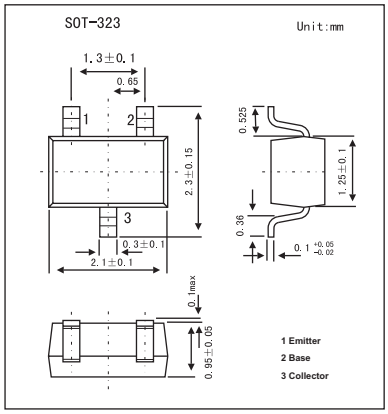
NPN Silicon Epitaxia

2SC4181A



Features

- High DC current gain:Hfe=1000 to 3200
- Low $V_{CE(sat)}$: $V_{CE(sat)}$=0.07v TYP
- High V_{EBO}: V_{EBO}=15V

Absolute Maximum Ratings Ta = 25℃

Parameter	Symbol	Rating	Unit
Collector-base voltage	V_{CBO}	60	V
Collector-emitter voltage	V_{CEO}	50	V
Emitter-base voltage	V_{EBO}	15	V
Collector current	I_C	150	mA
Total power dissipation	P_T	150	mW
Junction temperature	T_j	150	℃
Storage temperature	T_{stg}	-55 to +150	℃

Electrical Characteristics Ta = 25℃

Parameter	Symbol	Testconditons	Min	Typ	Max	Unit
Collector cutoff current	I_{CBO}	V_{CB} = 50V, I_E=0			100	nA
Emitter cutoff current	I_{EBO}	V_{EB} = 10V, I_C=0			100	nA
DC current gain *	h_{FE}	V_{CE} = 5.0V , I_C = 1.0mA	1000	1800	3200	
Base-emitter voltage *	V_{BE}	V_{CE} = 5.0V , I_C = 1.0mA		0.56		V
Collector-emitter saturation voltage *	$V_{CE(sat)}$	I_C = 50mA , I_B = 5.0mA		0.07	0.3	V
Base-emitter saturation voltage *	$V_{BE(sat)}$	I_C = 50mA , I_B = 5.0mA		0.8	1.2	V
Gain bandwidth product	f_T	V_{CE} = 5.0V , I_E = -10mA		250		MHz
Output capacitance	C_{ob}	V_{CB} = 5.0V , I_E = 0, f = 1.0MHz		3.0		pF
Turn-on time	t_{on}	V_{CC} = 10V, $V_{BE(off)}$ = -2.7V		0.13		ns
Storage time	t_{stg}	I_C = 150mA ,		0.72		ns
Turn-off time	t_{off}	I_{B1} = -I_{B2} = 15mA		1.22		ns

*. PW≤350μs,duty cycle≤2%

h_{FE} Classification

Marking	L15	L16
hFE	1000～2000	1600～3200