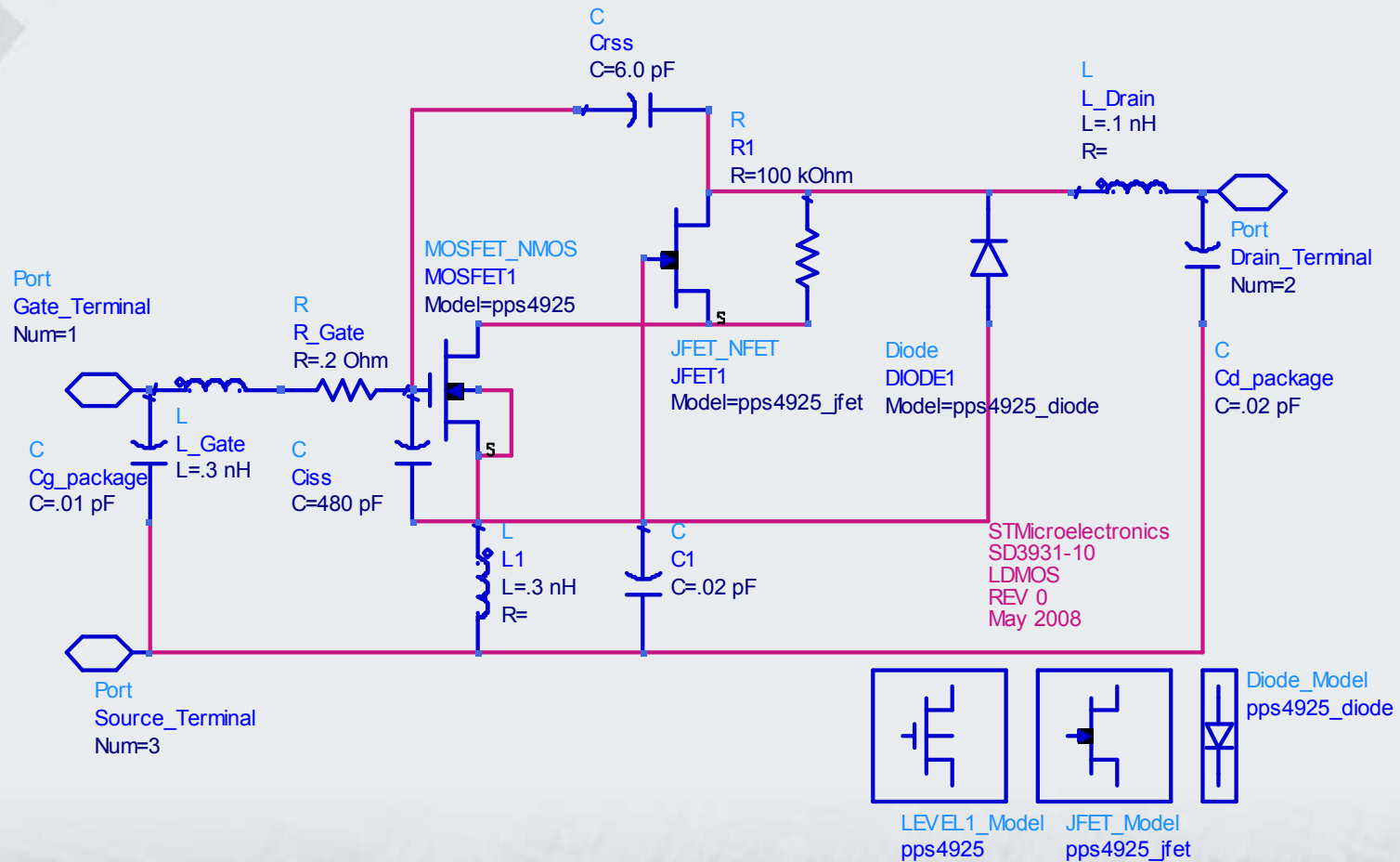


SD3931-10  
Model Validation



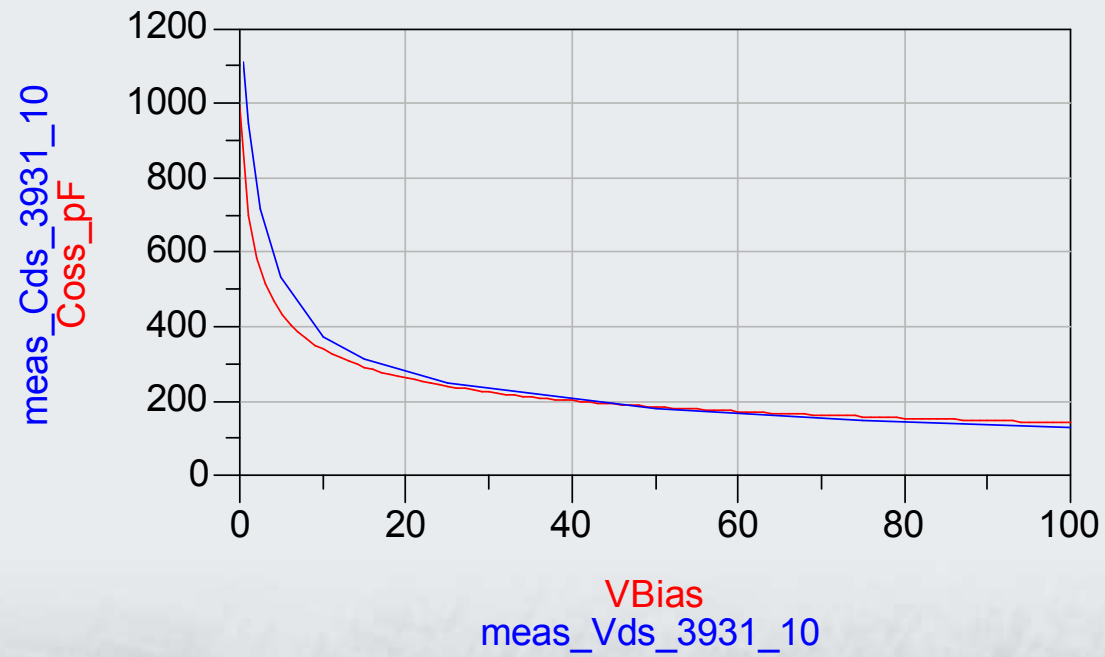
Quakertown , PA  
Qtn-jp-258-rev0  
May 30 , 2008



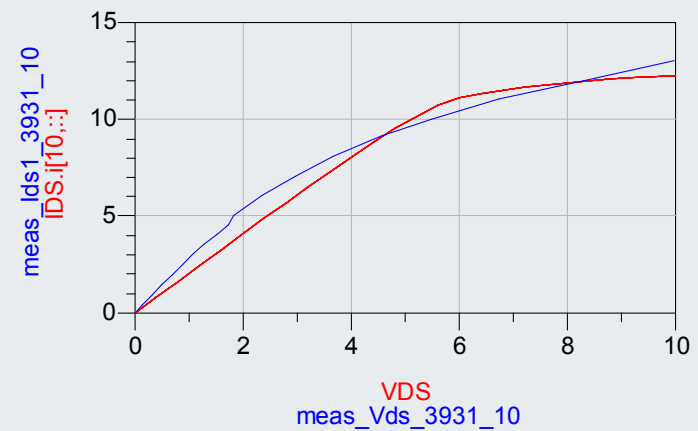
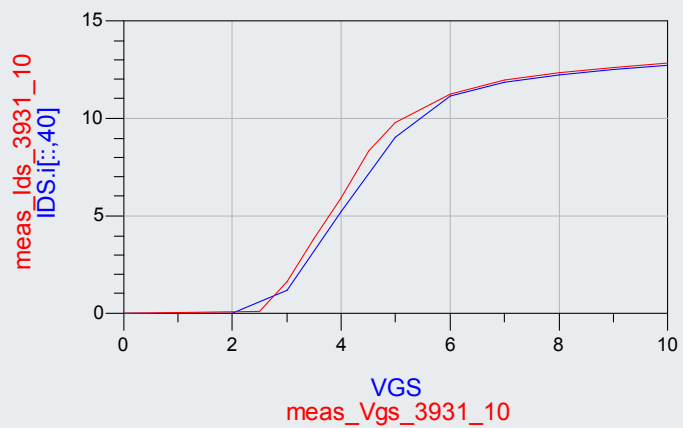
ADS2005A Model



## Output capacitance Measurement vs Simulated



## DC characteristics measured / simulated



# S-parameter Measured vs Simulated

measured 100 V 250 mA

freq	S(1,1)	S(2,1)	S(1,2)	S(2,2)
50.00 MHz	0.936 / -170.756	6.373 / 46.773	0.006 / -26.825	0.755 / -150.905
75.00 MHz	0.962 / -173.287	3.397 / 33.767	0.003 / -22.715	0.840 / -158.466
100.0 MHz	0.973 / -175.070	2.071 / 24.380	0.002 / 9.116	0.885 / -163.129
125.0 MHz	0.981 / -176.310	1.384 / 17.629	0.002 / 48.994	0.905 / -166.670
150.0 MHz	0.989 / -177.165	0.979 / 12.488	0.004 / 68.788	0.913 / -168.752
175.0 MHz	0.995 / -177.953	0.726 / 8.417	0.005 / 76.234	0.921 / -170.987
200.0 MHz	0.996 / -178.505	0.573 / 7.089	0.006 / 79.202	0.929 / -171.153

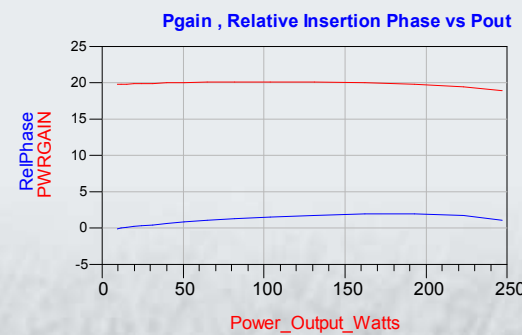
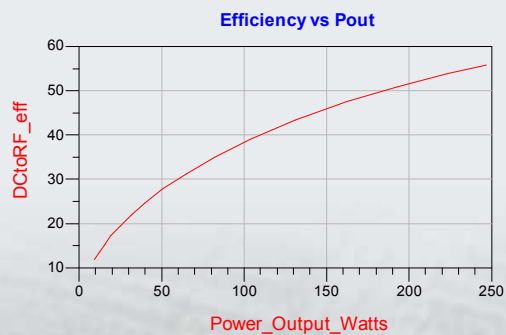
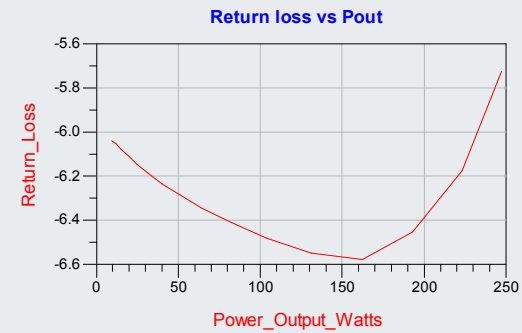
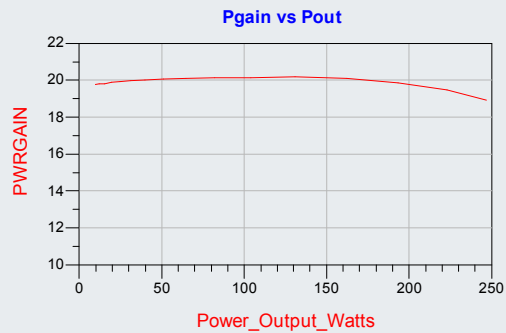
simulated 100 V 250 mA

freq	S(1,1)	S(2,1)	S(1,2)	S(2,2)
50.00 MHz	0.910 / -169.438	8.540 / 52.222	0.005 / -19.739	0.711 / -143.632
75.00 MHz	0.939 / -172.007	4.600 / 39.870	0.002 / 4.005	0.819 / -151.591
100.0 MHz	0.957 / -173.809	2.830 / 31.960	0.003 / 70.127	0.879 / -157.262
125.0 MHz	0.967 / -175.166	1.900 / 26.671	0.005 / 88.971	0.914 / -161.325
150.0 MHz	0.974 / -176.228	1.358 / 23.009	0.007 / 93.141	0.935 / -164.331
175.0 MHz	0.978 / -177.090	1.016 / 20.421	0.010 / 94.125	0.948 / -166.634
200.0 MHz	0.981 / -177.812	0.788 / 18.589	0.012 / 94.153	0.958 / -168.455



# Large Signal Simulations

$V_{ds} = 100 \text{ V}$  ,  $I_{dq} = 250 \text{ mA}$  ,  $F = 150 \text{ MHz}$



$$Z_{in} = .42 - j 3.1 \quad Z_{dl} = 3.4 + j 5.5$$

