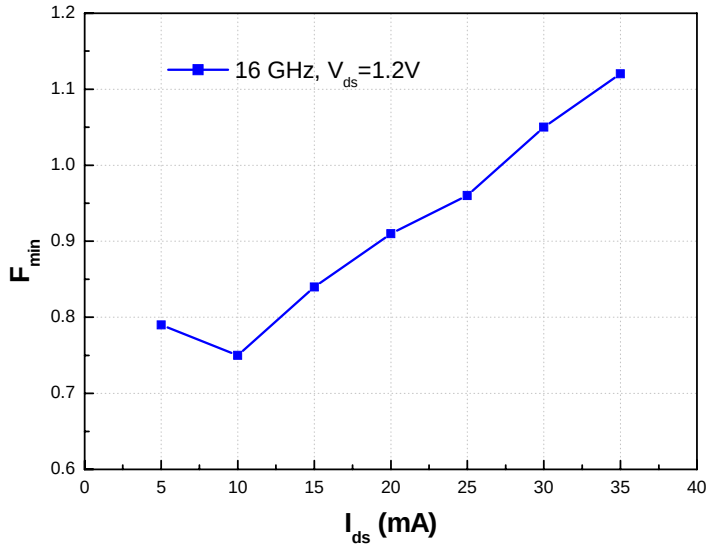
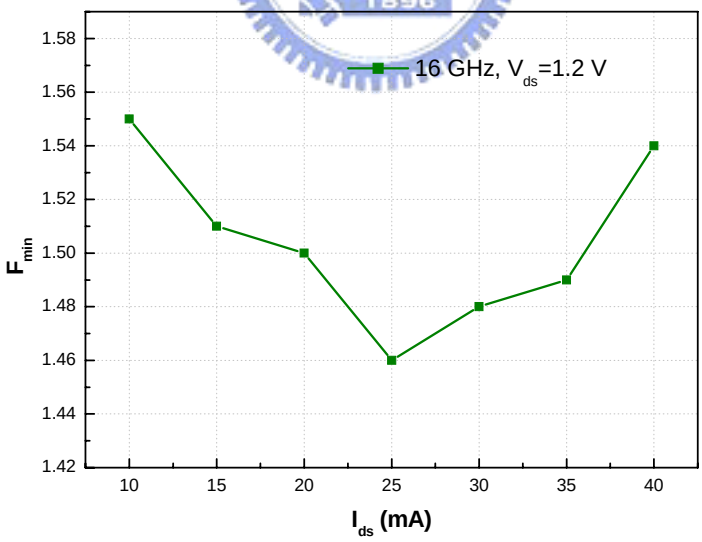
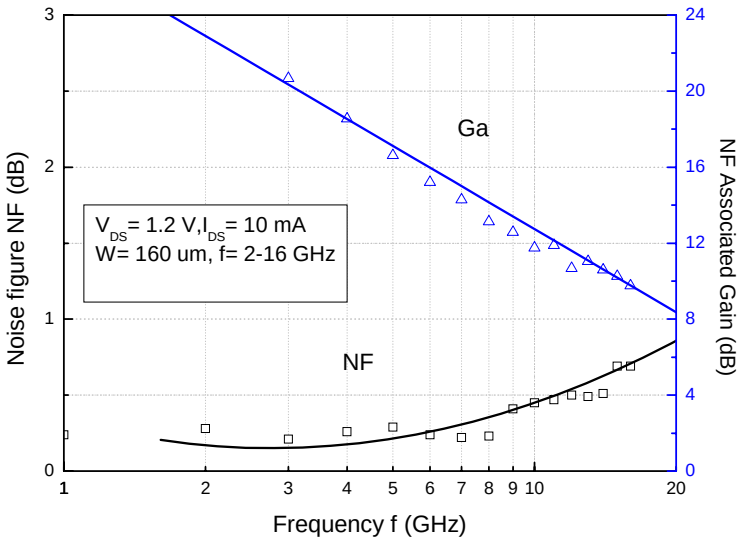


Sample A

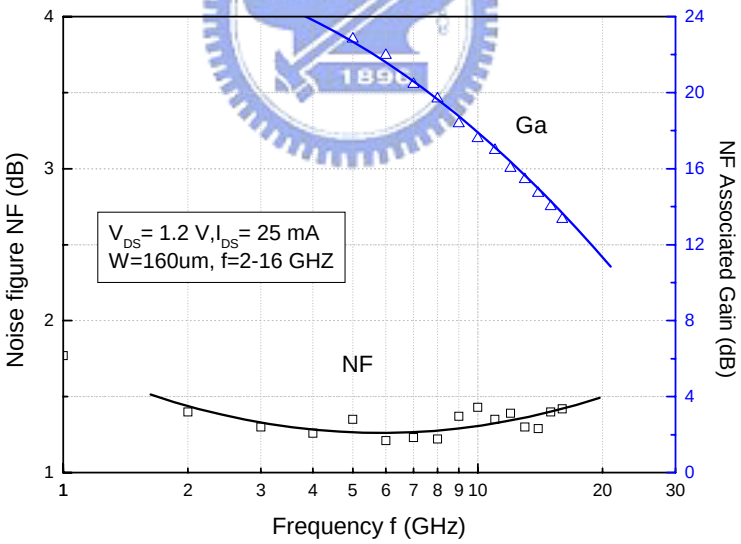


Sample B

Fig. 4.7 F_{min} vs. Ids at 16 GHz of sample A and sample B



Sample A



Sample B

Fig. 4.8 Noise figure (NF_{min}) and associated gain (Ga) vs. frequency of sample A and sample B

SG:SEL:NS:1;R:1;IC:MXG;IDOT:PIN;ISTB:A;
LG:SEL:NS:61;R:.8;OC:S#:21;ODOT:POUT;OSTB:A;

P(Out) (dBm) versus Load-Output

Frequency (f0): 2.4 GHz
Source State: 1 #352
Source Gamma: .80 27.3
Bias# 1
Bias Values Read:
Vg:-.400 V, Ig:-.023 mA
Vd:2.000 V, Id:62.920 mA

Contour Start: 10
Contour Step : .5
Contour Stop : 16.5
Fitted Max : 16.57
Mag .125, Angle 154.888
Fitted Min : .079
Mag .977, Angle -50.908
Fit Type EXP 3 NT 10
Power: -5 dBm

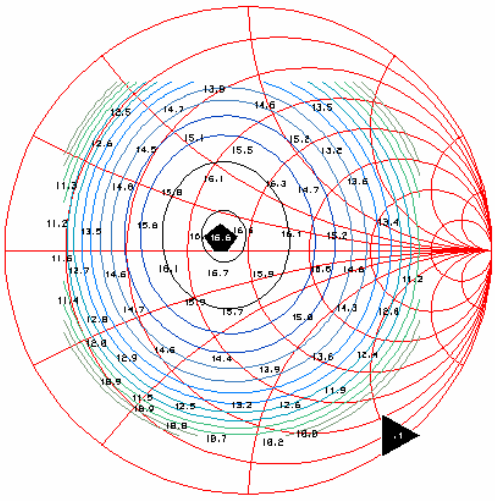
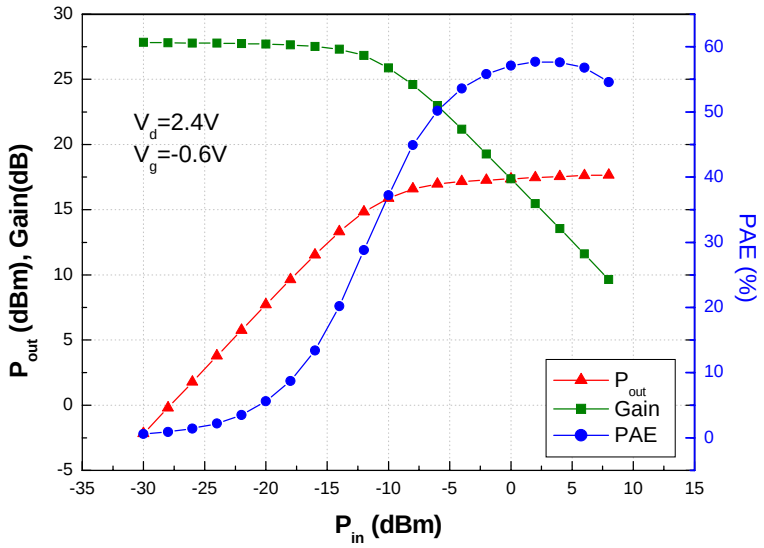
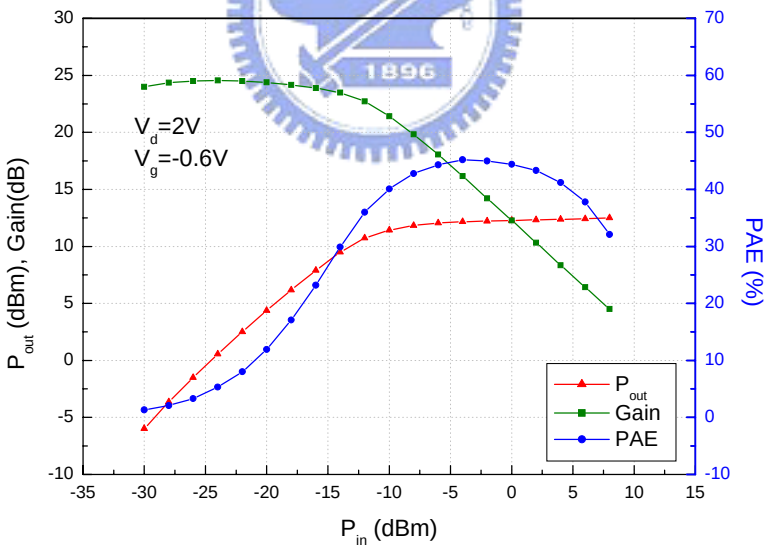


Fig. 4.9 Output power contours with a fixed input power of -5dBm at 2.4GHz for sample A

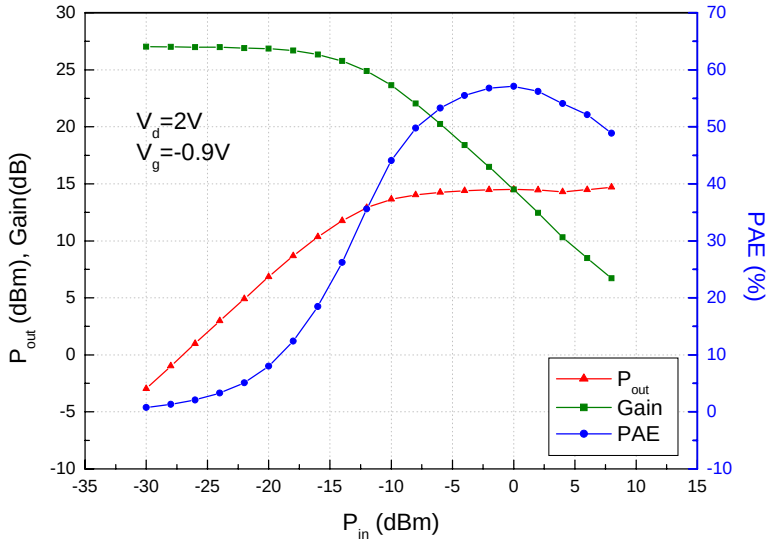


Sample A

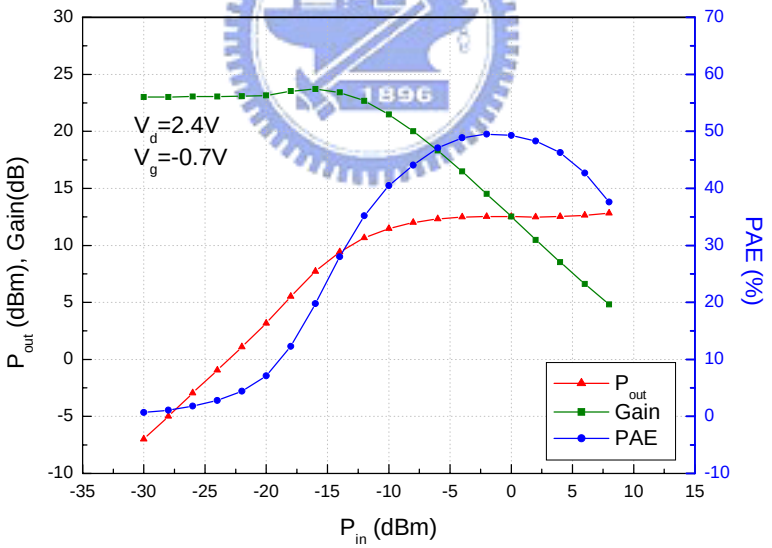


Sample B

Fig. 4.10 P_{out}, gain and PAE of the sample A and sample B at 2.4GHz



Sample A



Sample B

Fig. 4.11 P_{out}, gain and PAE of the sample A and sample B at 6GHz

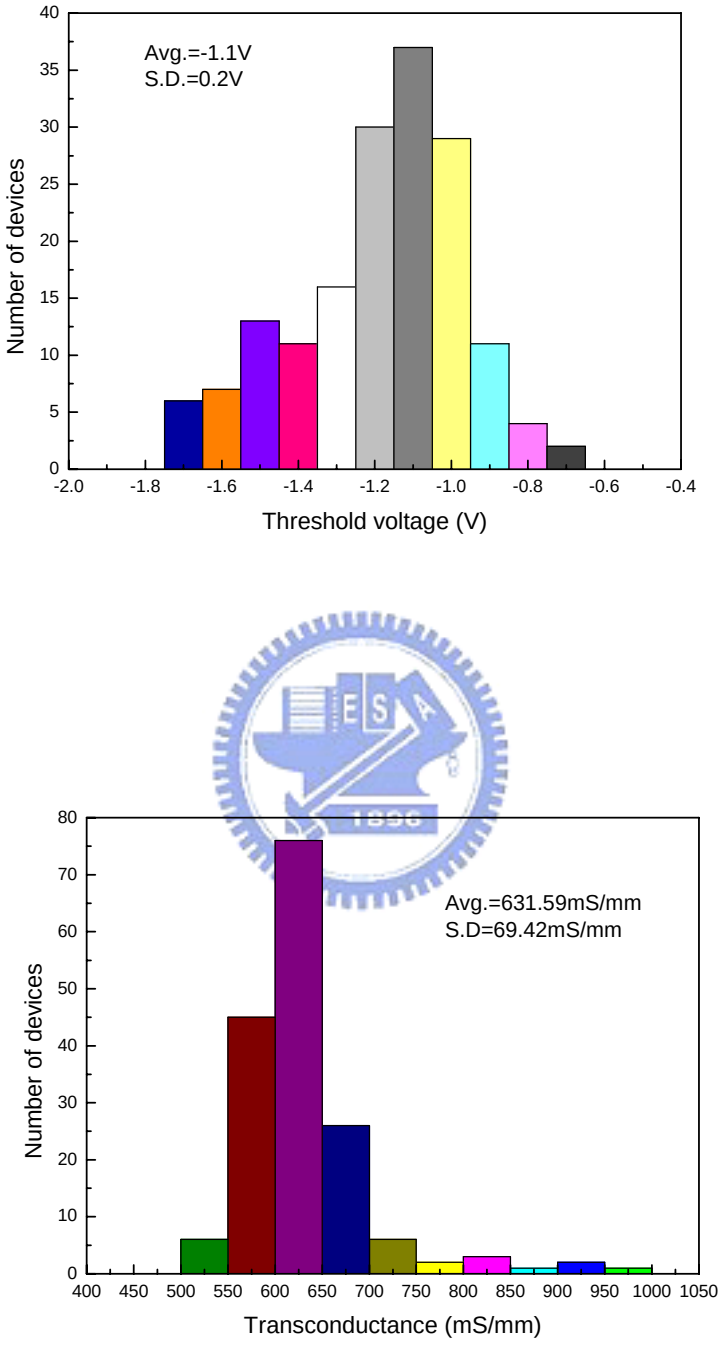


Fig. 4.12 The histogram of V_{th} and g_m across the wafer for sample A