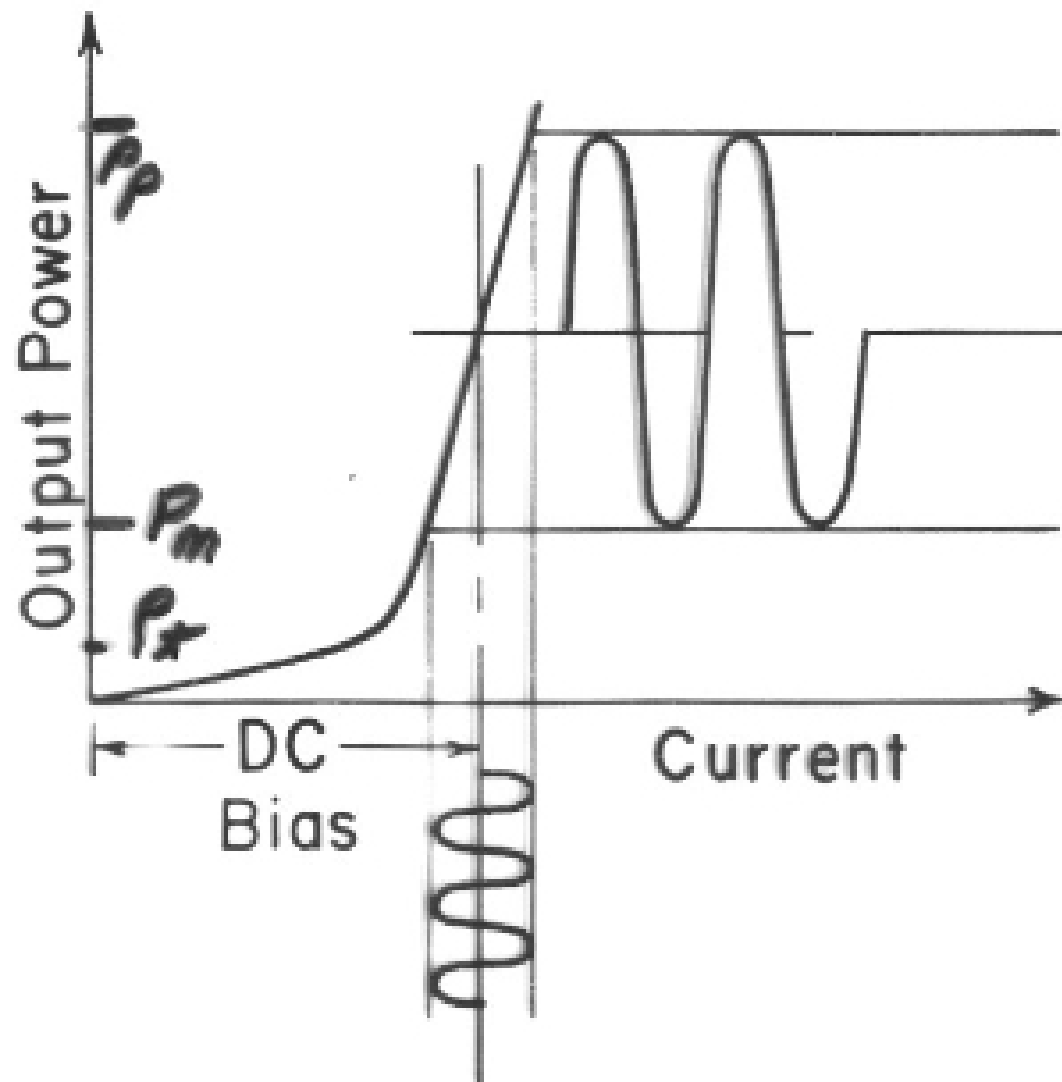
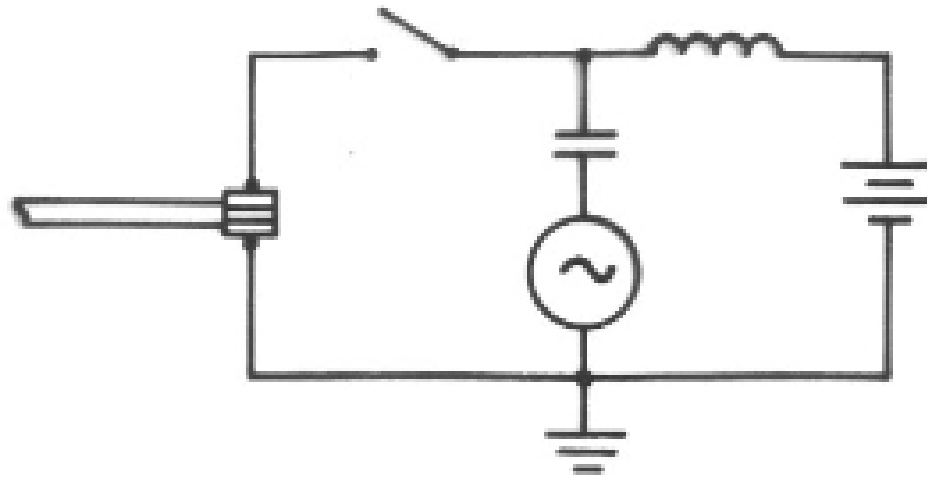


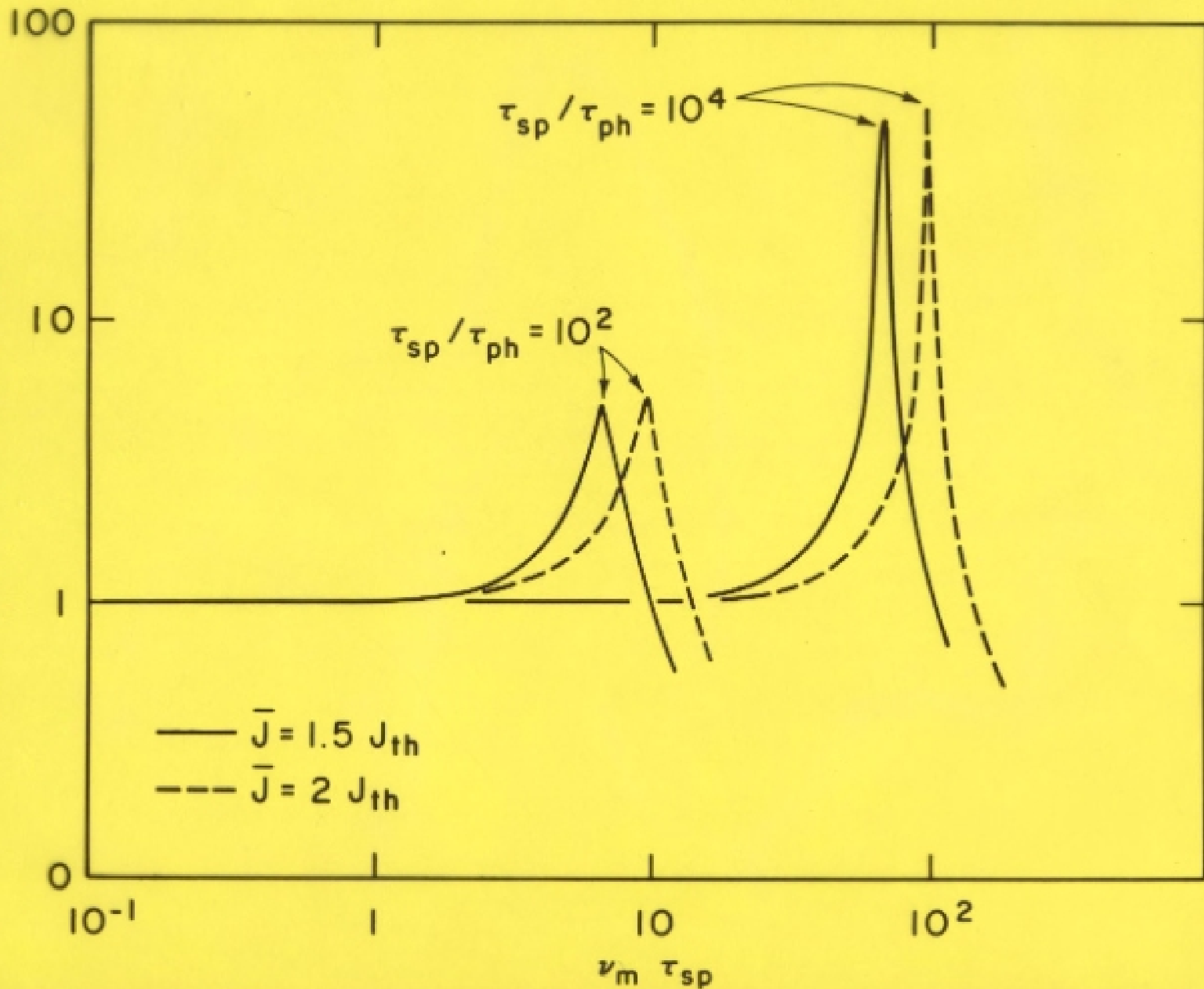
Direct Modulation



$$\eta = \frac{P_p - P_m}{P_p}$$

$$\eta_{max} = \frac{P_p - P_x}{P_p}$$

RELATIVE MODULATION RESPONSE



B. Goldstein, R. Weigand, Proc. IEEE (Correspondence) 53,
195 (1965)

GaAs laser mounted in X-band waveguide
driven by HP 620 A signal generator

$$f_{\max.} = 11 \text{ GHz} \quad R_{\text{mod.}} = 0.25$$

T. Ikegami and Y. Suematsu, IEEE J. of Q.E., QE4, 148 (1968)

GaAs laser mounted in 50Ω coaxial line

$$f_{\max.} = 4 \text{ GHz}$$

S. Takamiya, F. Kitasawa, and J. Nishizawa, Proc. IEEE
(Correspondence) 56, 135 (1968)

GaAs laser mounted in tapered waveguide

$$f_{\max.} = 46 \text{ GHz (deduced from sidebands)}$$