Abstracts

Amplifier design using /spl lambda//4 high impedance bias line with defect ground structure (DGS)

Si-Gyun Jeong, Do-Kyeong Hwang, Yong-Chae Jeong and Chul-Dong Kim. "Amplifier design using /spl lambda//4 high impedance bias line with defect ground structure (DGS)." 2002 MTT-S International Microwave Symposium Digest 02.2 (2002 Vol. II [MWSYM]): 1161-1164 vol.2.

In this paper, a new /spl lambda//4 bias transmission line that is added dumbbell-shaped defect ground structure (DGS) on ground plane of the conventional /spl lambda//4 bias transmission line is proposed. This DGS /spl lambda//4 bias transmission line maintains high impedance, but physical width is wider and length is shorter than that of the conventional bias line. If the proposed bias line is attached on signal transmission line, this bias line can reduces the 3/sup rd/ harmonic signal as well as the 2/sup nd/ harmonic signal. When the proposed bias line is adopted in power amplifier on IMT-2000 basestation transmitting band, the 3/sup rd/ harmonic signal is reduced about 26.5 dB than the conventional structure.

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