Abstracts

A Ka-band 4-bit monolithic phase shifter using unresonated FET switches (1998 Vol. I [MWSYM])

K. Maruhashi, H. Mizutani and K. Ohata. "A Ka-band 4-bit monolithic phase shifter using unresonated FET switches (1998 Vol. I [MWSYM])." 1998 MTT-S International Microwave Symposium Digest 98.1 (1998 Vol. I [MWSYM]): 51-54.

This paper presents a Ka-band 4-bit monolithic phase shifter incorporating novel unresonated FET switches which show broadband on/off characteristics up to 40 GHz without inductors. The developed switched-line phase shifter MMIC demonstrated an overall phase deviation of 3.3/spl deg/ r.m.s. and an insertion loss deviation of 0.9 dB r.m.s. at 34.5 GHz. Over a relatively wide frequency range from 33 to 36 GHz, the phase deviation was less than 7/spl deg/ r.m.s. The chip size of the MMIC is 2.5 mm/spl times/2.2 mm.

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