

Low-temperature Sintering of Mn-Zn Ferrites Using a Media Agitation Mill

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Abstract

Fine Mn-Zn ferrite powders prepared by the conventional solid state have been prepared using a media agitation mill and sintered at low temperature of 900... for 5 h in reductive atmosphere in order to fabricate multilayer chip transformers, which are conventionally produced by co-firing with silver electrodes below their melting point of 961.... Initial permeability ... has increased with increasing average grain size G_s ; the maximum ... value of 845 after grinding for 4 h has been attained for the ferrite with G_s of 1.9 ... at frequency of 100 kHz and applying voltage of 0.5V. Their grains have grown to about 15... from 1.0... even after grinding for 1 h by adding a small amount of lithium borosilicate glass; the maximum ... value of 748 has been attained.