

Brondy S. More

Digital Communication Lab

EE220

20-26

01	Study of Generation & Detection of BPSK	07-25	10
02	Implementation of BPSK	07-25	10
03	Date of performance:	14 - 07 - 2025	10
04	Date of submission:	21 - 07 - 2025	10



05. Simulation Study of BPSK 10-25 10
06. Implementation Study of BPSK 05-07-25 10
07. Simulation Study of BPSK in presence of Noise 05-07-25 10
08. Implementation Study of BPSK 22-07-25 10
09. Convolution Coding 05-07-25 10
10. Convolution Decoding 05-07-25 10

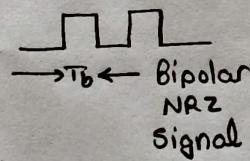
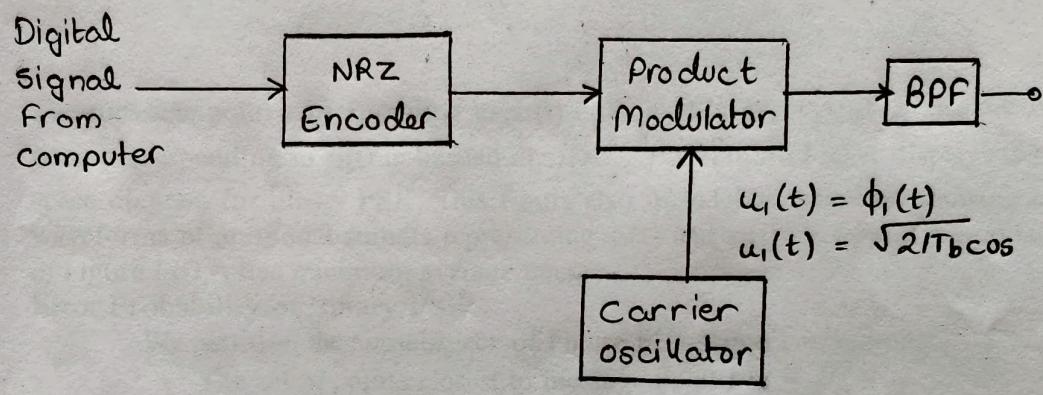
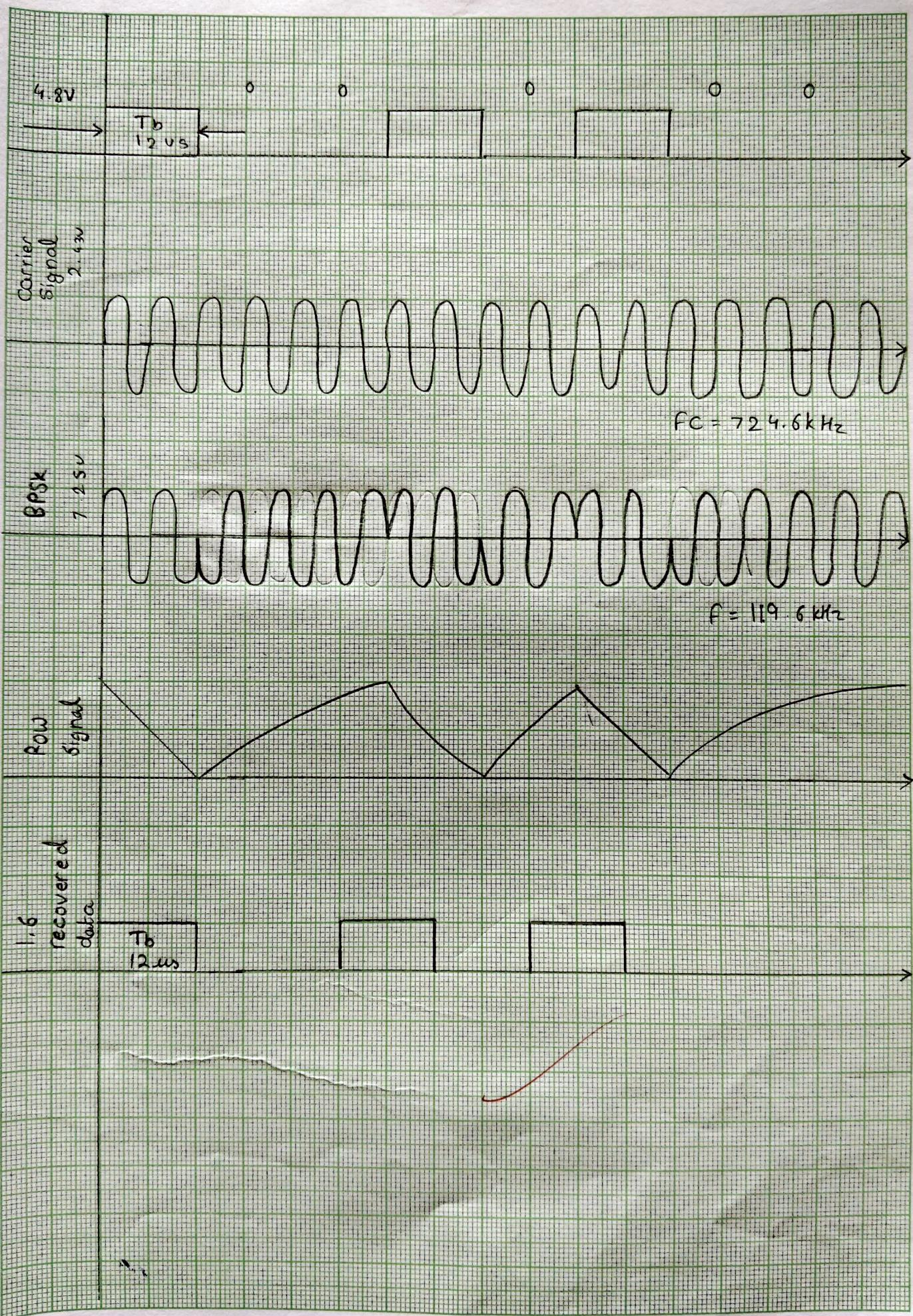
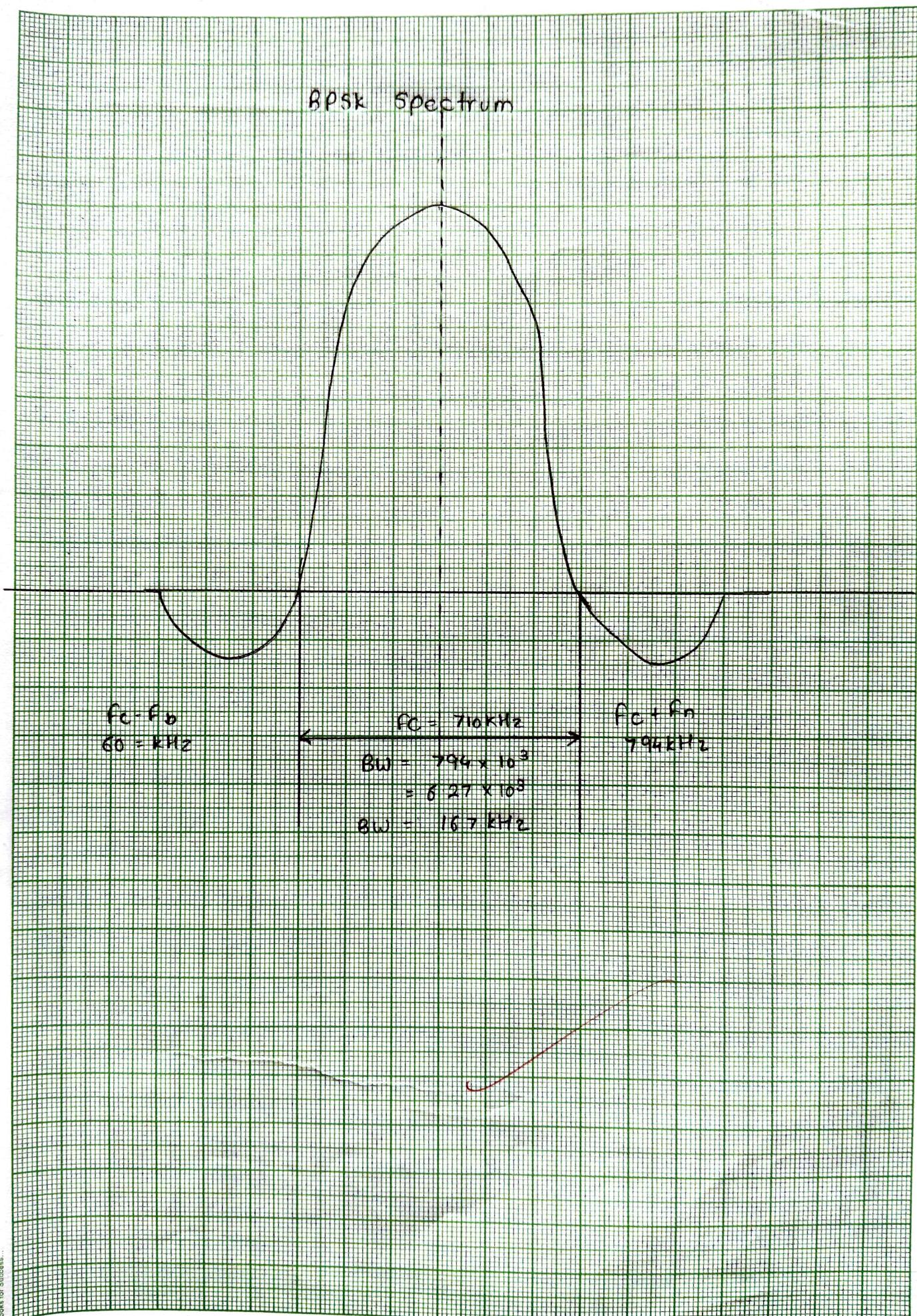
Circuit Diagram :-

Fig. BPSK Generation

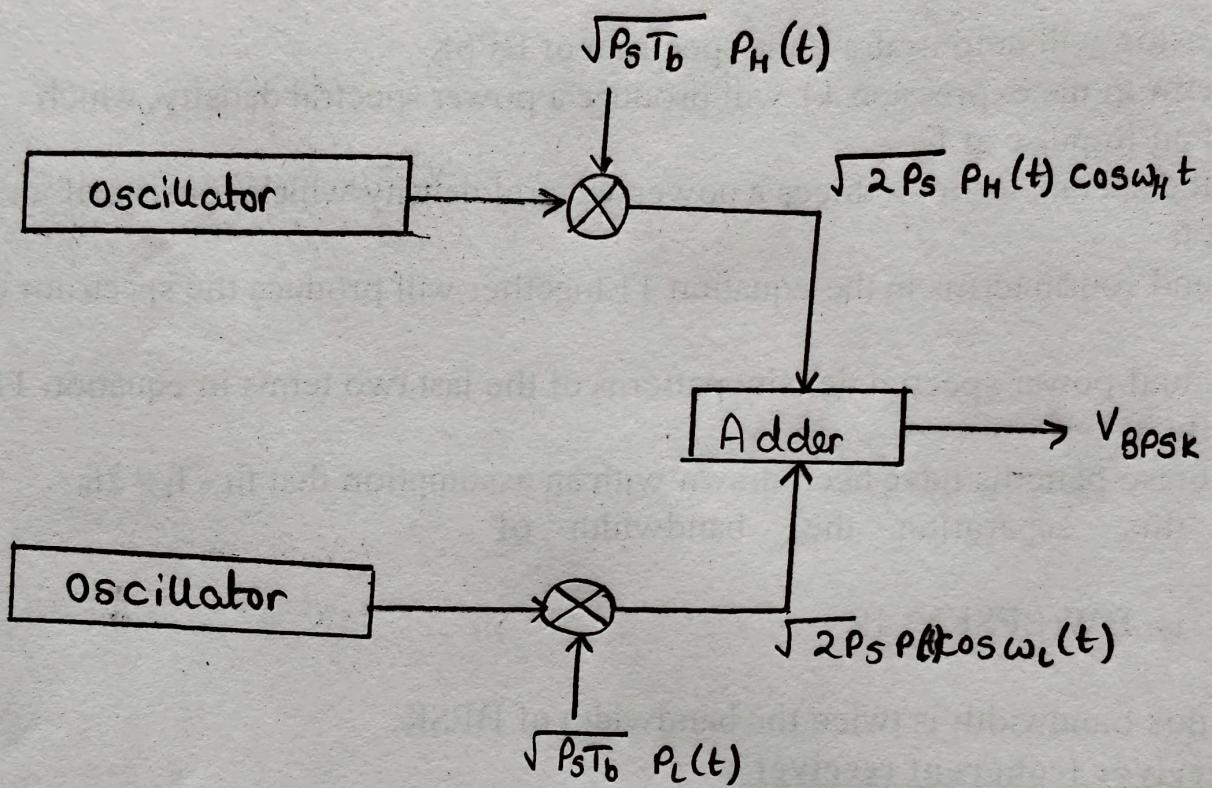


BPSK Spectrum



Experiment No.:	02
Title: STUDY OF GENERATION & DETECTION OF BFSK	
Date of performance:	21 - 07 - 2025
Date of submission:	28 - 07 - 2025

* Block Diagram :-

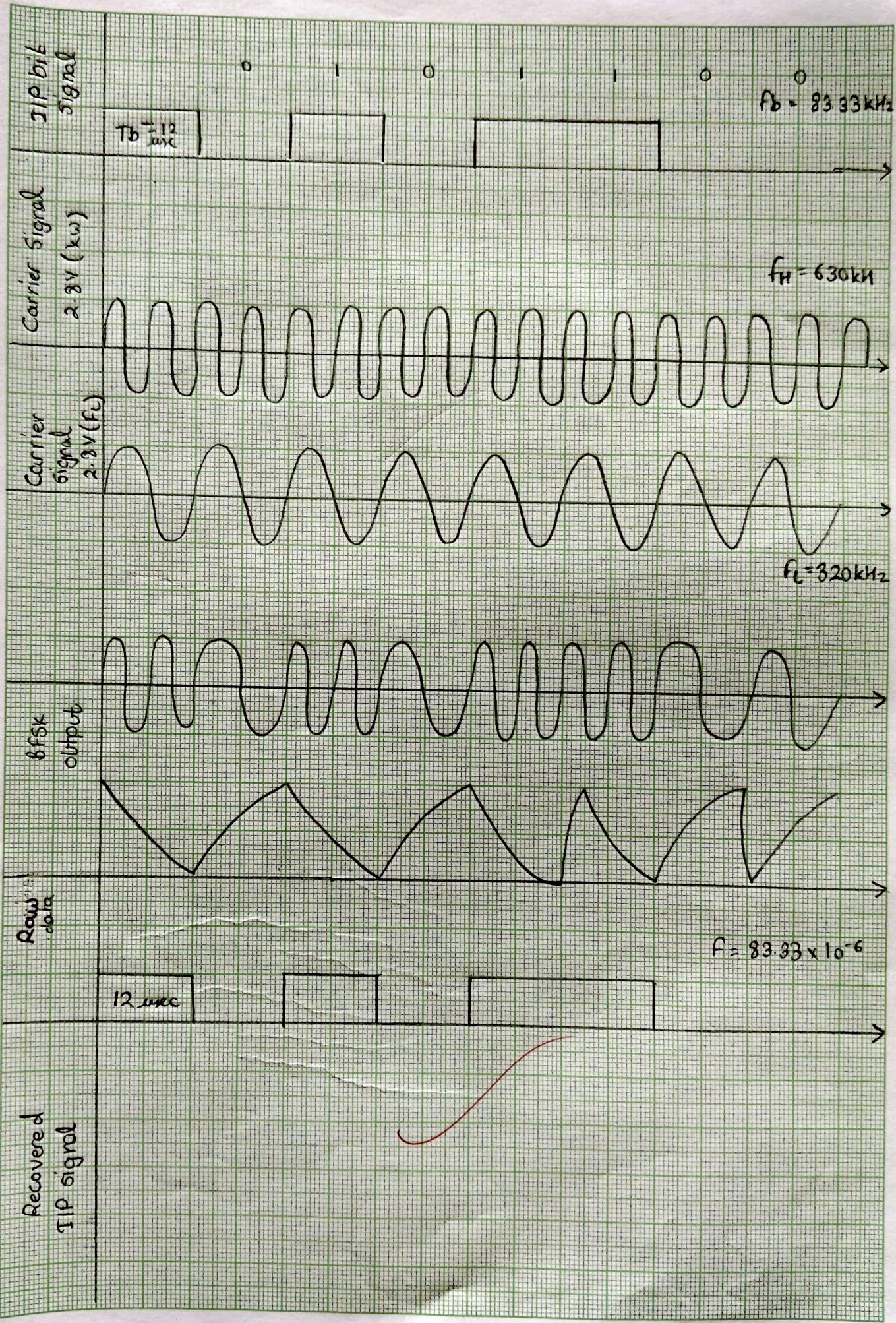


BFSK

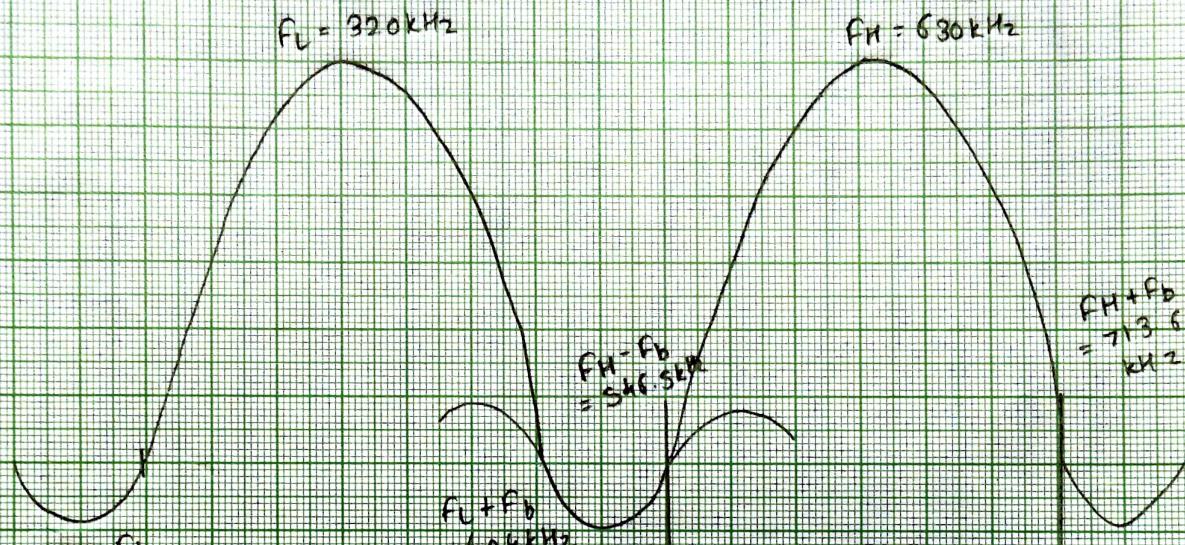
$$u_1(t) = \phi_1(t) = \sqrt{2/T_b} \cos \omega_H t$$

$$u_2(t) = \phi_2(t) = \sqrt{2/T_b} \cos \omega_L t$$





BFSK Spectrum



$$f_L - f_B = 237 \text{ kHz}$$

$$2f_B = 237 \times 10^3$$

$$404 \times 10^3$$

$$2f_B = 167 \text{ kHz}$$

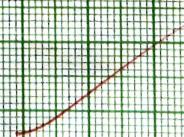
$$2f_B = \frac{78.6 \times 10^3}{546.5 \times 10^3}$$

$$2f_B = 167.1 \text{ kHz}$$

$$\text{BW} = 2f_B + 2f_B$$

$$= 4f_B$$

$$\text{BW} = 334 \text{ kHz}$$



Experiment No.: 03

**Title: STUDY OF GENERATION &
DETECTION OF QPSK**

Date of performance: 28-07-2025

Date of submission: 04-08-2025

Block Diagram :-

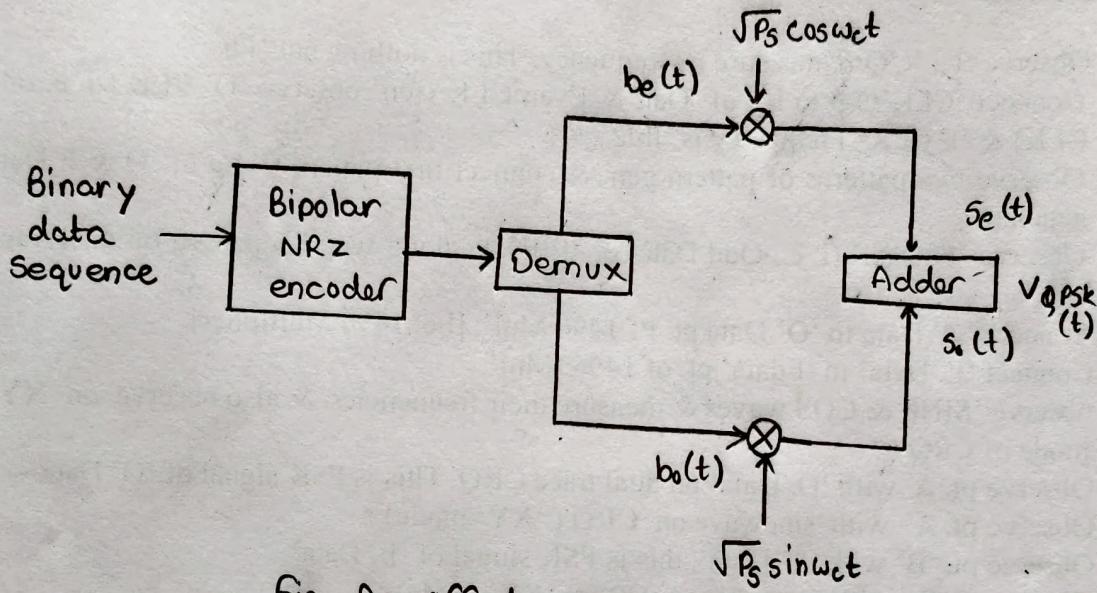
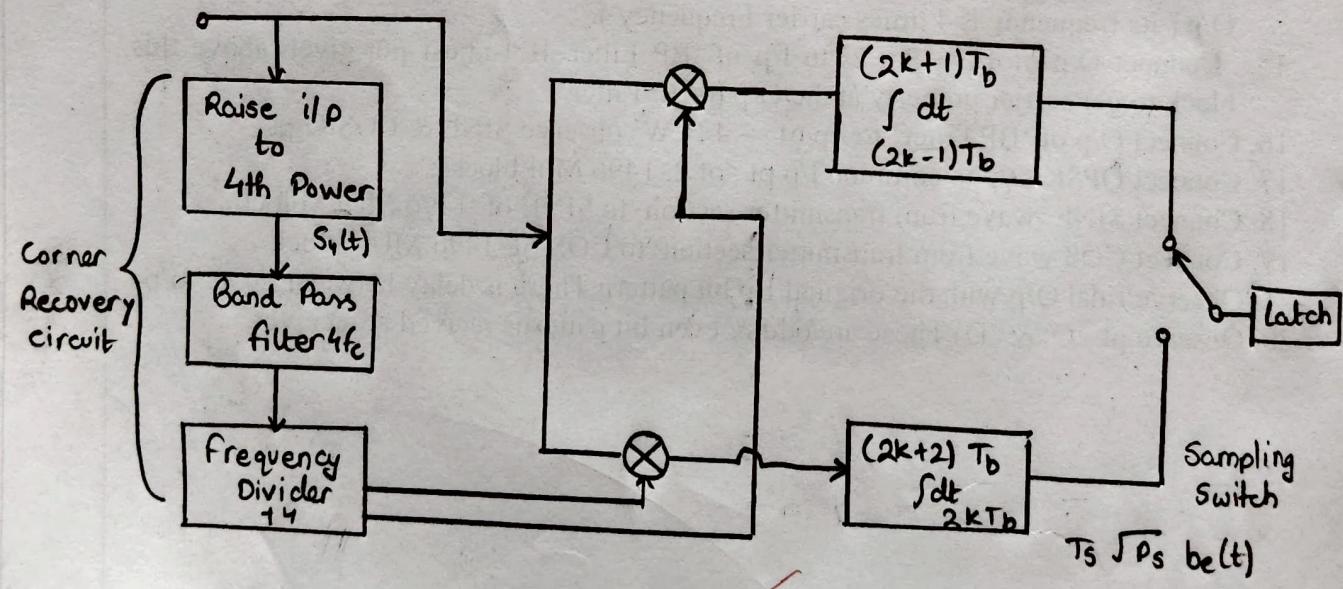


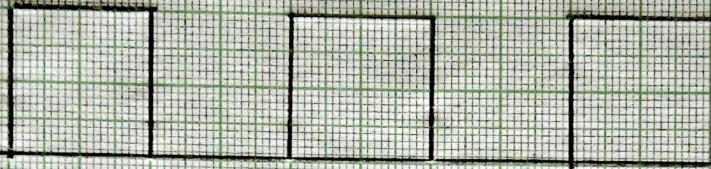
Fig. An offset QPSK Transmitter

$$s(t) = \sqrt{P_s} b_0(t) \sin \omega_c t + \sqrt{P_s} b_e(t) \cos \omega_c t$$

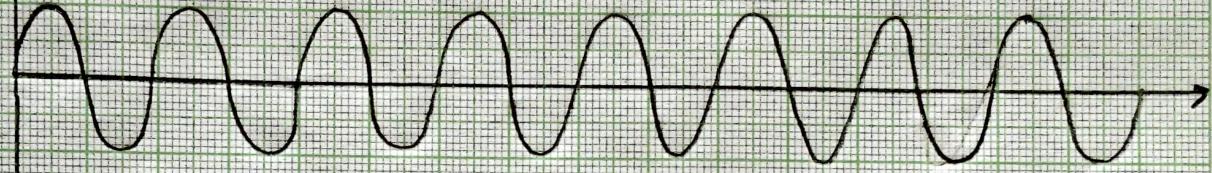


QPSK

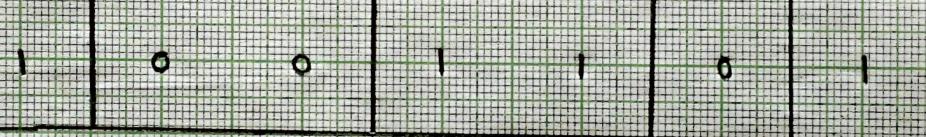
Bit
Clock
Signal



Carrier
Signal



bit
Program



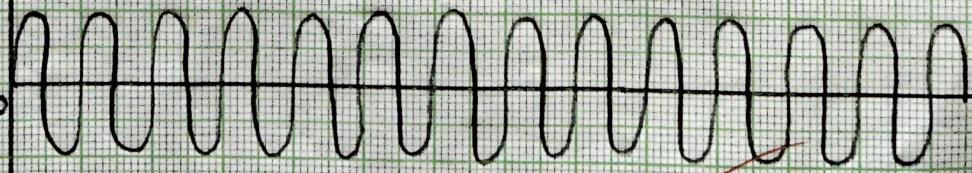
Odd
data

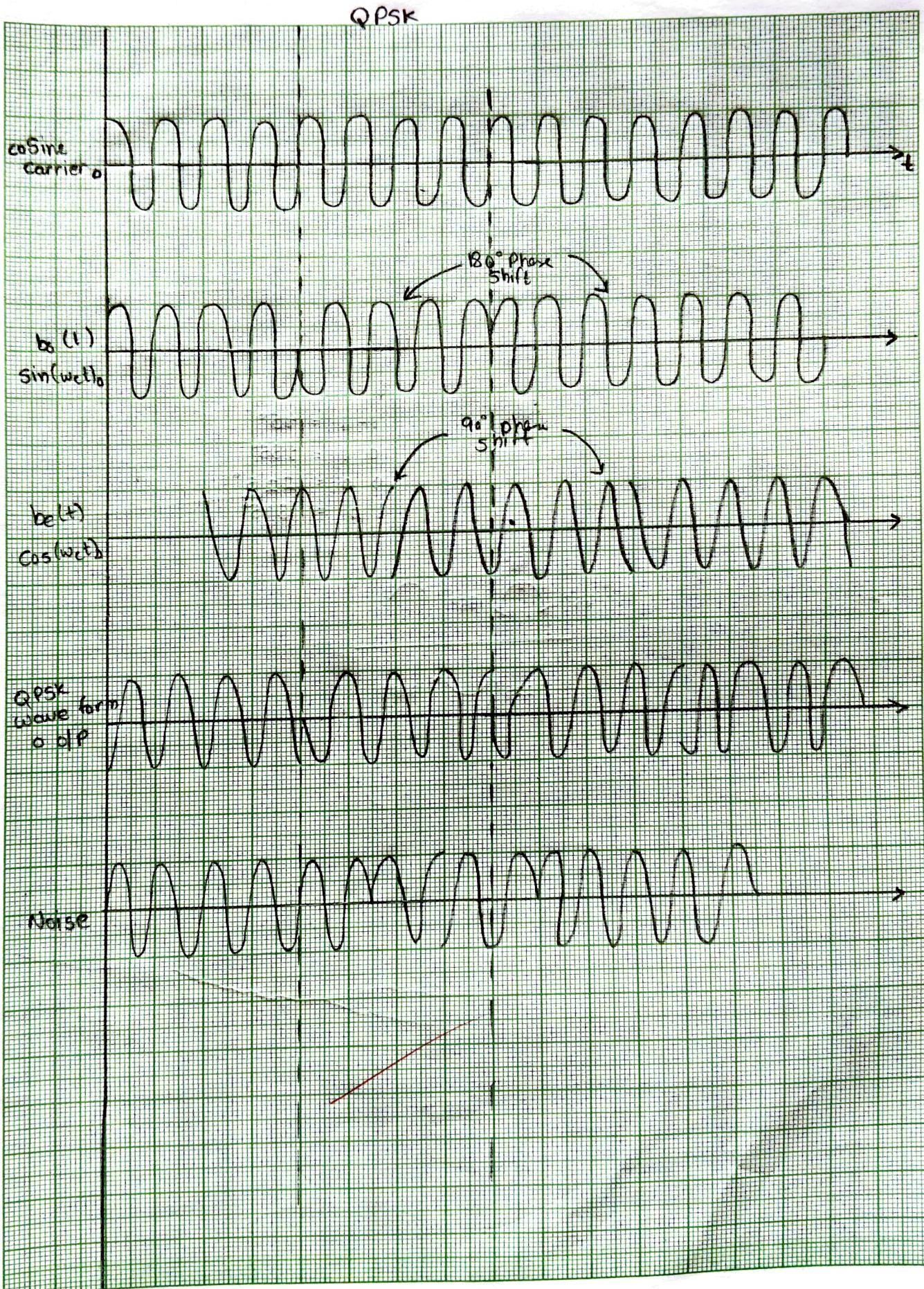


Even
data

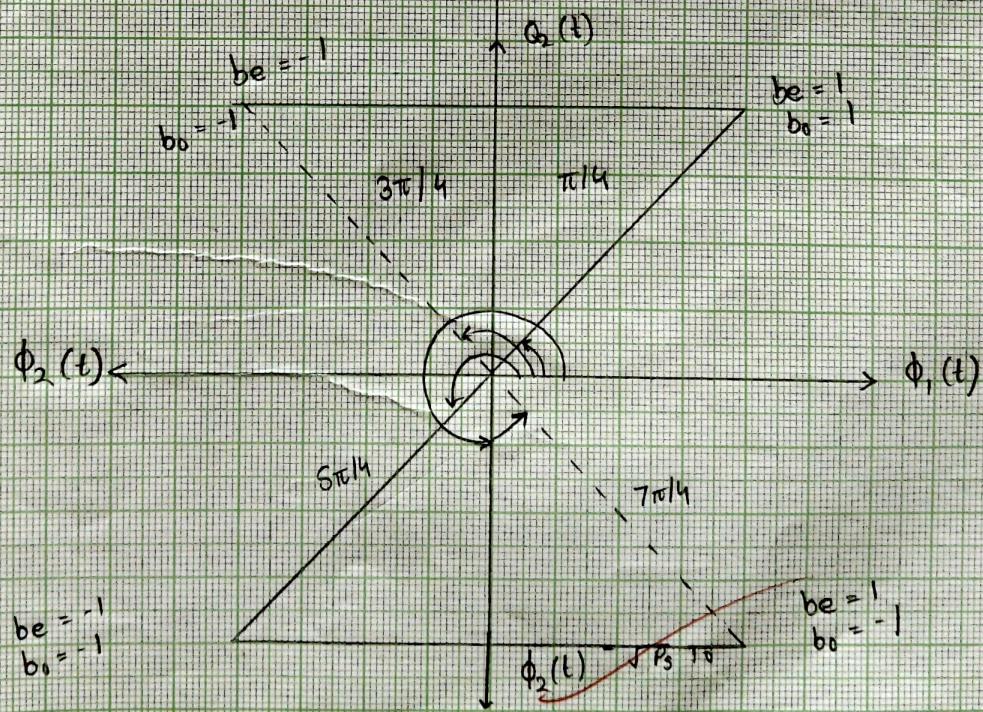
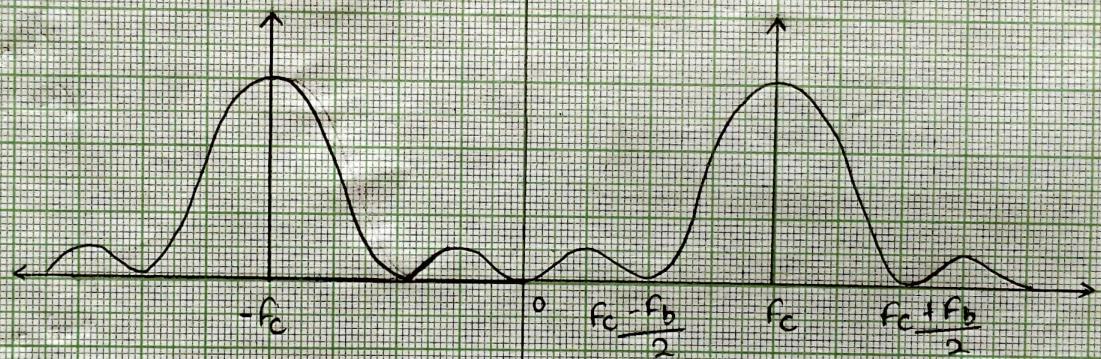
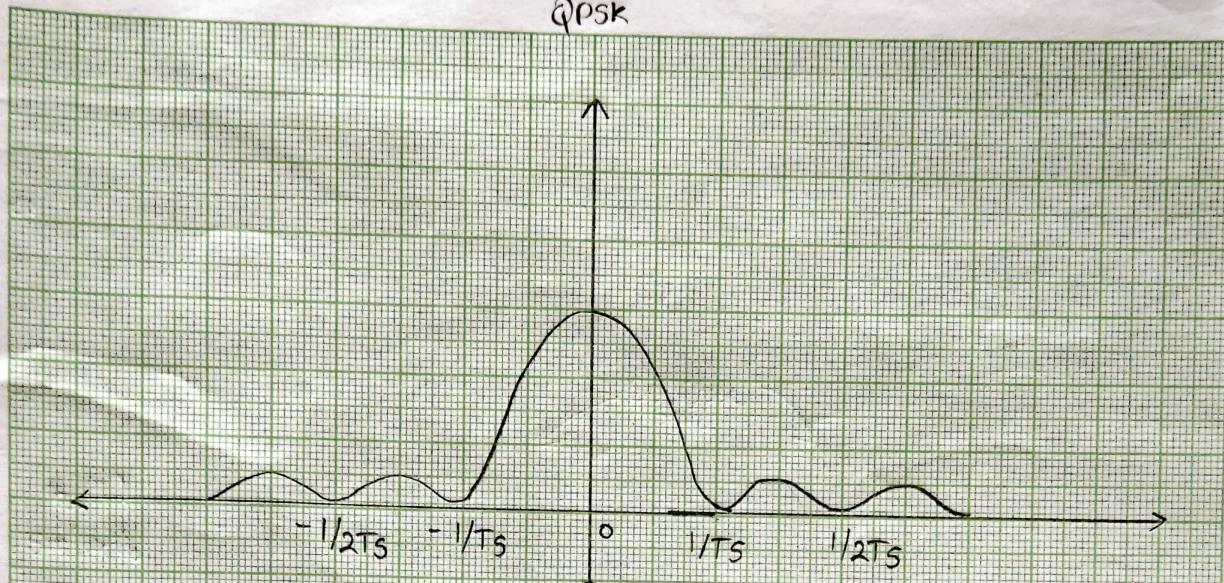


Sine
carrier





QPSK

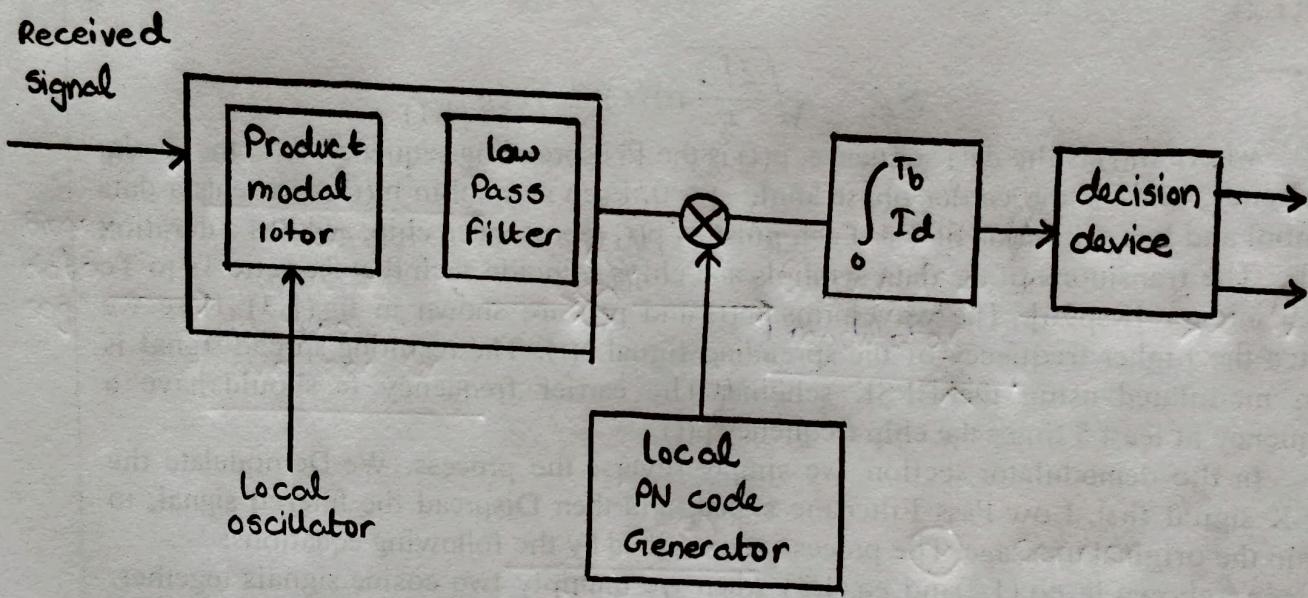


Experiment No.: 3-(B) 4.

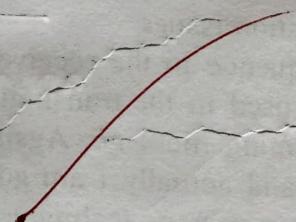
Title: STUDY OF GENERATION &
DETECTION OF DSSS BPSK

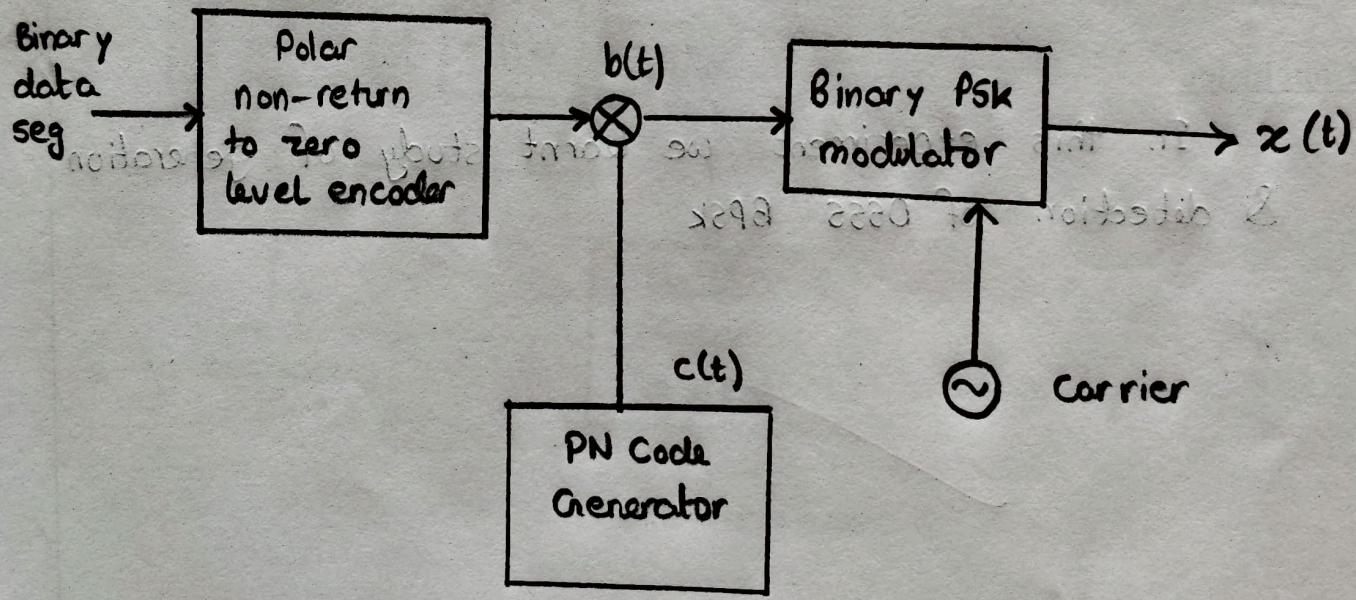
Date of performance: 04 - 08 - 2025

Date of submission: 11 - 08 - 2025



DSSS Receiver





DSSS Transmpter

