

Abstracts

A 40-GHz Digital Distribution Radio with a Single Oscillator

M. Hata, A. Fukasawa, M. Bessho, S. Makino and M. Higuchi. "A 40-GHz Digital Distribution Radio with a Single Oscillator." 1980 Transactions on Microwave Theory and Techniques 28.9 (Sep. 1980 [T-MTT]): 951-962.

New 40-GHz band digital radio equipment is described. In the equipment we adopted a new circuit configuration consisting of a single IMPATT diode oscillator which functions as both transmitter frequency converter and receiver load oscillator simultaneously. The principal system design factors, a unique IMPATT diode oscillator mount configuration and test results are described. The compact radio equipment is designed so that it ensures excellent cost performance for communication systems in local trunk service, even in short hop applications resulting from rainfall attenuation to the new band.

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