Abstracts

Attenuation Constants of UHF Radio Waves in Arched Tunnels (Short Papers)

Y. Yamaguchi, T. Abe, T. Sekiguchi and J. Chiba. "Attenuation Constants of UHF Radio Waves in Arched Tunnels (Short Papers)." 1985 Transactions on Microwave Theory and Techniques 33.8 (Aug. 1985 [T-MTT]): 714-718.

This paper describes the attenuation constants of UHF radio waves in arched tunnels. In the analysis, a point-matching method is combined with Muller's method and is applied to determine the propagation constant of the dominant mode. We compare the calculated result with previous experimental data, as well as that of the experimental equation and the theoretical result of a circular waveguide having the same cross-sectional area. Finally, an approximate equation for the attenuation constant is derived from the point-matching solution so that one can determine or estimate the value without elaborate calculations.

❑ Return to main document.