Abstracts

Antenna Applications of Superconductors

R.C. Hansen. "Antenna Applications of Superconductors." 1991 Transactions on Microwave Theory and Techniques 39.9 (Sep. 1991 [T-MTT] (Special Issue on Microwave Applications of Superconductivity)): 1508-1512.

The applicability of superconductors to antennas is examined. Potential implementations that are examined are superdirective arrays; electrically small antennas; tuning and matching of these two; high-gain millimeter-wavelength arrays; and kinetic inductance slow wave structures for array phasers and traveling wave array feeds. Superdirective arrays and small antennas will not benefit directly, but their tuning/matching networks will undergo major improvements. Miniaturization of antennas will not be aided, but much higher gain millimeter-wave arrays will be realizable. Finally, kinetic inductance slow wave lines appear advantageous for array phasers and time delay, as well as for traveling wave array feeds.

❑ Return to main document.