

$$\frac{1}{2\pi\sqrt{LC}} = f_r \text{ Hz} \quad \text{equation 1}$$

$$= 25.33 \mu\text{H}$$

Total Inductance

Substituted into
$$L_{eq} = \frac{L_1 L_2 - M^2}{L_1 + L_2 - 2M}$$

with $k \times L$

giving me $33.77 \mu\text{H}$ for L

is this equation needed

$$Y = \frac{1}{j\omega L_{eq}} + j\omega C$$