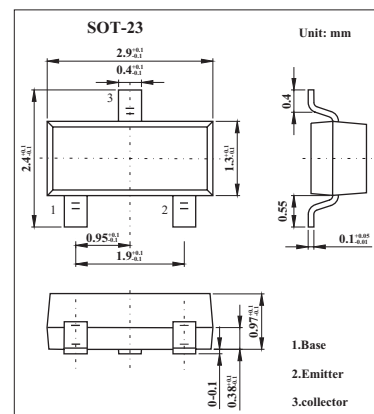


Silicon NPN Epitaxial

2SC2714

■ Features

- Small reverse transfer capacitance: $C_{re} = 0.7 \text{ pF}$ (typ.)
- Low noise figure: $NF = 2.5 \text{ dB}$ (typ.) ($f = 100 \text{ MHz}$)

■ Absolute Maximum Ratings $T_a = 25^\circ\text{C}$

Parameter	Symbol	Rating	Unit
Collector-base voltage	V_{CBO}	40	V
Collector-emitter voltage	V_{CEO}	30	V
Emitter-base voltage	V_{EBO}	4	V
Collector current	I_C	20	mA
Emitter current	I_E	4	mA
Collector power dissipation	P_C	100	mW
Junction temperature	T_j	125	$^\circ\text{C}$
Storage temperature range	T_{stg}	-55 to +125	$^\circ\text{C}$

■ Electrical Characteristics $T_a = 25^\circ\text{C}$

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit
Collector cut-off current	I_{CBO}	$V_{CB} = 18 \text{ V}, I_E = 0$			0.5	μA
Emitter cut-off current	I_{EBO}	$V_{EB} = 4 \text{ V}, I_C = 0$			0.5	μA
DC current gain	h_{FE}	$V_{CE} = 6 \text{ V}, I_C = 1 \text{ mA}$	40		200	
Reverse transfer capacitance	C_{re}	$V_{CB} = 6 \text{ V}, f = 1 \text{ MHz}$		0.70		pF
Transition frequency	f_T	$V_{CE} = 6 \text{ V}, I_C = 1 \text{ mA}$		550		MHz
Collector-base time constant	$C_{c.rbb'}$				30	ps
Noise figure	NF	$V_{CE} = 6 \text{ V}, I_E = -1 \text{ mA}, f = 100 \text{ MHz}$		2.5	5.0	dB
Power gain	G_{pe}		17	23		dB

■ h_{FE} Classification

Marking	QR	QO	QY
Rank	R	O	Y
h_{FE}	40~80	70~140	100~200