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[NE68139-T1](#)

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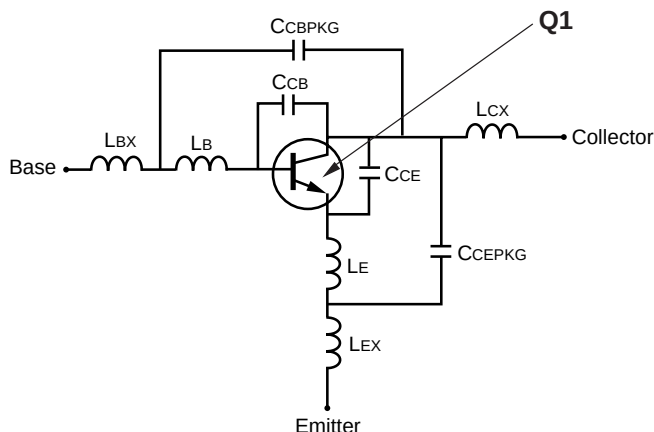
sales@integrated-circuit.com

NEC

NONLINEAR MODEL

NE68119

SCHEMATIC



BJT NONLINEAR MODEL PARAMETERS⁽¹⁾

Parameters	Q1	Parameters	Q1
IS	2.7e-16	MJC	0.56
BF	185.0	XCJC	0
NF	1.02	CJS	0
VAF	15.0	VJS	0.75
IKF	0.055	MJS	0
ISE	1.77e-11	FC	0.5
NE	2.1	TF	14.0e-12
BR	1	XTF	3
NR	1	VTF	25
VAR	Infinity	ITF	0.1
IKR	Infinity	PTF	0
ISC	0	TR	0.3e-9
NC	2	EG	1.11
RE	0.6	XTB	0
RB	12	XTI	3
RBM	3.7	KF	0
IRB	1.2e-5	AF	1
RC	8		
CJE	1.2e-12		
VJE	0.77		
MJE	0.5		
CJC	0.8e-12		
VJC	0.27		

(1) Gummel-Poon Model

UNITS

Parameter	Units
time	seconds
capacitance	farads
inductance	henries
resistance	ohms
voltage	volts
current	amps

ADDITIONAL PARAMETERS

Parameters	68119
CCB	0.07e-12
CCE	0.01e-12
LB	1.13e-9
LE	0.85e-9
CCBPKG	0.18e-12
CCEPKG	0.21e-12
LBX	0.19e-9
LCX	0.19e-9
LEX	0.19e-9

MODEL RANGE

Frequency: 0.05 to 3.0 GHz
Bias: $V_{CE} = 2.5\text{ V to }8.0\text{ V}$, $I_C = 0.3\text{ mA to }10\text{ mA}$

California Eastern Laboratories

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