



Sheet 2

1	Direct substitution	6	$B.W. = 250 \text{ Hz}$ $f_1 = 9875 \text{ Hz} \quad f_2 = 10125 \text{ Hz}$ $Q_s = 40$ $V_{L.res.} = 1200 90^\circ \quad V_{C.res.} = 1200 -90^\circ$ $V_{L.10\%} = 127.0728 173.2429^\circ \text{ V}$ $V_{C.10\%} = 156.878 -6.7571^\circ \text{ V}$ $P_{res.} = 180 \text{ W} \quad P_{4\%} = 16 \text{ W}$
2	$f_s = 15.805 \text{ kHz}$ $Q_s = 1265.68$ $B.W. = 12.48 \text{ Hz}$ $Z = 5.1 + 129.1j \ \Omega$ $Z = 5.1 + 1232.312j \ \Omega$	7	$R = 10 \ \Omega$ $L = 13.2629 \text{ mH}$ $C = 0.027 \ \mu\text{F}$ $f_1 = 8340 \text{ Hz} \quad f_2 = 8460 \text{ Hz}$
3	$\omega_s = 50 \text{ kRad/sec}$ $G \geq (\sqrt{2})/10 = 0.14142 \ \Omega^{-1}$	8	$L = 1.59155 \text{ mH}$ $C = 15.9155 \text{ pF}$ $R = 50 \ \Omega$
4	$C = 0.67547 \text{ nF}$ $f = 265.8846 \text{ kHz}, 235.664 \text{ kHz}$	9	Proof
5	$B.W. = 400 \text{ Hz}$ $Q = 14.4914$ $X_L = X_C = 28.98275 \ \Omega$ $L = 0.795774 \text{ mH}$ $C = 0.94735 \ \mu\text{F}$		