



Radio Test Report

Report No.: STS2604018W05

Issued for

Fortin Auto Radio Inc.

9855 Colbert, Anjou, Quebec, Canada, H1J1Z9

Product Name: ANT-RFIDBT2

Brand Name: Fortin

Model Name: ANT-RFIDBT2

Series Model(s): N/A

FCC ID: 2ACKU-ANTRFIDBT2

Test Standards: FCC Part 15 Subpart C

The test results presented in this report relate only to the object tested. This report shall not be reproduced, except in full, without the written approval of the Shenzhen STS Test Services Co., Ltd.

**TEST REPORT**

Applicant's Name: Fortin Auto Radio Inc.

Address: 9855 Colbert, Anjou, Quebec, Canada, H1J1Z9

Manufacturer's Name: Fortin Auto Radio Inc.

Address: 9855 Colbert, Anjou, Quebec, Canada, H1J1Z9

Product Description

Product Name: ANT-RFIDBT2

Brand.....: Fortin

Model Number.....: ANT-RFIDBT2

Series Model(s): N/A

Test Standards.....: FCC Part 15 Subpart C

Test Procedure: ANSI C63.10-2020+Cor 1-2023

This device described above has been tested by STS and the test results show that the equipment under test (EUT) is in compliance with the FCC requirements. And it is applicable only to the tested sample identified in the report.

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Date of Test

Date of receipt of test item.....: 03 Apr. 2026

Date (s) of performance of tests.: 03 Apr. 2026 ~ 09 June 2026

Date of Issue: 09 June 2026

Test Result: **Pass**

Testing Engineer : _____

Aaron Bu

(Aaron Bu)

Technical Manager : _____

Skylar Li

(Skylar Li)

Authorized Signatory : _____

Bovey Yang

(Bovey Yang)





Table of Contents	Page
1. SUMMARY OF TEST RESULTS	5
1.1 TEST FACTORY	5
1.2 MEASUREMENT UNCERTAINTY	5
2. GENERAL INFORMATION	6
2.1 GENERAL DESCRIPTION OF THE EUT	6
2.2 DESCRIPTION OF THE TEST MODES	7
2.3 BLOCK DIAGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED	8
2.4 DESCRIPTION OF NECESSARY ACCESSORIES AND SUPPORT UNITS	8
2.5 EQUIPMENTS LIST FOR ALL TEST ITEMS	9
3. CONDUCTED EMISSION TEST RESULT (SECTION 15.207)	10
3.1 POWER LINE CONDUCTED EMISSION LIMITS	10
3.2 TEST PROCEDURE	11
3.3 TEST SETUP	11
3.4 EUT OPERATING CONDITIONS	11
3.5 TEST RESULTS	11
4. RADIATED& FIELD EMISSION TEST RESULT (SECTION 15.209)	12
4.1 LIMIT	12
4.2 TEST PROCEDURE	12
4.3 TEST SETUP	13
4.4 TEST RESULTS	14
5. 20 DB BANDWIDTH TEST	20
5.1 LIMIT	20
5.2 TEST SETUP	20
5.3 TEST RESULTS	20
6. ANTENNA REQUIREMENT	21
6.1 STANDARD REQUIREMENT	21
6.2 EUT ANTENNA	21
APPENDIX-PHOTOS OF TEST SETUP	22

**Revision History**

Rev.	Issue Date	Report No.	Effect Page	Contents
00	09 June 2026	STS2604018W05	ALL	Initial Issue



1. SUMMARY OF TEST RESULTS

Test procedures according to the technical standards:

FCC Part15 , Subpart C			
Standard Section	Test Item	Judgment	Remark
15.207	Conducted Emission	N/A	
15.209(a)	Radiated emission, Spurious Emission	PASS	
2.1049&15.215	20 dB Bandwidth	PASS	
15.203	Antenna requirement	PASS	

1.1 TEST FACTORY

Shenzhen CTA Testing Technology Co., Ltd.
Room 106, Building 1, Yibaolai Industrial Park, Qiaotou Community, Fuhai Street, Bao'an District, Shenzhen, China
FCC test Firm Registration Number: 517856
IC test Firm Registration Number: 27890
A2LA Certificate No.: 6534.01
IC CAB ID: CN0127

1.2 MEASUREMENT UNCERTAINTY

The reported uncertainty of measurement $y \pm U$, where expended uncertainty U is based on a standard uncertainty multiplied by a coverage factor of $k=2$, providing a level of confidence of approximately 95 %.

No.	Item	Uncertainty
1	RF output power, conducted	$\pm 0.751\text{dB}$
2	Unwanted Emissions, conducted	$\pm 2.888\text{dB}$
3	All emissions, radiated 9K-30MHz	$\pm 2.48\text{dB}$
4	All emissions, radiated 30M-1GHz	$\pm 2.52\text{dB}$
5	All emissions, radiated 1G-18GHz	$\pm 3.48\text{dB}$
6	All emissions, radiated >18GHz	$\pm 4.18\text{dB}$
7	Conducted Emission (9KHz-150KHz)	$\pm 2.48\text{dB}$
8	Conducted Emission (150KHz-30MHz)	$\pm 2.52\text{dB}$
9	Occupied Channel Bandwidth	$\pm 3.6\%$
10	Power Spectral Density, conducted	$\pm 1.214\text{dB}$
11	Duty Cycle	$\pm 3.2\%$



2. GENERAL INFORMATION

2.1 GENERAL DESCRIPTION OF THE EUT

Product Name	ANT-RFIDBT2
Brand	Fortin
Model Number	ANT-RFIDBT2
Series Model(s)	N/A
Model Difference	N/A
Channel List	Please refer to the Note 2.
Antenna Type	Please refer to the Note 3.
Equipemnt Category	Non-ISM frequency
Operating frequency	125KHz
Modulation Type	ASK
Power Rating	Input: DC 12V
Adapter	N/A
Battery	N/A
Hardware version number	1R0
Software version/FVIN	1.01
Connecting I/O Port(s)	Please refer to the Note 1.

Note:

1. For a more detailed features description, please refer to the manufacturer's specifications or the User Manual.
- 2.

Test channel list	
Coil	Frequency(KHz)
1	125

3. Table for Filed Antenna

Ant.	Brand	Model Name	Antenna Type	Connector	NOTE
1	Fortin	ANT-RFIDBT2	Coil	N/A	Antenna



2.2 DESCRIPTION OF THE TEST MODES

To investigate the maximum EMI emission characteristics generates from EUT, the test system was pre-scanning tested base on the consideration of following EUT operation mode or test configuration mode which possible have effect on EMI emission level. Each of these EUT operation mode(s) or test configuration mode(s) mentioned above was evaluated respectively.

Pretest Mode	Description
Mode 1	TX Mode

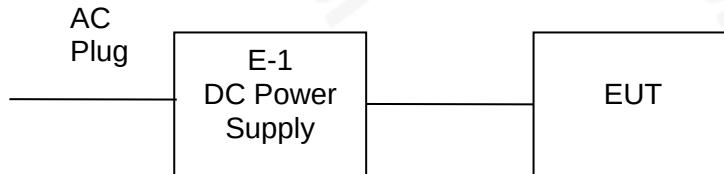
For Radiated Emission	
Final Test Mode	Description
Mode 1	TX Mode



2.3 BLOCK DIAGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED

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

Radiated Emission Test



2.4 DESCRIPTION OF NECESSARY ACCESSORIES AND SUPPORT UNITS

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

Item	Equipment	Mfr/Brand	Model/Type No.	Note
E-1	DC power supply	HONGSHENG FENG	DPS-305AF	N/A

Item	Equipment	Mfr/Brand	Length	Note
N/A	N/A	N/A	N/A	N/A

Note:

- (1) For detachable type I/O cable should be specified the length in cm in 『Length』 column.
- (2) “YES” is means “with core”; “NO” is means “without core”.



2.5 EQUIPMENTS LIST FOR ALL TEST ITEMS

Radiation Test Equipment					
Kind of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until
Test Receiver	R&S	ESCI	101427	2025.09.25	2026.09.24
Signal Analyzer	R&S	FSV 40-N	101823	2025.09.26	2026.09.25
Active loop Antenna	ZHINAN	ZN30900C	16035	2025.02.25	2027.02.24
Bilog Antenna	TESEQ	CBL6111D	34678	2025.09.27	2027.09.26
Pre-Amplifier(0.1M-3GHz)	EM	EM330	060665	2026.02.04	2027.02.03
RF Coaxial Cable	LEITAI M-WAVE	CA360	DC-18G	2025.09.26	2026.09.25
RF Coaxial Cable	LEITAI M-WAVE	CA360	DC-18G	2025.09.26	2026.09.25
Temperature & Humidity	SW-108	SuWei	N/A	2026.02.04	2027.02.03
Test SW	EZ-EMC	Ver.STSLAB-03A1 RE			



3. CONDUCTED EMISSION TEST RESULT (SECTION 15.207)

3.1 POWER LINE CONDUCTED EMISSION LIMITS

The radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies, within the band 150 kHz to 30 MHz, shall not exceed the limits in the following table.

FREQUENCY (MHz)	Class B (dBuV)	
	Quasi-peak	Average
0.15 -0.5	66 - 56 *	56 - 46 *
0.50 -5.0	56.00	46.00
5.0 -30.0	60.00	50.00

Note:

- (1) The tighter limit applies at the band edges.
- (2) The limit of "*" marked band means the limitation decreases linearly with the logarithm of the frequency in the range.

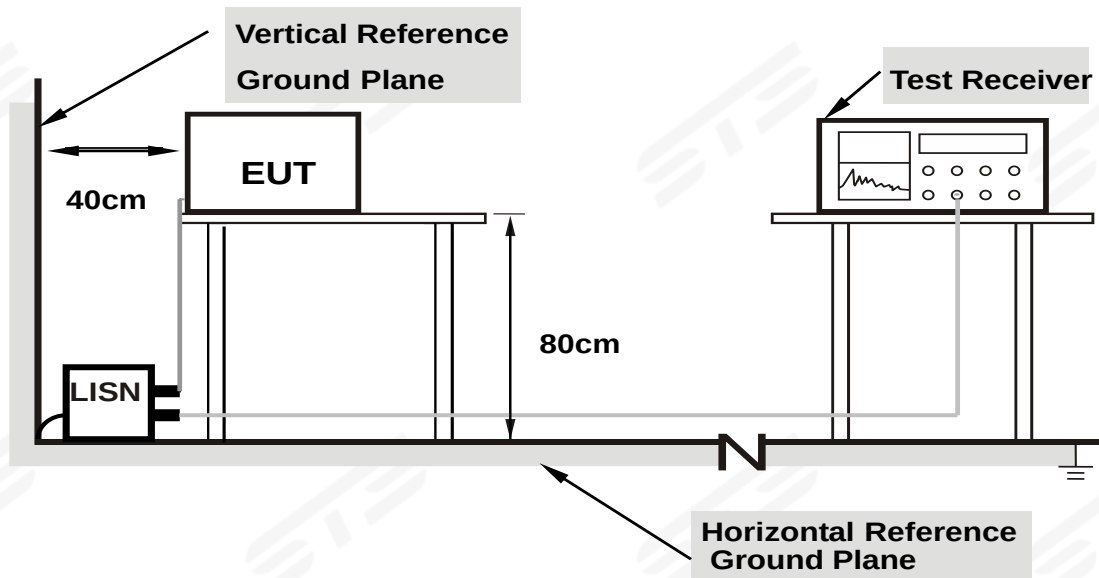
The following table is the setting of the receiver

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

3.2 TEST PROCEDURE

- The EUT is 0.8 m from the horizontal ground plane and 0.4 m from the vertical ground plane with EUT being connected to the power mains through a line impedance stabilization network (LISN). All other support equipments are powered from additional LISN(s). The LISN provides 50 Ohm/ 50uH of coupling impedance for the measuring instrument.
- Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 to 40 cm long.
- I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.
- LISN is at least 80 cm from the nearest part of EUT chassis.
- For the actual test configuration, please refer to the related Item –EUT Test Photos.

3.3 TEST SETUP



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

2. Both of LISNs (AMN) are 80 cm from EUT and at least 80 cm from other units and other metal planes support units.

3.4 EUT OPERATING CONDITIONS

The EUT was configured for testing in a typical fashion (as a customer would normally use it). The EUT has been programmed to continuously transmit during test. This operating condition was tested and used to collect the included data.

3.5 TEST RESULTS

The EUT is powered by a DC direct current source, so it is not applicable.



4. RADIATED& FIELD EMISSION TEST RESULT (SECTION 15.209)

4.1 LIMIT

Frequency [MHz]	Field Strength [uV/m]	Measurement Distance [Meters]
0.009 ~ 0.490	2400/F (kHz)	300
0.490 ~ 1.705	24000/F (kHz)	30
1.705 ~ 30	30	30
30 ~ 88	100	3
88 ~ 216	150	3
216 ~ 960	200	3
Above 960	500	3

Note:

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

Receiver Parameter	Setting
Attenuation	Auto
Start ~ Stop Frequency	9kHz~90kHz / RB 200Hz for AV
Start ~ Stop Frequency	90kHz~110kHz / RB 200Hz for QP
Start ~ Stop Frequency	110kHz~490kHz / RB 200Hz for AV
Start ~ Stop Frequency	490kHz~30MHz / RB 9kHz for QP
Start ~ Stop Frequency	30MHz~1000MHz / RB 120kHz for QP

§15.209(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. Radiated emission limits in these three bands are based on measurements employing an average detector.

4.2 TEST PROCEDURE

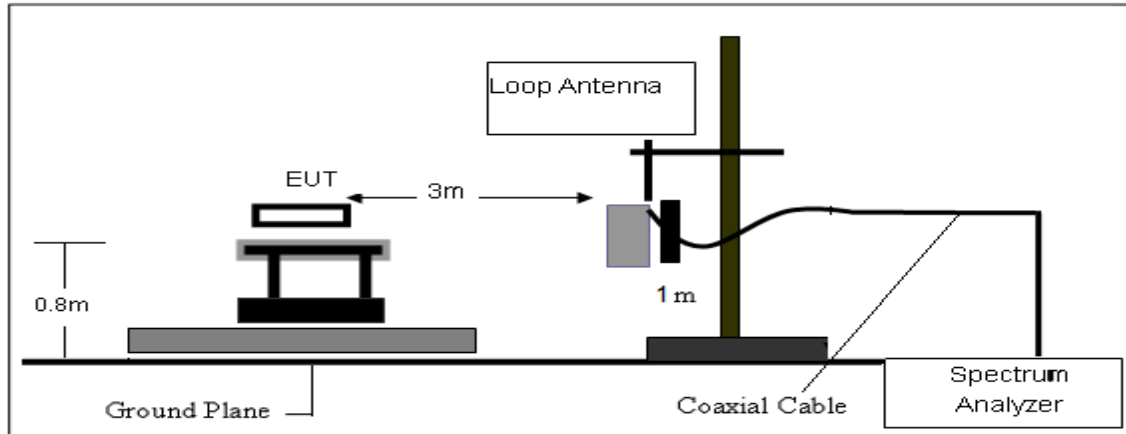
- a. The measuring distance of at 3 m shall be used for measurements at frequency 0.009MHz up to 1GHz.
- b. The EUT was placed on the top of a rotating table 0.8 meter above the ground at a 3 meter anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- c. 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.
- d. If the Peak Mode measured value compliance with and lower than Quasi Peak Mode Limit, the EUT shall be deemed to meet QP Limits and then no additional QP Mode measurement performed.
- e. For the actual test configuration, please refer to the related Item –EUT Test Photos.

Note:

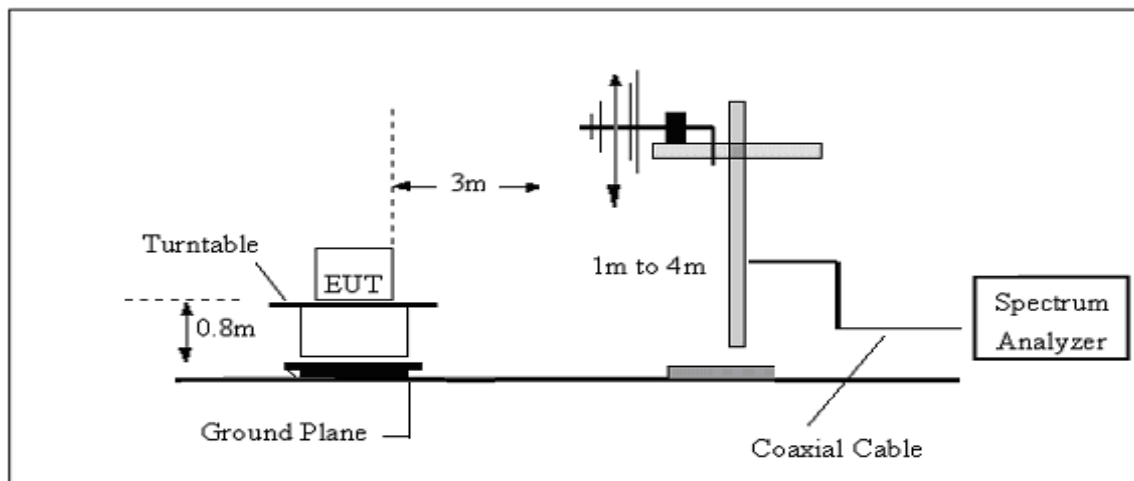
Both horizontal and vertical antenna polarities were tested and performed pretest to three orthogonal axis. The worst case emissions were reported.

4.3 TEST SETUP

(A) Radiated Emission Test-Up Frequency Below 30MHz



(B) Radiated Emission Test-Up Frequency 30MHz~1GHz





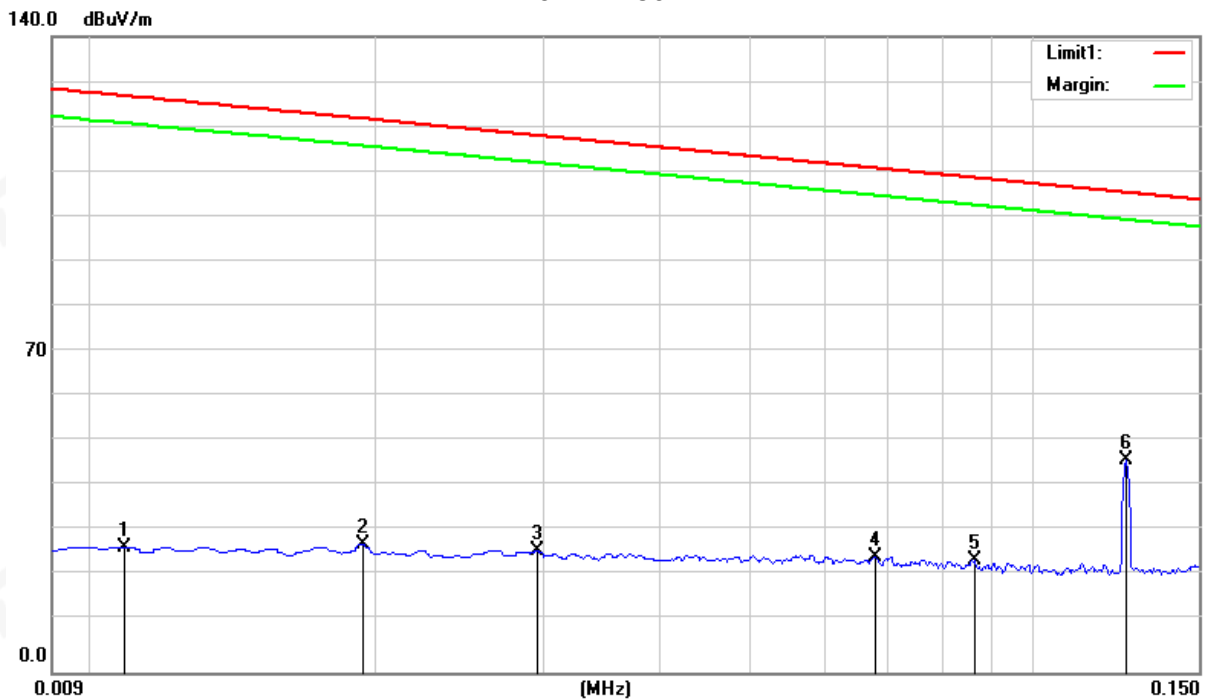
4.4 TEST RESULTS

Temperature :	23.4°C	Relative Humidity :	60%
Test Voltage :	DC 12V	Test Mode :	Mode 1

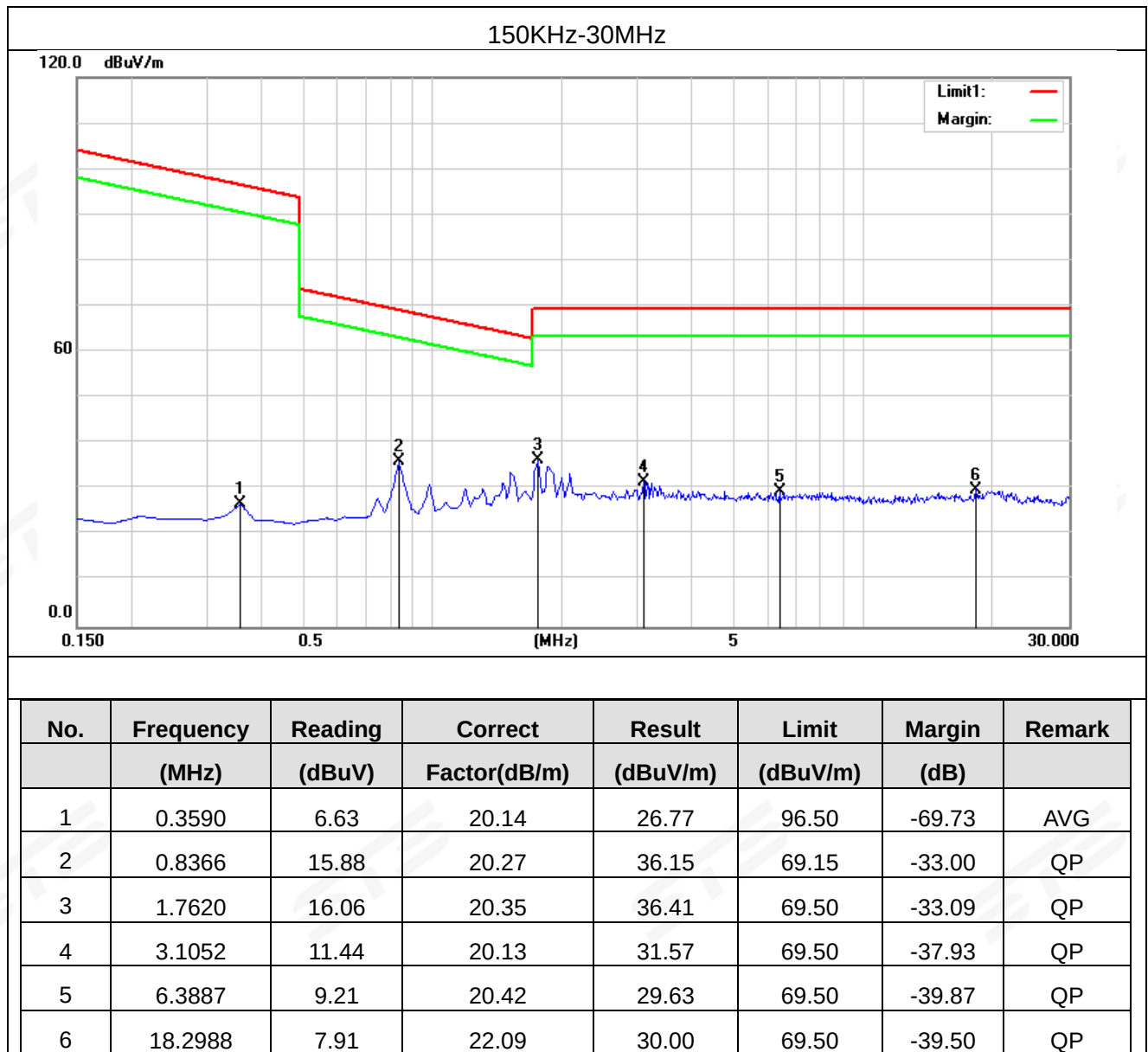
4.4.1 Spurious Radiated Emission Below 30 MHz

Coxial

9KHz-150KHz

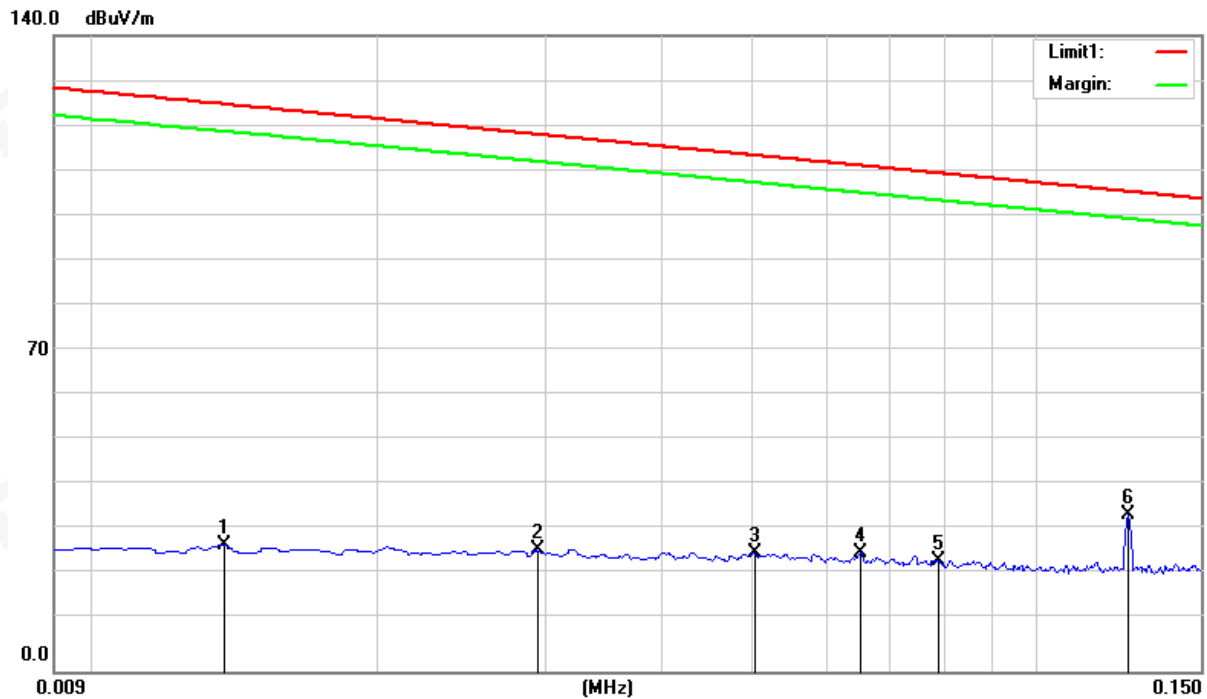


No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	0.0107	8.17	19.42	27.59	127.02	-99.43	QP
2	0.0193	8.13	20.05	28.18	121.89	-93.71	AVG
3	0.0295	6.84	19.91	26.75	118.21	-91.46	AVG
4	0.0677	6.50	19.00	25.50	110.99	-85.49	AVG
5	0.0866	6.38	18.24	24.62	108.85	-84.23	AVG
6	0.1250	29.33	17.55	46.88	105.63	-58.75	Peak

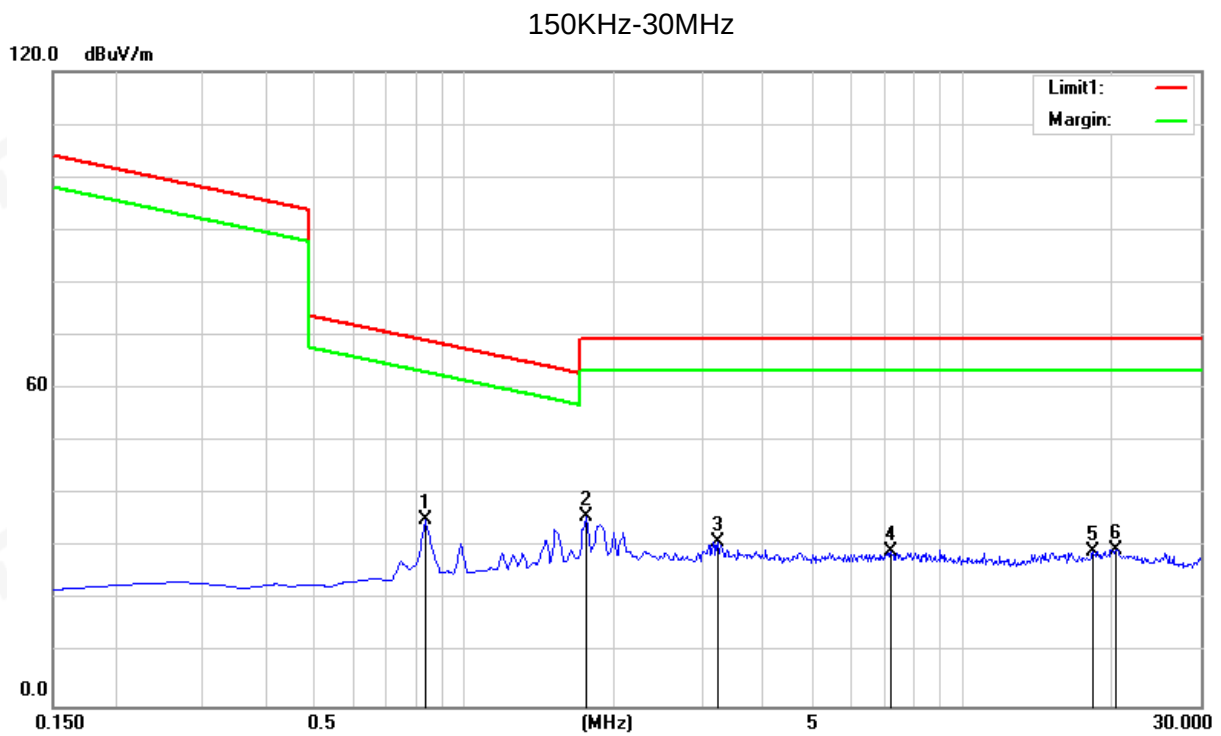




Coplanar
9KHz-150KHz



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	0.0136	8.08	19.63	27.71	124.93	-97.22	AVG
2	0.0294	6.70	19.91	26.61	118.24	-91.63	AVG
3	0.0502	6.71	19.49	26.20	113.59	-87.39	AVG
4	0.0651	6.88	19.08	25.96	111.33	-85.37	AVG
5	0.0788	5.88	18.62	24.50	109.67	-85.17	AVG
6	0.1250	16.90	17.55	34.45	105.63	-71.18	Peak

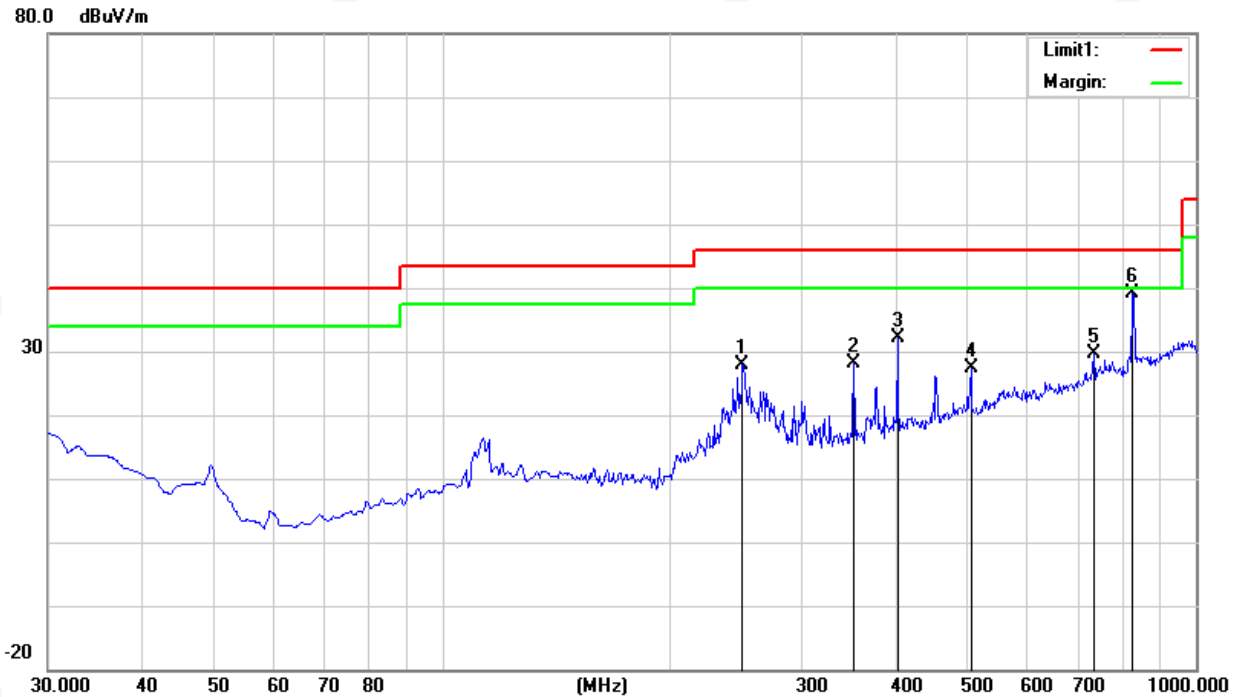


No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	0.8366	15.02	20.27	35.29	69.15	-33.86	QP
2	1.7620	15.46	20.35	35.81	69.50	-33.69	QP
3	3.2244	10.98	20.17	31.15	69.50	-38.35	QP
4	7.1946	8.87	20.37	29.24	69.50	-40.26	QP
5	18.2391	7.08	22.08	29.16	69.50	-40.34	QP
6	20.2987	7.31	22.39	29.70	69.50	-39.80	QP



4.4.2 Spurious Radiated Emission 30MHz -1 GHz

Temperature:	23.4°C	Relative Humidity:	60%
Test Voltage:	DC 12V	Phase:	Horizontal
Test Mode:	Mode 1		



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(KHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	251.1600	43.84	-15.95	27.89	46.00	-18.11	QP
2	352.0400	41.04	-13.02	28.02	46.00	-17.98	QP
3	402.4800	43.16	-11.00	32.16	46.00	-13.84	QP
4	503.3600	35.27	-7.98	27.29	46.00	-18.71	QP
5	733.2500	32.00	-2.35	29.65	46.00	-16.35	QP
6	825.4000	40.47	-1.31	39.16	46.00	-6.84	QP

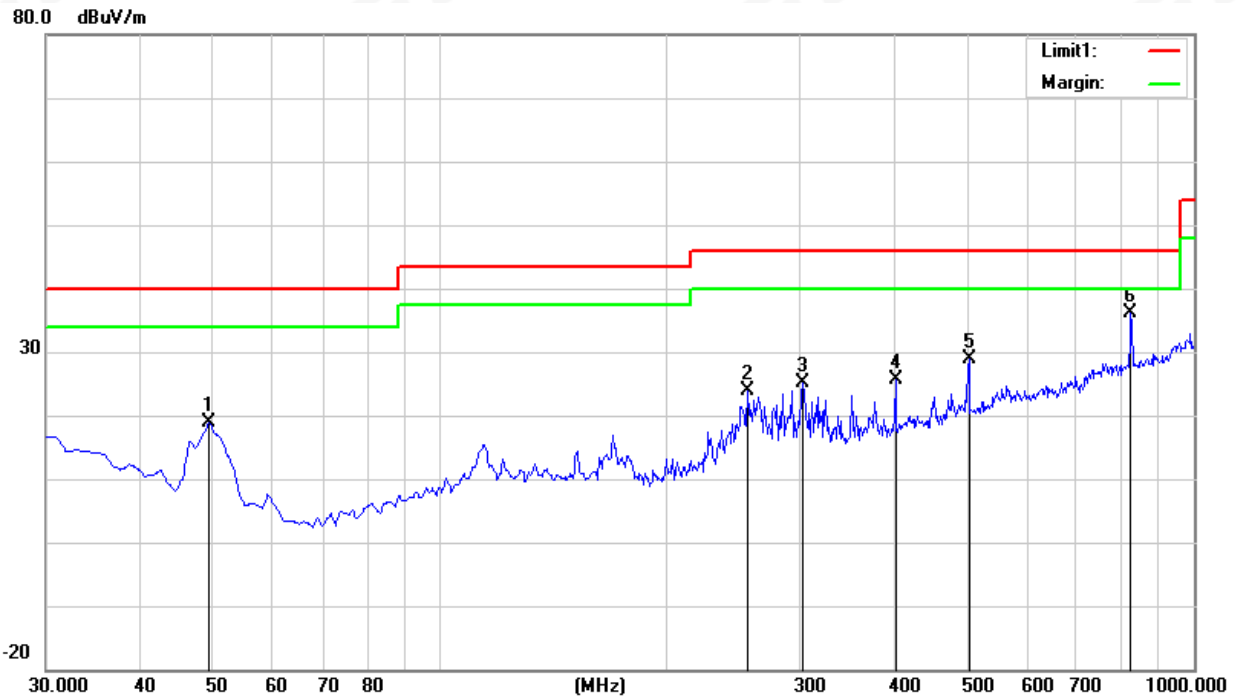
Note:1).Level (dBμV/m)= Reading (dBμV)+ Factor (dB/m)

2). Factor(dB/m)=Antenna Factor (dB/m) + Cable loss (dB) - Pre Amplifier gain (dB)

3). Margin(dB) = Limit (dBμV/m) - Level (dBμV/m)



Temperature:	23.4°C	Relative Humidity:	60%
Test Voltage:	DC 12V	Phase:	Vertical
Test Mode:	Mode 1		



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(KHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	49.4000	41.91	-22.95	18.96	40.00	-21.04	QP
2	256.0100	39.22	-15.24	23.98	46.00	-22.02	QP
3	303.5400	39.72	-14.69	25.03	46.00	-20.97	QP
4	402.4800	36.64	-11.00	25.64	46.00	-20.36	QP
5	503.3600	36.81	-7.98	28.83	46.00	-17.17	QP
6	825.4000	37.41	-1.31	36.10	46.00	-9.90	QP

Note:1).Level (dBμV/m)= Reading (dBμV)+ Factor (dB/m)

2). Factor(dB/m)=Antenna Factor (dB/m) + Cable loss (dB) - Pre Amplifier gain (dB)

3). Margin(dB) = Limit (dBμV/m) - Level (dBμV/m)



5. 20 DB BANDWIDTH TEST

5.1 Limit

FCC Part 2.1049, Only applicable to report.

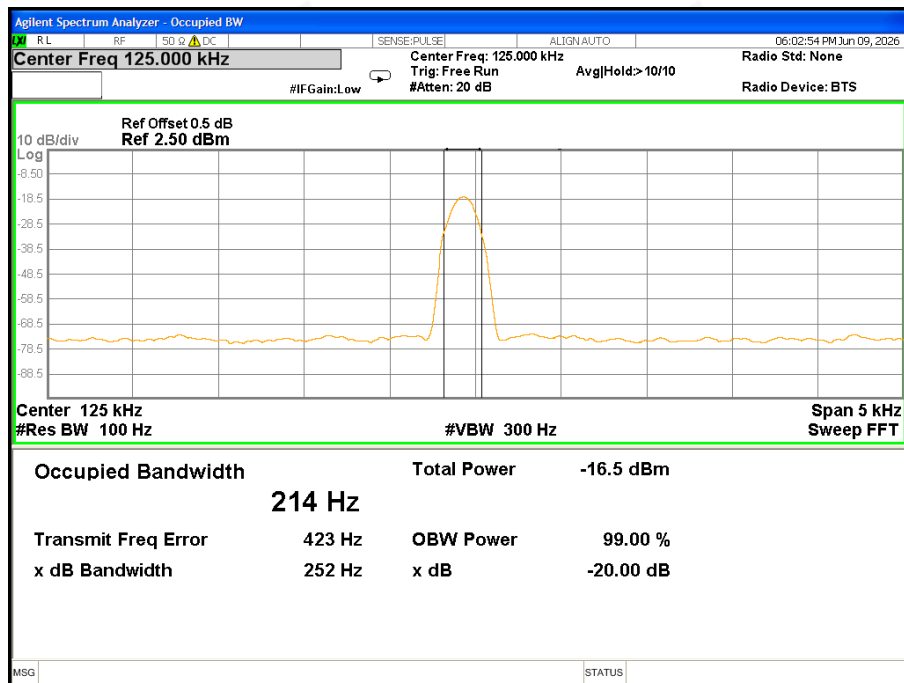
5.2 TEST SETUP

Spectrum Parameter	Setting
Span Frequency	≥ 3 times the 20 dB bandwidth
RB	100Hz
VB	$\geq$ RBW
Detector	Peak
Trace	Max Hold
Sweep Time	Auto

The test program and configuration, Refer to 4.2 and 4.3

5.3 TEST RESULTS

Operating Frequency (kHz)	20 dB Bandwidth (KHz)
125	0.252





6. ANTENNA REQUIREMENT

6.1 STANDARD REQUIREMENT

15.203 requirement: For intentional device, according to 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.

6.2 EUT ANTENNA

The EUT antenna is Coil Antenna. It comply with the standard requirement.



APPENDIX-PHOTOS OF TEST SETUP

Note: See test photos in setup photo document for the actual connections between Product and support equipment.

※※※※※END OF THE REPORT※※※※※