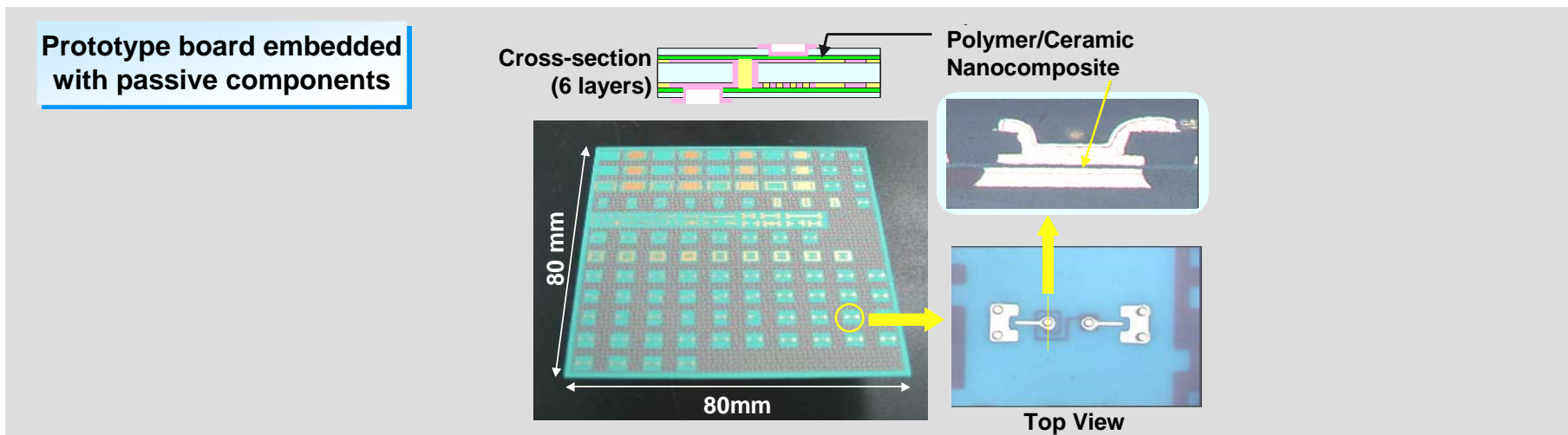


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## Ten-fold increase in capacitance using polymer nanocomposite thin film capacitors - Contributing to high-density multi-layer wiring board for mobile device -



The Tokyo Institute of Technology and the Advanced Research Laboratory (General Manager: Dr. Nobuyuki OSAKABE) of Hitachi, Ltd., have developed a polymer nanocomposite material for embedded thin film capacitors in a multi-layer wiring board, improving capacitance by one order of magnitude ( $>1\text{nF}/\text{mm}^2$ ). This high dielectric nanocomposite was achieved by incorporating a high concentration of barium titanate nanoparticles with a newly developed high-performance polymer. This result opens the way to realizing next-generation high-density, system-integrated multi-layered wiring boards for mobile equipment such as cellular phones, PDAs and car navigation systems.

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