

Abstracts

Conditions for Maximum Power Transfer (Comments)

H.F. Mathis. "Conditions for Maximum Power Transfer (Comments)." 1963 Transactions on Microwave Theory and Techniques 11.5 (Sep. 1963 [T-MTT]): 453-453.

In recent correspondences by Shulman Castaguetto and I Matheau, there are discussions of the conditions for maximum power transfer. In Shuhnan's notation, the source impedance is $Z_{\text{sub s}} = R_{\text{sub 3}} + jX_{\text{sub 3}} = R_{\text{sub s}}(1 + jx_{\text{sub s}})$, the load impedance is $Z = R + jX = R_{\text{sub s}}/(y + jx)$, P is the power delivered to the load, and $P_{\text{sub 0}}$ is the maximum power available from the source. A very simple procedure is to plot $Z' = r + j(x + x_{\text{sub 3}})$ on a Smith Chart.

Maximum power transfer occurs when Z' is the closest to the center of the chart.

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