

# formulas\_\_used

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## 1 Other Formulas Used (More or Less)

### 1.0.1 Parallel Inductance Formula

$$L_{\text{parallel}} = \frac{L_p + M}{2}$$

### 1.0.2 Self-Inductance Formula

$$L_{\text{self}} = 0.002l \left[ \ln \left( \frac{2l}{r} \right) - \frac{3}{4} \right]$$

### 1.0.3 Mutual Inductance Formula

$$M = \frac{\mu l}{2\pi} \left[ \ln \left( \frac{2l}{s} \right) - 1 \right]$$

### 1.0.4 Equivalent Inductance Formula

$$L_{\text{eq}} = L_1 + L_2 - 2M_{12}$$

### 1.0.5 Effective Inductance Formula

$$L_{\text{eff}} = \frac{\mu l}{2\pi} \cosh^{-1} \left( \frac{2s}{d} \right)$$

### 1.0.6 Effective Inductance Formula

$$L_{\text{eff}} = \frac{\mu l s}{w}$$