EERF 6392 - Millimeter Wave Integrated Circuit Design

EERF 6392 Millimeter Wave Integrated Circuit Design (3 semester credit hours) Millimeter wave applications, silicon integrated circuits technology trends, passive components in silicon IC's for millimeter wave operation, Drude model for silicon substrate, parasitic modeling, NQS transistor model, High frequency limit for thermal noise, chip interface including packaging and antenna, comparison between RF and mm-wave circuits, techniques for extending circuit operation frequency (injection locking and frequency multiplication), and diode circuits including a parametric amplifier. Prerequisites: EECT 6325 and EERF 6311 or equivalent. (3-0) T (2016-02-05 23:54:16)