

CTC Laboratories, Inc.

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•	TEST REPORT		
Report No. ·····:	CTC20232165E03		
FCC ID······:	2AUKMMTMAXPLUS		
Applicant·····:	Matco Tools		
Address	4403 Allen Rd. Stow, OH 44224, USA		
Manufacturer	Matco Tools		
Address:	4403 Allen Rd. Stow, OH 44224, USA		
Product Name······:	Automotive Diagnostic Scan Tool		
Trade Mark······:			
Model/Type reference······:	MAXIMUSPLUS		
Listed Model(s) ······	/		
Standard·····:	FCC CFR Title 47 Part 15 Subpart C Section 15.247		
Date of receipt of test sample:	Nov. 17, 2023		
Date of testing	Nov. 17, 2023 ~ Dec. 26, 2023		
Date of issue	Dec. 27, 2023		
Result:	PASS		
Compiled by:		Tana Cu	
(Printed name+signature)	Terry Su	Perry Su	
Supervised by:		Zie shang	
(Printed name+signature)	Eric Zhang	Terry Su Zic shang Jerras	
Approved by:		1 mas	
(Printed name+signature)	Totti Zhao		
Testing Laboratory Name:	CTC Laboratories, Inc.		
Address	1-2/F., Building 2, Jiaquan Building, Gu Shenzhen, Guangdong, China	uanlan High-Tech Park,	
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1. TEST SUMMARY

1.1. Test Standards

The tests were performed according to following standards:

FCC Rules Part 15.247: Operation within the bands of 902-928MHz, 2400-2483.5MHz, and 5725-5850MHz.

<u>RSS 247 Issue 2:</u> Standard Specifications for Frequency Hopping Systems (FHSs) and Digital Transmission Systems (DTSs) Operating in the Bands 902-928MHz, 2400-2483.5MHz and 5725-5850MHz. <u>ANSI C63.10-2013</u>: American National Standard for Testing Unlicensed Wireless Devices. <u>RSS-Gen Issue 5</u>: General Requirements for Compliance of Radio Apparatus.

1.2. Report version

Revised No.	Date of issue	Description
01	Dec. 27, 2023	Original

1.3. Test Description

FCC Part 15 Subpart C (15.247)/ RSS 247 Issue 2					
Test litere	Standard	I Section	Decult		
Test Item	FCC IC		Result	Test Engineer	
Antenna Requirement	15.203	/	Pass	Alicia Liu	
Conducted Emission	15.207	RSS-Gen 8.8	Pass	Cecilia Luo	
Restricted Bands	15.205	RSS-Gen 8.10	Pass	Alicia Liu	
Hopping Channel Separation	15.247(a)(1)	RSS 247 5.1 (b)	Pass	Alicia Liu	
Dwell Time	15.247(a)(iii)	RSS 247 5.1 (d)	Pass	Alicia Liu	
Peak Output Power	15.247(b)(1)	RSS 247 5.4 (b)	Pass	Alicia Liu	
Number of Hopping Frequency	15.247(a)(iii)	RSS 247 5.1 (d)	Pass	Alicia Liu	
Conducted Band Edge and Spu- rious Emissions	15.247(d)	RSS 247 5.5	Pass	Alicia Liu	
Radiated Band Edge and Spurious Emissions	15.205&15.209& 15.247(d)	RSS 247 5.5	Pass	Alicia Liu	
Radiated Spurious Emission	15.247(d)&15.20 9	RSS 247 5.5& RSS-Gen 8.9	Pass	Alicia Liu	
20dB Bandwidth	15.247(a)	RSS 247 5.1 (b)	Pass	Alicia Liu	

Note: The measurement uncertainty is not included in the test result.





CTC Laboratories, Inc.

Add: 1-2/F., Building 2, Jiaquan Building, Guanlan High-Tech Park, Shenzhen, Guangdong, China

Laboratory accreditation

The test facility is recognized, certified, or accredited by the following organizations:

A2LA-Lab Cert. No.: 4340.01

CTC Laboratories, Inc. EMC Laboratory has been accredited by A2LA for technical competence in the field of electrical testing, and proved to be in compliance with ISO/IEC 17025:2017 General Requirements for the Competence of Testing and Calibration Laboratories and any additional program requirements in the identified field of testing.

Industry Canada (Registration No.: 9783A, CAB Identifier: CN0029)

CTC Laboratories, Inc. EMC Laboratory has been registered by Certification and Engineer Bureau of Industry Canada for the performance of with Registration NO.: 9783A on Jan, 2016.

FCC (Registration No.: 951311, Designation Number CN1208)

CTC Laboratories, Inc. EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained inour files. Registration 951311, Aug 26, 2017.

1.5. Measurement Uncertainty

The data and results referenced in this document are true and accurate. The reader is cautioned that there may be errors within the calibration limits of the equipment and facilities. The measurement uncertainty was calculated for all measurements listed in this test report acc. to TR-100028-01" Electromagnetic compatibility and Radio spectrum Matters (ERM); Uncertainties in the measurement of mobile radio equipment characteristics; Part 1" and TR-100028-02 "Electromagnetic compatibility and Radio spectrum Matters (ERM); Uncertainties radio equipment characteristics; Part 2" and is documented in the CTC Laboratories, Inc. quality system acc. to DIN EN ISO/IEC 17025. Furthermore, component and process variability of devices similar to that tested may result in additional deviation. The manufacturer has the sole responsibility of continued compliance of the device.

Below is the best measurement capability for CTC Laboratories, Inc.



Test Items	Measurement Uncertainty	Notes
20dB Emission Bandwidth	±0.0196%	(1)
Carrier Frequency Separation	±1.9%	(1)
Number of Hopping Channel	±1.9%	(1)
Time of Occupancy	±0.028%	(1)
Max Peak Conducted Output Power	±0.743 dB	(1)
Band-edge Spurious Emission	±1.328 dB	(1)
Conducted RF Spurious Emission	9kHz-1GHz: ±0.746dB 1GHz-26GHz: ±1.328dB	(1)
Conducted Emissions 9kHz~30MHz	±3.08 dB	(1)
Radiated Emissions 30~1000MHz	±4.51 dB	(1)
Radiated Emissions 1~18GHz	±5.84 dB	(1)
Radiated Emissions 18~40GHz	±6.12 dB	(1)

Note (1): This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

1.6. Environmental conditions

During the measurement the environmental conditions were within the listed ranges:

Temperature:	21°C ~ 27°C
Relative Humidity:	40% ~ 60%
Air Pressure:	101kPa



2. GENERAL INFORMATION

2.1. Client Information

Applicant:	Matco Tools
Address:	4403 Allen Rd. Stow, OH 44224, USA
Manufacturer:	Matco Tools
Address:	4403 Allen Rd. Stow, OH 44224, USA

2.2. General Description of EUT

Product Name:	Automotive Diagnostic Scan Tool
Trade Mark:	
Model/Type reference:	MAXIMUSPLUS
Listed Model(s):	1
Power supply:	5Vdc/5A from AC/DC Adapter 7.6Vdc from 6300mAh Li-ion Battery
Adapter Model:	XDJ361R-050500 Input: 100-240V~ 50/60Hz 0.9A Output: 5Vdc/5A
Hardware version:	1
Software version:	1
Bluetooth 5.1/ BR+EDR	
Modulation:	GFSK, π/4-DQPSK, 8-DPSK
Operation frequency:	2402MHz~2480MHz
Channel number:	79
Channel separation:	1MHz
Antenna type:	FPC Antenna
Antenna gain:	3.64dBi Max



2.3. Accessory Equipment information

Equipment Information						
Name	Model	S/N	Manufacturer			
1	1	1	1			
Cable Information	Cable Information					
Name	Shielded Type	Ferrite Core	Length			
1	1	1	1			
Test Software Information						
Name	Versions	1	1			
Engineering mode	1	1	1			



2.4. Operation state

Operation Frequency List: The EUT has been tested under typical operating condition. The Applicant provides communication tools software to control the EUT for staying in continuous transmitting and receiving mode for testing. BT EDR, 79 channels are provided to the EUT. Channels 00/39/78 were selected for testing.

Operation Frequency List:

Channel	Frequency (MHz)
00	2402
01	2403
:	:
38	2440
39	2441
40	2442
:	:
77	2479
78	2480

Note: The display in grey were the channel selected for testing.

Test mode

For RF test items:

The engineering test program was provided and enabled to make EUT continuous transmit

For AC power line conducted emissions:

The EUT was set to connect with the Bluetooth instrument under large package sizes transmission.

For Radiated spurious emissions test item:

The engineering test program was provided and enabled to make EUT continuous transmit. The EUT in each of three orthogonal axis emissions had been tested, but only the worst case (X axis) data recorded in the report.



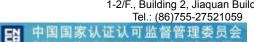
2.5. Measurement Instruments List

RF Tes	RF Test System					
Item	Test Equipment	Manufacturer	Model No.	Serial No.	Calibrated Until	
1	Spectrum Analyzer	R&S	FSV40-N	101331	Mar. 14, 2024	
2	Spectrum Analyzer	R&S	FSV40-N	101654	Aug. 07, 2024	
3	Spectrum Analyzer	R&S	FSU26	100105	Dec. 12, 2024	
4	MXA Signal Analyzer	Keysight	N9020A	MY46471737	Dec. 12, 2024	
5	MXA Signal Analyzer	Keysight	N9020A	MY52091402	Aug. 22, 2024	
6	MXG Vector Signal Generator	Agilent	N5182A	MY47420864	Dec. 12, 2024	
7	PSG Analog Signal Generator	Agilent	E8257D	MY46521908	Dec. 12, 2024	
8	EXG Analog Signal Generator	Keysight	N5173B	MY59100842	Dec. 12, 2024	
9	MXG Vector Signal Generator	Keysight	N5182B	MY59100212	Dec. 12, 2024	
10	Wideband Radio Com- munication Tester	R&S	CMW500	102257	May 25, 2024	
11	Wideband Radio Com- munication Tester	R&S	CMW500	102414	Dec. 12, 2024	
12	High and low tempera- ture test chamber	ESPEC	MT3035	1	Mar. 24, 2024	
13	RF Control Unit	Tonscend	JS0806-2	/	Aug. 22, 2024	
14	Test Software	Tonscend	JS1120-3	V3.3.38	/	

Radiate	Radiated Emission (3m chamber 2)					
Item	Test Equipment	Manufacturer	Model No.	Serial No.	Calibrated Until	
1	Trilog-Broadband Antenna	Schwarzbeck	VULB 9168	9168-1013	Dec. 07, 2024	
2	Horn Antenna	Schwarzbeck	BBHA 9120D	9120D-648	Dec. 07, 2024	
3	Spectrum Analyzer	R&S	FSU26	100105	Dec. 12, 2024	
4	Spectrum Analyzer	R&S	FSV40-N	101331	Mar. 14 2024	
5	Pre-Amplifier	SONOMA	310	186194	Dec. 12, 2024	
6	Low Noise Pre-Amplifier	EMCI	EMC051835	980075	Dec. 12, 2024	
7	Test Receiver	R&S	ESCI7	100967	Dec. 12, 2024	
8	3m chamber 2	Frankonia	EE025	/	Oct. 23, 2024	
9	Test Software	FARA	EZ-EMC	FA-03A2	1	

Radiate	d Emission (3m chamber 3	3)			
Item	Test Equipment	Manufacturer	Model No.	Serial No.	Calibrated Until
1	Trilog-Broadband Antenna	Schwarzbeck	VULB 9163	01026	Dec. 18, 2024
2	Horn Antenna	Schwarzbeck	BBHA 9120D	9120D-647	Dec. 01, 2024
3	Test Receiver	Keysight	N9038A	MY56400071	Dec. 12, 2024
4	Broadband Amplifier	SCHWARZBECK	BBV9743B	259	Dec. 12, 2024
5	Mirowave Broadband Amplifier	SCHWARZBECK	BBV9718C	111	Dec. 12, 2024

CTC Laboratories, Inc.



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6	3m chamber 3	YIHENG	EE106	/	Aug. 28, 2026
7	Test Software	FARA	EZ-EMC	FA-03A2	1

Conduc	ted Emission				
Item	Test Equipment	Manufacturer	Model No.	Serial No.	Calibrated Until
1	LISN	R&S	ENV216	101112	Dec. 12, 2024
2	LISN	R&S	ENV216	101113	Dec. 12, 2024
3	EMI Test Receiver	R&S	ESCS30	100353	Dec. 12, 2024
4	ISN CAT6	Schwarzbeck	NTFM 8158	CAT6-8158-0046	Dec. 12, 2024
5	ISN CAT5	Schwarzbeck	NTFM 8158	CAT5-8158-0046	Dec. 12, 2024
6	Test Software	R&S	EMC32	6.10.10	1

Note: 1. The Cal. Interval was one year.

2. The Cal. Interval was three year of the chamber

3. The cable loss has calculated in test result which connection between each test instruments.



3.1. Conducted Emission

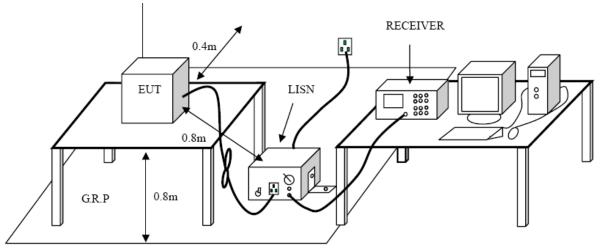
<u>Limit</u>

FCC CFR Title 47 Part 15 Subpart C Section 15.207/ RSS - Gen 8.8

	Limit (d	BuV)
Frequency range (MHz)	Quasi-peak	Average
0.15-0.5	66 to 56*	56 to 46*
0.5-5	56	46
5-30	60	50

* Decreases with the logarithm of the frequency.

Test Configuration



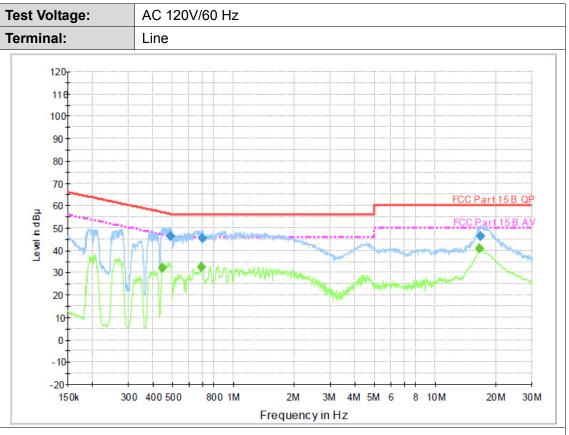
Test Procedure

- 1. The EUT was setup according to ANSI C63.10:2013 requirements.
- 2. The EUT was placed on a platform of nominal size, 1 m by 1.5 m, raised 80 cm above the conducting ground plane. The vertical conducting plane was located 40 cm to the rear of the EUT. All other surfaces of EUT were at least 80 cm from any other grounded conducting surface.
- The EUT and simulators are connected to the main power through a line impedances stabilization network (LISN). The LISN provides a 50ohm /50uH coupling impedance for the measuring equipment. The peripheral devices are also connected to the main power through a LISN. (Please refer to the block diagram of the test setup and photographs)
- 4. Each current-carrying conductor of the EUT power cord, except the ground (safety) conductor, was individually connected through a LISN to the input power source.
- 5. The excess length of the power cord between the EUT and the LISN receptacle were folded back and forth at the center of the lead to form a bundle not exceeding 40 cm in length.
- 6. Conducted Emissions were investigated over the frequency range from 0.15MHz to 30MHz using a receiver bandwidth of 9 kHz.
- 7. During the above scans, the emissions were maximized by cable manipulation.

Test Mode

Please refer to the clause 2.4.





Final Measurement Detector 1

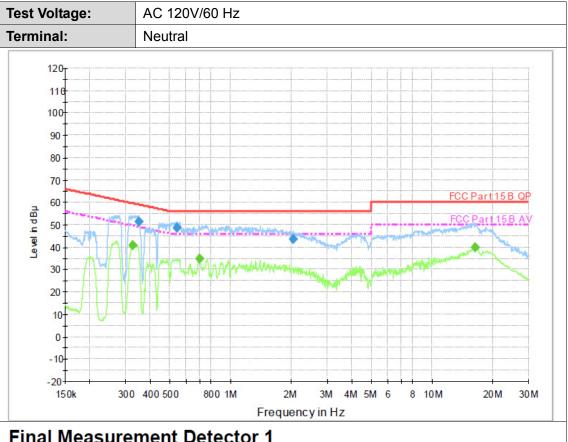
		asaren								
	Frequency	QuasiPeak	Meas.	Bandwidth	Filter	Line	Corr.	Margin	Limit	Comment
	(MHz)	(dBµ V)	Time	(kHz)			(dB)	(dB)	(dBµ	
			(ms)						V)	
	0.487010	46.3	1000.00	9.000	On	L1	9.5	9.9	56.2	
	0.700330	45.2	1000.00	9.000	On	L1	9.5	10.8	56.0	
[16.667580	46.4	1000.00	9.000	On	L1	9.7	13.6	60.0	

Final Measurement Detector 2

	Frequency (MHz)	Average (dBµ V)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµ V)	Comment
[0.444280	32.2	1000.00	9.000	On	L1	9.5	14.8	47.0	
[0.692000	32.7	1000.00	9.000	On	L1	9.5	13.3	46.0	
[16.535040	40.7	1000.00	9.000	On	L1	9.7	9.3	50.0	

Emission Level= Read Level+ Correct Factor





i inter inte	asaren								
Frequency	QuasiPeak	Meas.	Bandwidth	Filter	Line	Corr.	Margin	Limit	Comment
(MHz)	(dBµ V)	Time	(kHz)			(dB)	(dB)	(dBµ	
		(ms)						V)	
0.349650	51.5	1000.00	9.000	On	Ν	9.4	7.5	59.0	
0.542430	48.7	1000.00	9.000	On	Ν	9.4	7.4	56.0	
2.025220	43.7	1000.00	9.000	On	N	9.4	12.3	56.0	

Final Measurement Detector 2

	Frequency (MHz)	Average (dBµ V)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµ V)	Comment
- Ľ	0.324110	40.8	1000.00	9.000	On	N	9.4	8.8	49.6	
	0.697540	34.8	1000.00	9.000	On	Ν	9.4	11.2	46.0	
	16.338200	39.8	1000.00	9.000	On	Ν	9.5	10.2	50.0	

Emission Level= Read Level+ Correct Factor



3.2. Radiated Emission

<u>Limit</u>

FCC CFR Title 47 Part 15 Subpart C Section 15.209/ RSS - Gen 8.9

Frequency	Field Strength	Measurement Distance
(MHz)	(microvolts/meter)	(meters)
0.009~0.490	2400/F (kHz)	300
0.490~1.705	24000/F (kHz)	30
1.705~30.0	30	30
30~88	100	3
88~216	150	3
216~960	200	3
960~1000	500	3

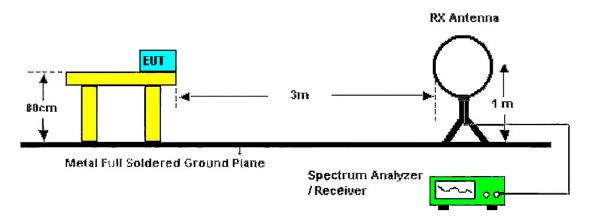
Frequency Pange (MHz)	dBµV/m (at 3 meters)						
Frequency Range (MHz)	Peak	Average					
Above 1000	74	54					

Note:

(1) The tighter limit applies at the band edges.

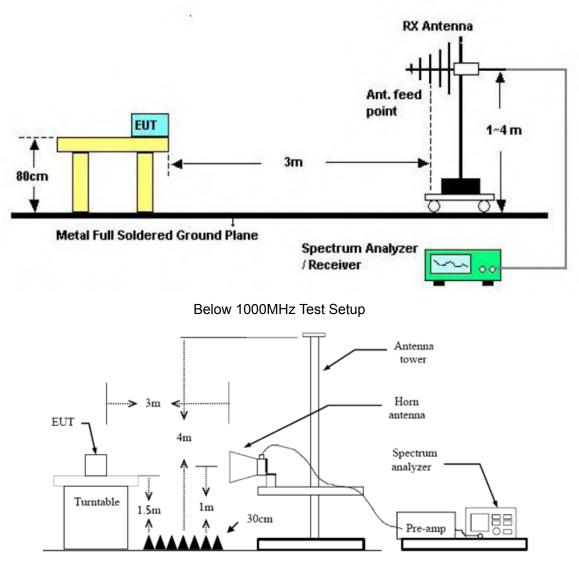
(2) Emission Level (dBuV/m)=20log Emission Level (uV/m).

Test Configuration



Below 30MHz Test Setup





Test Procedure

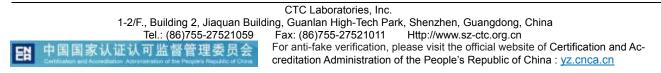
Above 1GHz Test Setup

- 1. The EUT was setup and tested according to ANSI C63.10:2013
- 2. The EUT is placed on a turn table which is 0.8 meter above ground for below 1 GHz, and 1.5 m for above 1 GHz. The turn table is rotated 360 degrees to determine the position of the maximum emission level.
- 3. The EUT was set 3 meters from the receiving antenna, which was mounted on the top of a variable height antenna tower.
- 4. For each suspected emission, the EUT was arranged to its worst case and then tune the Antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high pass filter are used for the test in order to get better signal level to comply with the guidelines.
- 5. Set to the maximum power setting and enable the EUT transmit continuously.
- 6. Use the following spectrum analyzer settings
 - (1) Span shall wide enough to fully capture the emission being measured;
 - (2) Below 30 MHz:

9kHz – 150kHz, RBW=200Hz, VBW \geq RBW, Sweep=auto, Detector function=peak, Trace=max hold; 150kHz – 30MHz, RBW=9kHz, VBW \geq RBW, Sweep=auto, Detector function=peak, Trace=max hold; If the emission level of the EUT measured by the peak detector is 3 dB lower than the applicable limit, the peak emission level will be reported. Otherwise, the emission measurement will be repeated using the quasi-peak detector and reported.

(3) 30 MHz - 1 GHz:

RBW=120 kHz, VBW=300 kHz, Sweep=auto, Detector function=peak, Trace=max hold;





If the emission level of the EUT measured by the peak detector is 3 dB lower than the applicable limit, the peak emission level will be reported. Otherwise, the emission measurement will be repeated using the quasi-peak detector and reported.

(4) From 1 GHz to 10th harmonic:

RBW=1MHz, VBW=3MHz Peak detector for Peak value.

RBW=1MHz, VBW \ge 1/T Peak detector for Average value.

Note 1: For the 1/T& Duty Cycle please refer to clause 3.10 Duty Cycle.

<u>Test Mode</u>

Please refer to the clause 2.4.

Test Result

9 KHz~30 MHz

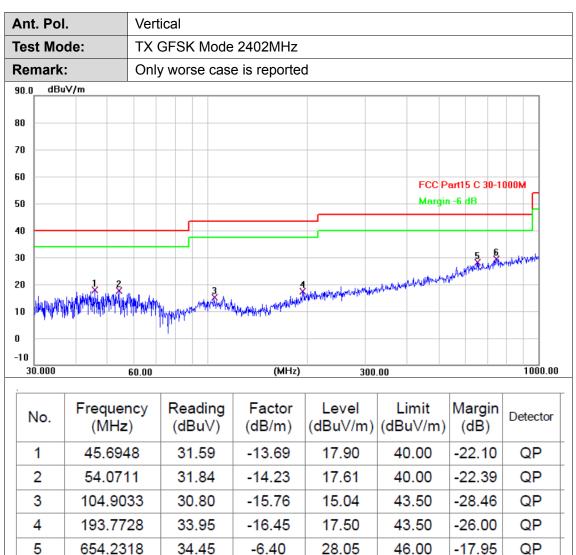
From 9 KHz to 30 MHz Conclusion: PASS

Note: The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.



nt. Po	l.	Hori	zonta	al									
est Mo	de:	тх (GFSł	< Mode	2402MHz								
emark		Only	Only worse case is reported										
0.0 dB	uV/m												
0													
o													
D							ECC P	art15 C 30-1	000M				
D								airi 5 C 30-1 n -6 dB					
0								5	6				
0	1	2				4	a shandard guida make	poprint and a construction					
	X	6											
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	ydair a thriait mig	60.00	hulunnin	un minini	(MHz)				1000.0				
0	Frequer (MHz	60.00	Rea	ading BuV)			Limit	Margin (dB)	1000.0				
0 30.000		60.00 ncy	Rea (df	ading	(MHz) Factor	300 Level	Limit	Margin	1000.0				
0 30.000 No.	(MHz	60.00 ncy :)	Rea (df	ading BuV)	(MHz) Factor (dB/m)	300 Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	1000.0				
0 30.000 No.	(MHz 44.120	60.00 ncy :) 02 51	Rea (dl	ading BuV) 1.30	(MHz) Factor (dB/m) -13.79	300 Level (dBuV/m) 17.51	Limit (dBuV/m) 40.00	Margin (dB) -22.49	Detector QP				
No. 1 2 30 4	(MHz 44.120 59.025 102.71 243.37	60.00 ncy 2) 02 51 92 71	Re: (di 3 ⁻ 3 ⁻ 3(ading BuV) 1.30 1.54	(MHz) Factor (dB/m) -13.79 -15.18	300 Level (dBuV/m) 17.51 16.36	Limit (dBuV/m) 40.00 40.00	Margin (dB) -22.49 -23.64	Detector QP QP				
No. 1 2 3	(MHz 44.120 59.025 102.71	60.00 ncy 2) 02 51 92 71	Rea (dl 3 ⁻ 3 ⁻ 3 ⁻ 3 ⁻	ading BuV) 1.30 1.54 0.49	(MHz) Factor (dB/m) -13.79 -15.18 -15.90	300 Level (dBuV/m) 17.51 16.36 14.59	Limit (dBuV/m) 40.00 40.00 43.50	Margin (dB) -22.49 -23.64 -28.91	Detector QP QP QP				





6 *

747.4825

1.Factor (dB/m) = Antenna Factor (dB/m)+Cable Factor (dB)-Pre-amplifier Factor 2.Margin value = Level -Limit value

-4.92

29.34

46.00

-16.66

QP

34.26

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est Mo	de:	TX (GFSI	< Mode	2402MF	Ιz						
emark		No r scrib			e emissic	n v	which	more	than 10 (dB	below the	e pre-
)0. <u>0</u> dB	uV/m				1	_						
)												
I									FCC Pa	rt15	C - Above 1	G PK
, 📃												
									FCC Pa	rt15	C - Above 1	GAV
)	ş											
)	^											
)	1 ×											
, 📖												
)												
	0 3500.00 E	000.00	850	0.00 11	000.00 (M	Hz)	160	00.00	18500.00	2100	0.00 23500	0.00 26000
No.	Frequer (MHz			ading BuV)	Facto (dB/m		1	vel V/m)	Limit (dBuV/		Margin (dB)	Detector
1 *	4804.0	47	26	6.03	2.08		28	.11	54.00)	-25.89	AVG
2	4804.4	25	4(0.45	2.08		42	.53	74.00)	-31.47	peak



nt. Po	l.	Verti	cal					
est Mo	de:	ТХ С	GFSK Mode	2402MHz				
emark		No r scrib	eport for the	e emission v	which more	than 10 dB l	below the	e pre-
00. <u>0</u> dBu	uV/m							
۱								
ı						FCC Part15	C - Abovo 1	C PK
						FCC Faitis	C-ADOVE I	
						FCC Part15	C - Above 1	G AV
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	×							
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ı								
.0								
1000.000	0 3500.00 6	000.00	8500.00 11	000.00 (MHz)	16000.00	18500.00 2100	0.00 23500	.00 26000.
No.	Frequer (MHz		Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1 *	4803.59	95	25.87	2.08	27.95	54.00	-26.05	AVG
	4804.86	39	41.08	2.08	43.16	74.00	-30.84	peak



nt. Po	ol.	Horiz	zontal					
est M	ode:	TX G	GFSK Mode	2441MHz				
lemar	k:		eport for the ed limit.	e emission v	vhich more 1	han 10 dB t	pelow the	pre-
00.0 dE	3uV/m							
0								
						FCC Part15 C	- Above 1G	РК
0								
) — I								
, 🗖						FCC Part15 C	- Above 1G	AV
	1×							
)								
)	Š							
) —								
) —								
).0								
1000.00	00 3500.00 6	000.00	8500.00 11	000.00 (MHz)	16000.00 1	8500.00 21000	.00 23500.0	0 26000.0
No.	Frequer (MHz	псу	Reading (dBuV)	Factor (dB/m)	Level	Limit (dBuV/m)	Margin (dB)	Detecto
1	4881.6		40.61	2.18	42.79	74.00	-31.21	peak
	4882.9		25.82	2.18	28.00	54.00	-26.00	AVG
2 *								



nt. Pol	Ι.	Vertio	cal					
est Mo		_	FSK Mode					
Remark			eport for the ed limit.	e emission v	which more	than 10 dB l	below the	e pre-
00.0 dBu	uV/m		1		1		1	
0								
0						FCC Part15	C - Above 1	G PK
0								
0						FCC Part15	C - Above 1	GAV
0								
0	Š							
o	1							
0	×							
0								
	0 3500.00 6	000.00	8500.00 11	000.00 (MHz)	16000.00	18500.00 2100	0.00 23500	.00 26000.
No.	Frequer (MHz		Reading (dBu∀)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1 *	4882.0	99	24.65	2.18	26.83	54.00	-27.17	AVG
I		73	39.35	2.18	41.53	74.00	-32.47	peak



nt. Po	I.	Horiz	zontal					
est Mo	ode:	TX GFSK Mode 2480MHz No report for the emission which more than 10 dB below the pre- scribed limit.						
Remark				emission v	vhich more t	han 10 dB l	below the	e pre-
00.0 dB	uV/m							
0								
						FCC Part15	C - Above 1	G PK
)								
)								
						FCC Part15	C - Above 1	GAV
	ş							
0								
0	1×							
0								
D.0			8500.00 11	000.00 (MHz)	16000.00 1	8500.00 2100	0.00 23500	.00 26000.
	0 3500.00 6	000.00	0000.00 11	,	10000.00			
	0 3500.00 6	000.00	8500.00 11	<u> </u>	10000.00			
	0 3500.00 6	000.00	000.00 11					
	6 3500.00 6 Freque (MHz	ncy	Reading (dBuV)	Factor (dB/m)	Level	Limit (dBuV/m)	Margin (dB)	Detector
1000.00	Freque	ncy :)	Reading	Factor	Level	Limit		Detector AVG



Ant.	Pol.		Verti	cal									
Test	Mod	de:	TX G	GFSK I	Mode	2480MH	Ηz						
	nark:			eport f		e emissio	on v	vhich	more t	han 10 c	IB t	pelow the	; pre-
100.0	dBu\	√/m											
90											_		
80										FCC Pa	rt15	C - Above 1	G PK
70											-		
60										FCC Pa	rt15 (C - Above 1	GAV
50		2									-		
40		ş									+		
30		1×									-		
20											+		
10											+		
0.0	00.000	3500.00 6	000.00	8500.0	0 11	000.00 (N	(Hz)	160	00.00 1	8500.00 2	100	0.00 23500	.00 26000.0
N	o.	Frequer (MHz		Read (dBu		Facto (dB/m			vel IV/m)	Limit (dBuV/		Margin (dB)	Detector
1	*	4960.1	30	24.	17	2.30		26	.47	54.00)	-27.53	AVG
2	2	4960.1	49	40.0	68	2.30		42	.98	74.00)	-31.02	peak



nt. Po	l.	Horiz	zontal					
est Mo	ode:	TX 1	π/4-DQPSK	Mode 2402	2MHz			
Remark	(:		eport for the bed limit.	e emission v	which more 1	than 10 dB t	pelow the	e pre-
00.0 dB	luV/m							
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0						500 D		
0						FCC Part15	C-ADOVE I	
0								
0						FCC Part15	C - Above 1	
0	ş							
o	1							
o								
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0.0	10 3500.00	000.00	8500.00 11	000.00 (MHz)	16000.00 1	18500.00 21000	0.00 23500	.00 26000.
	1							
No.	Frequer (MHz	-	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
110.					1			
1 *	4803.8	48	26.00	2.08	28.08	54.00	-25.92	AVG



Ant	. Pol		Verti	cal										
Test	t Mo	de:	TX 1	τ/4-D	QPSK	Mode	2402	2MHz						
Ren	nark		No re scrib			e emiss	on v	vhich	more t	han 10	dB t	pelow the	e pre-	
100.0) dBu	V/m												
90							_							
80										500 D		0.411	0.04	
70							-			FULP	anis	C - Above 1	GPK	
60														
50							_			FCC P	art15	C - Above 1	G AV	
40		1×												
30														
20		×												
10														
0.0														
10	00.000	3500.00 6	000.00	8500	.00 11	000.00 (MHz)	160	00.00 1	8500.00	2100	0.00 23500).00 2600)0.0
		-		Dee		F				Ling				
N	lo.	Frequer (MHz			ading 3uV)	Fact (dB/r			vel iV/m)	Lim (dBuV		Margin (dB)	Detecto	ж
	1	4803.9	21	40	.20	2.0	В	42	.28	74.0	0	-31.72	peak	[
2	2 *	4804.0	09	25	.71	2.0	В	27	.79	54.0	0	-26.21	AVG	i

Page 27 of 89

Remarks:



nt. Po	l.	Hori	zonta	l									
est Mo	de:	TX 1	π/4-C	QPSK	Mode 2	441	MHz						
emark			eport ed lii		emissio	on w	vhich m	ore t	han 10) dB t	elow t	he p	re-
10.0 dBu	uV/m												
		_											
									FCC	Dort1E (C - Abov	- 1C F	~
									FUU			ergr	
									FCC	Part15 (C - Abov	e 1G A	v
	ş												
	×												_
.0 1000.000	0 3500.00 6	000.00	8500	.00 11	000.00 (M	IHz)	16000).00 1	8500.00	21000	0.00 23	500.00	26000.
							1				1		
No.	Freque (MHz	-		ading BuV)	Facto (dB/m		Lev (dBu\		Lin (dBu)		Marg (dB)		etector)
1 *	4881.3	88	25	5.04	2.18		27.2	22	54.	00	-26.7	8	AVG
2	4882.9	86	39	9.98	2.18		42.1	16	74.	00	-31.8	34	peak
					-		-						



Ant. Pol	•	Verti	cal										
est Mo	de:	TX	π/4-I	DQPSK	Mode 2	441	MHz						
Remark		No r scrib			e emissio	on v	vhich	more t	han 10	dB b	pelow t	he pr	e-
100. <u>0</u> dBu	V/m								_				_
0													
0									FCC P	art15 () - Above	1G PK	_
0										_			
0													
		_							FCC P	art15 (C-Above	16 AV	_
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0	×									_			_
o	ş	_											_
0	^												
0						-							
0.0	3500.00 6	000.00	850	0.00 11	000.00 (N	IHz)	160	00.00 1	8500.00	21000	.00 235	00.00	26000.0
No.	Frequer (MHz	-		ading BuV)	Facto (dB/m			vel iV/m)	Lim (dBu∖		Margi (dB)		etector
1	4882.4	51	4	0.53	2.18		42	.71	74.0	00	-31.2	9 p	eak
2 *	4882.9	69	2	5.18	2.18		27	.36	54.0	00	-26.6	4 A	VG



Ant.	Pol.		Hori	zonta	al								
Test	t Mod	de:	ТΧ	π/4-E	DQPSK	Mode 2	480	OMHz					
Rem	nark:			epor bed li		e emissic	n v	vhich ı	nore	than 1	0 dB	below the	e pre-
100.0) dBu	lV/m					_						
90							_						
80							-			FCC	Part15	C - Above	IG PK
70							+						
60							-			FCC	Part15	C - Above	IG AV
50		ş					-						
40		X											
30		1×					-						
20													
10													
0.0 10	00.000	3500.00 6	000.00	850	0.00 1	1000.00 (N	(Hz)	160	00.00	18500.00) 2100	0.00 2350	0.00 26000.0
1				De	- di - a	Fasta		Lev		1 :	.:.	Mauria	
N	o .	Frequer (MHz			ading BuV)	Facto (dB/m		1		Lin (dBu		Margin (dB)	Detector
1	*	4959.2	13	24	1.42	2.30		26.	72	54.	00	-27.28	AVG
2	2	4960.2	10	40).92	2.30		43.	22	74.	00	-30.78	peak
Rem	narks												

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Remarks:



nt. Pol	•	Vertica	al					
est Mo	de:	TX π/	/4-DQPSK	Mode 2480	OMHz			
emark	:		port for the d limit.	emission v	which more t	han 10 dB t	pelow the	e pre-
00.0 dBu	V/m							
,								
)						FCC Part15 (C-Above 10	G PK
						FCC Part15 (C - Above 10	3 AV
	ş							
I	×							
	1							
	^							
.0								
.u 1000.000	3500.00 6	000.00	8500.00 11	000.00 (MHz)	16000.00 1	8500.00 21000	.00 23500.	.00 26000.0
No.	Frequer (MHz	•	Reading (dBu∀)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
	4959.4	16	24.41	2.30	26.71	54.00	-27.29	AVG
1 *				2.30	41.99	74.00	-32.01	



est Mode emark:	:	TX 8	rizontal 8-DPSK Mode 2402MHz report for the emission which more than 10 dB below the pre								
emark:							Z				
		No r scrit			e emissi	on v	vhich	more t	han 10 dB	below th	e pre-
10. <u>0</u> dBuV/1	m			-							
						_			FCC Part15	C Abour	10.04
									FCC Partis	C-ADUVE	IGPK
									FCC Part15	C - Above	1G AV
	1×										
	ş										
	_					_					
)											
1000.000 3	500.00 E	600.00	850	0.00 11	000.00 (MHz)	160	00.00	8500.00 2100	0.00 2350	0.00 26000
No.	Freque (MHz			ading BuV)	Fact (dB/r			vel V/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	4803.3	·		1.18	2.08	<u> </u>	`	.26	74.00	-30.74	peak
2 *	4803.7	83	2	5.89	2.08	3	27	.97	54.00	-26.03	+ · · · · · · · · · · · · · · · · · · ·



Ant	. Pol	•	Vertic	cal								
Tes	t Mo	de:	TX 8-	-DPSK Moo	de 2402MH	Z						
Ren	nark		No report for the emission which more than 10 dB below the pre- scribed limit.									
100.	0 dBu	V/m										
90												
80							500 D	0.41.1	0.0%			
70							FCC Part15	C - Above 1				
60												
50							FCC Part15	C - Above 1	<u>G AV</u>			
40		ş										
30		1×										
20												
10												
0.0	100 000	3500.00 6	000.00	8500.00 11	000.00 (MHz)	16000.00		0.00 23500	.00 26000.0			
I												
N	lo.	Frequer (MHz	-	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector			
1	*	4803.9	59	25.54	2.08	27.62	54.00	-26.38	AVG			
2	2	4804.2	68	40.29	2.08	42.37	74.00	-31.63	peak			
Ren	narks	6:										

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Ant	Pol.		Horiz	zontal										
Test	t Mod	le:	TX 8-DPSK Mode 2441MHz											
Ren	nark:			No report for the emission which more than 10 dB below the pre- scribed limit.										
100.	0 dBu	V/m				1					_			
90											_			
80										FCC Pa	rt15 (C-Above 10	G PK	
70											_			
60														
50										FCC Pa	rt15 (C - Above 10	G AV	
		ş												
40		^									-			
30		1 *									_			
20											_			
10														
0.0														
1(000.000	3500.00 6	000.00	8500.00	11	000.00 (M	Hz)	160	00.00 1	8500.00	21000	0.00 23500	.00 26000.0	
1												1		
N	lo.	Freque (MHz		Readi (dBu		Facto (dB/m			vel iV/m)	Limi (dBuV/		Margin (dB)	Detector	
	1 *	4881.0)11	24.8	7	2.18		27	.05	54.0	0	-26.95	AVG	
	2	4881.9	23	39.7	2	2.18		41	.90	74.0	0	-32.10	peak	
								1				1		

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Remarks:



No r	3-DPSK Mod report for the bed limit.			han 10 dB b	- Above 1G	i PK
§ scrib			vhich more t	FCC Part1 5 C	- Above 1G	i PK
				FCC Part15 C	- Above 1G	AV
				FCC Part15 C	- Above 1G	AV
×						
×						
0.00 6000.00	8500.00 110	000.00 (MHz)	16000.00 1	8500.00 21000	00 23500 (00 26000.
requency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
881.611	24.81	2.18	26.99	54.00	-27.01	AVG
882.028	40.12	2.18	42.30	74.00	-31.70	peak
8	equency (MHz) 881.611	equency (MHz) Reading (dBuV) 881.611 24.81	equency Reading Factor (MHz) (dBuV) (dB/m) 881.611 24.81 2.18	equency Reading Factor Level (dBuV) (dBuV) (dB/m) 24.81 2.18 26.99	equency (MHz) Reading (dBuV) Factor (dB/m) Level Limit (dBuV/m) (dBuV/m) 881.611 24.81 2.18 26.99 54.00	equency Reading Factor Level Limit (dBuV) (dB/m) (dBuV/m) (dBuV/m) (dB) (881.611 24.81 2.18 26.99 54.00 -27.01



Ant. Pol.			Horizontal										
	lode:		TX 8-DPSK Mode 2480MHz No report for the emission which more than 10 dB below the pre- scribed limit.										
ema	rk:												
0.0	dBuV/n	1					_						
' 🗀										FCC Part15	C - Above 1	G PK	
<u>ا</u> ۱													
										FCC Part15	C - Above 1	GAV	
		ş											
' -													
۱		1×											
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,													
).0													
1000	.000 35	00.00 6	6000.00	850	0.00 1	1000.00 (M	Hz)	160	00.00	18500.00 2100	0.00 2350	0.00 26000	
No	. F	reque (MHz			ading BuV)	Facto (dB/m	-		vel V/m)	Limit (dBuV/m)	Margin (dB)	Detector	
1	* 4	4959.7	'11	24	4.56	2.30		26	.86	54.00	-27.14	AVG	
2	4	4960.3	57	4(0.67	2.30		42	.97	74.00	-31.03	peak	



de:		Ant. Pol. Vertical										
		-DPSK Moo										
:			emission v	which more t	than 10 dB t	pelow the	pre-					
V/m												
					FCC Part15	C - Above 1	G PK					
					FCC Part15	C - Above 1	GAV					
ş												
1×												
3500.00 6	000.00	8500.00 11	000.00 (MHz)	16000.00	18500.00 2100	0.00 23500	.00 26000					
		Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector					
4959.7	29	24.10	2.30	26.40	54.00	-27.60	AVG					
4960.7	46	39.99	2.30	42.29	74.00	-31.71	peak					
	v/m	Scrib	scribed limit. V/m V/m V/m Image: Scribed limit. Image: Scribe limi	scribed limit. v/m k <tr m<="" tr=""> k <t< td=""><td>Scribed limit. V/m V/m Image: Scribed limit. V/m Image: Scribed limit. V/m Image: Scribed limit. V/m Image: Scribed limit. Image: Scribed limit. V/m Image: Scribed limit. Image: Scribe limit. Image: Scrib limit. Image: S</td><td>scribed limit. V/m Image: Scribed limit. Image: Scribe limit. Image:</td><td>Scribed limit. V/m V/m FCC Part15 C - Above 1 FCC</td></t<></tr>	Scribed limit. V/m V/m Image: Scribed limit. V/m Image: Scribed limit. V/m Image: Scribed limit. V/m Image: Scribed limit. Image: Scribed limit. V/m Image: Scribed limit. Image: Scribe limit. Image: Scrib limit. Image: S	scribed limit. V/m Image: Scribed limit. Image: Scribe limit. Image:	Scribed limit. V/m V/m FCC Part15 C - Above 1 FCC					
Scribed limit. V/m V/m Image: Scribed limit. V/m Image: Scribed limit. V/m Image: Scribed limit. V/m Image: Scribed limit. Image: Scribed limit. V/m Image: Scribed limit. Image: Scribe limit. Image: Scrib limit. Image: S	scribed limit. V/m Image: Scribed limit. Image: Scribe limit. Image:	Scribed limit. V/m V/m FCC Part15 C - Above 1 FCC										

Remarks:



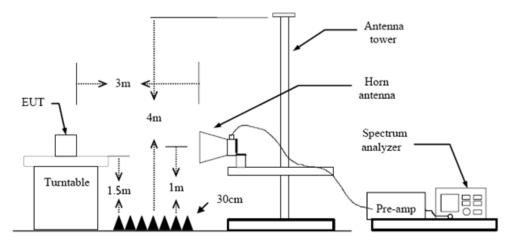
3.3. Band Edge Emissions (Radiated)

<u>Limit</u>

FCC CFR Title 47 Part 15 Subpart C Section 15.247 (d):

Restricted Frequency Band	(dBuV/m	n)(at 3m)
(MHz)	Peak	Average
2310 ~ 2390	74	54
2483.5 ~ 2500	74	54

Test Configuration



Test Procedure

- 1. The EUT was setup and tested according to ANSI C63.10:2013 requirements.
- 2. The EUT is placed on a turn table which is 1.5 meter above ground. The turn table is rotated 360 degrees to determine the position of the maximum emission level.
- 3. The EUT was positioned such that the distance from antenna to the EUT was 3 meters.
- 4. The antenna is scanned from 1 meter to 4 meters to find out the maximum emission level. This is repeated for both horizontal and vertical polarization of the antenna. In order to find the maximum emission, all of the interface cables were manipulated according to ANSI C63.10:2013 on radiated measurement.
- 5. The receiver set as follow:

RBW=1MHz, VBW=3MHz Peak detector for Peak value.

RBW=1MHz, VBW see note 1 with Peak Detector for Average Value.

Note 1: For measurements above 1 GHz the resolution bandwidth is set to 1 MHz, then the video bandwidth is set to 3 MHz for peak measurements and 1 MHz resolution bandwidth with 1/T video bandwidth with peak detector for average measurements. For the Duty Cycle please refer to clause 3.10 Duty Cycle.

<u>Test Mode</u>

Please refer to the clause 2.4.



Test Results

est Mo	l.		zontal K Mode 240)21/1日マ				
	uV/m	GFS	K MOUE 240					
10.0 40	41711							
00								
0								
0						FCC Part15 (C-Above 10	G PK
0								
0						ECC DestIE (A h	
0						FCC Part15 (X	
				a white alter with hi			wienner	
0	al man the part of the state of	and the second		and a construction	ann an Sharan an Sharan Anna an Sharan Anna an Sharan Anna an Sharan Anna Anna Anna Anna Anna Anna Anna			
0								
0.0	0 2315.30	2325.30	2335.30 23	45.30 (MHz)	2365.30 2	375.30 2385.3	30 2395.3	0 2405.3
No.	Frequ (MF		Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	2390	.000	19.58	31.31	50.89	74.00	-23.11	peak
2 *	2390	.000	5.32	31.31	36.63	54.00	-17.37	AVG



nt. Po		Verti	cal					
est Mo	de:	GFS	K Mode 240	02MHz				
00.0 dBu	ıV/m	1						
0								A
0						FCC Part15 C	- Above 1G	PK
0								
0						FCC Part15 C	1 Above 1G	
0							×	
0	a Marcely- Athenantica, Ad	understander	and the second second	and the more services and the	non many	and an advantage of the	Emm	ha
o								
0								
0								
0.0 2306.000) 2316.00 2	326.00	2336.00 23	46.00 (MHz)	2366.00 23	376.00 2386.0	0 2396.00	2406.00
No.	Freque (MH2		Reading (dBu∀)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	2390.0	000	22.01	31.31	53.32	74.00	-20.68	peak
•	2390.0	00	5.75	31.31	37.06	54.00	-16.94	AVG
2 *	1		1		1			

2.Margin value = Level -Limit value





Ant.	Pol.		Hori	zontal					
Test	Mod	de:	GFS	SK Mode 24	80 MHz				
110.0) dBu	V/m							
100	A								
90									
80	++						FCC Part15	C - Above 1	G PK
70									
60		Į					FCC Part15	C - Above 1	G AV
50									
40	Hij	2 munum	an a	manner	Amanagement	norman	and the second second second		wahanaa
30									
20									
10.0 24	77.000	2487.00	2497.00	2507.00 2	517.00 (MHz)	2537.00	2547.00 2557	.00 2567.	00 2577.00
1		Froque	- Pov	Reading	Factor	Level	Limit	Margin	
N	0.	Freque (MH		(dBuV)	(dB/m)		(dBuV/m)	Margin (dB)	Detector
1		2483.		23.23	31.48	54.71	74.00	-19.29	peak
2	*	2483.	500	6.15	31.48	37.63	54.00	-16.37	AVG

Remarks:



Ant	. Po	I.		Vert	ical												
Test	t Mo	de:		GFS	SK M	ode 24	180 I	MHz									
100.) dB	uV/m															
90	Λ																
80	\mathbb{A}											_	FCC P	art15	C - Ab	ove 1	G PK
70																	
60	+	1										_	FCC P	art15	C - Ab	ove 1	GAV
50		¥							-			-			0 110		
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10							_		-								
0.0	177.00	0 2487.0	0 24	197.00	250)7.00 2	2517.0	0 (M	Hz)	25	37.00	2547	.00	2557	.00	2567.0)0 2577.00
1					I					I		1			T		
N	о.		quen //Hz)			ading BuV)		Facto dB/m			evel iV/m)	1	Lim BuV			rgin B)	Detector
1		248	33.50	0	2	1.80	3	31.48	5	53	.28		74.0	0	-20	.72	peak
2	*	248	33.50	0	5	5.59	3	31.48	}	37	.07		54.0	0	-16	.93	AVG
	actor	dB/m				actor (t value		n)+C	abl	e Fac	tor (dE	3)-F	re-a	impli	ifier I	acto	or

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nt. Po	I	Hori	zontal					
est Mo	de:	π/4-	DQPSK Mo	de 2402MH	z			
10.0 dB	uV/m		l l					
100								
30								
30						FCC Part15	C - Above 1	GPK
/0								
50								
50						FCC Part15	C- ₁ Above 1 X	GAV
40								
10	and the second secon	lowethnesenation	method and the second	men white men	alanta and and and	han manager and and and a second second	sense former with the se	and h
30								
20								
2305 30	0 2315.30	2325.30	2335.30 23	945.30 (MHz)	2365.30	2375.30 2385	5.30 2395	30 2405.
No.	Freque (MH		Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	2390.0	000	20.83	31.31	52.14	74.00	-21.86	peak
2 *	2390.0	000	6.00	31.31	37.31	54.00	-16.69	AVG
Remark			na Factor (c					



nt. Po	l.	Verti	Vertical											
est Mo	ode:	π/4-I	DQP	SK Mo	de 240	D2MH	Z							
00.0 dB	uV/m							1						
0														
														Λ
)									FCC	Part1	iC-A	bove 1	GF	ж
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.									FCC	Part1	i C1A X	bove 1	G /	<u> </u>
)														
I un	weather the way	Maria	mm	mont	romand	mm	Angen	warehold	mont	mmm	man	m	r.J	h
0														
0.0														
	0 2316.00 2	326.00	2336	.00 23	846.00	(MHz)	23	66.00	2376.00	238	6.00	2396.	00	2406.0
No.	Freque (MHz	-		ading BuV)		ctor /m)		evel uV/m)		nit V/m		argin dB)	D)etector
1	2390.0	00	21	.42	31	.31	52	2.73	74	.00	-2	1.27		peak
2 *	2390.0	00	4	.29	31	.31	35	5.60	54	.00	-1	8.40		AVG
emark Facto.	r (dB/m) =	Anten .evel -			dB/m)+	+Cable	e Fac	tor (dE	3)-Pre-	amp	lifier	Facto	or	

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Ant. Pol		Hori	zontal					
Test Mo	de:	π/4-	DQPSK Mo	de 2480M⊦	z			
110.0 dBu	V/m							
100								
90								
80						FCC Part15	C - Above 1	G PK
70		_						
60	1					FCC Part15	C - Above 1	G AV
50	×							
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20								
10.0 2477.000	2487.00 2	497.00	2507.00 25	17.00 (MHz)	2537.00	2547.00 2557	.00 2567.	00 2577.00
1							1	
No.	Frequer (MHz		Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	2483.5	00	21.40	31.48	52.88	74.00	-21.12	peak
2 *	2483.5	00	7.17	31.48	38.65	54.00	-15.35	AVG

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Remarks:



Ant. Pol.	Ve	ertical					
Test Mode:	: π/	4-DQPSK Mod	de 2480MH	Z			
100.0 dBuV/m	1						
90							
80					FCC Part15	C - Above 1	G PK
70							
60					FCC Part15	C - Above 1	G AV
50							
40	handnorman	when have a marked and the second second	and the solution of	and an and an and an and	www.www.www.	and and and and	www.whereas
30							
20							
10							
0.0 2477.000 248	87.00 2497.0	00 2507.00 251	17.00 (MHz)	2537.00 2	547.00 2557.	00 2567.0	0 2577.00
1							
No. F	Frequency (MHz)	(dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	2483.500	21.35	31.48	52.83	74.00	-21.17	peak
2 *	2483.500	7.32	31.48	38.80	54.00	-15.20	AVG

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Remarks:



Ant.	Pol.		Horiz	zonta	al									
Test	t Mod	le:	8-DF	PSK	Mode 2	402M	Hz							
110.([) dBu'	√/m												1
100													٨	_
90													-	-
80										FCCI	Part15	C - Above	1G PK	-
70														-
60														
50										FCC	^o art15	C -1Above X	1G AV	-
												2		
40	wheeler after	more an and the second s	Warnan	ka, wanaki	web represent	throughout	ndinumi	\~\$\$\$\$\$***\$\$\$\$\$\$	whenter	nerhelenser	www.	Anno Seathanna ann	¹¹ 464	1
30														-
20										_				-
10.0 23	05.300	2315.30 2	325.30	233	35.30 23	345.30	(MHz)	236	5.30	2375.30	2385	.30 2395	.30 24	05.30
1														
N	lo.	Freque (MHz			ading BuV)	Fac (dB/			vel V/m)	Lim (dBu\		Margin (dB)	Detec	tor
	1	2390.0	00	2	1.58	31.	31	52	.89	74.0	00	-21.11	pea	k
2	2 *	2390.0	00	7	7.43	31.	31	38	.74	54.0	00	-15.26	AV	G
													-	<u> </u>
1.Fa		: (dB/m) = /			•	dB/m)+	Cable	e Fact	tor (dE	s)-Pre-a	ampli	fier Fact	or	

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2.Margin value = Level -Limit value



16.00
or
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nt. Po	l.	Hori	zontal					
est Mo	de:	8-DF	PSK Mode 2	480MHz				
10.0 dB	ıV/m		1				1	
00								
0								
o						500 D	0 41 1	
o 🕂						FCC Part15	C - Above 1	GPK
0	1					FCC Part15	C - Above 1	GAV
0	×							
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		and and a second .	Minde Children and a surfa	energy is an average of the second	and and advantages on a	alandrooffing in addit you is a	and and also been	(Co. C
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0.0	0 2487.00	2497.00	2507.00 25	17.00 (MHz)	2537.00	2547.00 2557.	.00 2567.	00 2577.0
No.	Freque (MHz		Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	2483.5	00	20.96	31.48	52.44	74.00	-21.56	peak
2 *	2483.5	00	7.89	31.48	39.37	54.00	-14.63	AVG



Ant	. Pol	•		Verti	cal														
Tes	t Mo	de:		8-DF	PSK	Mod	le 2	480N	/Hz										
100.	0 dBu	V/m																	
90	Λ																		
80	\square												F	CC Pr	urt15	C - Above	e 1G	РК	
70																			
60		Ļ											F	CC Pa	urt15	C - Abov	e 1G	AV	
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20																			
10																			
0.0																			
	177.000	2487.	00 24	97.00	250	7.00	25	17.00	(MI	tz)	253	7.00	2547	.00	2557	.00 256	67.00	257	7.00
		Fre	quen	CV	Re	adin		Fa	cto			vel		Limi	+	Margi	n		
N	l o.		MHz)			BuV	-		8/m)			vei iV/m)						Detect	or
	1	24	83.50	0	2	2.17	'	31	.48		53	.65		74.0	D	-20.3	5	peal	<
2	2 *	24	83.50	0	6	6.67		31	.48		38	.15	ł	54.0	0	-15.8	5	AVG	3
	1									1									(

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Remarks:

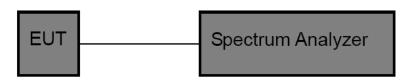


3.4. Band edge and Spurious Emissions (Conducted)

<u>Limit</u>

FCC CFR Title 47 Part 15 Subpart C Section 15.247 (d):In any 100 kHz 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 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement.

Test Configuration



Test Procedure

- 1. The transmitter output was connected to the spectrum analyzer through an attenuator, the path loss was compensated to the results for each measurement.
- 2. Set to the maximum power setting and enable the EUT transmit continuously
- 3. Use the following spectrum analyzer settings: RBW = 100 kHz, VBW ≥ RBW, scan up through 10th harmonic.
- Sweep = auto, Detector function = peak, Trace = max hold
- 4. Measure and record the results in the test report.

Test Mode

Please refer to the clause 2.4.

Test Results

(1) Band edge Conducted Test

Test Mode	Frequency[MHz]	Ref Level[dBm]	Result[dBm]	Limit[dBm]	Verdict
	2402	10.73	-55.22	≤-9.28	PASS
GFSK	2480	10.43	-55.66	≤-9.57	PASS
Gran	Hop_2402	10.28	-56.86	≤-9.73	PASS
	Hop_2480	10.47	-57.15	≤-9.53	PASS
	2402	10.59	-42.50	≤-9.41	PASS
	2480	10.29	-56.40	≤-9.71	PASS
π/4-DQPSK	Hop_2402	7.17	-46.91	≤-12.83	PASS
	Hop_2480	5.24	-57.28	≤-14.76	PASS
	2402	10.90	-43.06	≤-9.10	PASS
8-DPSK	2480	9.69	-55.93	≤-10.32	PASS
0-DF3N	Hop_2402	6.59	-43.79	≤-13.41	PASS
	Hop_2480	9.40	-57.31	≤-10.60	PASS





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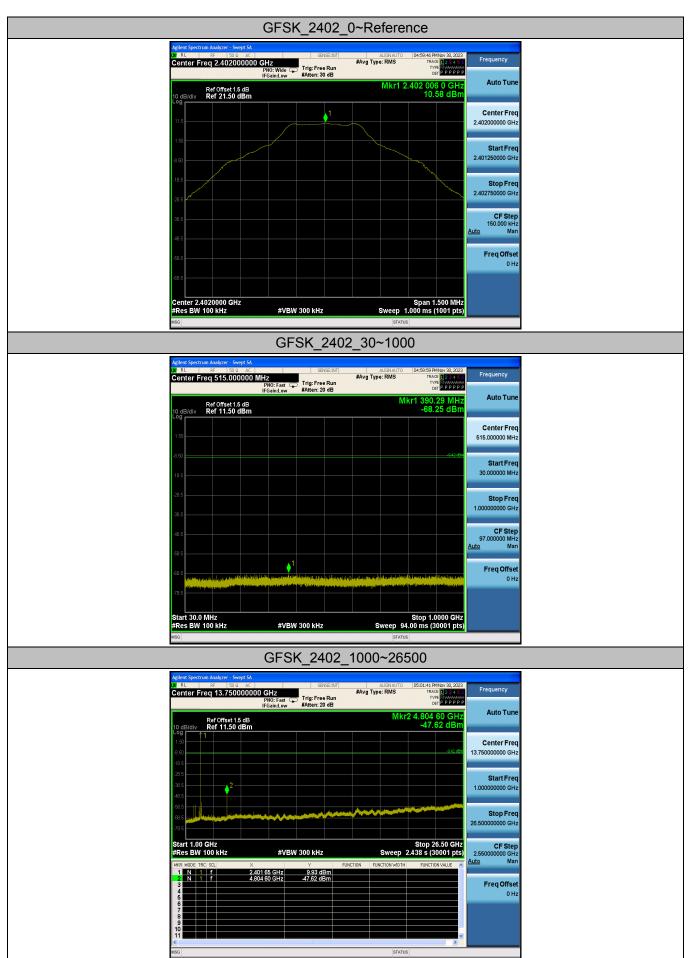




(2) Conducted Spurious Emissions Test

Test Mode	Freq(MHz)	Freq Range [MHz]	Ref Level [dBm]	Result [dBm]	Limit [dBm]	Verdict
		Reference	10.58	10.58		PASS
	2402	30~1000	10.58	-68.25	≤-9.42	PASS
	2402	1000~6000	10.58	-47.62	≤-9.42	PASS
		6000~26500	10.75	10.75		PASS
		Reference	10.75	-68.37	≤-9.25	PASS
GFSK	2441	30~1000	10.75	-42.19	≤-9.25	PASS
GFSK	2441	1000~6000	10.19	10.19		PASS
		6000~26500	10.19	-68.07	≤-9.81	PASS
		Reference	10.19	-51.33	≤-9.81	PASS
	2490	30~1000	10.72	10.72		PASS
	2480	1000~6000	10.72	-67.49	≤-9.28	PASS
		6000~26500	10.72	-45.05	≤-9.28	PASS
		Reference	10.55	10.55		PASS
	2402	30~1000	10.55	-67.56	≤-9.45	PASS
	2402	1000~6000	10.55	-50.43	≤-9.45	PASS
		6000~26500	10.10	10.10		PASS
		Reference	10.10	-68.35	≤-9.9	PASS
π/4-DQPSK	2441	30~1000	10.10	-51.52	≤-9.9	PASS
11/4-DQF3K	2441	1000~6000	10.68	10.68		PASS
		6000~26500	10.68	-68.3	≤-9.32	PASS
		Reference	10.68	-49.96	≤-9.32	PASS
	2480	30~1000	10.43	10.43		PASS
	2400	1000~6000	10.43	-67.87	≤-9.57	PASS
		6000~26500	10.43	-48.36	≤-9.57	PASS
		Reference	9.89	9.89		PASS
	2402	30~1000	9.89	-68.53	≤-10.11	PASS
	2402	1000~6000	9.89	-54.49	≤-10.11	PASS
		6000~26500	10.58	10.58		PASS
		Reference	10.58	-68.25	≤-9.42	PASS
8-DPSK	2441	30~1000	10.58	-47.62	≤-9.42	PASS
0-0530	2441	1000~6000	10.75	10.75		PASS
		6000~26500	10.75	-68.37	≤-9.25	PASS
		Reference	10.75	-42.19	≤-9.25	PASS
	2480	30~1000	10.19	10.19		PASS
	2 4 00	1000~6000	10.19	-68.07	≤-9.81	PASS
		6000~26500	10.19	-51.33	≤-9.81	PASS

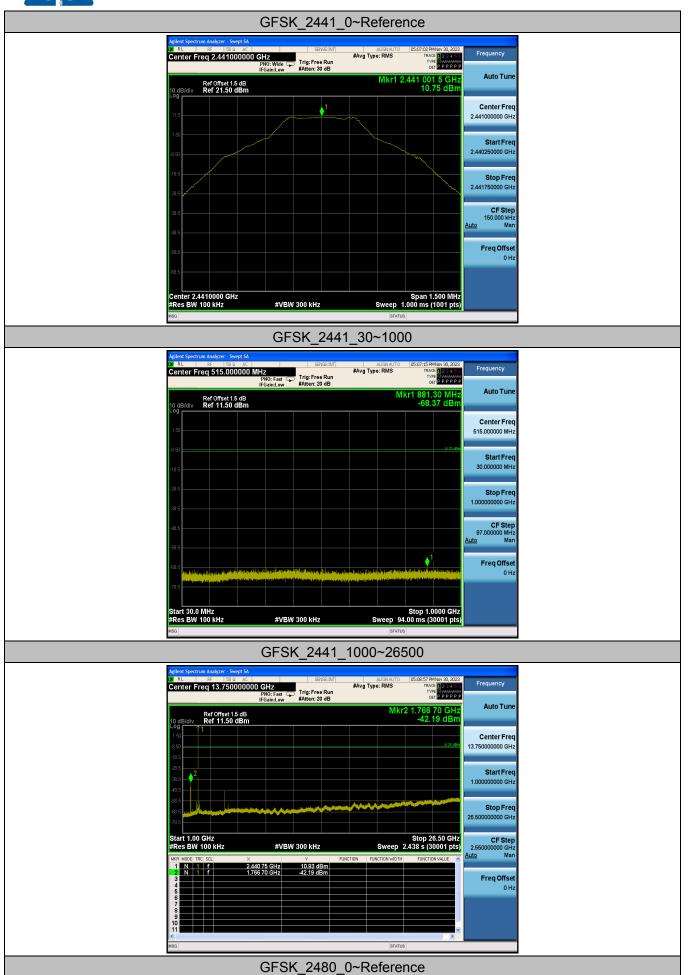






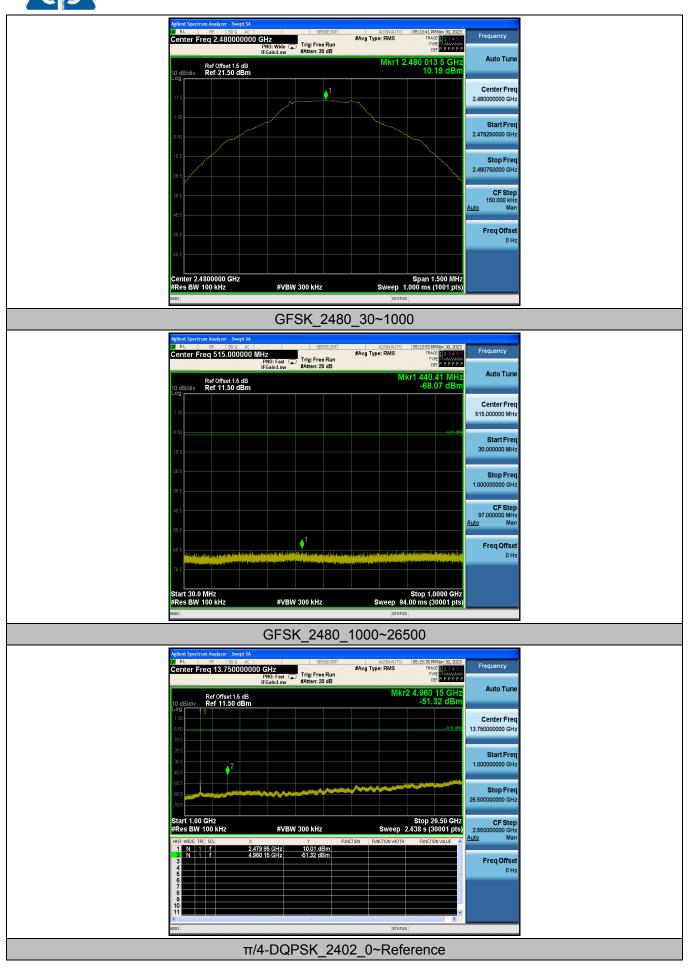
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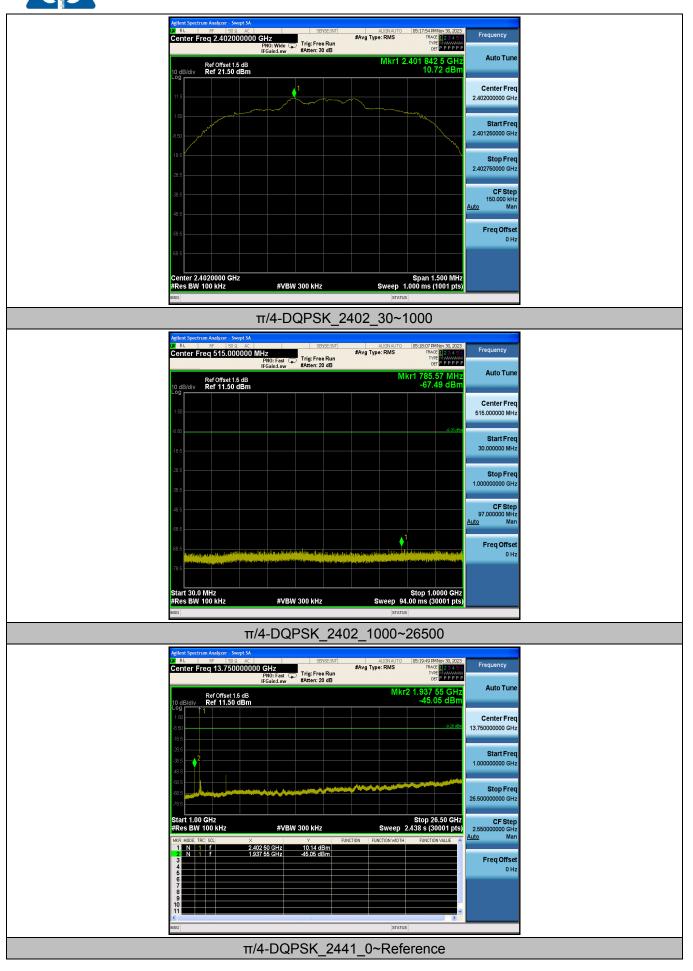


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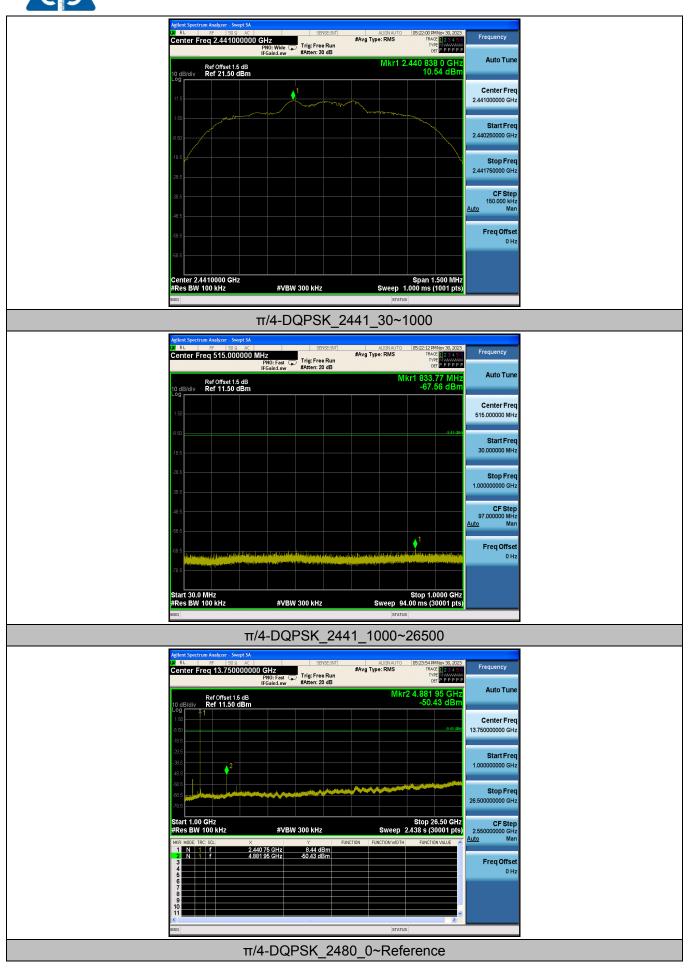




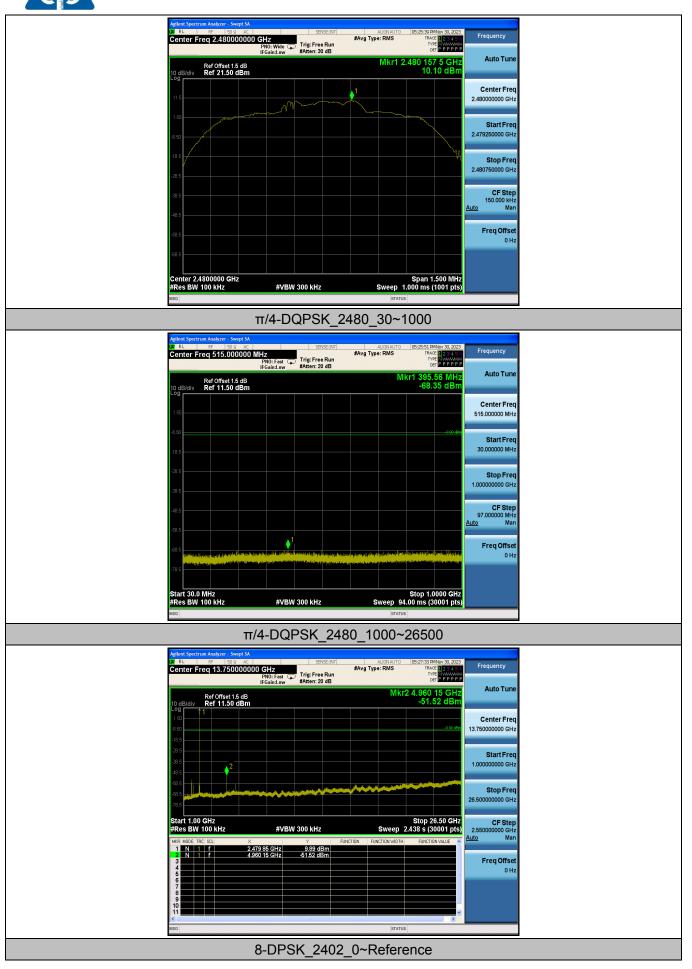






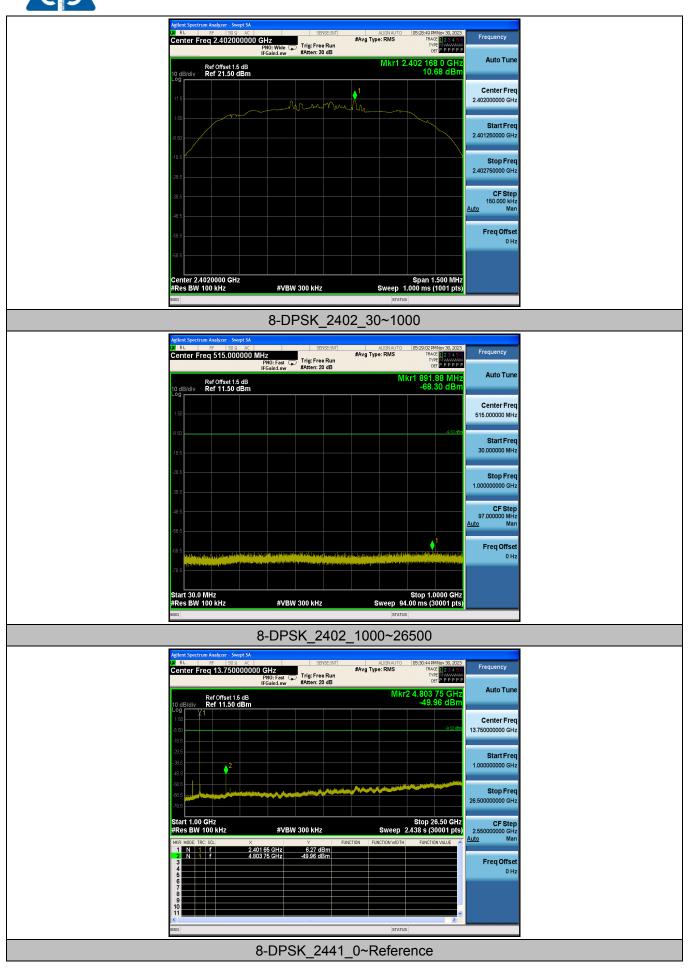






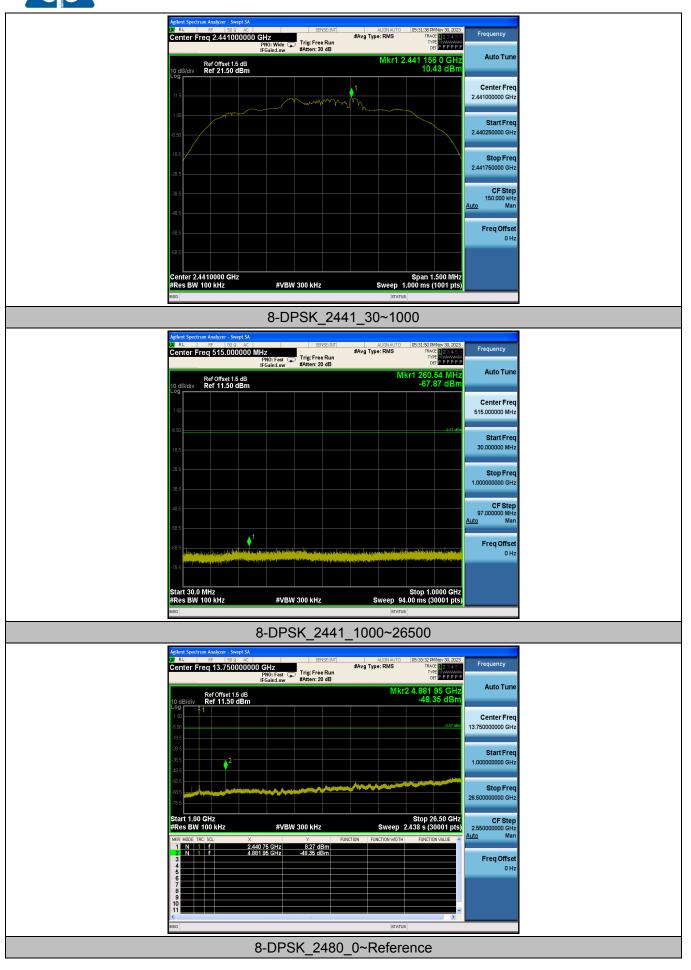








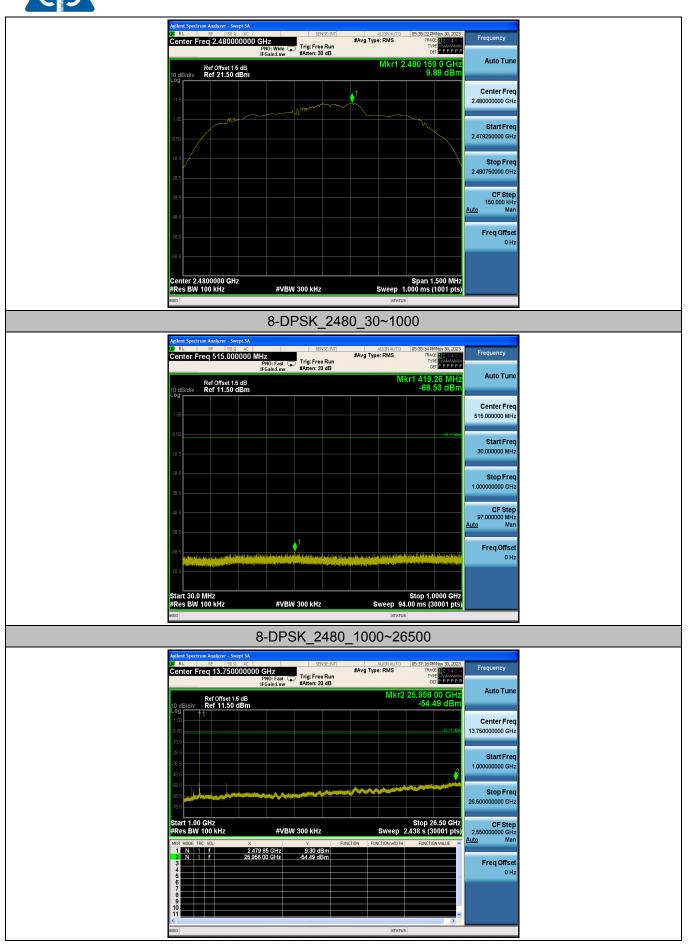








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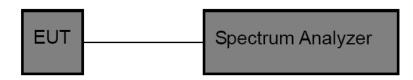


3.5. 20DB Bandwidth

<u>Limit</u>

N/A

Test Configuration



Test Procedure

- 5. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram above.
- 6. OCB and 20dB Spectrum Setting:
 - (1) Set RBW = $1\% \sim 5\%$ occupied bandwidth.
 - (2) Set the video bandwidth (VBW) \geq 3 RBW.
 - (3) Detector = Peak.
 - (4) Trace mode = Max hold.
 - (5) Sweep = Auto couple.

Note: The EUT was set to continuously transmitting in each mode and low, Middle and high channel for the test.

Test Mode

Please refer to the clause 2.4.

Test Results

Test Mode	Frequency[MHz]	20db EBW[MHz]	20dB Bandwidth *2/3 (kHz)	Verdict
	2402	0.924	616	PASS
GFSK	2441	0.909	606	PASS
	2480	0.849	566	PASS
	2402	1.281	854	PASS
π/4-DQPSK	2441	1.275	850	PASS
	2480	1.275	850	PASS
	2402	1.305	870	PASS
8-DPSK	2441	1.275	850	PASS
	2480	1.296	864	PASS







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8-DPSK_2402

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3.6. Channel Separation

<u>Limit</u>

FCC CFR Title 47 Part 15 Subpart C Section 15.247 (a)(1)/ RSS-247 5.1 b :

Test Item	Limit	Frequency Range(MHz)
Channel Separation	>25KHz or >two-thirds of the 20 dB bandwidth Which is greater	2400~2483.5

Test Configuration

EUT	Spectrum Analyzer

Test Procedure

7. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram above.

8. Spectrum Setting:

(1) Set RBW = Set the RBW to less than 30% of the channel spacing or the 20 dB bandwidth,

whichever is smaller.

- (2) Set the video bandwidth (VBW) \ge 3 RBW.
- (3) Detector = Peak.
- (4) Trace mode = Max hold.
- (5) Sweep = Auto couple.

Test Mode

Please refer to the clause 2.4.

Test Results

Test Mode	Frequency[MHz]	Result[MHz]	Limit[kHz]	Verdict
GFSK	Hop_2441	1.018	>606	PASS
π/4-DQPSK	Hop_2441	1.322	>850	PASS
8-DPSK	Hop_2441	1.008	>850	PASS



GFSK_Hop_2441								
		HZ PNO: Fast Gain:Low #Atten: 40 dB	#Avg Type: RMS	05:40:17 PMNov 30, 2023 TRACE 1 2 3 4 5 6 TYPE MAXWANN DET P P P P P	Frequency Auto Tune			
	Ref Offset 1.5 dB 10 dB/div Ref 30.00 dBm 20.0			r2 1.018 MHz -0.01 dB	Center Freq 2.441500000 GHz			
	100		2Δ1		Start Freq 2.440500000 GHz			
	-10.0				Stop Freq 2.442500000 GHz			
	-40.0			A	CF Step 200.000 KHz <u>ito</u> Man Freq Offset			
	5000		Sto	p 2.442500 GHz	0 Hz			
	#Res BW 300 kHz	#VBW 300 kHz π/4-DQPSK_	Sweep 1.00	00 ms (1001 pts)				
	Agilent Spectrum Analyzer - Swept SA Dr. RL BERGER - S0 G AC Center Freq 2.441500000 G			05:48:37 PMNov 30, 2023 TRACE 2 2 4 5 1 TYPE DET P.P.P.P.P	Frequency			
	Ref Offset 1.5 dB 10 dB/div Ref 30.00 dBm	Gain:Low #Atten: 40 dB		r2 1.322 MHz 0.08 dB	Auto Tune Center Freg			
	200 100		present i	2 <u>0</u> 1	2.441500000 GHz Start Freq			
	.10.0				2.440500000 GHz Stop Freq 2.442500000 GHz			
	-200			A	CF Step 200.000 kHz <u>tto</u> Man			
	-50.0				Freq Offset 0 Hz			
	Start 2.440500 GHz #Res BW 300 kHz	#VBW 300 kHz	Sto Sweep 1.00 STATUS	p 2.442500 GHz 00 ms (1001 pts)				



LXI RL	Im Analyzer - Swept SA RF 50 Ω AC eq 2.441500000 C	DNO East C Tri	SENSE:INT g: Free Run ten: 40 dB	ALD #Avg Type: F	RMS	05:55:29 PMNov 30, 20 TRACE 1 2 3 4 TYPE MWWW DET P P P P	Frequency
10 dB/div	Ref Offset 1.5 dB Ref 30.00 dBm				ΔM	kr2 1.008 MH 0.06 d	Z Auto Tune B
20.0						▲2∆1	Center Freq 2.441500000 GHz
10.0 			~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	مىرائىل ك ^{ىر}			Start Freq 2.440500000 GHz
-10.0							Stop Freq 2.442500000 GHz
-30.0							CF Step 200.000 kHz <u>Auto</u> Man
-50.0							Freq Offset 0 Hz
Start 2.440	0500 CH7					top 2 442500 G	
#Res BW	300 kHz	#VBW 300	kHz	Sv	veep 1.0	top 2.442500 Gl 000 ms (1001 p	s)



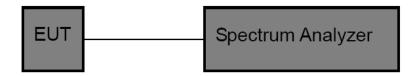
3.7. Number of Hopping Channel

<u>Limit</u>

FCC CFR Title 47 Part 15 Subpart C Section 15.247 (a)(iii)/ RSS-247 5.1 d:

Section	Test Item	Limit
15.247 (a)(iii)/ RSS-247 5.1 d:	Number of Hopping Channel	>15

Test Configuration



Test Procedure

1. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram above.

- 2. Spectrum Setting:
 - (1) Peak Detector: RBW=100 kHz, VBW≥RBW, Sweep time= Auto.

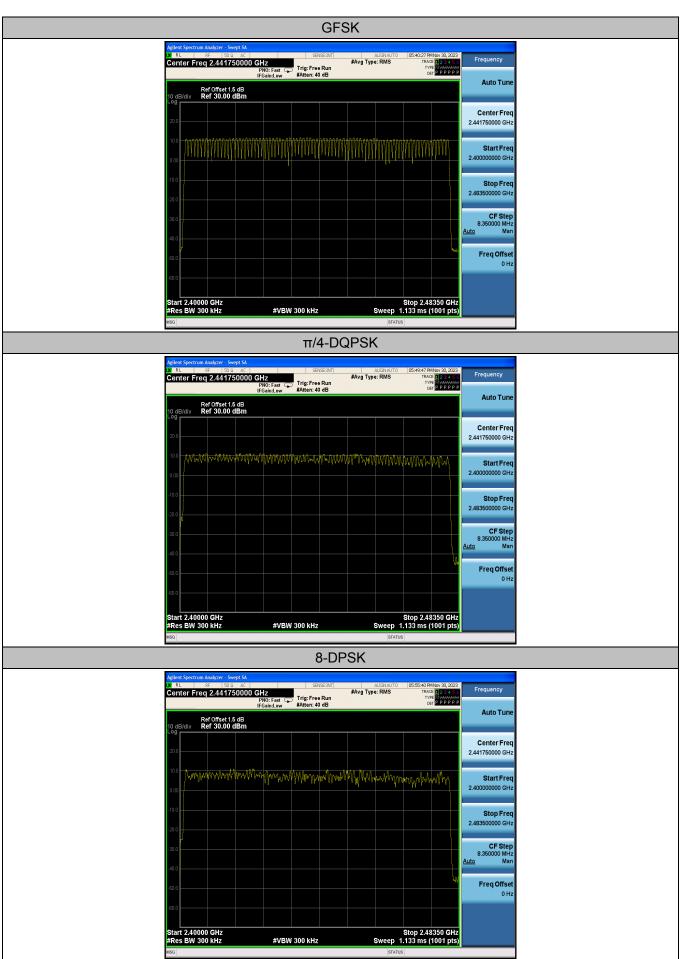
<u>Test Mode</u>

Please refer to the clause 2.4.

Test Result

Test Mode	Freq(MHz)	Result[Num]	Limit[Num]	Verdict
GFSK	Нор	79	≥15	PASS
π/4-DQPSK	Нор	79	≥15	PASS
8-DPSK	Нор	79	≥15	PASS







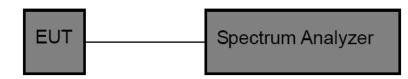


3.8. Dwell Time

<u>Limit</u>

Section	Test Item	Limit
15.247(a)(iii)/ RSS-247 5.1 d	Average Time of Occupancy	0.4 sec

Test Configuration



Test Procedure

- 1. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram above.
- 2. Spectrum Setting:
 - (1) Spectrum Setting: RBW=1MHz, VBW≥RBW.
 - (2) Use video trigger with the trigger level set to enable triggering only on full pulses.
 - (3) Sweep Time is more than once pulse time.
- (4) Set the center frequency on any frequency would be measure and set the frequency span to zero.
 - (5) Measure the maximum time duration of one single pulse.
 - (6) Set the EUT for packet transmitting.

Test Mode

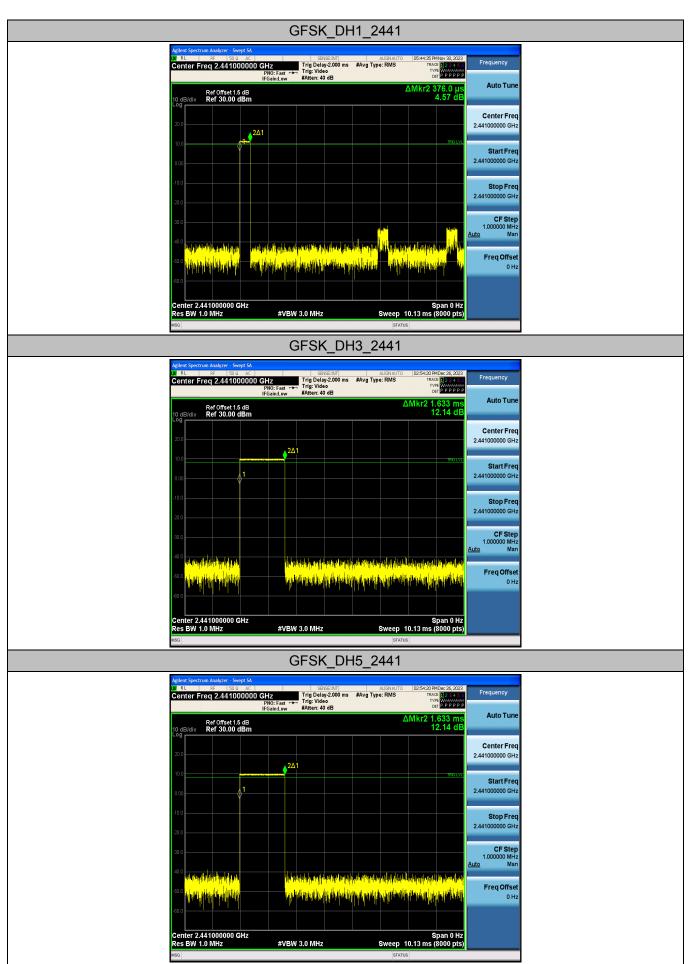
Please refer to the clause 2.4.



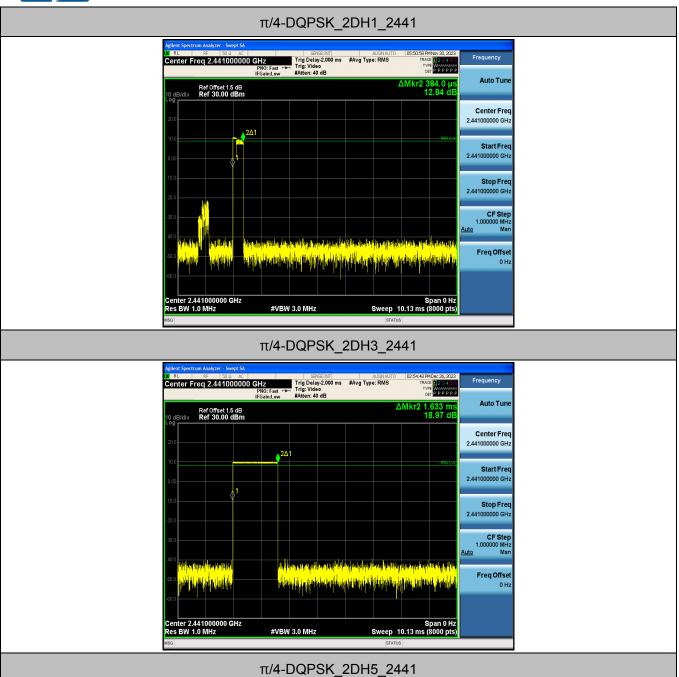
<u>Test Result</u>

Modulation type	Channel	Frequency [MHz]	Pulse Time (ms)	Total of Dwell (ms)	Period Time (ms)	Limit (Second)	Result
	DH1	2441	0.376	120.320	31.60		
GFSK	DH3	2441	1.633	261.280	31.60	≤ 0.40	Pass
	DH5	2441	2.880	307.200	31.60		
	2DH1	2441	0.384	122.880	31.60		
π/4-DQPSK	2DH3	2441	1.633	261.280	31.60	≤ 0.40	Pass
	2DH5	2441	2.883	307.520	31.60		
	3DH1	2441	0.385	123.200	31.60		
8-DPSK	3DH3	2441	1.635	261.600	31.60	≤ 0.40	Pass
	3DH5	2441	2.887	307.947	31.60		

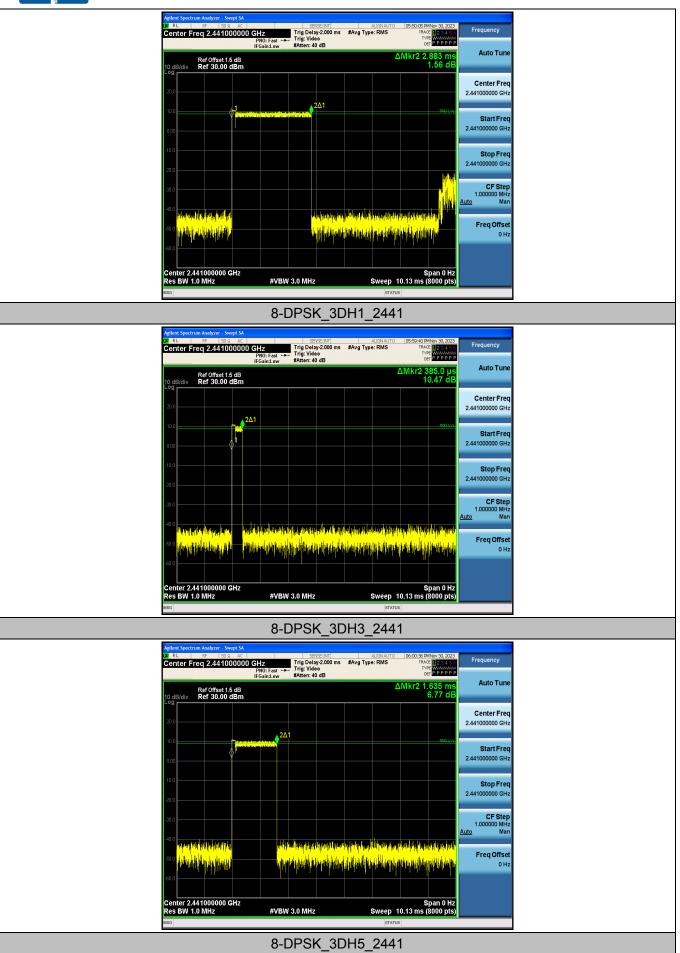
Note: 1DH1/2DH1/3DH1Total of Dwell= Pulse Time*(1600/2)*31.6/79 1DH3/2DH3/3DH3 Total of Dwell= Pulse Time*(1600/4)*31.6/79 1DH5/2DH5/3DH5 Total of Dwell= Pulse Time*(1600/6)*31.6/79















LXI RL	rum Analyzer - Swept SA RF 50 Ω AC	SEN	SE:INT	ALIGNAUTO	05:55:57 PMNo	w 30, 2023	Frequency
Center F	req 2.441000000 G	Hz Trig Delay PNO: Fast ↔ Trig: Vide FGain:Low #Atten: 40	/-2.000 ms #Avg⊺ o dB	ype: RMS	TRACE TYPE	23456 V////////////////////////////////////	Frequency
		Gam.cow written. 40	40	Δ	Mkr2 2.88	87 ms	Auto Tune
10 dB/div Log	Ref Offset 1.5 dB Ref 30.00 dBm				12.3	58 dB	
							Center Freq
20.0			Δ1				2.441000000 GHz
10.0						TRIOLVL	Otaut Europ
0.00							Start Freq 2.441000000 GHz
0.00	¢'						
-10.0							Stop Freq
-20.0							2.441000000 GHz
-30.0							CF Step 1.000000 MHz
-40.0							<u>Auto</u> Man
Man Ma	<mark>Millin)Nudebr</mark>			<mark>na na mana</mark>	<mark>ha lana salahisak</mark>	<u>Ahiphin</u>	Freq Offset
-50.0 18 19 1	inder and the second		<u>A Angeli A Namp</u> al	White intracit	ek <mark>a kasima</mark> di K	lydydini.	0 Hz
-60.0	a or of who	1	and to re-		. P. G. P.	1.16	
	441000000 GHz				Spa	in 0 Hz	
Res BW 1	I.U WHZ	#VBW 3.0 MHz			0.13 ms (80	ou pts)	
MSG				STATUS		_	



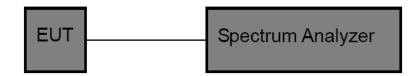
3.9. Peak Output Power

<u>Limit</u>

FCC CFR Title 47 Part 15 Subpart C Section 15.247 (b)(1) / RSS-247 5.4 b:

Test Item	Limit	Frequency Range(MHz)
Maximum Conducted Peak Output Power	Hopping Channels>75 Pow- er<1W(30dBm) Other <125mW(21dBm)	2400~2483.5
E.I.R.P	4 Watt or 36dBm	2400~2483.5

Test Configuration



Test Procedure

1. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram above.

- 2. Spectrum Setting:
 - (1) Set RBW> 20DB Bandwidth.
 - (2) Set the video bandwidth (VBW) \ge RBW.
 - (3) Detector = Peak.
 - (4) Trace mode = Max hold.
 - (5) Sweep = Auto couple.

Test Mode

Please refer to the clause 2.4.

<u>Test Result</u>

Test Mode	Frequency[MHz]	Result[dBm]	Limit[dBm]	Verdict
	2402	11.25	<=30	PASS
GFSK	2441	11.46	<=30	PASS
	2480	10.85	<=30	PASS
	2402	11.30	<=30	PASS
π/4-DQPSK	2441	10.77	<=30	PASS
	2480	10.04	<=30	PASS
	2402	11.26	<=30	PASS
8-DPSK	2441	10.71	<=30	PASS
	2480	10.04	<=30	PASS

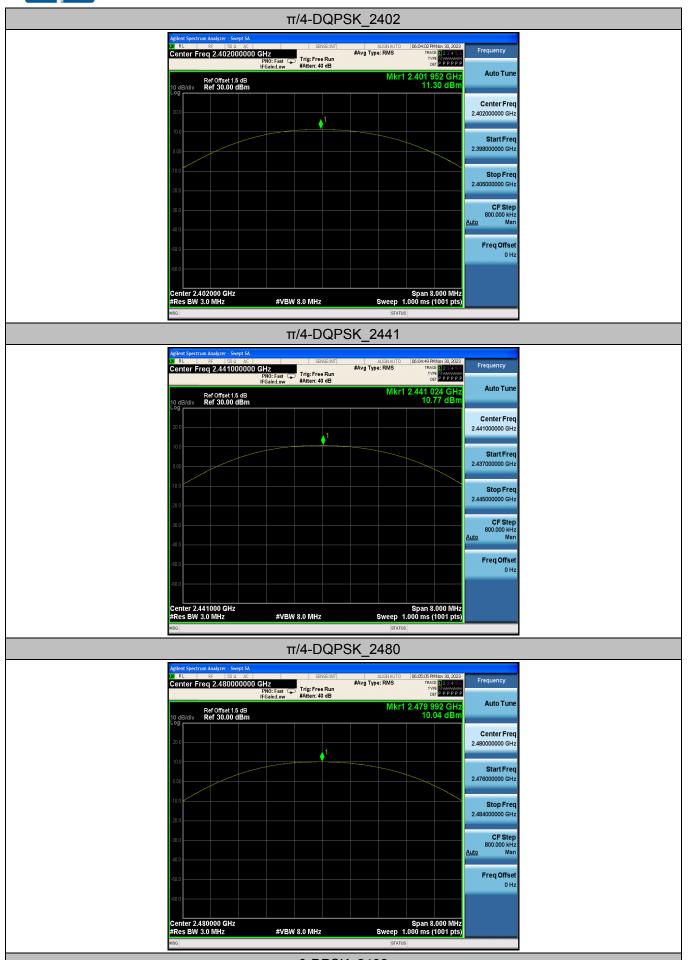


	OFOK	2402			
	GFSK_	2402			
Agilent Spectrum Analyzer - Swept SA A RL RF 50 Q AC Center Freq 2.402000000 GHz PH0: Fas	sense:init Trig: Free Run # #Atten: 40 dB	ALIGNAUTO #Avg Type: RMS	06:01:50 PMNov 30, 2023 TRACE 1 2 3 4 5 6 TYPE MUNICIPAL P P P P P	Frequency	
Ref Offset 1.5 dB 10 dB/div Ref 30.00 dBm	w #Atten: 40 dB	Mkr1 :	2.401 888 GHz 11.24 dBm	Auto Tune	
20.0				Center Freq 2.402000000 GHz	
10.0				Start Freq 2.398000000 GHz	
-10.0				Stop Freq	
-20.0				2.406000000 GHz CF Step	
-40.0				800.000 kHz <u>Auto</u> Man	
-50.0				Freq Offset 0 Hz	
Center 2.402000 GHz			Span 8.000 MHz		
	/BW 8.0 MHz	Sweep 1.0 STATUS	Span 8.000 MHz 000 ms (1001 pts)		
Agilent Spectrum Analyzer - Swept SA	GFSK_	2441			
Agnetic spectrum Analyzer - swept SA Off RL RF 50 Ω AC Center Freq 2.441000000 GHz PR0: Fas IFGain:Lo	sense:INT Trig: Free Run W #Atten: 40 dB	ALIGNAUTO #Avg Type: RMS	06:03:02 PMNov 30, 2023 TRACE 1 2 3 4 5 6 TYPE MWWWWW DET P P P P P	Frequency	
Ref Offset 1.5 dB 10 dB/div Ref 30.00 dBm		Mkr1 :	2.441 040 GHz 11.46 dBm	Auto Tune	
20.0	1			Center Freq 2.441000000 GHz	
0.00				Start Freq 2.437000000 GHz	
-10.0				Stop Freq 2.44500000 GHz	
-20.0				CF Step 800.000 kHz	
-40.0				<u>Auto</u> Man	
-60.0				Freq Offset 0 Hz	
Center 2.441000 GHz #Res BW 3.0 MHz #\	/BW 8.0 MHz	Sweep 1.	Span 8.000 MHz 000 ms (1001 pts)		
MSG		STATUS			
Agilent Spectrum Analyzer - Swept SA	GFSK_				
Center Freq 2.480000000 GHz PN0: Fas IFGain:Lor	sense:INT Trig: Free Run # #Atten: 40 dB	#Avg Type: RMS	06:03:39 PMNov 30, 2023 TRACE 1 2 3 4 5 6 TYPE MWWWW DET P P P P P	Frequency Auto Tune	
Ref Offset 1.5 dB 10 dB/div Ref 30.00 dBm		Mkr1	2.479 920 GHz 10.85 dBm		
20.0	↓ ¹			Center Freq 2.480000000 GHz	
0.00				Start Freq 2.476000000 GHz	
-10.0				Stop Freq 2.484000000 GHz	
-30.0				CF Step 800.000 kHz	
-40.0				<u>Auto</u> Man Freq Offset	
-60.0				0 Hz	
Center 2.480000 GHz #Res BW 3.0 MHz #\	VBW 8.0 MHz		Span 8.000 MHz 000 ms (1001 pts)		
MSG		STATUS			



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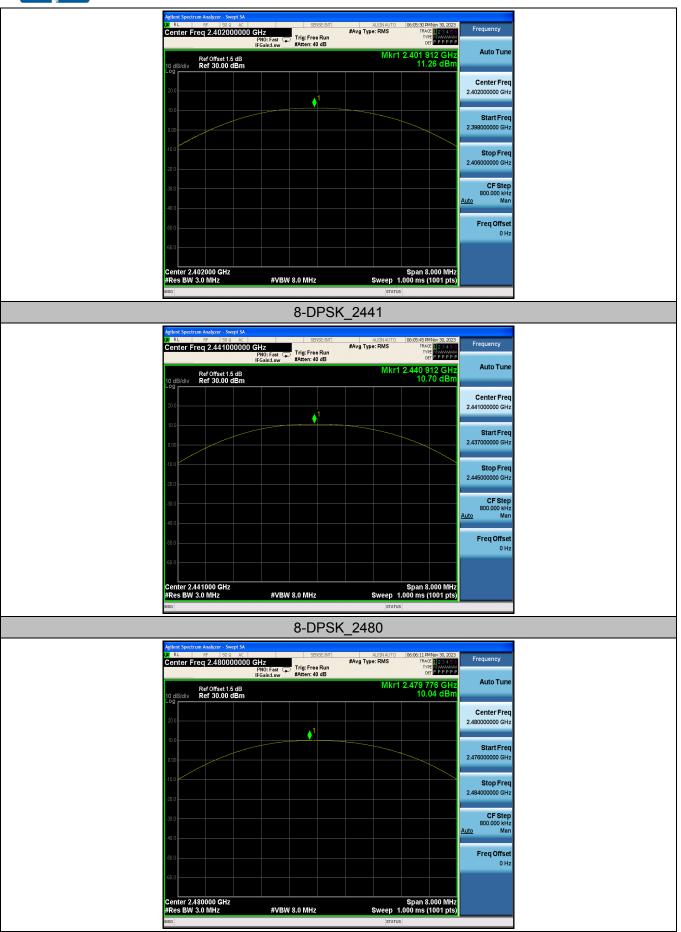
8-DPSK_2402

CTC Laboratories, Inc.



EN





CTC Laboratories, Inc. 1-2/F., Building 2, Jiaquan Building, Guanlan High-Tech Park, Shenzhen, Guangdong, China Tel.: (86)755-27521059 下at: (86)755-27521059 下at: (86)755-27521011 中国国家认证认可监督管理委员会 Fax: (86)755-27521011 Fax: (86)755-27521011 For anti-fake verification, please visit the official website of Certification and Accreditation Administration of the People's Republic of China : <u>yz.cnca.cn</u>

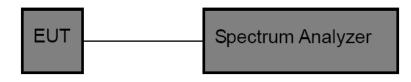


3.10. Duty Cycle

Limit

None, for report purposes only.

Test Configuration



Test Procedure

- 1. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram above.
- 2. The EUT was directly connected to the Spectrum Analyzer and antenna output port as show in the block diagram above. The measurement according to section 10.2 of KDB 558074 D01 DTS Meas Guidance v05r02.

Spectrum Setting: 3.

Set analyzer center frequency to test channel center frequency. Set the span to 0Hz Set the RBW to 10MHz Set the VBW to 10MHz Detector: Peak Sweep time: Auto

Allow trace to fully stabilize. Then use the peak marker function to determine the maximum amplitude level.

Test Mode

Please refer to the clause 2.4.

Test Result

Test Mode	Frequency [MHz]	Transmission Duration [ms]	Transmission Period [ms]	Duty Cycle [%]	1/T Minimum VBW (kHz)	Final setting For VBW (kHz)
	2402	2.89	3.75	77.07	0.35	1
GFSK	2441	2.89	3.75	77.07	0.35	1
	2480	2.89	3.75	77.07	0.35	1
	2402	1.52	3.75	40.53	0.66	1
π/4-DQPSK	2441	1.53	3.75	40.80	0.65	1
	2480	1.52	3.75	40.53	0.66	1
	2402	2.88	3.74	77.01	0.35	1
8-DPSK	2441	2.89	3.76	76.86	0.35	1
	2480	2.89	3.75	77.07	0.35	1











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3.11. Antenna requirement

Requirement

FCC CFR Title 47 Part 15 Subpart C Section 15.203:

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 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.

FCC CFR Title 47 Part 15 Subpart C Section 15.247(c) (1)(i):

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

<u>Test Result</u>

The directional gain of the antenna less than 6dBi, please refer to the EUT internal photographs antenna photo.