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Recent Trends in Materials, Multilayer, High Capacitance and High Reliability in Multilayer Ceramic Capacitors (MLCCs)

报告人

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报告时间

2024年4月11日 上午9:30~11:30

报告地点

嘉定园区G4第一会议室

Takashi Yamamoto received a PhD degree in Electronics Engineering in 1980 from Kyoto University. His research has consistently focused on (1) Preparation of new lead-based ferroelectrics and the relationship between the properties and mechanisms of the ceramics. (2) Computer simulations of stress effects on crystalline, dielectric, and piezoelectric properties were performed using phenomenological thermodynamics. (3) Aiming at the application of thin film devices, he developed a new measurement method of piezoelectric constants of $Pb(Zr,Ti)O_3$ thin films. Furthermore, he has developed a design method that combines shielding and absorption and realized a laminated absorber from MHz to THz. Through these studies, he wrote 162 papers.

Abstract：With the rapid development of future automotive technologies and mobile communication systems, higher and more specific requirements are put forward for multilayer ceramic capacitors (MLCCs). To realize these worlds, MLCCs have become smaller, higher capacitance, higher performance, lower power consumption and more reliable. In particular, the Ni end-electrolyte MLCC has rapidly become more compact and large-capacity due to the low cost of Ni metal. The lecture will cover a wide range of topics, starting from the “materials, these high-layer technologies and high-reliability technologies” of nickel internal current MLCCs, as well as future prospects.

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