Abstracts

Analysis of Two-Tone, Third-Order Distortion in Cascaded Two-Ports

N.G. Kanaglekar, R.E. McIntosh and W.E. Bryant. "Analysis of Two-Tone, Third-Order Distortion in Cascaded Two-Ports." 1988 Transactions on Microwave Theory and Techniques 36.4 (Apr. 1988 [T-MTT]): 701-705.

We consider the third-order intermodulation of a system composed of a number of cascaded two-port two-tone, third-order intercept point (IP) is highly dependent angles of the IMD signals, which are usually unknown designer. Consequently, worst-case design strategies are these situations. In this paper, we develop general bound formulas for the intercept point that include the effects of mismatches between component networks. We also obtain expressions for the expected value and variance of the intercept point of two cascaded two-port networks. A comparison of these results with measurements indicates that worst-case design strategies are overly conservative in many situations.

❑ Return to main document.