Abstracts

A new millimeter-wave printed dipole phased array antenna using microstrip-fed coplanar stripline tee junctions

Young-Ho Suh and Kai Chang. "A new millimeter-wave printed dipole phased array antenna using microstrip-fed coplanar stripline tee junctions." 2002 MTT-S International Microwave Symposium Digest 02.2 (2002 Vol. II [MWSYM]): 1321-1324 vol.2.

A new millimeter-wave printed twin dipole phased array antenna is developed at Ka-band using a microstrip-fed CPS tee junction. To accomplish a progressive phase shift, a tunable phase shifter controlled by piezoelectric transducer (PET) is used. Measured return loss of better than 15 dB is achieved from 30 to 31.5 GHz for a 1/spl times/8 array. The phased array antenna has a measured antenna gain of 14.4 dBi with 42/spl deg/ beam steering and more than 11 dB side lobe suppression across the scan.

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