

NEC

NONLINEAR MODEL

NE42484A

SCHEMATIC

(see Page 2)

FET NONLINEAR MODEL PARAMETERS ⁽¹⁾

Parameters	Q1	Parameters	Q1
VTO	-0.75	RG	2.5
VTOSC	0	RD	2.5
ALPHA	7	RS	4.1
BETA	0.21	RGMET	0
GAMMA	0.09	KF	0
GAMMADC ⁽²⁾	0.08	AF	1
Q	2.1	TNOM	27
DELTA	1.2	XTI	3
VBI	1	EG	1.43
IS	1e-14	VTOTC	0
N	1	BETATCE	0
RIS	0	FFE	1
RID	0		
TAU	7e-12		
CDS	0.15e-12		
RDB	900		
CBS	1.1e-10		
CGSO ⁽³⁾	0.25e-12		
CGDO ⁽⁴⁾	0.04e-12		
DELTA1	0.3		
DELTA2	0		
FC	0.5		
VBR	Infinity		

UNITS

Parameter	Units
capacitance	picofarads
inductance	nanohenries
resistance	ohms

MODEL RANGE

Frequency: 0.1 to 16 GHz

Bias: $V_{DS} = 1\text{ V to }3.5\text{ V}$, $I_D = 10\text{ mA to }40\text{ mA}$

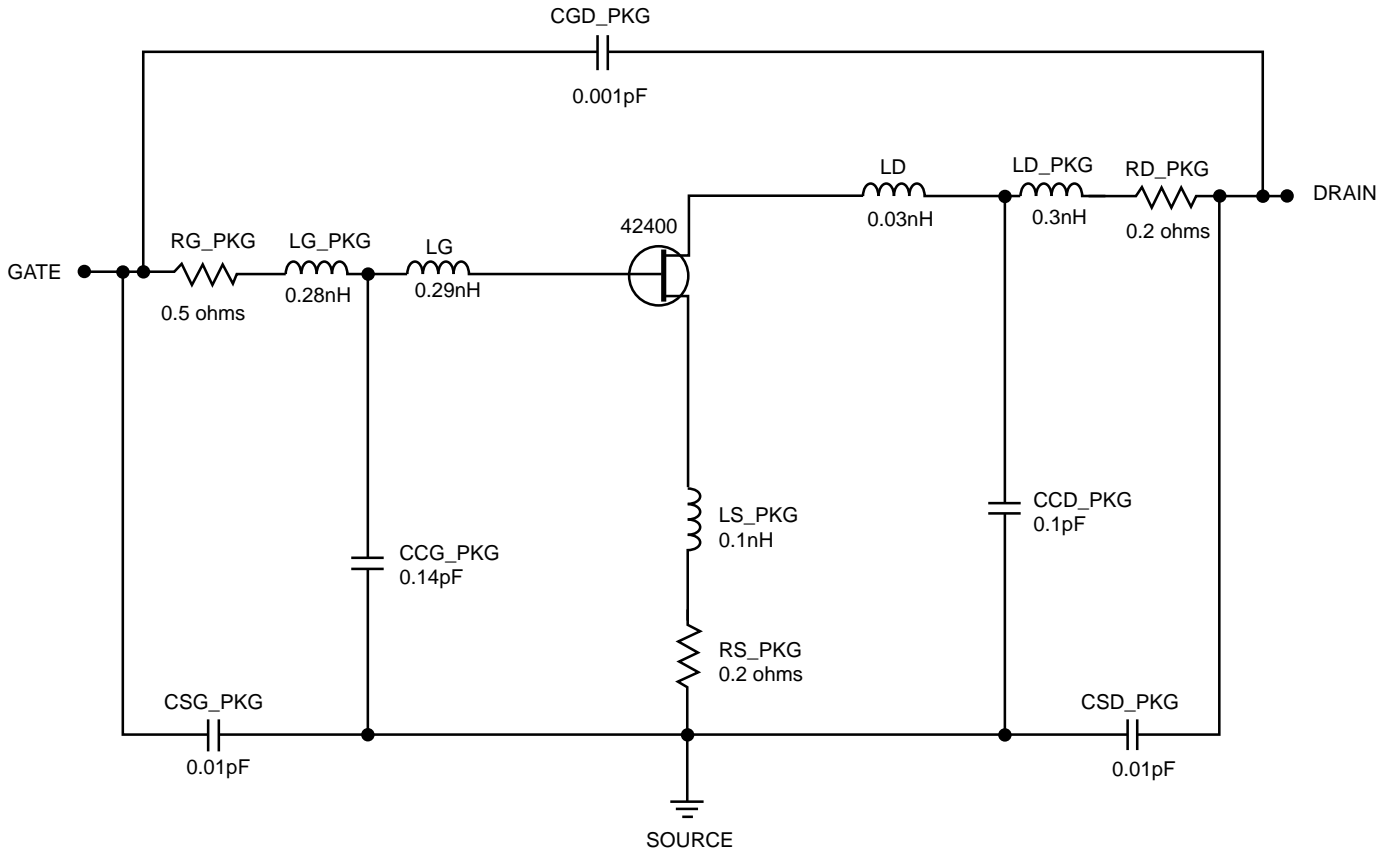
Date: 11/15/96

(1) Series IV Libra TOM Model

The parameter in Libra corresponds to the parameter in PSpice:

(2) GAMMADC	GAMMA
(3) CGSO	CGS
(4) CGDO	CGD

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