

EE 236 Lab Report

Basic Electronic Devices

Experiment No. 6

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Batch:Monday

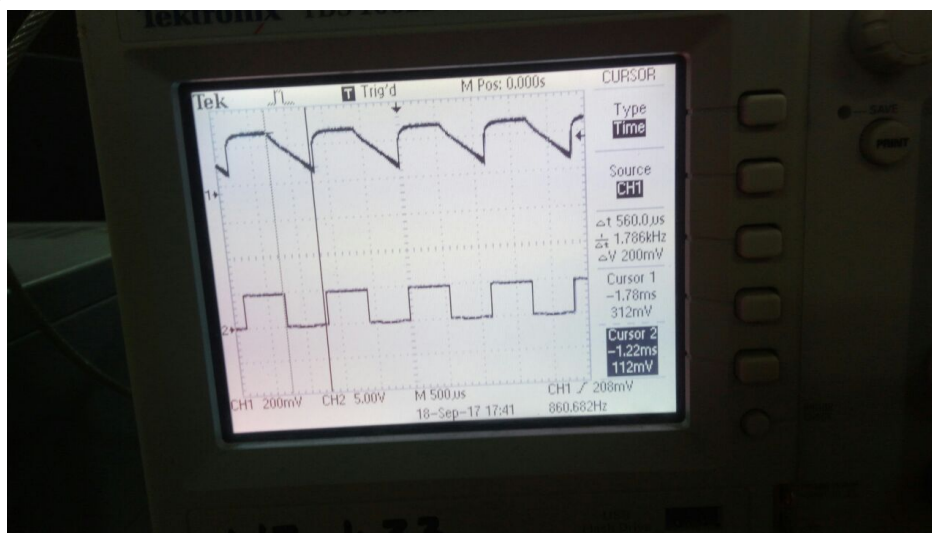
Exp Date:

Name of TA/RA :Arindam Sarkar

Roll No: 16d070044

Table No: 20

Q1.Estimate τ_0 from part A.



slope of the graph = 357.2.

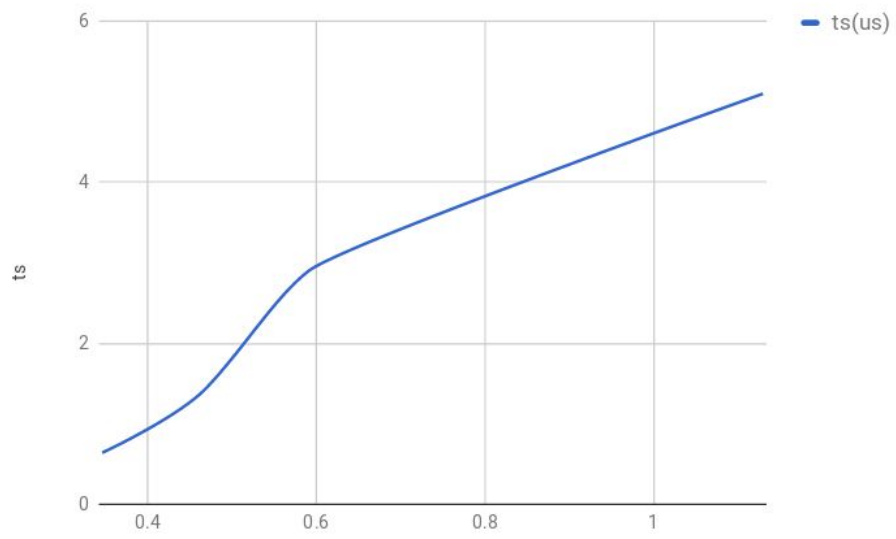
Hence, the average life time is 69.98 usec

Q2. For part B, plot t_s versus $\ln \{1+ (V_1-0.6) / (|V_2| +0.6)\}$. Hence estimate τ_0 from the slope. Also comment on the storage time 't s ' for different frequencies.

100k Hz

freq	ts(us)	v1	v2	$\ln \{1+ (V_1 -0.6) / (V_2 +0.6)\}$
100000	0.74	2.5	-4	0.34
	1.26	3	-3.5	0.46
	2.8	3.5	-3	0.59
	5.0	5	-1.5	1.13

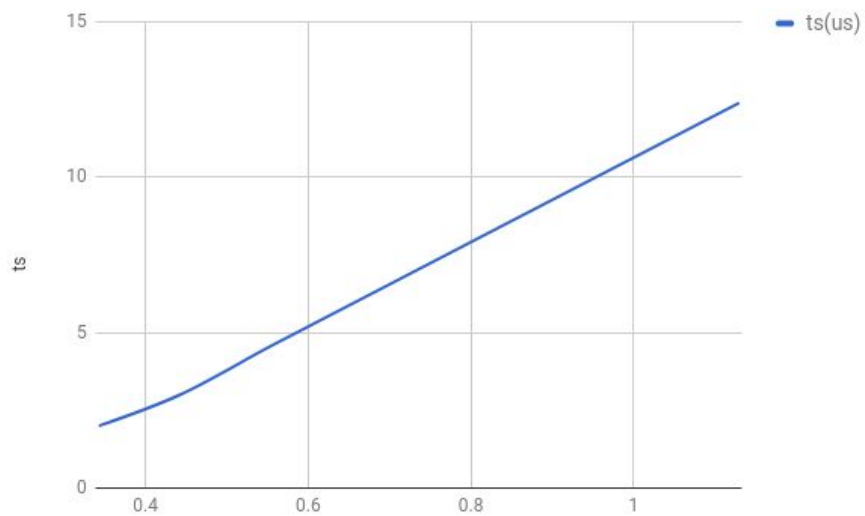
Lifetime = 4.0 us



40k Hz

freq	$t_s(\mu s)$	v1	v2	$\ln \{1+ (V1 -0.6) / (V2 +0.6)\}$
40000	2.4	2.48	-4	0.34
	3.4	2.88	-3.5	0.44
	4.4	3.28	-3	0.55
	12.4	5	-1.5	1.129

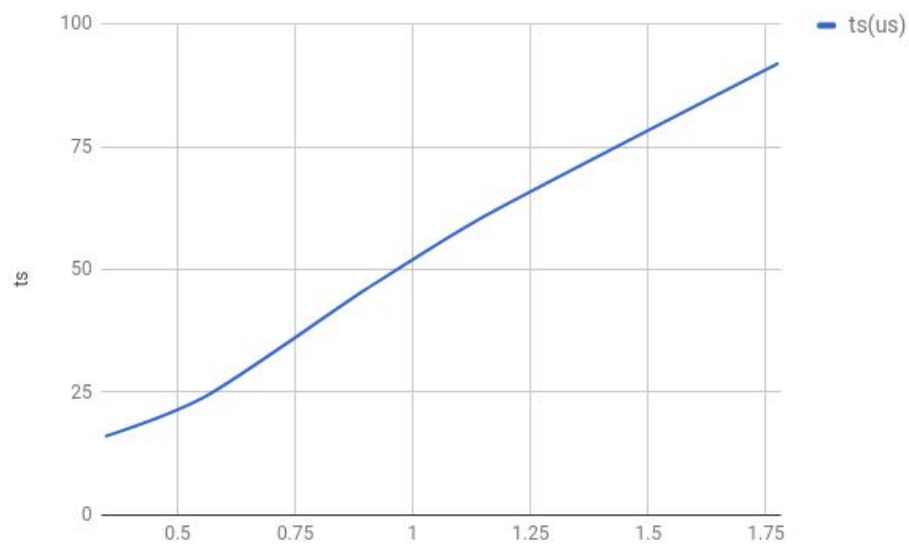
Lifetime = 13 μs

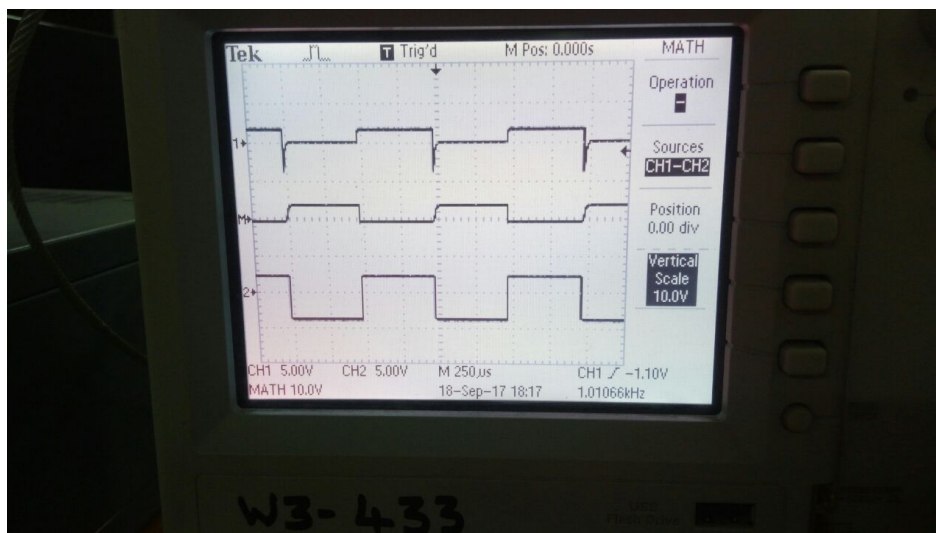
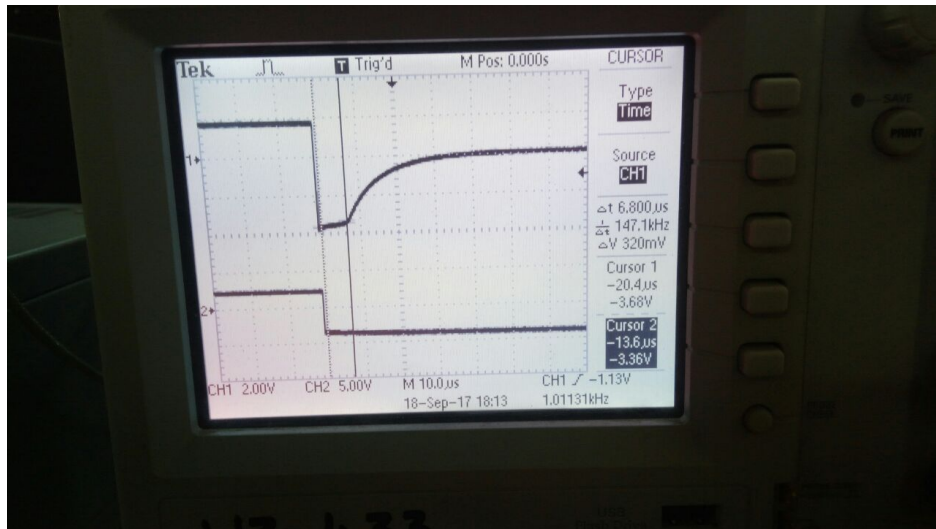


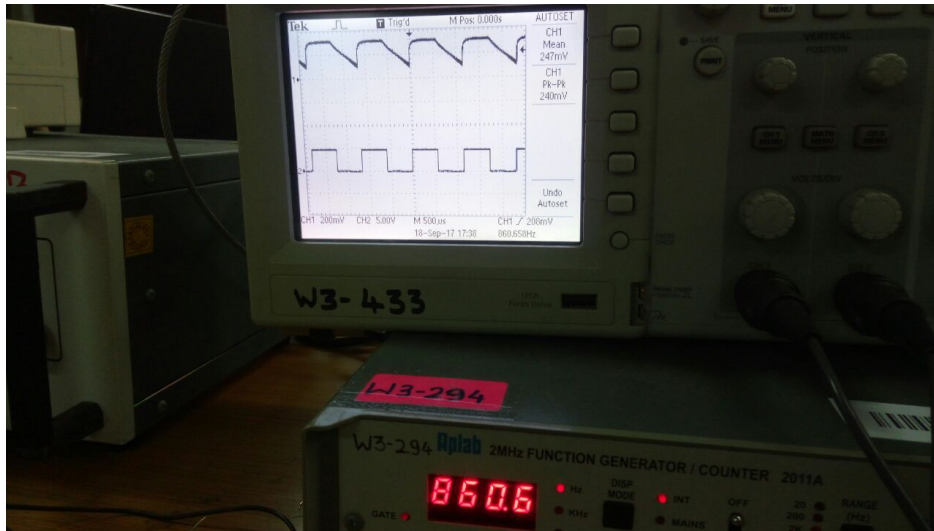
1k Hz

freq	ts(us)	v1	v2	$\ln \{1+ (V1 -0.6) / (V2 +0.6)\}$
1000	16	2.5	-4	0.34
	24	3.28	-3	0.55
	46	4.4	-2	0.90
	60	5.04	-1.5	1.13
	92	6	-0.5	1.77

Lifetime = 49 us







Inference : The storage time(t_s) decreases with increase in frequency.