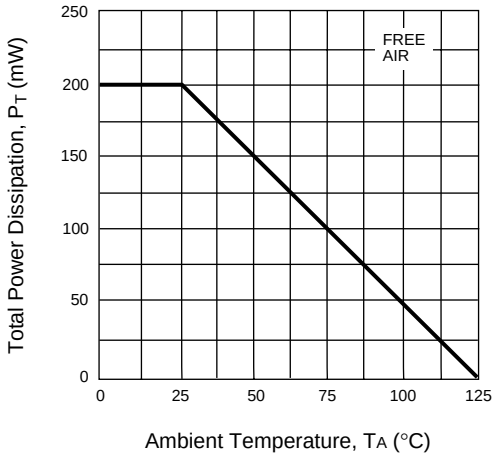
ABSOLUTE MAXIMUM RATINGS[1] (T_A = 25°C)

SYMBOLS	PARAMETERS	UNITS	RATINGS
V_{DSX}	Drain to Source Voltage	V	10
V_{G1S}	Gate 1 to Source Voltage	V	-4.5
V_{G2S}	Gate 2 to Source Voltage	V	-4.5
I_D	Drain Current	mA	80
T_{CH}	Channel Temperature	°C	125
T_{STG}	Storage Temperature	°C	-55 to +125
P_T	Total Power Dissipation	mW	200

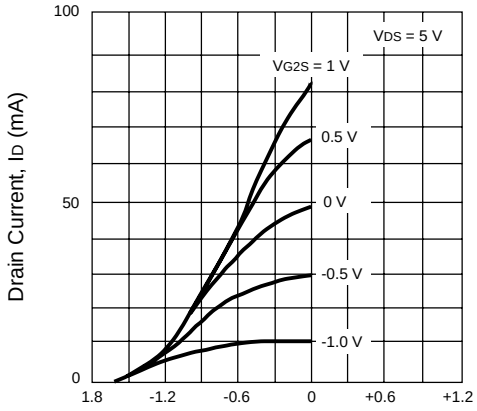
Note:
1. Operation in excess of any one of these parameters may result in permanent damage.

TYPICAL PERFORMANCE CURVES (T_A = 25°C)

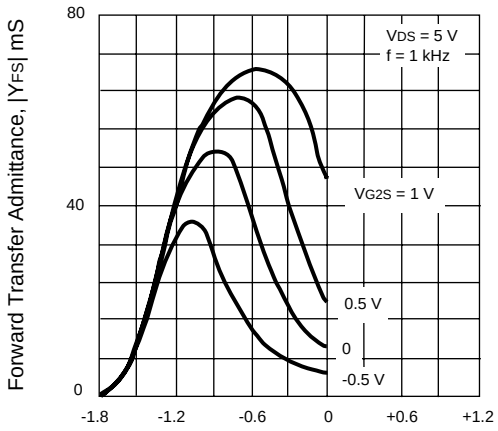
TOTAL POWER DISSIPATION vs. AMBIENT TEMPERATURE



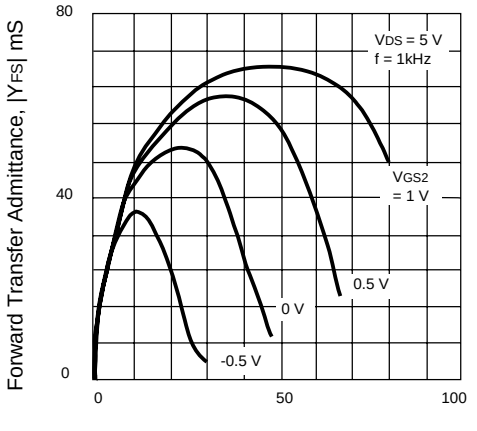
DRAIN CURRENT vs. GATE 1 TO SOURCE VOLTAGE



FORWARD TRANSFER ADMITTANCE vs. GATE 1 TO SOURCE VOLTAGE

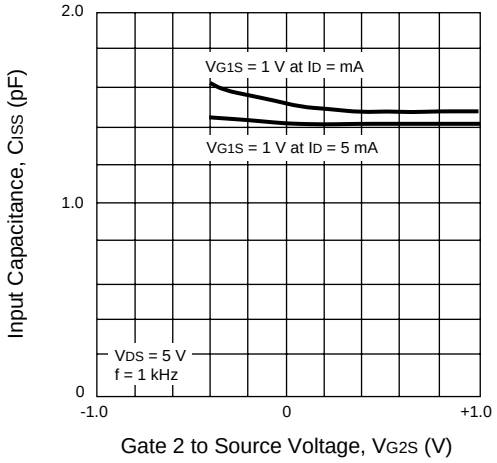


FORWARD TRANSFER ADMITTANCE vs. DRAIN CURRENT

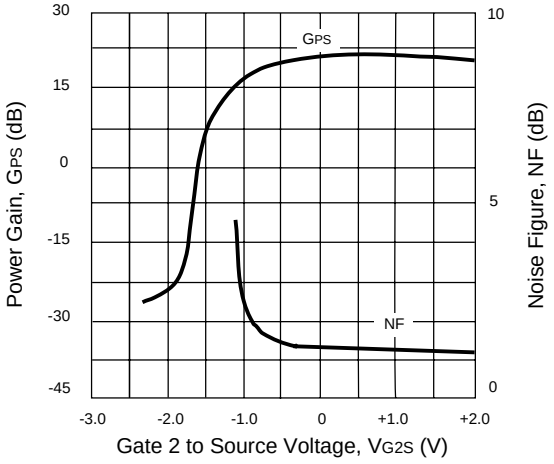


TYPICAL PERFORMANCE CURVES (T_A = 25°C)

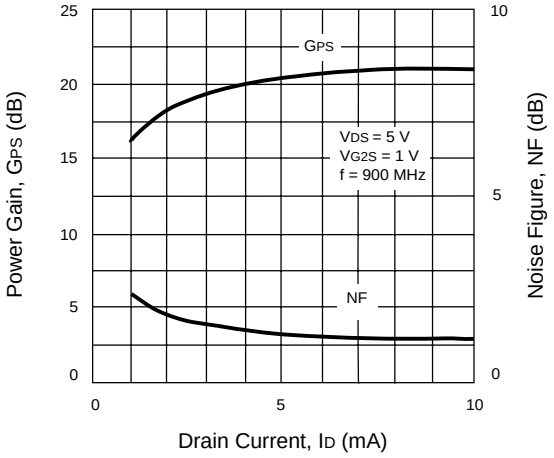
INPUT CAPACITANCE vs. GATE 2 TO SOURCE VOLTAGE



POWER GAIN AND NOISE FIGURE vs. GATE 2 TO SOURCE VOLTAGE

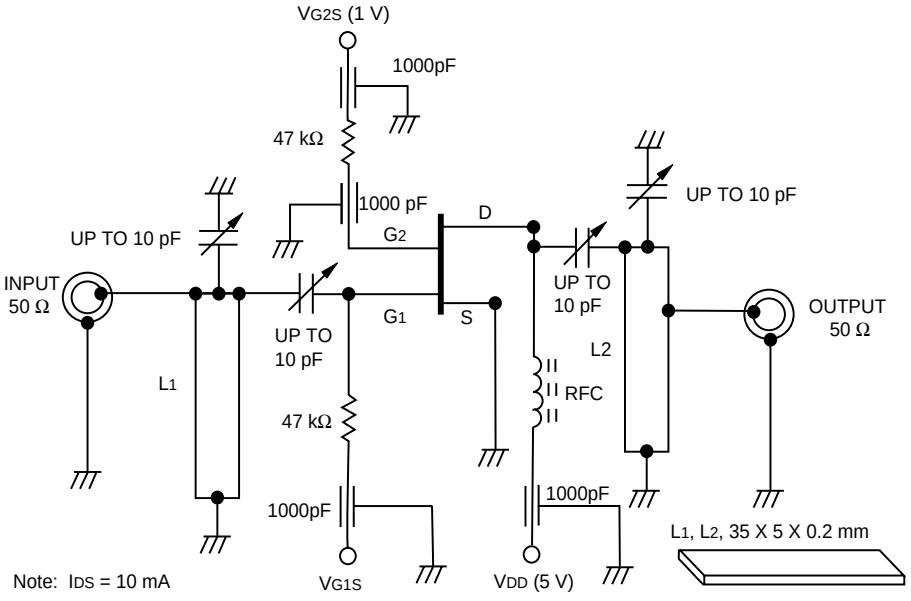


POWER GAIN AND NOISE FIGURE vs. DRAIN CURRENT



TEST CIRCUIT DIAGRAM

900 MHz G_{PS} and NF TEST CIRCUIT



NONLINEAR MODEL

UNITS FOR MODEL PARAMETERS

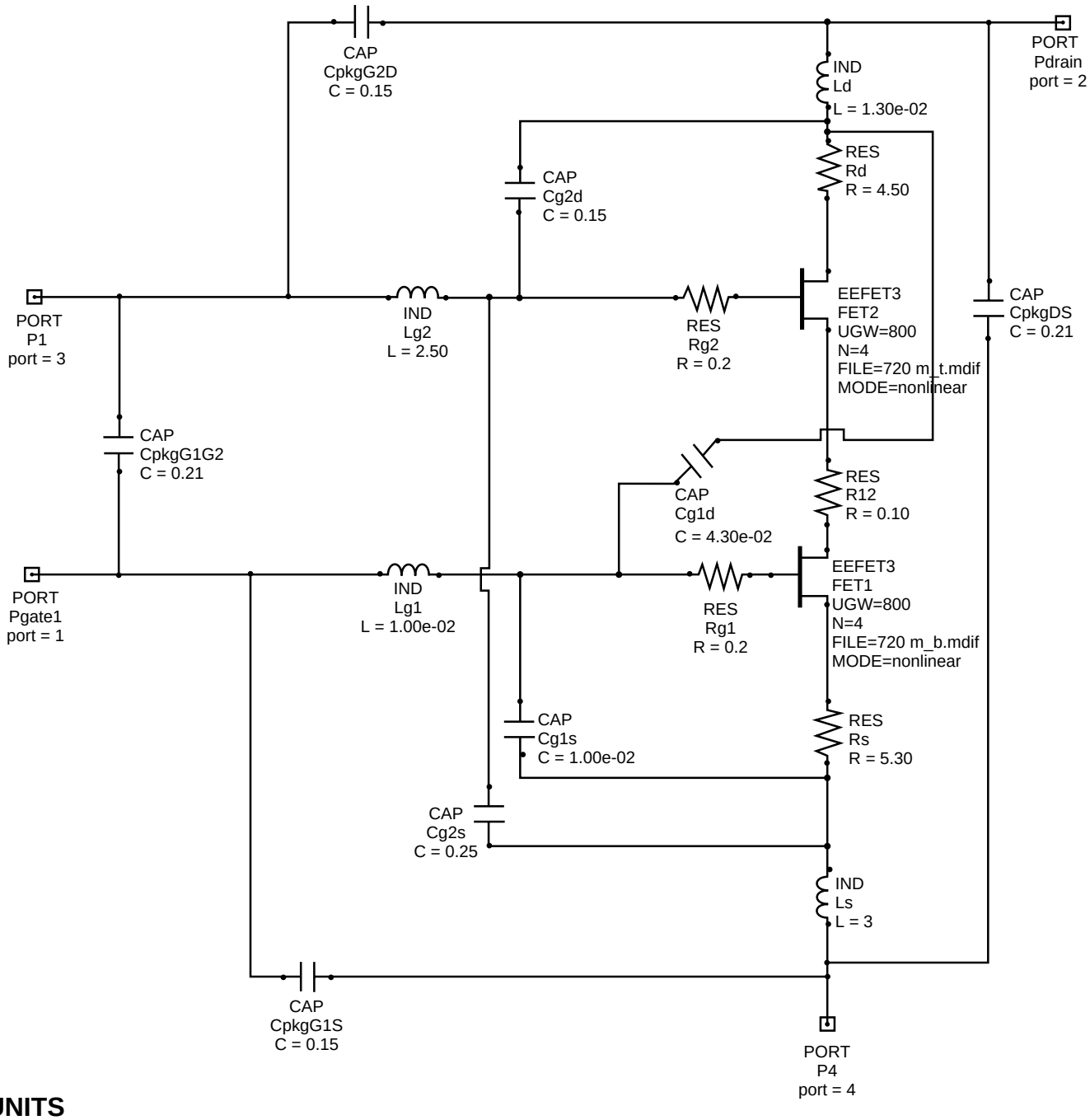
Parameter	Units
time	seconds
capacitance	farads
inductance	henries
resistance	ohms
voltage	volts
current	amps

FET NONLINEAR MODEL PARAMETERS(1)

Parameters	FET1	FET2	Parameters	FET1	FET2
UGW	100e-6	100e-6	IDSOC	0.07	0.07
NGF	4	4	RDB	1.0e9	1.0e9
IS	8.78e-10	8.78e-10	CBS	0.16e-12	0.16e-12
N	1.33	1.33	GDBM	0.00035	0
RG	0	0	KDB	0	0
RD	0	0	VDSM	1	1
RS	0	0	GMMAXAC	0.0195	0.0394
RIS	0	0	GAMMAAC	0.006	0.06
RID	0	0	KAPAAC	0.95	0.95
TAU	1.0e-12	1.0e-12	PEFFAC	1.67	2.07
CDSO	5.0e-15	5.0e-15	VTOAC	-1.895	-1.895
C11O	0.25e-12	0.5e-12	VTSOAC	-10	-10
C11TH	0.1e-12	0.1e-12	VDELTAC	3	3
VINFL	-1.12	-1.12	GMMAX	0.0294	0.0394
DELTGS	1.2	1.2	GAMMA	0.005	0.006
DELTDS	1	0.1	KAPA	0.8	0.026
LAMBDA	0.25	0.25	PEFF	1.636	1.636
C11DELT	0	0	VTO	-2	-2
C12O	0	0	VTSO	-10	-10
C12SAT	0.01e-12	0.01e-12	VDELT	1.47	1.47
CGDSAT	1.0e-15	1.0e-15	VCH	1	1
KBK	0.03	0.03	VSAT	3	3
VBR	6.5	6.5	VGO	1.47	1.47
NBR	2	2	VDSO	3	3

(1) Libra EEFET3 Model

SCHEMATIC



UNITS

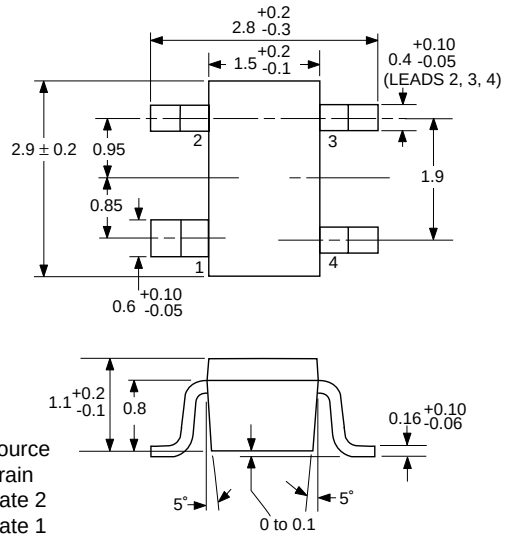
Parameter	Units
capacitance	picofarads
inductance	nanohenries
resistance	ohms

NOTES:
1. This UGW value scales the model parameters on page 1.
2. This N value is the number of gate fingers and scales the model parameters on page 1.

Frequency: 0.1 to 1.5 GHz
Bias: V_{DS} = 3 V, V_{g1S}= -1.45 V, V_{g2S}= 1 V, I_D = 3 mA

OUTLINE DIMENSIONS (Units in mm)

OUTLINE 39
(SOT-143)



1. Source
2. Drain
3. Gate 2
4. Gate 1

ORDERING INFORMATION

PART NUMBER	AVAILABILITY	IDSS RANGE (mA)	MARKING
NE25339	Bulk up to 3 K	10 - 80	-
NE25339-T1	3K/Reel	10 - 80	-

Mouser Electronics

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CEL:

NE25139-T1-U72 NE25339-T1