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Mechanical model for a thermoelectric thin film bonded to an elastic infinite substrate

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Highlights

- An analytical mode for the mechanics of thermoelectric thin film/substrate structures is developed.
- The singularity of the stresses near the free ends of the thermoelectric film is identified.
- The stress intensity factors are presented for the ends of the thermoelectric films.
- Effects of electric current, stiffness, thermal conductivity and thickness of the film are explored.

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