

History

Document Changes

The modifications that have been made to this document are listed in the table below.

Date	Revision	Description	Author
05-08-24	01	Initial Release	Andy Yang

TABLE OF CONTENTS

1. Objectives	3
2. Purposes:	3
3. Antenna gain description:	3
4. Performance specification:	7
5. Sample size:	8
6. Test location & date & Name:.....	10
7. Table of calibrated equipment:	11
8. Names of commercial test software being used:.....	11
9. Test setup photos and description of how measurements are made.....	12
10. Name and address of the antenna manufacturer:.....	13

1. Objectives

Establish general criteria for SZ25780

Type	Model Name
BT	SZ25780
WIFI	SZ25780

2. Purposes:

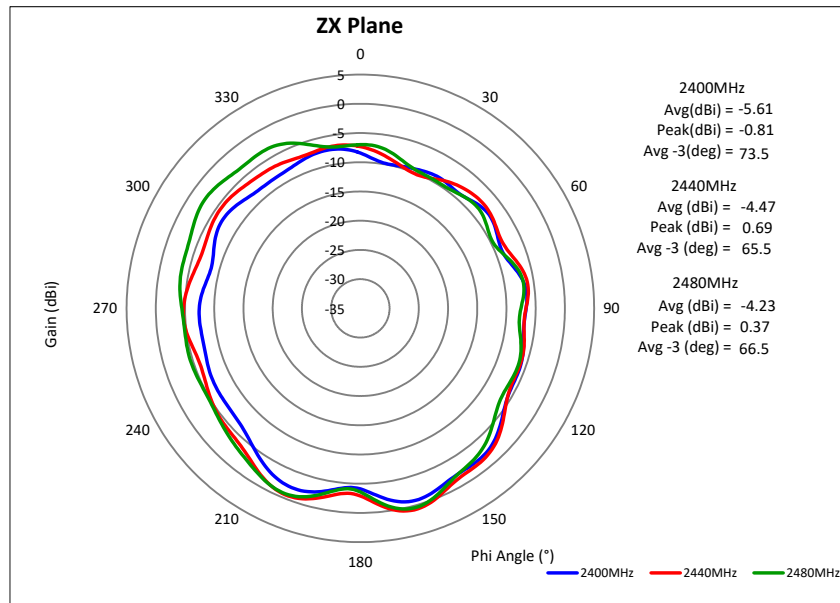
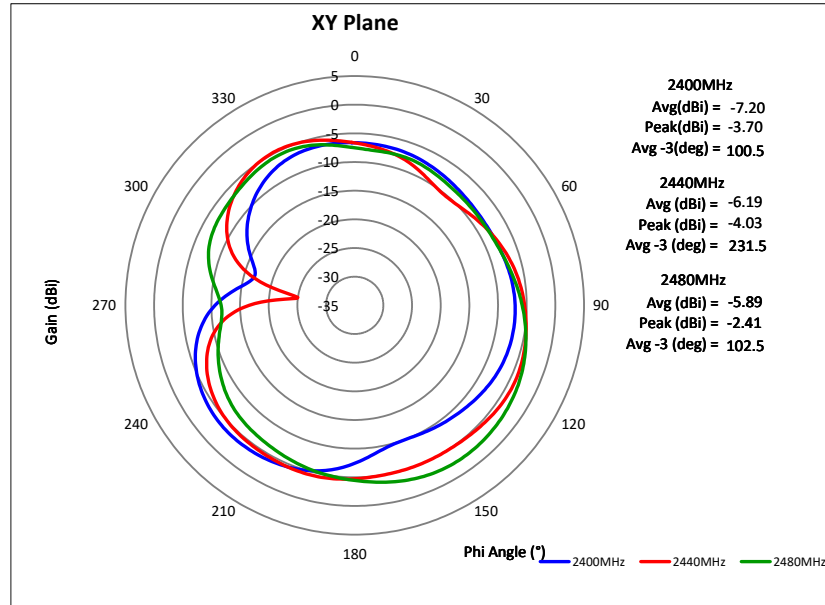
Measure SZ25780 BT and WIFI and provide the gain measurements that can be referenced

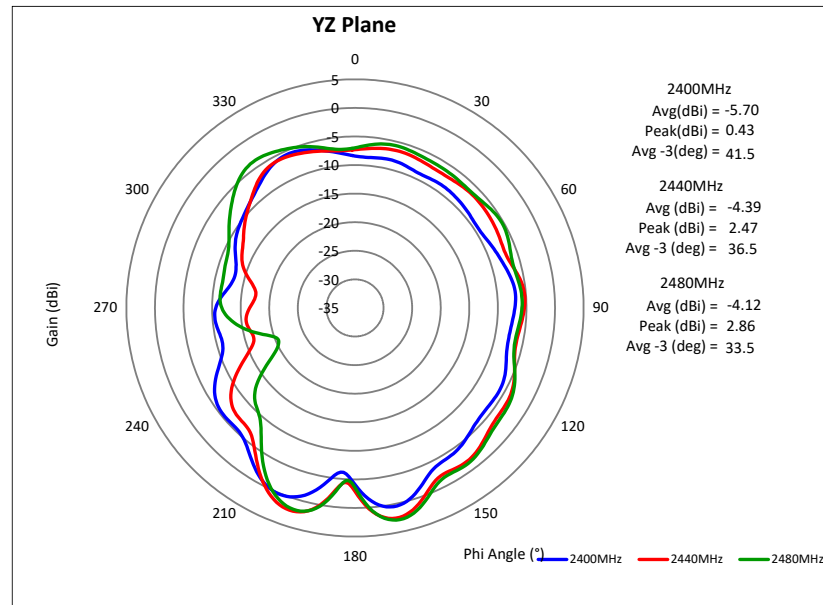
3. Antenna gain description:

BT:

Antenna Gain Data					
Freq. [unit: MHz]	H-pol [dBi]	V-pol [dBi]	Average [dBi]	Efficiency [%]	θ, ϕ of Maximum Gain
2400	-7.2	-5.61	-6.18	24.08	100.5,73.5
2440	-6.19	-4.47	-4.89	31.78	231.5,65.5
2480	-5.89	-4.24	-4.72	33.72	102.5,66.5

Antenna 2D Radiation Pattern

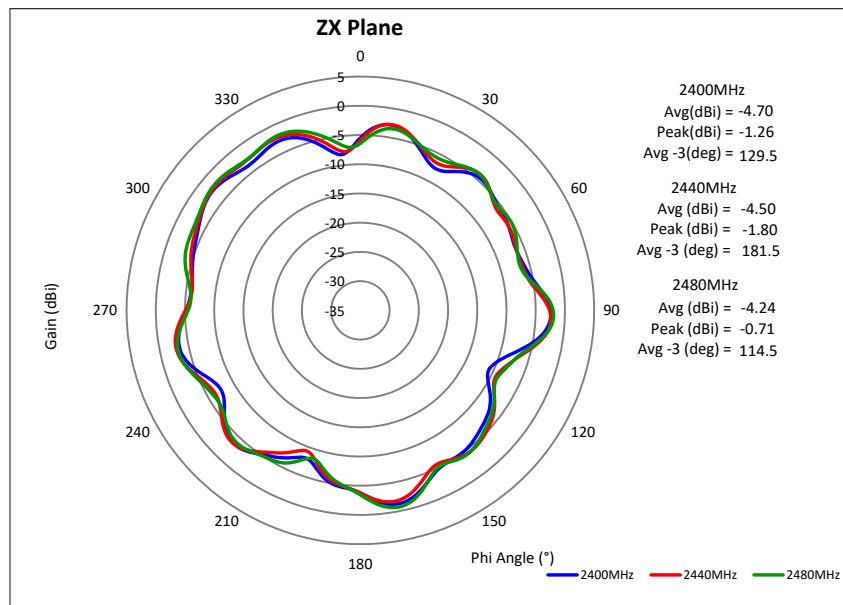
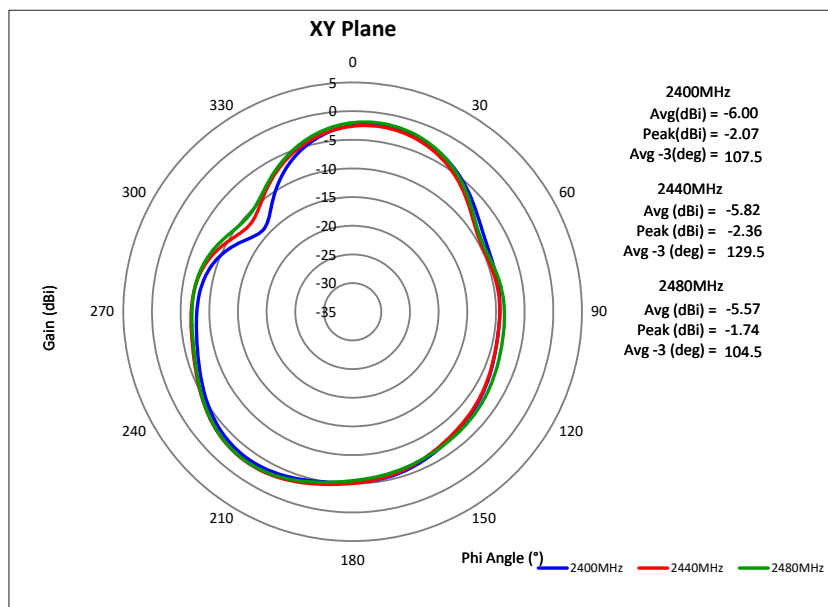


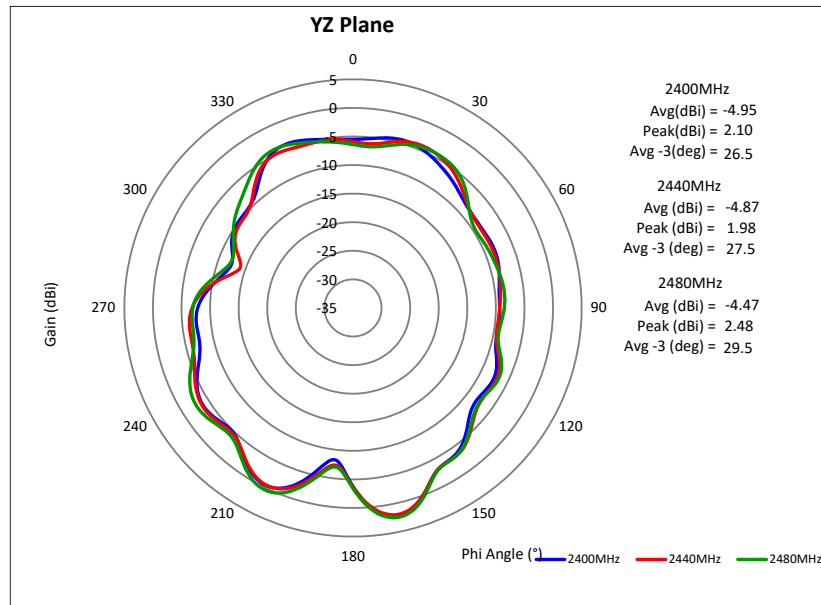


WIFI:

Antenna Gain Data					
Freq.	H-pol	V-pol	Average	Efficiency	θ, ϕ
[unit: MHz]	[dBi]	[dBi]	[dBi]	[%]	
2400	-6	-4.7	-5.8	26.32	107.5,129.5
2440	-5.82	-4.5	-5.51	28.11	129.5,181.5
2480	-5.67	-4.24	-5.35	29.19	104.5,114.5

Antenna 2D Radiation Pattern





4. Performance specification:

Gain values for the antennas should be expected to have averages within 0.5 dB of averages provided in above table.

BT:

Antenna vendor Part Number	Type	Antenna Manufacturer	Highest Peak Gain with Cable Loss (dBi)	Laptop/Host Model
			2.4	
SZ25780 BT	PIFA	Pulse Electronics	1	

WIFI:

Antenna vendor Part Number	Type	Antenna Manufacturer	Highest Peak Gain with Cable Loss (dBi)	Laptop/Host Model
			2.4	
SZ25780 WIFI	PIFA	Pulse Electronics	2.3	

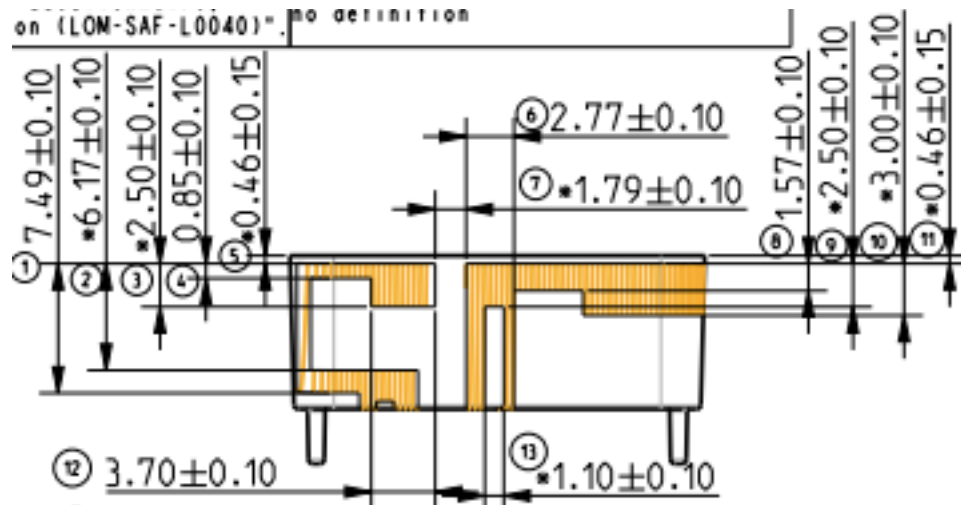
5. Sample size:

1 piece was measured for each antenna

BT:



Antenna Mechanical Drawing:



WIFI:



7. Table of calibrated equipment:

Equipment	Calibration date
Agilent Technologies E5071C Network Analyzer	7/20/2023 next due date 12/11/2023

8. Names of commercial test software being used:

SUNYIELD System

9. Test setup photos and description of how measurements are made



Measurements are made in a 4 m. anechoic chamber. Antenna is adhered to 1 mm. thick PC surface. Receiving horns on other end of chamber. Antenna is rotated to get measurements in 10 degree increments in the sphere, and 8 frequency values are measured. Measured power is compared to input power and gain values are determined from this data.

10. Name and address of the antenna manufacturer:

Pulse Electronics Corporation
No. 99 Huo Ju Road, Suzhou New District SND Hi-Tech Industrial
Park