

## FCC RADIO TEST REPORT

Applicant..... : Yantai Trial Retailing Engineering CO.,LTD

Address..... : NO.161 CHANGJIANG ROAD, Pilot Free Trade Zone Yantai area,  
Shandong China.

Manufacturer..... : SHENZHEN SHINDY TECHNOLOGY CO., LTD.

Address..... : NO.401, 1300018, DAFU INDUSTRIAL COMMUNITY, ZHANGGE  
COMMUNITY, FUCHENG STREET, LONGHUA DISTRICT, SHENZHEN,  
GUANGDONG PROVINCE, P.R.CHINA

Factory..... : SHENZHEN SHINDY TECHNOLOGY CO., LTD.

Address..... : NO.401, 1300018, DAFU INDUSTRIAL COMMUNITY, ZHANGGE  
COMMUNITY, FUCHENG STREET, LONGHUA DISTRICT, SHENZHEN,  
GUANGDONG PROVINCE, P.R.CHINA

Product Nam..... : Retail AI Camera Z3

Brand Name..... : Retail Eye

Model No. .... : Retail Eye - Z3

FCC ID..... : 2A23I-AICAM-03

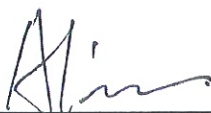
Measurement Standard..... : 47 CFR FCC Part 15, Subpart C (Section 15.247)

Receipt Date of Samples..... : June 07, 2021

Date of Tested..... : June 07, 2021 to August 20, 2021

Date of Report..... : September 07, 2021

This report shows that above equipment is technically compliant with the requirements of the standards above. All test results in this report apply only to the tested sample(s). Without prior written approval of Dongguan Nore Testing Center Co., Ltd, this report shall not be reproduced except in full.

  
Prepared by  
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## Revision History

[illegible]

## 1. Summary of Test Result

FCC Rules	Description of Test	Result	Remarks
§15.247(a)(1)	Channel Separation test	PASS	---
§15.247(a)(1)	20dB Bandwidth	PASS	---
§15.247(a)(1)(iii)	Hopping Channel Number	PASS	---
§15.247(a)(1)(iii)	Time of Occupancy (Dwell Time)	PASS	---
§15.247(b)	Max Peak output Power test	PASS	---
§15.247(d)	Band edge test	PASS	---
§15.207 (a)	AC Power Conducted Emission	PASS	---
§15.247(d), §15.209, §15.205	Radiated Emission	PASS	---
§15.203	Antenna Requirement	PASS	---
§15.247(d)	Conducted Spurious Emission	PASS	---

## 2. General Description of EUT

Product Information	
Product name:	Retail AI Camera Z3
Main Model Name:	Retail Eye - Z3
Additional Model Name:	N/A
Model Difference:	N/A
S/N:	00001-3K-Z3
Brand Name	Retail Eye
Hardware version:	Not Stated
Software version:	Not Stated
Rating:	DC 5V come from USB port
Classification:	Class A
Typical arrangement:	Table-top
I/O Port:	N/A
Accessories Information	
Adapter:	M/N: JHD-AP024J-050300BA-A Input: AC 100-240V 50/60Hz, 0.55A Output: DC 5V 3000mA
Cable:	DC Line: 1.5m
Other:	N/A
Additional information	
Note:	N/A
Remark:	All the information above are provided by the manufacturer. More detailed feature of the EUT please refers to the user manual.

Technical Specification	
Bluetooth Version:	V5.0
Frequency Range:	2402-2480MHz
Modulation Type:	GFSK, $\pi/4$ -DQPSK, 8DPSK
Number of Channel:	79 (refer to following channel list for details)
Channel Space:	1MHz
Antenna Type:	PIFA antenna
Antenna Gain:	2.5 dBi (Declared by manufacturer)
Remark:	The EUT does not support BLE feature.

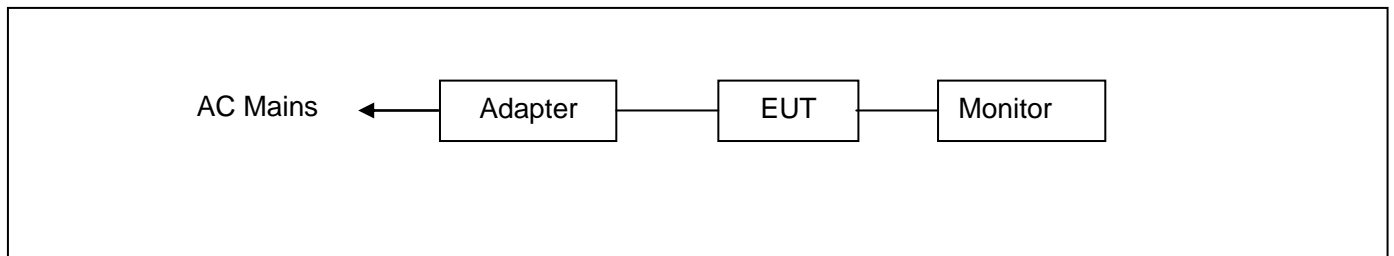
Channel List							
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
0	2402	20	2422	40	2442	60	2462
1	2403	21	2423	41	2443	61	2463
2	2404	22	2424	42	2444	62	2464
3	2405	23	2425	43	2445	63	2465
4	2406	24	2426	44	2446	64	2466
5	2407	25	2427	45	2447	65	2467
6	2408	26	2428	46	2448	66	2468
7	2409	27	2429	47	2449	67	2469
8	2410	28	2430	48	2450	68	2470
9	2411	29	2431	49	2451	69	24721
10	2412	30	2432	50	2452	70	2472
11	2413	31	2433	51	2453	71	2473
12	2414	32	2434	52	2454	72	2474
13	2415	33	2435	53	2455	73	2475
14	2416	34	2436	54	2456	74	2476
15	2417	35	2437	55	2457	75	2477
16	2418	36	2438	56	2458	76	2478
17	2419	37	2439	57	2459	77	2479
18	2420	38	2440	58	2460	78	2480
19	2421	39	2441	59	2461	----	----

### 3. Test Channels and Modes Detail

No.	Mode	Channel	Frequency (MHz)	Modulation
1	TX	Hopping	2402-2480	GFSK/ $\pi$ /4-DQPSK /8DPSK
2	TX	Low	2402	GFSK/ $\pi$ /4-DQPSK /8DPSK
3	TX	Mid	2441	GFSK/ $\pi$ /4-DQPSK /8DPSK
4	TX	High	2480	GFSK/ $\pi$ /4-DQPSK /8DPSK
5.	Normal Mode	---	---	---

Note: TX mode means that the EUT was programmed to be in continuously transmitting mode.

### 4. Configuration of EUT



### 5. Modification of EUT

No modifications are made to the EUT during all test items.



## 6. Description of Support Device

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

No.	Equipment	Brand	M/N	S/N	Cable Specification	Remarks
1.	Monitor	DELL	S2240Tb	CN-0FP53P-7 4261-3AL-0C YU	AC Line: 1.15m unshielded DC Line: 1.21m unshielded with a core	Adapter: Manufacturer: CWT M/N: KPL-050F-VI I/P: AC100-240V50/ 60Hz, 1.7A O/P: 12V4.17A 50W

No.	Test Software	Modulation	Power Setting
1.	Engineering Mode (No need software)	GFSK	Default
2.		$\pi/4$ -DQPSK	Default
3.		8DPSK	Default

## 7. Test Facility and Location

Test Site	:	Dongguan Nore Testing Center Co., Ltd. (Dongguan NTC Co., Ltd.)
Accreditations and Authorizations	:	<p>The Laboratory has been assessed and proved to be in compliance with CNAS/CL01</p> <p>Listed by CNAS, August 13, 2018</p> <p>The Certificate Registration Number is L5795.</p> <p>The Certificate is valid until August 13, 2024</p> <p>The Laboratory has been assessed and proved to be in compliance with ISO17025</p> <p>Listed by A2LA, November 01, 2017</p> <p>The Certificate Registration Number is 4429.01</p> <p>The Certificate is valid until December 31, 2021</p> <p>Listed by FCC, November 06, 2017</p> <p>Test Firm Registration Number: 907417</p> <p>Listed by Industry Canada, June 08, 2017</p> <p>The Certificate Registration Number. Is 46405-9743A</p>
Test Site Location	:	Building D, Gaosheng Science and Technology Park, Hongtu Road, Nancheng District, Dongguan City, Guangdong Province, China

## 8. Applicable Standards and References

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

### Test Standards:

47 CFR Part 15, Subpart C, 15.247

ANSI C63.10-2013

### References Test Guidance:

DTS KDB 558074 D01 15.247 Meas Guidance v05r02

### Remark:

The EUT has also been tested and complied with the requirements of FCC Part 15, Subpart B, recorded in a separate test report.

## 9. Deviations and Abnormalities from Standard Conditions

No additions, deviations and exclusions from the standard.

## 10. Test Conditions

No.	Test Item	Test Mode	Test Voltage	Tested by	Remarks
1.	Channel Separation test	1	AC 120V 60Hz	Ray	See note <sup>1</sup>
2.	20dB Bandwidth	2-4	AC 120V 60Hz	Ray	See note <sup>1</sup>
3.	Hopping Channel Number	1	AC 120V 60Hz	Ray	See note <sup>1</sup>
4.	Time of Occupancy (Dwell Time)	1	AC 120V 60Hz	Ray	See note <sup>1</sup>
5.	Max Peak output Power test	2-4	AC 120V 60Hz	Ray	See note <sup>1</sup>
6.	Band edge test	1-4	AC 120V 60Hz	Ray	See note <sup>1</sup>
7.	AC Power Conducted Emission	5	AC 120V 60Hz AC 240V 50Hz	Ray	See note <sup>1</sup>
8.	Radiated Emission	1-4	AC 120V 60Hz AC 240V 50Hz	Ray	See note <sup>1</sup>
9.	Antenna Requirement	---	---	---	See note <sup>1</sup>
10.	Conducted Spurious Emission	1-4	AC 120V 60Hz	Ray	See note <sup>1</sup>

**Note:**

1. The testing climatic conditions for temperature, humidity, and atmospheric pressure are within: 15~35℃, 30~70%, 86~106kPa
2. As the EUT can be operated multiple positions, all X,Y,Z axis were considered during the test and only the worst case X was recorded.
3. AC 120V 60Hz is come from input voltage of the ancillary equipment adapter.
4. Only the worst voltage was recorded in the report.

## 11. Measurement Uncertainty

No.	Test Item	Frequency	Uncertainty	Remarks
1.	Conducted Emission	150KHz ~ 30MHz	$\pm 2.52$ dB	---
2.	Radiated Emission Test	9kHz ~ 30MHz	$\pm 2.60$ dB	
		30MHz ~ 1GHz	$\pm 4.68$ dB	---
		1GHz ~ 18GHz	$\pm 5.14$ dB	---
		18GHz ~ 40GHz	$\pm 5.14$ dB	---
3.	RF Conducted Test	10Hz-40GHz	$\pm 1.06$ dB	---

**Note:**

1. This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of  $k=2$ .
2. The measurement uncertainty levels above are estimated and calculated according to CISPR 16-4-2.
3. The conformity assessment statement in this report is based solely on the test results, measurement uncertainty is excluded.

## 12. Sample Calculations

Conducted Emission						
Freq. (MHz)	Reading Level (dBuV)	Correct Factor (dB)	Measurement (dBuV)	Limit (dBuV)	Over (dB)	Detector
0.1900	30.10	10.60	40.70	79.00	-38.30	QP
<p>Where,</p> <p>Freq. = Emission frequency in MHz</p> <p>Reading Level = Uncorrected Analyzer/Receiver reading</p> <p>Corrector Factor = Insertion loss of LISN + Cable Loss + RF Switching Unit attenuation</p> <p>Measurement = Reading + Corrector Factor</p> <p>Limit = Limit stated in standard</p> <p>Margin = Measurement - Limit</p> <p>Detector = Reading for Quasi-Peak / Average / Peak</p>						

Radiated Spurious Emissions and Restricted Bands						
Freq. (MHz)	Reading Level (dBuV)	Correct Factor (dB/m)	Measurement (dBuV/m)	Limit (dBuV/m)	Over (dB)	Detector
60.0700	45.88	-18.38	27.50	49.00	-21.50	QP
<p>Where,</p> <p>Freq. = Emission frequency in MHz</p> <p>Reading Level = Uncorrected Analyzer/Receiver reading</p> <p>Corrector Factor = Antenna Factor + Cable Loss - Pre-amplifier</p> <p>Measurement = Reading + Corrector Factor</p> <p>Limit = Limit stated in standard</p> <p>Over = Margin, which calculated by Measurement - Limit</p> <p>Detector = Reading for Quasi-Peak / Average / Peak</p>						

Note: For all conducted test items, the spectrum analyzer offset or transducer is derived from RF cable loss and attenuator factor. The offset or transducer is equal to the RF cable loss plus attenuator factor.

## 13. Test Items and Results

### 13.1 Conducted Emissions Measurement

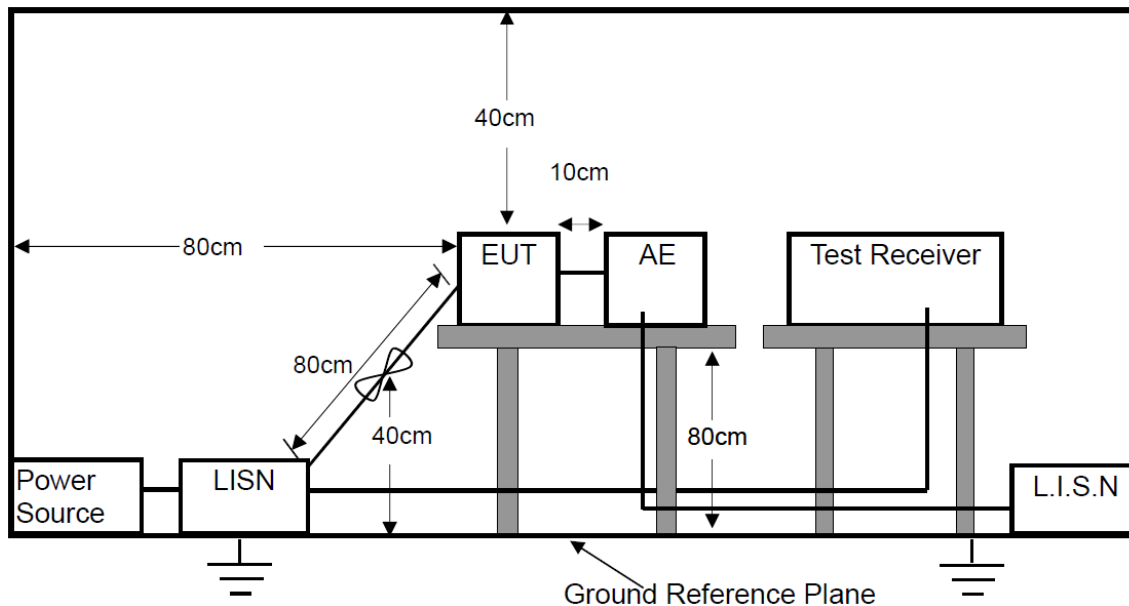
#### LIMIT

According to the requirements of FCC PART 15.207, the limits are as follows:

Frequency (MHz)	Quasi-peak	Average
0.15 to 0.5	66 to 56	56 to 46
0.5 to 5	56	46
5 to 30	60	50

Note: 1. If the limits for the average detector are met when using the quasi-peak detector, then the limits for the measurements with the average detector are considered to be met.  
2. The lower limit shall apply at the transition frequencies.  
3. The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.5MHz.

#### BLOCK DIAGRAM OF TEST SETUP



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## TEST PROCEDURES

- a. The EUT was placed on a wooden table 0.8m height from the metal ground plan and 0.4m from the conducting wall of the shielding room and it was kept at 0.8m from any other grounded conducting surface.
- b. All I/O cables and support devices were positioned as per ANSI C63.10.
- c. Connect mains power port of the EUT to a line impedance stabilization network (LISN).
- d. Connect all support devices to the other LISN and AAN, if needed.
- e. Scan the frequency range from 150KHz to 30MHz at both sides of AC line for maximum conducted interference checking and record the test data.

## TEST RESULTS

PASS

Please refer to the following pages.



M/N: Retail Eye - Z3

Testing Voltage: AC 120V/60Hz

Phase: L1

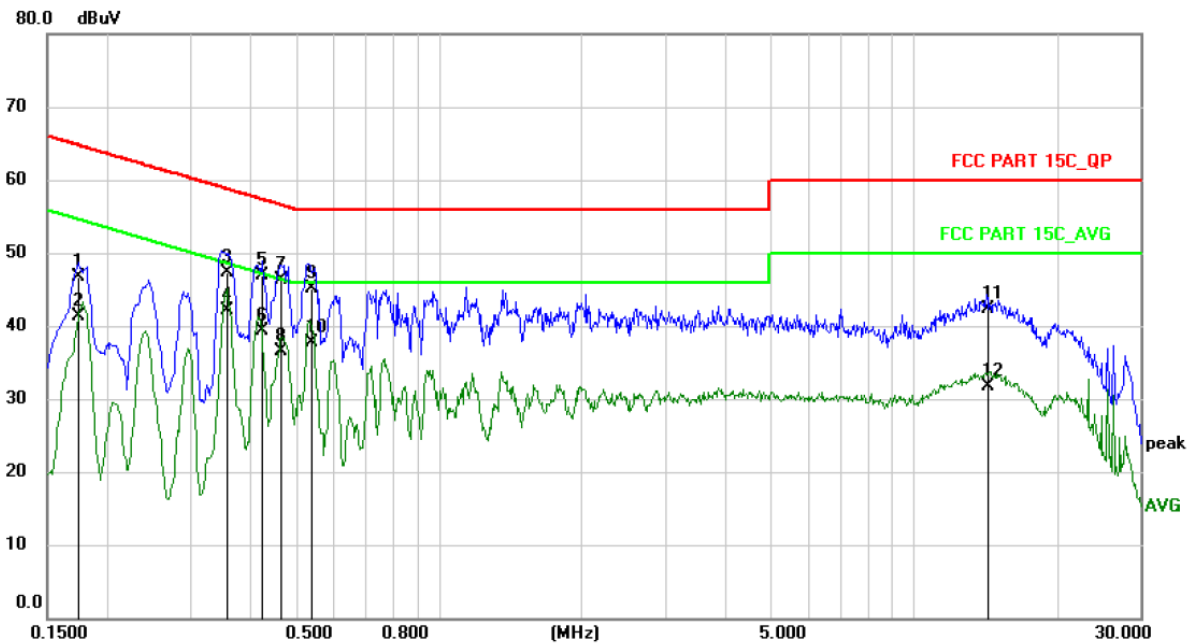
Detector: QP & AVG

Test Mode: 5

## Conducted Emission Measurement

Date: 2021/7/30

Time: 11:26:12



No. Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over		
	MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1	0.1737	36.03	10.60	46.63	64.78	-18.15	QP	
2	0.1737	30.71	10.60	41.31	54.78	-13.47	AVG	
3	0.3578	36.69	10.61	47.30	58.78	-11.48	QP	
4 *	0.3578	31.59	10.61	42.20	48.78	-6.58	AVG	
5	0.4259	36.29	10.62	46.91	57.33	-10.42	QP	
6	0.4259	28.62	10.62	39.24	47.33	-8.09	AVG	
7	0.4660	35.63	10.62	46.25	56.58	-10.33	QP	
8	0.4660	25.85	10.62	36.47	46.58	-10.11	AVG	
9	0.5380	34.54	10.63	45.17	56.00	-10.83	QP	
10	0.5380	27.07	10.63	37.70	46.00	-8.30	AVG	
11	14.2500	31.58	10.75	42.33	60.00	-17.67	QP	
12	14.2500	20.92	10.75	31.67	50.00	-18.33	AVG	

M/N: Retail Eye - Z3

Testing Voltage: AC 120V/60Hz

Phase: N

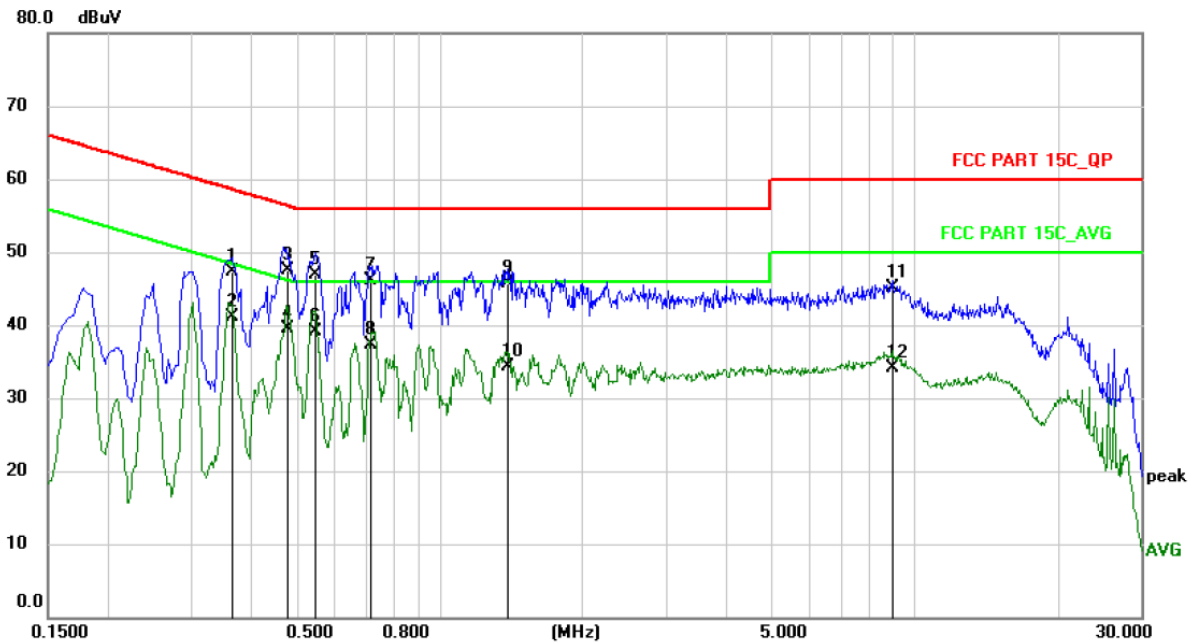
Detector: QP & AVG

Test Mode: 5

## Conducted Emission Measurement

Date: 2021/7/30

Time: 11:33:28



No. Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over		
	MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1	0.3659	36.77	10.61	47.38	58.59	-11.21	QP	
2	0.3659	30.51	10.61	41.12	48.59	-7.47	AVG	
3	0.4778	36.97	10.63	47.60	56.38	-8.78	QP	
4 *	0.4778	28.97	10.63	39.60	46.38	-6.78	AVG	
5	0.5460	36.37	10.63	47.00	56.00	-9.00	QP	
6	0.5460	28.42	10.63	39.05	46.00	-6.95	AVG	
7	0.7137	35.47	10.66	46.13	56.00	-9.87	QP	
8	0.7137	26.59	10.66	37.25	46.00	-8.75	AVG	
9	1.3900	35.04	10.70	45.74	56.00	-10.26	QP	
10	1.3900	23.60	10.70	34.30	46.00	-11.70	AVG	
11	8.9778	34.31	10.73	45.04	60.00	-14.96	QP	
12	8.9778	23.32	10.73	34.05	50.00	-15.95	AVG	

## 13.2 Radiated Spurious Emissions and Restricted Bands Measurement

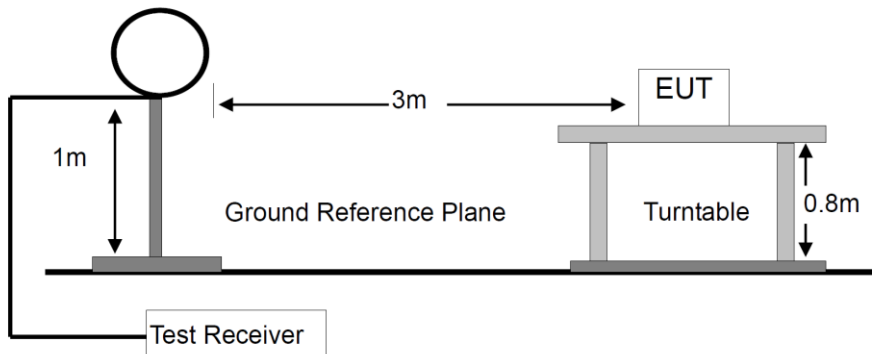
### LIMIT

Frequency range MHz	Distance Meters	Field Strengths Limit (15.209)
		$\mu\text{V/m}$
0.009 ~ 0.490	300	$2400/F(\text{kHz})$
0.490 ~ 1.705	30	$24000/F(\text{kHz})$
1.705 ~ 30	30	30
30 ~ 88	3	100
88 ~ 216	3	150
216 ~ 960	3	200
Above 960	3	500

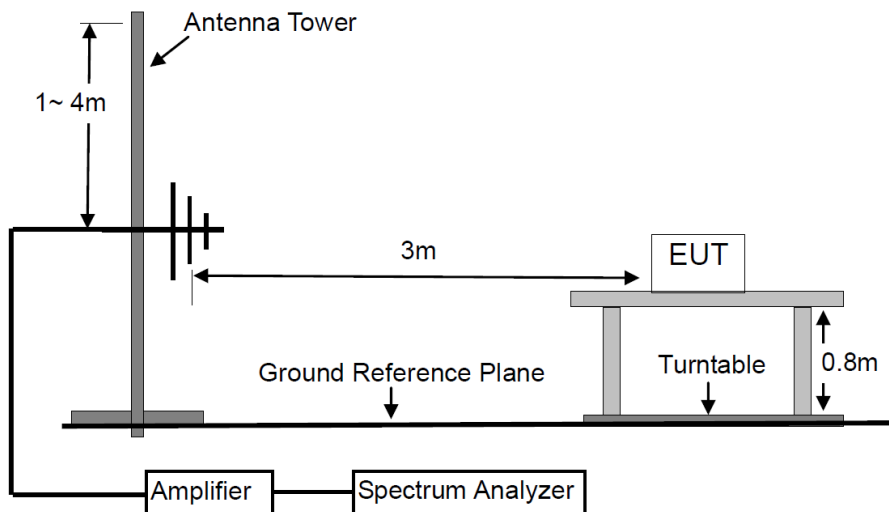
- Remark:
- (1) Emission level  $(\text{dB})\mu\text{V} = 20 \log \text{Emission level } \mu\text{V/m}$
  - (2) The smaller limit shall apply at the cross point between two frequency bands.
  - (3) As shown in 15.35(b), for frequencies above 1000MHz, the field strength limits are based on average detector, however, the peak field strength of any emission shall not exceed the maximum permitted average limits, specified above by more than 20dB under any condition of modulation.
  - (4) The frequency range scanned is from the lowest radio frequency signal generated in the device which is greater than 9 kHz to the tenth harmonic of the highest fundamental frequency or 40 GHz, whichever is lower.
  - (5) §15.247(d) specifies that emissions which fall in the restricted bands, as defined in §15.205 comply with radiated emission limits specified in §15.209.

## BLOCK DIAGRAM OF TEST SETUP

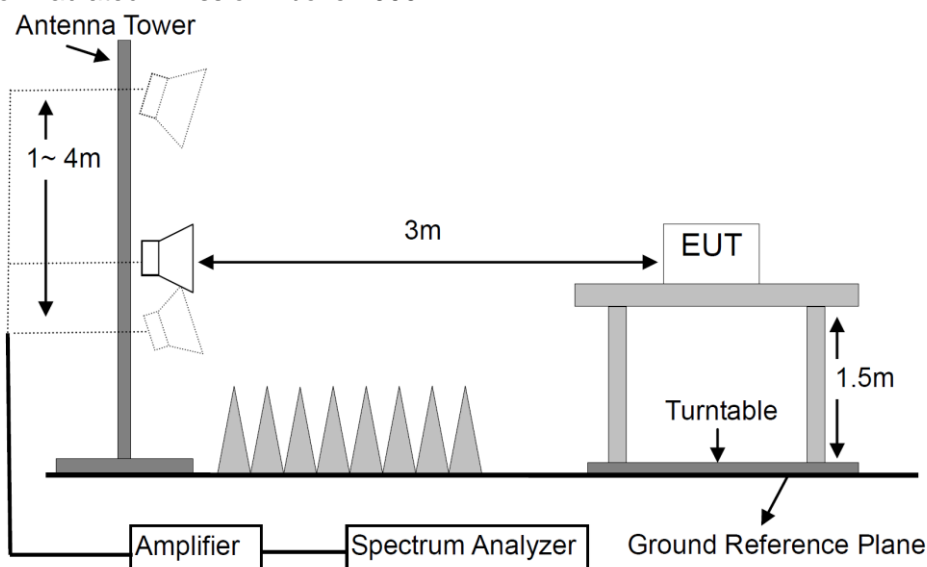
For Radiated Emission below 30MHz



For Radiated Emission 30-1000MHz



For Radiated Emission Above 1000MHz.



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## TEST PROCEDURES

- a. Below 1GHz, the EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi- anechoic chamber room.

- b. For the radiated emission test above 1GHz:

The EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meter full anechoic chamber room. The table was rotated 360 degrees to determine the position of the highest radiation. Place the measurement antenna away from each area of the EUT determined to be a source of emissions at the specified measurement distance, while keeping the measurement antenna aimed at the source of emissions at each frequency of significant emissions, with polarization oriented for maximum response. The measurement antenna may have to be higher or lower than the EUT, depending on the radiation pattern of the emission and staying aimed at the emission source for receiving the maximum signal. The final measurement antenna elevation shall be that which maximizes the emissions. The measurement antenna elevation for maximum emissions shall be restricted to a range of heights of from 1 m to 4 m above the ground or reference ground plane.

- c. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- d. The height of antenna is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- e. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading. The test-receiver system was set to peak detect function and specified bandwidth with maximum hold mode.
- f. A Quasi-peak measurement was then made for that frequency point for below 1GHz test. PK and AV for above 1GHz emission test.

During the radiated emission test, the spectrum analyzer was set with the following configurations:

Frequency Band (MHz)	Detector	Resolution Bandwidth	Video Bandwidth
30 to 1000	QP	120 kHz	300 kHz
Above 1000	Peak	1 MHz	3 MHz
	Average	1 MHz	10 Hz

## TEST RESULTS

PASS

Please refer to the following pages.

M/N: Retail Eye - Z3

Testing Voltage: AC 120V/60Hz

Polarization: Horizontal

Detector: QP

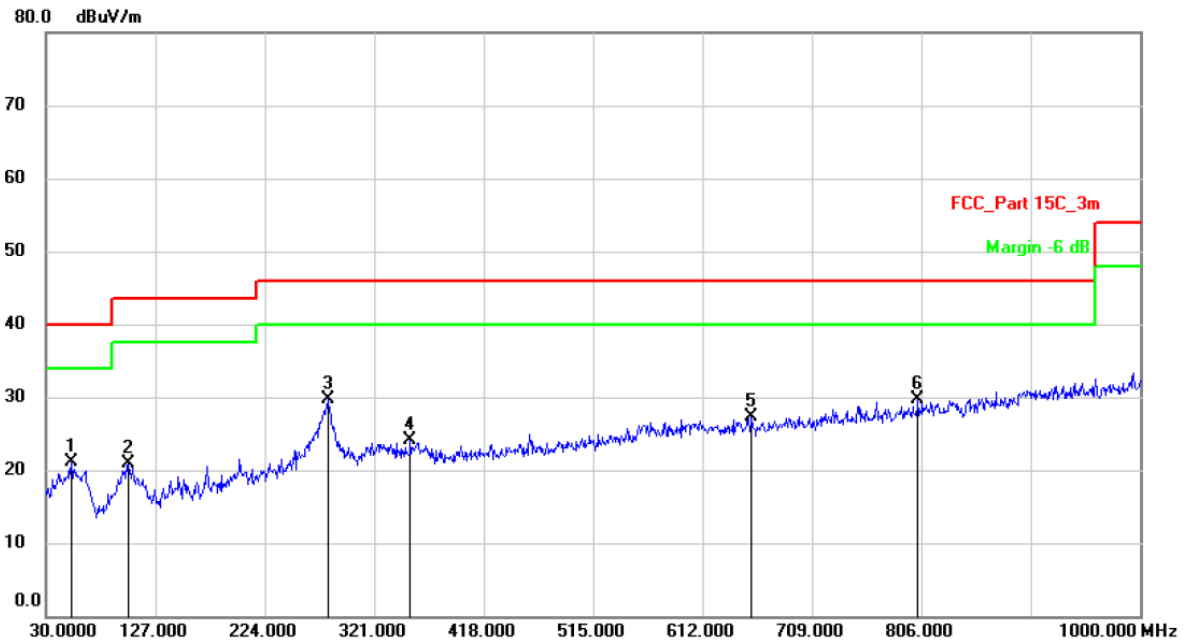
Test Mode: 5(the worst case)

Distance: 3m

## Radiated Emission Measurement

Date: 2021/7/31

Time: 13:22:02



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over		
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector	Comment
1		52.3100	28.29	-7.17	21.12	40.00	-18.88	QP	
2		102.7500	28.34	-7.52	20.82	43.50	-22.68	QP	
3	*	280.2600	35.60	-5.87	29.73	46.00	-16.27	QP	
4		353.0100	28.30	-4.11	24.19	46.00	-21.81	QP	
5		655.6500	25.83	1.39	27.22	46.00	-18.78	QP	
6		803.0900	25.69	4.02	29.71	46.00	-16.29	QP	

Note: Below 30MHz, the emissions are lower than 20dB below the allowable limit.

M/N: Retail Eye - Z3

Testing Voltage: AC 120V/60Hz

Polarization: Vertical

Detector: QP

Test Mode: 5(the worst case)

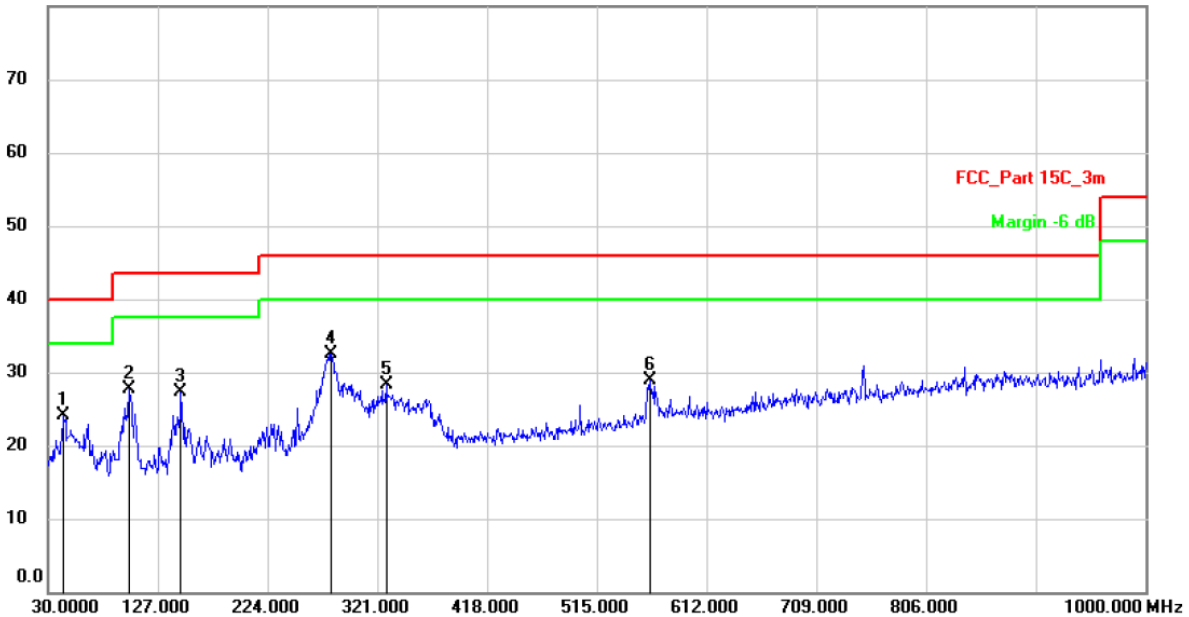
Distance: 3m

## Radiated Emission Measurement

Date: 2021/7/31

Time: 13:15:01

80.0 dBuV/m



No. Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over		
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector	Comment
1	43.5800	31.73	-7.66	24.07	40.00	-15.93	QP	
2	101.7800	36.35	-8.72	27.63	43.50	-15.87	QP	
3	147.3700	39.05	-11.75	27.30	43.50	-16.20	QP	
4 *	280.2600	39.42	-6.87	32.55	46.00	-13.45	QP	
5	328.7600	34.01	-5.69	28.32	46.00	-17.68	QP	
6	561.5600	30.42	-1.43	28.99	46.00	-17.01	QP	

Note: Below 30MHz, the emissions are lower than 20dB below the allowable limit.



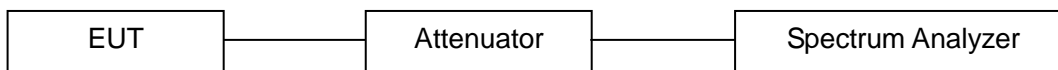
Modulation: GFSK(the worst case)				Test Result: PASS			Test frequency range: 1-25GHz			
Freq. (MHz)	Ant. Pol. (H/V)	Reading Level(dBuV)		Factor (dB/m)	Emission Level (dBuV/m)		Limit 3m (dBuV/m)		Margin (dB)	
		PK	AV		PK	AV	PK	AV	PK	AV
Operation Mode: TX Mode (Low)										
4804	V	49.17	36.06	6.30	55.47	42.36	74.00	54.00	-18.53	-11.64
7206	V	47.93	32.92	10.44	58.37	43.36	74.00	54.00	-15.63	-10.64
---										
4804	H	50.85	37.91	6.30	57.15	44.21	74.00	54.00	-16.85	-9.79
7206	H	48.25	34.92	10.44	58.69	45.36	74.00	54.00	-15.31	-8.64
---										
Operation Mode: TX Mode (Mid)										
4882	V	49.60	35.56	6.60	56.20	42.16	74.00	54.00	-17.80	-11.84
7323	V	49.13	33.66	10.55	59.68	44.21	74.00	54.00	-14.32	-9.79
---										
4882	H	50.10	35.97	6.60	56.70	42.57	74.00	54.00	-17.30	-11.43
7323	H	48.86	33.72	10.55	59.41	44.27	74.00	54.00	-14.59	-9.73
---										
Operation Mode: TX Mode (High)										
4960	V	48.66	35.48	6.89	55.55	42.37	74.00	54.00	-18.45	-11.63
7440	V	48.72	34.50	10.60	59.32	45.10	74.00	54.00	-14.68	-8.90
---										
4960	H	48.34	35.13	6.89	55.23	42.02	74.00	54.00	-18.77	-11.98
7440	H	49.23	33.92	10.60	59.83	44.52	74.00	54.00	-14.17	-9.48
---										
Spurious Emission in restricted band										
2390.000	V	51.54	39.12	0.09	51.63	39.21	74.00	54.00	-22.37	-14.79
2390.000	H	52.27	40.12	0.09	52.36	40.21	74.00	54.00	-21.64	-13.79
2483.500	V	59.11	44.98	0.35	59.46	45.33	74.00	54.00	-14.54	-8.67
2483.500	H	59.10	45.04	0.35	59.45	45.39	74.00	54.00	-14.55	-8.61
Remark: Data of measurement within this frequency range shown “---” in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits.										

### 13.3 Channel Separation test

#### LIMIT

Frequency hopping systems operating in the 2400-2483.5 MHz band may have hopping channel carrier frequencies that are separated by 25 kHz or two-thirds of the 20 dB bandwidth of the hopping channel, whichever is greater.

#### BLOCK DIAGRAM OF TEST SETUP



#### TEST PROCEDURES

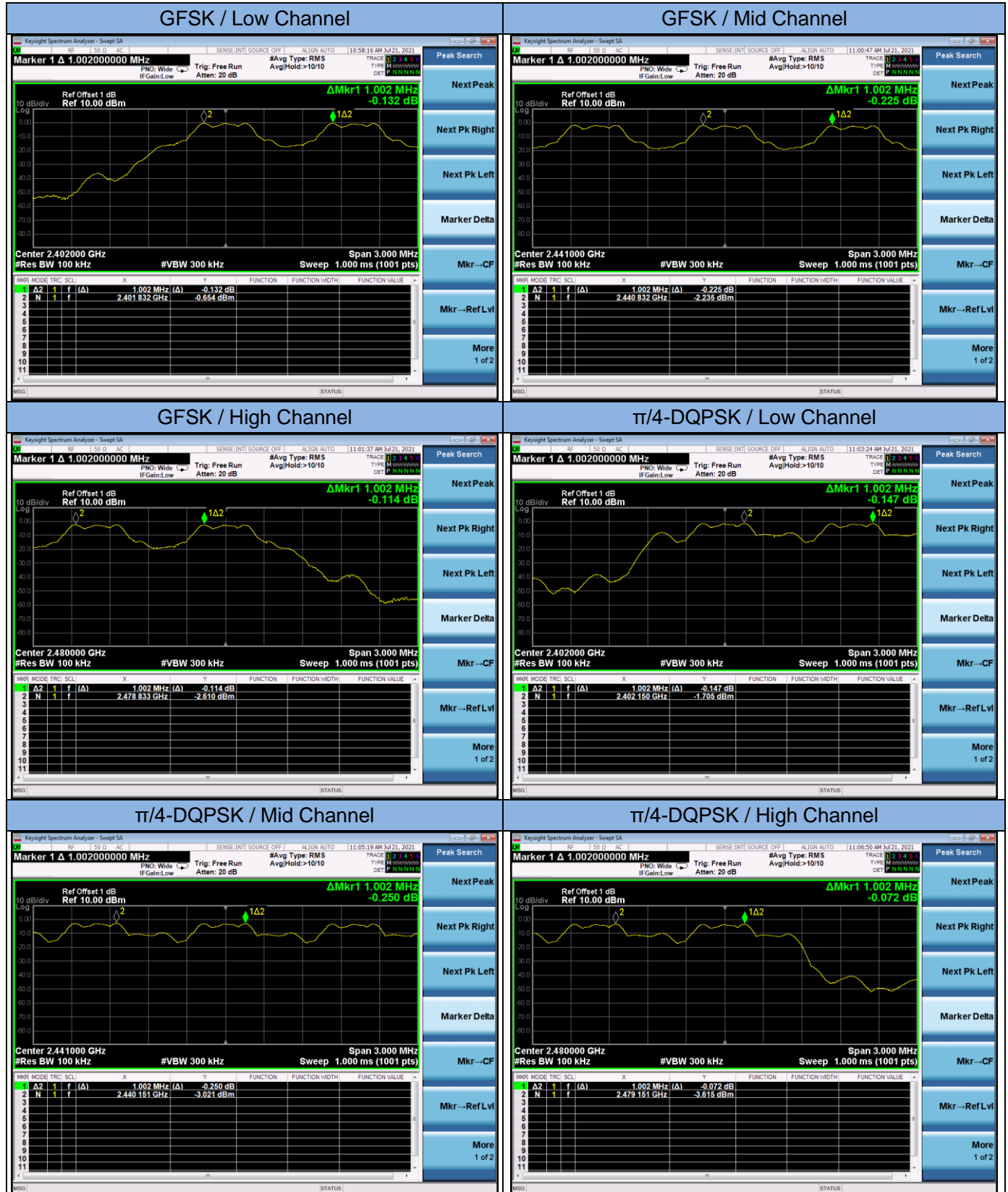
- The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement.
- Set to the maximum power setting and enable the EUT transmit continuously.
- Enable the EUT hopping function.
- Set spectrum analyzer and perform testing according to ANSI C63.10-2013 clause 7.8.2.

#### TEST RESULTS

PASS

Please refer to the following table.

Modulation	Channel	Frequency (MHz)	Hopping Separation Measurement (MHz)	Hopping Separation Limit (MHz)	Test Result
GFSK	Low	2402	1.002	>0.689	Pass
	Mid	2441	1.002	>0.693	Pass
	High	2480	1.002	>0.687	Pass
$\pi/4$ -DQPSK	Low	2402	1.002	>0.910	Pass
	Mid	2441	1.002	>0.911	Pass
	High	2480	1.002	>0.913	Pass
8DPSK	Low	2402	1.002	>0.900	Pass
	Mid	2441	1.002	>0.900	Pass
	High	2480	1.002	>0.901	Pass



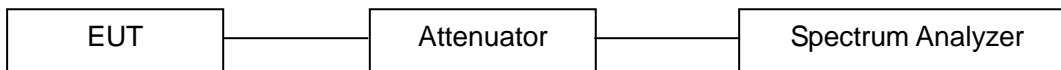


### 13.4 20dB Bandwidth

#### LIMIT

N/A

#### BLOCK DIAGRAM OF TEST SETUP



#### TEST PROCEDURES

- The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement.
- Set to the maximum power setting and enable the EUT transmit continuously.
- Set spectrum analyzer and perform testing according to ANSI C63.10-2013 clause 6.9.2.

#### TEST RESULTS

PASS

Please refer to the following table.