



Advancing the Frontier of ScAlN RF Acoustic Resonator and Filter Technology

This presentation highlights recent progress in ScAlN thin film development and its application to RF acoustic resonator and filter technology.

We will discuss the evolution of ScAlN thin films with a higher scandium (Sc) composition and thinner thicknesses. These advancements not only improve the material's piezoelectric properties but also enable the fabrication of resonators and filters operating at frequencies exceeding 10GHz, which is crucial for emerging high-frequency wireless communication systems. We will also delve into the pioneering efforts to realize multiple frequency bands on a single wafer as well as the wafer-level monolithic integration of ScAlN with CMOS technology.