EE381 HW3

Lewis Collum

Updated: February 16, 2020

2.47

- (a) $\Gamma = 0.5 \angle 0^{\circ}$
- **(b)** $\Gamma = 0.62 \angle 29.74^{\circ}$
- (c) $\Gamma = 1 \angle 53.13^{\circ}$
- (d) $\Gamma = 1 \angle 180^{\circ}$

2.53

- (a) $\Gamma = 0.24 \angle 75^{\circ}$
- **(b)** SWR = 1.65
- (c) $z(0.35\lambda) = 0.61 j0.05$
- **(d)** $y(0.35\lambda) = 1.65 + j0.05$
- **(e)** $d = 0.105\lambda$
- **(f)** $d(max) = 0.105\lambda$

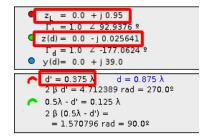
2.54

- (a) $\Gamma=0.24\angle76^\circ$
- **(b)** SWR = 1.64
- (c) $z(0.35\lambda) = 0.61 j0.02$
- **(d)** $y(0.35\lambda) = 1.64 + j0.06$
- (e) $d = 0.105\lambda$
- **(f)** $d(max) = 0.105\lambda$

2.58

(a)
$$Z_L = |j0.95 \cdot Z_0| = 95\Omega$$

(b)



2.65

```
First Solution d_1 = 0.22899 \lambda + 68.6983 \text{ mm} Z (d_1) = 202.6551 \Omega Z_{02} = 142.357 \Omega Second Solution d_2 = 0.47899 \lambda + 143.6983 \text{ mm} Z (d_2) = 49.3449 \Omega Z_{02} = 70.2459 \Omega Transformer Length \lambda_2/4 = 75.0 \text{ mm}
```