

Smith Chart-2

Friday, May 22, 2020 8:21 AM

Example 1:

Find VSWR

$$Z_0 = 75 \Omega$$

$$Z_L = 30 - j90$$

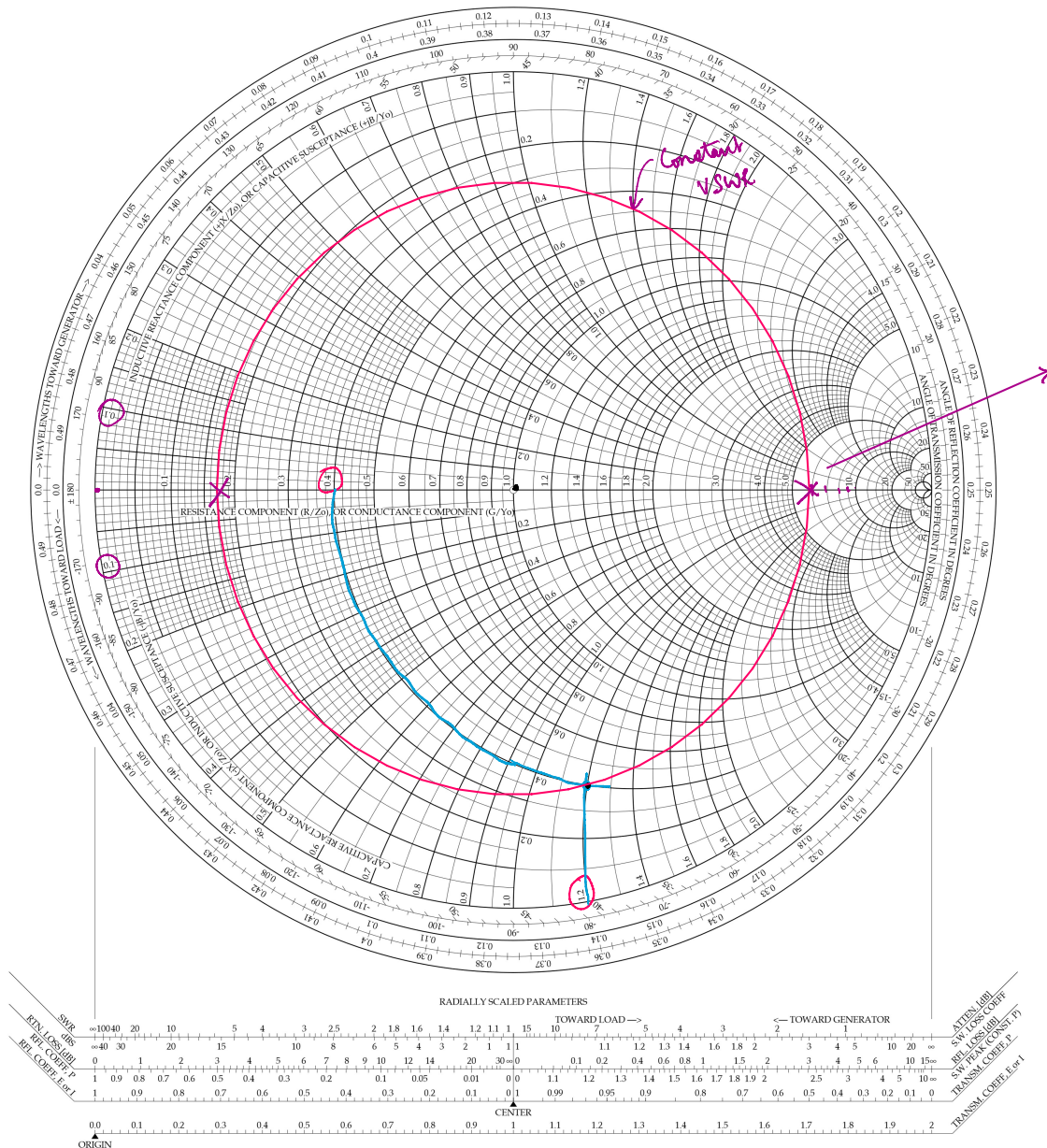
Step 1: $\bar{Z}_L = \frac{30 - j90}{75} = 0.4 - j1.2$

Step 2: Draw constant VSWR circle.

Step 3: $VSWR = \frac{1 + |\Gamma|}{1 - |\Gamma|} = \left(\frac{V_{max}}{V_{min}} \right) \cdot \frac{1}{Z_0} = \frac{Z_{max}}{Z_0} = \bar{Z}_{max}$

↑
Real impedance

Smith Chart



$\bar{Z}_{max} \sim 6$
 $VSWR \sim 6$
 By calculation
 ~ 6.34

