

RADIO TEST REPORT

Product : Radian Wristband

Brand : Parafait

Model Name : PARAWTCH01

FCC ID : G7H-SPRWB01

Test Regulation : FCC 47 CFR Part 15 Subpart C (Section 15.249)

Received Date : 2021/5/27

Test Date : 2023/2/23 ~ 2023/3/9

Issued Date : 2023/10/17

Applicant : Semnox Solutions Private Limited
No.4-1-145, 3rd Floor, Punja Building Annexe, M G Road,
Lalbagh, Mangalore, Karnataka, India

Issued By : Underwriters Laboratories Taiwan Co., Ltd.
Building B and Building E, No. 372-7, Sec. 4, Zhongxing
Rd., Zhudong Township, Hsinchu County, Taiwan

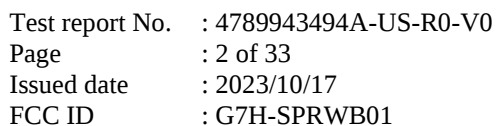


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Doc No: Form-ULID-004738 (DCS:17-EM-F0877) / 5.1



Original Test Report No.: 4789943494A-US-R0-V0

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1. Attestation of Test Results

APPLICANT: Semnox Solutions Private Limited
No.4-1-145, 3rd Floor, Punja Building Annexe, M G Road,
Lalbagh, Mangalore , Karnataka, India

MANUFACTURER: Semnox Solutions Private Limited
No.4-1-145, 3rd Floor, Punja Building Annexe, M G Road,
Lalbagh, Mangalore , Karnataka, India

EUT DESCRIPTION: Radian Wristband

BRAND: Parafait

MODEL: PARAWTCH01

SAMPLE STAGE: Engineering Verification Test sample

DATE of TESTED: 2023/2/23 ~ 2023/3/9

APPLICABLE STANDARDS

STANDARD	Test Results
FCC 47 CFR PART 15 Subpart C (Section 15.249)	PASS

Underwriters Laboratories Taiwan Co., Ltd. tested the above equipment in accordance with the requirements set forth in the above standards. All indications of Pass/Fail in this report are opinions expressed by Underwriters Laboratories Taiwan Co., Ltd. based on interpretations and/or observations of test results. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.

Note: The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein. This document may not be altered or revised in any way unless done so by Underwriters Laboratories Taiwan Co., Ltd. and all revisions are duly noted in the revisions section. Any alteration of this document not carried out by Underwriters Laboratories Taiwan Co., Ltd. will constitute fraud and shall nullify the document. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, any agency of the Federal Government, or any agency of any government.

Prepared By:



Sally Lu
Project Handler

Date : 2023/10/17

Approved and Authorized By:



Eric Lee
Senior Laboratory Engineer

Date : 2023/10/17

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2. Summary of Test Results

FCC Clause	Test Item	Result
15.203	Antenna requirement	PASS
15.207	AC Power Conducted Emission	PASS
15.209 15.249 15.249 (d)	Radiated Emission Test Band Edge Measurement Limit: 50dB less than the peak value of fundamental frequency or meet radiated emission limit in section 15.209	PASS

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3. Test Methodology and Reference Procedures

The tests documented in this report were performed in accordance with 47 CFR FCC Part 2, KDB414788 D01 Radiated Test Site v01r01 and ANSI C63.10-2013.

4. Facilities and Accreditation

Test Location	Underwriters Laboratories Taiwan Co., Ltd.
Address	Building B and Building E, No. 372-7, Sec. 4, Zhongxing Rd., Zhudong Township, Hsinchu County, Taiwan
Accreditation Certificate	Underwriters Laboratories Taiwan Co., Ltd. is accredited by TAF, Laboratory Code 3398.

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5. Measurement Uncertainty

For statement of conformity, accuracy method (Section 8.2.4 and 8.2.5 of ISO Guide 98-4) was applied as decision rule for measurement in this test report.

The following uncertainties have been calculated to provide a confidence level of 95 % using a coverage factor $k=2$.

Determining compliance based on the results of the compliance measurement, not considering measurement instrumentation uncertainty.

Measurement	Frequency	Uncertainty
Conducted disturbance at mains terminals ports	150kHz ~ 30MHz	± 2.9 dB
RF Conducted	9 kHz - 40GHz	± 2.4 dB
Radiated disturbance below 30MHz	9 kHz - 30 MHz	± 1.9 dB
Radiated disturbance below 1 GHz	30MHz ~ 1GHz	± 5.8 dB
Radiated disturbance above 1 GHz	1GHz ~ 40GHz	± 4.8 dB

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6. Equipment under Test

6.1. Description of EUT

Product	Radian Wristband
Brand	Parafait
Model Name	PARAWTCH01
Operating Frequency	915.3 ~ 917.7 MHz
Modulation	GFSK
Normal Voltage	3.7Vdc From Battery 5Vdc From Host
Sample ID	Radiated Test: 5809012 / 5809014 / 5809016
Maximum Field Strength (dBuV/m)	92.51 dBuV/m

Note:

1. The EUT could be supplied with rechargeable battery as the following table:

Brand Name	Model	Description
Zhongju	ZJ302030P	3.7V, max 4.2V, 140mA

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6.2. Test Condition

Test Item	Test Site No.	Environmental Condition	Input Power	Test Date	Tested by
Radiated Spurious Emission	9662	21~26°C/ 58~65%RH	5Vdc From Host	2023/02/23~ 2023/03/03	Jubo Shen
AC power Line Conducted Emission	SR1	21~26°C/ 58~65%RH	5Vdc From Host	2023/03/06~ 2023/03/09	Jubo Shen

FCC Test Firm Registration Number: 498077

Sample Calculation:

Radiated Spurious Emission:

- Where relevant, the follow sample calculation is provided:
Result Value (dBuV/m) = Reading Value (dBuV) + Correction Factor (dB/m).
Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Loss (dB) - Preamp Factor (dB).
Example: Result Value (34.5dBuV/m) = Reading Value (40.1dBuV) + Antenna Factor (18.7dB/m)
+ Cable Loss (4.2dB) - Preamp Factor (28.5dB).

AC power Line Conducted Emission:

- Where relevant, the follow sample calculation is provided:
Result Value (dBuV) = Reading Value (dBuV) + Correction Factor (dB).
Correction Factor (dB) = Insertion loss(dB) + Cable loss(dB).
Example: Result Value (53.7dBuV) = Reading Value (35.1dBuV) + Insertion loss(18.1dB) + Cable loss(0.5dB).

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6.3. Channel List

13 channels are provided to this EUT:

Channel	Frequency (MHz)	Channel	Frequency (MHz)
0	915.3	7	916.7
1	915.5	8	916.9
2	915.7	9	917.1
3	915.9	10	917.3
4	916.1	11	917.5
5	916.3	12	917.7
6	916.5	-	-

6.4. Duty Cycle

Mode	TX on (ms)	TX on+off (ms)	DutyCycle (%)	Duty Factor (dB)	1/T minimum VBW (kHz)
GFSK	19.500	100.000	19.50%	7.10	0.051

Duty Cycle Correction Factor = -14.2 dB
AVG= Peak + duty cycle correction factor
AVG= Peak -14.2 dB

6.5. Description of Available Antennas

Ant. No.	Transmitter Circuit	Brand Name	Model Name	Ant. Type	Maximum Gain (dBi)
1	Chain (0)	N/A	N/A	PIFA	0.6

*The above antenna information was provided from customer and for more detailed features description, please refer the manufacturer's specification or user's manual, the laboratory shall not be held responsible.

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6.6. Test Mode Applicability and Tested Channel Detail

- The fundamental of the EUT was investigated in three orthogonal axes X-Y/Y-Z/X-Z, it was determined that Y-Z plane was worst-case. Therefore, all final radiated testing was performed with the EUT in Y-Z plane.
- The EUT has two power source types:
 - a). 3.7 Vdc from battery, and
 - b). 3.7 Vdc from battery with 5Vdc from the host,the worst case was 3.7 Vdc from battery with 5Vdc from the host, therefore recorded this test result in this report.
- For below 30MHz testing, investigation was done on three antenna orientations (parallel, perpendicular, and ground-parallel), parallel and perpendicular are the worst orientations, therefore testing was performed on these two orientations only.
- For AC power line conducted emission have performed all modes of operation were investigated and the worst-case emissions are reported.

Test Item	Modulation Type	Available Channel	Test Channel
Radiated Emissions	GFSK	0 to 12	0,6,12
AC Power Line Conducted Emission	GFSK	0 to 12	6

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7. Test Equipment

Test Equipment List					
Equipment	Manufacturer	Model No.	Serial No.	Cal. Date	Expired date
Radiated Spurious Emission					
Spectrum Analyzer	Keysight	N9010A	MY56070834	2022/10/24	2023/10/23
EMI Test Receiver	Rohde & Schwarz	ESR7	101754	2022/12/13	2023/12/12
Loop Antenna	ETS lindgren	6502	00213440	2023/1/4	2024/1/3
Trilog-Broadband Antenna with 5dB Attenuator	Schwarzbeck & EMCI	VULB 9168 & N-6-05	774 & AT-N0538	2023/2/13	2024/2/12
Horn Antenna (1-18 GHz)	Schwarzbeck	BBHA 9120 D	01690	2022/12/21	2023/12/20
Preamplifier (30-1000 MHz)	EMCI	EMC330E	980405	2022/6/7	2023/6/6
Preamplifier (1-18 GHz)	EMCI	EMC051835BE	980406	2023/2/17	2024/2/16
Cables	Hanyitek	K1K50-UP0264-K1K50-2500	170214-4 & 170425-2	2022/12/1	2023/11/30
AC power Line Conducted Emission					
EMI Test Receiver	Rohde & Schwarz	ESR7	101753	2022/11/10	2023/11/9
Two-Line V-Network	Rohde & Schwarz	ENV216	102136	2022/8/29	2023/8/28
Impuls-Begrenzer Pulse Limiter	Rohde & Schwarz	ESH3-Z2	102219-Qt	2022/8/30	2023/8/29
Cables	TITAN	CFD200	T0732ACFD2 0020A300-2	2022/4/9	2023/4/8

UL Software		
Description	Name	Version
Radiated measurement	e3	6.191211 (V6)
AC power Line Conducted Emission	EZ_EMC	UL-3A1.2

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8. Description of Test Setup

Support Equipment

ID	Equipment	Brand Name	Model Name	S/N	Remark
A	Laptop	Lenovo	T460	PC0FWU5Y	Provided by Lab
B	Charge case	NA	PARACS01	NA	Supplied by client
C	Adapter	MERRYING	MKS-0502000	NA	Supplied by client

I/O Cables

ID	Equipment	Brand Name	Model Name	Length (m)	Remark
1	UART to USB cable	NA	NA	2	Supplied by client

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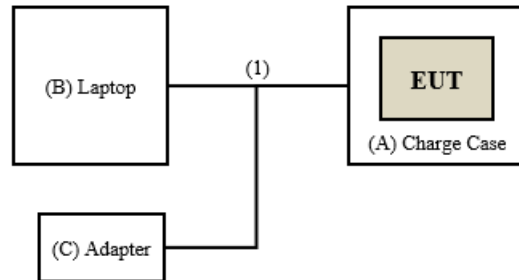
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Test Setup

Controlled using a bespoke application (YAT 2.4.1) on a test Notebook. The application was used to enable a continuous transmission mode and to select the test channels, data rates, modulation schemes and power setting as required.

Setup Diagram for Test



Under Table

Remote Site

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9. Test Result

9.1. Radiated Spurious Emission

Requirements

The field strength of emissions from intentional radiators operated within these frequency bands shall comply with the following

Fundamental Frequency (MHz)	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 ~ 24.25 GHz	250	2500

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 as below table, whichever is the lesser attenuation

Frequencies (MHz)	Field Strength (microvolts/meter)	Measurement Distance (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

Note :

1. The lower limit shall apply at the transition frequencies.
2. Emission level (dBuV/m) = 20 log Emission level (uV/m).
3. For frequencies above 1000 MHz, the field strength limits are based on average detector, however, the peak field strength of any emission shall not exceed the maximum permitted average limits, specified above by more than 20dB under any condition of modulation.

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Test Procedures

[For 9 kHz ~ 30 MHz]

- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter chamber room. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. Parallel, perpendicular, and ground-parallel orientations of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. For measurement below 30MHz, the initial step in collecting conducted emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured. If the emission level of the EUT measured by the peak detector is 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.

NOTE:

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 9kHz at frequency below 30MHz.

[For above 30 MHz]

- a. The EUT was placed on the top of a rotating table 0.8 meters (for 30MHz ~ 1GHz) / 1.5 meters (for above 1GHz) above the ground at 3 meter chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. The height of antenna is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. For measurement below 1GHz, the initial step in collecting conducted emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured. If the emission level of the EUT measured by the peak detector is 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.
- f. The test-receiver system was set to peak and average detects function and specified bandwidth with maximum hold mode when the test frequency is above 1 GHz. If the peak reading value also meets average limit, measurement with the average detector is unnecessary.

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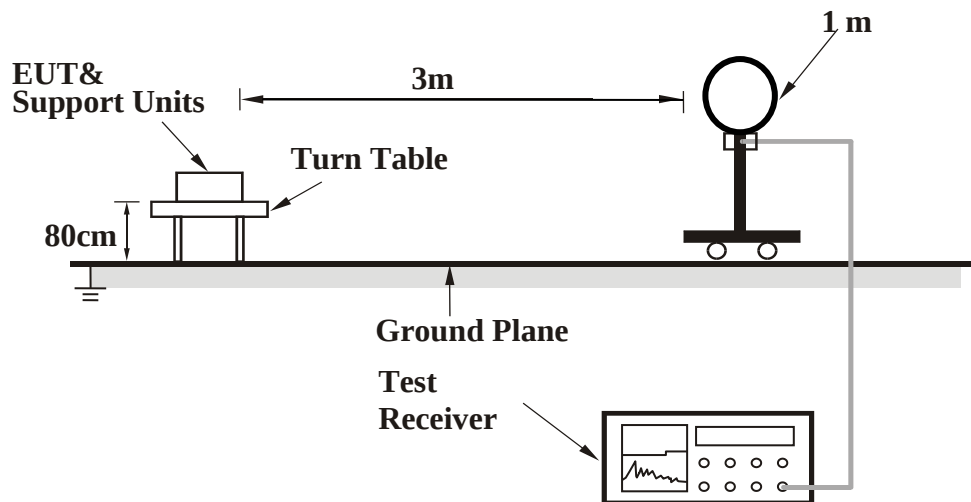
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Note:

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection (QP) at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) at frequency above 1GHz.
3. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is $\geq 1/T$ (Duty cycle $< 98\%$) or 10Hz (Duty cycle $\geq 98\%$) for Average detection (AV) at frequency above 1GHz.
4. All modes of operation were investigated (includes all external accessories) and the worst-case emissions are reported, the other emission levels were low against the limit.
5. Test data of Result value (dBuV/m) = Reading value (dBuV/m) + Correction Factor (dB/m).
6. Test data of Margin(dB) = Result value (dBuV/m) - Limit value (dBuV/m).
7. Test data of Correction Factor (dB/m) = Antenna Factor (dBuV/m) + Cable Loss (dB) - Preamp Factor (dB).
8. Test data of Notation "@" = Fundamental Frequency
9. Test data of Notation "*" = The peak result under 20 dB above and complies with AVG limit, AVG result is deemed to comply with AVG limit.

Test Setup

<Frequency Range 9 kHz ~ 30 MHz>

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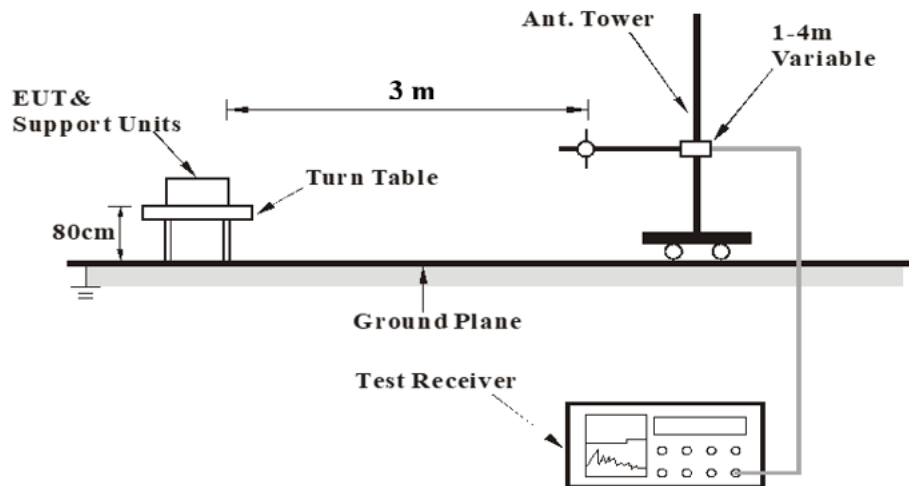
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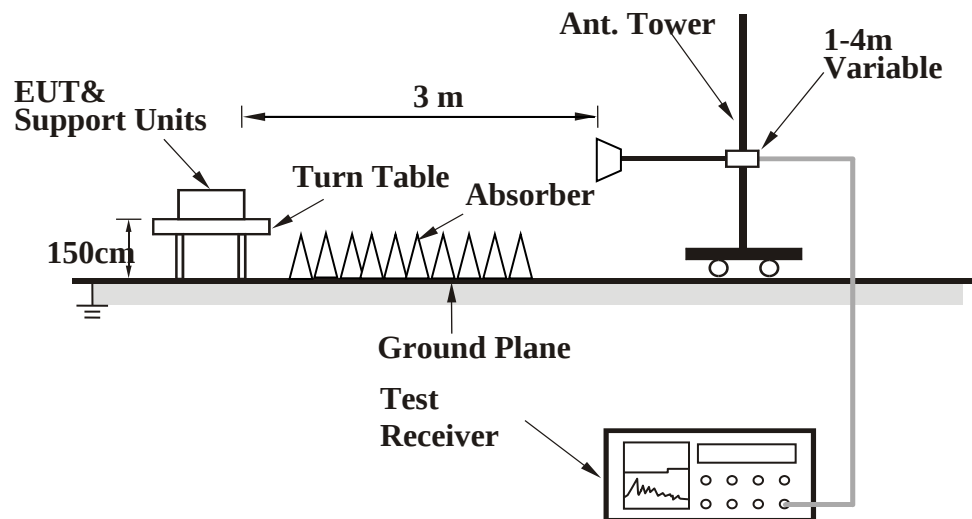
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<Frequency Range 30 MHz ~ 1 GHz >



<Frequency Range above 1 GHz>



For the actual test configuration, please refer to the Setup Configurations.

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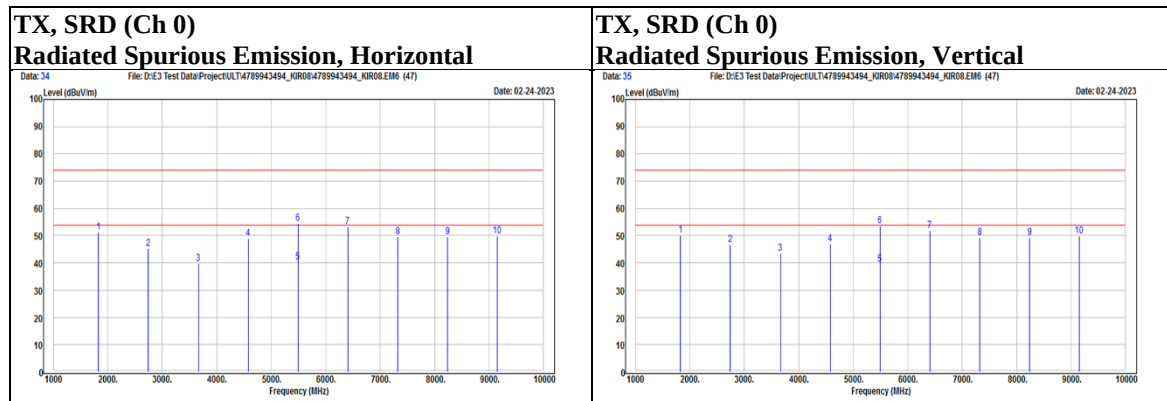
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Test Data

Above 1 GHz

Mode	SRD	Channel	0
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Polarization	Notation	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
Horizontal	*	1830.6	58.97	-7.78	51.19	74	-22.81	PK
	*	2745.9	48.55	-3.44	45.11	74	-28.89	PK
	*	3661.2	40.32	-0.42	39.9	74	-34.1	PK
	*	4576.5	45.02	4.07	49.09	74	-24.91	PK
		5491.8	46.55	8.05	54.6	74	-19.4	PK
		5491.8	32.35	8.05	40.4	54	-13.6	AVG
	*	6407.1	41.6	11.61	53.21	74	-20.79	PK
	*	7322.4	34.53	15	49.53	74	-24.47	PK
	*	8237.7	33.52	16.02	49.54	74	-24.46	PK
Vertical	*	9153	31.94	17.83	49.77	74	-24.23	PK
	*	1830.6	57.89	-7.78	50.11	74	-23.89	PK
	*	2745.9	50.09	-3.44	46.65	74	-27.35	PK
	*	3661.2	43.81	-0.42	43.39	74	-30.61	PK
	*	4576.5	42.9	4.07	46.97	74	-27.03	PK
		5491.8	45.59	8.05	53.64	74	-20.36	PK
		5491.8	31.39	8.05	39.44	54	-14.56	AVG
	*	6407.1	40.14	11.61	51.75	74	-22.25	PK
	*	7322.4	34.18	15	49.18	74	-24.82	PK
	*	8237.7	33.16	16.02	49.18	74	-24.82	PK
	*	9153	32.01	17.83	49.84	74	-24.16	PK

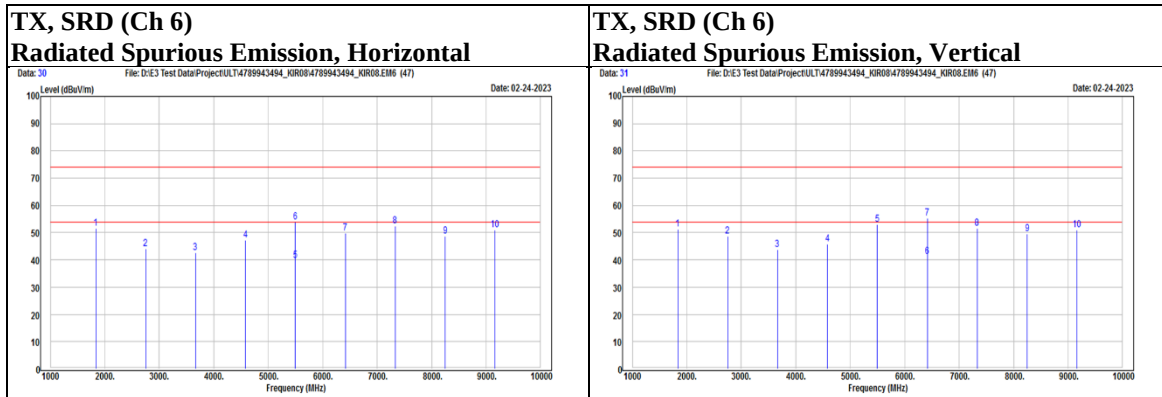


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Mode	SRD	Channel	6
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Polarization	Notation	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
Horizontal	*	1833	59.2	-7.76	51.44	74	-22.56	PK
	*	2749.5	47.46	-3.41	44.05	74	-29.95	PK
	*	3666	42.94	-0.42	42.52	74	-31.48	PK
	*	4582.5	43.24	4.14	47.38	74	-26.62	PK
		5499	45.83	8.07	53.9	74	-20.1	PK
		5499	31.63	8.07	39.7	54	-14.3	AVG
	*	6415.5	38.31	11.65	49.96	74	-24.04	PK
	*	7332	37.52	15.05	52.57	74	-21.43	PK
	*	8248.5	32.55	16.02	48.57	74	-25.43	PK
	*	9165	33.16	17.88	51.04	74	-22.96	PK
Vertical	*	1833	59.07	-7.76	51.31	74	-22.69	PK
	*	2749.5	51.98	-3.41	48.57	74	-25.43	PK
	*	3666	44.14	-0.42	43.72	74	-30.28	PK
	*	4582.5	41.56	4.14	45.7	74	-28.3	PK
	*	5499	45.08	8.07	53.15	74	-20.85	PK
		6415.5	43.71	11.65	55.36	74	-18.64	PK
		6415.5	29.51	11.65	41.16	54	-12.84	AVG
	*	7332	36.68	15.05	51.73	74	-22.27	PK
	*	8248.5	33.42	16.02	49.44	74	-24.56	PK
	*	9165	33.02	17.88	50.9	74	-23.1	PK



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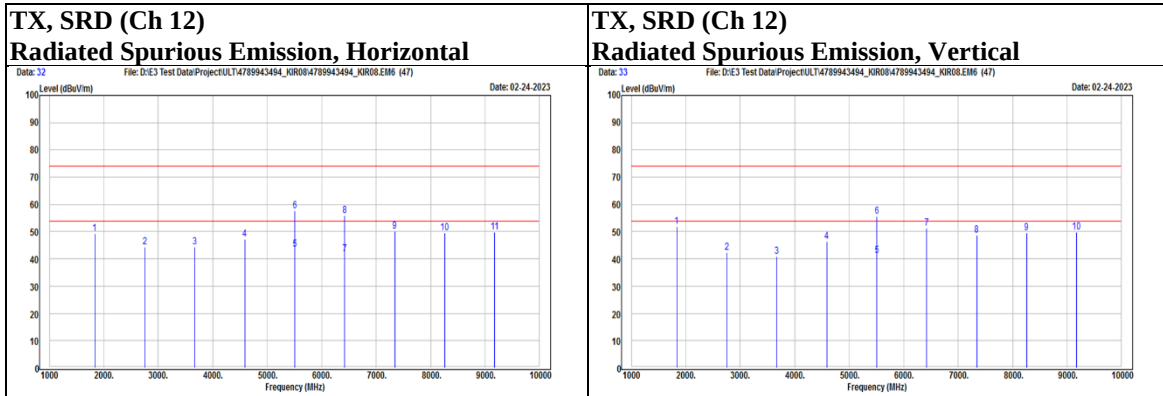
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Mode	SRD	Channel	12
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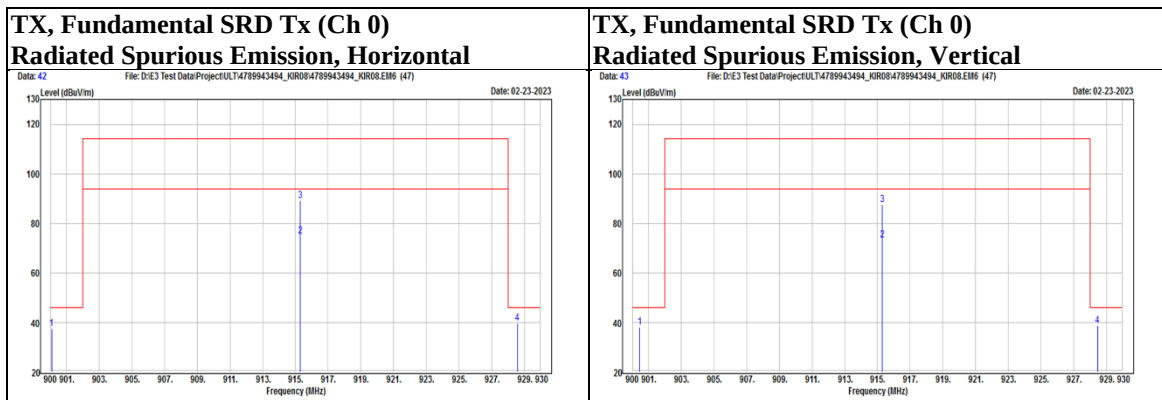
Polarization	Notation	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
Horizontal	*	1835.4	57.07	-7.73	49.34	74	-24.66	PK
	*	2753.1	47.85	-3.4	44.45	74	-29.55	PK
	*	3670.8	44.86	-0.41	44.45	74	-29.55	PK
	*	4588.5	43.15	4.19	47.34	74	-26.66	PK
		5506.2	49.68	8.07	57.75	74	-16.25	PK
		5506.2	35.48	8.07	43.55	54	-10.45	AVG
		6423.9	44.28	11.7	55.98	74	-18.02	PK
		6423.9	30.08	11.7	41.78	54	-12.22	AVG
	*	7341.6	35.04	15.09	50.13	74	-23.87	PK
	*	8259.3	33.58	15.97	49.55	74	-24.45	PK
	*	9177	31.83	17.94	49.77	74	-24.23	PK
Vertical	*	1835.4	59.58	-7.73	51.85	74	-22.15	PK
	*	2753.1	45.89	-3.4	42.49	74	-31.51	PK
	*	3670.8	41.39	-0.41	40.98	74	-33.02	PK
	*	4588.5	42.23	4.19	46.42	74	-27.58	PK
		5506.2	47.44	8.07	55.51	74	-18.49	PK
		5506.2	33.24	8.07	41.31	54	-12.69	AVG
	*	6423.9	39.6	11.7	51.3	74	-22.7	PK
	*	7341.6	33.6	15.09	48.69	74	-25.31	PK
	*	8259.3	33.46	15.97	49.43	74	-24.57	PK
	*	9177	31.97	17.94	49.91	74	-24.09	PK



Below 1 GHz

Mode	Fundamental SRD Tx	Channel	0
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Polarization	Notation	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
Horizontal		900.09	29.17	8.17	37.34	46	-8.66	PK
	@	915.3	80.32	8.65	88.97	114	-25.03	PK
	@	915.3	66.12	8.65	74.77	94	-19.23	AVG
		928.59	30.82	8.77	39.59	46	-6.41	PK
Vertical		900.45	30	8.18	38.18	46	-7.82	PK
	@	915.3	78.76	8.65	87.41	114	-26.59	PK
	@	915.3	64.56	8.65	73.21	94	-20.79	AVG
		928.47	29.82	8.77	38.59	46	-7.41	PK

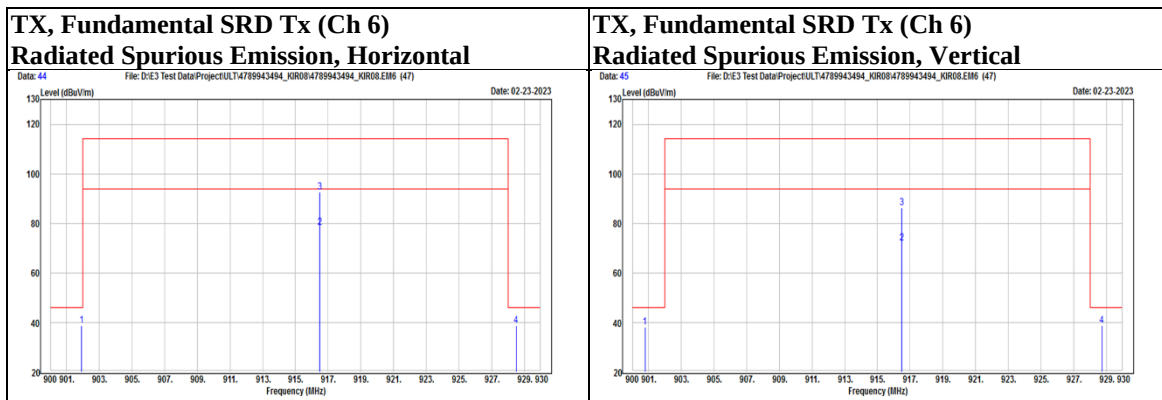


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Mode	Fundamental SRD Tx	Channel	6
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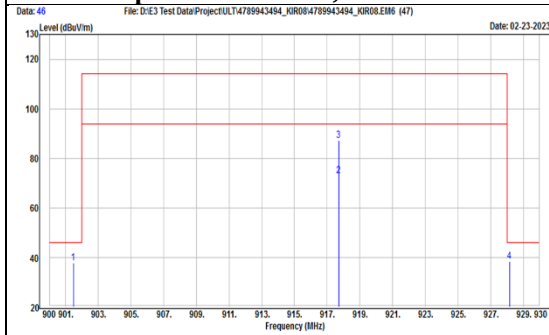
Polarization	Notation	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
Horizontal		901.92	30.35	8.23	38.58	46	-7.42	PK
	@	916.5	83.87	8.64	92.51	114	-21.49	PK
	@	916.5	69.67	8.64	78.31	94	-15.69	AVG
		928.5	29.88	8.77	38.65	46	-7.35	PK
Vertical		900.78	29.83	8.19	38.02	46	-7.98	PK
	@	916.5	77.66	8.64	86.3	114	-27.7	PK
	@	916.5	63.46	8.64	72.1	94	-21.9	AVG
		928.74	29.9	8.77	38.67	46	-7.33	PK



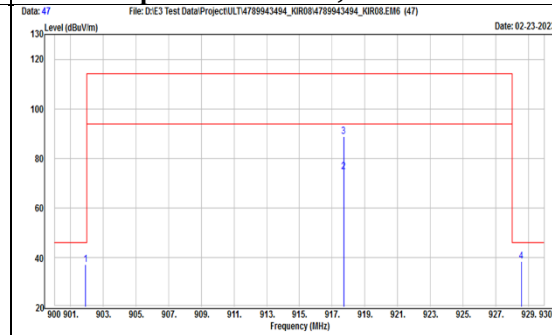
Mode	Fundamental SRD Tx	Channel	12
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Polarization	Notation	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
Horizontal		901.47	29.57	8.2	37.77	46	-8.23	PK
	@	917.7	78.52	8.62	87.14	114	-26.86	PK
	@	917.7	64.32	8.62	72.94	94	-21.06	AVG
		928.17	29.59	8.77	38.36	46	-7.64	PK
Vertical		901.92	29.03	8.23	37.26	46	-8.74	PK
	@	917.7	80.09	8.62	88.71	114	-25.29	PK
	@	917.7	65.89	8.62	74.51	94	-19.49	AVG
		928.59	29.65	8.77	38.42	46	-7.58	PK

TX, Fundamental SRD Tx (Ch 12)
Radiated Spurious Emission, Horizontal



TX, Fundamental SRD Tx (Ch 12)
Radiated Spurious Emission, Vertical



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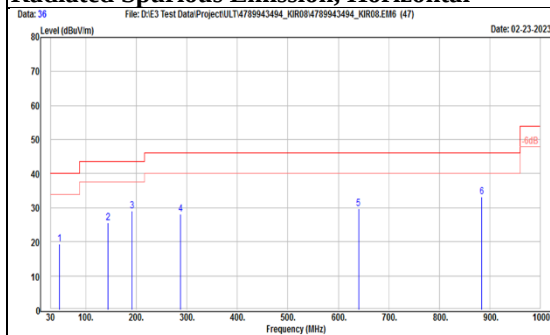
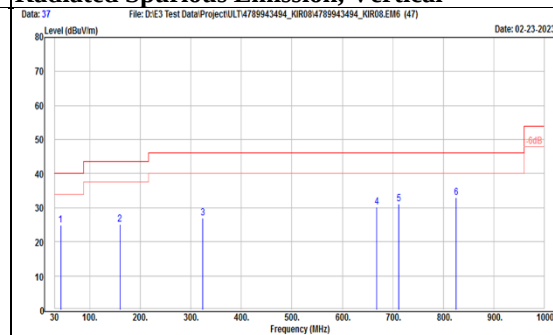
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Mode	SRD	Channel	0
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Polarization	Notation	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
Horizontal		48.43	25.25	-5.81	19.44	40	-20.56	PK
		144.46	31.71	-6.06	25.65	43.5	-17.85	PK
		191.99	36.99	-7.97	29.02	43.5	-14.48	PK
		288.02	33.11	-4.96	28.15	46	-17.85	PK
		640.13	25.72	3.92	29.64	46	-16.36	PK
		883.6	25.32	7.81	33.13	46	-12.87	PK
Vertical		42.61	31.12	-6.23	24.89	40	-15.11	PK
		159.98	30.65	-5.49	25.16	43.5	-18.34	PK
		323.91	30.97	-3.98	26.99	46	-19.01	PK
		668.26	26.08	4.19	30.27	46	-15.73	PK
		711.91	26.05	5.13	31.18	46	-14.82	PK
		825.4	26.12	6.83	32.95	46	-13.05	PK

TX, SRD (Ch 0)
Radiated Spurious Emission, Horizontal

TX, SRD (Ch 0)
Radiated Spurious Emission, Vertical

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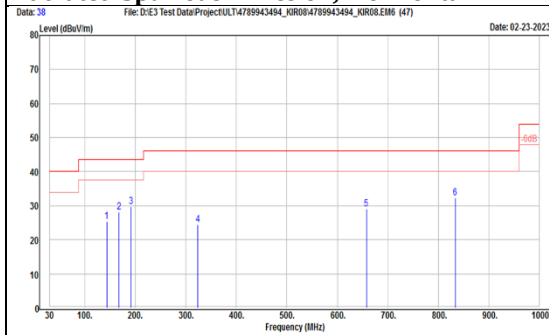
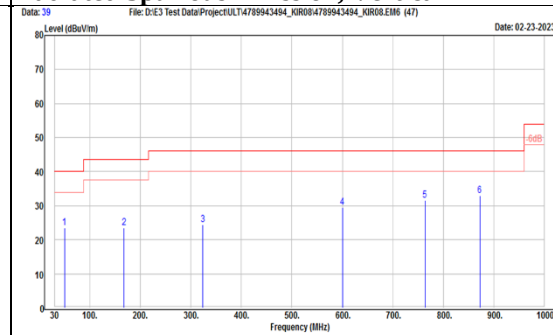
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Mode	SRD	Channel	6
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Polarization	Notation	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
Horizontal		143.49	31.43	-6.06	25.37	43.5	-18.13	PK
		167.74	33.92	-5.7	28.22	43.5	-15.28	PK
		191.99	37.71	-7.97	29.74	43.5	-13.76	PK
		323.91	28.35	-3.98	24.37	46	-21.63	PK
		657.59	25.22	3.93	29.15	46	-16.85	PK
		833.16	25.18	7.07	32.25	46	-13.75	PK
Vertical		50.37	29.49	-5.86	23.63	40	-16.37	PK
		167.74	29.31	-5.7	23.61	43.5	-19.89	PK
		323.91	28.52	-3.98	24.54	46	-21.46	PK
		600.36	26.03	3.37	29.4	46	-16.6	PK
		763.32	25.43	6.24	31.67	46	-14.33	PK
		871.96	25.29	7.74	33.03	46	-12.97	PK

TX, SRD (Ch 6)
Radiated Spurious Emission, Horizontal

TX, SRD (Ch 6)
Radiated Spurious Emission, Vertical

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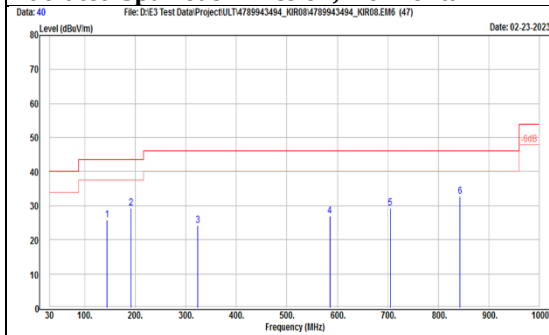
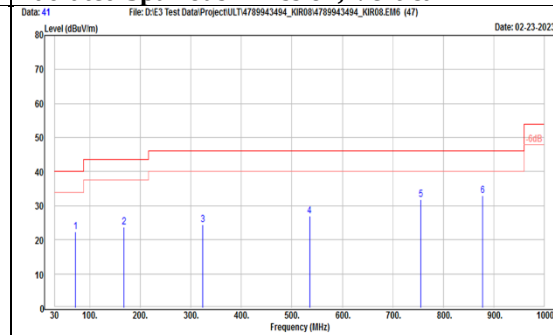
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Mode	SRD	Channel	12
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Polarization	Notation	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
Horizontal		144.46	31.87	-6.06	25.81	43.5	-17.69	PK
		191.99	37.36	-7.97	29.39	43.5	-14.11	PK
		323.91	28.09	-3.98	24.11	46	-21.89	PK
		584.84	24.18	2.79	26.97	46	-19.03	PK
		705.12	24.62	4.77	29.39	46	-16.61	PK
		842.86	25.63	7.13	32.76	46	-13.24	PK
Vertical		71.71	30.57	-8.31	22.26	40	-17.74	PK
		167.74	29.55	-5.7	23.85	43.5	-19.65	PK
		323.91	28.35	-3.98	24.37	46	-21.63	PK
		535.37	25.57	1.41	26.98	46	-19.02	PK
		755.56	25.5	6.34	31.84	46	-14.16	PK
		877.78	25.33	7.73	33.06	46	-12.94	PK

TX, SRD (Ch 12)
Radiated Spurious Emission, Horizontal

TX, SRD (Ch 12)
Radiated Spurious Emission, Vertical

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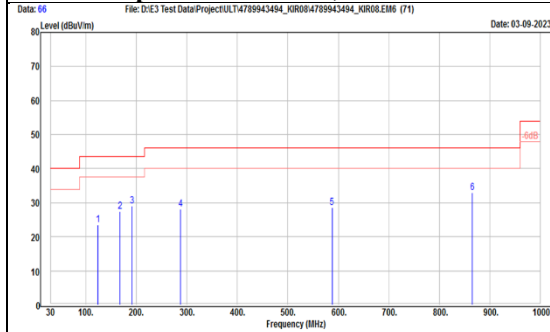
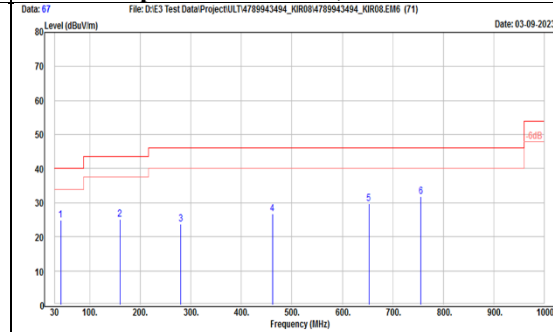
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Mode	SRD Charging	Channel	N/A
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Polarization	Notation	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
Horizontal		124.09	31.5	-7.88	23.62	43.5	-19.88	PK
		167.74	33.05	-5.7	27.35	43.5	-16.15	PK
		191.99	36.99	-7.97	29.02	43.5	-14.48	PK
		288.02	33.11	-4.96	28.15	46	-17.85	PK
		587.75	25.72	2.92	28.64	46	-17.36	PK
		865.17	25.29	7.66	32.95	46	-13.05	PK
Vertical		42.61	31.12	-6.23	24.89	40	-15.11	PK
		159.98	30.65	-5.49	25.16	43.5	-18.34	PK
		280.26	28.94	-5.21	23.73	46	-22.27	PK
		461.65	26.76	-0.06	26.7	46	-19.3	PK
		652.74	25.7	4.06	29.76	46	-16.24	PK
		755.56	25.41	6.34	31.75	46	-14.25	PK

TX, SRD Charging (N/A)
Radiated Spurious Emission, Horizontal

TX, SRD Charging (N/A)
Radiated Spurious Emission, Vertical

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9 kHz ~ 30 MHz Data:

For 9 kHz to 30 MHz radiated emission have performed all modes of operation were investigated. The amplitude of spurious emissions attenuated more than 20 dB below the permissible value is not required to be report.

No non-compliance noted:

KDB 414788 D01 OATS and Chamber Correlation Justification

- Base on FCC 15.31 (f) (2): measurements may be performed at a distance closer than that specified in the regulations; however, an attempt should be made to avoid making measurements in the near field.
- OATs and chamber correlation testing had been performed and chamber measured test results is the worst case test result.

Although these tests were performed other than open area test site, adequate comparison measurements were confirmed against 30m open area test site. Therefore sufficient tests were made to demonstrate that the alternative site produces results that correlate with the ones of tests made in an open field based on KDB 414788.

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9.2. AC Power Line Conducted Emission

Requirements

Frequency (MHz)	Conducted limit (dBμV)	
	Quasi-peak	Average
0.15 - 0.5	66 - 56	56 - 46
0.50 - 5.0	56	46
5.0 - 30	60	50

Note :

1. The lower limit shall apply at the transition frequencies.
2. The limit decreases in line with the logarithm of the frequency in the range of 0.15 to 0.50 MHz.

Test Procedures

- a. The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50uH of coupling impedance for the measuring instrument.
- b. Both lines of the power mains connected to the EUT were checked for maximum conducted interference.
- c. The frequency range from 150kHz to 30MHz was searched. Emission levels under (Limit - 20dB) was not recorded.

NOTE:

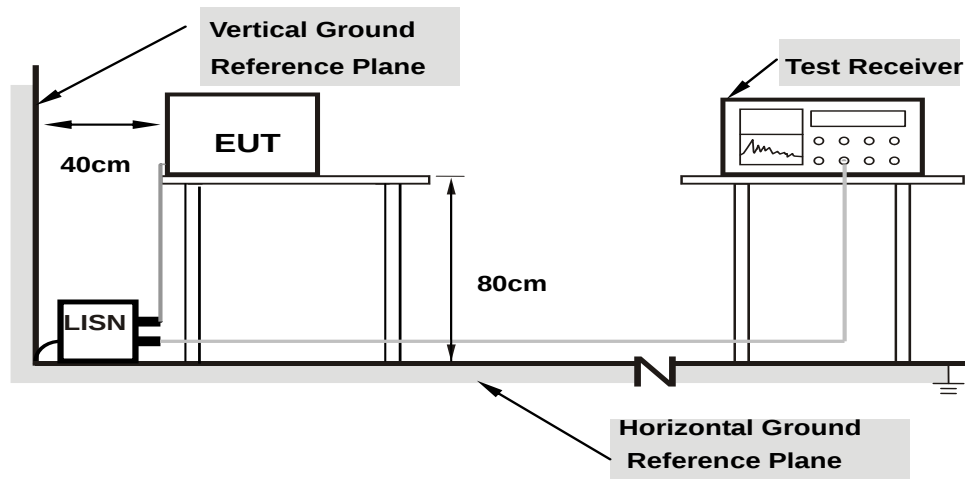
1. The resolution bandwidth and video bandwidth of test receiver is 9kHz for quasi-peak detection (QP) and average detection (AV) at frequency 0.15MHz-30MHz.
2. All modes of operation were investigated (includes all external accessories) and the worst-case emissions are reported, the other emission levels were low against the limit.
3. Test data of Result value (dBuV) = Reading value (dBuV) + Correction Factor (dB).
4. Test data of Margin(dB) = Result value (dBuV) - Limit value (dBuV).
5. Test data of Correction Factor (dB) = Insertion loss(dB) + Cable loss(dB).

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Test Setup



Note: 1.Support units were connected to second LISN.

For the actual test configuration, please refer to the Setup Configurations.

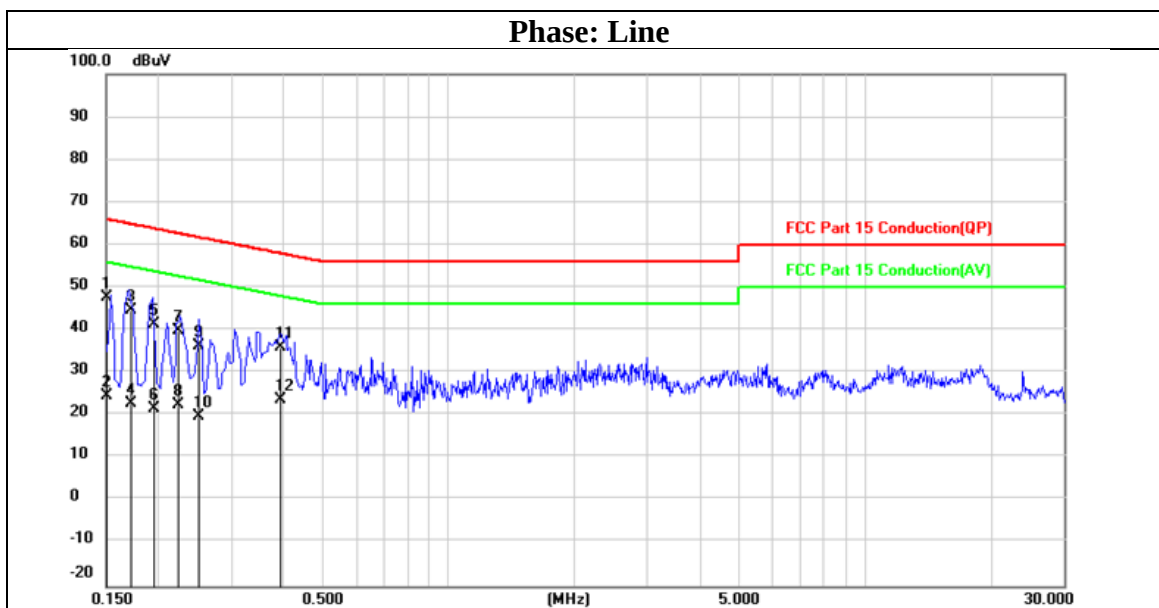
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Test Data

Mode	SRD_TX916.5 & Charge mode	Channel	6
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No.	Frequency (MHz)	Reading (dBuV)	Correct (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	0.1505	28.10	19.53	47.63	65.97	-18.34	QP
2	0.1505	5.07	19.53	24.60	55.97	-31.37	AVG
3	0.1728	25.23	19.53	44.76	64.82	-20.06	QP
4	0.1728	3.12	19.53	22.65	54.82	-32.17	AVG
5	0.1958	21.80	19.53	41.33	63.79	-22.46	QP
6	0.1958	1.99	19.53	21.52	53.79	-32.27	AVG
7	0.2228	20.29	19.53	39.82	62.71	-22.89	QP
8	0.2228	3.00	19.53	22.53	52.71	-30.18	AVG
9	0.2498	16.64	19.53	36.17	61.76	-25.59	QP
10	0.2498	0.25	19.53	19.78	51.76	-31.98	AVG
11	0.3928	16.40	19.53	35.93	58.00	-22.07	QP
12	0.3928	4.03	19.53	23.56	48.00	-24.44	AVG

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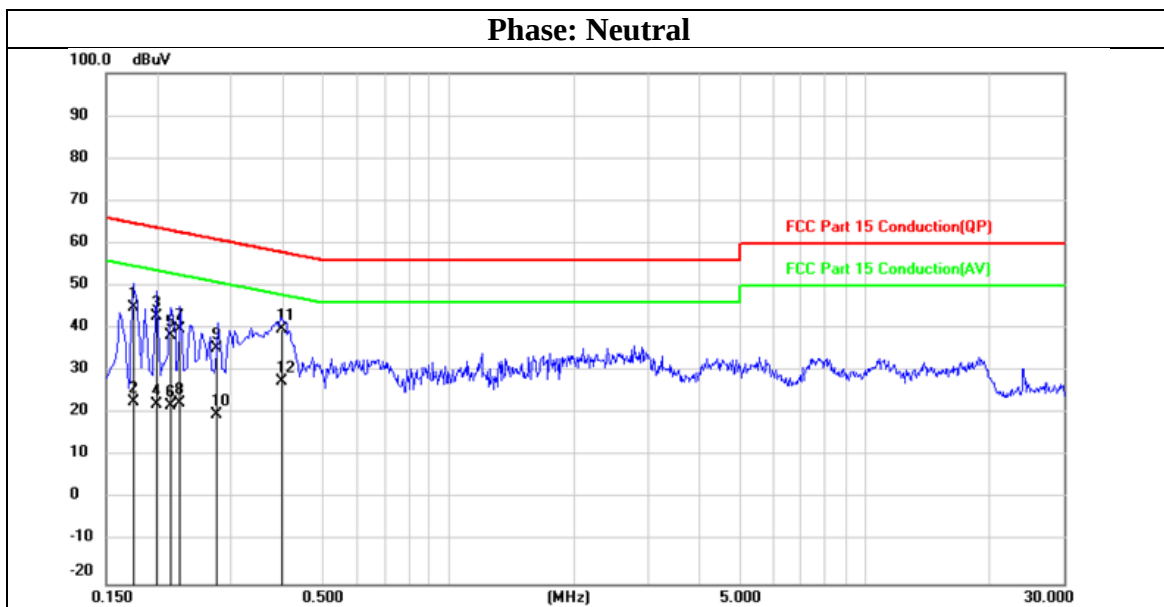
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Doc No: Form-ULID-004738 (DCS:17-EM-F0877) / 5.1

Mode	SRD_TX916.5 & Charge mode	Channel	6
------	---------------------------	---------	---



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	0.1733	25.38	19.53	44.91	64.80	-19.89	QP
2	0.1733	3.34	19.53	22.87	54.80	-31.93	AVG
3	0.1981	23.27	19.53	42.80	63.69	-20.89	QP
4	0.1981	2.57	19.53	22.10	53.69	-31.59	AVG
5	0.2143	18.80	19.53	38.33	63.04	-24.71	QP
6	0.2143	2.21	19.53	21.74	53.04	-31.30	AVG
7	0.2264	20.24	19.53	39.77	62.58	-22.81	QP
8	0.2264	2.82	19.53	22.35	52.58	-30.23	AVG
9	0.2756	15.88	19.53	35.41	60.95	-25.54	QP
10	0.2756	0.26	19.53	19.79	50.95	-31.16	AVG
11	0.3972	20.38	19.53	39.91	57.91	-18.00	QP
12	0.3972	7.88	19.53	27.41	47.91	-20.50	AVG

END OF REPORT

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