Abstracts

A Broadband, Low-Sidelobe, Dynamic Weighting, Three-Channel Receive, X-Band Active Array

S. Panaretos, C. Shoda, R. Relatores, J. Gordon, P. Curtis and D. Parker. "A Broadband, Low-Sidelobe, Dynamic Weighting, Three-Channel Receive, X-Band Active Array." 1996 MTT-S International Microwave Symposium Digest 96.3 (1996 Vol. III [MWSYM]): 1573-1576.

Hughes has recently developed a broadband low-sidelobe active array that uses T/R modules of a common-leg architecture and parts from multiple suppliers for each MMIC chip. Design of an 1140 element (8 watts per element), 4 GHz, rms sidelobes (<43 dB), X-band active array is described. High-precision phase and amplitude control (PAC) modules on each row of elements enables independent aperture illumination for receive (sum, delta-azimuth, delta-elevation) and transmit-sum channels.

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