

Surface resistance and sensitivity to hygrometry of various ceramic compositions for multilayer capacitors

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Abstract: When developing new dielectric compositions for multilayer ceramic capacitors, we have observed an influence of hygrometry on the insulation resistance behavior of some of them. The swiftness of the phenomenon let us suppose a surface mechanism. Prompted by these observations, we have investigated on the sensitivity to hygrometry of various conventional ceramic compositions by measuring their surface resistance versus the moisture rate in air. The studied materials are formulations for type I and type II ceramic capacitors. In order to understand some breakdown phenomena in ceramic multilayer capacitors, we have also investigated on the influence of the screen printed electrodes composition.