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Influence of dissipation on magnetostatic surface waves dispersion. (English) Zbl 07325305
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Summary: By means of consistent solution of the motion equation for magnetization the consideration of energy dissipation for magnetostatic surface waves propagating on in-plane magnetized ferrite plate is regarded. In this case the dispersion relations for the real and imaginary parts of the wave number are obtained. It is presented that dispersion curves are limited both by the wave number and frequency, and these restrictions tighten with an increase in the damping parameter. Both for forward and backward waves there is a critical value of the damping parameter and propagation angle, beyond which it does not exist.

MSC:

74-XX Mechanics of deformable solids

78-XX Optics, electromagnetic theory

Keywords:

dispersion; ferrites; magnetostatic waves; dissipation

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