



Report number: FCC/2504002-A1

<b>RADIO TEST REPORT</b> <b>FCC 47 CFR Part 15 Subpart C, §15.247, RSS 247</b>	
<b>Report Number.</b> .....	FCC/2504002-A1
<b>Date of issue</b> .....	03/09/2025
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<b>Sample ID</b> .....	FCC/2504002
<b>Testing Laboratory</b> .....	<b>Nemko India (Test Lab) Pvt. Ltd.</b>
<b>Address</b> .....	Plot no 193, IMT, Sector 68, Faridabad-121004, Haryana, India
<b>Applicants / Customers Name and Address</b>	<b>STR8BAT SPORTS TECH SOLUTIONS PTE LTD</b> 151 CHIN SWEE ROAD, #07-12, MANHATTAN HOUSE, SINGAPORE, SG 169876
<b>Manufacturer's name</b> .....	<b>ORIENT TECHNOLOGY (S) PTE LTD</b>
Address.....	178 Paya Lebar Rd, Paya Lebar 178 #07-06, 409030
<b>Standard Test Method</b> .....	FCC 47 CFR Part 15 Subpart C, §15.247, RSS 247 Issue 4 KDB 558074 D01, ANSI C63.10: 2020
<b>Protocol</b> .....	<b>Bluetooth Low Energy (2.4 GHz)</b>
<b>Product name:</b> .....	Str8bat Smart Sticker
<b>Brand/Trademark</b> .....	Str8bat
<b>Model/Type reference</b> .....	Ver 2.00S
<b>Date of receipt of test item</b> .....	03/04/2025
<b>Date (s) of performance of tests</b> .....	08/04/2025-18/04/2025
<b>Remarks:</b>	
<ul style="list-style-type: none"><li>The results of this report relate only to the item(s) tested.</li><li>The testing laboratory is responsible for all the information provided in the report, except the information provided by the customer/manufacturer, wherever applicable.</li><li>The report may be reproduced in full. Partial reproduction may only be made with the written consent of Nemko India.</li><li>The report is released by Nemko India in pdf format only. Printed copies of this report are uncontrolled including scans of colored prints.</li><li>This report is digitally signed on first page, doesn't required signature on each page.</li><li>The amendment report issued for the inclusion of RSS-247 requirements in the original test report number FCC/2504002 dated 06/08/2025, to align with ISED compliance.</li></ul>	
<b>Tested by:</b>	<b>Approved by/ Authorized Signatory:</b>
Shubham Panchal/ Testing Engineer	Dinesh Dhawan/ Sr. Testing Engineer
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#### Test Report Revision History

Revision #	Date of issue	Details of changes made to test report
FCC/2504002	06/08/2025	Original report issued
FCC/2504002-A1	03/09/2025	<ul style="list-style-type: none"> <li>Inclusion of RSS-247 Issue [4] section references in the Test Summary and test items</li> <li>Addition of worst-case radiated emission results for ISED</li> <li>Inclusion of 99% Occupied Bandwidth (OBW) measurements</li> <li>Update of test methodology reference from ANSI C63.10:2013 to ANSI C63.10:2020</li> </ul>

#### 1. Test Summary

Sr. No.	Test Parameter	Test Requirement	Limit	Verdict
1	Emission Bandwidth	FCC 15.247(a) RSS-247 §6.3.1	Refer 9.1	Pass
2	Maximum Power Spectral Density	FCC 15.247(e) RSS-247 §6.3.1	Refer 9.2	Pass
3	RF Output Power (EIRP)	FCC 15.247(b) RSS-247 §6.3.2	Refer 9.3	Pass
4	Band Edge	FCC 15.247(d) RSS-247 §6.6	Refer 9.4	Pass
5	Conducted spurious emission		Refer 9.5	Pass
6	Radiated spurious emission	FCC 15.205, 15.209 RSS-247 §6.6 RSS-Gen §8.9 & §8.10	Refer 9.6	Pass
7	Antenna Requirement	FCC 15.203 RSS-Gen §6.8	Refer 9.7	Pass

## 2. Measurement Uncertainty

Sr. No	Type	Test Parameter	Uncertainty ( $\pm$ )
1	Conducted	RF Output Power	1.14 dB
2	Conducted	Power Spectral Density	1.12 dB
3	Conducted	Emissions	1.42 dB
4	Conducted	Frequency	$1 \times 10^{-7}$
5	Radiated	30MHz-1GHz	3.496 dB
6	Radiated	1GHz-18GHz	5.1 dB
7	Radiated	18GHz-40GHz	5.0 dB

Use of measurement uncertainty for decisions on conformity (decision rule):

The testing standard(s) does not define a decision rule for comparing measurement results with the applicable limit specified in the standard. Decisions regarding conformity are made without considering measurement uncertainty ("simple acceptance" decision rule, previously known as "accuracy method").

Other (please specify): ..... (for example, when required by the standard or client, or if any regularity requirements apply)

## 3. Test facility

The test facility is accredited by NABL with certificate no. TC-5574 and designated by TEC.

### 3.1. Deviation from standard

- None

### 3.2. Abnormalities from Standard Conditions

- None

## 4. General Information

### 4.1. EUT Peripheral List

No.	Equipment	Manufacturer	Model No.	Serial No.	Power cord	Remark
1.	MOBILE CHARGER	--	UiCH 3151	--	--	--

### 4.2. Test Peripheral List

No.	Equipment	Manufacturer	Model No.	Serial No.
1	Laptop	Dell	Latitude 5400	--

##### 5. General Description of EUT (Based on customer declaration)

<b>Manufacturer Name:</b>	ORIENT TECHNOLOGY (S) PTE LTD
<b>Manufacturer address:</b>	178 Paya Lebar Rd, Paya Lebar 178 #07-06, 409030
<b>Product name:</b>	Str8bat Smart Sticker
<b>Model/Type Reference:</b>	Ver 2.00S
<b>Brand:</b>	Str8bat
<b>Bluetooth Version:</b>	4.1 BLE
<b>Serial Number:</b>	2025413111076
<b>Hardware Number:</b>	Ver 2.32/40
<b>Software Number:</b>	Bit 1.0.7
<b>Frequency Band:</b>	2400 MHz – 2483.5 MHz
<b>Operating Frequency Range:</b>	2402 MHz to 2480 MHz
<b>Modulation Technology:</b>	GFSK (Gaussian Frequency shift key)
<b>Nominal Bandwidth</b>	2MHz
<b>Data Rate</b>	1Mbps
<b>Rating:</b>	5V DC USB Powered (for charging only), 3.7V (Internal Rechargeable Li-ion Polymer Battery Used)



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#### Channel List:

Channel Number	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

#### Channels used for testing:

Channel	Channel Number	Centre Frequency (MHz)
Low	0	2402
Mid	19	2440
high	39	2480

#### 5.1. Description of Antenna's used.

Antenna Type*	Frequency Band (GHz)	Tx/Rx Paths	Antenna Gain (dBi)*
PCB Antenna	2.400–2.483 GHz	1	0

\*=Declared by manufacturer

#### 6. Equipment's used during Test

Sr. No	Name of the Instrument	Equipment ID	Model Number	Make	Calibration Due Date
1.	Signal Analyzer	NITL/T-E/264	FSV40	Rohde & Schwarz	03/05/2025
2.	Vector Signal Generator	NITL/T-E/267	SMBV100B	Rohde & Schwarz	05/03/2026
3.	R&S Signal Generator	NITL/T-E/266	SMB100B	Rohde & Schwarz	05/03/2026
4.	R&S Power Meter	NITL/T-E/262	OSP-B157W8	Rohde & Schwarz	06/03/2026
5.	Radio Communication Tester	NITL/T-E/263	CMW500	Rohde & Schwarz	02/05/2025
6.	WMS32 Software with TS8997	--	R & S WMS32	Rohde & Schwarz	--
7.	Temperature & Humidity Chamber	NITL/T-E/346	---	UNIQUE	09/04/2026
8.	Temperature and humidity datalogger	NITL/T-E/443(IV)	GSP-6	Elitech	12/06/2025
9.	EMI Test Receiver	NITL/T-E/258	ESR26	Rohde & Schwarz	02/05/2025
10.	Loop Antenna	NITL/T-E/323	FMZB 1513	Schwarzbeck	28/02/2028
11.	Trilog Broadband Antenna	NITL/T-E/319	VULB9162	Schwarzbeck	24/01/2026
12.	Wave Guide Antenna (Horn Antenna)	NITL/T-E/322	3117	ETS-LINDGREN	18/12/2026
13.	Pre-Amplifier (1GHz to 18GHz)	NITL/T-E/321	SCU18F	Rohde & Schwarz	VBU
14.	Pre-Amplifier (18GHz to 40GHz)	NITL/T-E/363	PAP-840A	Com-Power	VBU
15.	Horn Antenna	NITL/T-E/361	ES1808HAT4008-81	EINE SOL	25/04/2026

Discipline: - Electronics	Group: - Miscellaneous Products
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## 7. Radio Technical Requirements

### 7.1. Transmitter Conditions

Item	EUT Type
1	<input checked="" type="checkbox"/> Stand-alone radio equipment with or without their own control provisions
2	<input type="checkbox"/> Plug in radio devices intended for use with or within variety of host system, e.g., personal computer, hand-held terminals, etc
3	<input type="checkbox"/> Plug in radio devices intended for use within combined equipment. E.g., cable Modems, set-top boxes, access point etc
4	<input type="checkbox"/> Combined equipment or a combination of a plug-in radio devices and a specific type of host Equipment

### 7.2. Test conditions

#### 7.2.1 Normal conditions

Ambient:	Temperature: +15°C to +35°C
	Relative humidity: 20% to 75% RH
Power Supply:	3Vdc (Battery Operated)

All tests and measurements were performed in a controlled environment suitable for the tests conducted. The climatic conditions in the test area are automatically controlled and recorded continuously.

## 8. Frequency of Operation for BLE Interface

### 8.1. Test procedure

1. Make the setup as shown below.
2. Configure the Spectrum Analyzer as per requirement.
3. Measure operating frequency.

### 8.2. Test Setup



### 8.3. Test result

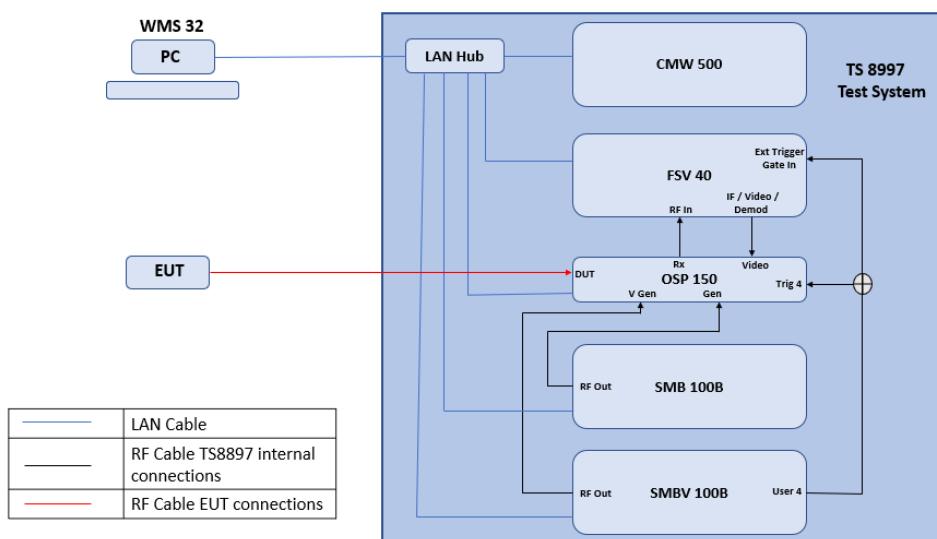
Operating Frequency	2402- 2480 MHz
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## 9. Test Parameters

### 9.1. Emission bandwidth 6dB

<b>Standard</b>	FCC 47 CFR 15.247(a) RSS-247 §6.3.1
<b>Limits</b>	Systems using digital modulation techniques may operate in the 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz bands. The minimum 6 dB bandwidth shall be at least 500 kHz.
<b>Test Procedure</b>	Refer to KDB 558074 D01 & ANSI C63.10.
<b>Measurements</b>	<input checked="" type="checkbox"/> Conducted Measurements <input type="checkbox"/> Radiated Measurements

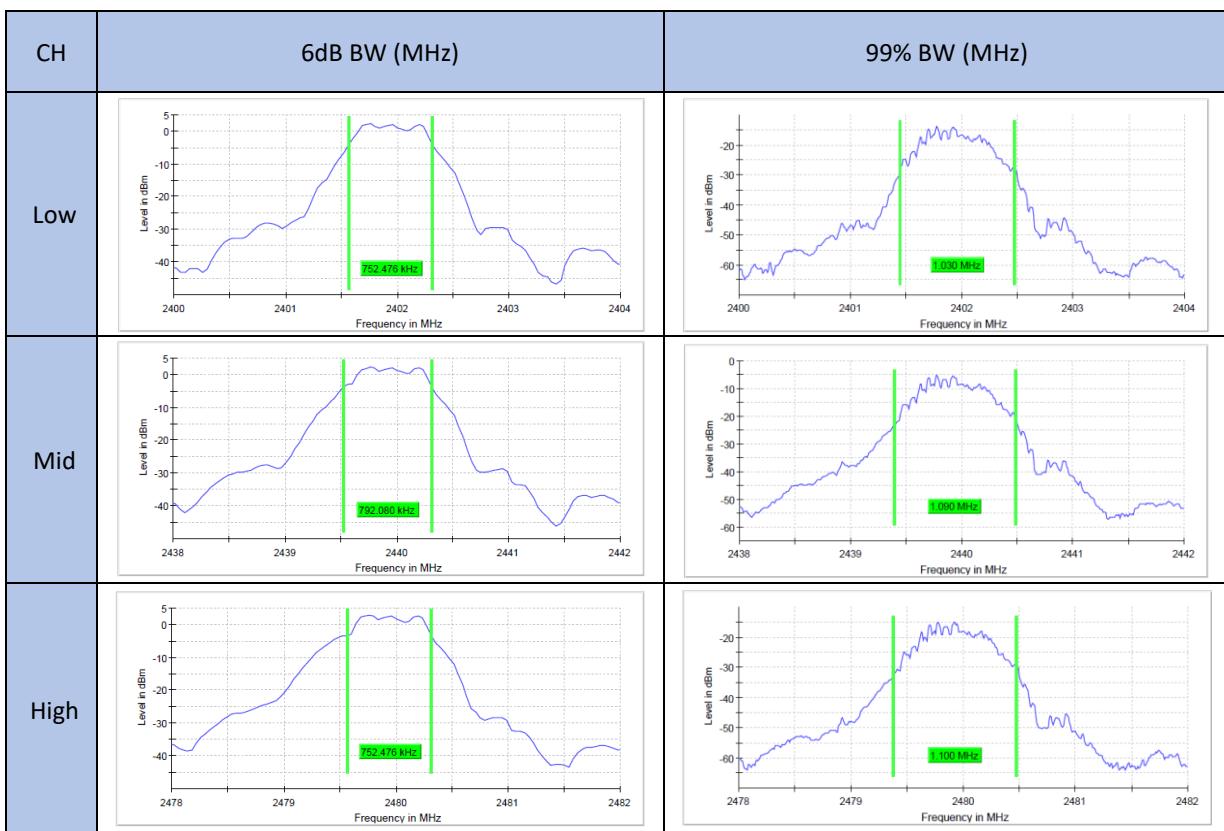
## Test Setup:



**Test Result:**

**Table 1 – Emission Bandwidth 6dB – 1Mbps**

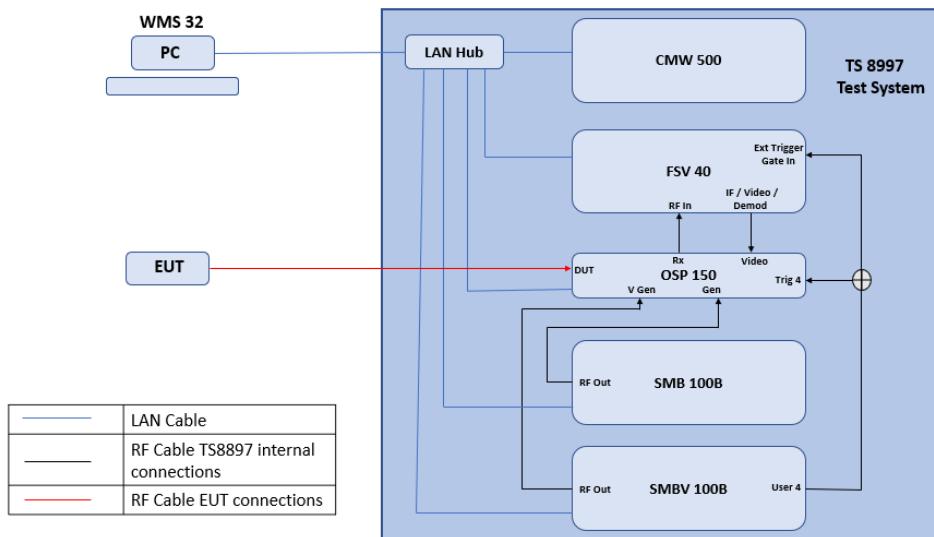
Channel	6dB Emission Bandwidth (MHz)	99% Bandwidth (MHz)	Limit (MHz)	Verdict
Low	0.752476	1.030	$\geq 0.5$	Pass
Mid	0.792080	1.090	$\geq 0.5$	Pass
High	0.752476	1.100	$\geq 0.5$	Pass



## 9.2. Maximum Power Spectral Density

Standard	FCC 47 CFR 15.247(e) RSS-247 §6.3.1
Limit	For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission. This power spectral density shall be determined in accordance with the provisions of paragraph (b) of this section. The same method of determining the conducted output power shall be used to determine the power spectral density.
Test Procedure	Refer to KDB 558074 D01 & ANSI C63.10.
Measurements	<input checked="" type="checkbox"/> Conducted Measurements <input type="checkbox"/> Radiated Measurements

### Test Setup:

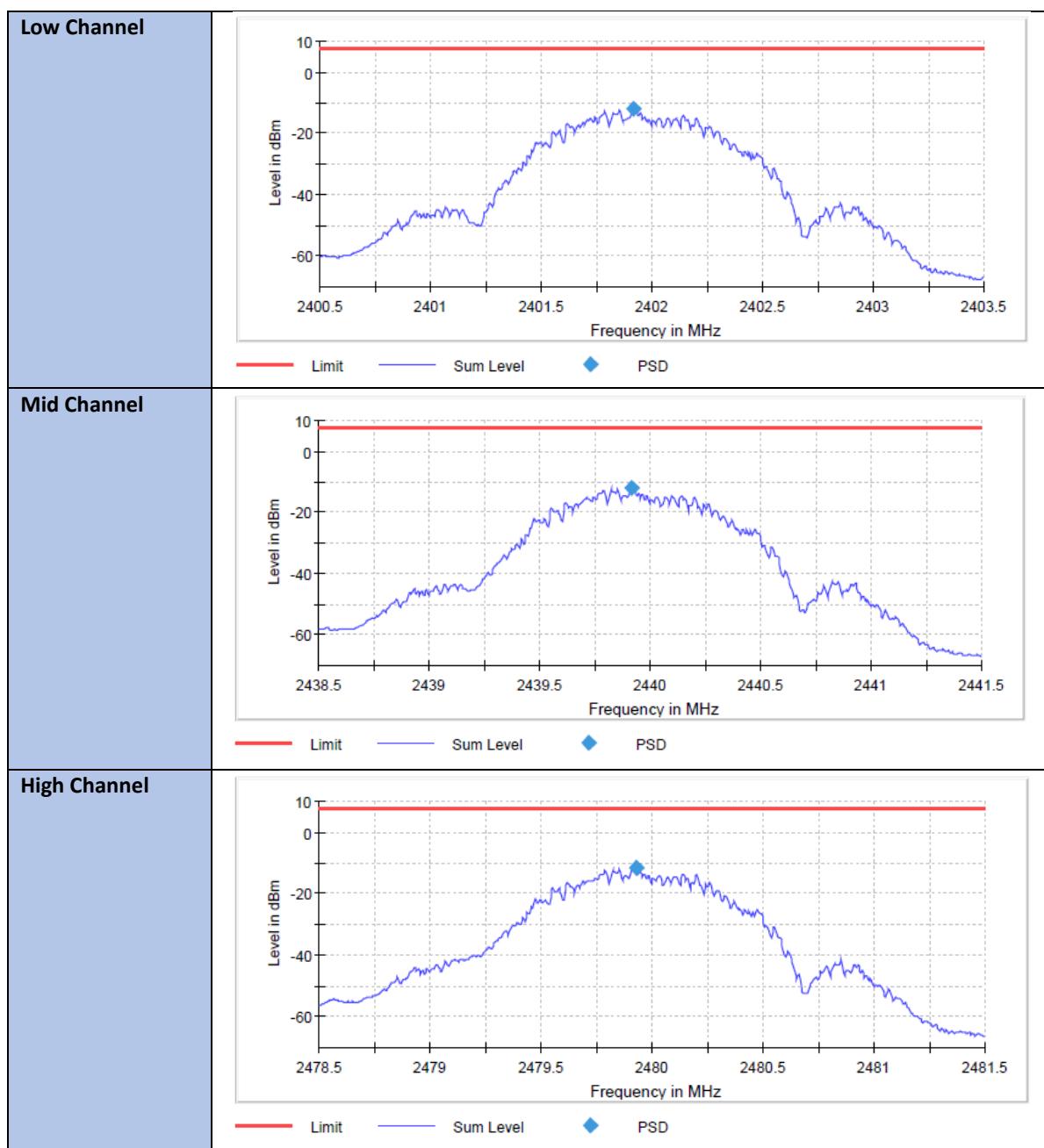


Test Results:

Table 2 – Power Spectral Density – 1Mbps

Channel	Centre Frequency (MHz)	Power Spectral Density (dBm/3kHz)	Limit (dBm/3kHz)	Verdict
Low	2402	-12.039	8.0	Pass
Mid	2440	-11.932	8.0	Pass
High	2480	-11.364	8.0	Pass

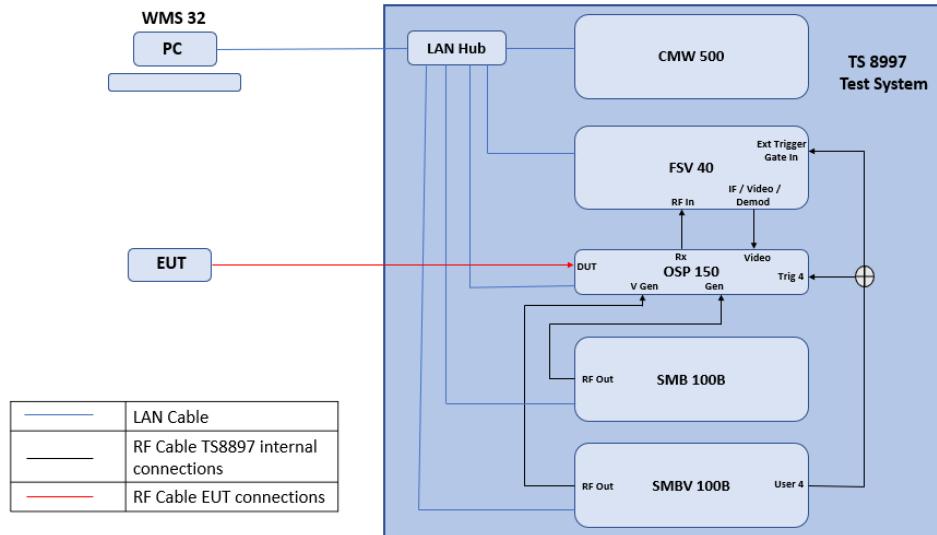
Test plot 1: Power Spectral Density – 1Mbps



### 9.3. RF Output Power

<b>Standard</b>	FCC 47 CFR 15.247(b) RSS-247 §6.3.2
<b>Limit</b>	<p>The maximum peak conducted output power is defined as the maximum power level measured with a peak detector using a filter with width and shape of which is sufficient to accept the full signal bandwidth.</p> <p>The maximum conducted output power is defined as the total transmit power delivered to all antennas and antenna elements averaged across all symbols in the signalling alphabet when the transmitter is operating at its maximum power control level.</p> <p>The maximum peak conducted output power of the intentional radiator shall not exceed the following:</p> <p>(1) For frequency hopping systems operating in the 2400-2483.5 MHz band employing at least 75 non-overlapping hopping channels, and all frequency hopping systems in the 5725-5850 MHz band: 1 watt. For all other frequency hopping systems in the 2400-2483.5 MHz band: 0.125 watts.</p> <p>(2) For frequency hopping systems operating in the 902-928 MHz band: 1 watt for systems employing at least 50 hopping channels; and 0.25 watts for systems employing less than 50 hopping channels, but at least 25 hopping channels.</p> <p>(3) For systems using digital modulation in the 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz bands: 1 Watt. As an alternative to a peak power measurement, compliance with the one Watt limit can be based on a measurement of the maximum conducted output power.</p> <p>Maximum Conducted Output Power is defined as the total transmit power delivered to all antennas and antenna elements averaged across all symbols in the signaling alphabet when the transmitter is operating at its maximum power control level. Power must be summed across all antennas and antenna elements. The average must not include any time intervals during which the transmitter is off or is transmitting at a reduced power level. If multiple modes of operation are possible (e.g., alternative modulation methods), the maximum conducted output power is the highest total transmit power occurring in any mode.</p> <p>(4) The conducted output power limit specified is based on the use of antennas with directional gains that do not exceed 6 dBi. If transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced below the stated values as appropriate, by the amount in dB that the directional gain of the antenna exceeds 6 dBi.</p>
<b>Test Procedure</b>	Refer to KDB 558074 D01 & ANSI C63.10.
<b>Measurements</b>	<input checked="" type="checkbox"/> Conducted Measurements <input type="checkbox"/> Radiated Measurements

**Test Setup:**



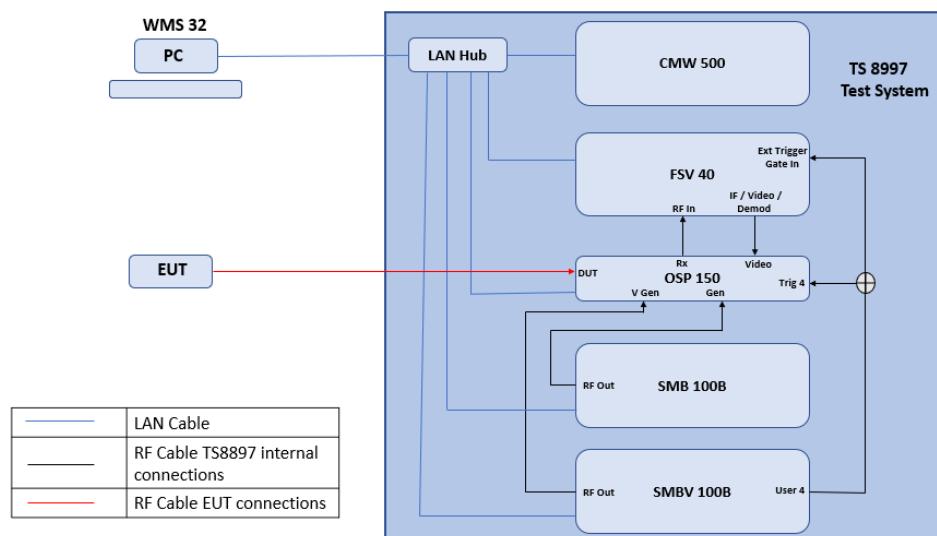
**Table 3 – Test Results: Tx Output Power – AVGPM-G – 1Mbps**

Channel	Output Power (dBm)	EIRP (dBm)	Output Power Limit (dBm)	EIRP Limit (dBm)	Verdict
Low	2.8	2.8	30	36	Pass
Mid	2.8	2.8	30	36	Pass
High	3.4	3.4	30	36	Pass

#### 9.4. Band Edge

Standard	FCC 47 CFR 15.247(d) RSS-247 §6.6
Limits	Emissions within a restricted band and within 2 MHz of an authorized band edge may be measured using either the marker-delta method or the integration method, which is described in, provided that the DTS bandwidth (or EBW) edge falls within 2 MHz of the band edge. Otherwise, all unwanted emissions measurements shall be performed using the standard methods. 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 conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in §15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a) (see §15.205(c)).
Test Procedure	Refer to KDB 558074 D01 & ANSI C63.10
Measurements	<input checked="" type="checkbox"/> Conducted Measurements <input type="checkbox"/> Radiated Measurements

#### Test Setup:

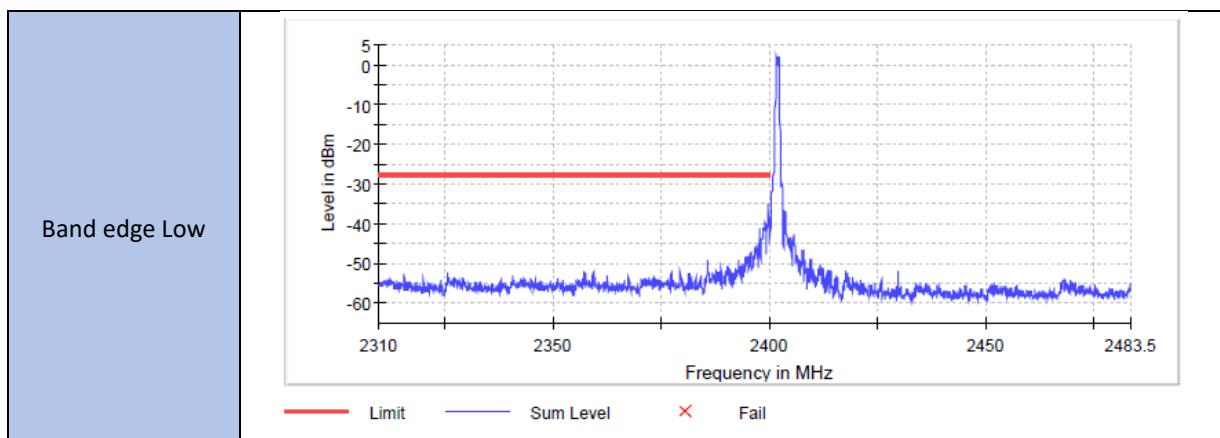


**Table 4: Test Results: Band Edge – 1Mbps**

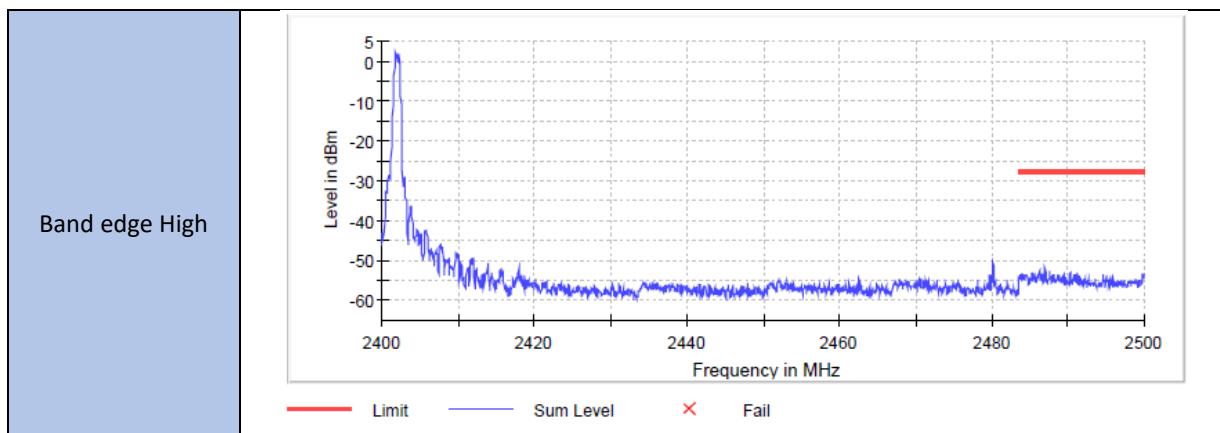
Channel	Tests	Verdict
Low	Band Edge low	Pass
	Band Edge high	
High	Band Edge low	Pass
	Band Edge high	

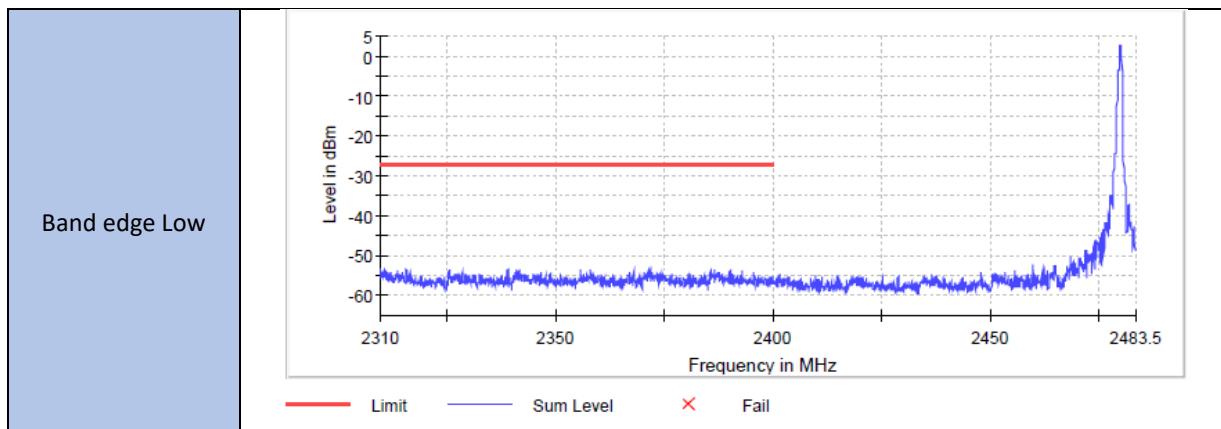
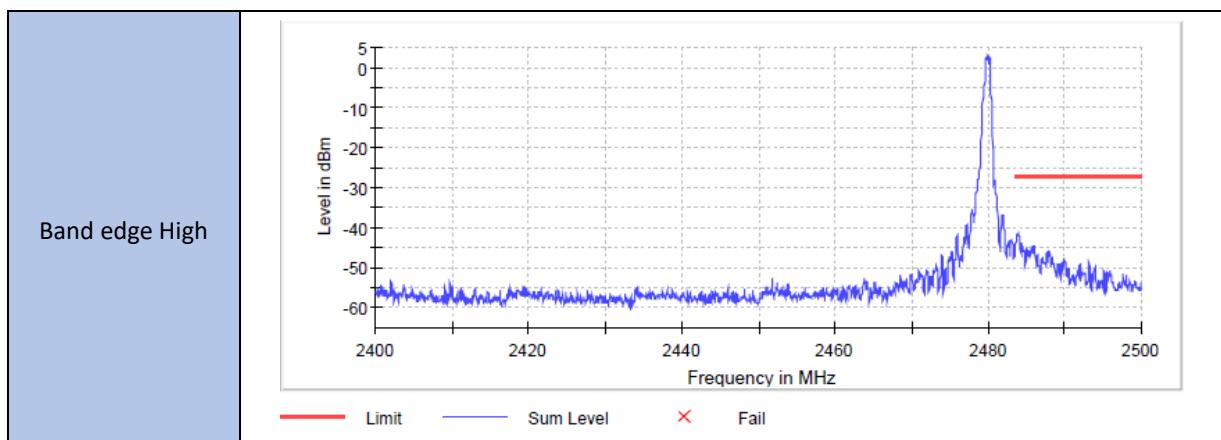
**Test Result:**

**Test plot 2: Band Edge Low – Low Channel - 1Mbps**



**Test plot 3: Band Edge High – Low Channel - 1Mbps**

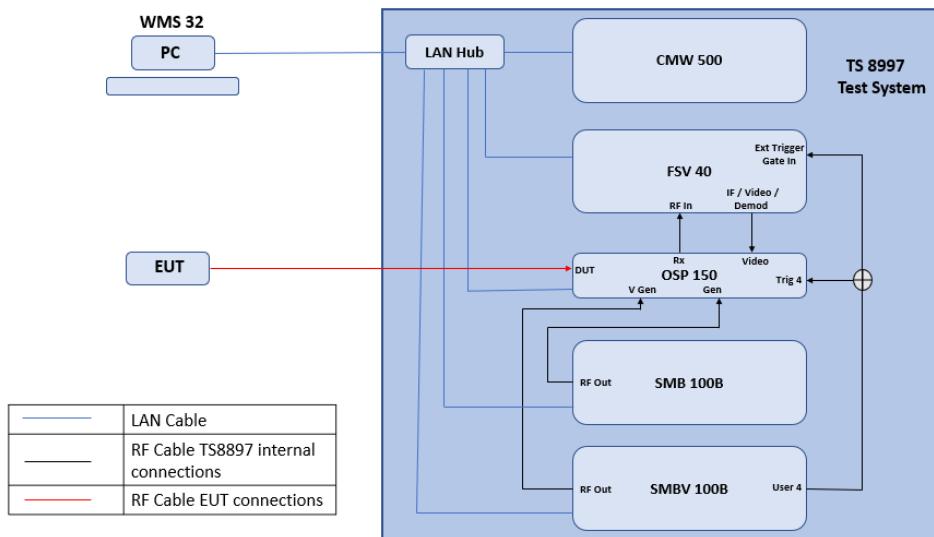


**Test plot 4: Band Edge Low – High Channel - 1Mbps****Test plot 5: Band Edge High – High Channel - 1Mbps**

## 9.5. Conducted Spurious Emission

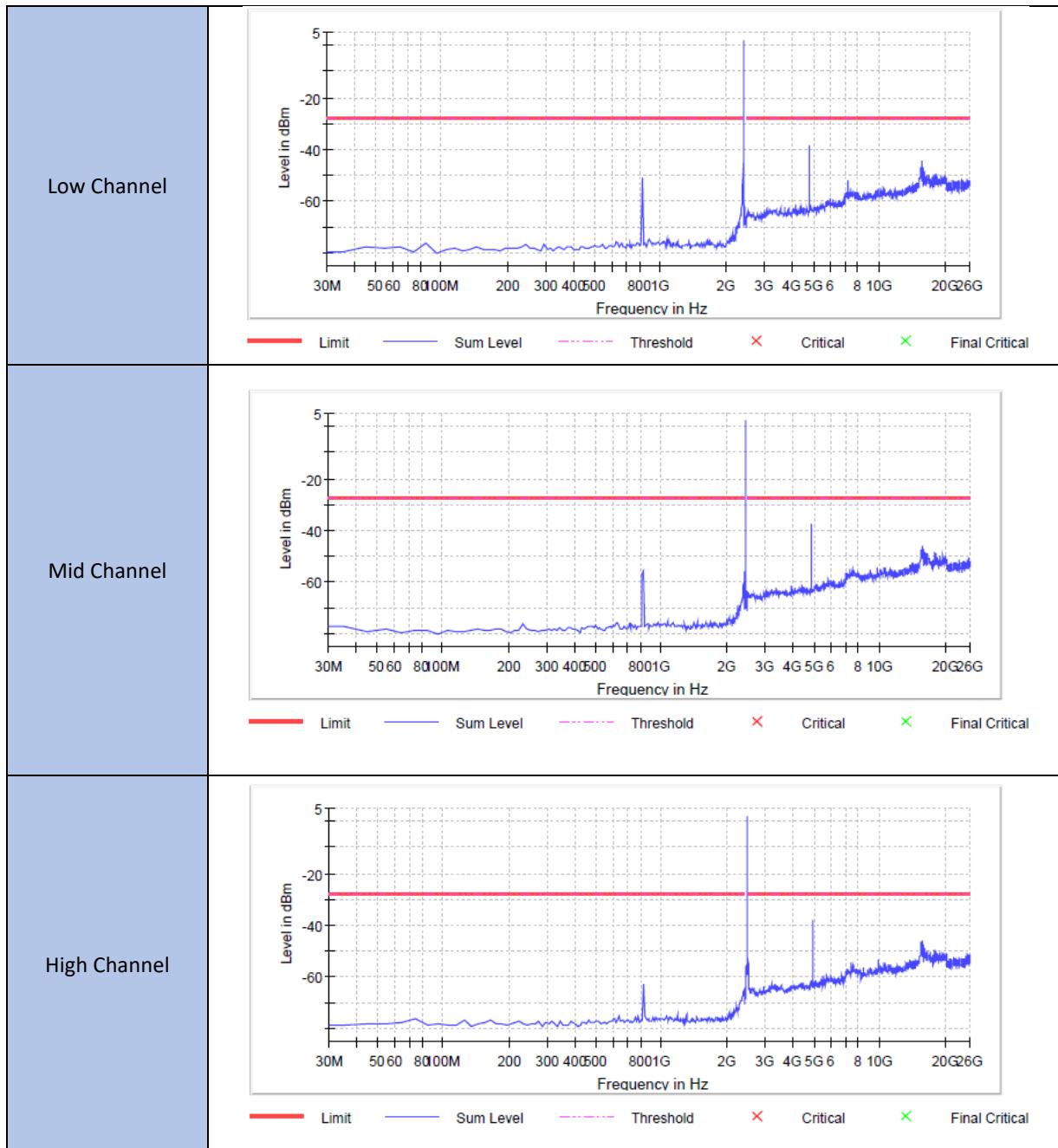
<b>Standard</b>	FCC 47 CFR 15.247(d) RSS-247 §6.6
<b>Limits</b>	In any 100 kHz bandwidth outside of the authorized frequency band, the emissions which fall in the non-restricted bands shall be attenuated at least 20 dB / 30dB relative to the maximum PSD level in 100 kHz by RF conducted measurement.
<b>Test Procedure</b>	Refer to KDB 558074 D01 & ANSI C63.10
<b>Measurements</b>	<input checked="" type="checkbox"/> Conducted Measurements <input type="checkbox"/> Radiated Measurements

## Test Setup:



**Test Results:**

**Test plot 6: Spurious Emission – 1Mbps**



**Results:** All the observation are within Limit.

**Verdict Pass.**

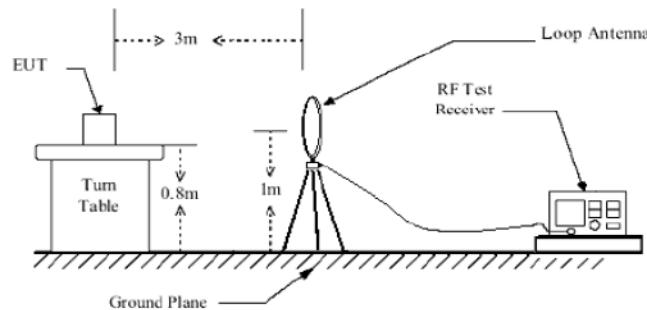
#### 9.6. Radiated Spurious Emission

<b>Standard</b>	FCC §15.205, FCC §15.209 RSS-247 §6.6, RSS-Gen §8.9 & §8.10																																																																											
<b>Limits</b>	(a) The emissions from an intentional radiator shall not exceed the field strength levels specified in the following table:																																																																											
	<table border="1"> <thead> <tr> <th rowspan="2">Frequency, MHz</th> <th colspan="2">Field strength of emissions</th> <th rowspan="2">Measurement distance, m</th> </tr> <tr> <th>µV/m</th> <th>dBµV/m</th> </tr> </thead> <tbody> <tr> <td>0.009–0.490</td><td>2400/F</td><td>67.6 – 20 × log<sub>10</sub>(F)</td><td>300</td> </tr> <tr> <td>0.490–1.705</td><td>24000/F</td><td>87.6 – 20 × log<sub>10</sub>(F)</td><td>30</td> </tr> <tr> <td>1.705–30.0</td><td>30</td><td>29.5</td><td>30</td> </tr> <tr> <td>30–88</td><td>100</td><td>40.0</td><td>3</td> </tr> <tr> <td>88–216</td><td>150</td><td>43.5</td><td>3</td> </tr> <tr> <td>216–960</td><td>200</td><td>46.0</td><td>3</td> </tr> <tr> <td>above 960</td><td>500</td><td>54.0</td><td>3</td> </tr> </tbody> </table>				Frequency, MHz	Field strength of emissions		Measurement distance, m	µV/m	dBµV/m	0.009–0.490	2400/F	67.6 – 20 × log <sub>10</sub> (F)	300	0.490–1.705	24000/F	87.6 – 20 × log <sub>10</sub> (F)	30	1.705–30.0	30	29.5	30	30–88	100	40.0	3	88–216	150	43.5	3	216–960	200	46.0	3	above 960	500	54.0	3																																						
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1.705–30.0	30	29.5	30																																																																									
30–88	100	40.0	3																																																																									
88–216	150	43.5	3																																																																									
216–960	200	46.0	3																																																																									
above 960	500	54.0	3																																																																									
Notes: For frequencies above 1 GHz the limit on peak RF emissions is 20 dB above the maximum permitted average emission limit applicable to the equipment under test.																																																																												
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(b) In the emission table above, the tighter limit applies at the band edges. (c) The level of any unwanted emissions from an intentional radiator operating under these general provisions shall not exceed the level of the fundamental emission. For intentional radiators which operate under the provisions of other sections within this part and which are required to reduce their unwanted emissions to the limits specified in this table, the limits in this table are based on the frequency of the unwanted emission and not the fundamental frequency. However, the level of any unwanted emissions shall not exceed the level of the fundamental frequency. (d) The emission limits shown in the above table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9–90 kHz, 110–490 kHz and above 1000 MHz.																																																																												

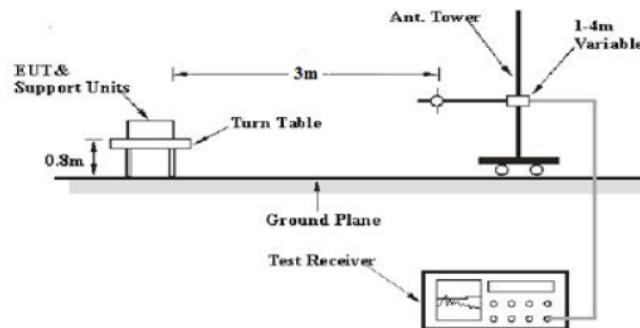
	<p>Radiated emission limits in these three bands are based on measurements employing an average detector.</p> <p>(f) In accordance with § 15.33(a), in some cases the emissions from an intentional radiator must be measured to beyond the tenth harmonic of the highest fundamental frequency designed to be emitted by the intentional radiator because of the incorporation of a digital device. If measurements above the tenth harmonic are so required, the radiated emissions above the tenth harmonic shall comply with the general radiated emission limits applicable to the incorporated digital device, as shown in § 15.109 and as based on the frequency of the emission being measured, or, except for emissions contained in the restricted frequency bands shown in § 15.205, the limit on spurious emissions specified for the intentional radiator, whichever is the higher limit. Emissions which must be measured above the tenth harmonic of the highest fundamental frequency designed to be emitted by the intentional radiator and which fall within the restricted bands shall comply with the general radiated emission limits in § 15.109 that are applicable to the incorporated digital device.</p> <p>RSS-Gen §8.9 &amp; §8.10</p> <p>Except where otherwise indicated in the applicable RSS, radiated emissions shall comply with the field strength limits shown in table 5 and table 6. Additionally, the level of any transmitter unwanted emission shall not exceed the level of the transmitter's fundamental emission.</p>												
	<p><b>Table 5 – General field strength limits at frequencies above 30 MHz</b></p>												
	<table border="1"> <thead> <tr> <th>Frequency (MHz)</th><th>Field strength (<math>\mu</math>V/m at 3 m)</th></tr> </thead> <tbody> <tr> <td>30 – 88</td><td>100</td></tr> <tr> <td>88 – 216</td><td>150</td></tr> <tr> <td>216 – 960</td><td>200</td></tr> <tr> <td>Above 960</td><td>500</td></tr> </tbody> </table>	Frequency (MHz)	Field strength ( $\mu$ V/m at 3 m)	30 – 88	100	88 – 216	150	216 – 960	200	Above 960	500		
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	<p><b>Table 6 – General field strength limits at frequencies below 30 MHz</b></p>												
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	<p><b>Note 1:</b> The emission limits for the ranges 9-90 kHz and 110-490 kHz are based on measurements employing a linear average detector.</p>												
<b>Test Procedure</b>	Refer to 558074 D01 and ANSI C63.10.												
<b>Measurements</b>	<input type="checkbox"/> Conducted Measurements <input checked="" type="checkbox"/> Radiated Measurements												

**Test Setup:**

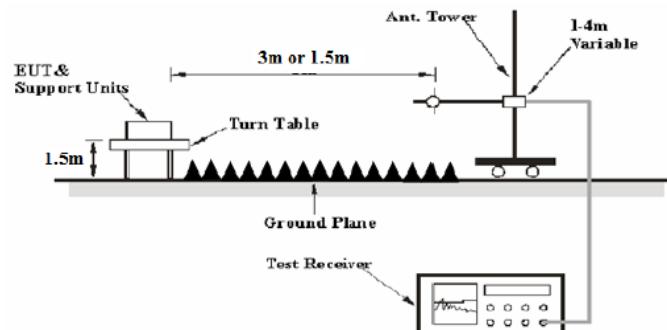
For radiated emissions from 9 kHz to 30 MHz



For radiated emissions from 30 MHz to 1 GHz



For radiated emissions from 1GHz to 40GHz



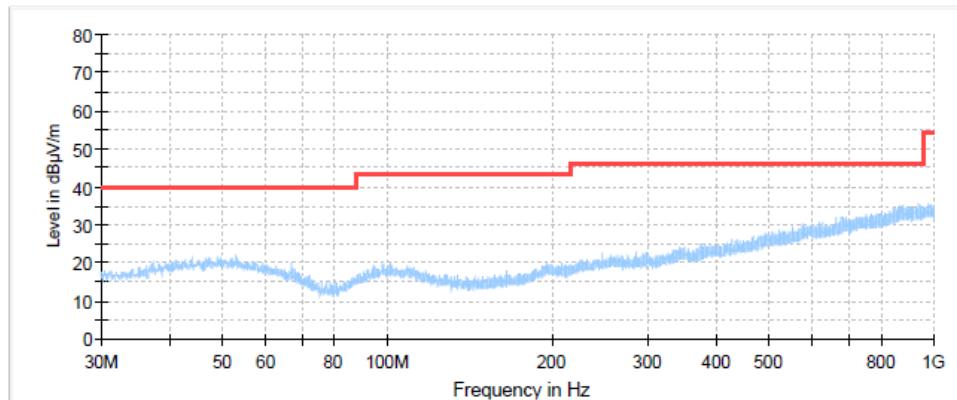
**Test Results:**

**9 kHz to 30 MHz:**

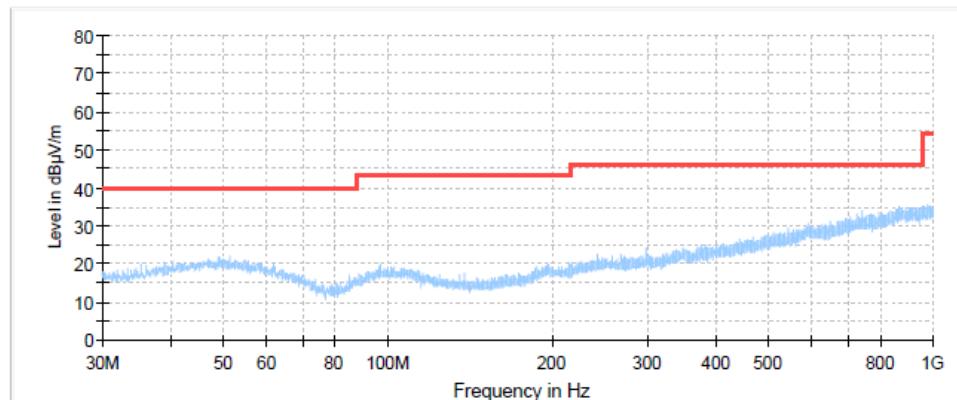
**Note:** 9kHz to 30 MHz have been tested & test result have data have more than 20dB margin.

30 MHz to 1GHz:

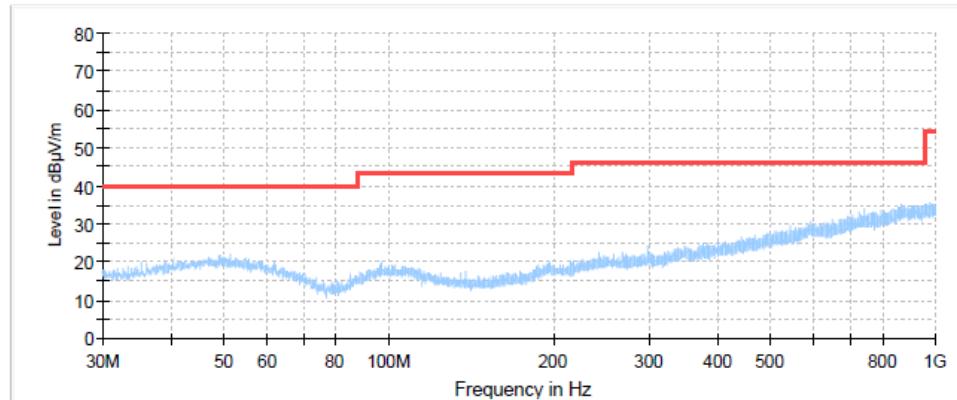
Test plot 7: Radiated Spurious Emissions Plot (30 MHz - 1 GHz) – Low Channel



Test plot 8: Radiated Spurious Emissions Plot (30 MHz - 1 GHz) – Mid Channel



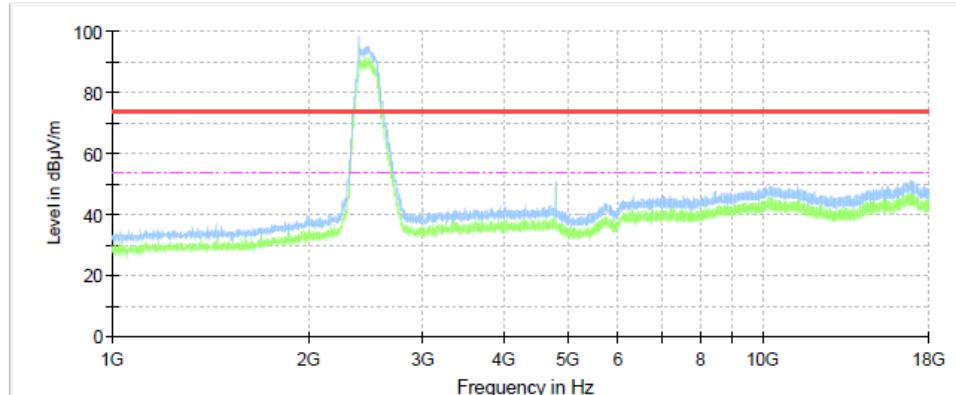
Test plot 9: Radiated Spurious Emissions Plot (30 MHz - 1 GHz) – High Channel



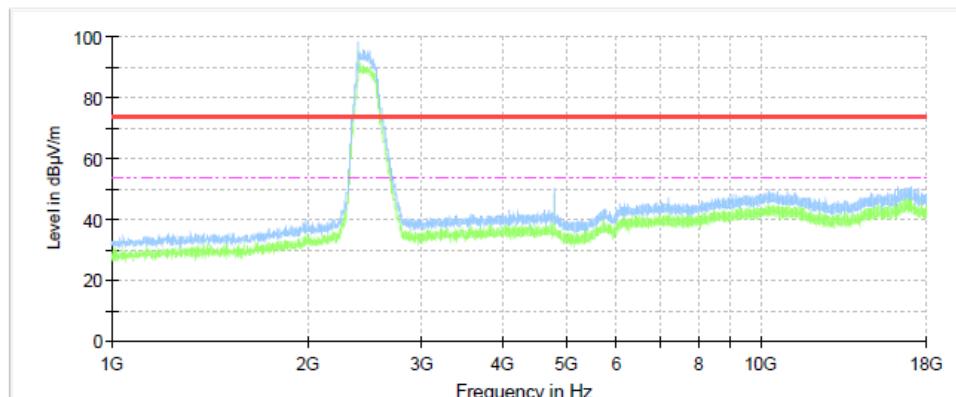
**Note:** No Major Peaks observed during 30 MHz to 1 GHz pre-scan measurement.

1 GHz to 18 GHz:

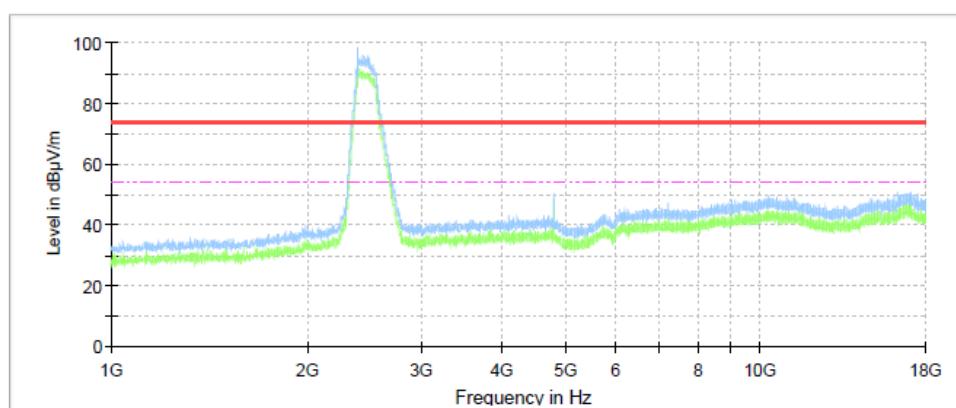
Test plot 10: Radiated Spurious Emissions Plot (1 GHz - 18 GHz) – Low Channel



Test plot 11: Radiated Spurious Emissions Plot (1 GHz - 18 GHz) – Mid Channel



Test plot 12: Radiated Spurious Emissions Plot (1 GHz - 18 GHz) – High Channel



Note: Peaks are well below avg limits during 1GHz to 18GHz & 18GHz to 40GHz pre-scan measurement.



Report number: FCC/2504002-A1  
Date of Issue: 03/09/2025



Table 5 – Test Results: Radiated Spurious Emission

Frequency (MHz)	Measured (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)
51.340000	21.96	40.00	18.04
97.253333	19.32	43.52	24.20
242.494667	22.73	46.02	23.29
297.720000	23.86	46.02	22.16
742.885333	34.01	46.02	12.01
4804.600000	50.47	74.00	23.53

Results: All the observation are within Limit.

Verdict Pass.

## 9.7. Antenna Requirements

### Applicable Standard:

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. And according to FCC §15.247 (b), if transmitting antennas of directional gain greater than 6 dBi are used the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

### RSS-Gen §6.8

The applicant for equipment certification shall provide a list of all antenna types that may be used with the transmitter, where applicable (i.e. for transmitters with detachable antenna), indicating the maximum permissible antenna gain (in dBi) and the required impedance for each antenna. The test report shall demonstrate the compliance of the transmitter with the limit for maximum equivalent isotropically radiated power (e.i.r.p.) specified in the applicable RSS, when the transmitter is equipped with any antenna type, selected from this list.

For expediting the testing, measurements may be performed using only the antenna with highest gain of each combination of transmitter and antenna type, with the transmitter output power set at the maximum level. However, the transmitter shall comply with the applicable requirements under all operational conditions and when in combination with any type of antenna from the list provided in the test report (and in the notice to be included in the user manual, provided below).

When measurements at the antenna port are used to determine the RF output power, the effective gain of the device's antenna shall be stated, based on a measurement or on data from the antenna's manufacturer.

The test report shall state the RF power, output power setting and spurious emission measurements with each antenna type that is used with the transmitter being tested.

For licence-exempt equipment with detachable antennas, the user manual shall also contain the following notice in a conspicuous location:

*This radio transmitter [enter the device's ISED certification number] has been approved by Innovation, Science and Economic Development Canada to operate with the antenna types listed below, with the maximum permissible gain indicated. Antenna types not included in this list that have a gain greater than the maximum gain indicated for any type listed are strictly prohibited for use with this device.*

Immediately following the above notice, the manufacturer shall provide a list of all antenna types which can be used with the transmitter, indicating the maximum permissible antenna gain (in dBi) and the required impedance for each antenna type.

Antenna Type*	Frequency Band (GHz)	Tx/Rx Paths	Antenna Gain (dBi)*
PCB Antenna	2.400–2.483 GHz	1	0

**Result:** Compliance.

\*\*\* End of Test report\*\*\*