ECEN 325 - 512

Characterizations of the MOSFET

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Contributors:

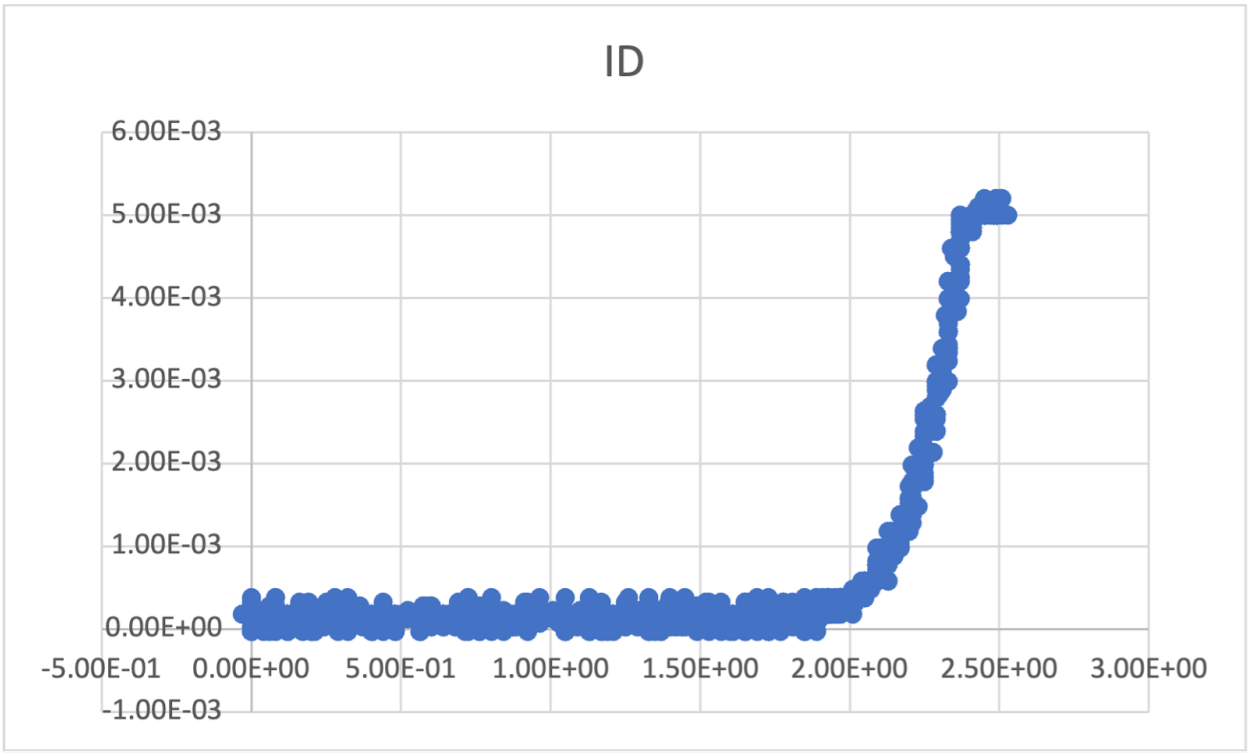
Dominic Treadwell | UIN: 720004254

Joaquin Salas | UIN: 731000141

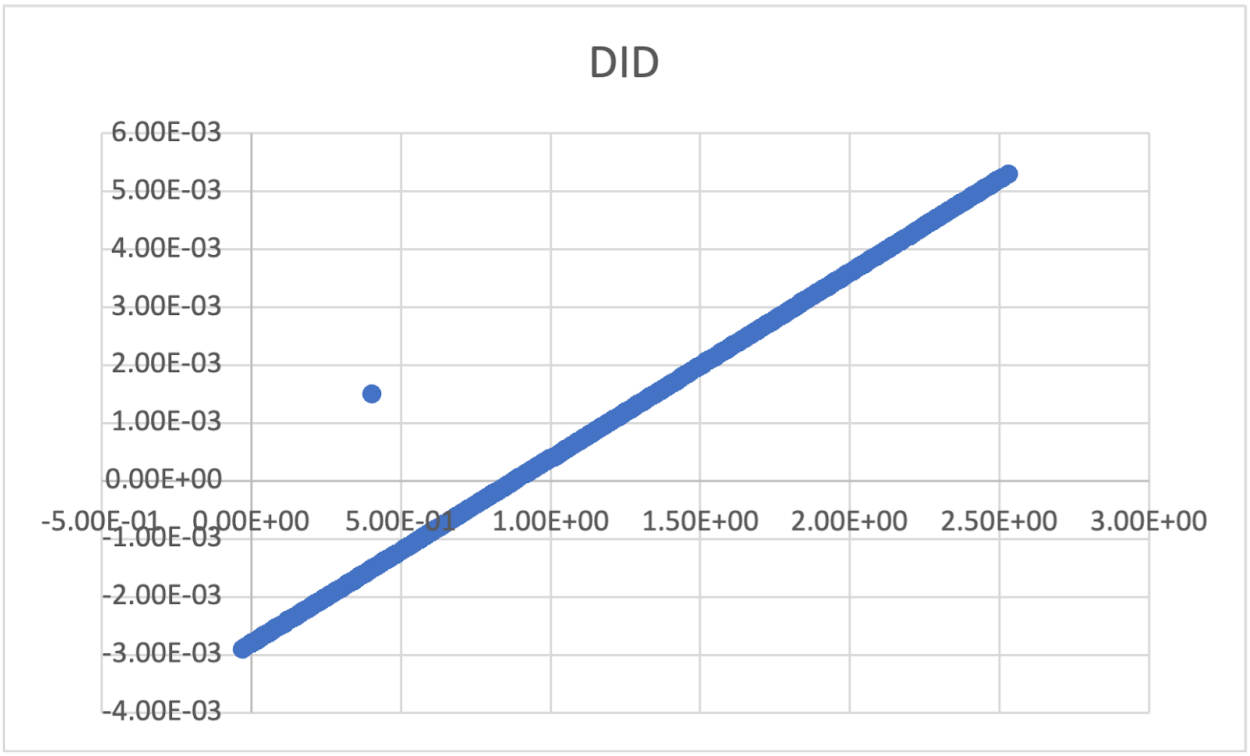
Measurements

1. The NMOS characterization circuit in Fig. 2 using the 2N7000G transistor

1(a) - Plot of ID as a function of VGS

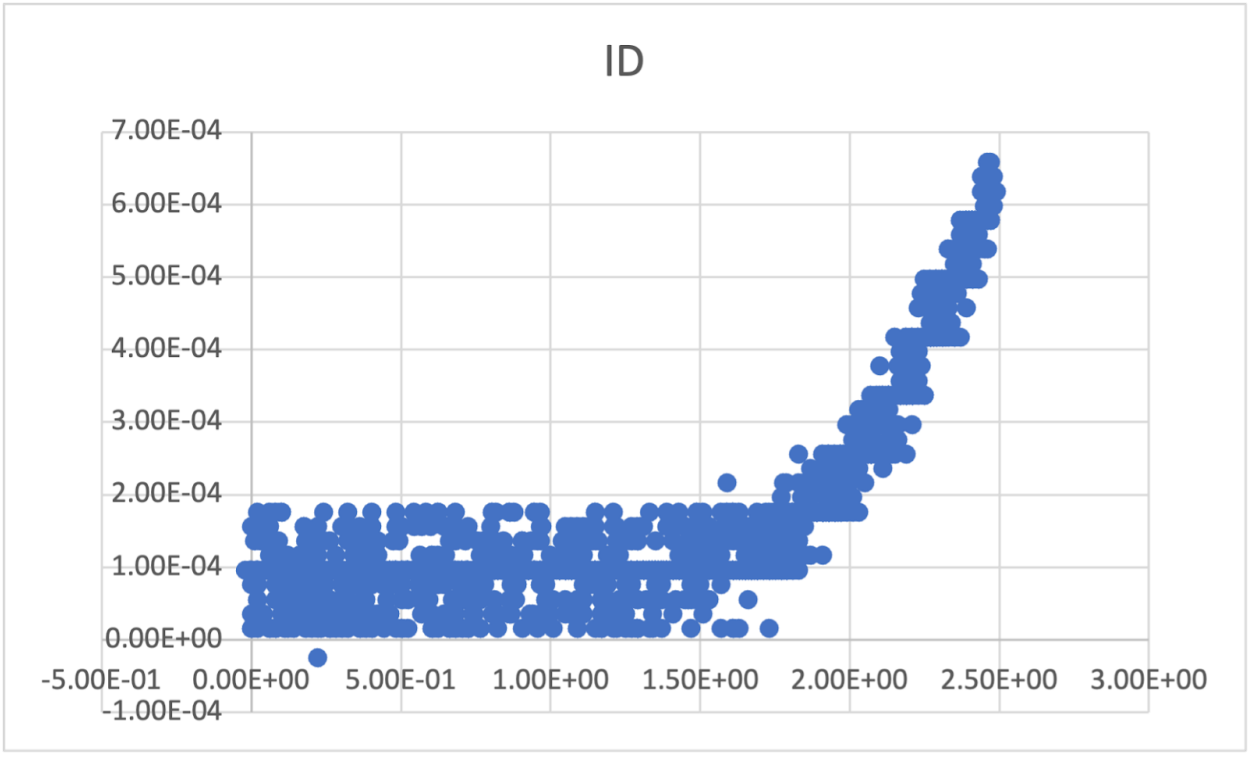


1(b) - Plot of the derivative of ID as a function of VGS

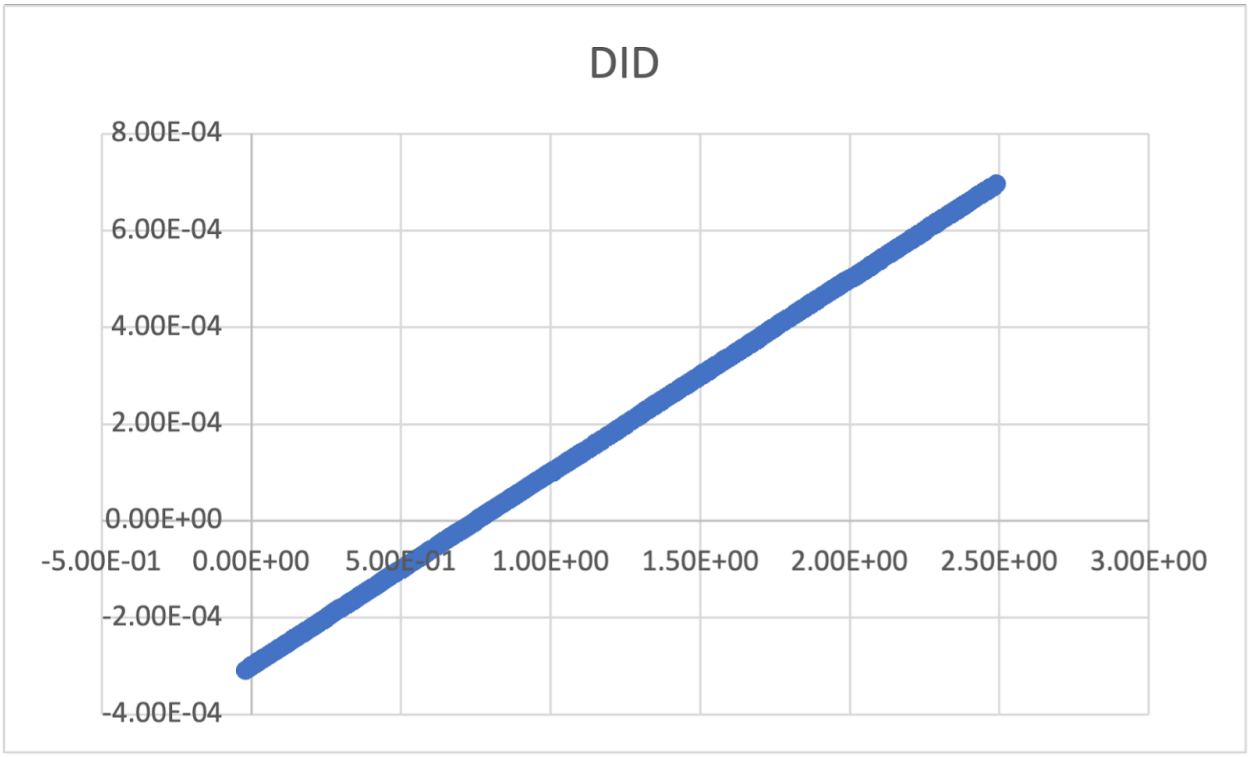


2. The NMOS characterization circuit in Fig. 2 using the CD4007N transistor

2(a) - Plot of ID as a function of VGS

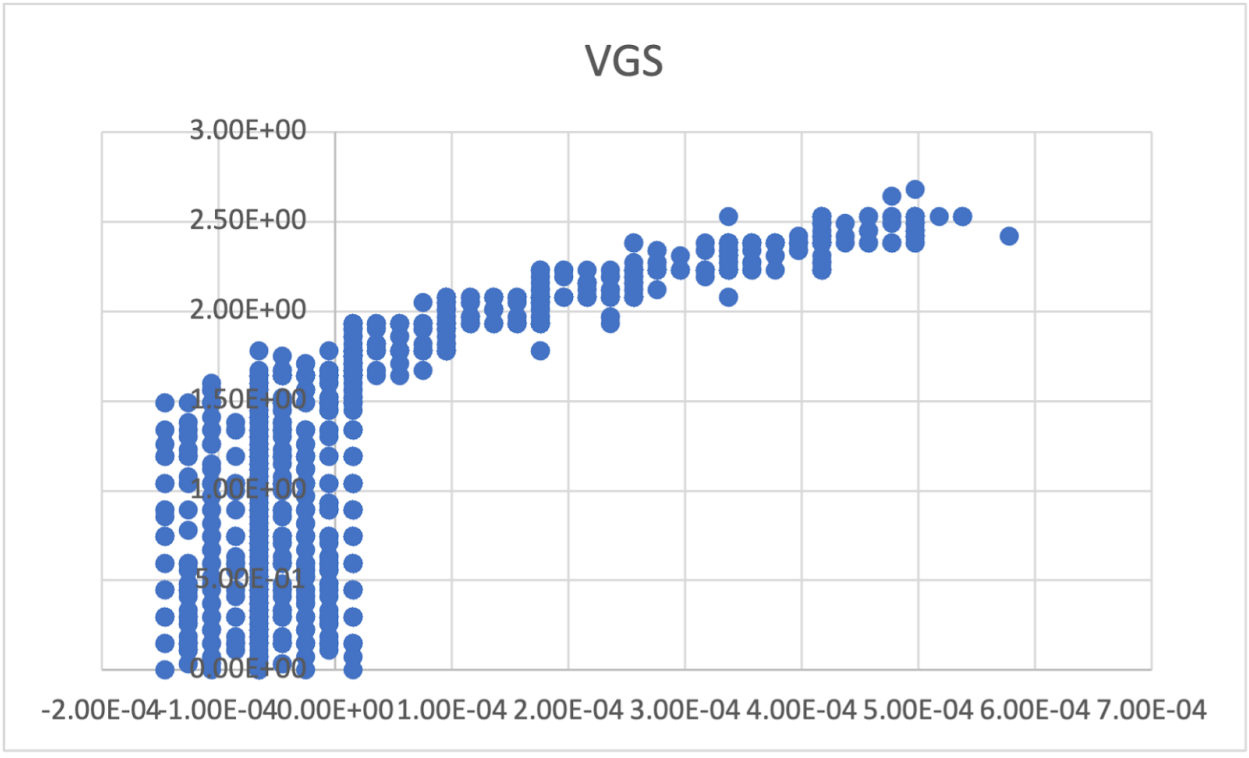


2(b) - Plot of the derivative of ID as a function of VGS

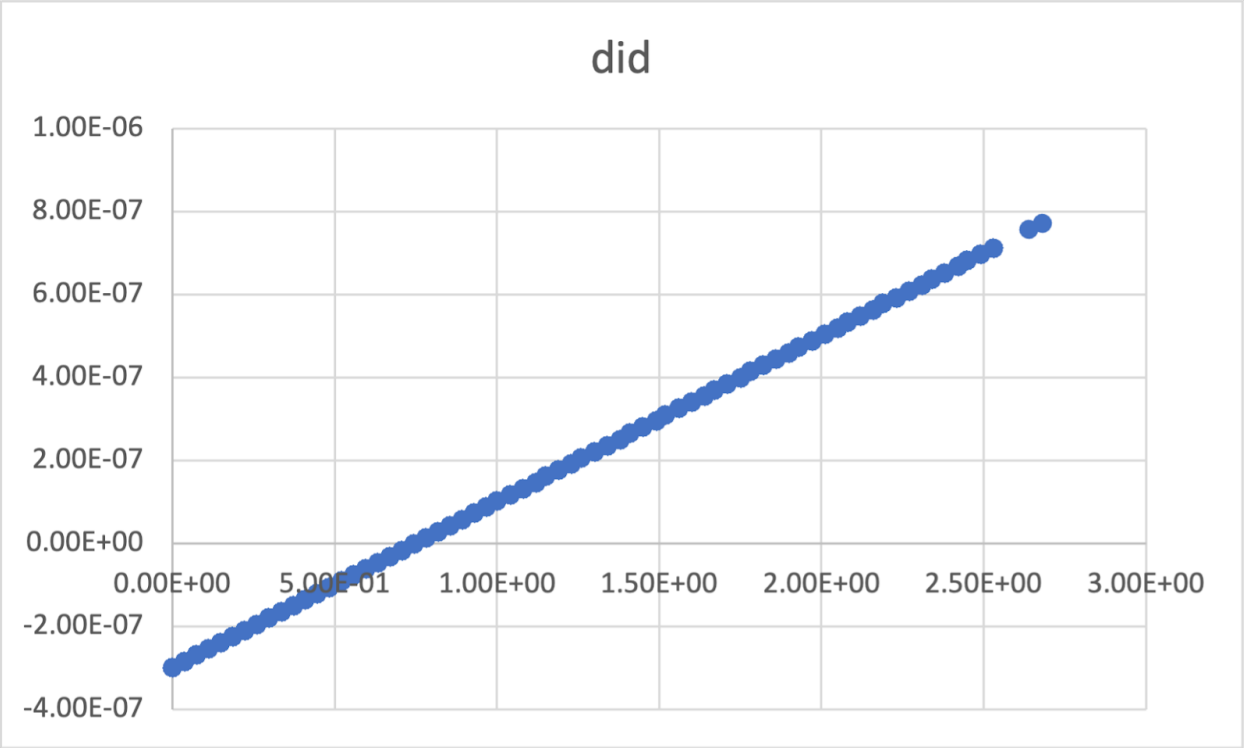


3. The PMOS characterization circuit in Fig. 3 using the CD4007P transistor

3(a) - Plot of ID as a function of VSG



3(b) - Plot of the derivative of ID as a function of VSG



Data Results:

	VT	Beta
2N7000G	0.875	0.0032
CD4007N	0.75	0.0004
CD4007P	0.749	4E-7

Results:

The data collected in this laboratory experiment closely aligned with our initial expectations, reflecting a high degree of congruence between our hypotheses and the actual outcomes. The entire lab procedure proceeded smoothly, devoid of any significant complications or unexpected challenges. The seamless execution of the experiment allowed us to focus more attentively on the fascinating aspects of the data and its implications.