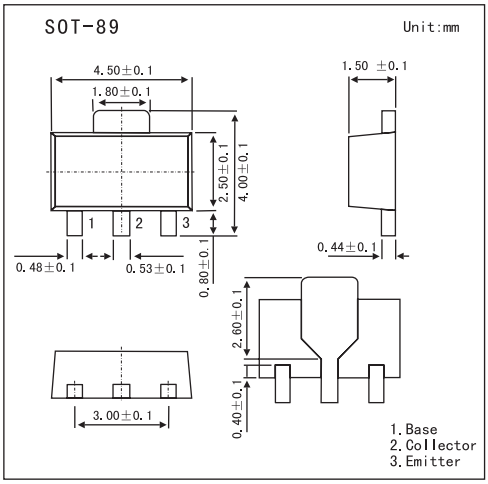
NPN Silicon Epitaxia

2SD2402



■ Features

- High current capacitance.
- Low collector saturation voltage.

■ Absolute Maximum Ratings Ta = 25℃

Parameter	Symbol	Rating	Unit
Collector-base voltage	V_{CBO}	50	V
Collector-emitter voltage	V_{CEO}	30	V
Emitter-base voltage	V_{EBO}	6	V
Collector current	I_C	5	A
Collector current (pulse) *	I_{CP}	8	A
Base current	I_B	0.2	A
Base current (pulse) *	I_{BP}	0.4	A
Total power dissipation	P_T	2	W
Junction temperature	T_j	150	℃
Storage temperature	T_{stg}	-55 to +150	℃

* PW ⩽ 10 ms, duty cycle ⩽ 50 %

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■ Electrical Characteristics Ta = 25℃

Parameter	Symbol	Testconditons	Min	Typ	Max	Unit
Collector cutoff current	I_{CBO}	V_{CB} = 50 V, I_E = 0			100	nA
Emitter cutoff current	I_{EBO}	V_{EB} = 6.0 V, I_C = 0			100	nA
DC current gain *	h_{FE} 1	V_{CE} = 1.0 V, I_C =1.0 A	80			
	h_{FE} 2	V_{CE} = 1.0 V, I_C = 2.0 A	100	200	400	
Base to emitter voltage *	V_{BE}	V_{CE} = 1.0 V, I_C = 0.1 A	600	650	700	mV
Collector saturation voltage	$V_{CE(sat)}$ 1	I_C = 3 V, I_B = 0.15 A		140	300	mV
	$V_{CE(sat)}$ 2	I_C = 5 V, I_B = 0.25 A		230	500	mV
Base saturation voltage	$V_{BE(sat)}$	I_C = 3 V, I_B = 0.15 A		0.88	1.2	V
Gain bandwidth product	f_T	V_{CE} = 10 V, I_E = -0.5 A		170		MHz
Output capacitance	C_{ob}	V_{CB} = 10 V, I_E = 0 , f = 1.0 MHz		60		pF
Turn-on time	t_{on}	I_C = 2.0 A, V_{CC}= 10 V I_{B1} = -I_{B2} = 0.1 A R_L = 500Ω		275		ns
Storage time	t_{stg}			485		ns
Fall time	t_f			45		ns

■ h_{FE} Classification

Marking	EX	EY	EZ
hFE	100～200	160～320	200～400