

### BJT NONLINEAR MODEL PARAMETERS(1)

Parameters	Q1	Q2	Parameters	Q1	Q2
IS	7e-16	6e-16	MJC	0.34	0.55
BF	109	120	XCJC	0	0.3
NF	1	0.98	CJS	0	0
VAF	15	10	VJS	0.75	0.75
IKF	0.19	0.08	MJS	0	0
ISE	7.9e-13	32e-16	FC	0.5	0.5
NE	2.19	1.93	TF	2.5e-12	12e-12
BR	1	12	XTF	5.2	6
NR	1.08	0.991	VTF	4.58	10
VAR	12.4	3.9	ITF	0.01	0.2
IKR	Infinity	0.17	PTF	0	0
ISC	0	0	TR	1e-9	1e-9
NC	2	2	EG	1.11	1.11
RE	1.3	0.38	XTB	0	0
RB	10	4.16	XTI	3	3
RBM	8.34	3.6	KF	0	0
IRB	0.009	1.96e-4	AF	1	1
RC	10	2			
CJE	0.4e-12	2.8e-12			
VJE	0.81	1.3			
MJE	0.5	0.5			
CJC	0.18e-12	1.1e-12			
VJC	0.75	0.7			

(1) Gummel-Poon Model

### UNITS

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

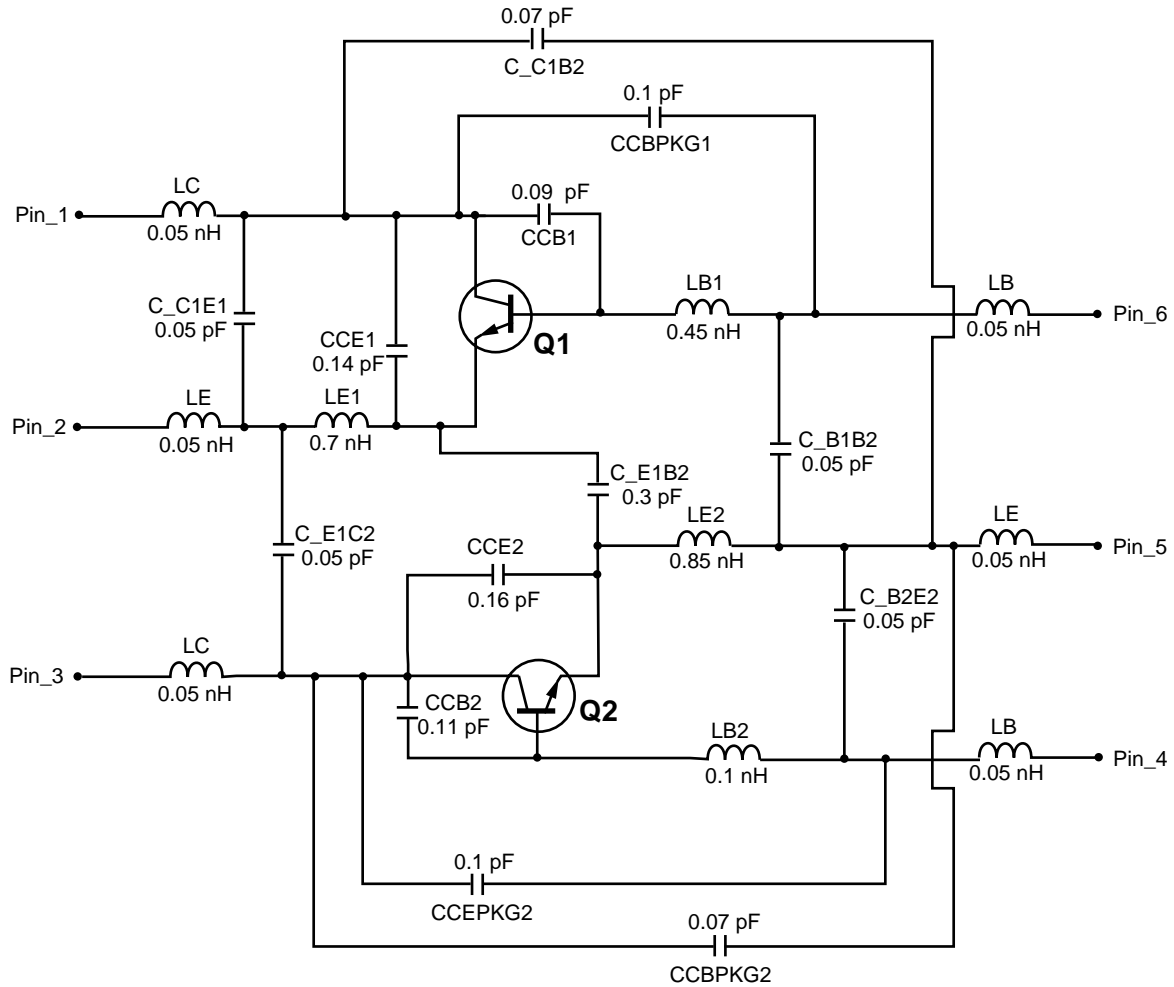
#### MODEL RANGE

Frequency: 0.1 to 3.0 GHz  
 Bias:  $V_{CE} = 0.5 \text{ V to } 5 \text{ V}$ ,  $I_c = 1 \text{ mA to } 10 \text{ mA}$   
 Date: 11/98

#### Note:

This nonlinear model utilized the latest data available. See our Design Parameter Library at [www.cel.com](http://www.cel.com) for this data.

**SCHEMATIC**



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**BUILT-IN TRANSISTORS**

	Q1	Q2
3-pin small mini mold part No.	NE68530	NE85630

**ORDERING INFORMATION**

PART NUMBER	QUANTITY	PACKAGING
UPA835TF-T1	3000	Tape & Reel

The UPA832TF features the Q1 and Q2 in inverted positions.

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DATA SUBJECT TO CHANGE WITHOUT NOTICE

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