Abstracts

Coaxial continuous transverse stub (CTS) array

M.F. Iskander, Zhijun Zhang, Zhengqing Yun and R. Isom. "Coaxial continuous transverse stub (CTS) array." 2001 Microwave and Wireless Components Letters 11.12 (Dec. 2001 [MWCL]): 489-491.

A new coaxial continuous transverse stub (CTS) array is proposed, designed, constructed, and tested. It is an omni-directional low cost antenna array which provides good impedance matching characteristics and good tolerance to manufacturing errors. It can be simply fed by a coaxial connector and is particularly suitable for millimeter wave personal communication systems (PCS). It is shown that this type of radiating element provides high percentage of radiation, and for the simulated design of single- and multiple-element arrays, S/sub 11/ was below -10 dB across a 6 GHz frequency span at the Ka band. A three-element prototype coaxial CTS antenna array was designed, constructed, and tested in the X-band. Experimental results were in good agreement with the simulated performance. Potential application of this new antenna array in multiband operation is also described.

❑ Return to main document.