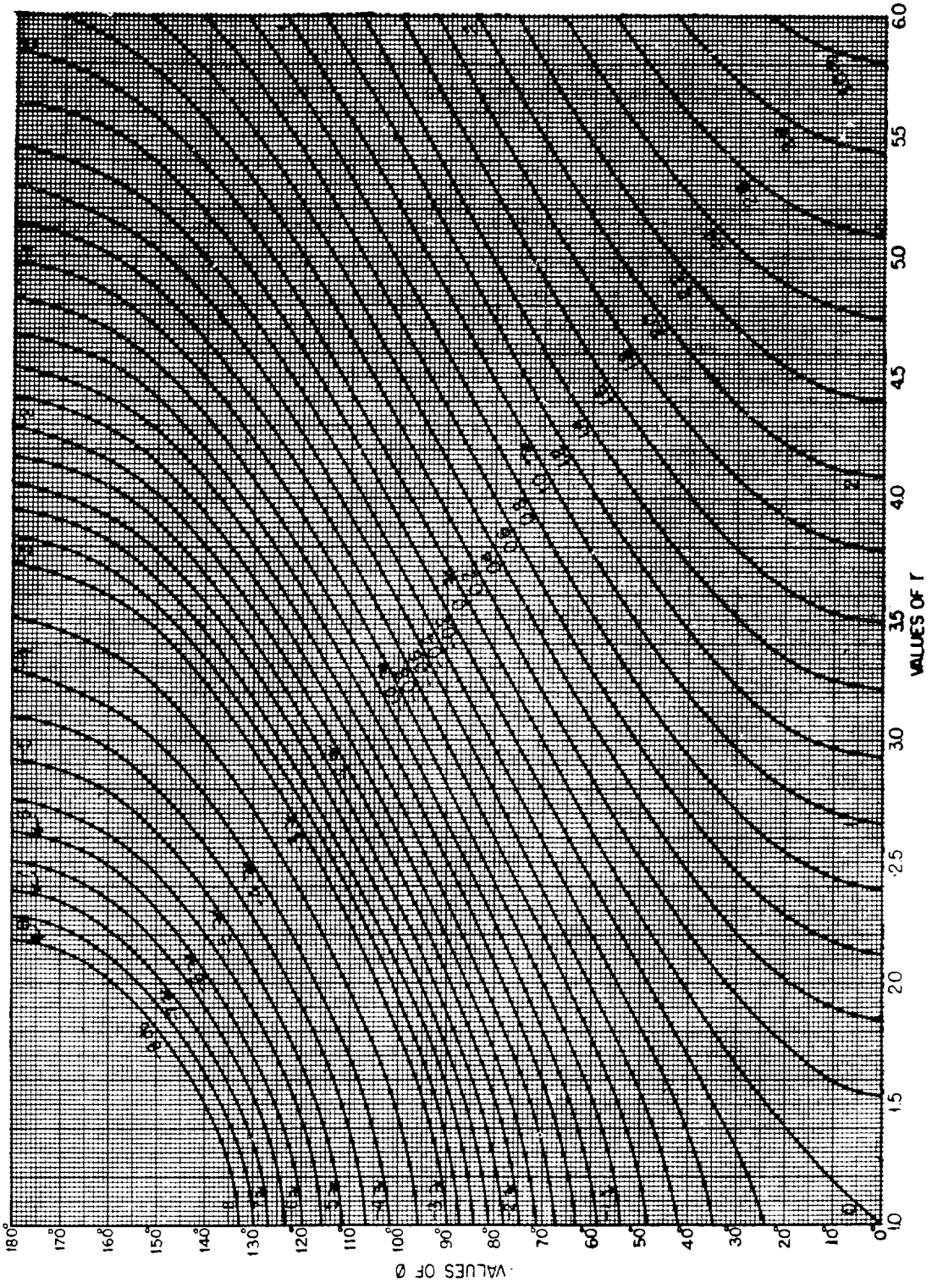
REFLECTION LOSSES-DECIBELS

(See Notes on Page 2)



NOTES:

Values of the Reflection Loss for any two impedances Z_x and Z_y are here given as a function of the ratio

$$\frac{Z_x}{Z_y} = r/\underline{\phi}$$

where r is the ratio of the magnitudes and ϕ is the difference between the angles of the two impedances. The ratio is always taken so that r is not less than unity. It is immaterial whether ϕ is positive or negative.

Negative reflection losses are reflection gains.

EXAMPLES:

(1) Find Reflection Loss for the impedances

$200/\underline{60^\circ}$ and $700/\underline{30^\circ}$

$$r/\underline{\phi} = \frac{700/\underline{30^\circ}}{200/\underline{60^\circ}} = 3.5/\underline{30^\circ}$$

Reflection Loss = 1.4 db

(2) Find Reflection Loss for the impedances

$400/\underline{35^\circ}$ and $680/\underline{45^\circ}$

$$r/\underline{\phi} = \frac{680/\underline{45^\circ}}{400/\underline{35^\circ}} = 1.7/\underline{80^\circ}$$

Reflection Loss = -1.8 db (a gain)