

RF MOSFET Power Transistor, 10W, 28V

500 - 1000 MHz

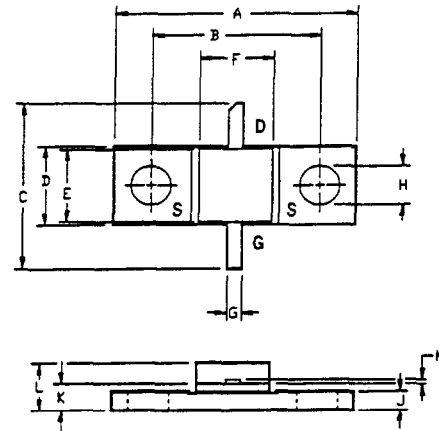
LF2810A

V2.00

Features

- N-Channel Enhancement Mode Device
- DMOS Structure
- Lower Capacitances for Broadband Operation
- Common Source Configuration
- Lower Noise Floor
- Applications

Broadband Linear Operation
500 MHz to 1200 MHz



Absolute Maximum Ratings at 25°C

Parameter	Symbol	Rating	Units
Drain-Source Voltage	V_{DS}	65	V
Gate-Source Voltage	V_{GS}	20	V
Drain-Source Current	I_{DS}	2.8	A
Power Dissipation	P_D	26.5	W
Junction Temperature	T_J	200	°C
Storage Temperature	T_{STG}	-55 to +150	°C
Thermal Resistance	θ_{JC}	6.6	°C/W

LETTER DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	20.70	20.96	.815	.825
B	14.35	14.61	.565	.575
C	13.72	14.22	.540	.560
D	6.27	6.53	.247	.257
E	6.22	6.48	.245	.255
F	6.22	6.48	.245	.255
G	1.14	1.40	.045	.055
H	2.92	3.18	.115	.125
J	1.40	1.65	.055	.065
K	1.96	2.46	.077	.097
L	3.61	4.37	.142	.172
M	.08	.15	.003	.006

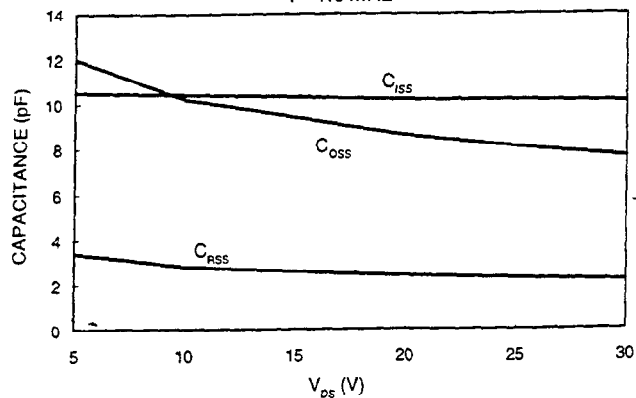
Electrical Characteristics at 25°C

Parameter	Symbol	Min	Max	Units	Test Conditions
Drain-Source Breakdown Voltage	BV_{DSS}	65	-	V	$V_{GS}=0.0$ V, $I_{DS}=4.0$ mA
Drain-Source Leakage Current	I_{DSS}	-	2.0	mA	$V_{DS}=28.0$ V, $V_{GS}=0.0$ V
Gate-Source Leakage Current	I_{GSS}	-	2.0	μA	$V_{GS}=20$ V, $V_{DS}=0.0$ V
Gate Threshold Voltage	$V_{GS(TH)}$	2.0	6.0	V	$V_{DS}=10.0$ V, $I_{DS}=20.0$ mA
Forward Transconductance	G_M	160	-	mS	$V_{DS}=10.0$ V, $I_{DS}=200.0$ mA, 80-30 μs Pulse
Input Capacitance	C_{ISS}	-	14	pF	$V_{DS}=28.0$ V, $F=1.0$ MHz
Output Capacitance	C_{OSS}	-	10	pF	$V_{DS}=28.0$ V, $F=1.0$ MHz
Reverse Capacitance	C_{RSS}	-	4.8	pF	$V_{DS}=28.0$ V, $F=1.0$ MHz
Power Gain	G_P	10	-	dB	$V_{DD}=28.0$ V, $I_{DQ}=100$ mA, $P_{OUT}=10.0$ W, $F=1.0$ GHz
Drain Efficiency	η_D	50	-	%	$V_{DD}=28.0$ V, $I_{DQ}=100$ mA, $P_{OUT}=10.0$ W, $F=1.0$ GHz
Load Mismatch Tolerance	VSWR-T	-	20:1	-	$V_{DD}=28.0$ V, $I_{DQ}=100$ mA, $P_{OUT}=10.0$ W, $F=1.0$ GHz

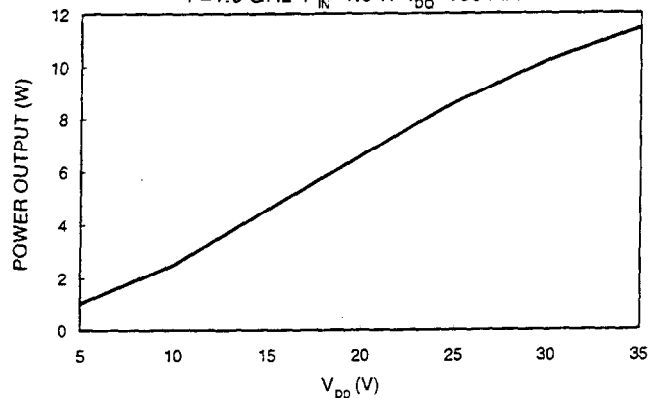
Typical Broadband Performance Curves

CAPACITANCES vs VOLTAGE

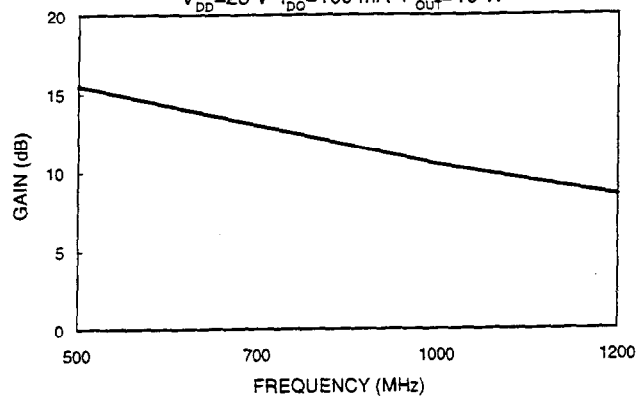
F=1.0 MHz



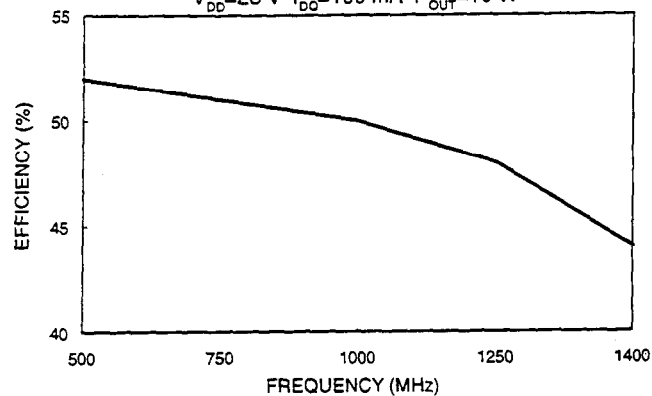
POWER OUTPUT vs VOLTAGE

F=1.0 GHz $P_{in}=1.0$ W $I_{DQ}=100$ mA

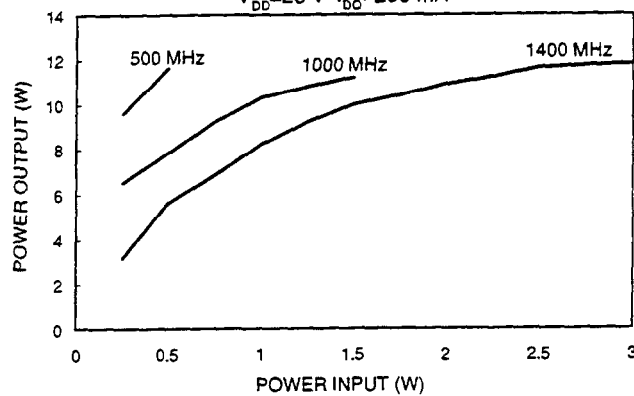
GAIN vs FREQUENCY

 $V_{DD}=28$ V $I_{DQ}=100$ mA $P_{OUT}=10$ W

EFFICIENCY vs FREQUENCY

 $V_{DD}=28$ V $I_{DQ}=100$ mA $P_{OUT}=10$ W

POWER OUTPUT vs POWER INPUT

 $V_{DD}=28$ V $I_{DQ}=200$ mA

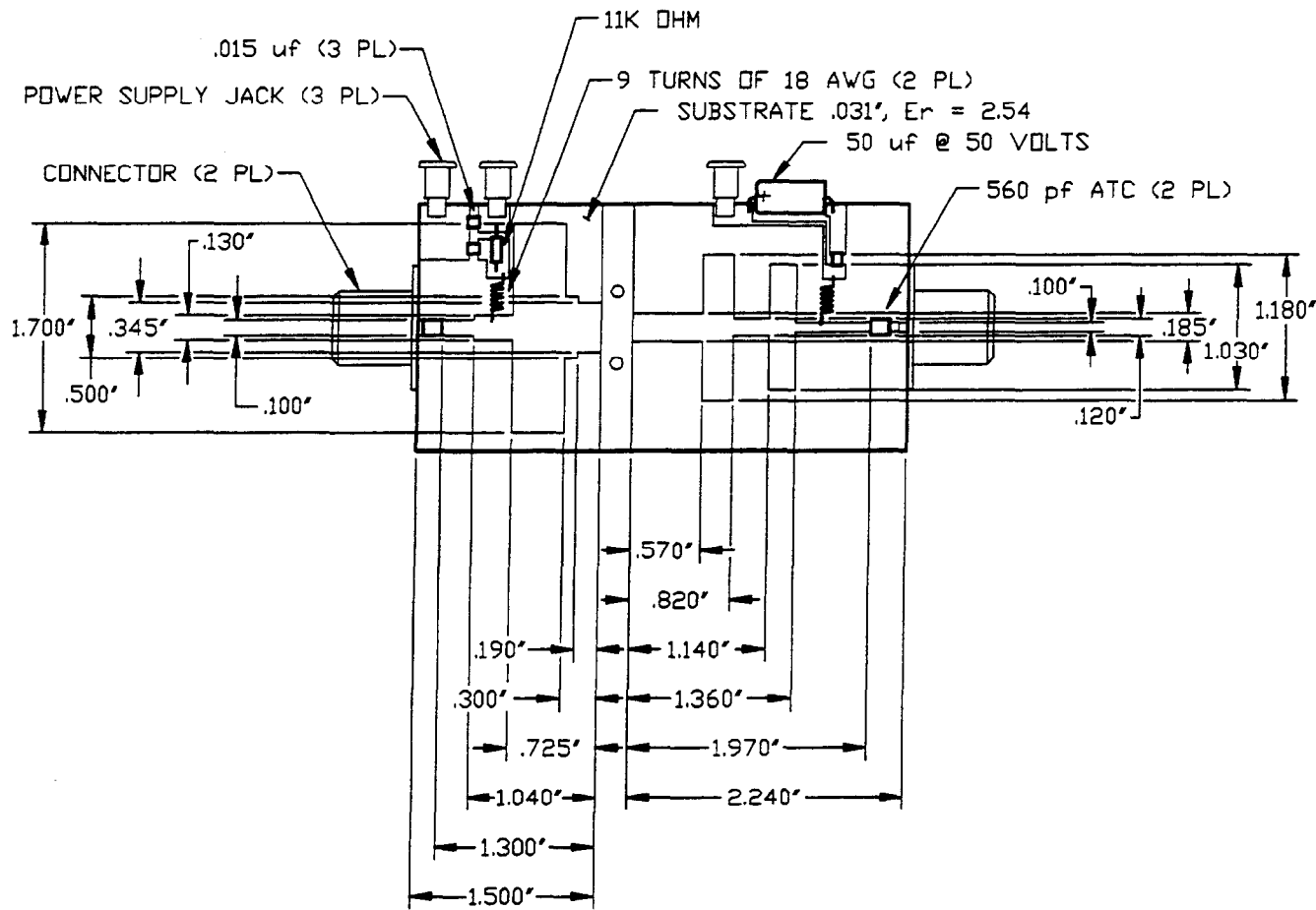
Typical Device Impedance

Frequency (MHz)	Z_{IN} (OHMS)	Z_{LOAD} (OHMS)
500	$0.60 - j 9.5$	$10.0 + j 17.0$
1000	$1.4 + j 1.0$	$4.85 + j 7.9$
1200	$1.5 + j 3.5$	$5.7 + j 5.7$

$V_{DD}=28\text{ V}$, $I_{DD}=100\text{ mA}$, $P_{OUT}=10\text{ Watts}$

Z_{IN} is the series equivalent input impedance of the device from gate to source.
 Z_{LOAD} is the optimum series equivalent load impedance as measured from drain to ground.

RF Test Fixture



Copyright Each Manufacturing Company.

All Datasheets cannot be modified without permission.

This datasheet has been download from :

www.AllDataSheet.com

100% Free DataSheet Search Site.

Free Download.

No Register.

Fast Search System.

www.AllDataSheet.com