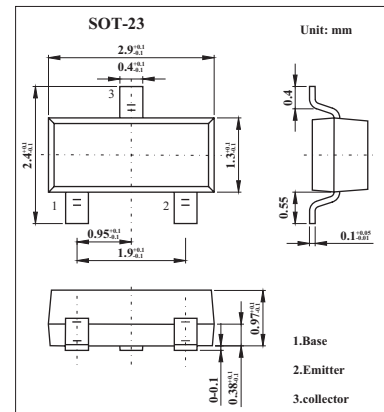


NPN Epitaxial Planar Silicon Transistor

2SC4104

■ Features

- High fr.
- Small reverse transfer capacitance.
- Adoption of FBET process.



■ Absolute Maximum Ratings Ta = 25°C

Parameter	Symbol	Rating	Unit
Collector-base voltage	V _{CB0}	70	V
Collector-emitter voltage	V _{CEO}	60	V
Emitter-base voltage	V _{EB0}	4	V
Collector current	I _C	50	mA
Collector current (pulse)	I _{cp}	100	mA
Collector dissipation	P _C	200	mW
Junction temperature	T _j	150	°C
Storage temperature	T _{stg}	-55 to +150	°C

■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit
Collector cutoff current	I _{CBO}	V _{CB} = 40V, I _E =0			0.1	μA
Emitter cutoff current	I _{EBO}	V _{EB} = 3V, I _C =0			1.0	μA
DC current gain	h _{FE}	V _{CE} = 10V, I _C = 10mA	60		270	
Gain bandwidth product	f _T	V _{CE} = 10V, I _C = 10mA	350	700		MHz
Base-collector time constant	τ _{bb,Cc}	V _{CE} = 10V, I _C = 10mA		8		ps
Output capacitance	C _{ob}	V _{CB} = 10V, f = 1.0MHz		1.3		pF
Reverse transfer capacitance	C _{re}	V _{CB} = 10V, f = 1.0MHz		1.0		pF
Collector-emitter saturation voltage	V _{CE(sat)}	I _C = 20mA, I _B = 2mA			0.5	V
Base-emitter saturation voltage	V _{BE(sat)}	I _C = 20mA, I _B = 2mA			1.0	V
Collector-base breakdown voltage	V _{(BR)CBO}	I _C = 10μA, I _E = 0	70			V
Collector-emitter breakdown voltage	V _{(BR)CEO}	I _C = 1mA, R _{BE} = ∞	60			V
Emitter-base breakdown voltage	V _{(BR)EBO}	I _E = 10μA, I _C = 0	4			V

■ hFE Classification

Marking	YY		
Rank	3	4	5
hFE	60~120	90~180	135~270