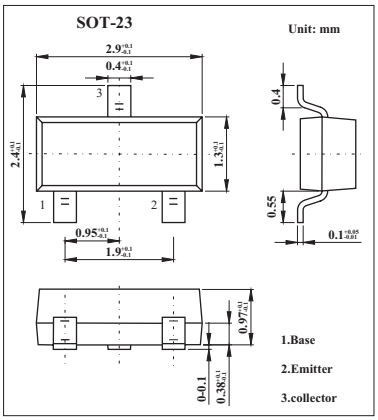
NPN Epitaxial Planar Silicon Transistors

2SC5310



Features

- Adoption of FBET, MBIT processes.
- Large current capacitance.
- Low collector-to-emitter saturation voltage.
- High-speed switching.
- Ultrasmall package facilitates miniaturization in end products.

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}	6	V
Collector current	I_C	1	A
Collector current (pulse)	I_{CP}	3	A
Base current	I_B	200	mA
Collector dissipation *	P_C	250	mW
Jumction temperature	T_j	150	℃
Storage temperature	T_{stg}	-55 to +150	℃

* Mounted on a glass-epoxy board (20□30□1.6mm)

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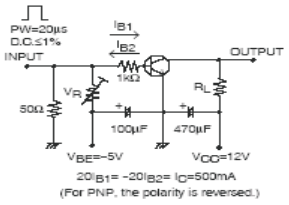
■ Electrical Characteristics Ta = 25℃

Parameter	Symbol	Testconditons	Min	Typ	Max	Unit
Collector cutoff current	I_{CBO}	V_{CB} = 20V, I_E=0			0.1	μA
Emitter cutoff current	I_{EBO}	V_{EB} = 3V, I_C=0			0.1	μA
DC current gain	h_{FE}	V_{CE} =2V , I_C = 100mA	135		400	
Gain bandwidth product	f_T	V_{CE} = 10V , I_C = 50mA		150		MHz
Output capacitance	C_{ob}	V_{CB} = 10V , f = 1.0MHz		19		pF
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C = 500mA , I_B = 25mA		100	200	mV
Base-emitter saturation voltage	$V_{BE(sat)}$	I_C = 500mA , I_B = 25mA		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	6			V
Turn-on time	t_{on}			60		ns
Storage time	t_{stg}			500		ns
Fall time	t_f			25		ns

■ h_{FE} Classification

Marking	NN	
Rank	5	6
hFE	135～270	200～400