

세라믹 적층공정을 이용한 강압용 압전변압기의 제작 및 특성

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Fabrication and Properties of Piezoelectric Transformer for Step-Down Voltage using Ceramic Stack Process

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Abstract : A multilayer piezoelectric transformer(MPT) for step-down voltage was made by ceramic stack process. And then, the characteristics of piezoelectric transformer, such as resonance frequency, matching impedance, electro-mechanical coupling coefficient, voltage gain, heat generation and efficiency, are analyzed. The piezoelectric transformer consists of a lead zirconate titanate ceramic with a high electromechanical quality factor. The piezoelectric transformer, with a multilayered construction in the thickness direction, was formed with dimensions 15mm long, 15mm wide and 5mm thick.

Key Words : Step-down, Piezoelectric transformer, Voltage gain