

FCC RADIO TEST REPORT

Applicant	: Dongguan Aiue Electronics Technology Co., LTD
Address	: Room 103, NO.42, Yanhedong Street, Ailingkan, Dalingshan Town, Dongguan, Guangdong, China
Manufacturer	: Dongguan Aiue Electronics Technology Co., LTD
Address	: Room 103, NO.42, Yanhedong Street, Ailingkan, Dalingshan Town, Dongguan, Guangdong, China
Factory	: Dongguan Aiue Electronics Technology Co., LTD
Address	: Room 103, NO.42, Yanhedong Street, Ailingkan, Dalingshan Town, Dongguan, Guangdong, China
Product Name	: ACCENT TABLE
Brand Name	Aiue [®] ASHLEY [®]
Model No	: A3, A4000643, A5, A6, ATC738, ATC638, ATC639, ATC730 (For model difference refer to section 2.)
FCC ID	: 2A65MAUT63B
Measurement Standard	: 47 CFR FCC Part 15, Subpart C (Section 15.247)
Receipt Date of Samples	November 15, 2023
Date of Tested	: November 16, 2023 to November 28, 2023
Date of Report	: December 14, 2023

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

Julie Xiao / Project Engineer





Table of Contents

1. Summary of Test Result	4
2. General Description of EUT	5
3. Test Channels and Modes Detail	8
4. Configuration of EUT	8
5. Modification of EUT	8
6. Description of Support Device	9
7. Test Facility and Location	10
8. Applicable Standards and References	11
9. Deviations and Abnormalities from Standard Conditions	11
10. Test Conditions	12
11. Measurement Uncertainty	13
12. Sample Calculations	14
13. Test Items and Results	15
13.1 Conducted Emissions Measurement	15
13.2 Radiated Spurious Emissions and Restricted Bands Measurement	19
13.3 Channel Separation test	27
13.4 20dB Bandwidth	31
13.5 Hopping Channel Number	35
13.6 Time of Occupancy (Dwell Time)	37
13.7 Maximum Peak Output Power	41
13.8 Band Edge Conducted Spurious Emission Measurement	45
13.9 Antenna Requirement	50
14. Test Equipment List	51



Revision History

Report Number	Description	Issued Date
NTC2311211FV00	Initial Issue	2023-12-14



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:	ACCENT TABLE
Main Model Name:	A3
Additional Model Name:	A4000643, A5, A6, ATC738, ATC638, ATC639, ATC730
Model difference:	These models have the same circuit schematic, construction, PCB Layout and
	critical components. The differences are model number, brand name, color of
	appearance and silk-screen due to trading purpose.
S/N:	2311-5648
Brand Name:	Aiue [®] , ASHLEY [®]
Hardware Version:	V01
Software Version:	VER01
Rating:	DC 18V 2.5A from adapter
Typical Arrangement:	Floor-standing
I/O Port:	Refer to the user manual
Accessories Information	
Adapter:	Model: LY036SPS-180250U1
	Input: AC 100-240V, 50-60Hz, 1A
	Output: DC 18V, 2.5A
Cable:	Power cord(adapter): 1.5m with a core, unshielded, undetachable
Other:	N/A
Additional Information	<u> </u>
Note:	According to the model difference and the requirements of the manufacturer, all
	tests were performed on model A3.
Remark:	All the information above are provided by the manufacturer. More detailed feature of
	the EUT please refers to the user manual.



Report No.: NTC2311211FV00

Product name	Trade name	Model name
ACCENT TABLE	ΙΟΕ	A3, A5, A6, ATC738, ATC638, ATC639, ATC730
ACCENT TABLE	ASHLEY®	A4000643

Technical Specification	
Bluetooth Version:	V5.1
Frequency Range:	2402-2480MHz
Modulation Type:	GFSK, π/4-DQPSK, 8DPSK
Number of Channel:	79 (refer to following channel list for details)
Channel Space:	1MHz
Antenna Type:	PCB Antenna
Antenna Gain:	-0.58 dBi
Remark:	The manufacturer declared that the product 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	2471
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		

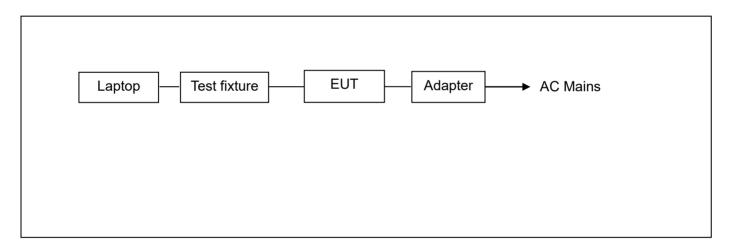


3. Test Channels and Modes Detail

No.	Mode	Channel	Frequency (MHz)	Modulation
1	ТХ	Hopping	2402-2480	GFSK / π/4-DQPSK / 8DPSK
2	ТХ	Low	2402	GFSK / π/4-DQPSK / 8DPSK
3	ТХ	Mid	2441	GFSK / π/4-DQPSK / 8DPSK
4	ТХ	High	2480	GFSK / π/4-DQPSK / 8DPSK
5	BT Link			

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.	Laptop	Lenovo	R720-151KB N	PF0Z35FH		Provided by the Lab

No.	Software	Modulation	Power Setting
1.		GFSK	10
2.	FCC_assist_1.0.2.2	π/4-DQPSK	10
3.		8DPSK	10





7. Test Facility and Location

Test Site	:	Dongguan Nore Testing Center Co., Ltd. (Dongguan NTC Co., Ltd.)
Accreditations and	:	The Laboratory has been assessed and proved to be in compliance with
Authorizations		CNAS/CL01
		Listed by CNAS, August 13, 2018
		The Certificate Registration Number is L5795.
		The Certificate is valid until August 13, 2024
		The Laboratory has been assessed and proved to be in compliance with
		ISO17025
		Listed by A2LA, November 01, 2017
		The Certificate Registration Number is 4429.01
		The Certificate is valid until December 31, 2023
		Listed by FCC, November 06, 2017
		Test Firm Registration Number: 907417
		Listed by Industry Canada, June 08, 2017
		The Certificate Registration Number. Is 46405-9743A
		The CAB identifier number: CN0015
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	Sean Yuan	See note ¹
2.	20dB Bandwidth	2-4	AC 120V 60Hz	Sean Yuan	See note ¹
3.	Hopping Channel Number	1	AC 120V 60Hz	Sean Yuan	See note ¹
4.	Time of Occupancy (Dwell Time)	1	AC 120V 60Hz	Sean Yuan	See note ¹
5.	Max Peak output Power test	2-4	AC 120V 60Hz	Sean Yuan	See note ¹
6.	Band edge test	1-4	AC 120V 60Hz	Sean Yuan	See note ¹
7.	AC Power Conducted Emission	1-5	AC 120V 60Hz AC 240V 50Hz	Sean Yuan	See note ¹
8.	Radiated Emission	1-5	AC 120V 60Hz	Sean Yuan	See note ¹
0.			AC 240V 50Hz		
9.	Antenna Requirement				
10.	Conducted Spurious Emission	1-4	AC 120V 60Hz	Sean Yuan	See note ¹
Note:					

Note:

1. The testing climatic conditions for temperature, humidity, and atmospheric pressure are within: 15~35 $^\circ\!C$, 30~70%,

86~106kPa

2. For test voltage AC 120V 60Hz, AC 240V 50Hz come from Adapter.



11. Measurement Uncertainty

No.	Test Item	Frequency	Uncertainty	Remarks
1.	Conducted Emission	150KHz ~ 30MHz	±2.52 dB	
		9kHz ~ 30MHz	±5.66 dB	
2	Radiated Emission	30MHz ~ 1GHz	±5.66 dB	
2.		1GHz ~ 18GHz	±5.19 dB	
		18GHz ~ 40GHz	±5.19 dB	
3.	Conducted Spurious Emissions	10Hz ~ 40GHz	±0.98 dB	
4.	RF Output Power	10Hz ~ 40GHz	±0.86 dB	
5.	Power Spectral Density	10Hz ~ 40GHz	±1.18 dB	
6.	Occupied Channel Bandwidth		±0.72%	
Noto		1		

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 uncertainly 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					
0.1700 34.81		9.99	44.80	64.96	-20.16	QP					
Where,											
Freq.	= Emiss	= Emission frequency in MHz									
Reading Lev	el = Spect	= Spectrum Analyzer/Receiver Reading									
Corrector Fa	ctor = Inserti	= Insertion loss of LISN + Cable Loss + RF Switching Unit attenuation									
Measuremer	nt = Readi	= Reading + Corrector Factor									
Limit	= Limit s	= Limit stated in standard									
Margin	= Meas	= Measurement - Limit									
Detector	= Readi	= Reading for Quasi-Peak / Average / Peak									

	Radiated Spurious Emissions and Restricted Bands											
Freq. (MHz)	Reading Level (dBuV)	Correct Factor (dB/m)	Measurement (dBuV/m)	Limit (dBuV/m)	Over (dB)	Detector						
288.9900	39.74	-5.75	33.99	46.00	-12.01	QP						
Where,												
Freq.	= Emiss	ion frequency in MH	lz									
Reading Lev	el = Spect	= Spectrum Analyzer/Receiver Reading										
Corrector Fa	ctor = Anten	= Antenna Factor + Cable Loss - Pre-amplifier										
Measuremer	nt = Readi	= Reading + Corrector Factor										
Limit	= Limit s	imit stated in standard										
Over	= Margi	= Margin, which calculated by Measurement - Limit										
Detector	= Readi	ng for Quasi-Peak /	Average / Peak									

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

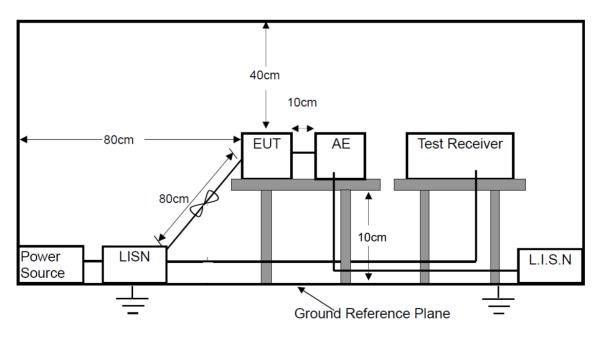
LIMITS

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 th	e average detector are met whe	en using the quasi-peak detector, then the limits						
for the measurer	for the measurements with the average detector are considered to be met.							
2. The lower limit sh	nall apply at the transition freque	ncies.						

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





TEST PROCEDURES

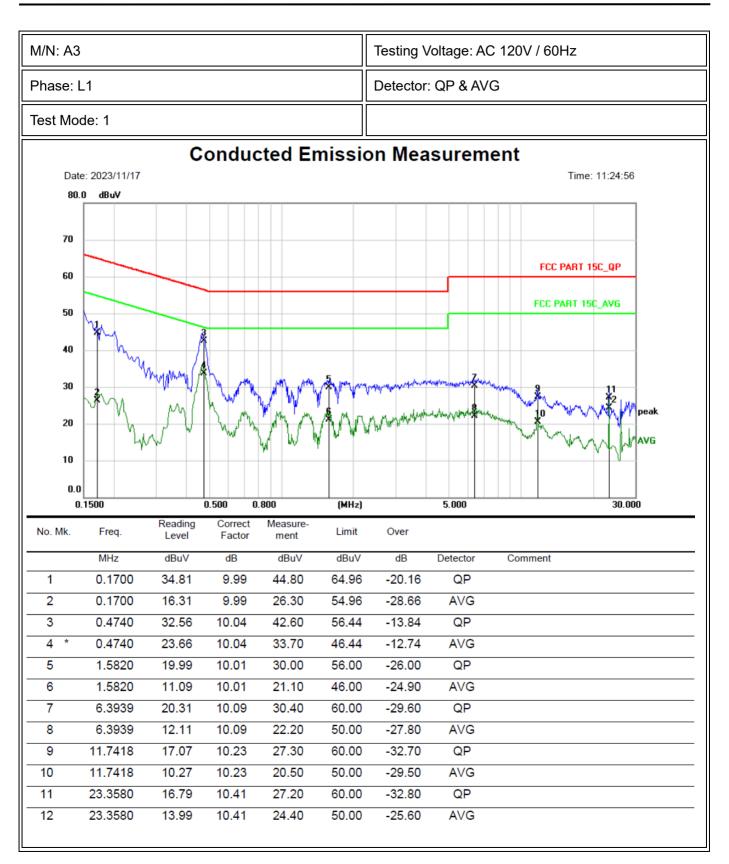
- a. The EUT was placed on a wooden table 0.1m height from the metal ground plan and 0.4m from the conducting wall of the shielding room and it was kept at 0.8m from any other grounded conducting surface.
- b. All I/O cables and support devices were positioned as per ANSI C63.10.
- c. Connect mains power 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

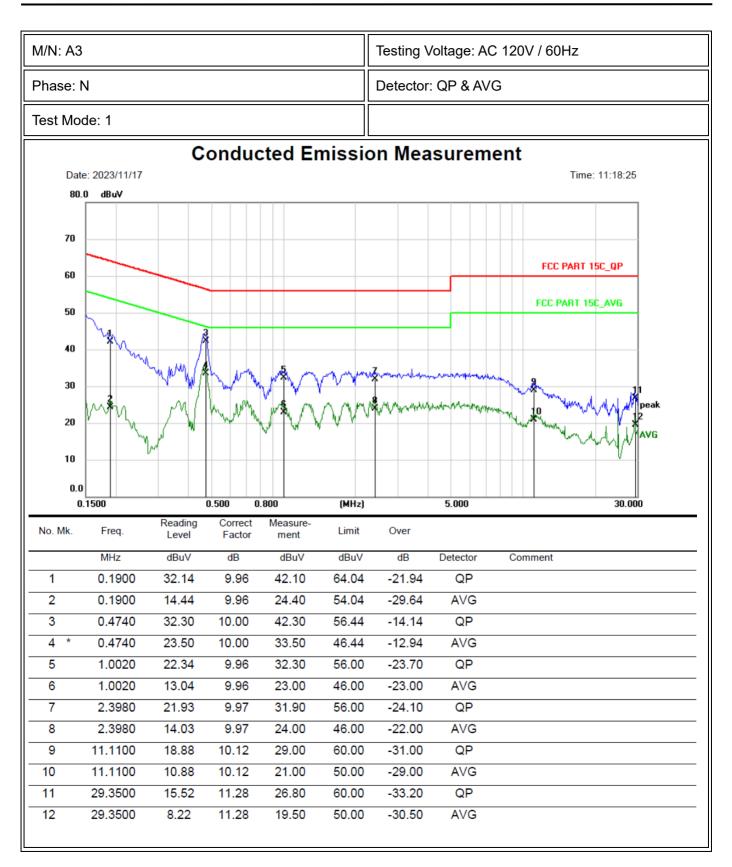
PASS

Please refer to the following pages of the worst case.











13.2 Radiated Spurious Emissions and Restricted Bands Measurement

LIMIT of Radiated Band Edges and non-restricted bands

In any 100 kHz bandwidth outside the intentional radiator frequency band, all harmonics/spurious must be at least 20 dB below the highest emission level within the authorized band. If the output power of this device was measured by spectrum analyzer, the attenuation under this paragraph shall be 30 dB instead of 20 dB.

LIMIT of Restricted bands

In addition, radiated emissions which fall in the restricted bands must also comply with the limits as below:

Frequency range	Distance Meters	Field Strengths Limit (15.209)
MHz	Distance meters	μV/m
0.009 ~ 0.490	300	2400/F(kHz)
0.490 ~ 1.705	30	24000/F(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 (dB) μ V = 20 log Emission level μ V/m

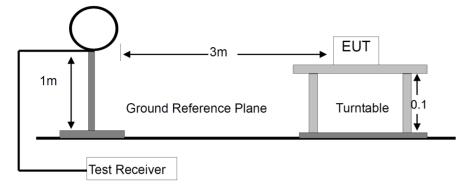
(2) The smaller limit shall apply at the cross point between two frequency bands.

- (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.

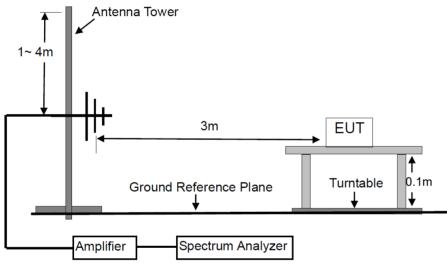


BLOCK DIAGRAM OF TEST SETUP

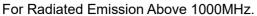
For Radiated Emission below 30MHz

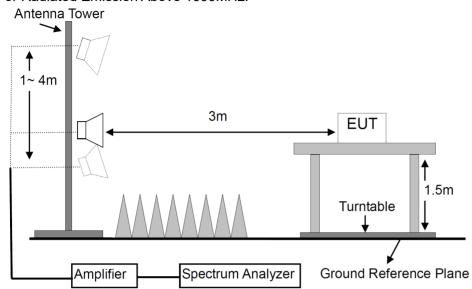


For Radiated Emission 30-1000MHz









TEST PROCEDURES

- a. Below 1GHz, the EUT was placed on the top of a rotating table 0.1 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.
- g. Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates, XYZ axis and packet type.

The worst case was found when the EUT was positioned on Z axis for radiated emission.

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

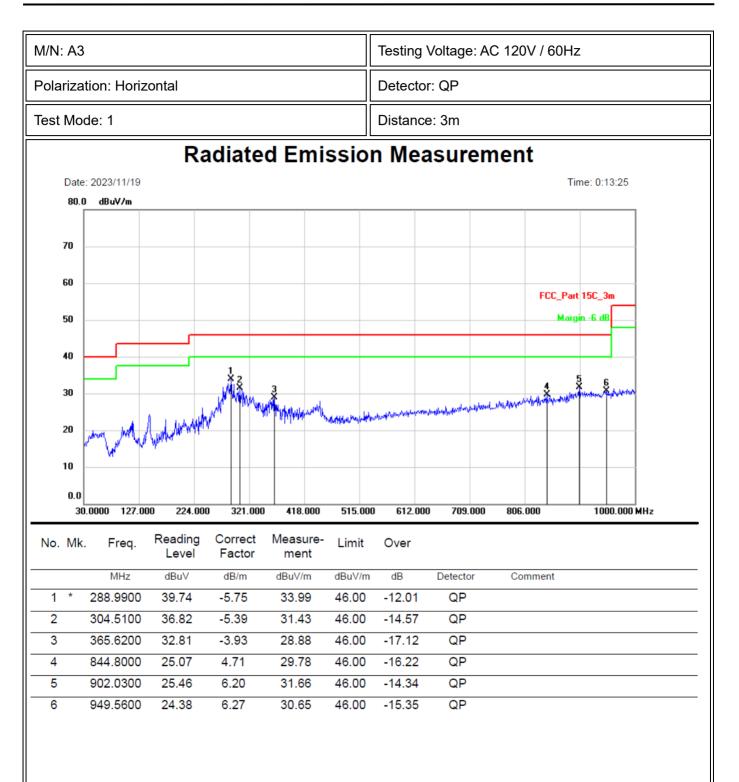
Frequency Band (MHz)	Detector	Resolution Bandwidth	Video Bandwidth
0.009~0.15	QP & AVG	200 Hz	1 kHz
0.15~30	QP & AVG	10 kHz	30 kHz
30 to 1000	QP	120 kHz	300 kHz
Above 1000	Peak	1 MHz	3 MHz
	Average	1 MHz	10 Hz

TEST RESULTS

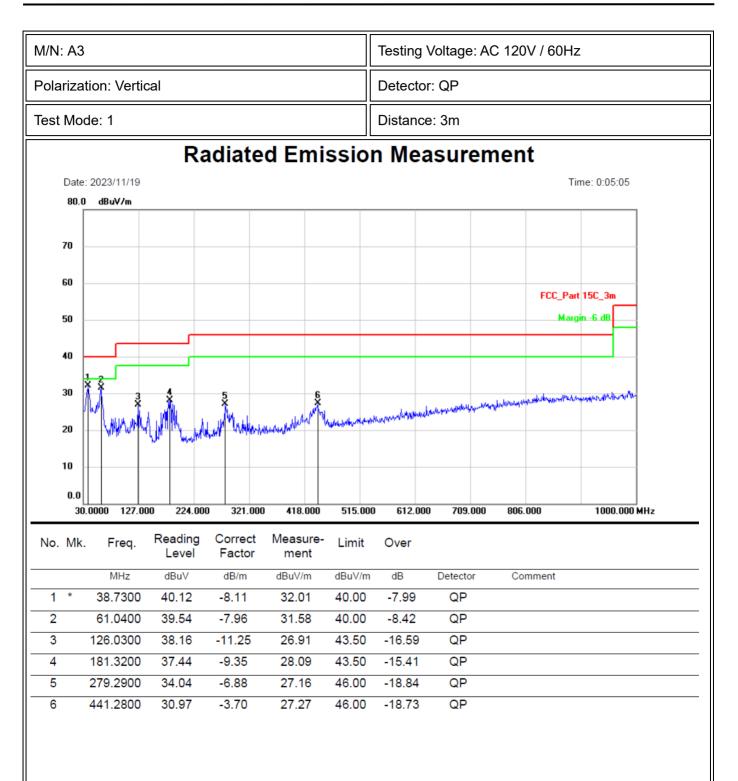
PASS

Please refer to the following pages of the worst case.





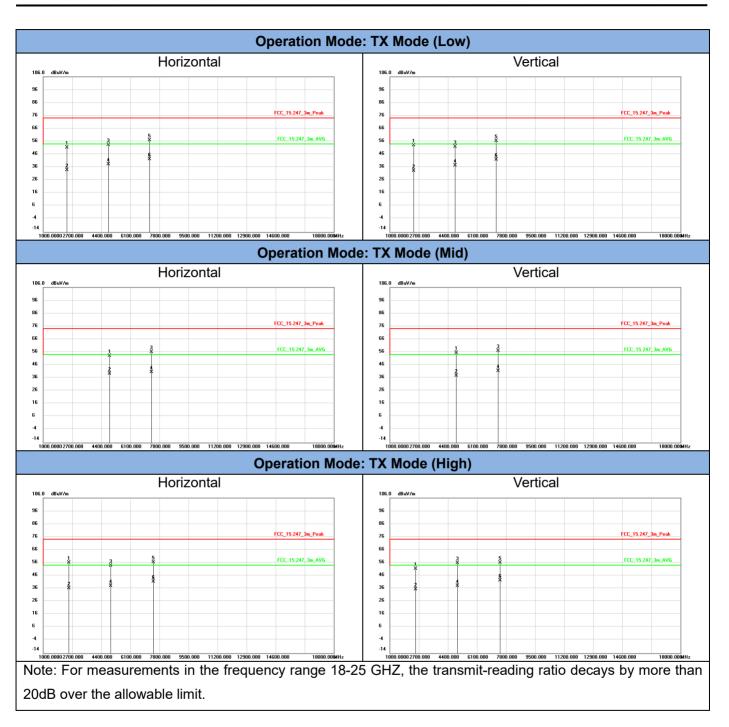






lodulation:	8DPSK (th	e worst ca	se)		Test Resu	It: PASS	Test frequ	lency ran	ge: 1-250	Hz
Freq.	Ant. Pol.	Read Level(d	-) Factor (dBuV/m)			Limit 3m (dBuV/m)		Mar (dl	-
(MHz)	(H/V)	PK	AV	(dB/m)	PK	AV	PK	AV	PK	AV
			Oper	ation Mo	de: TX Mo	de (Low)				
4804	Н	47.05	32.15	6.30	53.35	38.45	74.00	54.00	-20.65	-15.55
7206	Н	46.60	31.88	10.44	57.04	42.32	74.00	54.00	-16.96	-11.68
4804	V	45.66	31.24	6.30	51.96	37.54	74.00	54.00	-22.04	-16.46
7206	V	45.78	31.58	10.44	56.22	42.02	74.00	54.00	-17.78	-11.98
			Ореі	ration Mo	de: TX Mo	de (Mid)				
4882	Н	46.51	32.52	6.60	53.11	39.12	74.00	54.00	-20.89	-14.88
7323	Н	45.43	30.00	10.55	55.98	40.55	74.00	54.00	-18.02	-13.45
4882	V	48.76	31.03	6.60	55.36	37.63	74.00	54.00	-18.64	-16.37
7323	V	46.46	30.70	10.55	57.01	41.25	74.00	54.00	-16.99	-12.75
			Oper	ation Mo	de: TX Moo	le (High)				
4960	Н	46.79	31.23	6.89	53.68	38.12	74.00	54.00	-20.32	-15.88
7440	Н	45.62	30.75	10.60	56.22	41.35	74.00	54.00	-17.78	-12.65
4960	V	48.85	31.23	6.89	55.74	38.12	74.00	54.00	-18.26	-15.88
7440	V	45.45	31.62	10.60	56.05	42.22	74.00	54.00	-17.95	-11.78
		1	Spuriou	is Emissi	on in restr	icted bar	ld:		1	1
2390.000	Н	53.26	35.62	0.09	53.35	35.71	74.00	54.00	-20.65	-18.29
2390.000	V	54.03	35.90	0.09	54.12	35.99	74.00	54.00	-19.88	-18.01
2483.500	Н	54.55	35.11	0.35	54.90	35.46	74.00	54.00	-19.10	-18.54
2483.500	V	51.89	35.42	0.35	52.24	35.77	74.00	54.00	-21.76	-18.23
Remark:					iency rang re than 20c					ans the







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

- a. 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.
- b. Set to the maximum power setting and enable the EUT transmit continuously.
- c. Enable the EUT hopping function.
- d. Set spectrum analyzer and perform testing according to ANSI C63.10 clause 7.8.2.

TEST RESULTS

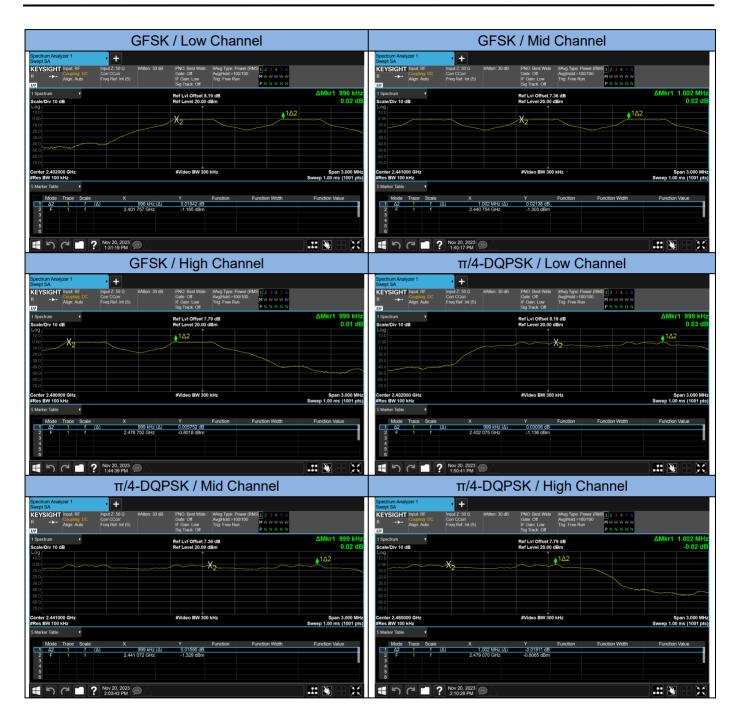
PASS

Please refer to the following tables.



Modulation	Channel	Frequency (MHz)	Hopping Separation Measurement (MHz)	Hopping Separation Limit (KHz)	Test Result
	Low	2402	0.996	>636.7	Pass
GFSK	Mid	2441	1.002	>636.0	Pass
	High	2480	0.999	>635.3	Pass
	Low	2402	0.999	>856.0	Pass
π/4-DQPSK	Mid	2441	0.999	>856.7	Pass
	High	2480	1.002	>856.0	Pass
	Low	2402	1.002	>866.0	Pass
8DPSK	Mid	2441	0.999	>866.7	Pass
	High	2480	0.999	>867.3	Pass







8	DPSK / Low Chann	nel	8DPSK / Mid Channel			
Spectrum Analyzer 1 + Swept SA + KEYSIGHT Input. RF Coupting DC CorrocCorr R → Align. Auto CorrocCorr Freq Ref. Int (S) LV	#Atten 30 dB PNO: Best Wide #Avg Type Power (RP Gate: Off AvgHods -100/100 IF Gain Low Ting Free Run Sig Track Off	MS <mark>1</mark> 23456 Mwwwww PNNNNN	Spectrum Analyzer 1 Swept SA KEYSIGHT Input: RF R Auguing DC Align: Auto Freq Ref	50 Ω #Atten: 30 dB PNO: Best Wide #Avg Type: Power Gate: Off Avg Hold.>100/1	er (RMS 1 2 3 4 5 6 00 M W W W W W P N N N N N	
1 Spectrum Scale/Div 10 dB Log 0.00 -10.0 -10.0 -10.0 -10.0 -10.0 -10.0 -10.0 -10.	Ref Lvi Offset 8.19 dB Ref Level 20.00 dBm	ΔMkr1 1.002 MHz 0.02 dB	1 Spectrum v Scale/Div 10 dB Log 100 000 000	Ref Lvi Offset 7.36 dB Ref Level 20.00 dBm	ΔΜkr1 999 kHz 0.02 dB	
200 0 300	#Video BW 300 kHz	Span 3.000 MHz	2000 400 500 -600 -700 Center 2.441000 GHz	aVideo BW 300 kHz	Span 3.000 MHz	
	Y Function I 002 MHz (∆) 0.01998 dB 754 GHz -1.169 dBm	Sweep 1.00 ms (1001 pts) Function Width Function Value	#Res BW 100 kHz 5 Marker Table • Mode Trace Scale 1 Δ2 1 f 2 F 1 f 3 1 f 3 4 1 f 1	X 989 1Hz (Δ) 989 1Hz (Δ) 0.02217 48 2.440 754 GHz -1.350 dBm	Sweep 1.00 ms (1001 pts) Function Width Function Value	
5 6 1 5 7 8 7 8 7 8 7 8 7 8 8 7 8 8 8 8 8 8 8	∋∆ DPSK / High Chanr	el	5 6 7 7 8 7 8 7 8 7 8 7 8 7 8 7 8 8 7 8	, 2023 6 РМ		
Spectrum Analyzer 1 Swept SA KEYSIGHT R → Captions DC Align: Auto	#Atton: 30 dB PNO Bost Wide #Avg Type Power (R Gate Off AvgHods=100100 IF Gam Low Ting Free Run Sig Track Off					
1 Spectrum v Scale/Div 10 dB L00 100 .100 .200 .300	Ref Lvi 0fset 7,79 dB Ref Level 20.00 dBm	-0.02 dB				
40.0 50.0 40.0 70.0 Center 2.480000 OHz #Res BW 100 kHz 50 Marker Table v	#Video BW 300 HHz	Span 3.000 MHz Sweep 1.00 ms (1001 pts)				
Mode Trace Scale X	Y Function I 999 HHz (Δ) -0.02088 dB Function I 752 GHz -0.7951 dBm I I	Function Width Function Value				
Nov 20, 2023 2:36:45 PM						

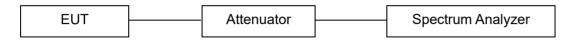


13.4 20dB Bandwidth

LIMIT

N/A

BLOCK DIAGRAM OF TEST SETUP



TEST PROCEDURES

- a. 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.
- b. Set to the maximum power setting and enable the EUT transmit continuously.
- c. Set spectrum analyzer and perform testing according to ANSI C63.10 clause 6.9.2.

TEST RESULTS

PASS

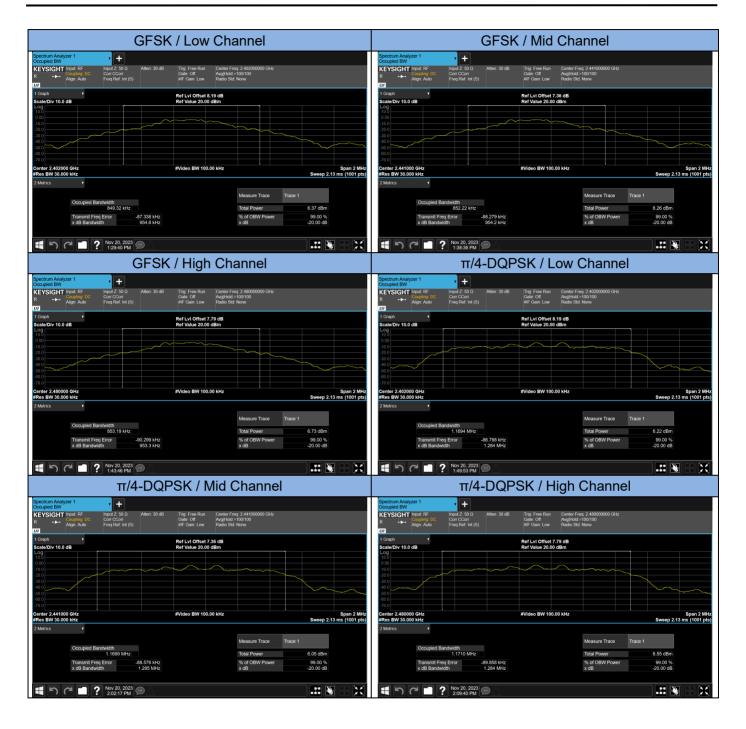
Please refer to the following tables.





Modulation	Channel	Frequency (MHz)	20dB Measurement (KHz)	Limit (MHz)	Remark
	Low	2402	955.0	N/A	
GFSK	Mid	2441	954.0	N/A	
	High	2480	953.0	N/A	
	Low	2402	1284	N/A	
π/4-DQPSK	Mid	2441	1285	N/A	Reporting only
	High	2480	1284	N/A	
	Low	2402	1299	N/A	
8DPSK	Mid	2441	1300	N/A	
	High	2480	1301	N/A	







8DPSK / Low Channel				8DPSK / Mid Channel			
Spectrum Analyzer 1 + Occupied BW Input. RF Input. 2 50 Ω KEYSIGHT Input. RF Corr Corr R + Corr Corr Altern Auto Freq Ref. Int (S)	Trig: Free Run Center Fri Gate: Off AwgHold: #IF Gain: Low Radio Std	aq: 2.402000000 GHz ≍100/100 None		Spectrum Analyzer 1 Occupied BW KEYSIGHT Input RF R → Aign Auto Corr Corr Freq Ref. Int	Gate: Off Avgli	er Frag. 2.441000000 GHz Hadis-1000100 Sidi None	
1 Graph Scale/Div 10.0 dB Log 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Ref Lvi Offset 8.19 dB Ref Value 20.00 dBm			1 Graph ScateDiv 10.0 dB Log 0.00 .00 .00 .00 .00 .00 .00	Ref Lvi Offset 7.36 dB Ref Value 20.00 dBm		
-80 0 -70 0 Center 2.402000 GHz #Res BW 30.000 KHz	#Video BW 100.00 kHz		Span 2 MHz Sweep 2.13 ms (1001 pts)	80 0 -70 0 Center 2.441000 GHz #Res BW 30.000 kHz	#Video BW 100.00 kHz	Span 2 MHz Sweep 2.13 ms (1001 pts)	
2 Metrics		Measure Trace Total Power % of OBW Power x dB	Trace 1 6.09 dBm -20.00 dB	2 Metrics Coccupied Bandwidth 1.1777 M Transmit Free Error x dB Bandwidth Landwidth Landwidth	-85.659 kHz 1.300 MHz	Measure Trace Trace 1 Total Power 5.97 dBm % of DBW Power -90.00 % x dB -20.00 dB	
	< / High Ch	annel	.:: 🔛 🔀	Nov 20, 20 2:29:25 P	₩ <u></u>		
Soladium Analyzer 1 Coupled BW KEYSIGHT medi K: Soladium Concount R Mark Autor Soladium Concount R Mark Autor Soladium Concount R Soladium (S) Soladium (S) Soladium (S) Concount Soladium (S) Soladium (S) Concount Soladium (S) Soladium (S) S		sg 2.48000000 GHz 109100 Note Measure Trace	Spen 2 MHz Sweep 2.13 ms (1001 pts) Trace 1				
1.1783 MHz Transmit Freq Error		Total Power % of OBW Power x dB	6.51 dBm 99.00 % -20.00 dB				



13.5 Hopping Channel Number

LIMIT

Frequency hopping systems in the 2400-2483.5MHz band shall use at least 15 channels.

BLOCK DIAGRAM OF TEST SETUP



TEST PROCEDURES

- a. 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.
- b. Set to the maximum power setting and enable the EUT transmit continuously.
- c. Enable the EUT hopping function.
- d. Set spectrum analyzer and perform testing according to ANSI C63.10 clause 7.8.3.

TEST RESULTS

PASS

Please refer to the following table.



Modulation	Number of Hopping Channels Measurement	Limit	Test Result
GFSK	79	≥15	PASS
π/4-DQPSK	79	≥15	PASS
8DPSK	79	≥15	PASS
The worst case: GFSK			
Spectrum Analyzer 1 Swept SA KEYSIGHT R Coupling: DC Align: Auto Scale/Div 10 dB Log 100 -20.0 -30.0 -40.0 -50.0 -50.0 -50.0 -70.0 Start 2.40000 GHz	Gate: Off Avg Hold:>100/100	M ₩ ₩ ₩ ₩ ₩ P N N N N N N ΔMkr1	78.323 0 MHz 0.61 dB Δ2
Start 2,40000 GH2 #Video BW 300 KH2 Stop 2,46330 GH2 #Res BW 100 kHz Sweep 8.00 ms (1001 pts) 5 Marker Table V			
Mode Trace Scale $1 \Delta 2 1 f (\Delta)$	78.323 0 MHz (Δ) 0.6121 dB .401 753 5 GHz -1.112 dBm 023 Δ	nction Width Fu	nction Value

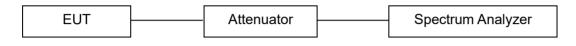


13.6 Time of Occupancy (Dwell Time)

LIMIT

The average time of occupancy on any channel shall not be greater than 0.4 seconds within a period of 0.4 seconds multiplied by the number of hopping channels employed.

BLOCK DIAGRAM OF TEST SETUP



TEST PROCEDURES

- a. 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.
- b. Set to the maximum power setting and enable the EUT transmit continuously.
- c. Enable the EUT hopping function.
- d. Set spectrum analyzer and perform testing according to ANSI C63.10 clause 7.8.4.

TEST RESULTS

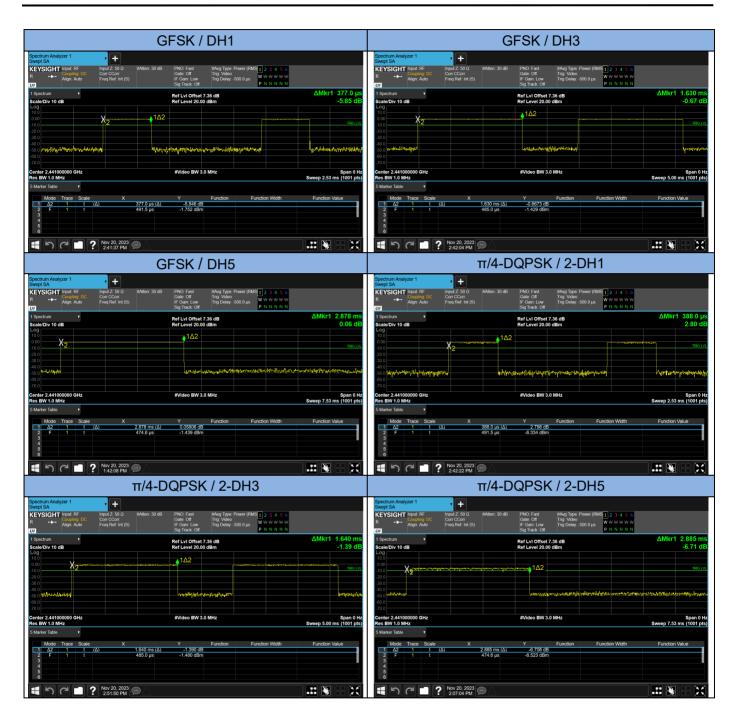
PASS

Please refer to the following table.



Modulation	Packet	Frequency (MHz)		Dwell Time Measurement (msec)	Limit (msec)	Test Result	
GFSK	DH1	2441	0.377	(ms)*(1600/(2*79))*31.6=	120.64	400	Pass
	DH3	2441	1.630	(ms)*(1600/(4*79))*31.6=	260.80	400	Pass
	DH5	2441	2.878	(ms)*(1600/(6*79))*31.6=	306.99	400	Pass
	2-DH1	2441	0.388	(ms)*(1600/(2*79))*31.6=	124.16	400	Pass
π/4-DQPSK	2-DH3	2441	1.640	(ms)*(1600/(4*79))*31.6=	262.40	400	Pass
	2-DH5	2441	2.885	(ms)*(1600/(6*79))*31.6=	307.73	400	Pass
	3-DH1	2441	0.388	(ms)*(1600/(2*79))*31.6=	124.16	400	Pass
8DPSK	3-DH3	2441	1.635	(ms)*(1600/(4*79))*31.6=	261.60	400	Pass
	3-DH5	2441	2.885	(ms)*(1600/(6*79))*31.6=	307.73	400	Pass







8DPSK / 3-DH1			8DPSK / 3-DI	H3
Specifican Analyzer 1 ↓ ↓ ↓ ↓ ↓ ± ↓ ± ↓ ± ↓ ± ↓ ± ↓ ± ↓ ± ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓	N W	KEYSIGHT Input: RF Input Z Coupling: DC Corr C	Corr Gate: Off Trig: Vide	e: Power (RMS 1 2 3 4 5 6 9 -500.0 µs P N N N N N
1 Specialization * Ref Lvi Offset 7.36 dB Scale/Div 10 dB 200 000 000 000 000 000 000 000 000 00	ΔMkr1 388.0 μs -1.11 dB 	1 Spectrum Scale/Div 11 dB Log 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Ref Lvt Offset 7.36 dB Ref Lvt 23.00 dBm	۵/۱Kr1 1.835 ms -1.24 dB
Conter 2,441000000 GHz #Video BW 3.0 MHz % SW 1.0 MHz % Marker Table 1	Span 0 Hz Sweep 2.53 ms (1001 pts)	Center 2.441000000 GHz Res BW 1.0 MHz 5 Marker Table	#Video BW 3.0 MHz	Span 0 Hz Sweep 5.00 ms (1001 pts)
Mode Trace Scale X Y Function Function Function Windth 1 Δ2 1 t Δ2 388.0 μs (Δ) -1.109 dB -1.09 dB -1.736 dBm	n Function Value	Mode Trace Scale 1 Δ2 1 t (Δ) 2 F 1 t 3 3 4 4 4 5 6 - - - -	X Y Function 1.635 ms (Δ) -1.237 dB 85.00 μs -1.460 dBm	Function Width Function Value
			20, 2023 🗩 🛆	
8DPSK / 3-DH5				
Spectrum Analyzer 1 + KEYSIGHT input RF Input 25 0 µ R → Align Auto Freq Ref Int (S) #Atten: 30 dB PNO First #Atten: 30 dB PNO First #Atten: 30 dB PNO First Trig Voleo Trig Voleo W W W W W W W W CI Sag Track Ting Voleo	N W			
1 Spectrum • Ref Lvi Offset 7.36 dB ScaleDV 10 dB Ref Level 20.00 dBm Log	∆Mkr1 2.885 ms -3.94 dB			
	TRIG LVL			
Go 0 Muccentel Jeggen-Site site - Angelle - Site -	Span 0 Hz Sweep 7.53 ms (1001 pts)			
Statistic V Function Function Function Function Function Function Watth 1 A2 F 1 t (A) 2.985 ms (A) -3.941 dB Function Function Function Watth 3	Function Value			
€ C Nov 20, 2023 2,32:55 PM 	.:: 🔊 - 🔀			



13.7 Maximum Peak Output Power

LIMIT

The maximum peak conducted output power of the intentional radiator shall not exceed the following: For frequency hopping systems operating in the 2400-2483.5 MHz band employing at least 75 non-overlapping hopping channels, and all frequency hopping systems in the 5725-5850 MHz band: 1 watt. For all other frequency hopping systems in the 2400-2483.5 MHz band 0.125 watts.

BLOCK DIAGRAM OF TEST SETUP



TEST PROCEDURES

- a. 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.
- b. Set to the maximum power setting and enable the EUT transmit continuously.
- c. Set spectrum analyzer and perform testing according to ANSI C63.10 clause 7.8.5.

TEST RESULTS

PASS

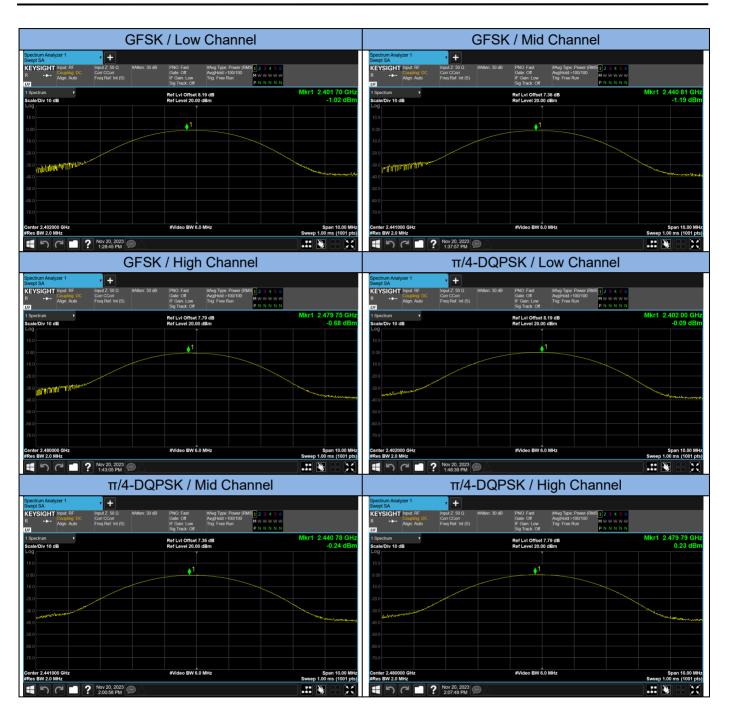
Please refer to the following tables.



Modulation	Frequency (MHz)	Peak Power output Measurement (dBm)	Peak Power output Measurement (mW)	Peak Power Limit (dBm)	Test Result
	2402.00	-1.02	0.79	21	Pass
GFSK	2441.00	-1.19	0.76	21	Pass
	2480.00	-0.68	0.86	21	Pass
	2402.00	-0.09	0.98	21	Pass
π/4-DQPSK	2441.00	-0.24	0.95	21	Pass
	2480.00	0.23	1.05	21	Pass
	2402.00	0.28	1.07	21	Pass
8DPSK	2441.00	0.10	1.02	21	Pass
	2480.00	0.65	1.16	21	Pass

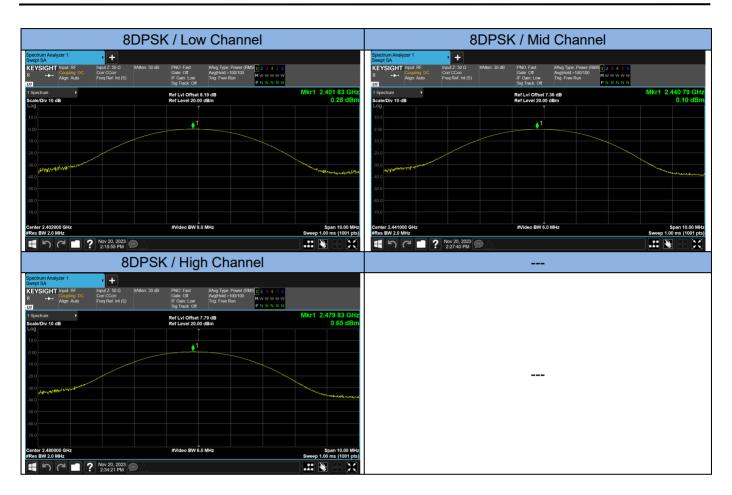












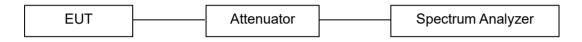


13.8 Band Edge Conducted Spurious Emission Measurement

LIMIT

In any 100KHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20dB below that in the 100KHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement.

BLOCK DIAGRAM OF TEST SETUP



TEST PROCEDURES

- a. 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.
- b. Set to the maximum power setting and enable the EUT transmit continuously.
- c. Set spectrum analyzer and perform testing according to ANSI C63.10 clause 7.8.6 and 6.10.
- d. Enable hopping function of the EUT and then repeat steps above.

TEST RESULTS

PASS

Please refer to the following test plots.



		Band	Edge		
G	GFSK / Low / 2402			GFSK / Hopping	
Spectrum Analyzer 1 + Swept SA KEYSIGHT Input RF R → Carging DC R → Align Auto CV	an 30 dB PNO Best Wide #Avg Type Power (RMS) 1 2 3 4 5 6 Gale: Off AvgHod 300/300 M W W W W W IF Gam Low Trig: Free Run P N N N N N Sig Track Off P N N N N N		Spectrum Analyzer 1 Swept SA KEYSIGHT Input RF Convincy DC R → Align: Auto Freq Ref. Int (S)	Ntten: 30 dB PNO Best Wide #Ang Type Power (RMS) 2 3 4 5 (Gate: Off AngHold: 300/300 IF Gani: Low Trg: Free Run P N N N I Sig Track: Off P N N N N	
1 Spectrum ScaleDby 10 dB Cog 100 00 00 00 00 00 00 00 00	Ref Level 20.00 dBm	Mkr1 2.401 76 GHz -1.10 dBm 0(1.31 t0 dbm	1 Spectrum Scale/DV 10 dB Log 10.0 000 000 000 000 000 000 000 000 00	Ref Level 20.00 dBm	Mkr1 2.404 76 GHz -1.08 dBm
0.0 Control Co	#Video BW 300 kHz Y Function GHz -1.101 dBm GHz -36.52 dBm	Span 10.00 MHz Sweep 1.00 ms (1001 pts) Function Value	700 Control 2400000 0Hz #Ree BW 100 kHz F Stanker Table • Mode Trace Scale X 1 1 1 2.402.7 2 N 1 7 2.303.9 4 1 2.309.8 4	#Video BW 300 kHz Function Function Width 5 GHz - 36 74 dBm	Span 10.00 MHz Sweep 1.00 ms (1001 pts) Function Value
د ا ا م ا ا ا ا ا ا ا ا ا ا ا ا ا ا ا ا ا	/ High Channel / 2480		5 Nov 20, 2023	GFSK / Hopping	
R Coupling: DC Corr CCorr Align: Auto Freq Ref: Int (S)	en: 30 dB PNO Best Wide integrations Power (RMS) 2 3 4 5 6 Cade Off Anglinds 300,500 M W W W W W IF Gain Low Tray Free Run P N N N N		Spectrum Analyzer 1 Imput 2 Swept SA Imput RF KEYSIGHT Input RF Input Z: 50 Ω R → Align: Auto Freq Ref. Int (S)	Nten: 30 dB PNO Best Wide #Avg Type: Power (RMS) 2 3 4 5 0 Gate: Off AvgHold: 300/300 IF Gain: Low Trg: Free Run M w w w W Sta Track: Off P N N N N T	N
139edram	Ref Level 20.00 dBm	Mkr1 2.479 76 GHz -0.78 dBm 0.1 20 79 dBm	1 Spectrum ScaleDby 10 dB Cog 0 0 0 0 0 0 0 0 0 0 0 0 0	Ref Level 20.00 dBm	Mkr1 2.478 76 GHz -0.75 dBm
0 0 0 Centrer 2 483500 GHz RRes BW 100 kHz Stanker Table 5 Marker Table * 1 N 1 7 2 N 1 7 2 N 1 7 4 5 5 5 6 6	#Video BW 300 kHz V Function Function Width CHz -45.72 dbm	Span 10.00 MHz Sweep 1.00 ms (1001 pts) Function Value	70 0 0 Control 2 483500 0Hz #Ree BW 100 kHz Stanker Table 5 Marker Table ▼ Mode Trace Scale X 1 1 1 2 N 1 4 1 2.476 3 fz 5 5 5 6 5 5	Fundion BW 300 kHz V Function Function Width 6 GHz -49.19 dBm	Span 10.00 MHz Sweep 1.00 ms (1001 pts) Function Value
6 H h c l ? Nov 20, 2023 1:45:42 PM	Δ		6 • Nov 20, 2023	\triangle	



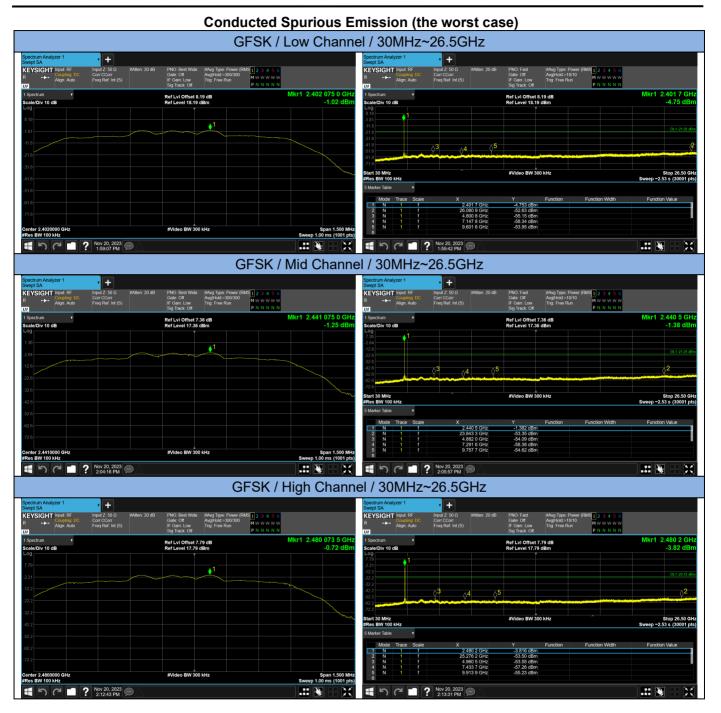
		Bar	nd Edge		
π/4-DC	PSK / Low / 2402		π/4-D	QPSK / Hopping	
Spectrum Analyzer 1 + Swept SA + KEYSIGHT Input RF Input 2:50 0 Country DC Country DC Country DC Country DC Country DC Freq Ret. Int (s)	PNO. Best Wide #Avg Type: Power (FMIS) 2 3 4 5 6 Cate off AvgHvids-300000 M w w w w w IF Can Low Trop Free Run M w w w w W Sig Track: Off P N N N N N		Spectrum Analyzer 1 Swept SA KEYSIGHT Input: RF Control Control	B PNO Best Wate #Avg1Type Power (RMS1) 2 3 4 5 6 Gale Off Avg1Hvld - 500/300 M W.W.W.W W </th <th></th>	
1 Spektram Scale Div 10 dB U D D D D D D D D D D D D	Ref Lvi Offset 8.19 dB Ref Level 20.00 dBm	Mkr1 2.401 76 GHz -1.20 dBm 0.1318:8m	1 \$pectum Scale/Div 10 dB Log 0 0 0 0 0 0 0 0 0 0 0 0 0	Ref Lvi Offset 8.19 dB Ref Level 20.00 dBm	Mkr1 2.404 76 GHz -1.04 dBm 01.121 M 48m
-700 Center 2.400000 GHz #Res BW 100 kHz 5 Market Table	#Video BW 300 kHz	Span 10.00 MHz Sweep 1.00 ms (1001 pts)	70 0 Center 2.400000 GHz #Res BW 100 kHz 5 Marker Table	#Video BW 300 kHz	Span 10.00 MHz Sweep 1.00 ms (1001 pts)
Joint and and the second sec	Y Function Function Width -1.197 dBm -38 16 dBm	Function Value	Mode Trace Scale X 203 76 GHz 2 203 76 GHz 2 1 r 2 203 76 GHz 2 309 06 GHz 3 3 1 r 2 399 06 GHz 3 4 5 5 5 5 5 5 5 5 5 5 5 5 6 1 7 7 7 7 7 9 0.6 GHz 3 4 5 5 6 1 7 7 7 7 7 9 0.6 GHz 3 4 5 5 6 1 7 7 7 9 0.6 GHz 3 7 7 7 9 0.6 GHz 3 7 7 7 9 9 0.6 GHz 3 1 7 7 9 0.6 GHz 1 7 7 9 0.6 GHz 1 7 7 1 1 7 1 1 1 1 <th1< th=""> 1 <th1< t<="" th=""><td>Y Function Function Width -1.037 dBm -37.98 dBm </td><td>Function Value</td></th1<></th1<>	Y Function Function Width -1.037 dBm -37.98 dBm 	Function Value
		🖹 - 🗙	Nov 20, 2023 1:58:39 PM		🔪 🔀
π/4-DQ	PSK / High / 2480		π/4-D	QPSK / Hopping	
Spectrum Analyzer 1 Swept SA KEYSIGHT Input: RF Input Z: 50 0 R A Coupling DC Corr Ccorr R Align: Auto Free Ref. Int (S)	PNO. Best Wide #Avg Type. Power (RMS) 1 2 3 4 5 6 Gate. Off Avg/Hold >300/300 M W W W IF Gain. Low Trig. Free Run M W W W Stat Track. Off P N N N N N N		Spectrum Analyzer 1 ↓ Swept SA ↓ KEYSIGHT Input Z: 50 Ω R ↓ Coupling: DC Corr CCorr Align: Audo Freq Ref. Int (S)	B PNO Best Wide #Avg Type: Power (RMS 1 2 3 4 5 6 Gate Off Avg]Hold - 500300 IF Gam. Low Trg: Free Run P M W W W W Sig Track Off P N N N N	
1 Spectrum Scale/Div 10 dB 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Ref Lvi Offset 7.79 dB Ref Level 20.00 dBm	Mkr1 2.479 76 GHz -0.77 dBm	Spectrum v Scale/Div 10 dB 00 000 00	Ref Lvi Offset 7.79 dB Ref Level 20.00 dBm	Mkr1 2.479 76 GHz -0.76 dBm
100 200 300 400 400 400	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	DL1 -20 77 dBm	100 200 300 400 400	~~~^ ²	DL1-20 77 dBm
-70 0 Center 2.483500 GHz #Res BW 100 kHz	#Video BW 300 kHz	Span 10.00 MHz Sweep 1.00 ms (1001 pts)	-70 0 Center 2.483500 GHz #Res BW 100 kHz	#Video BW 300 kHz	Span 10.00 MHz Sweep 1.00 ms (1001 pts)
S Markor Table V Mode Trace Scale X 1 1 1 2279 76 GHz 3 1 1 2483 50 GHz 4 5 6 5	Y Function Function Width -0.7708 dBm -49.16 dBm	Function Value	5 Munter Table Mode Trace Scale X <u>1 N 1 F 2,479 76 GHz N 1 F 2,483 63 GHz A 5 6 </u>	Y Function Function Width -0.7543 dBm -49.48 dBm	Function Value
1 C 2:11:08 PM			■ C ■ ? Nov 20, 2023 2:12:17 PM		



		Band Edge		
8DF	PSK / Low / 2402	8DI	PSK / Hopping	
Spectrum Analyzer 1 Swept SA KEYSIGHT Input RF R → Cogning CC Algor: Algor: Algor: Corr CCorr Free Ret. Int (5) 1 Spectrum	Gate: Off Avg]Hold: 300/300 IF Gain: Low Trig: Free Run M W W W W W Sig Track: Off P N N N N N	Spectrum Analyzer 1 Swept 6A K EVSIGHT Input RF R → Condeng DD Conf Conf R → Condeng DD Conf Conf reg. Ref. Int (S) 01 76 GHz	Gate: Off Avg[Hold >300/300 M W W W W IF Gain: Low Trig: Free Run M W W W W Sig Track: Off P N N N N N	403 76 GHz
Scale/DV 10 dB Log 100		U/75 '0F2 Tspectrum -1.13 dBm Log 00 100 000 000 000 000 000 000 000 000 000 000 000 000 000 000	Ref Level 20.0 dBm	-1.07 dBm
Center 2.400000 GHz #Res BW 100 kHz 5 Marker Table	Sweep 1.00	pan 10.00 MHz ms (1001 pts) #Res BW 100 HHz 5 Marker Table •	Sweep 1.0	Span 10.00 MHz 00 ms (1001 pts)
Mode Trace Scale X 1 N 1 2.40176 GHz 2 N 1 7 2.399 07 GHz 3 1 7 2.399 07 GHz 3 4 5 5 6 5	Y Function Function Wath Function -1 132 fill function -37.81 dBm	Mode Trace Scale X 1 N 1 2.403.76 GHz 2 N 1 7 2.403.76 GHz 3 1 7 2.399.07 GHz 3 6 6 6 6 6	Y Function Function Width Function -1071 0Bm -37.51 dBm	n Value
8DP	SK / High / 2480	8DI	PSK / Hopping	
Spectrum Analyzer 1 + Bwept SA + KEYSIGHT Input RF R →→ Input Z 50 Ω Align Auto #Atton: 30 From Ref. Int (S)		Spectrum Analyzer 1 Swept SA KEYSIGHT Input: RF Consider DC Corr Corr	3 PNO: Best Wide #Avg Type: Power (RMS 2 3 4 5 6	
Augin. Auto Preg Ker. Int (S)	Gate: Off Avg[Hold:>300/300 M. W.W.W.W.W. IF Gain: Low Trig: Free Run M. W.W.W.W.W. Svg Track: Off P. N. N. N. N. N.	K + Align: Auto Freq Ref: Int (S)	Gate: Off Avg[Hold:>300/300 M w W W W W IF Gain: Low Trig: Free Run P N N N N N Sig Track: Off P N N N N	
Augur. Augur. Augur. And Sinog Harr. Mt. (S) 1 Specify 10 dB Log 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	IF Gain: Low Trig: Free Run P N N N N N Sig Track: Off Ref Lvi Offset 7.79 dB Mkr1 2.4	R	IF Gain: Low Trig: Free Run P N N N N N N N N N N N N N N N N N N	478 76 GHz -0.78 dBm 0L1 30 78 dBm
Control • 1 Spectrum • 2 Spectrum • 0 000 • <t< th=""><td>Ref Level 20.00 KHz Symmetry #Video BW 300 KHz Symmetry Sweep 1.00</td><td>H + Align Auto Freq Ref. Ift (S) 79 76 GHz 1 spectrum • -0.76 dBm coste/bit 10 dB • 001 30 m det 100 00 001 30 m det 000 000 000 000 000 000 000 000 000 000 000 000 000 000 000 000 000 000 000 000 000 000 000 000 000 000 000 000 000 000 000 000 000 000 000 000 000 000 000 000 000 000 000 000 000 000 000 000 000 000 000 000 000 000 000 000 000 000 000</td><td>Ref Level 20.00 dBm Mkr1 2. Svideo BW 300 kHz Sveep 1.0</td><td>-0.78 dBm OL1 30 78 dBm Span 10.00 MHz 50 ms (1001 pts)</td></t<>	Ref Level 20.00 KHz Symmetry #Video BW 300 KHz Symmetry Sweep 1.00	H + Align Auto Freq Ref. Ift (S) 79 76 GHz 1 spectrum • -0.76 dBm coste/bit 10 dB • 001 30 m det 100 00 001 30 m det 000 000 000 000 000 000 000 000 000 000 000 000 000 000 000 000 000 000 000 000 000 000 000 000 000 000 000 000 000 000 000 000 000 000 000 000 000 000 000 000 000 000 000 000 000 000 000 000 000 000 000 000 000 000 000 000 000 000 000	Ref Level 20.00 dBm Mkr1 2. Svideo BW 300 kHz Sveep 1.0	-0.78 dBm OL1 30 78 dBm Span 10.00 MHz 50 ms (1001 pts)
Control * Specifican * Seguidation	Figure Law Top Fee Run PIL N H N IN Ref Level 20.00 dBm Construction PIL N H N IN P	H + Align Auto Freq Ref. Ift (S) 79 76 GHz 1 spectrum • -0.76 dBm coste/bit 10 dB • 001 30 m det 100 00 001 30 m det 000 000 000 000 000 000 000 000 000 000 000 000 000 000 000 000 000 000 000 000 000 000 000 000 000 000 000 000 000 000 000 000 000 000 000 000 000 000 000 000 000 000 000 000 000 000 000 000 000 000 000 000 000 000 000 000 000 000 000	IF Can Low Top Free Run Image: Can Low Top Free Run Image: Can Low Mkr1 2.7 Ref Level 20.00 dBm 0 </th <th>-0.78 dBm Cc1 23 78 dBm Span 10.00 MHz 30 ms (1001 pts) m Value</th>	-0.78 dBm Cc1 23 78 dBm Span 10.00 MHz 30 ms (1001 pts) m Value



Report No.: NTC2311211FV00





13.9 Antenna Requirement

STANDARD APPLICABLE

According to of FCC part 15C section 15.203 and 15.247:

An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.

Systems operating in the 2400-2483.5MHz band that are used exclusively for fixed, point-to-point operations may employ transmitting antennas with directional gain greater than 6dBi provided the maximum peak output power of the intentional radiator is reduced by 1dB for every 3dB that the directional gain of the antenna exceeds 6dBi.

ANTENNA CONNECTED CONSTRUCTION

The antenna is PCB antenna that no antenna other than furnished by the responsible party shall be used with the device, and the best case gain of the antenna is -0.58dBi, Therefore, the antenna is considered to meet the requirement.



14. Test Equipment List

ltem	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Test Receiver	Rohde & Schwarz	ESCI7	100837	Mar. 13, 2023	1 Year
2.	Antenna	Schwarzbeck	VULB9162	9162-010	Mar. 23, 2022	2 Year
3.	Spectrum Analyzer	Rohde & Schwarz	FSU26	200409/026	Mar. 13, 2023	1 Year
4.	Spectrum Analyzer	Keysight	N9020A	MY54200831	Mar. 13, 2023	1 Year
5.	Spectrum Analyzer	Keysight	N9010B	1215146	Sep. 06, 2023	1 Year
6.	Horn Antenna	Schwarzbeck	BBHA9170	9170-172	Mar. 23, 2022	2 Year
7.	Power Sensor	DARE	RPR3006W	15I00041SNO 64	Mar. 13, 2023	1 Year
8.	Communication Tester	Rohde & Schwarz	CMW500	149004	Mar. 13, 2023	1 Year
9.	Horn Antenna	COM-Power	AH-118	071078	Mar. 23, 2022	2 Year
10.	Pre-Amplifier	HP	HP 8449B	3008A00964	Mar. 13, 2023	1 Year
11.	Pre-Amplifier	HP	HP 8447D	1145A00203	Mar. 13, 2023	1 Year
12.	Loop Antenna	Schwarzbeck	FMZB 1513	1513-272	Mar. 23, 2022	2 Year
13.	Test Receiver	Rohde & Schwarz	ESCI	101152	Mar. 13, 2023	1 Year
14.	L.I.S.N	Rohde & Schwarz	ENV 216	101317	Mar. 13, 2023	1 Year
15.	L.I.S.N	Rohde & Schwarz	ESH2-Z5	893606/014	Mar. 13, 2023	1 Year
16.	RF Switching Unit	Compliance Direction Systems Inc.	RSU-M2	38311	Mar. 13, 2023	1 Year
17.	Temperature & Humidity Chamber	REMAFEE	SYHR225L	N/A	Mar. 13, 2023	1 Year
18.	DC Source	Maynuo	MY8811	N/A	Mar. 13, 2023	1 Year
19.	Temporary antenna connector	TESCOM	SS402	N/A	N/A	N/A
20.	Chamber	SAEMC	9*7*7m	N/A	Apr. 21, 2023	2 Year
21.	Test Software	EZ	EZ_EMC	N/A	N/A	N/A

Note: For photographs of EUT and measurement, please refer to appendix in separate documents.