

High-Temperature Superconducting Matching Networks for Electrically Short Monopole Antennas

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The benefits of using thin film high-temperature superconducting (HTS) matching networks for electrically short monopole antennas were demonstrated. Their performance was compared with similar matching networks made with gold, showing an efficiency improvement of 2 dB. A two-element array was also designed, fabricated and tested using HTS matching networks and short monopoles. The matching networks were configured as microstrip single stubs. This is the first demonstration of its type using thin film HTS material.

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