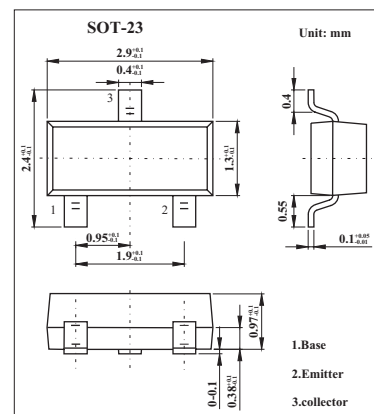


Silicon NPN Epitaxial

2SC3098

■ Features

- Low Noise Figure
- $NF=2.5dB, |S_{21e}|^2=14.5dB(f=500MHz)$
- $NF=3.0dB, |S_{21e}|^2=9.0dB(f=1GHz)$

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

Parameter	Symbol	Rating	Unit
Collector-base voltage	V_{CBO}	30	V
Collector-emitter voltage	V_{CEO}	20	V
Emitter-base voltage	V_{EBO}	3	V
Collector current	I_C	50	mA
Base current	I_B	25	mA
Collector power dissipation	P_C	150	mW
Junction temperature	T_J	125	$^\circ C$
Storage temperature	T_{stg}	-55 to +125	$^\circ C$

■ Electrical Characteristics $T_a = 25^\circ C$

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit
Collector cut-off current	I_{CBO}	$V_{CB} = 10V, I_E = 0$			1	μA
Emitter cut-off current	I_{EBO}	$V_{EB} = 1V, I_C = 0$			1	μA
DC current gain	h_{FE}	$V_{CE} = 10V, I_C = 10mA$	30	80	300	
Collector output capacitance	C_{ob}	$V_{CB} = 10V, I_E = 0, f = 1MHz$		1.15		pF
Reverse Transfer Capacitance	C_{re}	$I_C = 10mA, I_B = 1mA$		0.75		pF
Transition Frequency	f_T	$V_{CE} = 10V, I_C = 10mA$		3.5		GHz
Insertion Gain	$ S_{21e} ^2(1)$	$V_{CE} = 10V, I_C = 10mA, f=500MHz$		14.5		dB
	$ S_{21e} ^2(2)$	$V_{CE} = 10V, I_C = 10mA, f=1GHz$		9		dB
Noise Figure	NF(1)	$V_{CB}=10V, I_C=5mA, f=500MHz$		2.5		dB
	NF(2)	$V_{CB}=10V, I_C=5mA, f=1GHz$		3		dB

■ Marking

Marking	MB
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