

Abstracts

Low Cost Cartop Phased Array Steering

G. Schaffner. "Low Cost Cartop Phased Array Steering." 1987 MTT-S International Microwave Symposium Digest 87.2 (1987 Vol. II [MWSYM]): 949-952.

Under J. P. L. and NASA we are developing a cartop phased array antenna for MSAT auto transceivers. The beamsteering system consisting of eighteen 3 bit phase shifters and a nineteen way divider operating from 1545 to 1660 mhz is described. Criteria for material and part selection is discussed. An overall schematic for both circuits is given. The phase shifter development is illustrated with a schematic, predicted performance and measured performance. The nineteen way divider, presenting a greater challenge, is also discussed. Schematic, layout, predicted and measured performances are also given. The technology being evolved appears promising for achieving an affordable mobile communications system for rural areas.

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