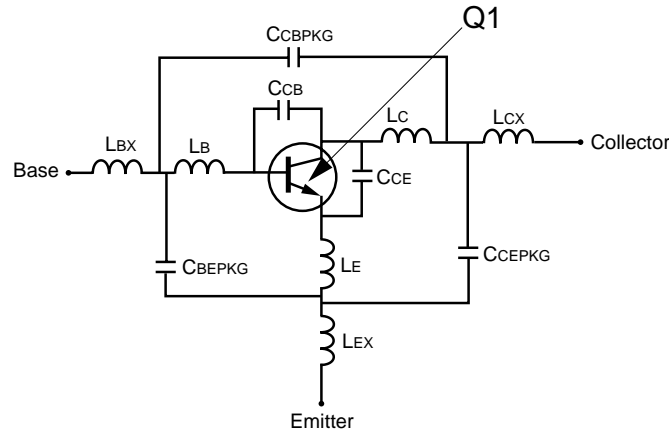


### SCHEMATIC



### BJT NONLINEAR MODEL PARAMETERS (1)

Parameters	Q1	Parameters	Q1
IS	8.0e-17	MJC	0.53
BF	128	XCJC	0.27
NF	1.0	CJS	0
VAF	17	VJS	0.75
IKF	0.18	MJS	0
ISE	3.3e-15	FC	0.37
NE	1.48	TF	6.0e-12
BR	9.05	XTF	11.9
NR	1.05	VTF	9.55
VAR	4.3	ITF	1.78
IKR	0.009	PTF	69.1
ISC	4.0e-15	TR	1.0e-9
NC	1.5	EG	1.11
RE	0.8	XTB	0
RB	11.1	XTI	3
RBM	2.46	KF	0
IRB	0.017	AF	1
RC	7.5		
CJE	0.415e-12		
VJE	0.68		
MJE	0.53		
CJC	0.102e-12		
VJC	0.29		

(1) Gummel-Poon Model

### UNITS

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

### ADDITIONAL PARAMETERS

Parameters	68718
C <sub>CB</sub>	0.26e-12
C <sub>CCE</sub>	0.19e-12
L <sub>B</sub>	1.51e-9
L <sub>C</sub>	1.18e-9
L <sub>E</sub>	0.71e-9
C <sub>CBPKG</sub>	0.063e-12
C <sub>CCEPKG</sub>	0.409e-12
C <sub>BEPKG</sub>	0.361e-12
L <sub>BX</sub>	0.18e-9
L <sub>CX</sub>	0.18e-9
L <sub>EX</sub>	0.09e-9

### MODEL RANGE

Frequency: 0.05 to 5.0 GHz  
 Bias: V<sub>CE</sub> = 1 V to 2 V, I<sub>C</sub> = 1 mA to 10 mA