On-Chip Integration Techniques for Millimeter-Wave Circuits & Systems

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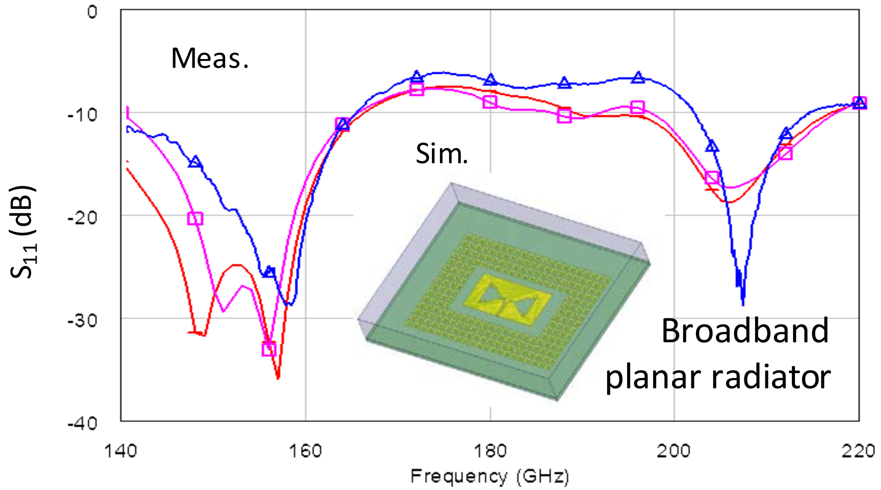
State of Art: Affordable CMOS integration techniques using multilayer processing with polymer films.

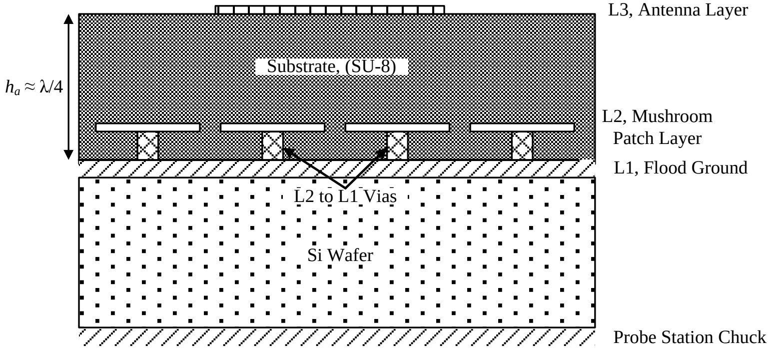
Objectives: Demonstrate fabrication process, characterization and modeling of materials, interconnects and broadband antennas.

Novelty: Utilize moderate performance dielectric to achieve wide bandwidth requirements.

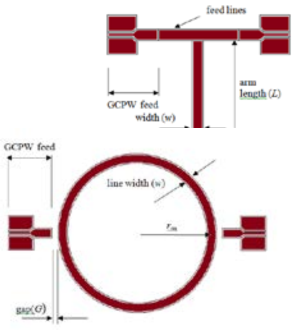
Design through electromagnetic simulation



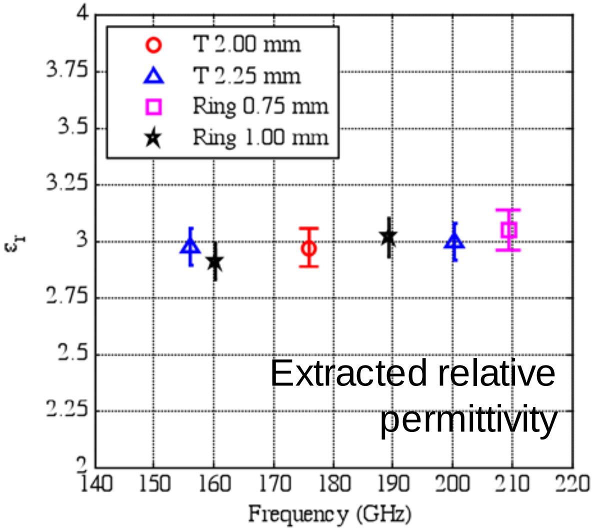
Multilayer **process** using spin-on polymers



Characterize using vector network analyzers



Microstrip ring & T-resonators



Extracted relative permittivity