Thermoelastic damping in circular cross-section micro/nanobeam resonators with single-phase-lag time

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Highlights

- Thermoelastic damping (TED) is affected by the non-Fourier effect significantly.
- A multiple-peak phenomenon of TED spectrum is observed at ultrahigh frequencies.
- The multiple-peak phenomenon depends on the equilibrium temperature.
- Heating and cooling occur simultaneously in the vibrating beam.