Abstracts

A compact V-band 2-bit reflection-type MEMS phase shifter

Hong-Teuk Kim, Jae-Hyoung Park, Jounghwa Yim, Yong-Kweon Kim and Youngwoo Kwon. "A compact V-band 2-bit reflection-type MEMS phase shifter." 2002 Microwave and Wireless Components Letters 12.9 (Sep. 2002 [MWCL]): 324-326.

Air-gap overlay CPW couplers and low-loss series metal-to-metal contact microelectromechanical system (MEMS) switches have been employed to reduce the loss of reflection-type MEMS phase shifters at V-band. Phase shift is obtained by changing the lengths of the open-ended stubs using series MEMS switches. A 2-bit [135] reflection-type MEMS phase shifter showed an average insertion loss of 4 dB with return loss better than 11.7 dB from 50 to 70 GHz. The chip is very compact with a chip size as small as 1.5 mm /spl times/ 2.1 mm.

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