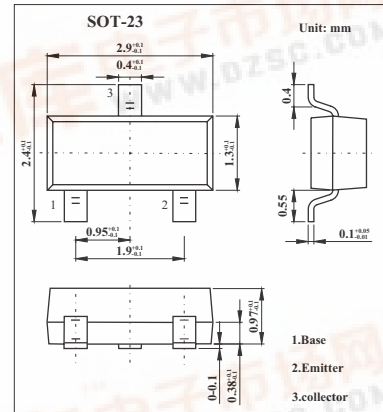


SMD Type Transistors

Silicon NPN Epitaxial
2SC3099

Features

- Low Noise Figure
- $NF=1.7dB, |S_{21e}|^2=15dB(f=500MHz)$
- $NF=2.5dB, |S_{21e}|^2=9.5dB(f=1GHz)$



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

Parameter	Symbol	Rating	Unit
Collector-base voltage	V_{CBO}	20	V
Collector-emitter voltage	V_{CEO}	20	V
Emitter-base voltage	V_{EBO}	3	V
Collector current	I_C	30	mA
Base current	I_B	15	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	Testconditons	Min	Typ	Max	Unit
Collector cut-off current	I_{CBO}	$V_{CB} = 10 V, I_E = 0$			0.1	μA
Emitter cut-off current	I_{EBO}	$V_{EB} = 1 V, I_C = 0$			1.0	μA
DC current gain	h_{FE}	$V_{CE} = 10 V, I_C = 5 mA$	30		250	
Output Capacitance	C_{ob}	$V_{CB} = 10 V, I_E = 0, f = 1 MHz$		0.9		pF
Reverse Transfer Capacitance	C_{re}			0.6		pF
Transition Frequency	f_T	$V_{CE} = 10 V, I_C = 10 mA$		4.0		GHZ
Insertion Gain	$ S_{21e} ^2(1)$	$V_{CE} = 10 V, I_C = 10 mA, f=500MHz$		15.0		dB
	$ S_{21e} ^2(2)$	$V_{CE} = 10 V, I_C = 10 mA, f=1GHz$		9.5		dB
Noise Figure	NF(1)	$V_{CB}=10V, I_C=3 mA, f=500MHz$		1.7		dB
	NF(2)	$V_{CB}=10V, I_C=3 mA, f=1GHz$		2.5		dB

Marking

Marking	MC
---------	----

