NEC

NONLINEAR MODEL | UPA833TF

BJT NONLINEAR MODEL PARAMETERS(1)

Parameters	Q1	Q2	Parameters	Q1	Q2
IS	3.8e-16	7e-16	MJC	0.48	0.34
BF	135.7	109	XCJC	0.56	0
NF	1	1	CJS	0	0
VAF	28	15	VJS	0.75	0.75
IKF	0.6	0.19	MJS	0	0
ISE	3.8e-15	7.9e-13	FC	0.75	0.5
NE	1.49	2.19	TF	11e-12	3e-12
BR	12.3	1	XTF	0.36	5.2
NR	1.1	1.08	VTF	0.65	4.58
VAR	3.5	12.4	ITF	0.61	0.01
IKR	0.06	Infinity	PTF	50	0
ISC	3.5e-16	0	TR	32e-12	1e-9
NC	1.62	2	EG	1.11	1.11
RE	0.4	1.3	XTB	0	0
RB	6.14	10	XTI	3	3
RBM	3.5	8.34	KF	1.5e-14	0
IRB	0.001	0.009	AF	1.22	1
RC	4.2	10			
CJE	0.796e-12	0.4e-12			
VJE	0.71	0.81			
MJE	0.38	0.5			
CJC	0.549e-12	0.18e-12			
VJC	0.65	0.75			

(1) Gummel-Poon Model

UNITS

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

MODEL RANGE

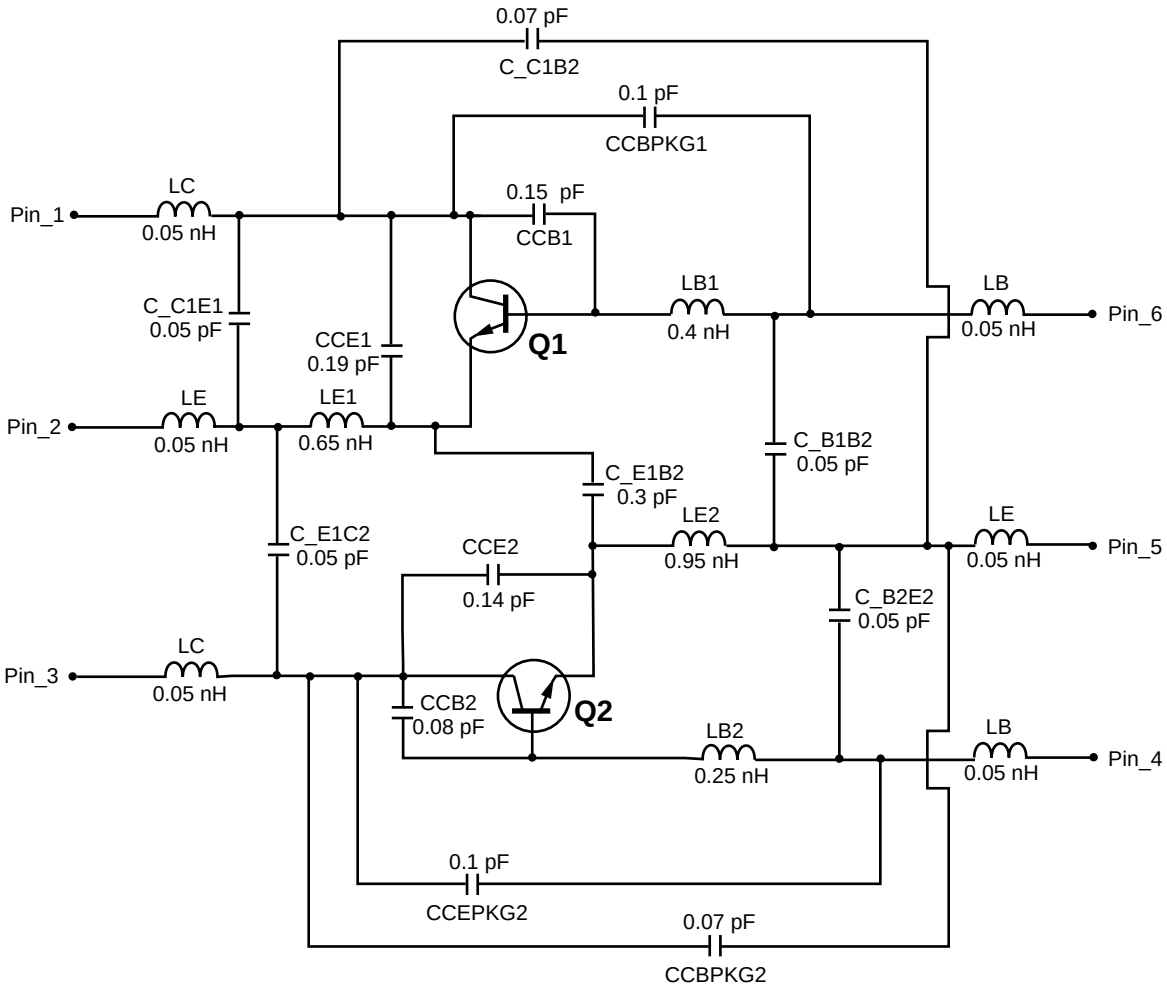
Frequency: 0.1 to 3.0 GHz

Bias: V_{CE} =0.5 V to 5 V, I_C = 1 mA to 10 mA

Date: 11/98

Note:
This nonlinear model utilized the latest data available. See our Design Parameter Library at **www.cel.com** for this data.

SCHEMATIC



MODEL RANGE

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BUILT-IN TRANSISTORS

	Q1	Q2
3-pin small mini mold part No.	NE68830	NE68530

The UPA836TF features the Q1 and Q2 in inverted positions.

ORDERING INFORMATION

PART NUMBER	QUANTITY	PACKAGING
UPA833TF-T1	3000	Tape & Reel