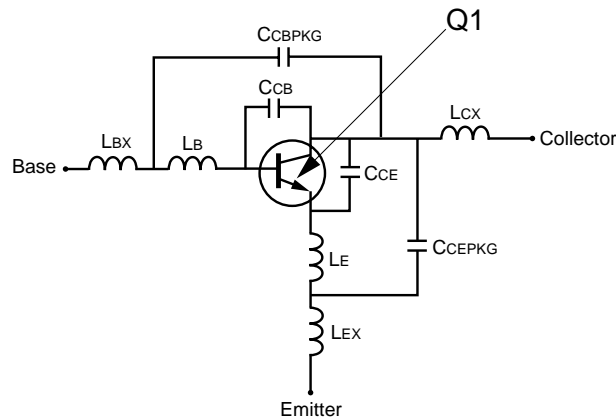


**SCHEMATIC****BJT NONLINEAR MODEL PARAMETERS (1)**

Parameters	Q1	Parameters	Q1
IS	7.0e-16	MJC	0.34
BF	109	XCJC	0
NF	1	CJS	0
VAF	15	VJS	0.75
IKF	0.19	MJS	0
ISE	7.90e-13	FC	0.5
NE	2.19	TF	2.0e-12
BR	1	XTF	5.2
NR	1.08	VTF	4.58
VAR	12.4	ITF	0.011
IKR	Infinity	PTF	0
ISC	0	TR	1.0e-9
NC	2	EG	1.11
RE	1.3	XTB	0
RB	10	XTI	3
RBM	8.34	KF	0
IRB	0.009	AF	1
RC	10		
CJE	0.4e-12		
VJE	0.81		
MJE	0.5		
CJC	0.18e-12		
VJC	0.75		

(1) Gummel-Poon Model

**UNITS**

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

**ADDITIONAL PARAMETERS**

Parameters	68519
C <sub>CB</sub>	0.13e-12
C <sub>CCE</sub>	0.14e-12
L <sub>B</sub>	0.9e-9
L <sub>E</sub>	0.9e-9
C <sub>CBPKG</sub>	0.17e-12
C <sub>CCEPKG</sub>	0.21e-12
L <sub>BX</sub>	0.19e-9
L <sub>CX</sub>	0.19e-9
L <sub>EX</sub>	0.19e-9

**MODEL RANGE**

Frequency: 0.05 to 3.0 GHz

Bias: V<sub>CE</sub> = 0.5 V to 3.0 V, I<sub>c</sub> = 0.5 mA to 20 mA**California Eastern Laboratories**EXCLUSIVE NORTH AMERICAN AGENT FOR **NEC** RF, MICROWAVE & OPTOELECTRONIC SEMICONDUCTORS**CEL CALIFORNIA EASTERN LABORATORIES** • Headquarters • 4590 Patrick Henry Drive • Santa Clara, CA 95054-1817 • (408) 988-3500 • Telex 34-6393 • FAX (408) 988-027924-Hour Fax-On-Demand: 800-390-3232 (U.S. and Canada only) • Internet: <http://WWW.CEL.COM>

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