2-28

① $l = 8mm$. 短路.

$z_0 = 400\Omega$.

$f_1 = 6GHz$ 时. $\lambda_1 = \dfrac{c}{f_1} = 0.05m$
$= 5cm$.

$\bar{l} = \dfrac{8}{50} = 0.16$

$\bar{l} = 0.16$

短路点
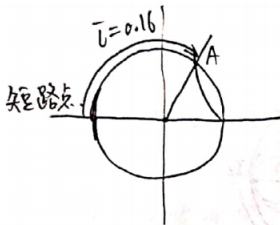
$\bar{l}_A = 0.16.$ 感性.

$f_2 = 10GHz$ $\lambda_2 = \dfrac{c}{f_2} = 3cm.$

$\bar{l} = \dfrac{8}{30} \approx 0.27.$

$\bar{l} = \dfrac{8}{30}$

短路
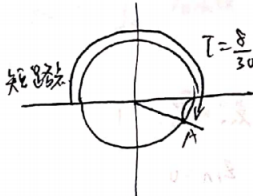
$\bar{l}_A = 0.27$ 容性.

②

$\bar{z} = j0.5$

$\bar{l}_D = 0.073$

$\bar{l} = \bar{l}_D - \bar{l}_A = 0.073.$

f_1 时:
$l = \bar{l}\lambda = 0.073 \times 5 = 0.365cm$

f_2 时
$l = 0.073 \times 3 = 0.219cm.$

2-24.

①解：$\overline{Z_L} = 1+j \ \Omega$

可确定 等反射系数圆 与 A 位置.

$\rho = 2.6$
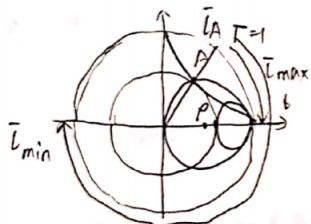
②解：$|\Gamma_2| = \dfrac{\rho-1}{\rho+1} = 0.444$

$\varphi_2 = 2\rho(0.25\lambda - \overline{l_A}) = 0.352\lambda$

$|\Gamma_2| = |\Gamma_2|e^{j\varphi_2} = 0.444e^{j0.352\lambda}$

2-25

①解：
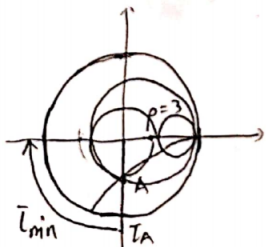
$\rho = 3 \rightarrow$ 等反射系数圆.

$\overline{l_A} = 0.375.$

$|\Gamma_2| = \dfrac{3-1}{3+1} = \dfrac{1}{2}$

$\varphi_2 = -\dfrac{\pi}{2}$

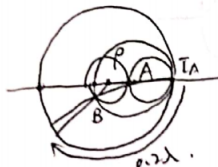$\Gamma_2 = \dfrac{1}{2}e^{-j\frac{\pi}{2}} = \dfrac{1}{2}\cdot j$

②解：由等电阻圆、等阻抗圆

得 $\overline{Z_L} = $

$Z_L = \overline{Z_L} \cdot 300 \ \Omega$

2-26.

①解：

$0.2\lambda.$

$\overline{R_L} = 2.$

$\Gamma_2 = \dfrac{\rho-1}{\rho+1} = \dfrac{2-1}{2+1} = \dfrac{1}{3}$

②解：

0.2λ 处 B.

0.25 处：短路点. $\Gamma_2 = -1$

$Z_{in} = 0$

0.5λ 处. 重复. $\Gamma_2 = \dfrac{1}{3}$

$\overline{Z_{in}} = 2 \ \Omega$