

Intermodulation Distortion and Gain Compression in Varactor Frequency Converters (Short Papers)

S.I. Ghobrial. "Intermodulation Distortion and Gain Compression in Varactor Frequency Converters (Short Papers)." 1975 Transactions on Microwave Theory and Techniques 23.2 (Feb. 1975 [T-MTT]): 255-257.

Using the nonlinear theory of Gardiner and Ghobrial gain compression in varactor frequency converters is characterized and related to the distortion performance of the device. It is shown that gain compression results from the generation of a current component at the sideband frequency which is in antiphase with the main sideband current component. It is also shown that under certain conditions, high levels of intermodulation distortion can exist with practically zero gain compression.

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