Abstracts

A 62/66 GHz frequency offset retrodirective array

N.B. Buchanan, T. Brabetz and V.F. Fusco. "A 62/66 GHz frequency offset retrodirective array." 2002 MTT-S International Microwave Symposium Digest 02.1 (2002 Vol. I [MWSYM]): 315-318 vol.1.

Measured and predicted results are presented for a 62/66 GHz frequency offset retrodirective array. Measurements show the array to produce a self steered monostatic 3 dB beamwidth of 22.5/spl deg/. Predictions carried out using an active element approach showed close agreement with a theoretical value of 21/spl deg/, confirming for the first time, frequency offset retrodirective action in the millimetre wave region. In addition, amplitude/pulse modulation was shown to be readily applied to the re-transmit self-steered signal. This work enables a variety of. short range mm-wave broadband wireless links and sensor applications such as asset tagging.

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