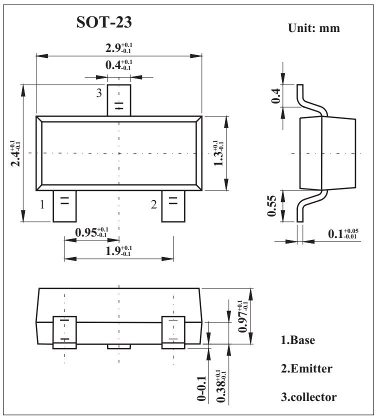
NPN Silicon Epitaxial Transistor

2SC3583



■ Features

- ● NF 1.2 dB TYP. @f = 1.0 GHz
- ● Ga 13 dB TYP. @f = 1.0 GHz

■ Absolute Maximum Ratings Ta = 25℃

Parameter	Symbol	Rating	Unit
Collector to base voltage	V_{CBO}	20	V
Collector to emitter voltage	V_{CEO}	10	V
Emitter to base voltage	V_{EBO}	1.5	V
Collector current	I_C	65	mA
Total power dissipation	P_{tot}	200	mW
Junction temperature	T_j	150	℃
Storage temperature range	T_{stg}	-65 to +150	℃

■ Electrical Characteristics Ta = 25℃

Parameter	Symbol	Testconditons	Min	Typ	Max	Unit
Collector cutoff current	I_{CBO}	V_{CB} = 10 V, I_E = 0			1.0	μA
Emitter cutoff current	I_{EBO}	V_{EB} = 1 V, I_E = 0			1.0	μA
DC current gain *1	h_{FE}	V_{CE} = 8 V, I_C = 20 mA	50	100	250	
Gain bandwidth product	f_T	V_{CE} = 8 V, I_C = 20 mA		9		GHz
Feed-Back Capacitance	Cre *2	V_{CB} = 10 V, I_E = 0, f = 1.0 MHz		0.35	0.9	pF
Insertion Power Gain	$\|S_{21e}\|^2$	V_{CE} = 8 V, I_C = 20 mA, f = 1.0 GHz	11	13		dB
Maximum Available Gain	MAG	V_{CE} = 8 V, I_C = 20 mA, f = 1.0 GHz		15		dB
Noise Figure	NF	V_{CE} = 8 V, I_E = 7 mA, f = 1.0 GHz		1.2	2.5	dB

*1.Pulse Measurement PW ≤350μs, Duty Cycle≤2 %

*2.The emitter terminal and the case shall be connected to the gurad terminal of the three-terminal capacitance bridge.

■ h_{FE} Classification

Marking	R33	R34	R35
Rank	R33/Q	R34/R	R35/S
h_{FE}	50～100	80～160	125～250