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Dielectric Properties of La2MoO6 Ceramics at Microwave Frequency

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Abstract : The microwave dielectric properties of La2MoO6 ceramics were investigated with a view to their application in mobile communication. La2MoO6 ceramics were prepared by the conventional solid-state method with various sintering conditions. The X-ray diffraction peaks of La2MoO6 ceramic did not vary significantly with sintering conditions. The average grain size of La2MoO6 ceramics increased as the temperature and time of sintering increased. A maximum density of 5.67 g/cm3, a dielectric constants (εr) of 14.1, a quality factor (Q×f) of 68,000 GHz, and a temperature coefficient of resonant frequency (τf) of -56 ppm/℃ were obtained when La2MoO6 ceramics that were sintered at 1300 ℃ for 4h.

Keywords : ceramics, sintering, microwave dielectric properties, La2MoO6
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