

FCC Radio Test Report

FCC ID: 2BKM7-K5

The report con	cerns:	Original	Grant

Report Reference No.....: 24EFSS12025 10511

Date Sample(s) Received.....: 2024-12-10

Date of Tested...... From 2024-12-11 to 2025-01-07

Date of issue..... 2025-02-18

Testing Laboratory DongGuanShuoXin Electronic Technology Co., Ltd.

Address Zone A, 1F, No. 6, XinGang Road YuanGang Street,

XinAn District, ChangAn Town, DongGuan City,

GuangDong, China

Applicant's name Gibson, Inc.

USA 37203

Equipment...... PROFESSIONAL MONITORING SYSTEM

Trade Mark:

(5 7 5 7 1

Model: K5

Ratings: I/P: 100-240V~ 50/60Hz 75W MAX

Test Engineer: Jelene Ore Fang

Jelena OuYang

Responsible Engineer:

Leo Cher

Authorized Signatory: 5mm Wom

Smile Wang



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1 TEST REPORT DECLARE

Applicant for FCC	Gibson, Inc.
Address for FCC	209 10th Avenue South, Suite 460, Nashville, TN USA 37203
Manufacturer	Gibson, Inc.
Address	209 10th Avenue South, Suite 460, Nashville, TN USA 37203
Factory	EVERVICTORY ELECTRONIC COMPANY LIMITED
Address	Chu Chi Management District, Hu Men Town, Dong-Guan City,
71441000	Guang-Dong Province, P.R. China
Equipment	PROFESSIONAL MONITORING SYSTEM
Model No.	K5
Trade Mark	KRK
Standard	FCC Part15, Subpart C (15.247) ANSI C63.10-2013

We Declare:

The equipment described above is tested by DongGuanShuoXin Electronic Technology Co., Ltd(ATT). and in the configuration tested the equipment complied with the standards specified above. The test results are contained in this test report and DongGuanShuoXin Electronic Technology Co., Ltd.(ATT) is assumed of full responsibility for the accuracy and completeness of these tests.

ATT is not responsible for the sampling stage, so the results only apply to the sample as received.

ATT's reports apply only to the specific samples tested under conditions. It is manufacture's responsibility to ensure that additional production units of this model are manufactured with the identical electrical and mechanical components. ATT shall have no liability for any declarations, inferences or generalizations drawn by the client or others from ATT issued reports.



2 SUMMARY OF TEST RESULTS

The EUT have been tested according to the applicable standards as referenced below:

Standard(s) Section	Test Item	Judgment	Remark
15.207	AC Power Line Conducted Emissions	PASS	
15.247(d) 15.205(a) 15.209(a)	Radiated Emission	PASS	
15.247(a)(1)(iii)	Number of Hopping Frequency	PASS	
15.247(a)(1)(iii)	Average Time Of Occupancy	PASS	
15.247(a)(1)	Hopping Channel Separation	PASS	
15.247(a)(1)	Bandwidth	PASS	
15.247(a)(1)	Maximum Output Power	PASS	
15.247(d)	Conducted Spurious Emission	PASS	
15.203	Antenna Requirement	PASS	Note(2)

Note:

- (1) "N/A" denotes test is not applicable in this test report
- (2) The device what use a permanently attached antenna were considered sufficient to comply with the provisions of 15.203.



2.1 MEASUREMENT UNCERTAINTY

Test Item	Uncertainty
Uncertainty for Conduction emission test (9kHz-150kHz)	3.7 dB
Uncertainty for Conduction emission test (150kHz-30MHz)	3.3 dB
Upcortainty for Padiation Emission tost (20MHz 200MHz)	4.60 dB (Polarize: V)
Uncertainty for Radiation Emission test (30MHz-200MHz)	4.60 dB (Polarize: H)
Uppertainty for Dadiction Emission toot (200MUz 40Uz)	6.10 dB (Polarize: V)
Uncertainty for Radiation Emission test (200MHz-1GHz)	5.08 dB (Polarize: H)
Uncontainty for Dadiation Emission took (4CL) - CCL)	5.01 dB (Polarize: V)
Uncertainty for Radiation Emission test (1GHz-6GHz)	5.01 dB (Polarize: H)
Uncertainty for Radiation Emission test (CCUz 19CUz)	5.26 dB (Polarize: V)
Uncertainty for Radiation Emission test (6GHz-18GHz)	5.26 dB (Polarize: H)
Uppertainty for Radiation Emission toot (1904-1004-1	5.06 dB (Polarize: V)
Uncertainty for Radiation Emission test (18GHz-40GHz)	5.06 dB (Polarize: H)
Uncertainty for radio frequency	±0.048kHz
Uncertainty for conducted RF Power	±0.32dB

Note:

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

Test Facility:

The Test site used by DongGuanShuoXin Electronic Technology Co., Ltd. to collect test data is located on the Zone A, 1F, No. 6, XinGang Road YuanGang Street, XinAn District, ChangAn Town, DongGuan City, GuangDong, China

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

Item	Registration No.	Expiration Date
CNAS	L3098	2030-08-27
A2LA	4893.01	2026-06-30
Innovation, Science and Economic Development Canada (ISED)	11033A CAB identifer:CN0083	2026-06-30
Federal Communications Commission (FCC)	171688 Designation No.:CN1235	2026-06-30



3 GENERAL INFORMATION

3.1 GENERAL DESCRIPTION OF EUT

Equipment	PROFESSIONAL MONITORING S'	YSTEM
Brand Name	/	
Test Model	K5	
Series Model	N/A	
Model Difference(s)	N/A	
Hardware Version	1.0	
Software Version	1.0	
Power Source	AC main	
Power Rating	100-240V~ 50/60Hz 75W MAX	
Operation Frequency	2402 MHz ~ 2480 MHz	
Modulation Technology	GFSK, π/4-DQPSK, 8-DPSK	
Bit Rate of Transmitter	1Mbps /2Mbps /3Mbps	
Antenna Information	Antenna Type: FPCB	Maximum Peak Gain: 2.1dBi
Max. Output Power	1Mbps: 0.248 dBm (0.001059 W 2Mbps: 1.112 dBm (0.001292 W 3Mbps: 1.746 dBm (0.001495 W	r)

Note:

1. For a more detailed features description, please refer to the manufacturer's specifications or the user's manual.





2. Channel List:

Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
00	2402	27	2429	54	2456
01	2403	28	2430	55	2457
02	2404	29	2431	56	2458
03	2405	30	2432	57	2459
04	2406	31	2433	58	2460
05	2407	32	2434	59	2461
06	2408	33	2435	60	2462
07	2409	34	2436	61	2463
08	2410	35	2437	62	2464
09	2411	36	2438	63	2465
10	2412	37	2439	64	2466
11	2413	38	2440	65	2467
12	2414	39	2441	66	2468
13	2415	40	2442	67	2469
14	2416	41	2443	68	2470
15	2417	42	2444	69	2471
16	2418	43	2445	70	2472
17	2419	44	2446	71	2473
18	2420	45	2447	72	2474
19	2421	46	2448	73	2475
20	2422	47	2449	74	2476
21	2423	48	2450	75	2477
22	2424	49	2451	76	2478
23	2425	50	2452	77	2479
24	2426	51	2453	78	2480
25	2427	52	2454		
26	2428	53	2455		



3.2 DESCRIPTION OF TEST MODES

The test system was pre-tested based on the consideration of all possible combinations of EUT operation mode.

Pretest Mode	Description	
Mode 1	TX Mode NOTE (1)	
Mode 2	TX Mode Channel 01_3Mbps	

Following mode(s) was (were) found to be the worst case(s) and selected for the final test.

AC power line conducted emissions test		
Final Test Mode Description		
Mode 2	TX Mode Channel 01_3Mbps	

Radiated emissions test - Below 1GHz				
Final Test Mode	Description			
Mode 2	TX Mode Channel 01_3Mbps			

Radiated emissions test - Above 1GHz				
Final Test Mode Description				
Mode 1 TX Mode NOTE (1)				

Conducted test				
Final Test Mode Description				
Mode 1	TX Mode note (1)			

Note:

- (1) The measurements are performed at the high, middle, low available channels.
- (2) The measurements for Hopping Channel Separation, Bandwidth and Maximum Output Power were tested during 1Mbps, 2Mbps and 3Mbps, the worst case are 1Mbps and 3Mbps, only worst case was documented.

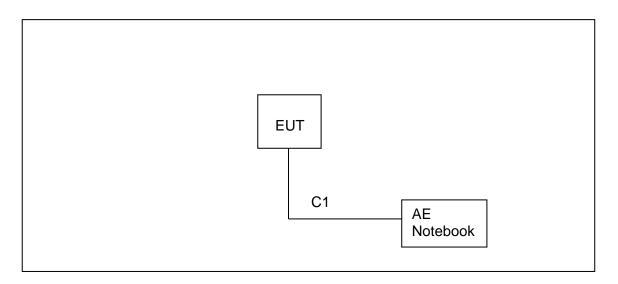


3.3 PARAMETERS OF TEST SOFTWARE

During testing, channel & power controlling software provided by the customer was used to control the operating channel as well as the output power level. The RF output power selection is for the setting of RF output power expected by the customer and is going to be fixed on the firmware of the final end product power parameters of FHSS

Test Software	FCC_assist1.0.4.exe					
Frequency (MHz)	2402 2441 2480					
Parameters(1Mbps)	Default	Default	Default			
Parameters(3Mbps)	Default	Default	Default			

3.4 BLOCKDIAGRAMSHOWINGTHECONFIGURATIONOFSYSTEMTESTED



3.5 SUPPORT UNITS

Item	Equipment	Brand	Model No.	Series No.
AE	Notebook	Lenovo	/	1

Item	Cable Type	Shielded Type	Ferrite Core	Length
C1	DC Cable	NO	NO	0.8m



3.6 TEST ENVIRONMENT CONDITIONS

Test Item	Temperature	Humidity	Test Voltage
AC Power Line Conducted Emissions	25.4°C	E 40/	DC 5V
AC Power Line Conducted Emissions	25.4 C	54%	(AC 120V/60Hz)
Radiated Emissions-9K-30MHz	25.0°C	60%	DC 5V
Radiated Emissions-30 MHz to 1GHz	24.2°C	59%	DC 5V
Radiated Emissions-Above 1000 MHz	24.2°C	59%	DC 5V
Number of Hopping Frequency	24.6°C	48%	DC 5V
Average Time Of Occupancy	24.6°C	48%	DC 5V
Hopping Channel Separation	24.6°C	48%	DC 5V
Bandwidth	24.6°C	48%	DC 5V
Maximum Output Power	24.6°C	48%	DC 5V
Conducted Spurious Emission	24.6°C	48%	DC 5V



4 AC POWER LINE CONDUCTED EMISSIONS TEST

4.1 LIMIT

Fraguency of Emission (MHz)	Limit (dBµV)			
Frequency of Emission (MHz)	Quasi-peak	Average		
0.15 - 0.50	66 to 56*	56 to 46*		
0.50 - 5.0	56	46		
5.0 - 30.0	60	50		

Note:

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

(2) The limit of " * " marked band means the limitation decreases linearly with the logarithm of the frequency in the range.

The following table is the setting of the receiver

Receiver Parameters	Setting
Attenuation	10 dB
Start Frequency	0.15 MHz
Stop Frequency	30 MHz
IF Bandwidth	9 kHz

4.2 TEST PROCEDURE

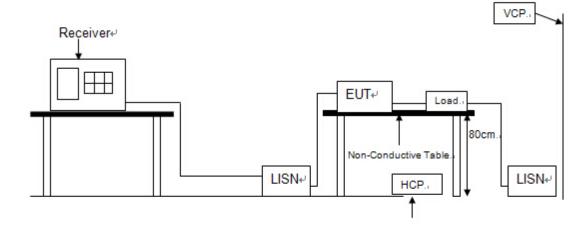
- a. The EUT was placed 0.8 meters from the horizontal ground plane with EUT being connected to the power mains through a line impedance stabilization network (LISN). All other support equipment powered from additional LISN(s). The LISN provide 50 Ohm/ 50uH of coupling impedance for the measuring instrument.
- b. Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 to 40 cm long.
- c. I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.
- d. LISN at least 80 cm from nearest part of EUT chassis.

4.3MEASUREMENT INSTRUMENTS LIST

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Pulse Limiter	MTS-systemtechn ik	MTS-IMP-136	261115-010-0024	11/17/2025
2	EMI Test Receiver	R&S	ESCI	101308	06/05/2025
3	LISN	AFJ	LS16	16011103219	06/05/2025
4	LISN	Schwarzbeck	NSLK 8127	8127-432	06/05/2025
5	MeasurementSoftwar e	Farad	EZ-EMC (Ver.ATT-03A)	N/A	N/A



4.4 TESTSETUP



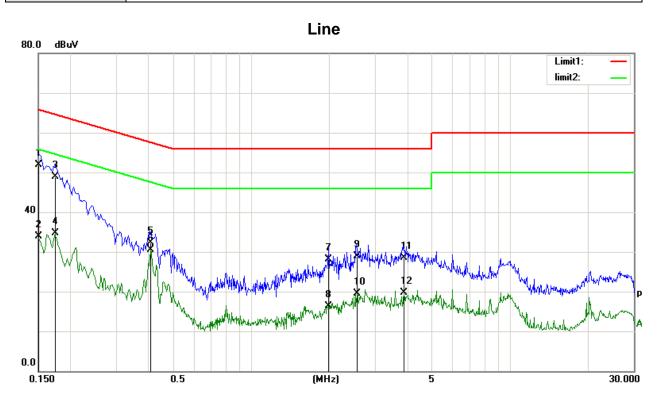
4.5 EUT OPERATING CONDITIONS

The EUT was configured for testing in a typical function (as a customer would normally use it), EUT was programmed to be in continuously transmitting data or hopping on mode.



4.6 TEST RESULTS

Test Mode: TX Mode Channel 01 _3Mbps



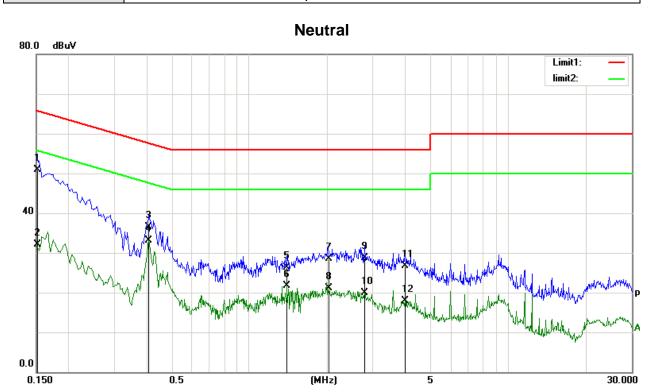
No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB)	(dBuV)	(dBuV)	(dB)	
1	0.1500	41.16	10.68	51.84	65.99	-14.15	QP
2	0.1500	23.20	10.68	33.88	55.99	-22.11	AVG
3	0.1740	38.36	10.57	48.93	64.76	-15.83	QP
4	0.1740	24.15	10.57	34.72	54.76	-20.04	AVG
5	0.4100	21.83	10.41	32.24	57.65	-25.41	QP
6	0.4100	20.15	10.41	30.56	47.65	-17.09	AVG
7	1.9899	17.39	10.69	28.08	56.00	-27.92	QP
8	1.9899	5.58	10.69	16.27	46.00	-29.73	AVG
9	2.5579	18.18	10.68	28.86	56.00	-27.14	QP
10	2.5579	8.89	10.68	19.57	46.00	-26.43	AVG
11	3.8900	17.87	10.73	28.60	56.00	-27.40	QP
12	3.8900	9.00	10.73	19.73	46.00	-26.27	AVG

Remarks:

- (1) Measurement Value = Reading Level + Correct Factor.(2) Margin Level = Measurement Value Limit Value.



Test Mode: TX Mode Channel 01 _3Mbps



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB)	(dBuV)	(dBuV)	(dB)	
1	0.1516	40.27	10.67	50.94	65.91	-14.97	QP
2	0.1516	21.37	10.67	32.04	55.91	-23.87	AVG
3	0.4100	26.00	10.41	36.41	57.65	-21.24	QP
4	0.4100	22.67	10.41	33.08	47.65	-14.57	AVG
5	1.3980	15.67	10.66	26.33	56.00	-29.67	QP
6	1.3980	10.95	10.66	21.61	46.00	-24.39	AVG
7	2.0300	17.91	10.69	28.60	56.00	-27.40	QP
8	2.0300	10.38	10.69	21.07	46.00	-24.93	AVG
9	2.7900	18.11	10.59	28.70	56.00	-27.30	QP
10	2.7900	9.26	10.59	19.85	46.00	-26.15	AVG
11	4.0020	15.97	10.75	26.72	56.00	-29.28	QP
12	4.0020	7.24	10.75	17.99	46.00	-28.01	AVG

Remarks:

- (1) Measurement Value = Reading Level + Correct Factor.(2) Margin Level = Measurement Value Limit Value.



5 RADIATED EMISSION TEST

5.1 LIMIT

In case the emission fall within the restricted band specified on15.205(a) &RSS-Gen 8.10, then the 15.209(a) &RSS-Gen 8.9 limit in the table below has to be followed.

LIMITS OF RADIATED EMISSION MEASUREMENT (9 kHz-1000MHz)

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		
Above 960	500	3		

LIMITS OF RADIATED EMISSION MEASUREMENT (9 kHz-30 MHz)

Frequency	Magnetic field strength (H-Field)	Measurement Distance		
(MHz)	(μA/m)	(meters)		
0.009-0.490	6.37/F(kHz)	300		
0.490-1.705	6.37/F(kHz)	30		
1.705-30.0	0.08	30		

LIMITS OF RADIATED EMISSION MEASUREMENT (30 MHz-1000MHz)

Frequency	Field Strength
(MHz)	(μV/m at 3m)
30-88	100
88-216	150
216-960	200
Above 960	500

LIMITS OF RADIATED EMISSION MEASUREMENT (Above 1000MHz)

Fraguency (MHz)	(dBuV/m at 3 m)				
Frequency (MHz)	Peak	Average			
Above 1000	74	54			

Note:

- (1) The limit for radiated test was performed according to FCC PART 15C and RSS-247.
- (2) The tighter limit applies at the band edges.
- (3) Emission level (dBuV/m)=20log Emission level (uV/m).



5.2 TEST PROCEDURE AND SETTING

- a. The measuring distance of 3 m shall be used for measurements. The EUT was placed on the top of a rotating table 0.8 meter above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.(below 1GHz)
- b. The measuring distance of 3 m shall be used for measurements. The EUT was placed on the top of a rotating table 1.5 meter above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.(above 1GHz)
- c. The height of the equipment or of the substitution antenna shall be 0.8m or 1.5m; the height of the test antenna shall vary between 1 m to 4 m. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights find the maximum reading (used Bore sight function).
- e. The receiver system was set to peak and average detect function and specified bandwidth with maximum hold mode when the test frequency is above 1GHz.
- f. The initial step in collecting radiated emission data is a receiver peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured.
- g. All readings are Peak unless otherwise stated QP in column of Note. Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform. (below 1GHz)
- h. All readings are Peak Mode value unless otherwise stated AVG in column of Note. If the Peak Mode Measured value compliance with the Peak Limits and lower than AVG Limits, the EUT shall be deemed to meet both Peak & AVG Limits and then only Peak Mode was measured, but AVG Mode didn't perform. (above 1GHz)
- i. The test result is calculated as the following:
 - (1) Result = Reading + Correct Factor
 - (2) Correct Factor = Antenna Factor + Cable Loss Amplifier Gain + Attenuator
 - (3) Margin = Result Limit

Spectrum Parameter	Setting
Attenuation	Auto
Start Frequency	1000 MHz
Stop Frequency	10th carrier harmonic
RBW / VBW	RBW 1MHz VBW 3MHz peak detector for Pk value
(Emission in restricted band)	RMS detector for AV value

Receiver Parameter	Setting
Attenuation	Auto
Start ~ Stop Frequency	9 kHz~90 kHz for PK/AVG detector
Start ~ Stop Frequency	90 kHz~110 kHz for QP detector
Start ~ Stop Frequency	110 kHz~490 kHz for PK/AVG detector
Start ~ Stop Frequency	490 kHz~30 MHz for QP detector
Start ~ Stop Frequency	30MHz~1000MHz for QP detector

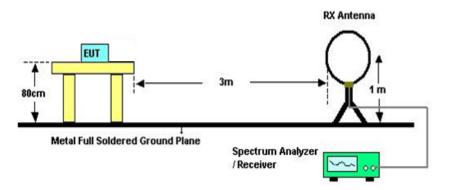


5.3 MEASUREMENT INSTRUMENTS LIST

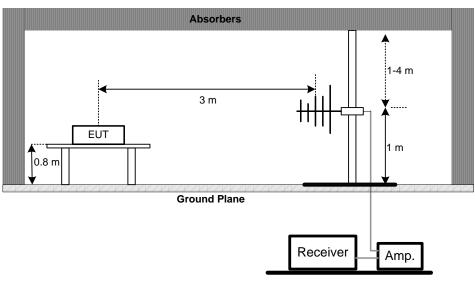
Item	Equipment	Manufacturer	Model No.	Serial No.	Calibrated until
1	EMI Test Receiver	R&S	ESCI	101307	06/05/2025
2	Spectrum Analyzer	Agilent	E4407B	US40240708	11/17/2025
3	Loop antenna	SCHWARZBECK K	FMZB1519	1519-062	01/14/2025
4	Broadband antenna	SCHWARZBECK	VULB9168	VULB9168-192	03/29/2025
5	HORN ANTENNA	SCHWARZBECK	BBHA9120D	9120D 1065	03/29/2025
6	Preamplifier Amplifier	HP	8447F	3113A05680	11/17/2025
7	PRE-AMPLIFIER	EMEC	EM01G26G	980136	03/29/2025
8	RF Cable	R&S	Test Cable 4	4	11/17/2025
9	RF Cable	R&S	Test Cable 5	5	11/17/2025
10	RF Cable	R&S	Test Cable 9	9	04/17/2025
11	RF Cable	R&S	Test Cable 10	10	04/17/2025
12	Measurement Software	Farad	EZ-EMC (Ver.ATT-03A)	N/A	N/A

5.4 TESTSETUP

9 kHz-30 MHz

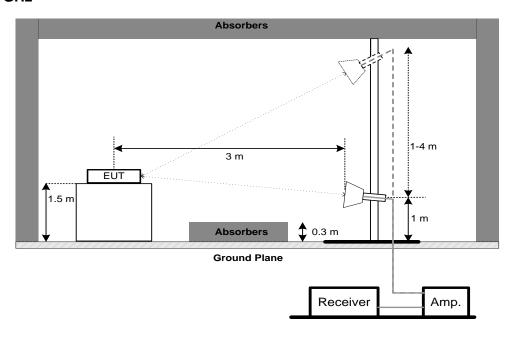


30 MHz to 1 GHz





Above 1 GHz



5.5 EUT OPERATING CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

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5.6 TEST RESULTS - 9 kHz TO 30MHz

Test Mode:	TX Mode Channel 01 _3Mbps
------------	---------------------------

Freq.	Reading Limit		Margin	State		
(MHz)	(dBuV/m)	(dBuV/m)	(dB)	P/F		
				Р		
				Р		

Note:

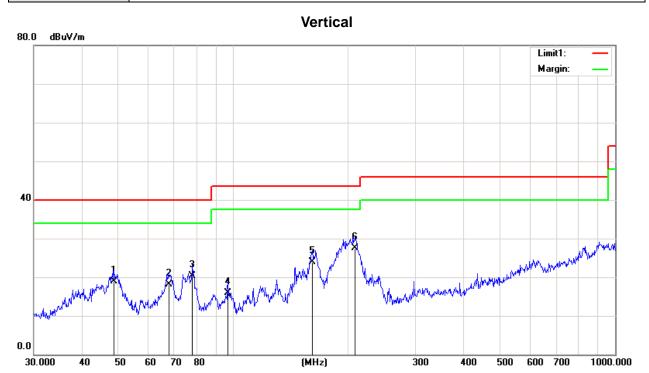
The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.

Distance extrapolation factor =20 log (specific distance/test distance)(dB); Limit line = specific limits(dBuv) + distance extrapolation factor



5.7 TEST RESULTS- 30 MHz TO 1000MHz

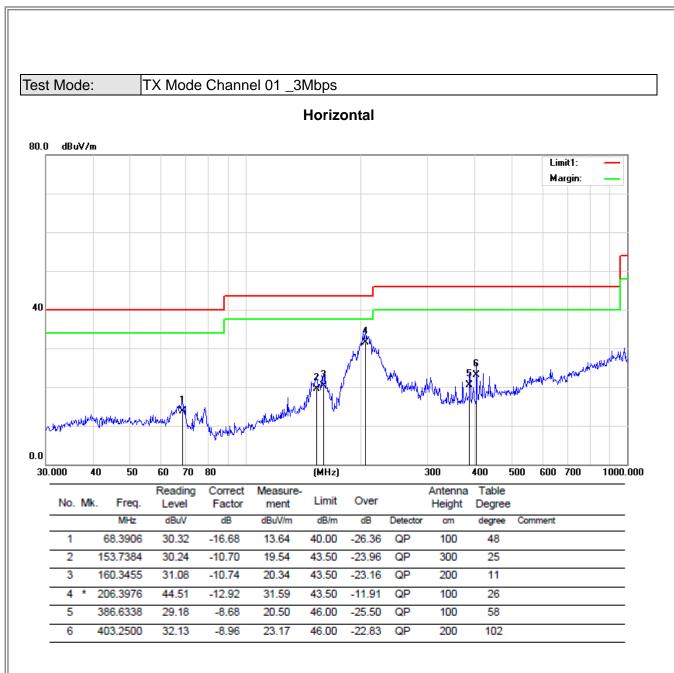
Test Mode: TX Mode Channel 01 _3Mbps



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dB/m	dB	Detector	cm	degree	Comment
1		48.6719	33.38	-14.51	18.87	40.00	-21.13	QP	300	58	
2		67.6751	34.32	-16.28	18.04	40.00	-21.96	QP	100	21	
3		78.1389	37.46	-17.25	20.21	40.00	-19.79	QP	200	33	
4		96.7749	32.31	-16.37	15.94	43.50	-27.56	QP	100	65	
5		160.9088	34.79	-10.94	23.85	43.50	-19.65	QP	100	41	
6	*	208.5801	40.46	-13.01	27.45	43.50	-16.05	QP	100	12	

^{*:}Maximum data x:Over limit !:over margin (Reference Only



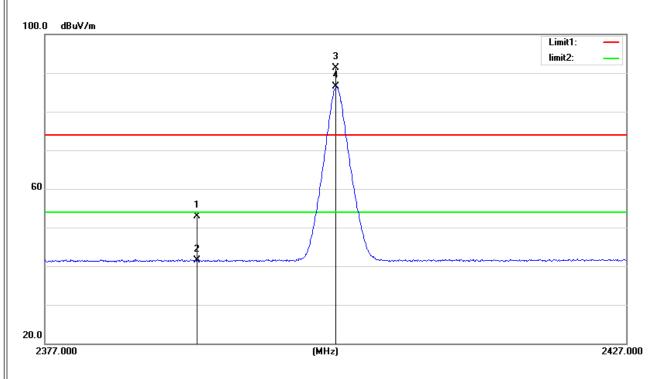


*:Maximum data x:Over limit !:over margin (Reference Only



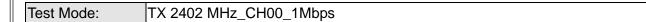
5.8 TEST RESULTS - ABOVE 1000MHz (BAND EDGE)

Test Mode: TX 2402 MHz_CH00_1Mbps

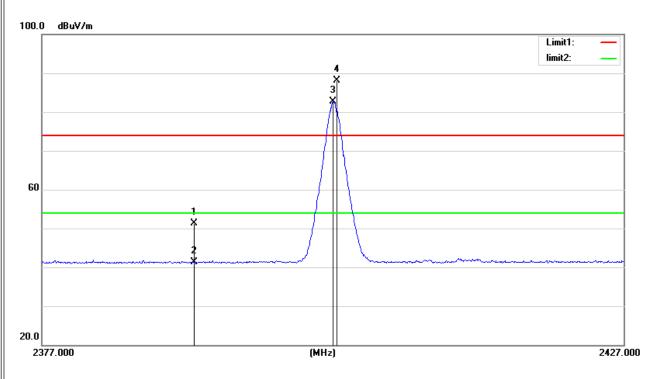


No.	Mk	. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		Antenna Height		
		MHz	dBuV	dB	dBuV/m	dB/m	dB	Detector	cm	degree	Comment
1		2390.000	22.68	30.14	52.82	74.00	-21.18	peak	150	0	
2		2390.000	11.42	30.14	41.56	54.00	-12.44	AVG	150	0	
3	Χ	2401.900	61.06	30.15	91.21	74.00	17.21	peak	150	0	No Limit
4	*	2401.950	56.26	30.15	86.41	54.00	32.41	AVG	150	0	No Limit





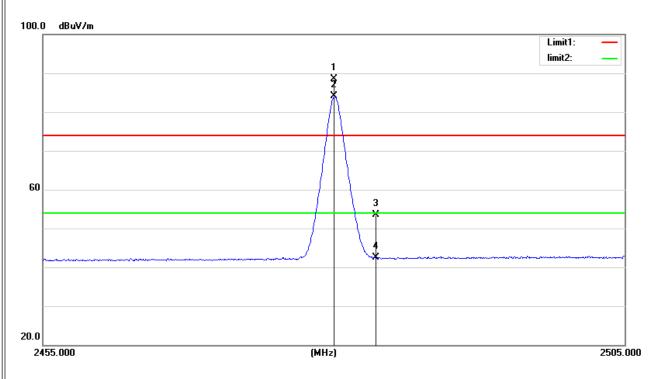
Horizontal



No.	Mk.	. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		Antenna Height		
		MHz	dBuV	dB	dBuV/m	dB/m	dB	Detector	cm	degree	Comment
1		2390.000	21.10	30.14	51.24	74.00	-22.76	peak	150	101	
2		2390.000	11.19	30.14	41.33	54.00	-12.67	AVG	150	101	
3	*	2401.900	52.58	30.15	82.73	54.00	28.73	AVG	150	101	No Limit
4	Х	2402.200	58.02	30.15	88.17	74.00	14.17	peak	150	101	No Limit

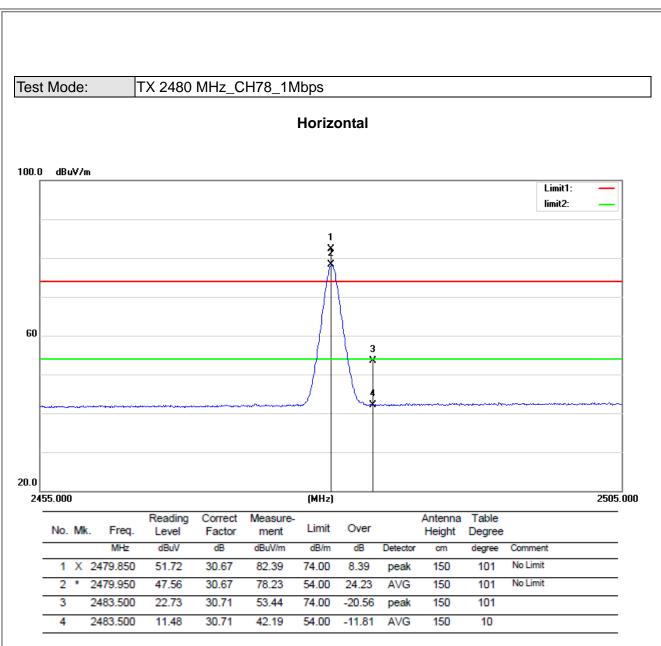




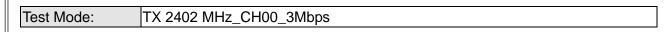


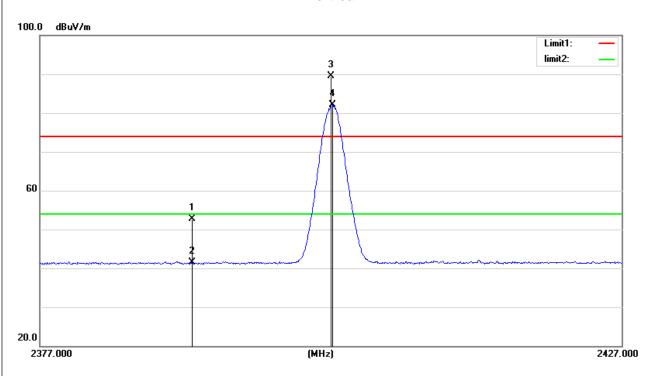
No.	Mk	. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dB/m	dB	Detector	cm	degree	Comment
1	Х	2479.850	57.77	30.67	88.44	74.00	14.44	peak	150	0	No Limit
2	*	2479.950	53.40	30.67	84.07	54.00	30.07	AVG	150	0	No Limit
3		2483.500	22.72	30.71	53.43	74.00	-20.57	peak	150	0	
4		2483.500	11.72	30.71	42.43	54.00	-11.57	AVG	150	0	





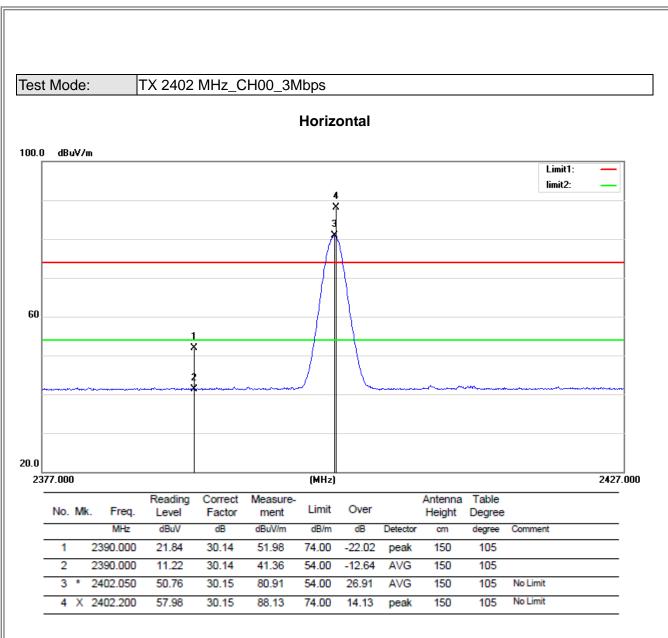




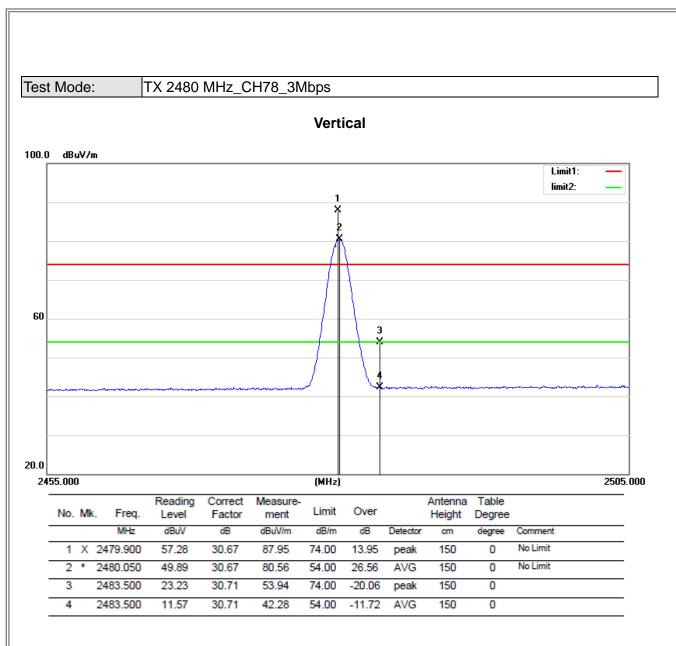


No.	Mk	. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		Antenna Height		
		MHz	dBuV	dB	dBuV/m	dB/m	dB	Detector	cm	degree	Comment
1		2390.000	22.53	30.14	52.67	74.00	-21.33	peak	150	299	
2		2390.000	11.36	30.14	41.50	54.00	-12.50	AVG	150	299	
3	Х	2401.850	59.40	30.15	89.55	74.00	15.55	peak	150	299	No Limit
4	*	2402.050	51.95	30.15	82.10	54.00	28.10	AVG	150	299	No Limit

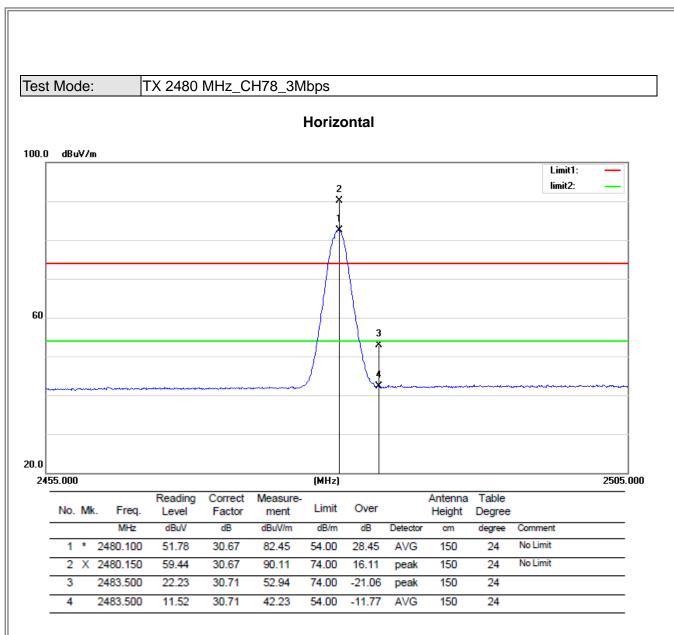














5.9 TEST RESULTS - ABOVE 1000MHz (HARMONIC)

Test Mode: TX 2402 MHz_CH00_1Mbps

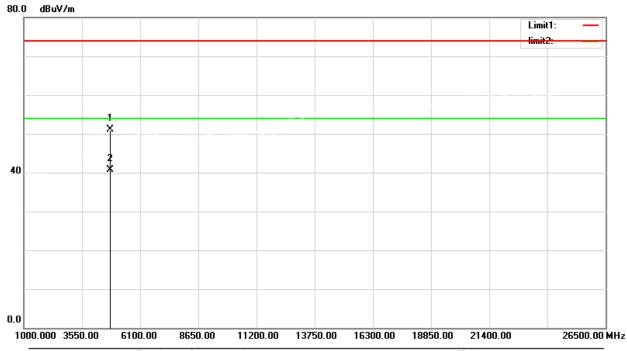


No.	Mk	. Freq.			Measure- ment		Over		Antenna Height		
		MHz	dBuV	dB	dBuV/m	dB/m	dB	Detector	cm	degree	Comment
1		4804.000	53.55	-1.90	51.65	74.00	-22.35	peak	150	25	
2	*	4804.000	42.48	-1.90	40.58	54.00	-13.42	AVG	150	25	



Test Mode: TX 2402 MHz_CH00_1Mbps

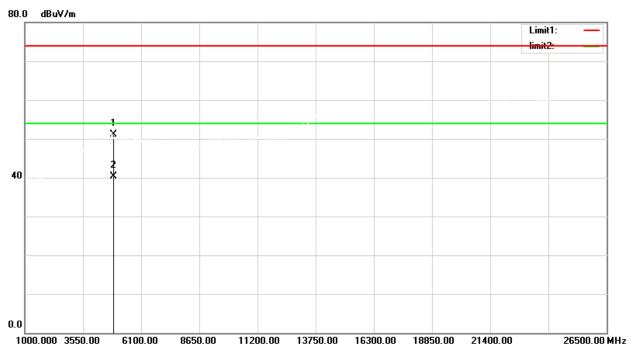
Horizontal



No.	М	k. Freq.		Correct Factor	Measure- ment	Limit	Over		Antenna Height		
		MHz	dBuV	dB	dBuV/m	dB/m	dB	Detector	cm	degree	Comment
1		4804.000	53.01	-1.90	51.11	74.00	-22.89	peak	150	103	
2	*	4804.000	42.59	-1.90	40.69	54.00	-13.31	AVG	150	103	



Test Mode: TX 2441 MHz_CH39_1Mbps

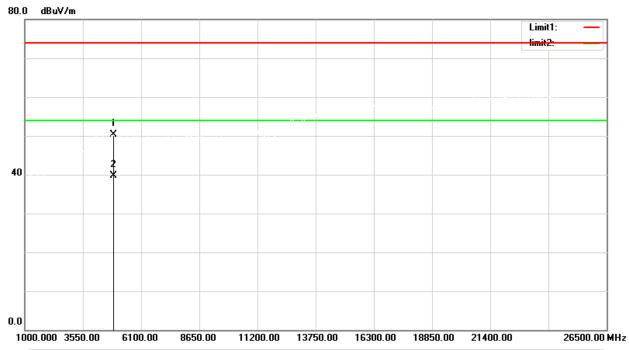


No.	M	∕lk.	Freq.	Reading Level		Measure- ment	Limit	Over		Antenna Height		
			MHz	dBuV	dB	dBuV/m	dB/m	dB	Detector	cm	degree	Comment
1		48	882.000	53.26	-2.16	51.10	74.00	-22.90	peak	150	58	
2	*	48	882.000	42.44	-2.16	40.28	54.00	-13.72	AVG	150	58	



Test Mode: TX 2441 MHz_CH39_1Mbps

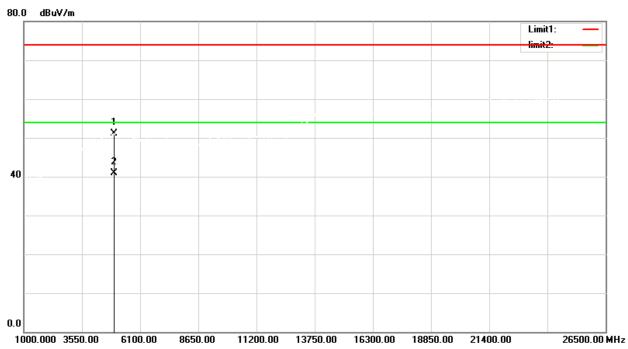
Horizontal



No.	Mk	. Freq.	Reading Level		Measure- ment	Limit	Over		Antenna Height		
		MHz	dBuV	dB	dBuV/m	dB/m	dB	Detector	cm	degree	Comment
1		4882.000	52.55	-2.16	50.39	74.00	-23.61	peak	150	44	
2	*	4882.000	41.82	-2.16	39.66	54.00	-14.34	AVG	150	44	



Test Mode: TX 2480 MHz_CH78_1Mbps

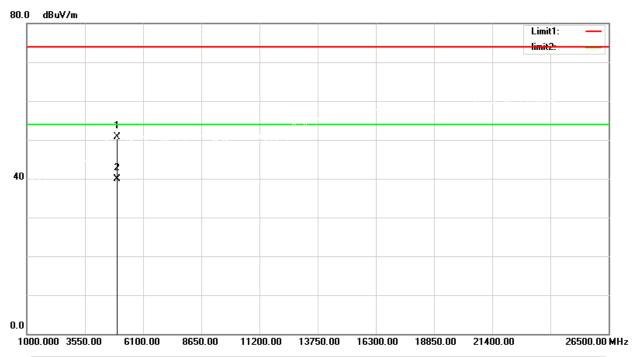


No.	Mk.	. Freq.	Reading Level		Measure- ment	Limit	Over		Antenna Height		
		MHz	dBuV	dB	dBuV/m	dB/m	dB	Detector	cm	degree	Comment
1		4960.000	52.87	-1.76	51.11	74.00	-22.89	peak	150	106	
2	*	4960.000	42.61	-1.76	40.85	54.00	-13.15	AVG	150	106	



Test Mode: TX 2480 MHz_CH78_1Mbps

Horizontal

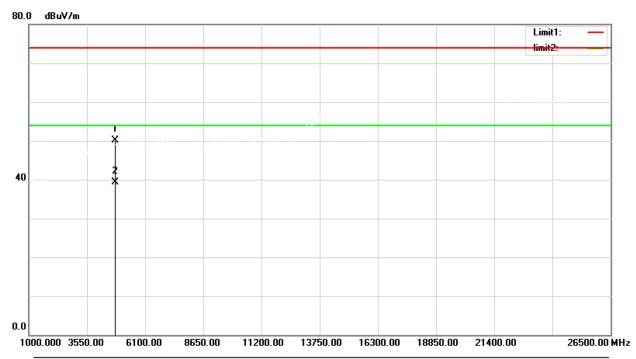


No.	М	k.	Freq.	Reading Level		Measure- ment	Limit	Over		Antenna Height		
			MHz	dBuV	dB	dBuV/m	dB/m	dB	Detector	cm	degree	Comment
1		496	0.000	52.53	-1.76	50.77	74.00	-23.23	peak	150	44	
2	*	496	0.000	41.64	-1.76	39.88	54.00	-14.12	AVG	150	44	



Test Mode: TX 2402 MHz_CH00_3Mbps

Vertical

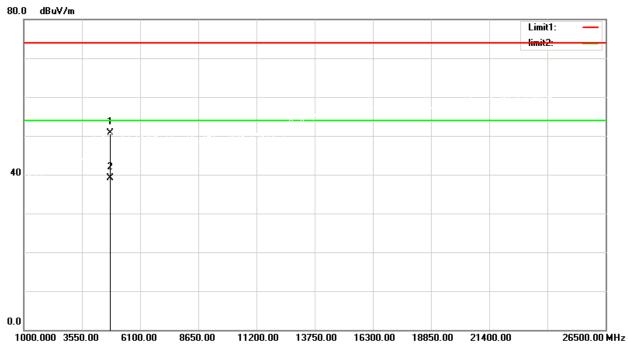


No.	M	k. Freq.	Reading Level		Measure- ment	Limit	Over		Antenna Height		
		MHz	dBuV	dB	dBuV/m	dB/m	dB	Detector	cm	degree	Comment
1		4804.000	52.00	-1.90	50.10	74.00	-23.90	peak	150	99	
2	*	4804.000	41.15	-1.90	39.25	54.00	-14.75	AVG	150	99	



Test Mode: TX 2402 MHz_CH00_3Mbps

Horizontal



No.	М	lk.	Freq.	Reading Level		Measure- ment	Limit	Over		Antenna Height		
			MHz	dBuV	dB	dBuV/m	dB/m	dB	Detector	cm	degree	Comment
1		48	304.000	52.51	-1.90	50.61	74.00	-23.39	peak	150	3	
2	*	48	304.000	41.02	-1.90	39.12	54.00	-14.88	AVG	150	3	



Test Mode: TX 2441 MHz_CH39_3Mbps

Vertical

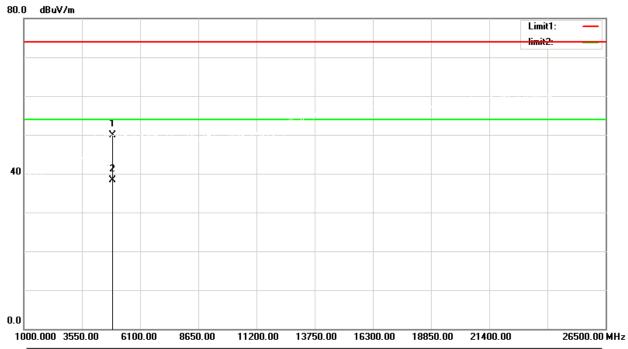


No.	Mk	c. Freq.			Measure- ment	Limit	Over		Antenna Height		
		MHz	dBuV	dB	dBuV/m	dB/m	dB	Detector	cm	degree	Comment
1		4882.000	52.26	-2.16	50.10	74.00	-23.90	peak	150	36	
2	*	4882.000	41.41	-2.16	39.25	54.00	-14.75	AVG	150	36	



Test Mode: TX 2441 MHz_CH39_3Mbps

Horizontal

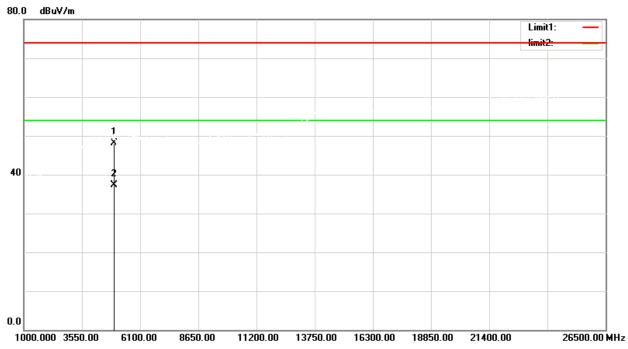


No.	M	k. Freq.	Reading Level		Measure- ment	Limit	Over		Antenna Height		
		MHz	dBuV	dB	dBuV/m	dB/m	dB	Detector	cm	degree	Comment
1		4882.000	52.05	-2.16	49.89	74.00	-24.11	peak	150	178	
2	*	4882.000	40.41	-2.16	38.25	54.00	-15.75	AVG	150	178	



Test Mode: TX 2480 MHz_CH78_3Mbps

Vertical

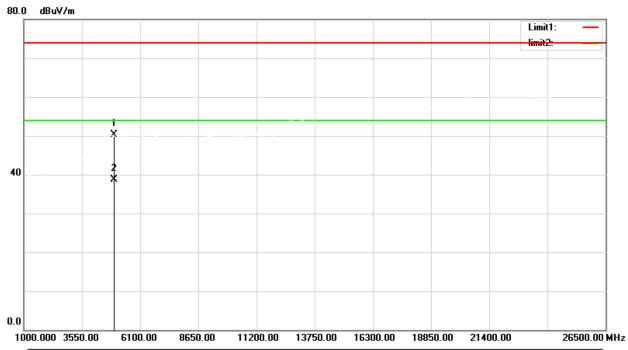


No.	М	k.	Freq.		Correct Factor	Measure- ment	Limit	Over		Antenna Height		
			MHz	dBuV	dB	dBuV/m	dB/m	dB	Detector	cm	degree	Comment
1		49	60.000	49.87	-1.76	48.11	74.00	-25.89	peak	150	55	
2	*	49	60.000	39.01	-1.76	37.25	54.00	-16.75	AVG	150	55	



Test Mode: TX 2480 MHz_CH78_3Mbps

Horizontal



No.	Mk	. Freq.			Measure- ment	Limit	Over		Antenna Height		
		MHz	dBuV	dB	dBuV/m	dB/m	dB	Detector	cm	degree	Comment
1		4960.000	52.03	-1.76	50.27	74.00	-23.73	peak	150	87	
2	*	4960.000	40.41	-1.76	38.65	54.00	-15.35	AVG	150	87	



6 NUMBER OF HOPPING FREQUENCY

6.1 LIMIT

FCC Part15, Subpart C (15.247)					
Section	Test Item				
15.247(a)(1)(iii)	Number of Hopping Frequency				

6.2 TEST PROCEDURE AND SETTING

- a. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below.
- b. Spectrum Setting: RBW=100 kHz, VBW=300 kHz, Sweep time = Auto.

Spectrum Parameters	Setting
Attenuation	Auto
Span Frequency	> Operating Frequency Range
RBW	100kHz
VBW	300kHz
Detector	Peak
Trace	Max Hold
Sweep Time	Auto

6.3 MEASUREMENT INSTRUMENTS LIST

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum analyzer	KEYSIGHT	N9010A	MY55150427	2025/05/22
2	Attenuator	Mini-Circuits	BW-S10W2	101109	N/A
3	RF Cable	Mi-cable	C10-01-01-1	100309	N/A

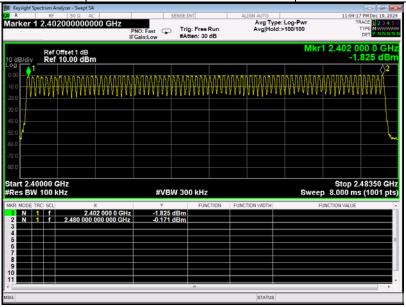
6.4 TEST SETUP

EUT	SPECTRUM
	ANALYZER

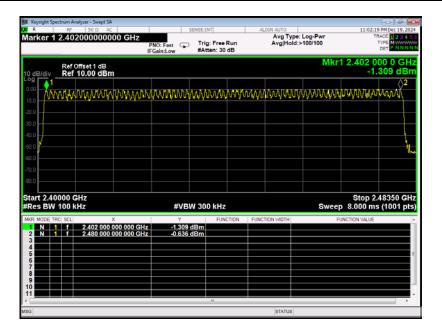
6.5 EUT OPERATION CONDITIONS



	Hopping Mode_1Mbps	
Number of Hopping	Measurement result(CH)	Limit(CH)
Frequency	79	≥15



Hopping Mode_3Mbps				
Number of Hopping	Measurement result(CH)	Limit(CH)		
Frequency	79	≥15		





7 AVERAGE TIME OF OCCUPANCY

7.1 LIMIT

FCC Part15, Subpart C (15.247)		
Section Test Item Limit		
15.247(a)(1)(iii)	Average Time of Occupancy	0.4sec

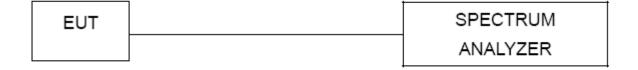
7.2 TEST PROCEDURE AND SETTING

- a. The transmitter output (antenna port) was connected to the spectrum analyzer
- b. Set RBW of spectrum analyzer to 1MHz and VBW to 1MHz
- c. Use a video trigger with the trigger level set to enable triggering only on full pulses
- d. Sweep Time is more than once pulse time
- e. Set the center frequency on any frequency would be measure and set the frequency span to zero span
- f. Measure the maximum time duration of one single pulse
- g. Set the EUT for DH1, DH3 and DH5 packet transmitting
- h. Measure the maximum time duration of one single pulse
- i. DH1 Packet permit maximum 1600 / 79 / 2 = 10.12 hops per second in each channel (1 time slot TX, 1 time slot RX). So, the dwell time is the time duration of the pulse times $10.12 \times 31.6 = 320$ within 31.6 seconds
- j. DH3 Packet permit maximum 1600 / 79 / 4 = 5.06 hops per second in each channel (3 time slots TX, 1 time slot RX).So, the dwell time is the time duration of the pulse times $5.06 \times 31.6 = 160$ within 31.6 seconds
- k. DH5 Packet permit maximum 1600/79/6 = 3.37 hops per second in each channel (5 time slots TX, 1 time slot RX).So, the dwell time is the time duration of the pulse times $3.37 \times 31.6 = 106.6$ within 31.6 seconds

7.3 MEASUREMENT INSTRUMENTS LIST

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum analyzer	KEYSIGHT	N9010A	MY55150427	2025/05/22
2	Attenuator	Mini-Circuits	BW-S10W2	101109	N/A
3	RF Cable	Mi-cable	C10-01-01-1	100309	N/A

7.4 TEST SETUP



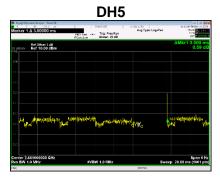
7.5 EUT OPERATION CONDITIONS



	TX Mode_1Mbps				
Mode	Channel Frequency	Pulse Time	Dwell Time	Limit	
iviode	(MHz)	(ms)	(ms)	(ms)	
DH1	2441	0.414	132.5	400	
DH3	2441	1.730	276.8	400	
DH5	2441	3.000	319.8	400	



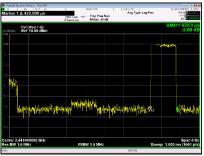






	TX Mode_3Mbps				
Mode	Channel Frequency (MHz)	Pulse Time (ms)	Dwell Time (ms)	Limit (ms)	
DH1	2441	0.420	134.4	400	
DH3	2441	1.750	280.0	400	
DH5	2441	3.040	324.1	400	

2441MHzDH1



2441MHzDH3



2441MHzDH5





8 HOPPING CHANNEL SEPARATION MEASUREMENT

8.1 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, provided the systems operate with an output power no greater than 125 mW.

8.2 TEST PROCEDURE AND SETTING

- a. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below.
- b. Span = wide enough to capture the peaks of two adjacent channels

Resolution (or IF) Bandwidth (RBW) ≥ 1% of the span

Video (or Average) Bandwidth (VBW) ≥ RBW

Sweep = Auto

Detector function = Peak

Trace = Max Hold

Spectrum Parameter	Setting
Attenuation	Auto
Span Frequency	> Measurement Bandwidth or Channel Separation
RBW	10 kHz
VBW	30 kHz
Detector	Peak
Trace	Max Hold
Sweep Time	Auto

8.3 MEASUREMENT INSTRUMENTS LIST

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum analyzer	KEYSIGHT	N9010A	MY55150427	2025/05/22
2	Attenuator	Mini-Circuits	BW-S10W2	101109	N/A
3	RF Cable	Mi-cable	C10-01-01-1	100309	N/A

8.4 TEST SETUP

EUT	SPECTRUM
	ANALYZER

8.5 EUT OPERATION CONDITIONS



TX Mode_1Mbps				
Channel	Frequency	Channel	Limit	Result
Charine	(MHz)	Separation(MHz)	(MHz)	Kesuit
CH00	2402	0.996	>(25KHz or 2/3*20dB	PASS
CHOO	2402	0.990	Bandwidth)	PAGG
CH39	2441	0.993	>(25KHz or 2/3*20dB	PASS
СПЗЭ	2441	0.993	Bandwidth)	PASS
CH78	2480	0.996	>(25KHz or 2/3*20dB	PASS
СП/О	2400	0.990	Bandwidth)	PASS

2402MHz 2441MHz 2480MHz









TX Mode_3Mbps				
Channel	Frequency (MHz)	Channel Separation(MHz)	Limit (MHz)	Result
CH00	2402	0.825	>(25KHz or 2/3*20dB Bandwidth)	PASS
CH39	2441	1.011	>(25KHz or 2/3*20dB Bandwidth)	PASS
CH78	2480	1.005	>(25KHz or 2/3*20dB Bandwidth)	PASS









9 BANDWIDTH TEST

9.1 LIMIT

FCC Part15, Subpart C (15.247)		
Section Test Item		
15.247(a)(1)	Bandwidth	

9.2 TEST PROCEDURE AND SETTING

- a. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below.
- b. Spectrum Setting: RBW= 30 kHz, VBW=100 kHz, Sweep Time = Auto.

Spectrum Parameter	Setting
Attenuation	Auto
Span Frequency	> Measurement Bandwidth
RBW	30kHz
VBW	100kHz
Detector	Peak
Trace	Max Hold
Sweep Time	Auto

9.3 MEASUREMENT INSTRUMENTS LIST

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum analyzer	KEYSIGHT	N9010A	MY55150427	2025/05/22
2	Attenuator	Mini-Circuits	BW-S10W2	101109	N/A
3	RF Cable	Mi-cable	C10-01-01-1	100309	N/A

9.4 TEST SETUP

EUT	SPECTRUM
	ANALYZER

9.5 EUT OPERATION CONDITIONS



TX Mode_1Mbps					
Channel	Frequency	20dB Bandwidth	99 % Emission Bandwidth	Result	
	(MHz)	(MHz)	(MHz)		
CH00	2402	0.880	0.8231	PASS	
CH39	2441	0.878	0.8157	PASS	
CH78	2480	0.881	0.8230	PASS	

2402WHz | Control | Contr



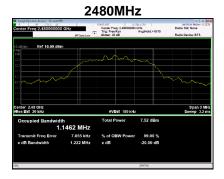




TX Mode_3Mbps					
Channel	Frequency	20dB Bandwidth	99 % Emission Bandwidth	Result	
	(MHz)	(MHz)	(MHz)		
CH00	2402	1.225	1.1464	PASS	
CH39	2441	1.224	1.1437	PASS	
CH78	2480	1.222	1.1462	PASS	









10 MAXIMUM OUTPUT POWER

10.1 LIMIT

FCC Part15 , Subpart C (15.247)				
Section Test Item Limit				
15.247(a)(1) Maximum Output Power 0.125Watt or 21dBm				

Note:

Frequency hopping systems shall have hopping channel carrier frequencies separated by a minimum of 25 kHz or the 20 dB bandwidth of the hopping channel, whichever is greater. Alternatively, 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 band width of the hopping channel, whichever is greater, provided the systems operate with an output power no greater than 125 mW.

10.2 TEST PROCEDURE AND SETTING

- a. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below.
- b. Spectrum Setting: RBW= 1MHz/3MHz, VBW= 1MHz/3MHz, Sweep time = Auto.

10.3 MEASUREMENT INSTRUMENTS LIST

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum analyzer	KEYSIGHT	N9010A	MY55150427	2025/05/22
2	Attenuator	Mini-Circuits	BW-S10W2	101109	N/A
3	RF Cable	Mi-cable	C10-01-01-1	100309	N/A

10.4 TEST SETUP

EUT	SPECTRUM
	ANALYZER

10.5 EUT OPERATION CONDITIONS



TX Mode_1Mbps					
Channal	Frequency	Output Power	Output Power	Dogult	
Channel	(MHz)	(dBm)	(W)	Result	
CH00	2402	-1.061	0.000783	PASS	
CH39	2441	-0.407	0.000911	PASS	
CH78	2480	0.248	0.001059	PASS	
Limit	21dBm /0.125W				







TX Mode_2Mbps					
Channal	Frequency	Output Power	Output Power	Dogult	
Channel	(MHz)	(dBm)	(W)	Result	
CH00	2402	-0.156	0.000965	PASS	
CH39	2441	0.493	0.001120	PASS	
CH78	2480	1.112	0.001292	PASS	
Limit	21dBm /0.125W				





TX Mode_3Mbps					
Channal	Frequency	Output Power	Output Power	Dogult	
Channel	(MHz)	(dBm)	(W)	Result	
CH00	2402	0.437	0.001106	PASS	
CH39	2441	1.067	0.001278	PASS	
CH78	2480	1.746	0.001495	PASS	
Limit	21dBm /0.125W			•	





11 CONDUCTED SPURIOUS EMISSION

11.1 LIMIT

For FCC

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated 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, provided the transmitter demonstrates compliance with the peak Output Power limits. If the transmitter complies with the Output Power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in Section 15.209(a) is not required.

11.2 TEST PROCEDURE AND SETTING

- a. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below.
- b. Spectrum Setting: RBW= 100 kHz, VBW=300 kHz, Sweep time = Auto.

11.3 MEASUREMENT INSTRUMENTS LIST

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum analyzer	KEYSIGHT	N9010A	MY55150427	2025/05/22
2	Attenuator	Mini-Circuits	BW-S10W2	101109	N/A
3	RF Cable	Mi-cable	C10-01-01-1	100309	N/A

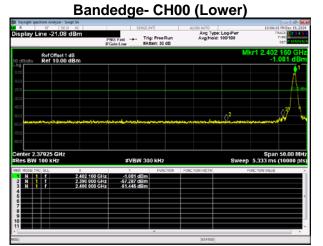
11.4 TEST SETUP

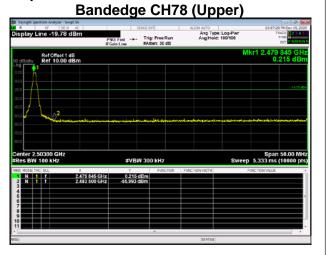
EUT	SPECTRUM
	ANALYZER

11.5 EUT OPERATION CONDITIONS

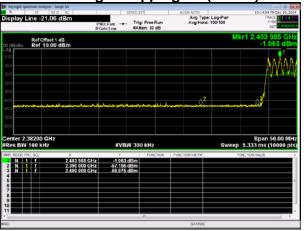


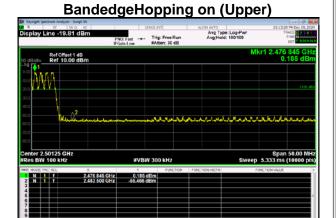
TX Mode_1Mbps



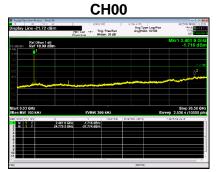


Bandedge- Hopping on (Lower)

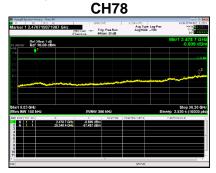




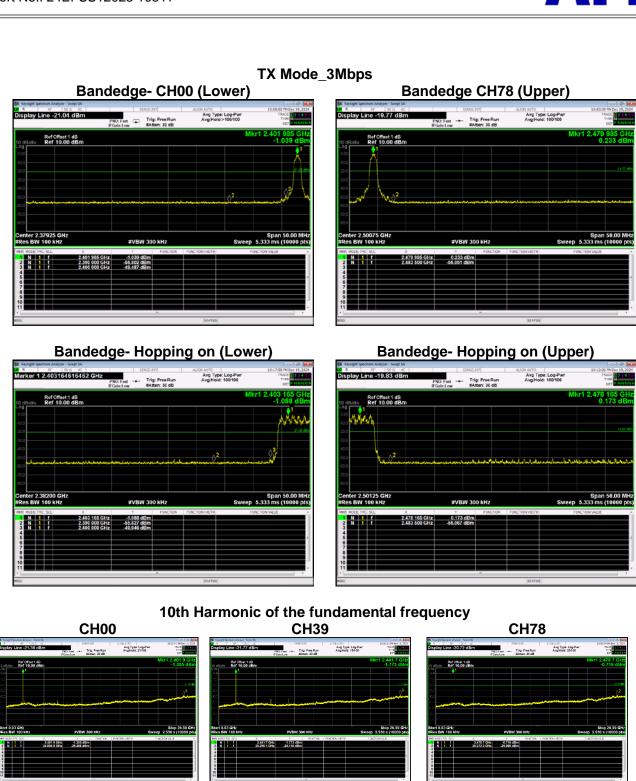
10th Harmonic of the fundamental frequency











END OF TEST REPORT