

Abstracts

HF, VHF, and UHF systems and technology

F.H. Raab, R. Caverly, R. Campbell, M. Eron, J.B. Hecht, A. Mediano, D.P. Myer and J.L.B. Walker. "HF, VHF, and UHF systems and technology." 2002 Transactions on Microwave Theory and Techniques 50.3 (Mar. 2002 [T-MTT] (50th Anniversary Issue)): 888-899.

A wide variety of unique systems and components inhabits the HF, VHF, and UHF bands. Many communication systems (ionospheric, meteor-burst, and troposcatter) provide beyond-line-of-sight coverage and operate independently of external infrastructure. Broadcasting and over-the-horizon radar also operate in these bands. Magnetic-resonance imaging uses HF/VHF signals to see the interior of a human body, and RF heating is used in a variety of medical and industrial applications. Receivers typically employ a mix of analog and digital-signal-processing techniques. Systems for these frequencies make use of RF-power MOSFETs, p-i-n diodes, and ferrite-loaded transmission-line transformers.

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