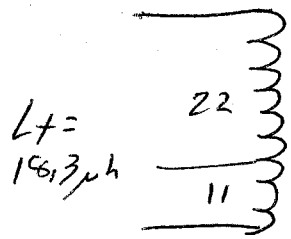
KN5L 12/10/2013

Three terminal Auto Transformer



$L_4 = 18.3\,\mu H$

$L_2 = 10.58\,\mu H$

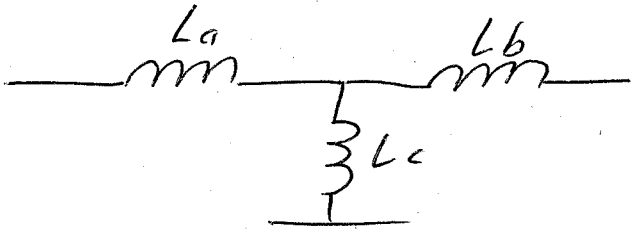
$L_1 = 3.84\,\mu H$

L using Wheelers Continuous Formula

$D = 1''$

$L = 1.04''$

$M = (L_4 - L_1 - L_2)/2 = 1.94$

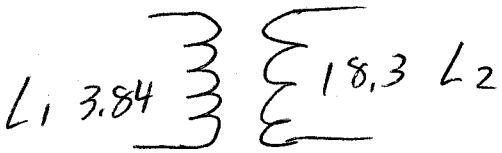


$L_a = -M = -1.94$

$L_b = L_2 + M = 12.52$

$L_c = L_1 + M = 5.78$

Four terminal Linear Transformer



$L_a = L_1 - M$

$M = L_1 - L_a = 5.78$ Using La -1.94 above

$k = \frac{M}{\sqrt{L_1 L_2}} = .69$

$L_b = L_2 - M = 12.52$

$L_c = M = 5.78 \leftarrow M$