TEST REPORT

Applicant Name:	QUEST USA CORP
Address:	495 Flatbush Ave, Brooklyn, NY 11225, USA
Report Number:	2601U18172E-RF-00
FCC ID:	2AJQ7MWKKBD1

Test Standard (s)

FCC PART 15.249

Sample Description

Product Type:	Molded Buddy wireless keyboard
Model No.:	DS20824-FB
Multiple Model(s) No.:	DS21092-FB
Trade Mark:	N/A
Date Received:	2026/06/11
Issue Date:	2026/07/29

Test Result:	Pass▲

▲ In the configuration tested, the EUT complied with the standards above.

Prepared and Checked By:

Navilite Cai

Navilite Cai
RF Engineer

Approved By:

Nancy Wang

Nancy Wang
RF Supervisor

Note: The information marked# is provided by the applicant, the laboratory is not responsible for its authenticity and this information can affect the validity of the result in the test report. Customer model name, addresses, names, trademarks etc. are included.
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DOCUMENT REVISION HISTORY

Revision Number	Report Number	Description of Revision	Date of Revision
0	2601U18172E-RF-00	Original Report	2026/07/29

GENERAL INFORMATION

Product Description for Equipment under Test (EUT)

Product	Molded Buddy wireless keyboard
Tested Model	DS20824-FB
Multiple Model(s) No.	DS21092-FB
Frequency Range	2402-2480MHz
Maximum E-field strength	89.85dBuV/m@3m
Modulation Technique	GFSK
Antenna Specification#	0dBi (provided by the applicant)
Voltage Range	1* 1.5V AA alkaline battery
Sample serial number	3NPE-1 (Assigned by BACL, Shenzhen)
Sample/EUT Status	Good condition
Adapter Information	N/A
Note: The Multiple models are electrically identical with the test model except for model name, color and accessories. Please refer to the declaration letter# for more detail, which was provided by manufacturer.	

Objective

This test report is in accordance with Part 2-Subpart J, and Part 15-Subparts A and C of the Federal Communication Commissions rules.

The tests were performed in order to determine compliance with FCC Part 15, Subpart C, and section 15.203, 15.205, 15.209, 15.215 and 15.249 rules.

Test Methodology

All measurements contained in this report were conducted with ANSI C63.10-2020, American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices.

All emissions measurement was performed at Bay Area Compliance Laboratories Corp. (Shenzhen). The radiated testing was performed at an antenna-to-EUT distance of 3 meters.

Each test item follows test standards and with no deviation.

Measurement Uncertainty

Parameter		Uncertainty
Occupied Channel Bandwidth		52.29kHz(k=1.96, 95% level of confidence)
RF Frequency		81.235Hz(k=1.96, 95% level of confidence)
RF output power, conducted		1.57dB(k=1.96, 95% level of confidence)
Conducted Spurious Emission		2.48dB(k=1.96, 95% level of confidence)
AC Power Lines Conducted Emissions	9kHz~150 kHz	3.46dB(k=2, 95% level of confidence)
	150 kHz ~30MHz	3.72dB(k=2, 95% level of confidence)
Radiated Emissions	0.009MHz~30MHz	3.66dB(k=2, 95% level of confidence)
	30MHz~1000MHz (Horizontal)	5.10dB(k=2, 95% level of confidence)
	30MHz~1000MHz (Vertical)	6.28dB(k=2, 95% level of confidence)
	1GHz - 6GHz	6.18dB(k=2, 95% level of confidence)
	6GHz - 18GHz	6.62dB(k=2, 95% level of confidence)
	18GHz - 40GHz	6.66dB(k=2, 95% level of confidence)
Temperature		±0.4℃
Humidity		±2%
Supply voltages		DC±0.4%;AC±1%

Note: The extended uncertainty given in this report is obtained by combining the standard uncertainty times the coverage factor K with the 95% confidence interval. Otherwise required by the applicant or Product Regulations, Decision Rule in this report did not consider the uncertainty.

Test Facility

The Test site used by Bay Area Compliance Laboratories Corp. (Shenzhen) to collect test data is located on the 5F(B-West) , 6F, 7F, the 3rd Phase of Wan Li Industrial Building D, Shihua Rd, FuTian Free Trade Zone, Shenzhen, China.

The lab has been recognized as the FCC accredited lab under the KDB 974614 D01 and is listed in the FCC Public Access Link (PAL) database, test firm registration No.: 715558, the FCC Designation No. : CN5045.

SYSTEM TEST CONFIGURATION

Description of Test Configuration

The system was configured for testing by manufacturer.

Frequency Channel List#:

Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
0	**2402**	10	2422	20	2442	30	2462
1	2404	11	2424	21	2444	31	2464
2	2406	12	2426	22	2446	32	2466
3	2408	13	2428	23	2448	33	2468
4	2410	14	2430	24	2450	34	2470
5	2412	15	2432	25	2452	35	2472
6	2414	16	2434	26	2454	36	2474
7	2416	17	2436	27	2456	37	2476
8	2418	18	2438	28	2458	38	2478
9	2420	**19**	**2440**	29	2460	**39**	**2480**
EUT was tested with Channel 0, 19 and 39.							

EUT Exercise Software

"FCC test tool .exe"# exercise software was used and the power level is Default#. The software and power level was provided by the manufacturer.

Equipment Modifications

No modifications were made to the unit tested.

Support Equipment List and Details

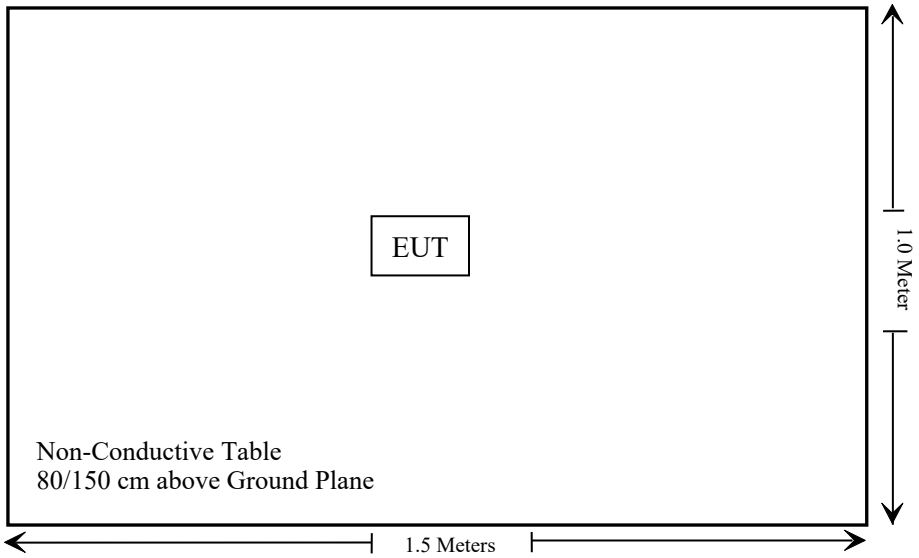
Manufacturer	Description	Model	Serial Number
/	/	/	/

Support Cable Descriptions

Cable Description	Length (m)	From/Port	To
/	/	/	/

Block Diagram of Test Setup

For Radiated Emission:



SUMMARY OF TEST RESULTS

FCC Rules	Description of Test	Result
§1.1307 (b) (3) &§2.1093	RF Exposure	Compliant
§15.203	Antenna Requirement	Compliant
§15.207(a)	AC Line Conducted Emissions	Not applicable
15.205, §15.209, §15.249(a)(c)(d)	Radiated Emissions& Outside of Band Emission	Compliant
§15.215 (c)	20 dB Bandwidth	Compliant

Not Applicable: The EUT is powered by battery.

TEST EQUIPMENT LIST

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Radiated Emissions Test (Below 1GHz)					
Rohde & Schwarz	EMI Test Receiver	ESR3	102455	2025/09/01	2026/08/31
Sonoma instrument	Pre-amplifier	310 N	186238	2025/09/08	2026/09/07
Sunol Sciences	Broadband Antenna	JB1	A040904-1	2026/06/26	2029/06/25
Unknown	Chamber A Cable	Cable A1	Cable A1	2025/09/08	2026/09/07
Unknown	Chamber A Cable	Cable A2	Cable A2	2025/09/08	2026/09/07
BACL	Active Loop Antenna	1313-1A	4031911	2024/05/14	2027/05/13
Unknown	Chamber A Cable	Cable A3	Cable A3	2025/09/08	2026/09/07
Unknown	Chamber A Cable	Cable A4	Cable A4	2025/09/08	2026/09/07
Audix	EMI Test software	E3	19821b(V9)	NCR	NCR
TDK	Chamber	Chamber A	2#	2026/07/03	2029/07/02
Radiated Emissions Test (Above 1GHz)					
Rohde & Schwarz	Spectrum Analyzer	FSV40	101605	2025/09/01	2026/08/31
A.H.System	Preamplifier	PAM-0118P	489	2025/09/08	2026/09/07
Schwarzbeck	Horn Antenna	BBHA9120D (1201)	1143	2023/07/26	2026/07/25
Schwarzbeck	Horn Antenna	BBHA9120D (1201)	1143	2026/07/15	2027/07/14
Unknown	Chamber B Cable	Cable B1	Cable B1	2025/09/08	2026/09/07
Unknown	Chamber B Cable	Cable B2	Cable B2	2025/09/08	2026/09/07
Unknown	Chamber B Cable	Cable B3	Cable B3	2025/09/08	2026/09/07
JD	Filter Switch Unit	DT7220FSU	DS79906	2025/08/12	2026/08/11
JD	Multiplex Switch Test Control Set	DT7220SCU	DS79903	2025/08/12	2026/08/11
A.H.System	Pre-amplifier	PAM-1840VH	190	2025/09/08	2026/09/07
Electro-Mechanics Co	Horn Antenna	3116	9510-2270	2023/09/18	2026/09/17
Unknown	Chamber B Cable	Cable B4	Cable B4	2025/09/17	2026/09/16
Unknown	Chamber B Cable	Cable B5	Cable B5	2025/09/17	2026/09/16
Audix	EMI Test software	E3	191218 V9(c)	NCR	NCR
TDK	Chamber	Chamber B	1#	2023/07/14	2026/07/13
TDK	Chamber	Chamber B	1#	2026/07/06	2029/07/05

*** Statement of Traceability:** Bay Area Compliance Laboratories Corp. (Shenzhen) attests that all calibrations have been performed in accordance to requirements that traceable to National Primary Standards and International System of Units (SI).

FCC §1.1307 (b) (3) &§2.1093 - RF EXPOSURE

Applicable Standard

According to FCC §2.1093 and §1.1307(b) (3), systems operating under the provisions of this section shall be operated in a manner that ensure that the public is not exposed to radio frequency energy level in excess of the Commission's guideline.

According to KDB 447498 D04 Interim General RF Exposure Guidance V01

1-mW Test Exemption:

Per § 1.1307(b)(3)(i)(A), a single RF source is exempt RF device (from the requirement to show data demonstrating compliance to RF exposure limits, as previously mentioned) if the available maximum time-averaged power is no more than 1 mW, regardless of separation distance. This exemption applies to all operating configurations and exposure conditions, for the frequency range 100 kHz to 100 GHz, regardless of fixed, mobile, or portable device exposure conditions. This is a standalone exemption, and it cannot be applied in conjunction with any other test exemption.

For worst case:

Mode	Frequency (MHz)	Maximum E-Field (dBuV/m@3m)	Maximum EIRP		1-mW Test Exemption
			(dBm)	(mW)	
GFSK	2402-2480	89.85	-5.35	0.292	**Yes**

Note: EIRP = E-Field – 95.2 @3m

Result: Compliant.

FCC§15.203 - ANTENNA REQUIREMENT

Applicable Standard

According to FCC § 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 an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this Section. 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.

Further, this requirement does not apply to intentional radiators that must be professionally installed, such as perimeter protection systems and some field disturbance sensors, or to other intentional radiators which, in accordance with § 15.31(d), must be measured at the installation site. However, the installer shall be responsible for ensuring that the proper antenna is employed so that the limits in this part are not exceeded.

Antenna Connector Construction

The EUT has one internal antenna which was permanently attached and the antenna gain# is 0dBi, fulfill the requirement of this section. Please refer to the EUT photos.

Result: Compliant.

FCC§15.205, §15.209 & §15.249(a)(c)(d) - RADIATED EMISSIONS

Applicable Standard

As per FCC§15.249 (a), except as provided in paragraph (b) of this section, the field strength of emissions from intentional radiators operated within these frequency bands shall comply with the following:

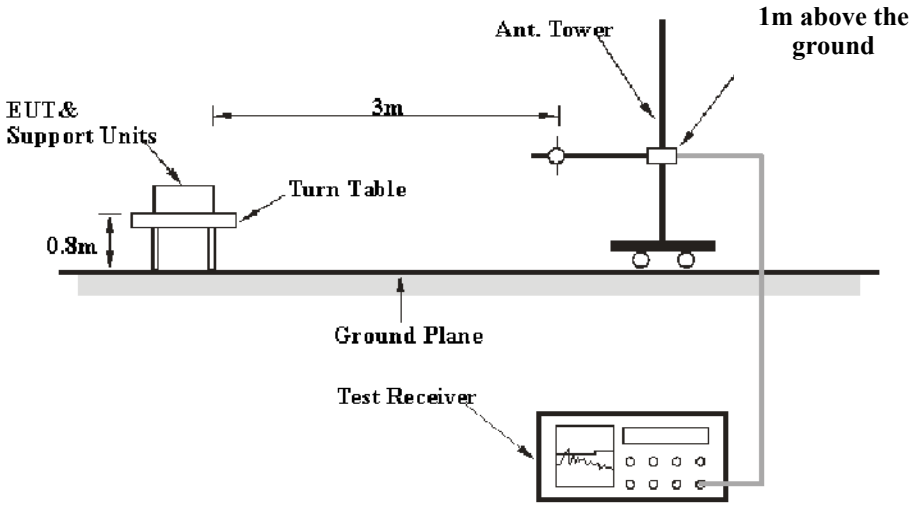
Fundamental frequency	Field strength of fundamental (millivolts/meter)	Field strength of harmonics (microvolts/meter)
902–928 MHz	50	500
2400–2483.5 MHz	50	500
5725–5875 MHz	50	500
24.0–24.25 GHz	250	2500

As per FCC§15.249 (c), Field strength limits are specified at a distance of 3 meters.

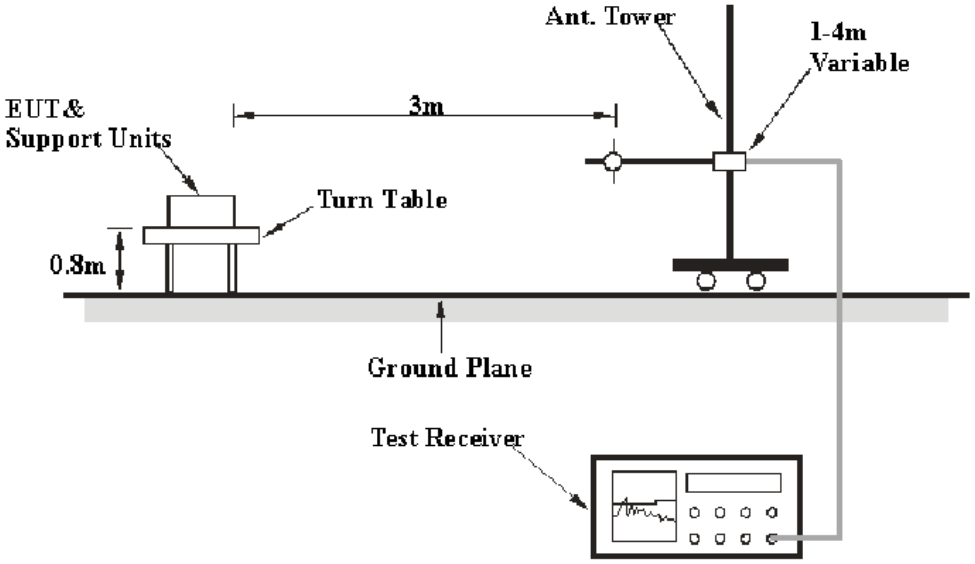
As per FCC§15.249 (d), Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 50 dB below the level of the fundamental or to the general radiated emission limits in §15.209, whichever is the lesser attenuation.

EUT Setup

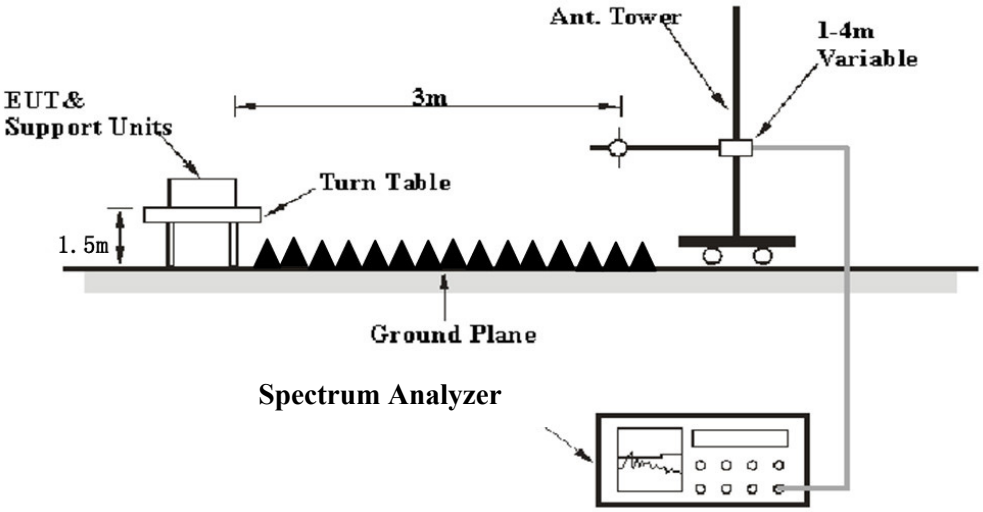
9 kHz-30MHz:



30MHz-1GHz:



Above 1GHz:



The radiated emission and out of band emission tests were performed in the 3 meters chamber test site, using the setup accordance with the ANSI C63.10-2020. The specification used was the FCC 15.209/15.205 and FCC 15.249 limits.

EMI Test Receiver & Spectrum Analyzer Setup

The EMI test receiver & Spectrum Analyzer Setup were set with the following configurations:

Frequency Range	RBW	Video B/W	IF B/W	Detector	Measurement
9 kHz – 150 kHz	/	/	200 Hz	QP	QP
	300 Hz	1 kHz	/	PK	PK
150 kHz – 30 MHz	/	/	9 kHz	QP	QP
	10 kHz	30 kHz	/	PK	PK
30 MHz – 1000 MHz	/	/	120 kHz	QP	QP
	120 kHz	500 kHz	/	PK	PK
Above 1 GHz	Fundamental & Harmonics				
	1MHz	3 MHz	/	PK	PK
	Average Emission Level=Peak Emission Level+20*log(Duty cycle)				
	Band Edge & Other Emissions				
	1MHz	3 MHz	/	PK	PK
	1MHz	≥10 Hz	/	PK	Average

For Duty cycle measurement:

Use the duty cycle factor correction factor method per 15.35(c).
Duty cycle=On time/100milliseconds, On time=N1*L1+N2*L2+…Nn-1*Ln-1+Nn*Ln,
Where N1 is number of type 1 pulses, L1 is length of type 1 pulse, etc.

Test Procedure

Maximizing procedure was performed on the highest emissions to ensure that the EUT complied with all installation combinations.

The EUT is set 3 meter away from the testing antenna, which is varied from 1-4 meter, and the EUT is placed on a turntable, which is 0.8 meter above ground plane for below 1GHz or 1.5 meter for above 1GHz, the table shall be rotated for 360 degrees to find out the highest emission. The receiving antenna should be changed the polarization both of horizontal and vertical.

All final data was recorded in Quasi-peak detection mode except for the frequency bands 9–90 kHz, 110–490 kHz and above 1000 MHz, average detection modes for frequency bands 9–90 kHz and 110–490 kHz, peak and average detection modes for frequencies above 1 GHz.

For 9 kHz-30MHz, the report shall list the six emissions with the smallest margin relative to the limit, for each of the three antenna orientations (parallel, perpendicular, and ground-parallel) unless the margin is greater than 20 dB.

All emissions under the average limit and under the noise floor have not recorded in the report.

Factor & Over Limit/Margin Calculation

The Factor is calculated by adding the Antenna Factor and Cable Loss, and subtracting the Amplifier Gain. The basic equation is as follows:

Factor = Antenna Factor + Cable Loss - Amplifier Gain

The "**Over Limit/Margin**" column of the following data tables indicates the degree of compliance with the applicable limit. For example, an Over Limit/margin of -7dB means the emission is 7dB below the limit. The equation for calculation is as follows:

Over Limit = Level – Limit; Margin = Limit–Corrected Amplitude
Level / Corrected Amplitude = Read Level + Factor

Test Data

Environmental Conditions

Temperature:	23.5~23.7 °C
Relative Humidity:	53~59 %
ATM Pressure:	100.2~101.2 kPa

The testing was performed by Anson Su on 2026-07-28 for below 1GHz and Wing K Ji from 2026-06-26 to 2026-07-27for above 1GHz.

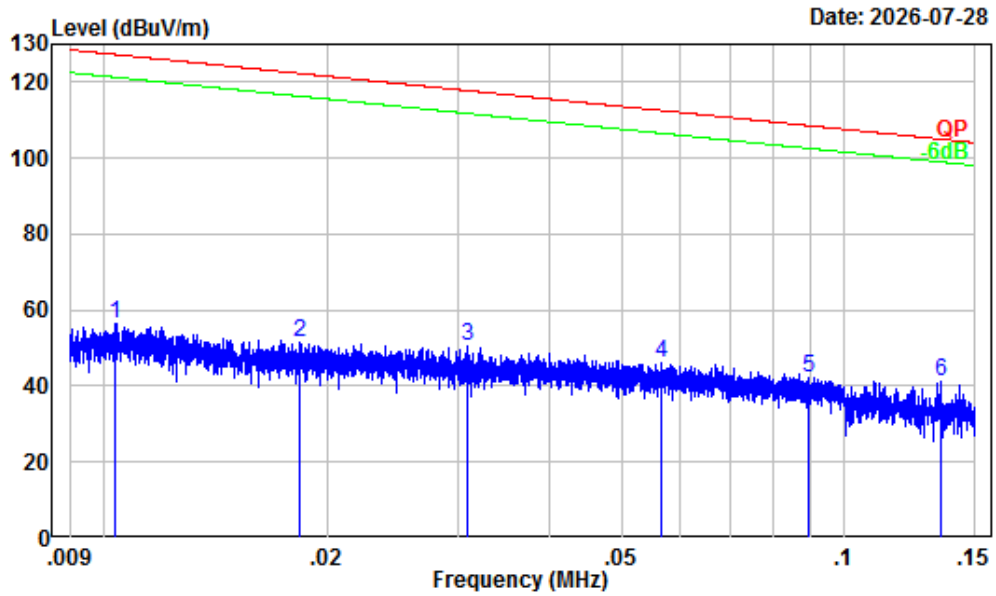
EUT operation mode: Transmitting

Note: Pre-scan in the X, Y and Z axes of orientation, the worst case X-axis of orientation was recorded

9 kHz-30MHz: *(The maximum E-Field strength channel: High Channel was tested.)*

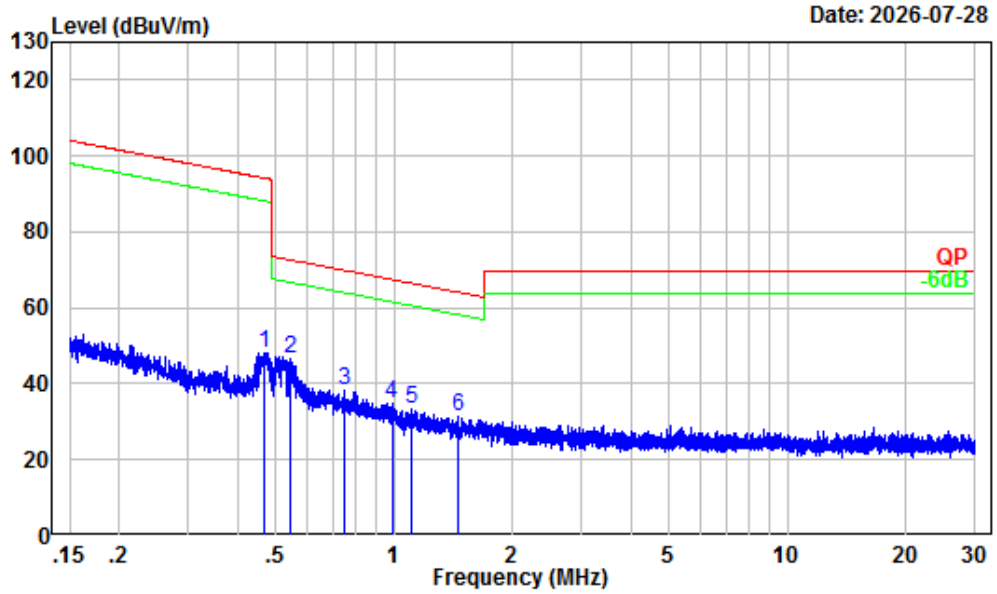
Note: When the test result of peak was less than the limit of QP/Average more than 6dB, just peak value were recorded.

Parallel (worst case)



Site : Chamber A
Condition : 3m
Project Number : 2601U18172E-RF
Test Mode : Transmitting
Detector: Peak RBW/VBW: 0.3/1kHz
Tester : Anson Su

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	0.010	32.23	24.41	56.64	127.27	-70.63	Peak
2	0.018	30.70	20.82	51.52	122.30	-70.78	Peak
3	0.031	28.39	22.31	50.70	117.77	-67.07	Peak
4	0.056	25.75	20.20	45.95	112.57	-66.62	Peak
5	0.089	22.74	19.65	42.39	108.57	-66.18	Peak
6	0.135	19.95	21.23	41.18	105.02	-63.84	Peak



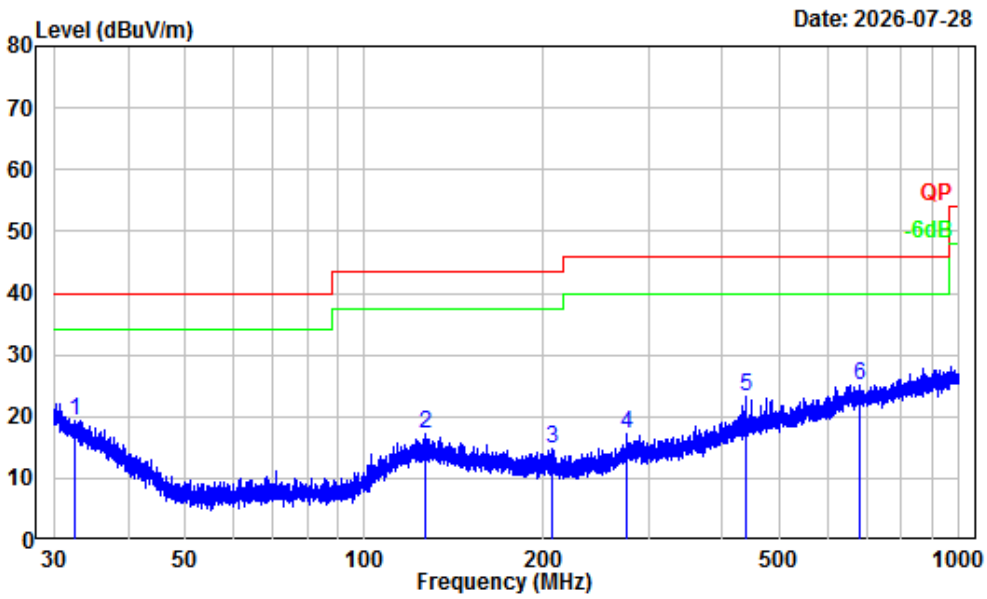
Site : Chamber A
Condition : 3m
Project Number : 2601U18172E-RF
Test Mode : Transmitting
Detector: Peak RBW/VBW: 10/30kHz
Tester : Anson Su

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	0.470	6.97	41.15	48.12	94.16	-46.04	Peak
2	0.544	5.86	40.76	46.62	72.88	-26.26	Peak
3	0.751	3.31	35.16	38.47	70.01	-31.54	Peak
4	0.988	1.29	33.39	34.68	67.58	-32.90	Peak
5	1.112	0.89	32.67	33.56	66.53	-32.97	Peak
6	1.454	-0.07	31.26	31.19	64.15	-32.96	Peak

30MHz-1GHz: *(The maximum E-Field strength channel: High Channel was tested.)*

Note: When the test result of peak was less than the limit of QP/Average more than 6dB, just peak value were recorded.

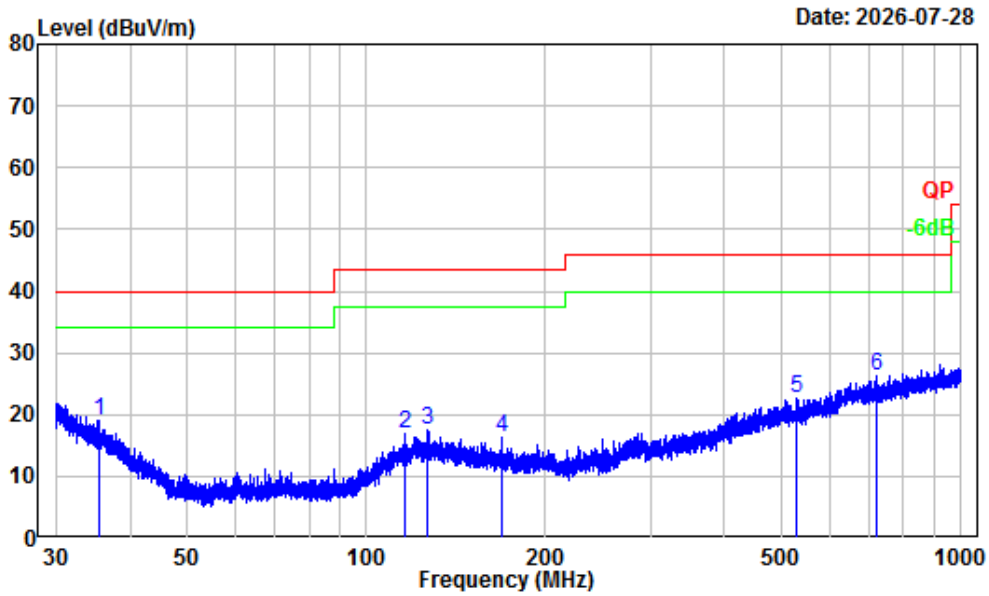
Horizontal



Site : Chamber A
Condition : 3m Horizontal
Project Number : 2601U18172E-RF
Test Mode : Transmitting
Detector: Peak RBW/VBW: 120/500kHz
Tester : Anson Su

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	32.61	-7.16	26.55	19.39	40.00	-20.61	Peak
2	126.44	-11.12	28.42	17.30	43.50	-26.20	Peak
3	206.67	-13.52	28.43	14.91	43.50	-28.59	Peak
4	276.00	-11.24	28.44	17.20	46.00	-28.80	Peak
5	438.46	-7.41	30.73	23.32	46.00	-22.68	Peak
6	680.85	-3.31	28.37	25.06	46.00	-20.94	Peak

Vertical



Site : Chamber A
Condition : 3m Vertical
Project Number : 2601U18172E-RF
Test Mode : Transmitting
Detector: Peak RBW/VBW: 120/500kHz
Tester : Anson Su

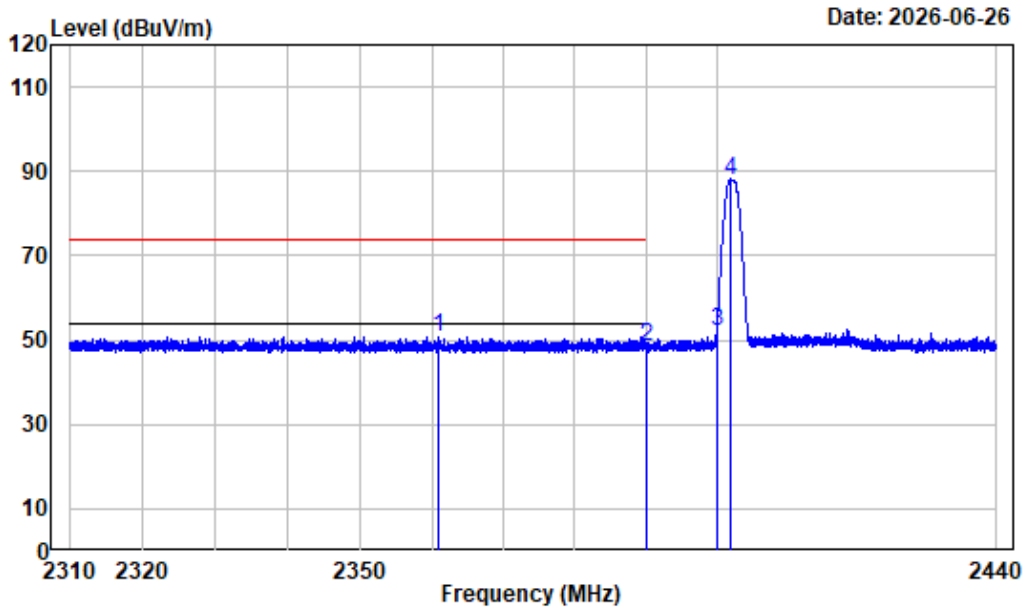
	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	35.42	-8.91	28.03	19.12	40.00	-20.88	Peak
2	115.67	-12.01	28.82	16.81	43.50	-26.69	Peak
3	126.88	-11.12	28.52	17.40	43.50	-26.10	Peak
4	169.30	-12.99	29.41	16.42	43.50	-27.08	Peak
5	527.09	-5.90	28.65	22.75	46.00	-23.25	Peak
6	722.99	-3.21	29.37	26.16	46.00	-19.84	Peak

Above 1GHz:

Fundamental and Band Edge Measurements (Radiated):

Note: The test result of peak was less than the limit of average, so just peak values were recorded.

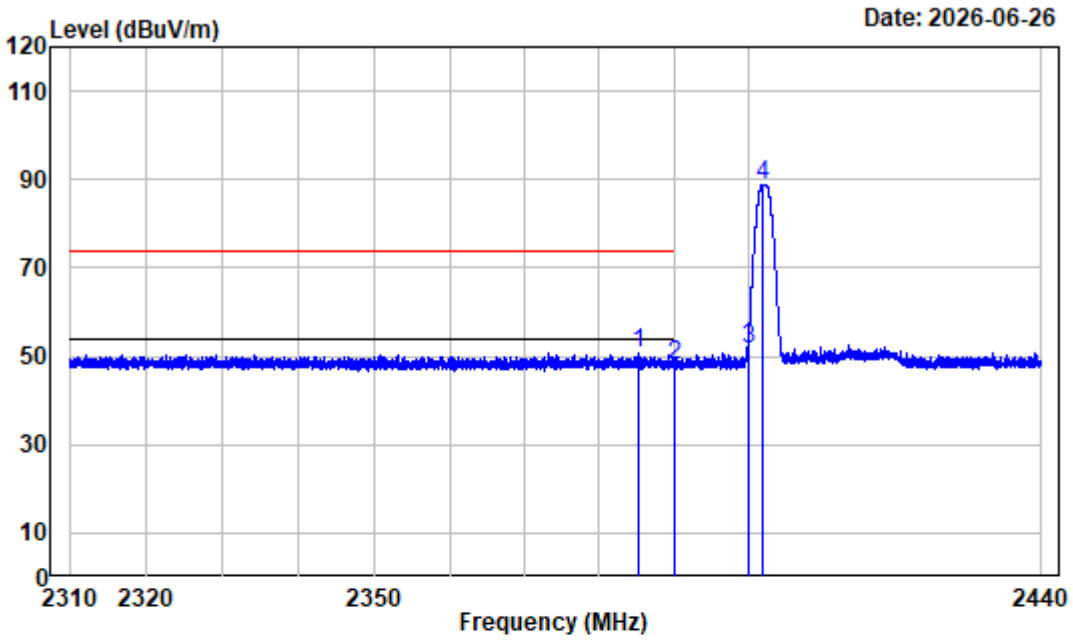
Test Channel:	2402MHz	Ant. Polar. :	Horizontal



Condition : Horizontal
Project No. : 2601U18172E-RF
Tester : Wing K Ji
Spectrum setting: Peak reading:RBW:1MHz VBW:3MHz Detector:Peak
Note : SRD_2402

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	2360.781	-10.91	61.83	50.92	74.00	-23.08	Peak
2	2390.000	-10.97	59.34	48.37	74.00	-25.63	Peak
3	2400.000	-10.99	63.18	52.19	74.00	-21.81	Peak
4	2402.000	-10.99	99.06	88.07	114.00	-25.93	Peak

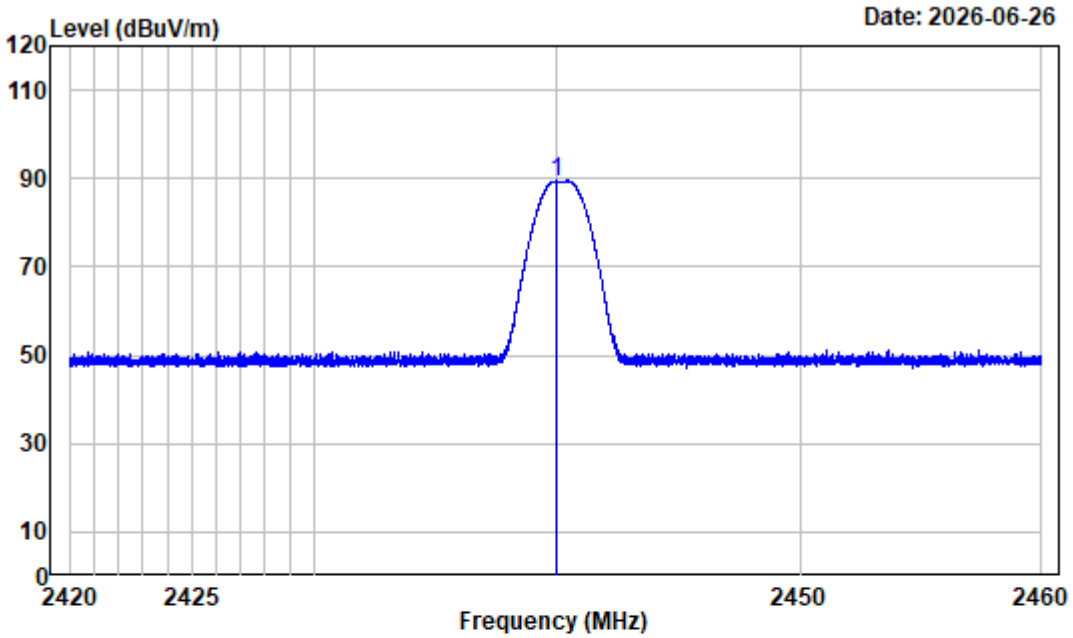
Test Channel:	2402MHz	Ant. Polar. :	Vertical



Condition : Vertical
Project No. : 2601U18172E-RF
Tester : Wing K Ji
Spectrum setting: Peak reading:RBW:1MHz VBW:3MHz Detector:Peak
Note : SRD_2402

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	2385.335	-10.96	61.87	50.91	74.00	-23.09	Peak
2	2390.000	-10.97	58.89	47.92	74.00	-26.08	Peak
3	2400.000	-10.99	62.79	51.80	74.00	-22.20	Peak
4	2402.000	-10.99	99.66	88.67	114.00	-25.33	Peak

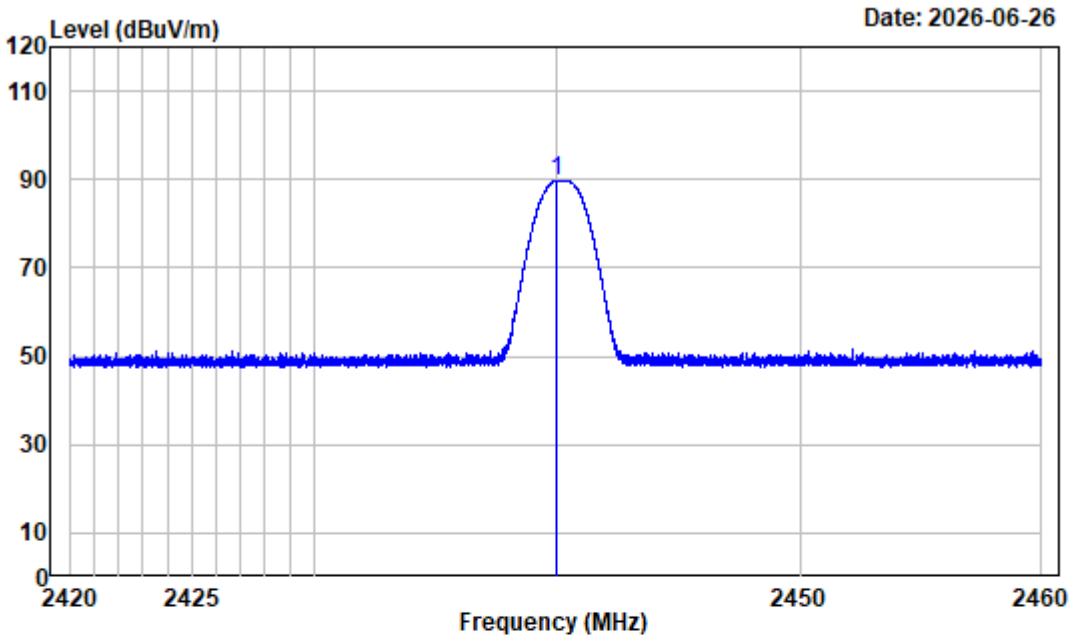
Test Channel:	2440MHz	Ant. Polar. :	Horizontal



Condition : Horizontal
Project No. : 2601U18172E-RF
Tester : Wing K Ji
Spectrum setting: Peak reading:RBW:1MHz VBW:3MHz Detector:Peak
Note : SRD_2440

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	2440.000	-10.90	100.27	89.37	114.00	-24.63	Peak

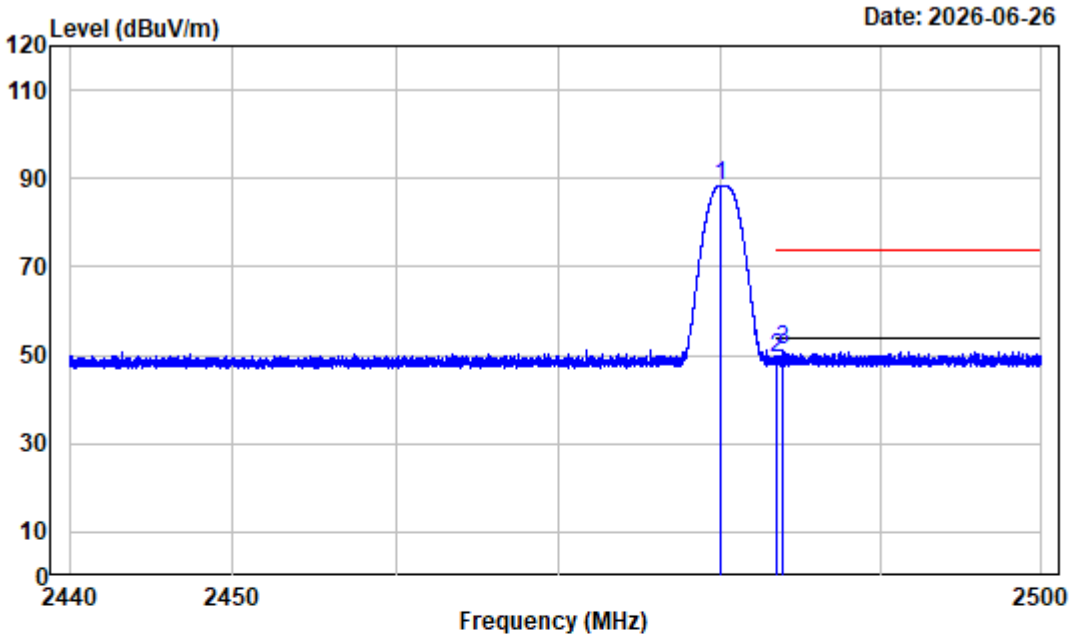
Test Channel:	2440MHz	Ant. Polar. :	Vertical



Condition : Vertical
Project No. : 2601U18172E-RF
Tester : Wing K Ji
Spectrum setting: Peak reading:RBW:1MHz VBW:3MHz Detector:Peak
Note : SRD_2440

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	2440.000	-10.90	100.48	89.58	114.00	-24.42	Peak

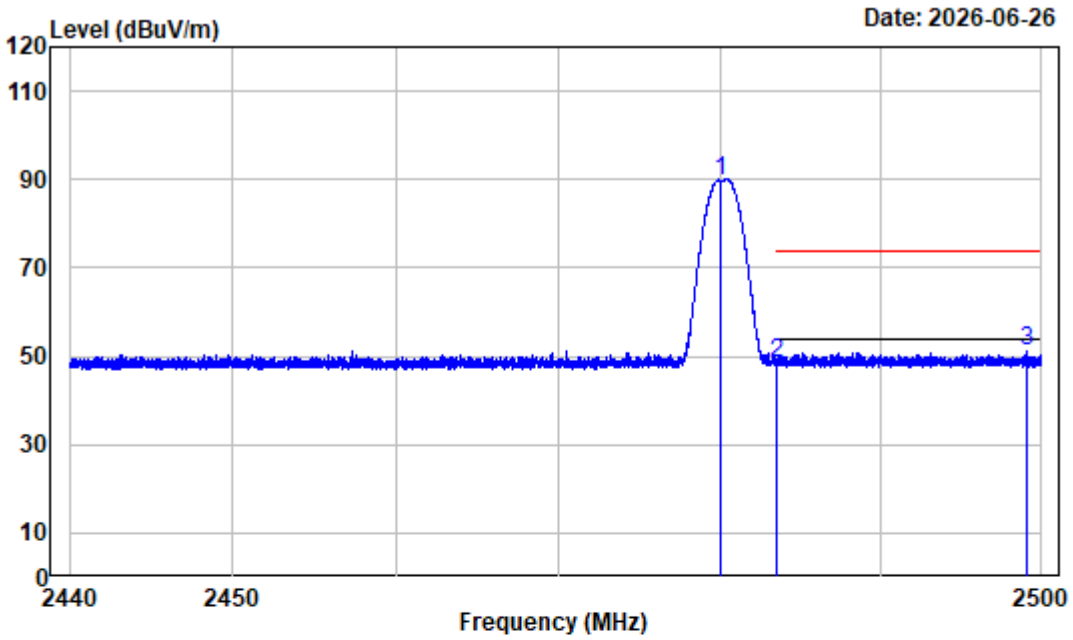
Test Channel:	2480MHz	Ant. Polar. :	Horizontal



Condition : Horizontal
Project No. : 2601U18172E-RF
Tester : Wing K Ji
Spectrum setting: Peak reading:RBW:1MHz VBW:3MHz Detector:Peak
Note : SRD_2480

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	2480.000	-10.92	99.10	88.18	114.00	-25.82	Peak
2	2483.500	-10.93	60.33	49.40	74.00	-24.60	Peak
3	2483.905	-10.93	62.05	51.12	74.00	-22.88	Peak

Test Channel:	2480MHz	Ant. Polar. :	Vertical



Condition : Vertical
Project No. : 2601U18172E-RF
Tester : Wing K Ji
Spectrum setting: Peak reading:RBW:1MHz VBW:3MHz Detector:Peak
Note : SRD_2480

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	2480.000	-10.92	100.77	89.85	114.00	-24.15	Peak
2	2483.500	-10.93	59.33	48.40	74.00	-25.60	Peak
3	2499.040	-10.95	61.96	51.01	74.00	-22.99	Peak

Harmonics and Other Emissions (1-25GHz):

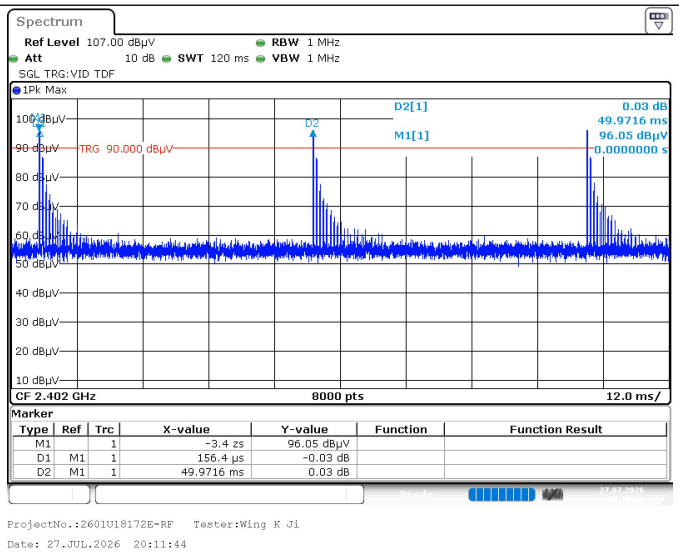
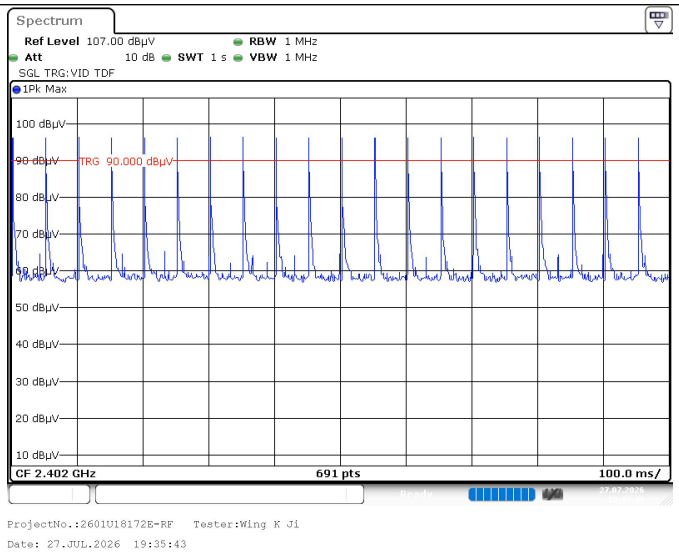
Frequency (MHz)	Reading (dBµV)	PK/AV	Polar (H/V)	Factor (dB/m)	Absolute Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)
Low Channel							
4804.00	66.73	PK	H	-7.83	58.90	74	-15.10
4804.00	69.54	PK	V	-7.83	61.71	74	-12.29
Middle Channel							
4880.00	66.63	PK	H	-7.67	58.96	74	-15.04
4880.00	72.05	PK	V	-7.67	64.38	74	-9.62
High Channel							
4960.00	67.10	PK	H	-7.57	59.53	74	-14.47
4960.00	72.48	PK	V	-7.57	64.91	74	-9.09

Note:
Factor = Antenna factor (RX) + Cable Loss – Amplifier Factor
Absolute Level = Factor + Reading
Margin = Absolute Level - Limit
The other spurious emission which is 20dB to the limit or in noise floor level was not recorded.
The parameters of the Multiplex Switch Test Control Set are added to the reading results by adding the TDF to the spectrum analyzer.

Field Strength of Average							
Frequency (MHz)	Peak Measurement @3m (dBµV/m)	Polar (H/V)	Duty Cycle Correction Factor (dB)	Corrected Amplitude (dBµV/m)	FCC Part 15.249		
					Limit (dBµV/m)	Margin (dB)	Comment
Low Channel							
4804.00	58.90	H	-50.17	8.73	54	-45.27	Harmonic
4804.00	61.71	V	-50.17	11.54	54	-42.46	Harmonic
Middle Channel							
4880.00	58.96	H	-50.17	8.79	54	-45.21	Harmonic
4880.00	64.38	V	-50.17	14.21	54	-39.79	Harmonic
High Channel							
4960.00	59.53	H	-50.17	9.36	54	-44.64	Harmonic
4960.00	64.91	V	-50.17	14.74	54	-39.26	Harmonic

Note:
Corrected. Amplitude = Peak level+ Duty Cycle Corrected Factor
Margin = Corrected. Amplitude - Limit

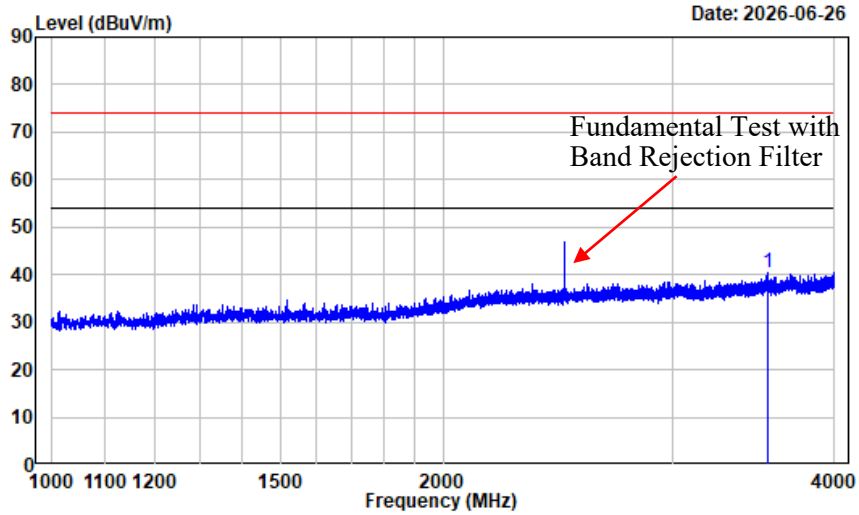
Duty cycle (worst case)
Ton =0.1564ms
Tp = 49.9716ms
Duty cycle = Ton/Tp = 0.1564/49.9716=0.0031
Duty Cycle Corrected Factor = 20lg (Duty cycle) = 20lg0.0031= -50.17

Duty Cycle (120ms)	
Duty Cycle (1s)	

Listed with the worst case test plot:

Horizontal

1-4GHz

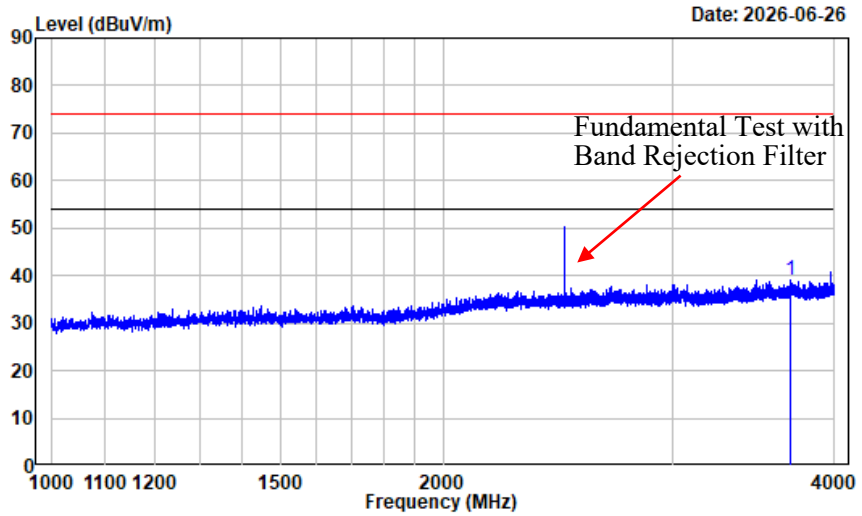



```
Condition        : Horizontal
Project No.      : 2601U18172E-RF
Tester           : Wing K Ji
Spectrum setting: Peak reading:RBW:1MHz VBW:3MHz Detector:Peak
Note             : SRD_2480
```

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	3558.250	-9.01	49.43	40.42	74.00	-33.58	Peak

Vertical

1-4GHz

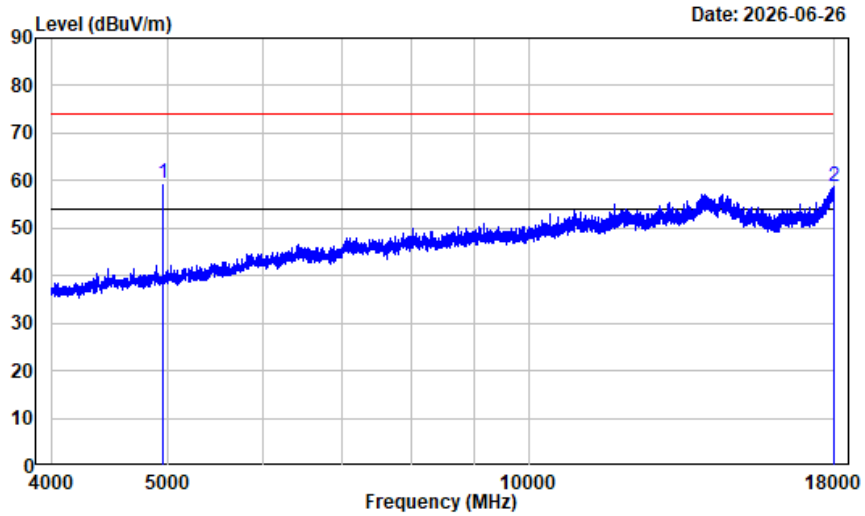



```
Condition        : Vertical
Project No.      : 2601U18172E-RF
Tester           : Wing K Ji
Spectrum setting: Peak reading:RBW:1MHz VBW:3MHz Detector:Peak
Note             : SRD_2480
```

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	3697.000	-9.50	48.40	38.90	74.00	-35.10	Peak

Horizontal_Peak

4-18GHz

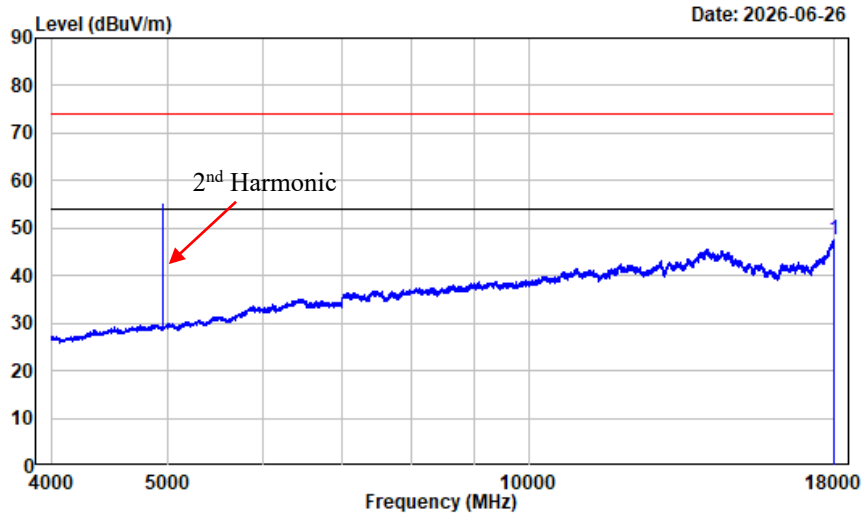



```
Condition        : Horizontal
Project No.      : 2601U18172E-RF
Tester           : Wing K Ji
Spectrum setting: Peak reading:RBW:1MHz VBW:3MHz Detector:Peak
Note             : SRD_2480
```

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	4960.000	-7.57	67.10	59.53	74.00	-14.47	Peak
2	17980.750	9.48	49.40	58.88	74.00	-15.12	Peak

Horizontal_Average

4-18GHz

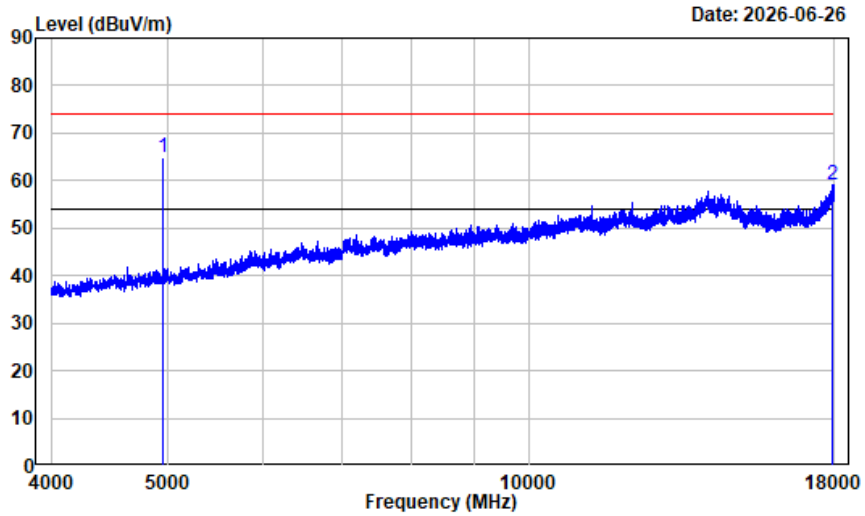



```
Condition        : Horizontal
Project No.      : 2601U18172E-RF
Tester           : Wing K Ji
Spectrum setting: Average reading:RBW:1MHz VBW:10kHz Detector:Peak
Note             : SRD_2480
```

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	17995.480	9.56	38.13	47.69	54.00	-6.31	Average

Vertical_Peak

4-18GHz

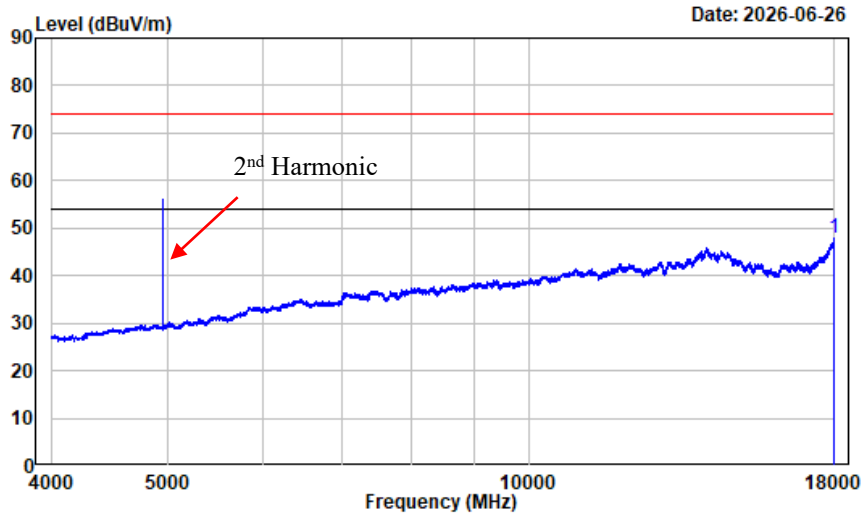



```
Condition        : Vertical
Project No.      : 2601U18172E-RF
Tester           : Wing K Ji
Spectrum setting: Peak reading:RBW:1MHz VBW:3MHz Detector:Peak
Note             : SRD_2480
```

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	4960.000	-7.57	72.48	64.91	74.00	-9.09	Peak
2	17916.000	9.16	49.99	59.15	74.00	-14.85	Peak

Vertical_Average

4-18GHz

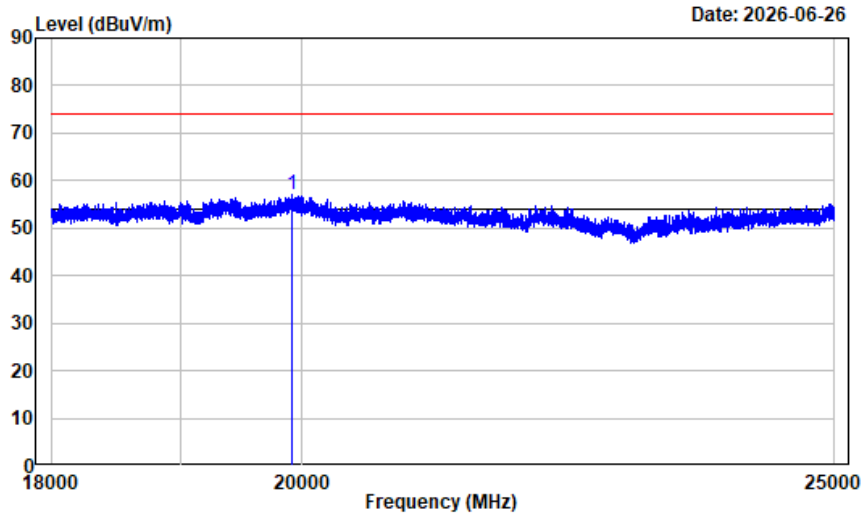



```
Condition        : Vertical
Project No.      : 2601U18172E-RF
Tester           : Wing K Ji
Spectrum setting: Average reading:RBW:1MHz VBW:10kHz Detector:Peak
Note             : SRD_2480
```

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	17994.750	9.53	38.37	47.90	54.00	-6.10	Average

Horizontal_Peak

18-25GHz

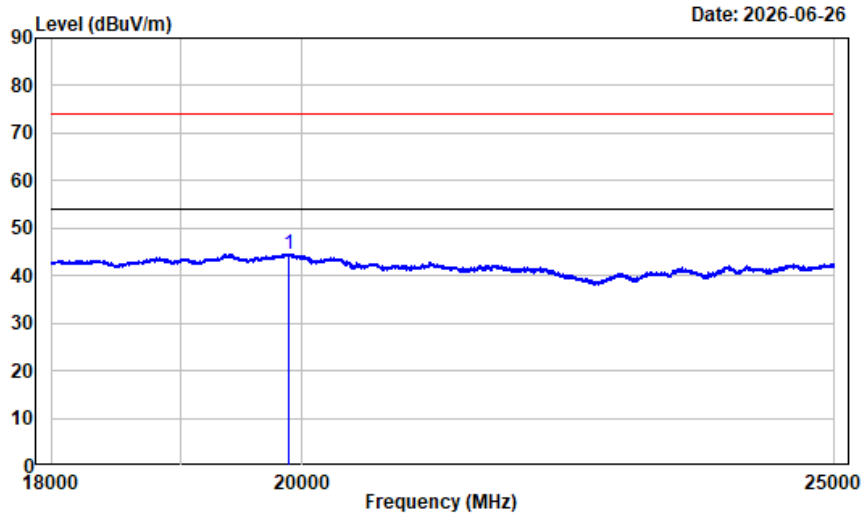



```
Condition        : Horizontal
Project No.      : 2601U18172E-RF
Tester           : Wing K Ji
Spectrum setting: Peak reading:RBW:1MHz VBW:3MHz Detector:Peak
Note             : SRD_2480
```

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	19911.880	17.80	39.22	57.02	74.00	-16.98	Peak

Horizontal_Average

18-25GHz

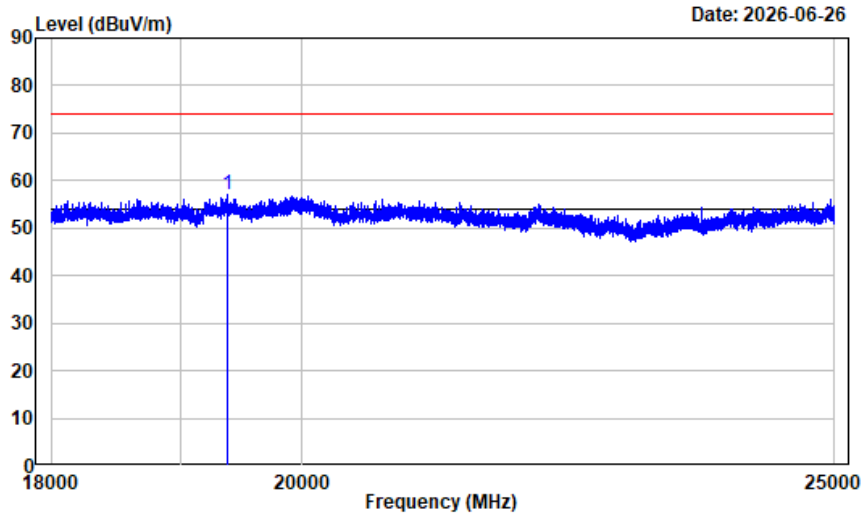



```
Condition        : Horizontal
Project No.      : 2601U18172E-RF
Tester           : Wing K Ji
Spectrum setting: Average reading:RBW:1MHz VBW:10kHz Detector:Peak
Note             : SRD_2480
```

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	19889.130	17.78	26.87	44.65	54.00	-9.35	Average

Vertical_Peak

18-25GHz

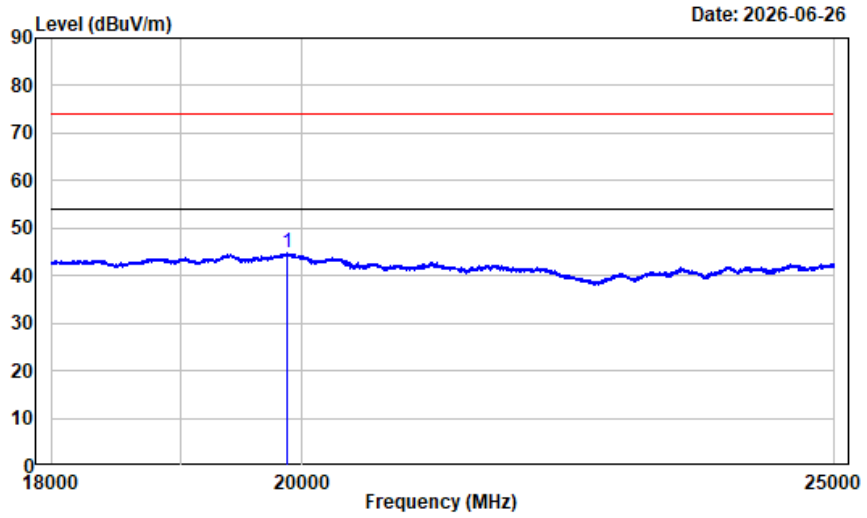



```
Condition        : Vertical
Project No.      : 2601U18172E-RF
Tester           : Wing K Ji
Spectrum setting: Peak reading:RBW:1MHz VBW:3MHz Detector:Peak
Note             : SRD_2480
```

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	19384.250	17.30	39.87	57.17	74.00	-16.83	Peak

Vertical_Average

18-25GHz




```
Condition        : Vertical
Project No.      : 2601U18172E-RF
Tester           : Wing K Ji
Spectrum setting: Average reading:RBW:1MHz VBW:10kHz Detector:Peak
Note             : SRD_2480
```

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	19869.000	17.77	26.98	44.75	54.00	-9.25	Average

FCC§15.215(c) - 20dB EMISSION BANDWIDTH

Applicable Standard

Intentional radiators operating under the alternative provisions to the general emission limits, as contained in § 15.217 through 15.257 and in Subpart E of this part, must be designed to ensure that the 20 dB bandwidth of the emission, or whatever bandwidth may otherwise be specified in the specific rule section under which the equipment operates, is contained within the frequency band designated in the rule section under which the equipment is operated.

Test Procedure

Test Method: ANSI C63.10-2020 Clause 6.9.2

a) The spectrum analyzer center frequency is set to the nominal EUT channel center frequency. The span range for the EMI receiver or spectrum analyzer shall be between two times and five times the OBW.

b) The nominal IF filter bandwidth (3 dB RBW) shall be in the range of 1% to 5% of the OBW and video bandwidth (VBW) shall be at least three times RBW, unless otherwise specified by the applicable requirement.

c) Set the reference level of the instrument as required, keeping the signal from exceeding the maximum input mixer level for linear operation. In general, the peak of the spectral envelope shall be more than [10 log (OBW/RBW)] below the reference level. Specific guidance is given in 4.1.6.2.

d) Steps a) through c) might require iteration to adjust within the specified tolerances.

e) The dynamic range of the instrument at the selected RBW shall be more than 10 dB below the target "−xx dB down" requirement; that is, if the requirement calls for measuring the −20 dB OBW, the instrument noise floor at the selected RBW shall be at least 30 dB below the reference value.

f) Set detection mode to peak and trace mode to max-hold.

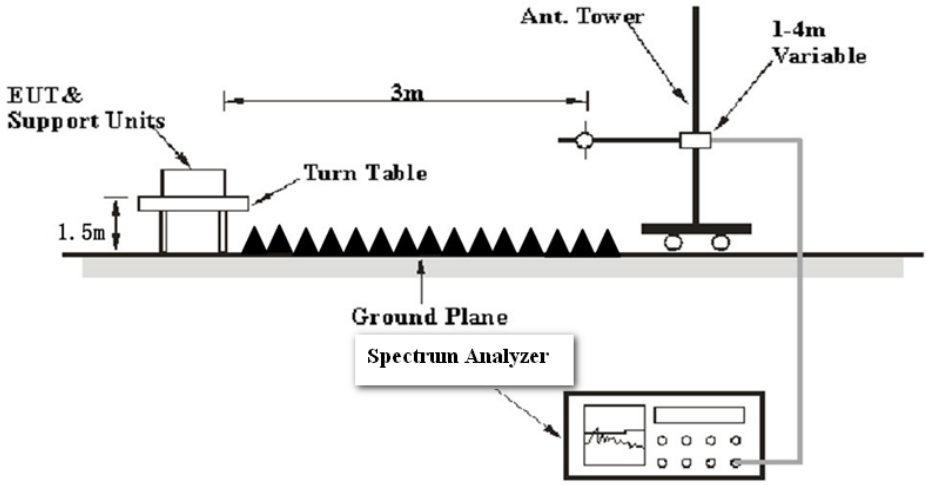
g) Determine the reference value: Set the EUT to transmit an unmodulated carrier or modulated signal, as applicable. Allow the trace to stabilize. Set the spectrum analyzer marker to the highest level of the displayed trace (this is the reference value).

h) Determine the "−xx dB down amplitude" using [(reference value) - xx]. Alternatively, this calculation may be made by using the marker-delta function of the instrument.

i) If the reference value is determined by an unmodulated carrier, then turn the EUT modulation ON, and either clear the existing trace or start a new trace on the spectrum analyzer and allow the new trace to stabilize. Otherwise, the trace from step g) shall be used for step j).

j) Place two markers, one at the lowest frequency and the other at the highest frequency of the envelope of the spectral display, such that each marker is at or slightly below the "−xx dB down amplitude" determined in step h). If a marker is below this "−xx dB down amplitude" value, then it shall be as close as possible to this value. The dBc bandwidth is the frequency difference between the two markers. Alternatively, set a marker at the lowest frequency of the envelope of the spectral display, such that the marker is at or slightly below the "−xx dB down amplitude" determined in step h). Reset the marker-delta function and move the marker to the other side of the emission until the delta marker amplitude is at the same level as the reference marker amplitude. The marker-delta frequency reading at this point is the specified emission bandwidth.

k) The dBc bandwidth shall be reported by providing spectral plot(s) of the measuring instrument display; the plot axes and the scale units per division shall be clearly labeled. Tabular data may be reported in addition to the plot(s).



Test Data

Environmental Conditions

Temperature:	23.7 °C
Relative Humidity:	59 %
ATM Pressure:	101.2 kPa

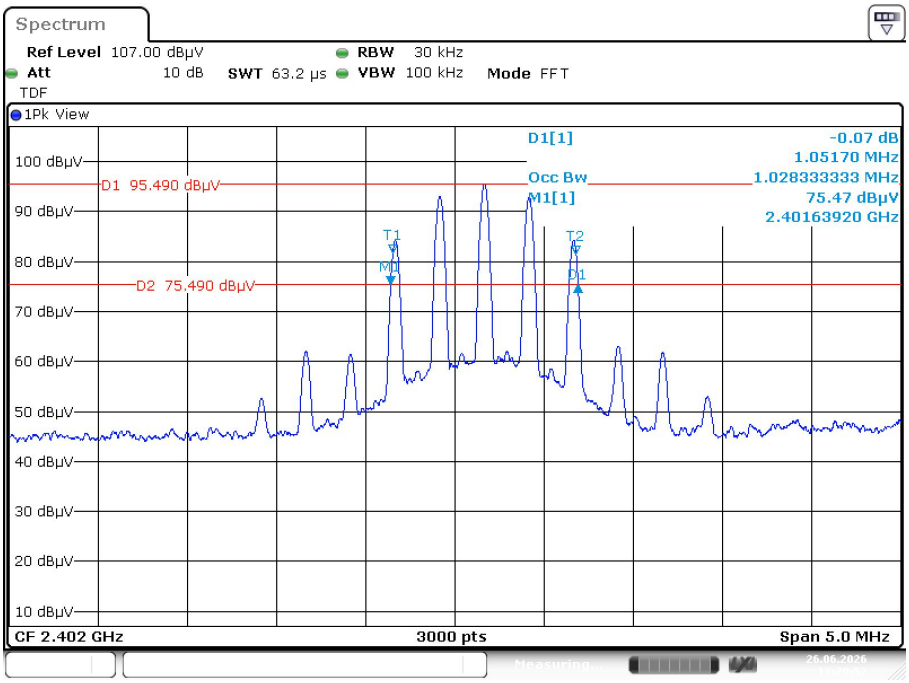
The testing was performed by Wing K Ji on 2026-06-26.

EUT operation mode: Transmitting

Please refer to the following table and plots.

Channel	Frequency (MHz)	20dB Bandwidth (MHz)
Low	2402	1.052
Middle	2440	1.049
High	2480	1.050

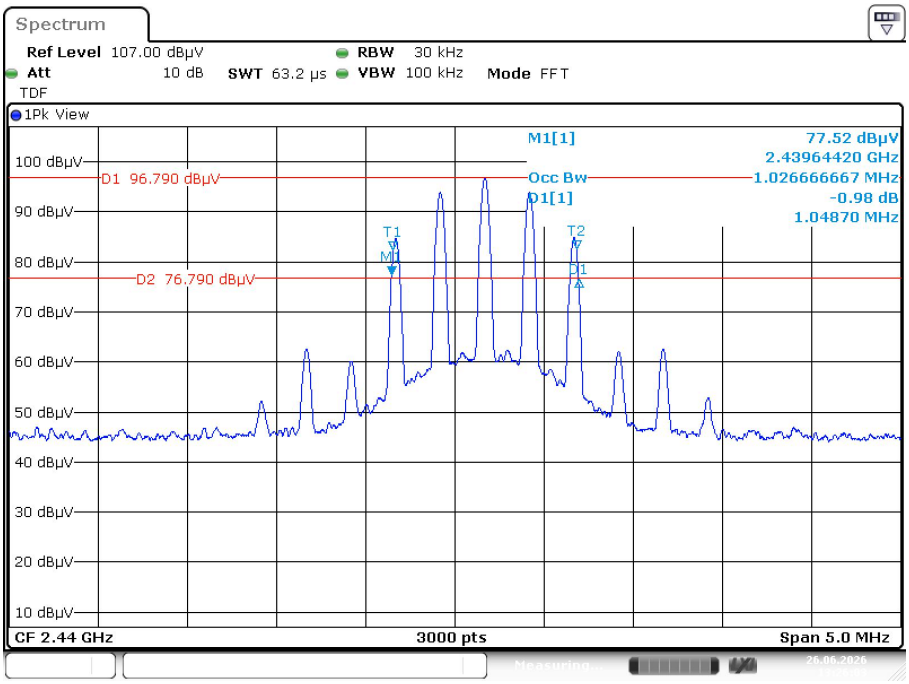
Low channel



ProjectNo.:2601U18172E-RF Tester:Wing K Ji

Date: 26.JUN.2026 13:29:52

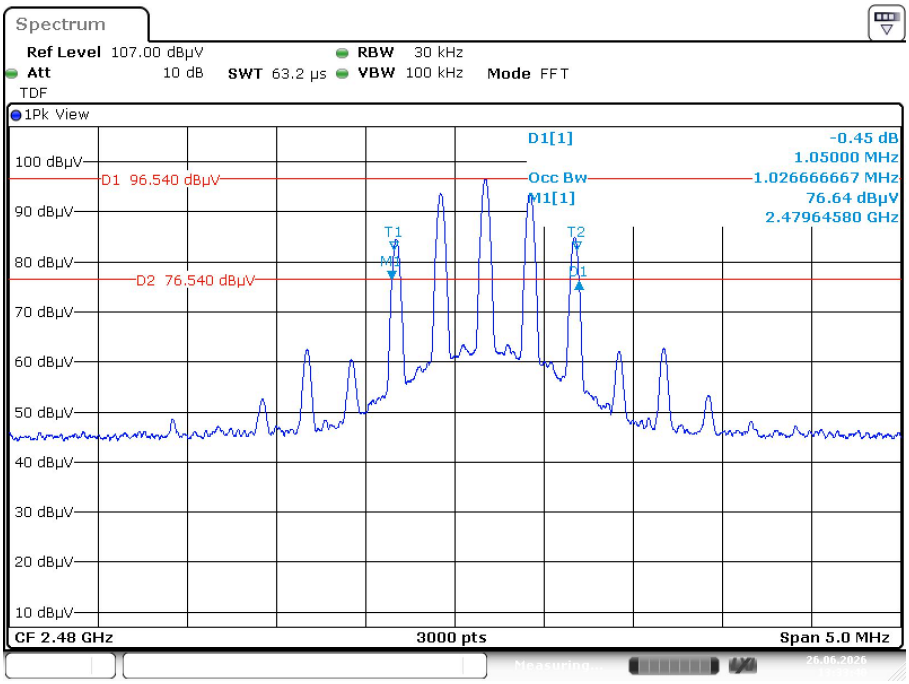
Middle Channel



ProjectNo.:2601U18172E-RF Tester:Wing K Ji

Date: 26.JUN.2026 13:26:04

High Channel



ProjectNo.:2601U18172E-RF Tester:Wing K Ji

Date: 26.JUN.2026 13:33:41

Note: The TDF is the parameter of the Multiplex Switch Test Control Set and does not include the antenna factor, cable loss and amplifier factor.

EUT PHOTOGRAPHS

Please refer to the attachment 2601U18172E-RF-EXP External photo and 2601U18172E-RF-INP Internal photo.

TEST SETUP PHOTOGRAPHS

Please refer to the attachment 2601U18172E-RF-TSP Test Setup photo.

******* END OF REPORT *******