

Figure 1. Epitaxial layer diagrams for the devices discussed in this abstract.

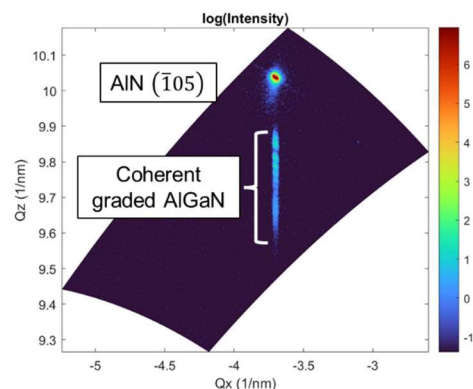


Figure 2. RSM of the full PoIFET structure showing the AlGaAs is coherently strained to the substrate.

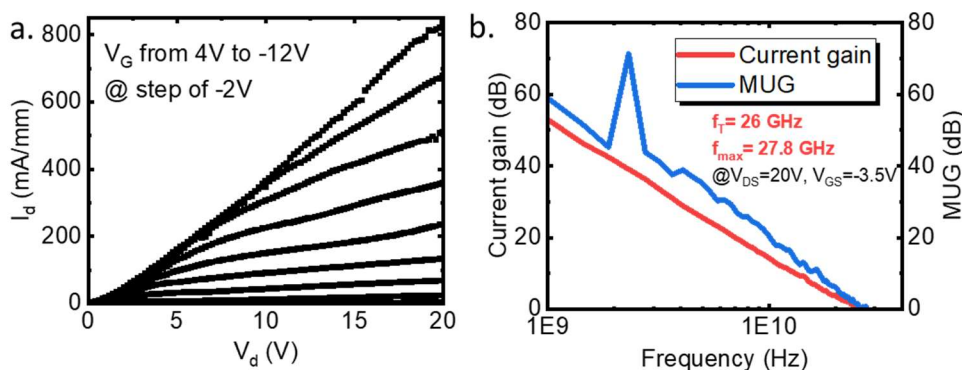


Figure 3. a) Drain current vs voltage and current gain and b) unilateral power gain vs frequency for the highly scaled channel-only PoIFET.

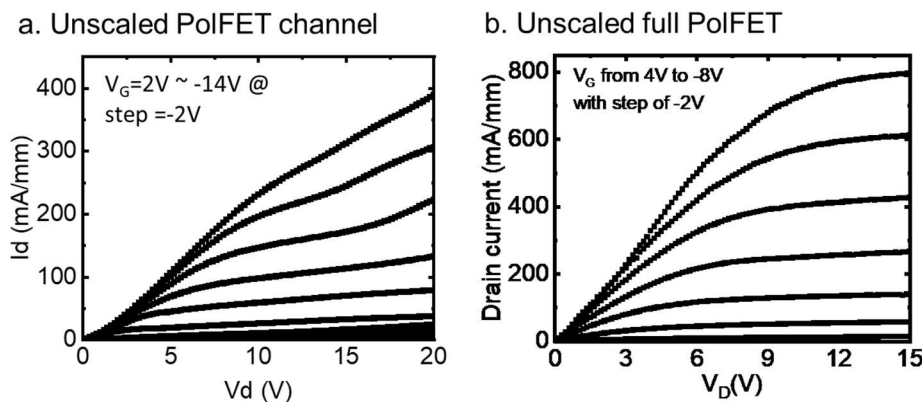


Figure 4. Drain current vs voltage plots for a) the unscaled channel-only PoIFET and b) the unscaled PoIFET with reverse-graded contacts showing a factor of 2 improvement in maximum drain current.