

Figure 1- Gain vs. Power Output

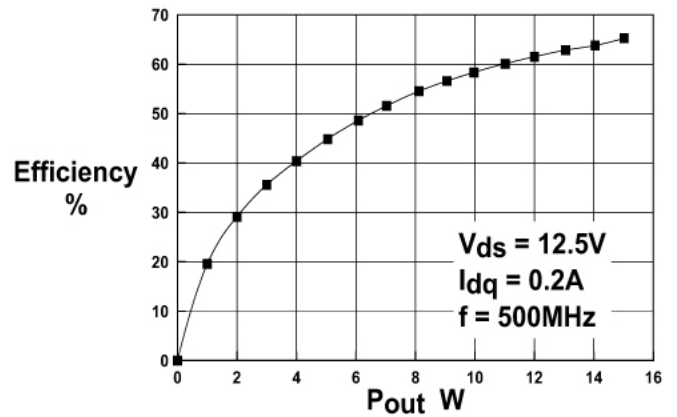


Figure 2 - Efficiency vs. Power Output

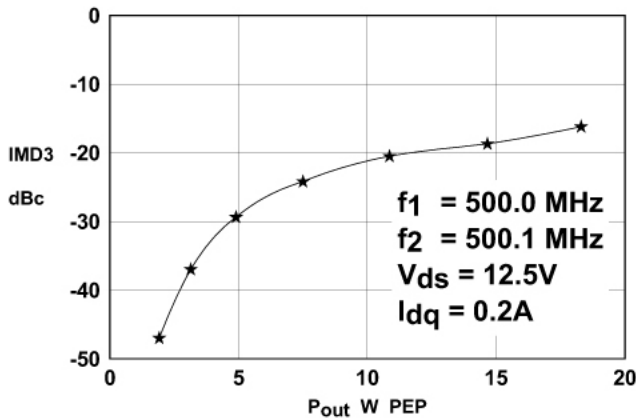


Figure 3 - IMD vs. Power Output

OPTIMUM SOURCE AND LOAD IMPEDANCE

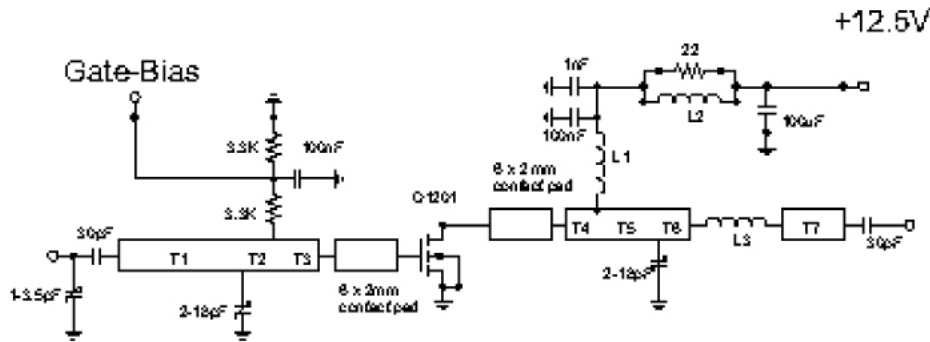
Frequency MHz	Z _S Ω	Z _L Ω
500MHz	2.7 + j2.7	3.5 - j0.9

Typical S Parameters

! V_{DS} = 12.5V, I_{DQ} = 1A
MHZ S M A R 50

Freq MHz	S11		S21		S12		S22	
	mag	ang	mag	ang	mag	ang	mag	ang
100	0.92	-157	9.33	90	0.018	18	0.72	-174
200	0.92	-162	8.12	81	0.022	24	0.75	-175
300	0.91	-167	6.90	71	0.026	29	0.78	-176
400	0.91	-172	5.69	62	0.03	35	0.80	-177
500	0.91	-177	4.48	52	0.034	41	0.83	-178
600	0.90	178	3.26	43	0.038	47	0.85	-179
700	0.90	173	2.05	33	0.042	52	0.88	-180
800	0.89	168	0.83	24	0.046	58	0.90	179
900	0.90	162	0.70	17	0.054	55	0.91	174
1000	0.90	160	0.58	16	0.061	55	0.91	174

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Substrate 0.8mm PTFE/glass, $\epsilon_r=2.5$

All microstrip lines $W=2.2\text{mm}$

T1 32mm

T2 4mm

T3 5mm

T4 3mm

T5 9mm

T6 7.5mm

T7 13mm

L1 6 turns 0.5mm dia enamelled copper wire, 3mm i.d.

L2 1.5 turns 0.5mm enamelled copper wire on Siemens B62152A7 2 hole ferrite core

L3 1/16" dia wire hairpin loop 15mm long

D1201 500MHz Test Fixture

