Lab 12: The Impedance of an Inductor

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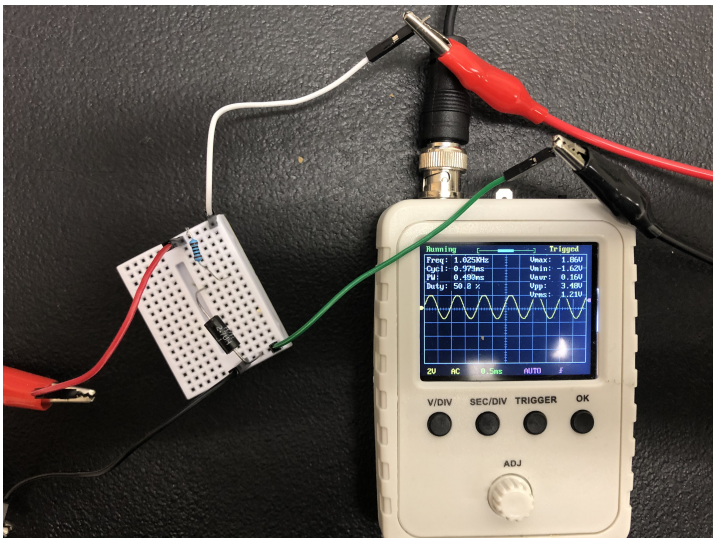
Table 1: First Approximation for R_{int}						
$f(Hz)$	s/DIV	$V_{RL}(V)$	V/DIV for V_{RL}	$V_L(V)$	V/DIV for V_L	$R_{int}(\Omega)$
1000	0.5ms	3.48V	2V	0.08V	2V	2.35

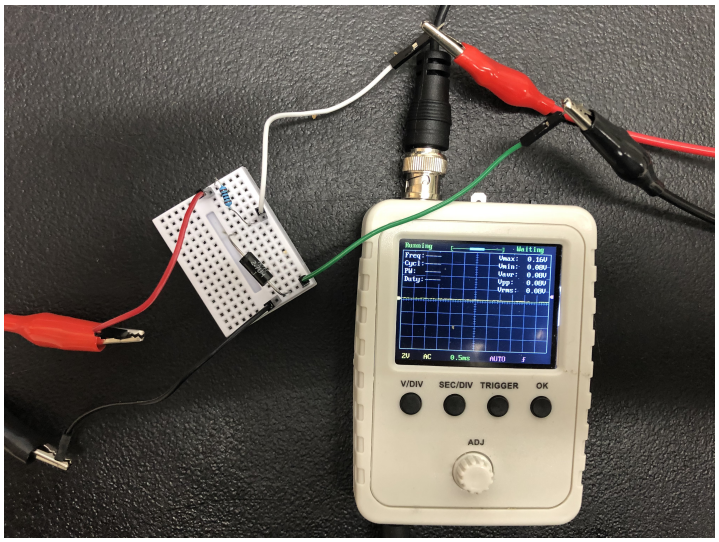
Table 2: First Approximation for L									
$f(Hz)$	s/DIV	$V_{RL}(V)$	V/DIV for V_{RL}	$V_L(V)$	V/DIV for V_L	$I_R(A)$	$Z_{L,eff}(\Omega)$	$X_L(\Omega)$	L (H)
65000	20us	3.56V	2V	0.08V	2V				

Table 3: The Impedance of an Inductor					
$f(Hz)$	s/DIV	$V_{RL}(V)$	V/DIV for V_{RL}	$V_L(V)$	V/DIV for V_L
1000					
22000					
32000					
39000					
45000					
50000					
55000					
60000					
65000					

SETUP



V_{RL}



V_L

- We assume that the current is determined by the largest resistor in the circuit, R. How large is the error that we can expect as a result?