2SC5474 (Tentative)

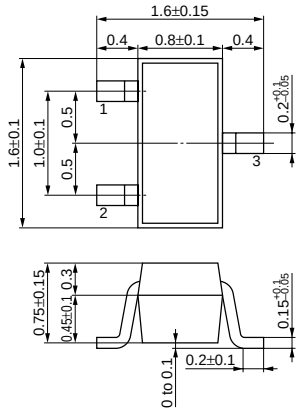
Silicon NPN epitaxial planer type

For low-voltage low-noise high-frequency oscillation

Features

- High transition frequency f_T.
- High gain of 8.9dB and low noise of 1.8dB at 3V.
- Optimum for RF amplification of a portable telephone and pager.
- SS-Mini type package, allowing downsizing of the equipment and automatic insertion through the tape packing.

Unit: mm



1:Base
2:Emitter EIAJ:SC–75
3:Collector SS-Mini Type Package

Marking symbol : 3A

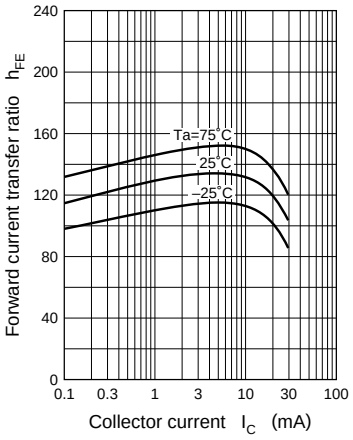
Absolute Maximum Ratings (Ta=25˚C)

Parameter	Symbol	Ratings	Unit
Collector to base voltage	V_{CBO}	9	V
Collector to emitter voltage	V_{CEO}	6	V
Emitter to base voltage	V_{EBO}	1	V
Collector current	I_C	30	mA
Collector power dissipation	P_C	125	mW
Junction temperature	T_j	125	˚C
Storage temperature	T_{stg}	–55 ~ +125	˚C

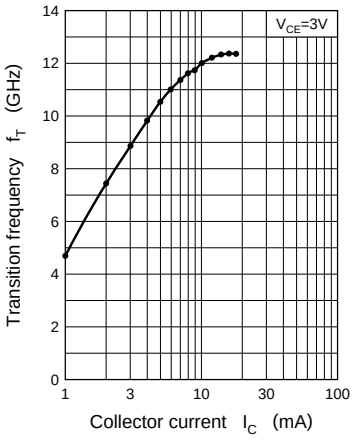
Electrical Characteristics (Ta=25˚C)

Parameter	Symbol	Conditions	min	typ	max	Unit
Collector cutoff current	I_{CBO}	V_{CB} = 9V, I_E = 0			1	µA
Emitter cutoff current	I_{EBO}	V_{EB} = 1V, I_C = 0			1	µA
Forward current transfer ratio	h_{FE}	V_{CE} = 3V, I_C = 10mA	80		200	
Collector output capacitance	C_{ob}	V_{CB} = 3V, I_E = 0, f = 1MHz		0.4		pF
Transition frequency	f_T	V_{CE} = 3V, I_C = 10mA, f = 2GHz		12.0		GHz
Noise figure	NF	V_{CE} = 3V, I_C = 3mA, f = 1.5GHz		1.8		dB
Foward transfer gain	$\|S_{21e}\|^2$	V_{CE} = 3V, I_C = 10mA, f = 2GHz		8.9		dB

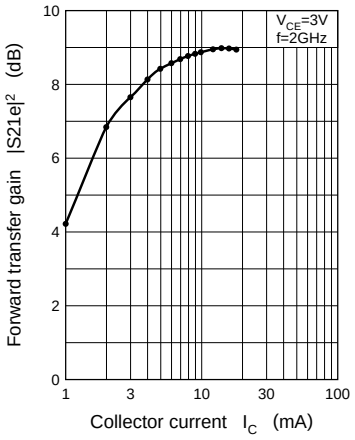
h_{FE} — I_C



f_T — I_C



$|S_{21e}|^2$ — I_C



NF — I_C