

The total capacitance of the secondary circuit will be a little less than the sum of coil capacitance and toroid capacitance. Their close proximity causes the toroid to shield some of the secondary coil surface area from ground. Below is the capacitance formula for a toroid.

$$C = 1.4 \left( 1.2781 - \frac{D_2}{D_1} \right) \sqrt{\pi D_2 (D_1 - D_2)}$$

C = capacitance in picofarads

D<sub>1</sub> = outside diameter of toroid in inches

D<sub>2</sub> = diameter of cross section of toroid in inches