

Prüfbericht-Nr.: Test report no.:	CN21BLDK 002	Auftrags-Nr.: Order no.:	244342625	Seite 1 von 98 Page 1 of 98
Kunden-Referenz-Nr.: Client reference no.:	P00338203	Auftragsdatum: Order date:	2021-06-29	
Auftraggeber: Client:	Beijing Roborock Technology Co., Ltd. Floor 6, Suite 6016, 6017, 6018, Building C, Kangjian Baosheng Plaza, No. 8 Heiquan Road, Haidian District, 100192 Beijing, P. R. China			
Prüfgegenstand: Test item:	Robotic Vacuum Cleaner			
Bezeichnung / Typ-Nr.: Identification / Type no.:	roborock S6 Pure, roborock S4 Max FCC ID:2AN20-RSW06 IC:23317-RSW06			
Auftrags-Inhalt: Order content:	Complete test			
Prüfgrundlage: Test specification:	FCC CFR47 Part 15, Subpart C Section 15.247 RSS-Gen Issue 5, Amendment 2, February 2021 RSS-247 Issue 2, February 2017 ANSI C63.10: 2013			
Wareneingangsdatum: Date of sample receipt:	2021-07-06			
Prüfmuster-Nr.: Test sample no.:	A003084721-004			
Prüfzeitraum: Testing period:	Refer to test report			
Ort der Prüfung: Place of testing:	TÜV Rheinland (Shanghai) Co., Ltd.			
Prüflaboratorium: Testing laboratory:	TÜV Rheinland (Shanghai) Co., Ltd.			
Prüfergebnis*: Test result*:	Pass			
geprüft von: tested by:	X Yanli Fan		genehmigt von: authorized by:	X Hongfei Wu
Datum: Date: 2021-09-23	Signed by: Yanli Fan		Ausstellungsdatum: Issue date: 2021-09-23	Signed by: Hongfei Wu
Stellung / Position:	PE/Yanli Fan		Stellung / Position:	Reviewer/Hongfei Wu
Sonstiges / Other:	HVIN: 3181A-S The purpose of this report is to perform the C2PC tests since the host of the wireless module and antenna gain were changed, so only the related tests were performed.			
Zustand des Prüfgegenstandes bei Anlieferung: Condition of the test item at delivery:	Prüfmuster vollständig und unbeschädigt Test item complete and undamaged			
* Legende:	P(ass) = entspricht o.g. Prüfgrundlage(n)	F(ail) = entspricht nicht o.g. Prüfgrundlage(n)	N/A = nicht anwendbar	N/T = nicht getestet
* Legend:	P(ass) = passed a.m. test specification(s)	F(ail) = failed a.m. test specification(s)	N/A = not applicable	N/T = not tested
Dieser Prüfbericht bezieht sich nur auf das o.g. Prüfmuster und darf ohne Genehmigung der Prüfstelle nicht auszugsweise vervielfältigt werden. Dieser Bericht berechtigt nicht zur Verwendung eines Prüfzeichens. This test report only relates to the a. m. test sample. Without permission of the test center this test report is not permitted to be duplicated in extracts. This test report does not entitle to carry any test mark.				

Prüfbericht - Nr.: CN21BLDK 002
Test Report No.

Seite 2 von 96
Page 2 of 96

TEST SUMMARY

5.1.1 ANTENNA REQUIREMENT

RESULT: Pass

5.2.1 CONDUCTED EMISSION

RESULT: Pass

5.3.1 RADIATED BAND-EDGE

RESULT: Pass

5.3.2 RADIATED SPURIOUS EMISSION

RESULT: Pass

Contents

1.	GENERAL REMARKS	4
1.1	COMPLEMENTARY MATERIALS.....	4
2.	TEST SITES	4
2.1	TEST FACILITIES	4
2.2	LIST OF TEST AND MEASUREMENT INSTRUMENTS.....	5
2.3	TRACEABILITY	5
2.4	CALIBRATION	5
2.5	MEASUREMENT UNCERTAINTY	6
3.	GENERAL PRODUCT INFORMATION.....	7
3.1	PRODUCT FUNCTION AND INTENDED USE	7
3.2	RATINGS AND SYSTEM DETAILS.....	7
3.3	INDEPENDENT OPERATION MODES.....	8
3.4	NOISE GENERATING AND NOISE SUPPRESSING PARTS	8
3.5	SUBMITTED DOCUMENTS.....	8
4.	TEST SET-UP AND OPERATION MODES.....	9
4.1	PRINCIPLE OF CONFIGURATION SELECTION	9
4.2	TEST OPERATION AND TEST SOFTWARE.....	9
4.3	SPECIAL ACCESSORIES AND AUXILIARY EQUIPMENT	9
4.4	COUNTERMEASURES TO ACHIEVE EMC COMPLIANCE.....	9
5.	TEST RESULTS	10
5.1	CONDUCTED TESTING AT ANTENNA PORT	10
5.1.1	<i>Antenna Requirement.....</i>	<i>10</i>
5.2	EMISSION IN THE FREQUENCY RANGE UP TO 30MHZ.....	12
5.2.1	<i>Conducted Emission.....</i>	<i>12</i>
5.3	EMISSION IN THE FREQUENCY RANGE ABOVE 30MHZ	15
5.3.1	<i>Radiated Band-Edge</i>	<i>15</i>
5.3.2	<i>Radiated Spurious Emission.....</i>	<i>22</i>
6.	LIST OF TABLES	95
7.	LIST OF FIGURES	95

1. General Remarks

1.1 Complementary Materials

Null.

2. Test Sites

2.1 Test Facilities

TÜV Rheinland (Shanghai) Co., Ltd.

Shanghai TÜV Rheinland Building No. 177, 178 Lane 777, West Guangzhong Rd, Jing'an District, Shanghai, China

The used test equipment is in accordance with CISPR 16 for measurement of radio interference.

The Federal Communications Commission has reviewed the technical characteristics of the radiated and conducted emission facility, and has found these test facilities to be in compliance with the requirements of section 2.948 of the FCC rules. The description of the test facility is listed under FCC registration number 958801.

The Innovation, Science and Economic Development Canada has reviewed the technical characteristics of the radiated and conducted emission facility, and has found these test facilities to be in compliance. The description of the test facility is listed under chambers filing number 2932F.

2.2 List of Test and Measurement Instruments

Table 1: List of Test and Measurement Equipment

Instrument	Manufacturer	Type No.	Asset No.	Cali. Due Date
3m modified semi-anechoic chamber	Frankonia	SAC3	G1811378	2022-06-27
Bilog antenna	Teseq	CBL 6112D	G1811425	2023-03-10
EMI test receiver	Rohde & Schwarz	ESCI	G1811402	2021-09-18
Spectrum analyser	Rohde & Schwarz	FSV40	G1822702	2021-11-01
Preamplifier	Taiwan EMCI	EMC184045SE	G1825372	2023-03-06
Log periodic antenna	Rohde & Schwarz	HL050	G1811417	2023-03-10
Broadband Horn Antenna	Schwarzbeck	BBHA 9170	9170-305	2023-07-08
Preamplifier	Taiwan EMCI	EMC051845SE	G1825371	2023-03-06
Spectrum Analyzer	Keysight	N9020A	MY54500180	2021-09-08
Thermohygrometer	Testo	608-H1	1241320614	2021-10-13
EMI test receiver	R&S	ESIB26	G1811380	2023-03-06
Artificial main network	R&S	ENV432	G1830003	2022-11-01
EMC measurement software	R&S	EMC32 (Ver 10.20.01)	G1824845	N/A

2.3 Traceability

All measurement equipment calibrations are traceable to NIST or where calibration is performed outside the United States, to equivalent nationally recognized standards organizations.

2.4 Calibration

Equipment requiring calibration is calibrated periodically by the manufacturer or according to manufacturer's specifications. Additionally all equipment is verified for proper performance on a regular basis using in house standards or comparisons.

2.5 Measurement Uncertainty

Table 2: Measurement Uncertainty

Measurement Type	Frequency	Uncertainty
Antenna Port Conducted Emission	< 1GHz	±0.39dB
	> 1GHz	±0.68dB
Conducted Emission	150kHz - 30MHz	±3.39dB
Radiated Emission	9kHz - 30MHz	±2.93dB
	30MHz - 1GHz	±5.34dB
	> 1GHz	±5.40dB

3. General Product Information

3.1 Product Function and Intended Use

The EUT (Equipment Under Test) is a Robotic Vacuum Cleaner which supports Wi-Fi.

The aim of this report is to evaluate the RF characteristic of the Wi-Fi Part of this EUT.

For details refer to the User Manual and Circuit Diagram.

3.2 Ratings and System Details

Table 3: Technical Specification of EUT

General Description of EUT	
Product Name:	Robotic Vacuum Cleaner
Model No.:	roborock S6 Pure, roborock S4 Max
Rated Voltage:	DC 20V, 1.2A
Extreme operating temperature:	4~40°C
Technical Specification of W-LAN	
Frequency Range:	2412~2462MHz
Modulation Type:	DSSS (CCK, DQPSK, DBPSK) OFDM (QPSK/BPSK/16QAM/64QAM)
Antenna Type:	Internal antenna
Antenna Gain:	3.87 dBi
Receiver Category:	1

3.3 Independent Operation Modes

Table 4: Independent Operation Modes

Test Mode Tx	Operating Mode	Channel Number	Channel Frequency [MHz]
TM1	802.11b	1	2412
TM2	802.11b	6	2437
TM3	802.11b	11	2462
TM4	802.11g	1	2412
TM5	802.11g	6	2437
TM6	802.11g	11	2462
TM7	802.11n-HT20	1	2412
TM8	802.11n-HT20	6	2437
TM9	802.11n-HT20	11	2462
TM10	Normal		

3.4 Noise Generating and Noise Suppressing Parts

Refer to the Circuit Diagram.

3.5 Submitted Documents

- Bill of Material
- PCB Layout
- Photo Document
- Circuit Diagram
- Instruction Manual
- Rating Label

4. Test Set-up and Operation Modes

4.1 Principle of Configuration Selection

The equipment under test (EUT) was configured to measure its maximum power level. The test modes were adapted accordingly in reference to the instructions for use.

4.2 Test Operation and Test Software

Test operation refers to test setup in chapter 5. All testing were performed according to the procedures in ANSI C63.10: 2013.

4.3 Special Accessories and Auxiliary Equipment

Null.

4.4 Countermeasures to achieve EMC Compliance

Null.

5. Test Results

5.1 Conducted Testing at Antenna Port

5.1.1 Antenna Requirement

RESULT:**Pass**

According to the manufacturer declared, the EUT has one internal antenna, the directional gain of antenna is 3.87 dBi and the antenna is designed with permanent attachment and no consideration of replacement. Therefore the EUT is considered sufficient to comply with the provision.

Table 5: Antenna Requirement**FCC 15.203 – Antenna Requirement 1**

Requirement:	No antenna other than that furnished by the responsible party shall be used with the device	
Results:	Antenna type:	Internal antenna
Verdict:	Pass	

FCC 15.204 – Antenna Requirement 2

Requirement:	An intentional radiator may be operated only with the antenna with which it is authorized. If an antenna is marketed with the intentional radiator, it shall be of a type which is authorized with the intentional radiator.	
Results:	Only one internal antenna can be used	
Verdict:	Pass	

RSS-Gen 6.4 – External Control

Requirement:	The device shall not have any external controls accessible to the user that enable it to be adjusted, selected or programmed to operate in violation of the regulatory requirements, including RSS-Gen and the applicable RSSs	
Results:	The device does not have any transmitter external controls accessible to the user that can be adjusted and operated in violation of the limits of this standard.	
Verdict:	PASS	

RSS-Gen 6.8 – Antenna Requirement

Requirement: 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.

Results:

a) Antenna Type:	Internal antenna
b) Manufacture:	N/A
c) Model No.:	N/A
d) Gain with reference to an isotropic radiator:	3.87 dBi

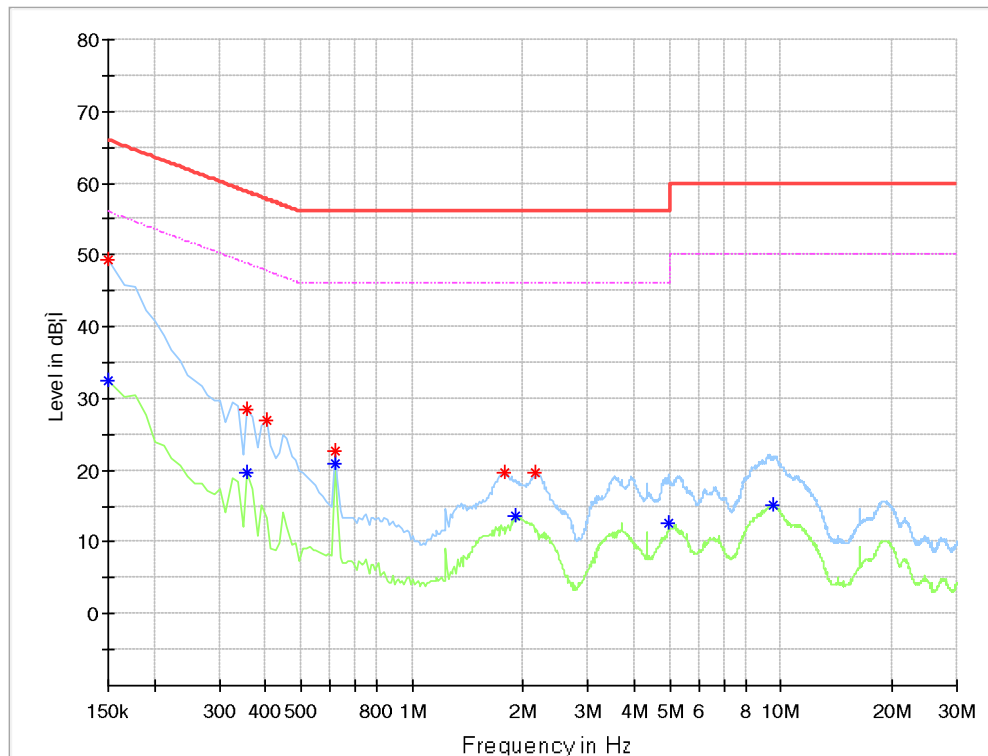
Verdict: PASS

5.2 Emission in the Frequency Range up to 30MHz

5.2.1 Conducted Emission

RESULT:**Pass**

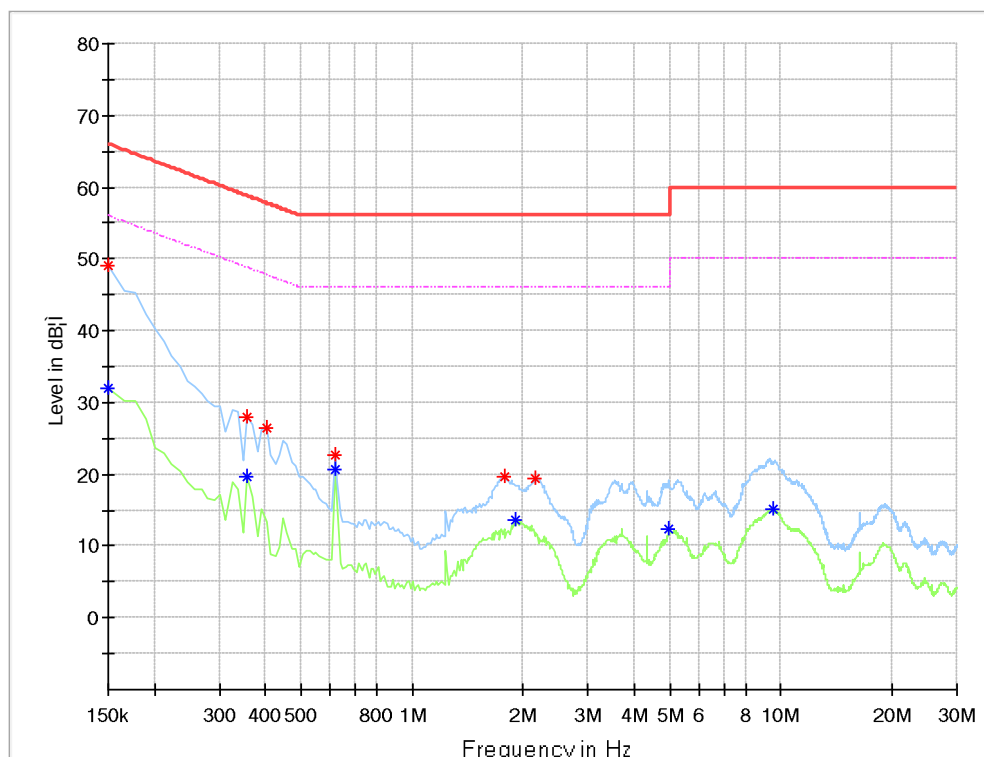
Date of testing	:	2021-08-20
Ambient temperature	:	26.1°C
Relative humidity	:	32.7%
Atmospheric pressure	:	101kPa
Test requirement	:	FCC Part 15.207 (a) RSS-Gen Issue 5, Amendment 2, February 2021, Clause 8.8
Test procedure	:	ANSI C63.10: 2013
Test voltage	:	AC 120V/60Hz
Test modes applied	:	TM10

Figure 1: Conducted Emission, L

Final_Result_QPK

Frequency (MHz)	QuasiPeak (dBµV)	Limit (dBµV)	Margin (dB)	Line
0.150000	49.43	66.00	16.57	L
0.358125	28.35	58.77	30.42	L
0.403125	26.91	57.79	30.88	L
0.616875	22.69	56.00	33.31	L
1.775625	19.61	56.00	36.39	L
2.169375	19.54	56.00	36.46	L

Final_Result_CAV

Frequency (MHz)	CAverage (dBµV)	Limit (dBµV)	Margin (dB)	Line
4.948125	12.51	46.00	33.49	L
1.910625	13.58	46.00	32.42	L
9.526875	15.19	50.00	34.81	L
0.358125	19.56	48.77	29.21	L
0.616875	20.84	46.00	25.16	L
0.150000	32.41	56.00	23.59	L

Figure 2: Conducted Emission, N

Final_Result_QPK

Frequency (MHz)	QuasiPeak (dBμV)	Limit (dBμV)	Margin (dB)	Line
0.150000	49.08	66.00	16.92	N
0.358125	28.08	58.77	30.69	N
0.403125	26.55	57.79	31.24	N
0.616875	22.59	56.00	33.41	N
1.775625	19.61	56.00	36.39	N
2.169375	19.48	56.00	36.52	N

Final_Result_CAV

Frequency (MHz)	CAverage (dBμV)	Limit (dBμV)	Margin (dB)	Line
4.948125	12.45	46.00	33.55	N
1.910625	13.51	46.00	32.49	N
9.526875	15.12	50.00	34.88	N
0.358125	19.56	48.77	29.21	N
0.616875	20.79	46.00	25.21	N
0.150000	32.11	56.00	23.89	N

5.3 Emission in the Frequency Range above 30MHz

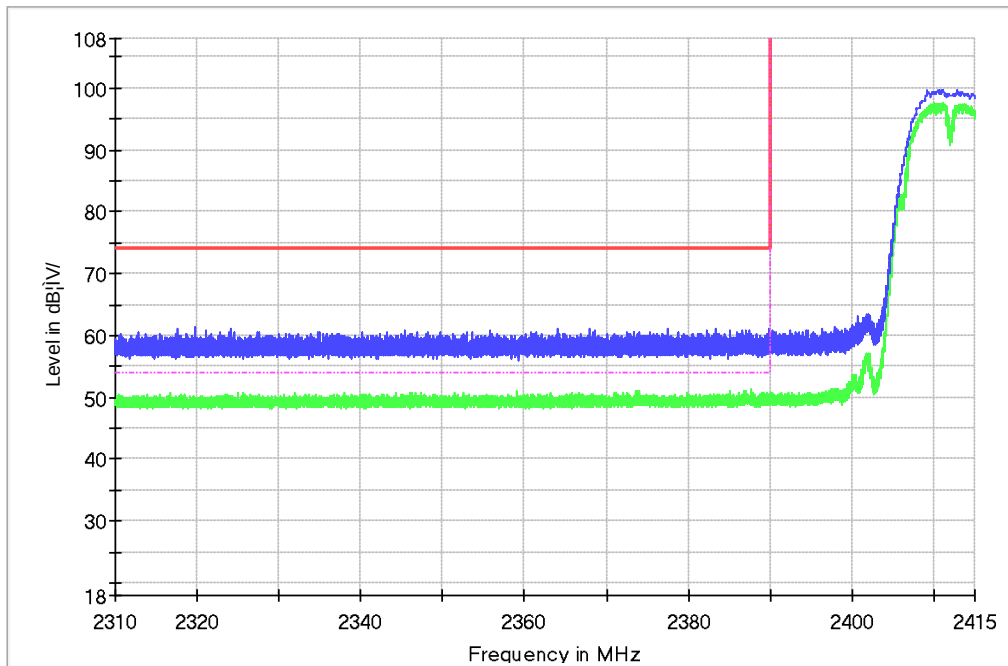
5.3.1 Radiated Band-Edge

RESULT:**Pass**

Date of testing	:	2021-07-27
Ambient temperature	:	26.1°C
Relative humidity	:	32.7%
Atmospheric pressure	:	101kPa
Test requirement	:	FCC Part 15.247(d) FCC Part 15.205(a) FCC Part 15.209(a) RSS-Gen Issue 5, Amendment 2, February 2021, Clause 8.9 RSS-Gen Issue 5, Amendment 2, February 2021, Clause 8.10 RSS-247 Issue 2, February 2017, Clause 5.5
Test procedure	:	ANSI C63.10: 2013
Test voltage	:	AC 120V/60Hz
Test modes applied	:	TM1, TM3, TM4, TM6, TM7, TM9

Figure 3: Radiated Band-Edge, TM1, H

RE_1-18GHz_HL050_FSV40_Pre


Figure 4: Radiated Band-Edge, TM1, V

RE_1-18GHz_HL050_FSV40_Pre

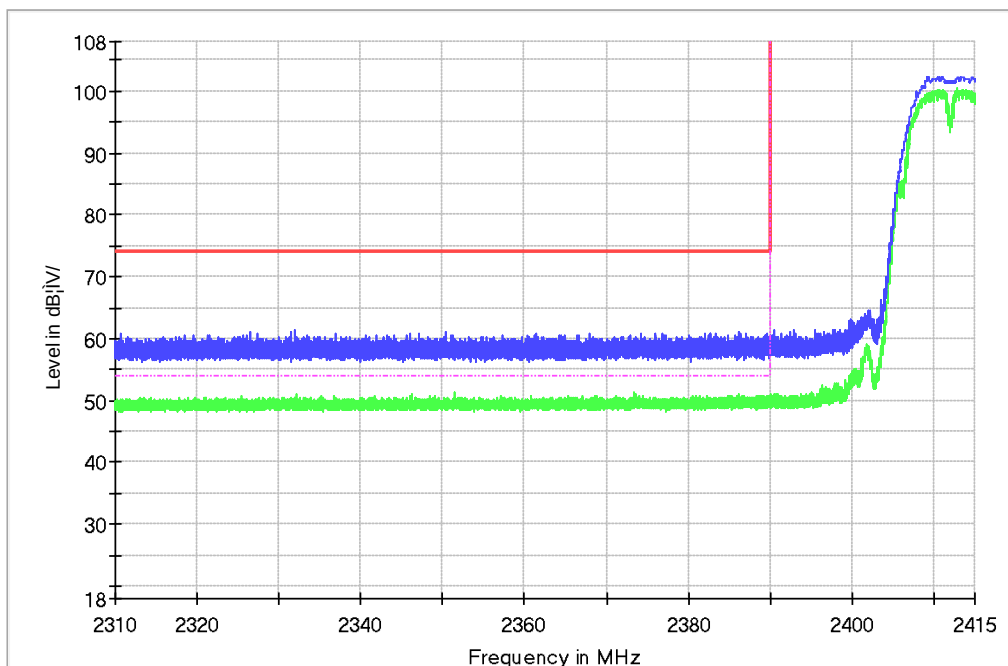


Figure 5: Radiated Band-Edge, TM3, H

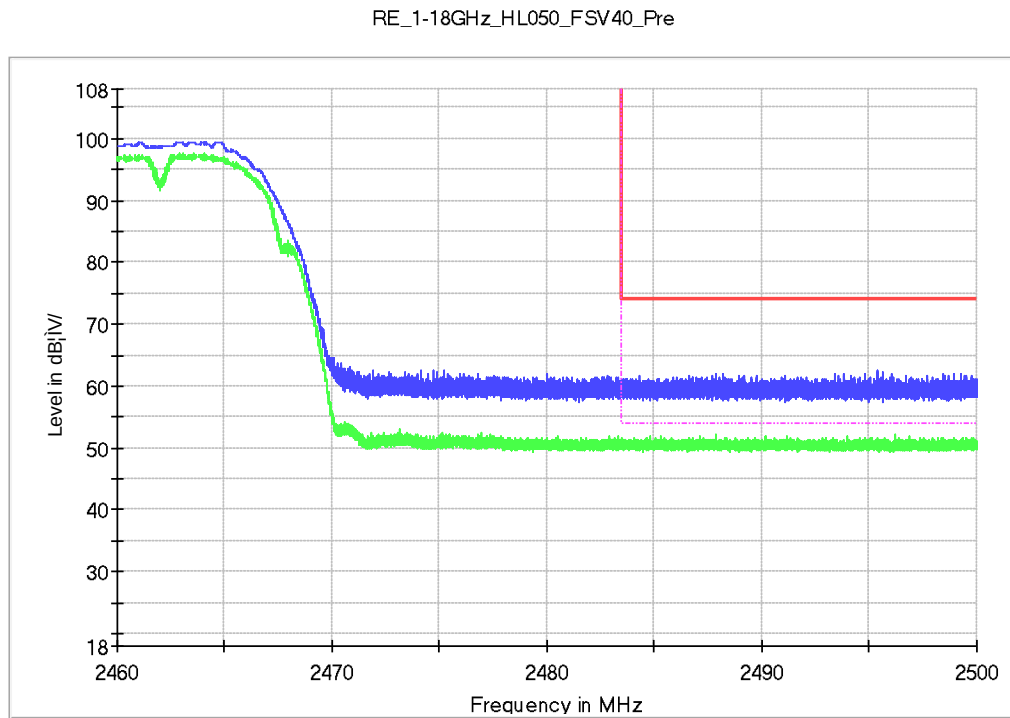


Figure 6: Radiated Band-Edge, TM3, V

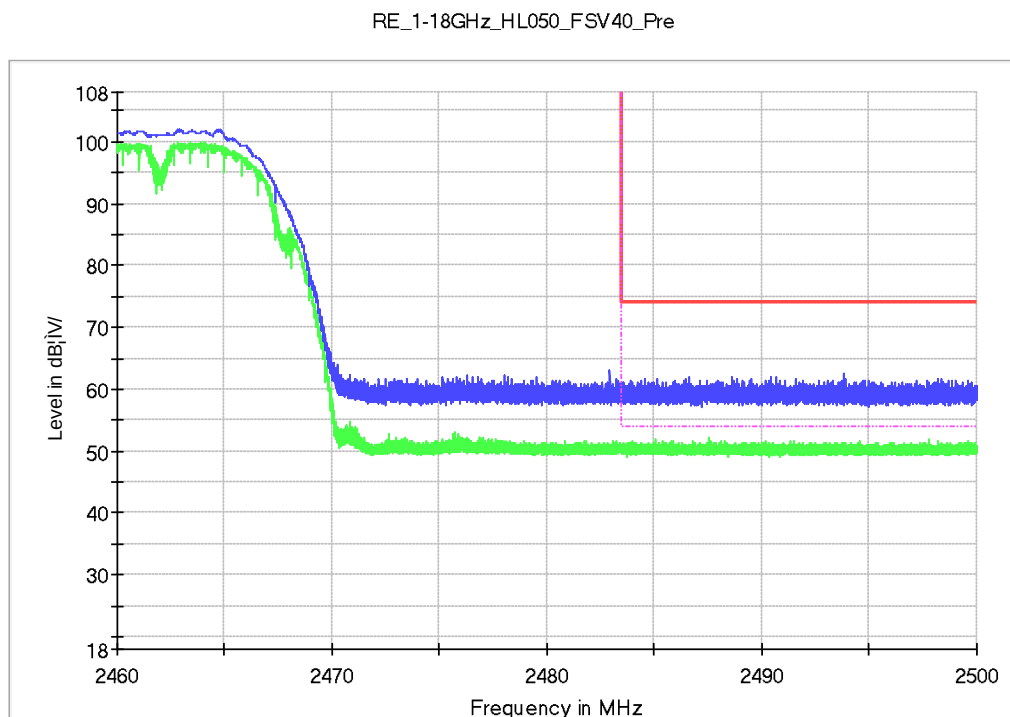
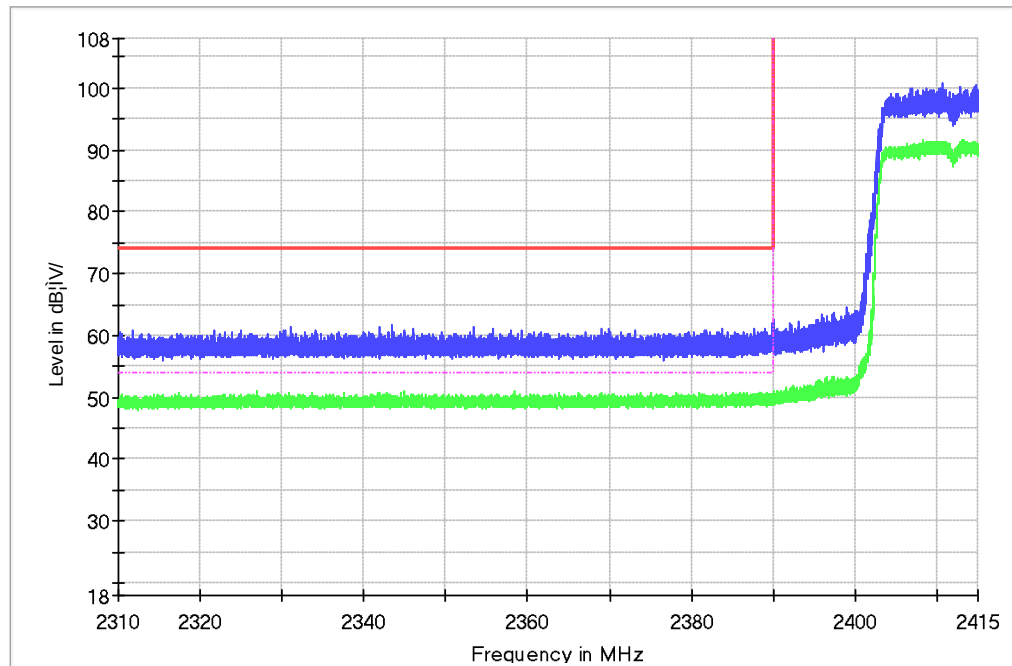


Figure 7: Radiated Band-Edge, TM4, H

RE_1-18GHz_HL050_FSV40_Pre


Figure 8: Radiated Band-Edge, TM4, V

RE_1-18GHz_HL050_FSV40_Pre

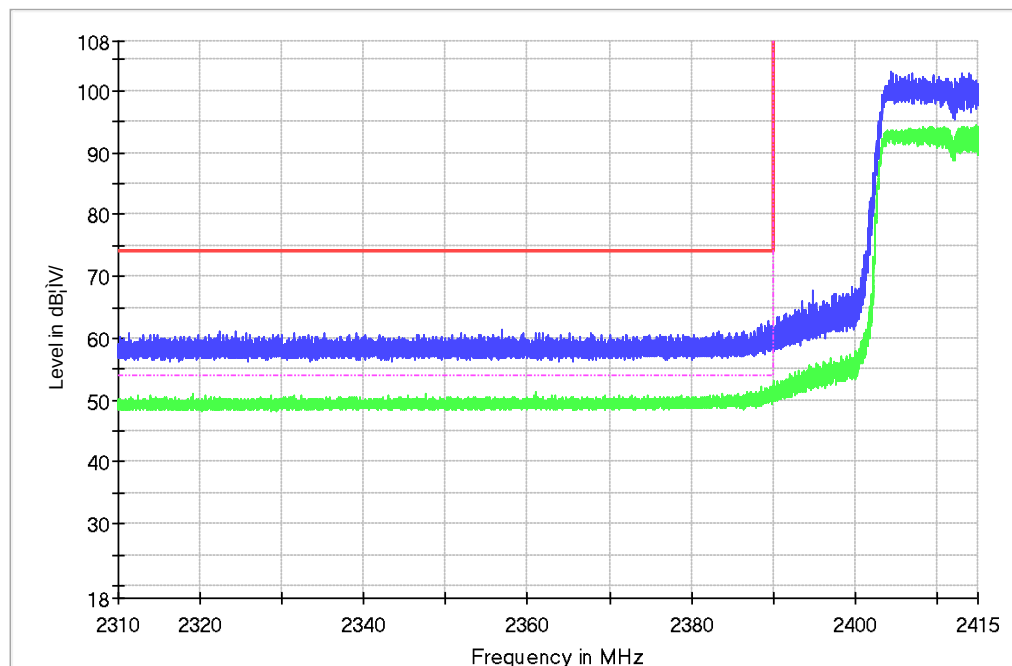


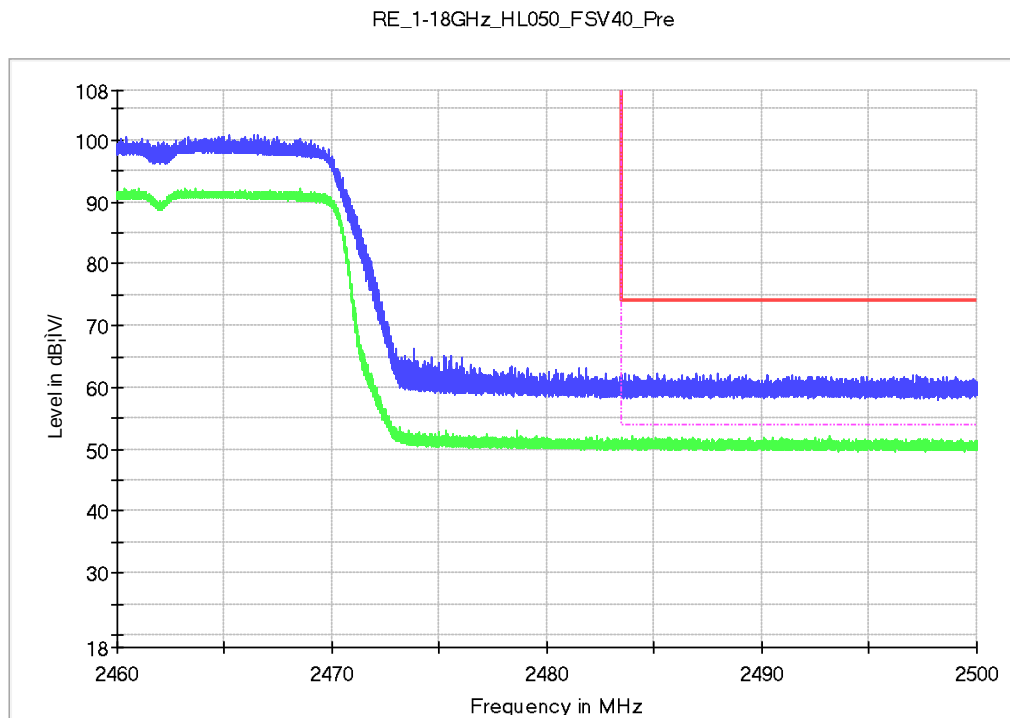
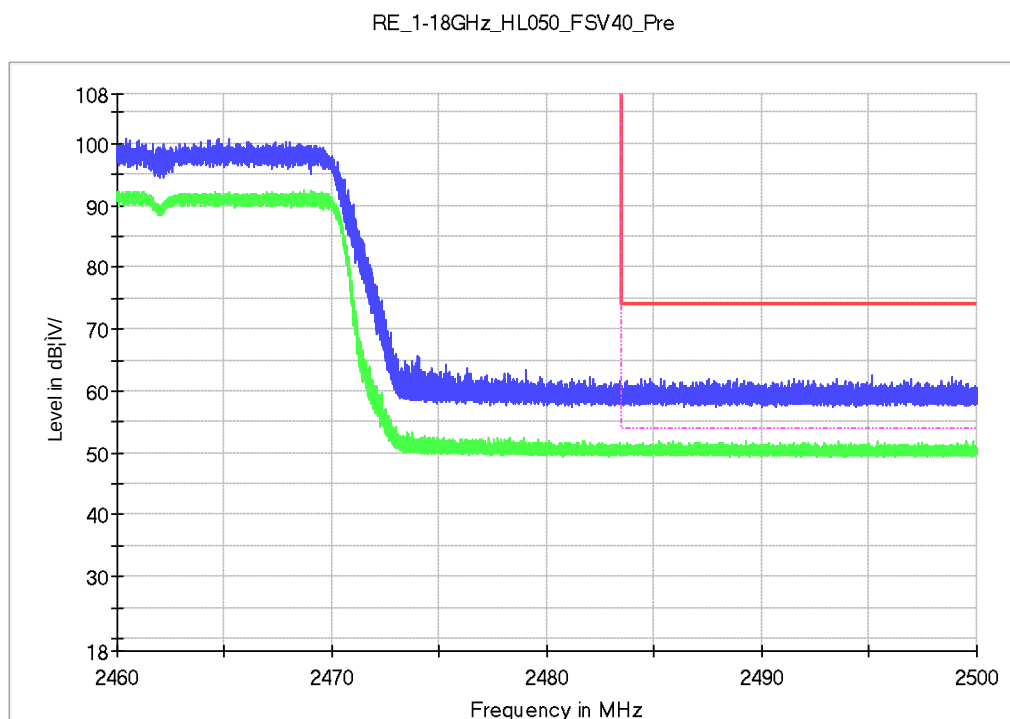
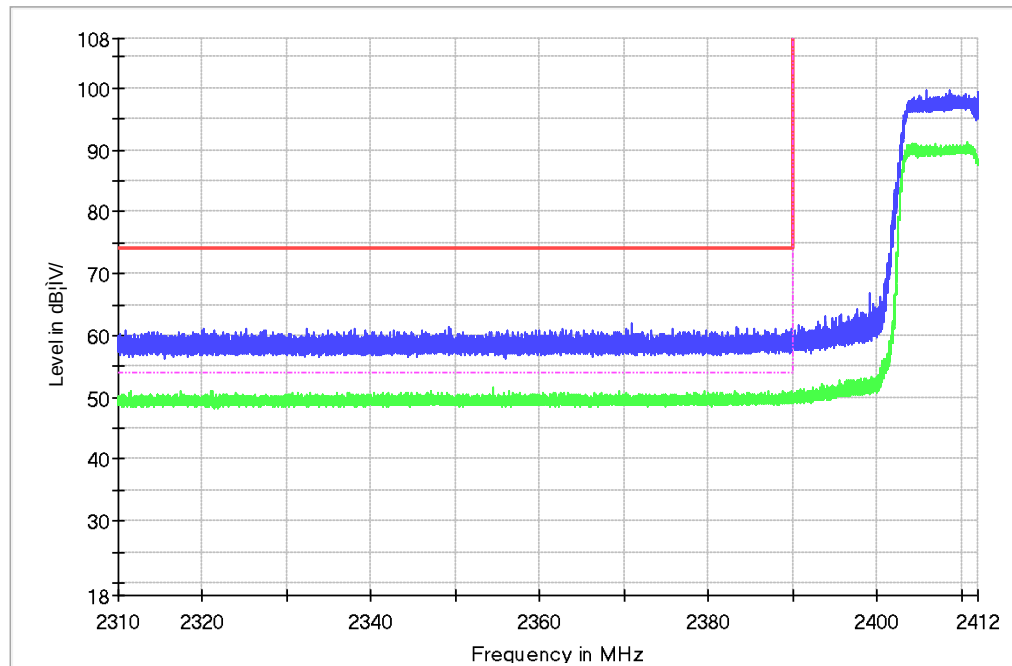
Figure 9: Radiated Band-Edge, TM6, H

Figure 10: Radiated Band-Edge, TM6, V


Figure 11: Radiated Band-Edge, TM7, H

RE_1-18GHz_HL050_FSV40_Pre


Figure 12: Radiated Band-Edge, TM7, V

RE_1-18GHz_HL050_FSV40_Pre

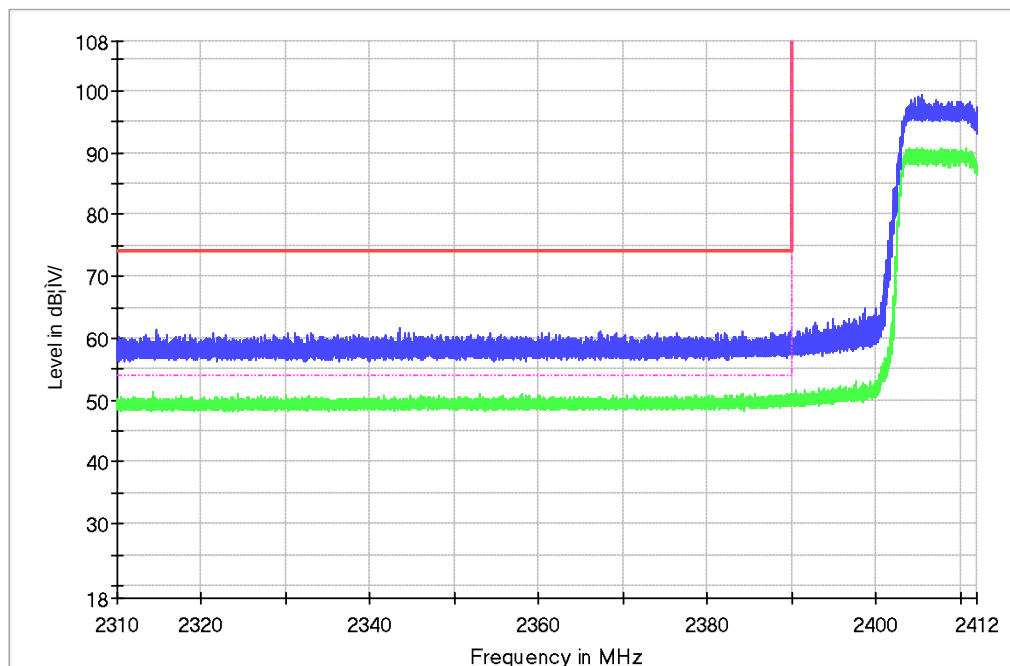
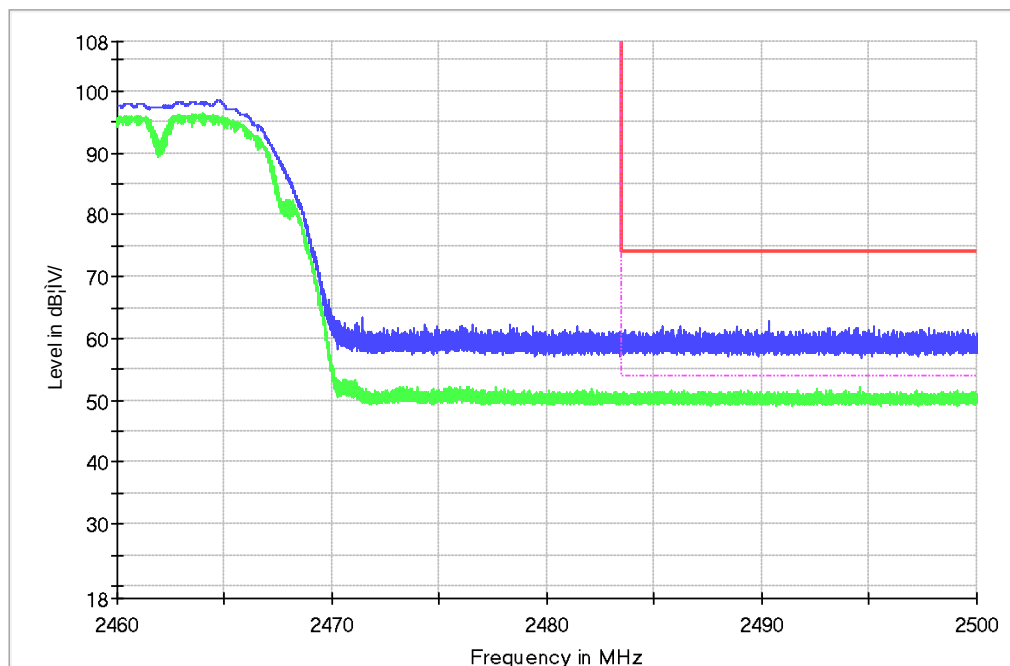
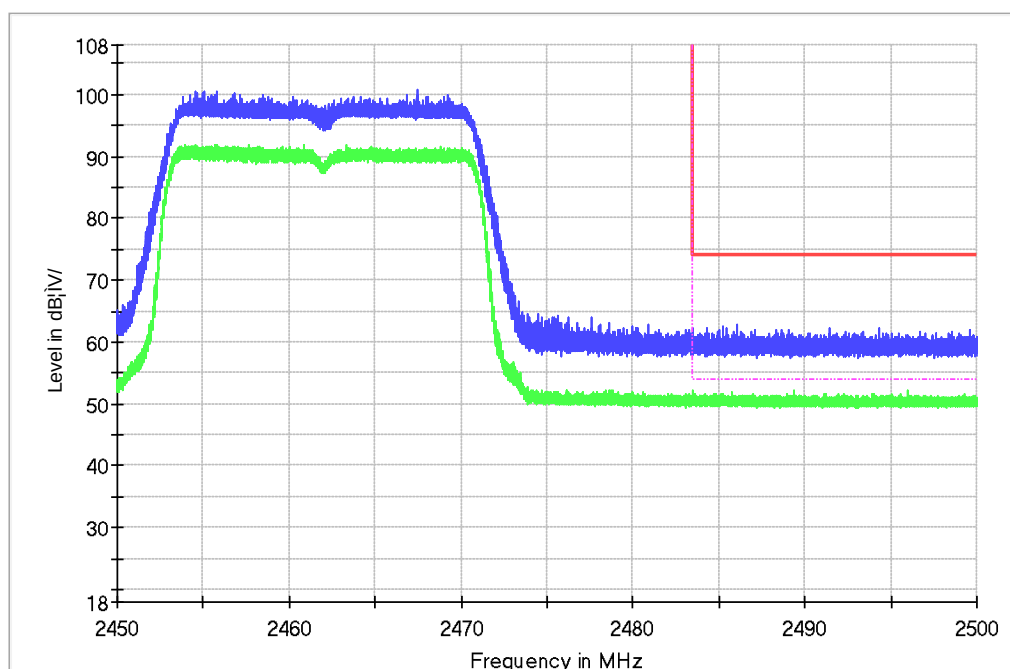


Figure 13: Radiated Band-Edge, TM9, H

RE_1-18GHz_HL050_FSV40_Pre


Figure 14: Radiated Band-Edge, TM9, V

RE_1-18GHz_HL050_FSV40_Pre



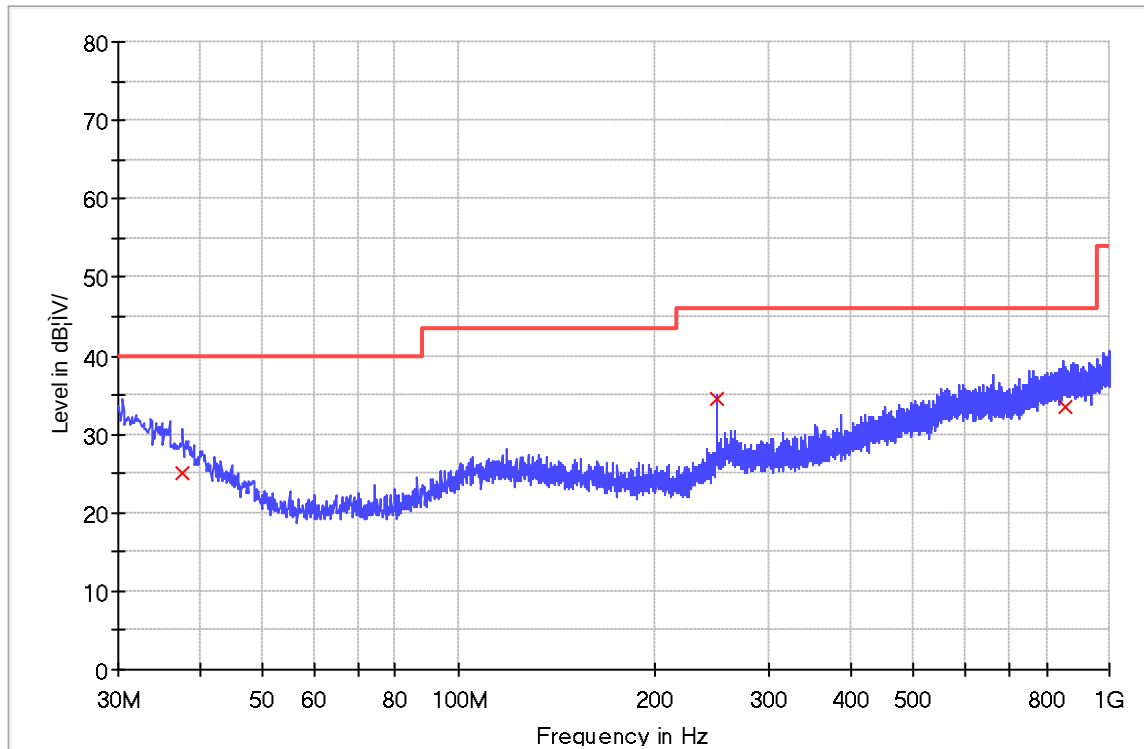
5.3.2 Radiated Spurious Emission

RESULT:**Pass**

Date of testing	:	2021-08-18
Ambient temperature	:	26.1°C
Relative humidity	:	32.7%
Atmospheric pressure	:	101kPa
Test requirement	:	FCC Part 15.247(d) FCC Part 15.209(a) RSS-Gen Issue 5, Amendment 2, February 2021, Clause 8.9 RSS-247 Issue 2, February 2017, Clause 5.5
Test procedure	:	ANSI C63.10: 2013
Test voltage	:	AC 120V/60Hz
Test modes applied	:	TM1 to TM9

Figure 15: Radiated Spurious Emission, TM1, 30MHz to 1GHz, H

_Radiated emission (30M-1GHz) 1 Range

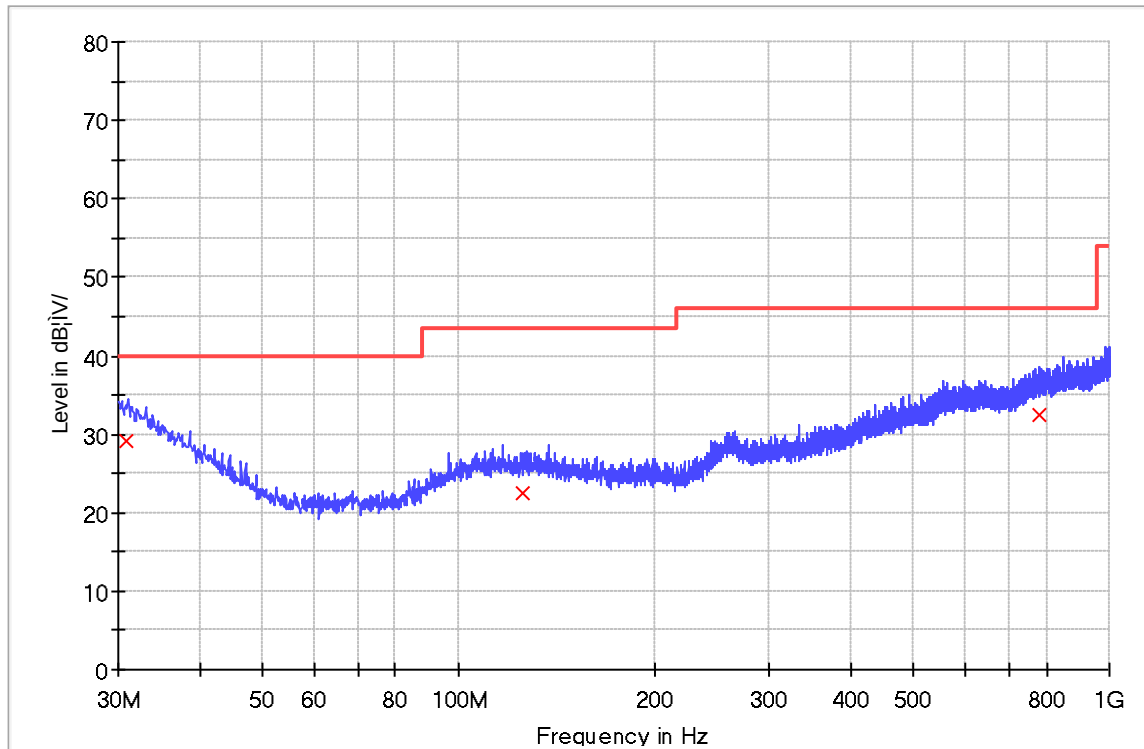


Limit and Margin

Frequency (MHz)	QuasiPeak (dBμV/m)	Pol	Corr. (dB)	Margin - QPK (dB)	Limit - QPK (dBμV/m)
37.638750	25.2	H	21.2	14.8	40.0
249.947500	34.5	H	19.3	11.5	46.0
858.380000	33.5	H	28.0	12.5	46.0

Figure 16: Radiated Spurious Emission, TM1, 30MHz to 1GHz, V

_Radiated emission (30M-1GHz) 1 Range

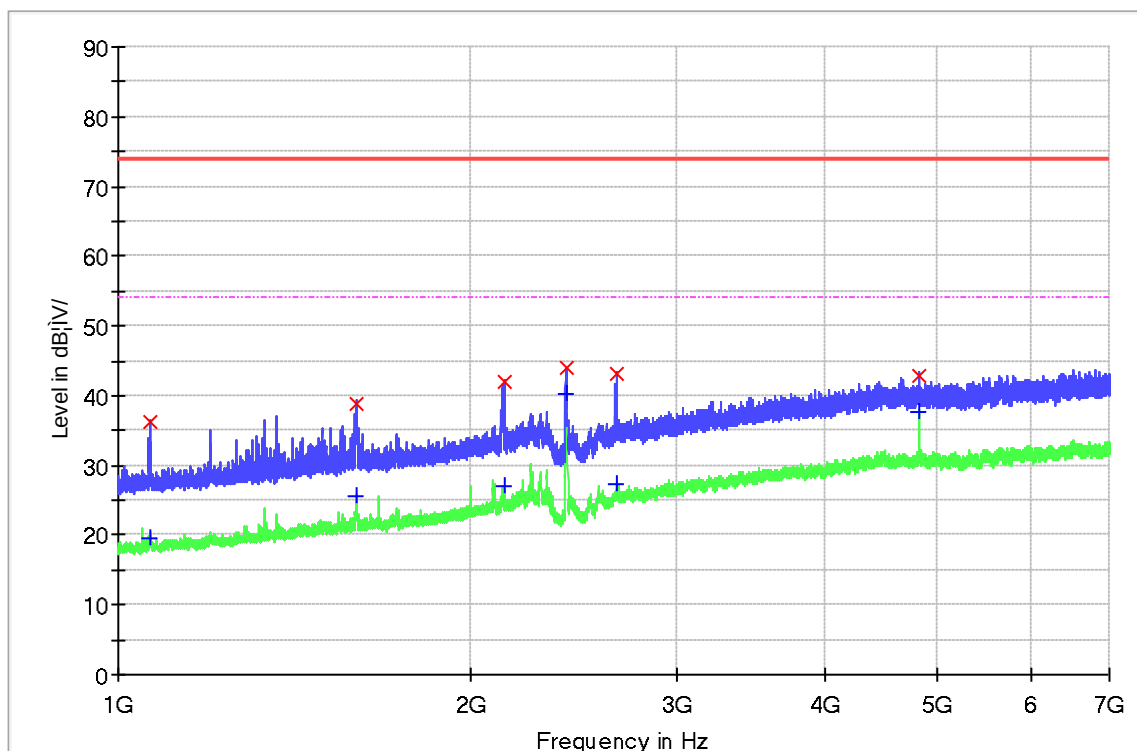


Limit and Margin

Frequency (MHz)	QuasiPeak (dBμV/m)	Pol	Corr. (dB)	Margin - QPK (dB)	Limit - QPK (dBμV/m)
30.848750	29.1	V	25.0	10.9	40.0
125.060000	22.4	V	18.8	21.1	43.5
777.991250	32.5	V	27.2	13.5	46.0

Figure 17: Radiated Spurious Emission, TM1, 1GHz to 7GHz, H

RE_1-18GHz_HL050_FSV40_Pre


Limit and Margin PK

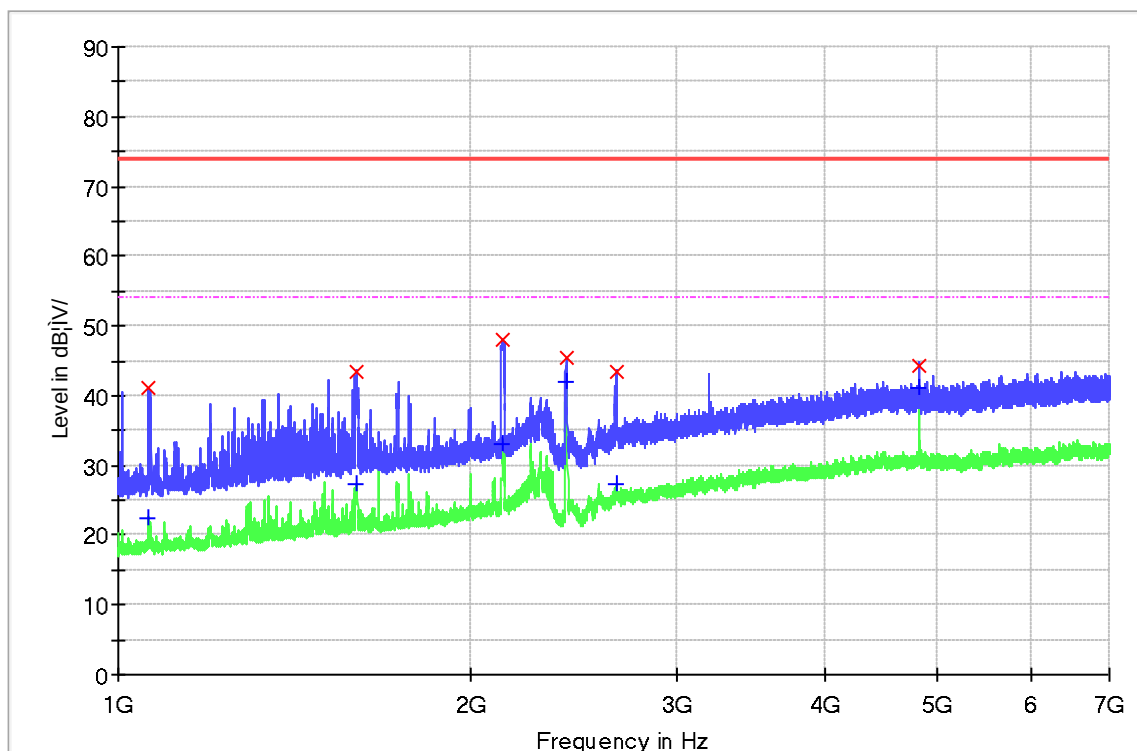
Frequency (MHz)	MaxPeak (dBµV/m)	Pol	Corr. (dB)	Margin - PK+ (dB)	Limit - PK+ (dBµV/m)
1063.750000	36.2	H	-22.1	37.8	74.0
1595.875000	38.8	H	-18.3	35.2	74.0
2131.937500	42.1	H	-15.7	31.9	74.0
2409.062500	44.1	H	-14.4	29.9	74.0
2663.312500	43.2	H	-13.3	30.8	74.0
4824.062500	42.9	H	-6.5	31.1	74.0

Limit and Margin AV

Frequency (MHz)	Average (dBµV/m)	Pol	Corr. (dB)	Margin - AVG (dB)	Limit - AVG (dBµV/m)
1063.750000	19.5	H	-22.1	34.5	54.0
1595.875000	25.5	H	-18.3	28.5	54.0
2131.937500	27.0	H	-15.7	27.0	54.0
2409.062500	40.2	H	-14.4	13.8	54.0
2663.312500	27.3	H	-13.3	26.7	54.0
4824.062500	37.7	H	-6.5	16.3	54.0

Figure 18: Radiated Spurious Emission, TM1, 1GHz to 7GHz, V

RE_1-18GHz_HL050_FSV40_Pre


Limit and Margin PK

Frequency (MHz)	MaxPeak (dBµV/m)	Pol	Corr. (dB)	Margin - PK+ (dB)	Limit - PK+ (dBµV/m)
1062.812500	41.1	V	-22.1	32.9	74.0
1595.312500	43.5	V	-18.4	30.5	74.0
2129.687500	48.0	V	-15.7	26.0	74.0
2409.062500	45.3	V	-14.4	28.7	74.0
2659.375000	43.3	V	-13.3	30.7	74.0
4824.062500	44.3	V	-6.5	29.7	74.0

Limit and Margin AV

Frequency (MHz)	Average (dBµV/m)	Pol	Corr. (dB)	Margin - AVG (dB)	Limit - AVG (dBµV/m)
1062.812500	22.5	V	-22.1	31.5	54.0
1595.312500	27.4	V	-18.4	26.6	54.0
2129.687500	33.1	V	-15.7	20.9	54.0
2409.062500	42.1	V	-14.4	11.9	54.0
2659.375000	27.2	V	-13.3	26.8	54.0
4824.062500	41.2	V	-6.5	12.8	54.0

Figure 19: Radiated Spurious Emission, TM1, 7GHz to 18GHz, H

RE_1-18GHz_HL050_FSV40_Pre

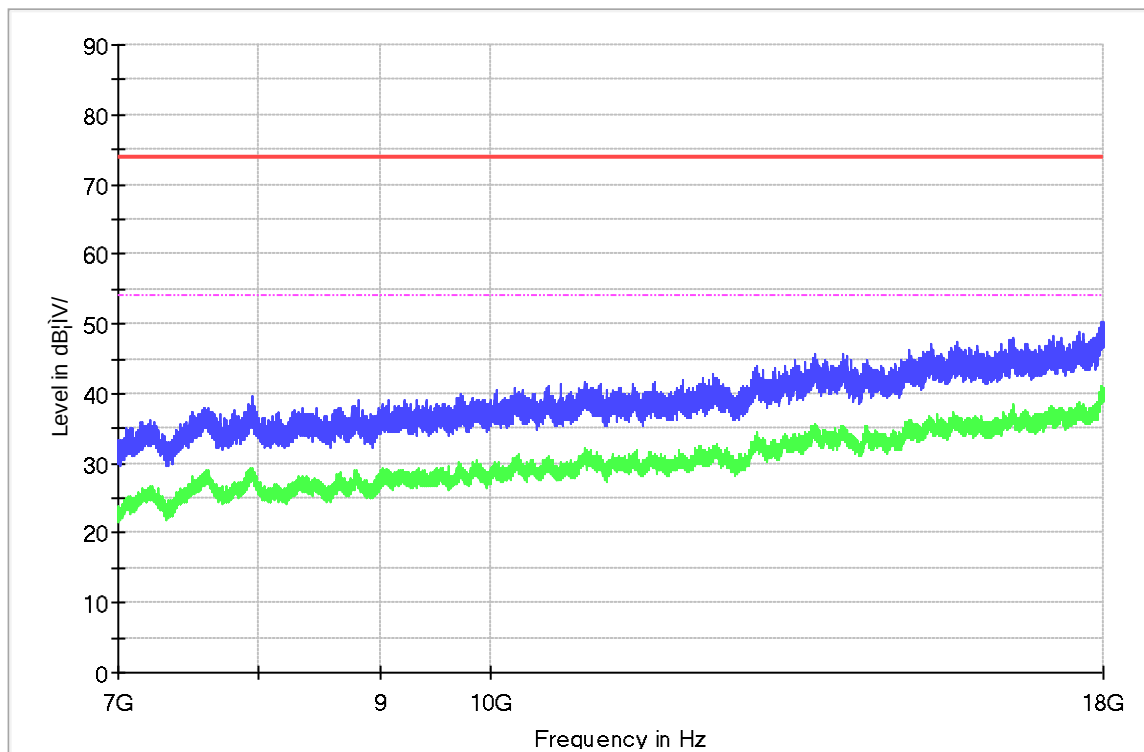


Figure 20: Radiated Spurious Emission, TM1, 7GHz to 18GHz, V

RE_1-18GHz_HL050_FSV40_Pre

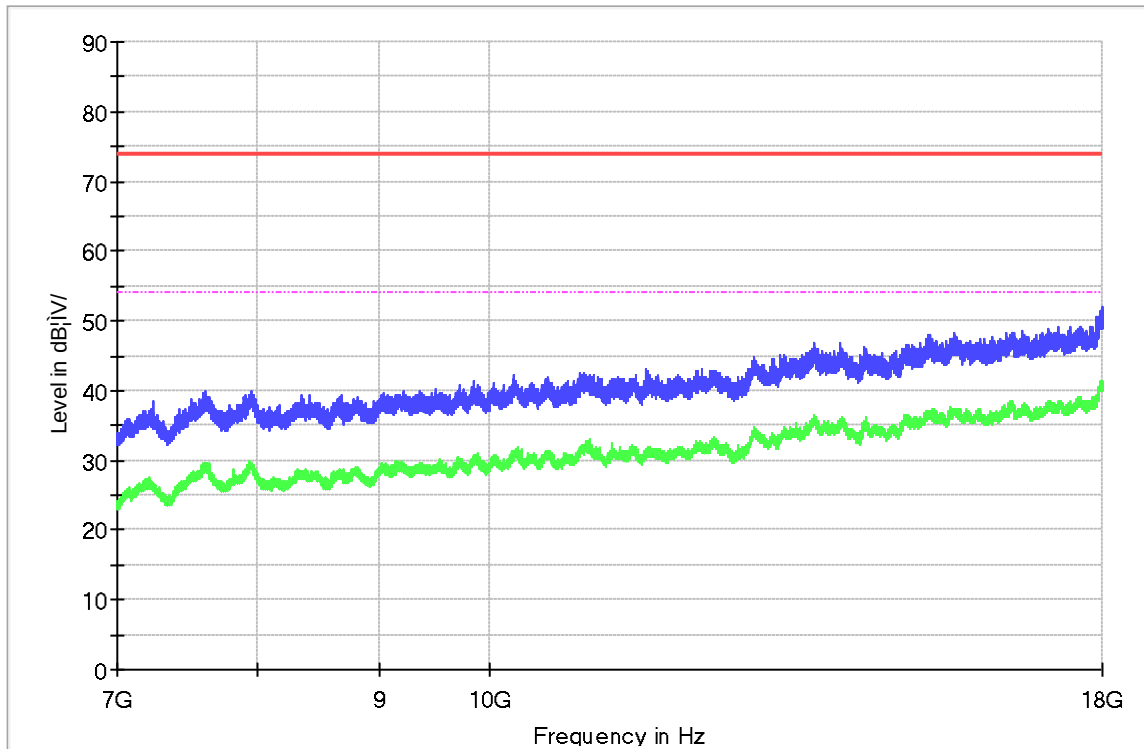


Figure 21: Radiated Spurious Emission, TM1, 18GHz to 25GHz, H

RE_18-40GHz_9170_FSV40_Pre

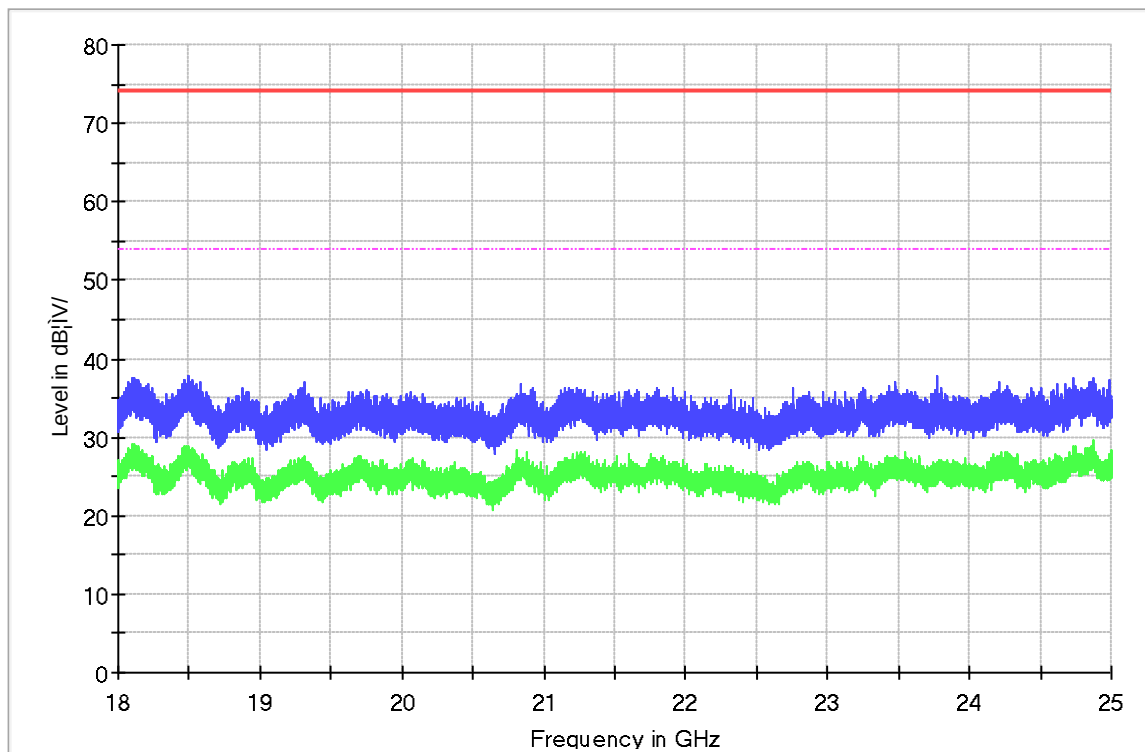


Figure 22: Radiated Spurious Emission, TM1, 18GHz to 25GHz, V

RE_18-40GHz_9170_FSV40_Pre

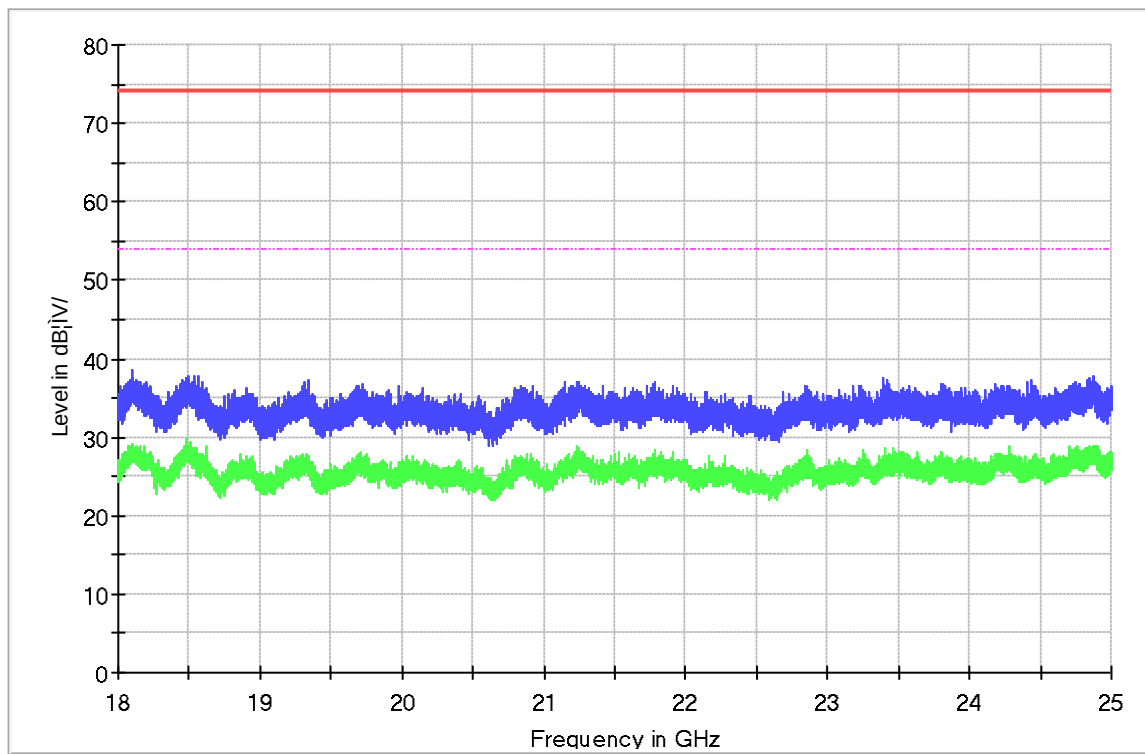
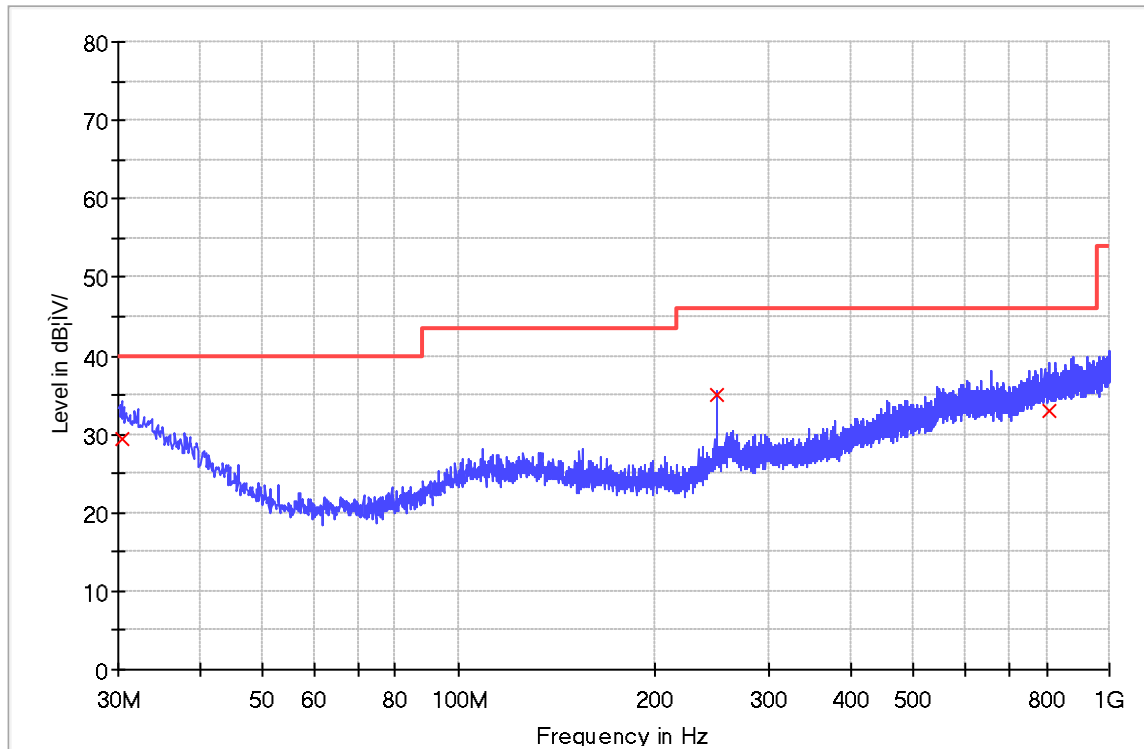


Figure 23: Radiated Spurious Emission, TM2, 30MHz to 1GHz, H

_Radiated emission (30M-1GHz) 1 Range

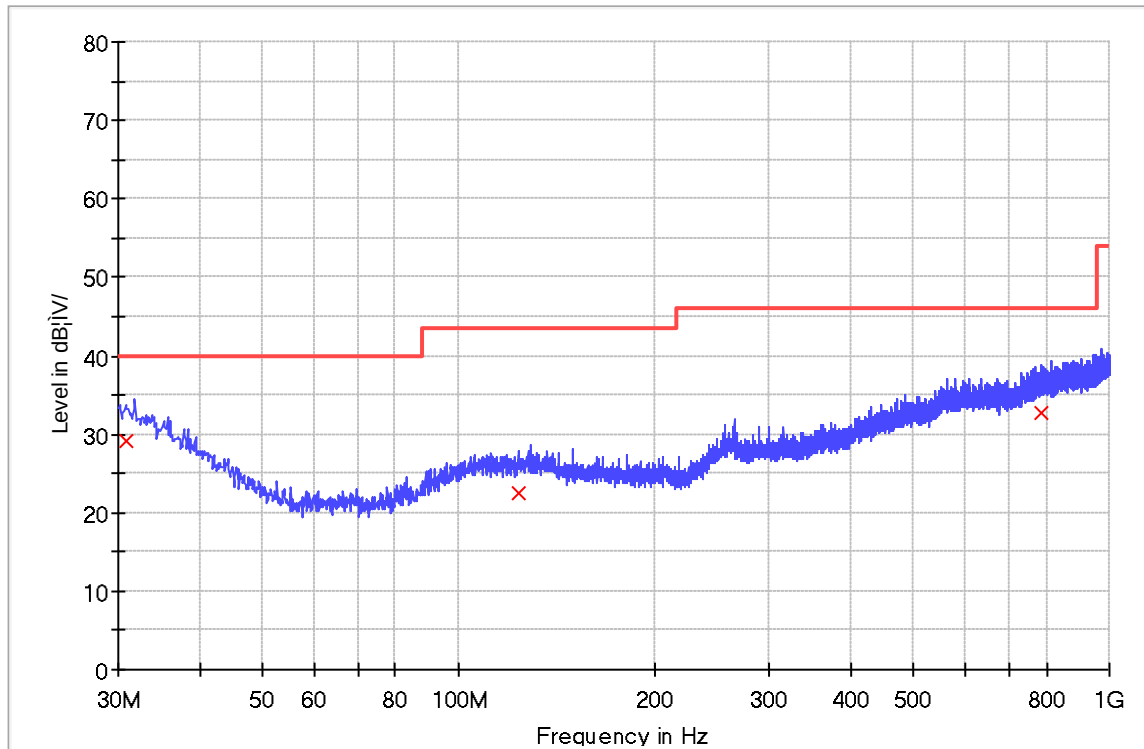


Limit and Margin

Frequency (MHz)	QuasiPeak (dBμV/m)	Pol	Corr. (dB)	Margin - QPK (dB)	Limit - QPK (dBμV/m)
30.363750	29.3	H	25.2	10.7	40.0
250.068750	35.1	H	19.3	10.9	46.0
809.758750	33.0	H	27.5	13.0	46.0

Figure 24: Radiated Spurious Emission, TM2, 30MHz to 1GHz, V

_Radiated emission (30M-1GHz) 1 Range

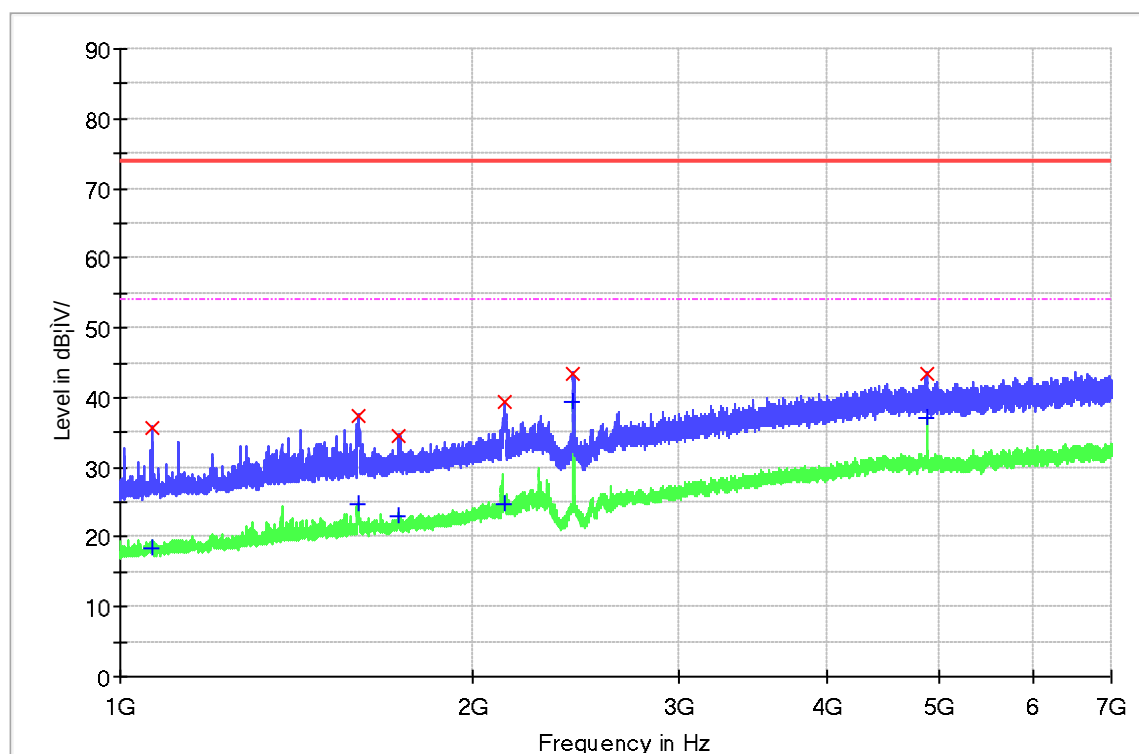


Limit and Margin

Frequency (MHz)	QuasiPeak (dBμV/m)	Pol	Corr. (dB)	Margin - QPK (dB)	Limit - QPK (dBμV/m)
30.970000	29.0	V	24.9	11.0	40.0
123.605000	22.4	V	18.7	21.1	43.5
784.417500	32.7	V	27.4	13.3	46.0

Figure 25: Radiated Spurious Emission, TM2, 1GHz to 7GHz, H

RE_1-18GHz_HL050_FSV40_Pre


Limit and Margin PK

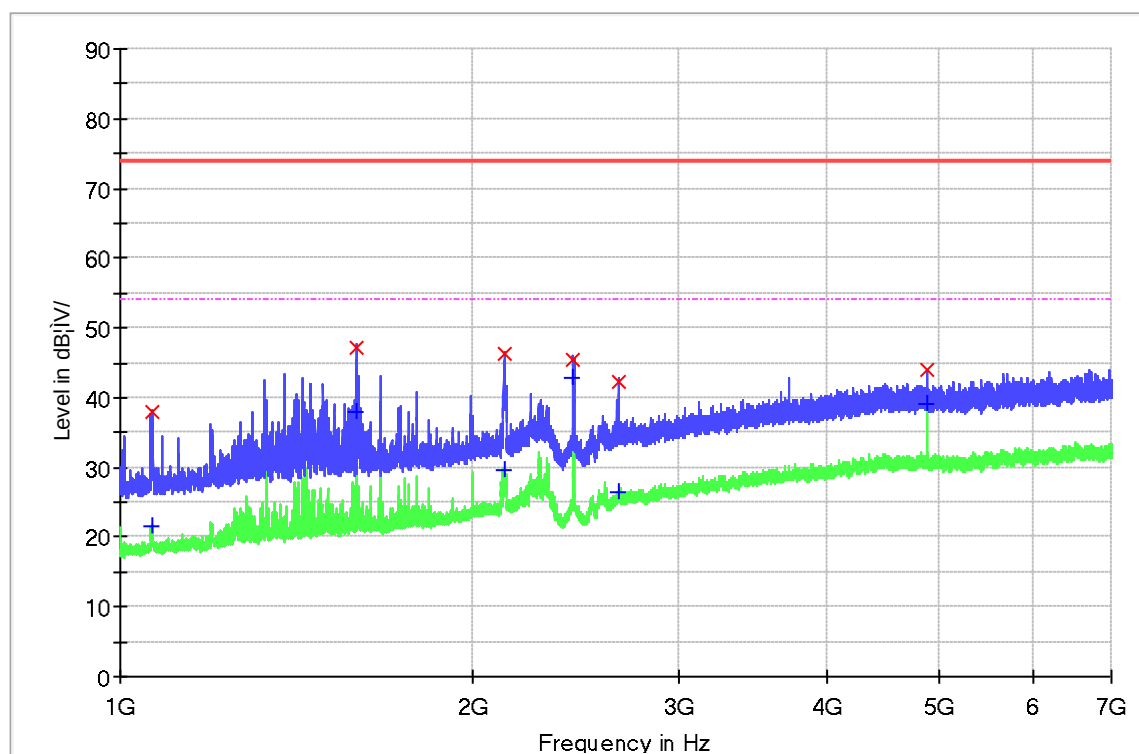
Frequency (MHz)	MaxPeak (dBµV/m)	Pol	Corr. (dB)	Margin - PK+ (dB)	Limit - PK+ (dBµV/m)
1064.875000	35.6	H	-22.1	38.4	74.0
1597.562500	37.4	H	-18.3	36.6	74.0
1727.312500	34.5	H	-17.7	39.5	74.0
2128.750000	39.3	H	-15.7	34.7	74.0
2435.312500	43.4	H	-14.3	30.6	74.0
4873.937500	43.5	H	-6.5	30.5	74.0

Limit and Margin AV

Frequency (MHz)	Average (dBµV/m)	Pol	Corr. (dB)	Margin - AVG (dB)	Limit - AVG (dBµV/m)
1064.875000	18.5	H	-22.1	35.5	54.0
1597.562500	24.7	H	-18.3	29.3	54.0
1727.312500	23.1	H	-17.7	30.9	54.0
2128.750000	24.6	H	-15.7	29.4	54.0
2435.312500	39.5	H	-14.3	14.5	54.0
4873.937500	37.2	H	-6.5	16.8	54.0

Figure 26: Radiated Spurious Emission, TM2, 1GHz to 7GHz, V

RE_1-18GHz_HL050_FSV40_Pre


Limit and Margin PK

Frequency (MHz)	MaxPeak (dBµV/m)	Pol	Corr. (dB)	Margin - PK+ (dB)	Limit - PK+ (dBµV/m)
1065.250000	38.0	V	-22.1	36.0	74.0
1591.000000	47.3	V	-18.4	26.7	74.0
2128.750000	46.4	V	-15.7	27.6	74.0
2434.000000	45.4	V	-14.3	28.6	74.0
2662.000000	42.3	V	-13.3	31.7	74.0
4874.125000	43.9	V	-6.5	30.1	74.0

Limit and Margin AV

Frequency (MHz)	Average (dBµV/m)	Pol	Corr. (dB)	Margin - AVG (dB)	Limit - AVG (dBµV/m)
1065.250000	21.5	V	-22.1	32.5	54.0
1591.000000	38.0	V	-18.4	16.0	54.0
2128.750000	29.7	V	-15.7	24.3	54.0
2434.000000	42.8	V	-14.3	11.2	54.0
2662.000000	26.4	V	-13.3	27.6	54.0
4874.125000	39.0	V	-6.5	15.0	54.0

Figure 27: Radiated Spurious Emission, TM2, 7GHz to 18GHz, H

RE_1-18GHz_HL050_FSV40_Pre

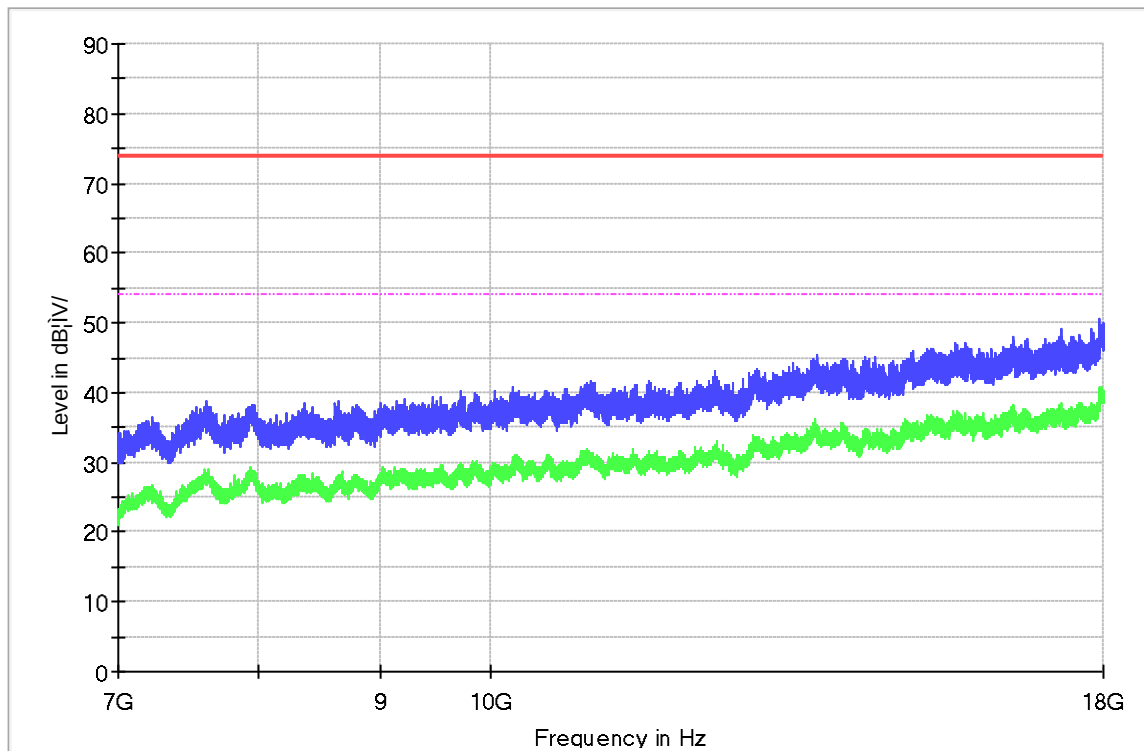


Figure 28: Radiated Spurious Emission, TM2, 7GHz to 18GHz, V

RE_1-18GHz_HL050_FSV40_Pre

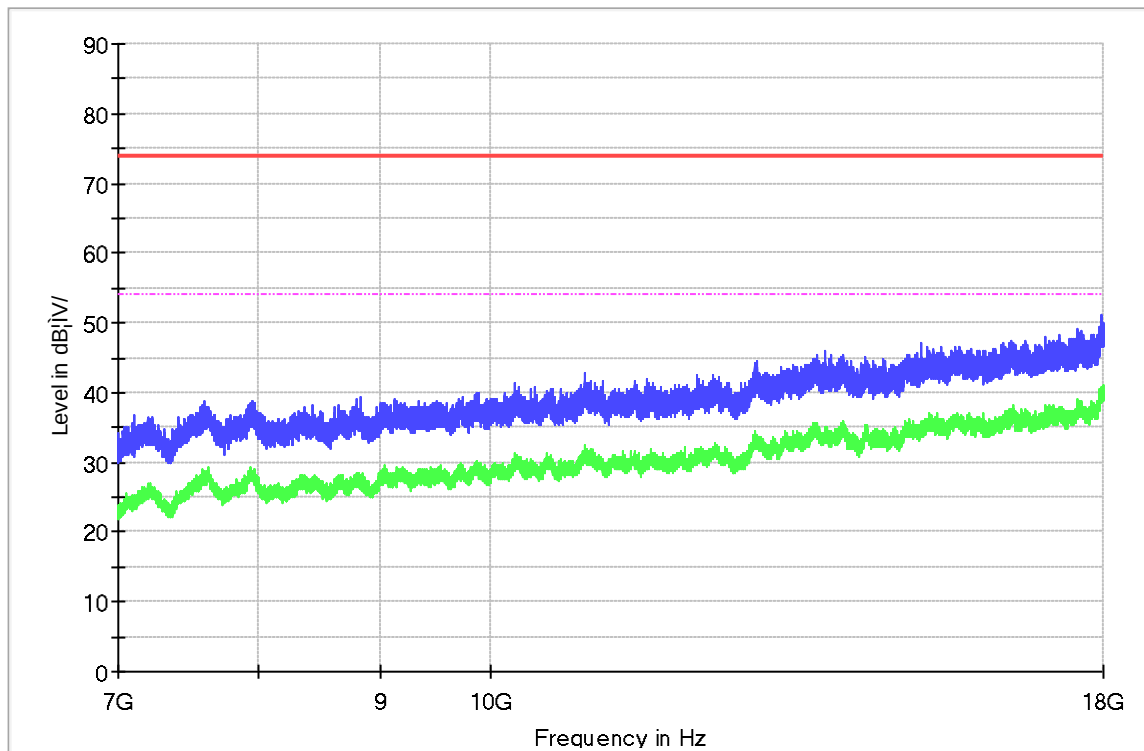


Figure 29: Radiated Spurious Emission, TM2, 18GHz to 25GHz, H

RE_18-40GHz_9170_FSV40_Pre

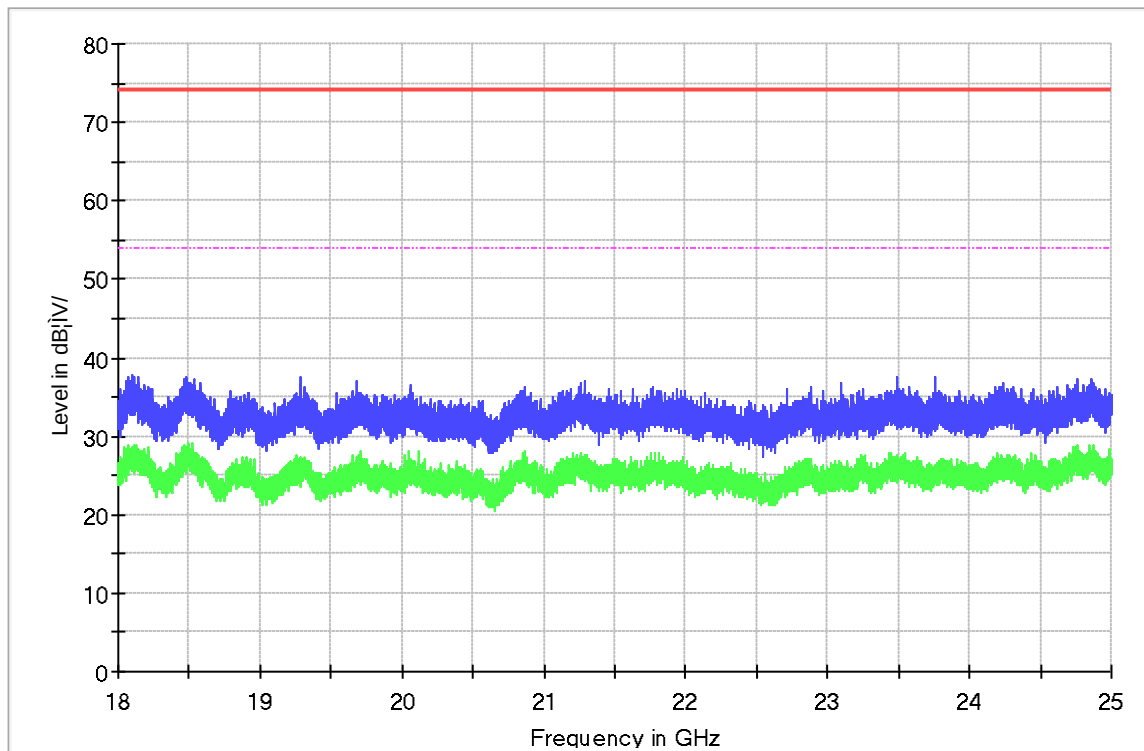


Figure 30: Radiated Spurious Emission, TM2, 18GHz to 25GHz, V

RE_18-40GHz_9170_FSV40_Pre

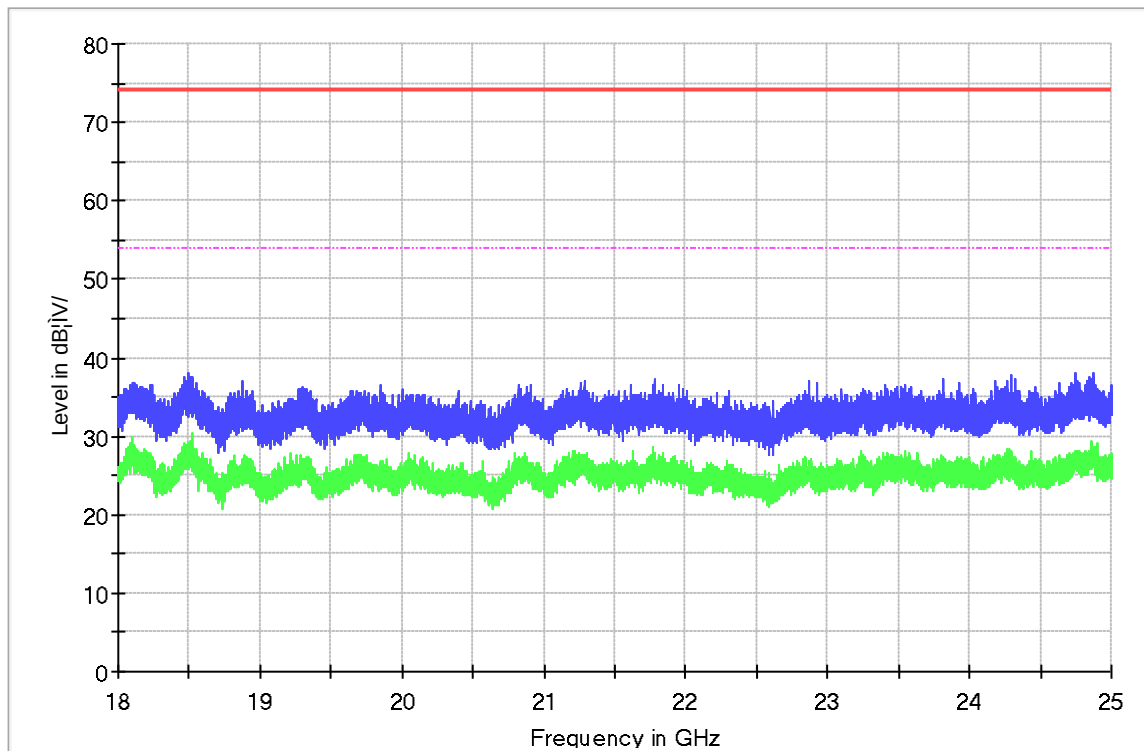
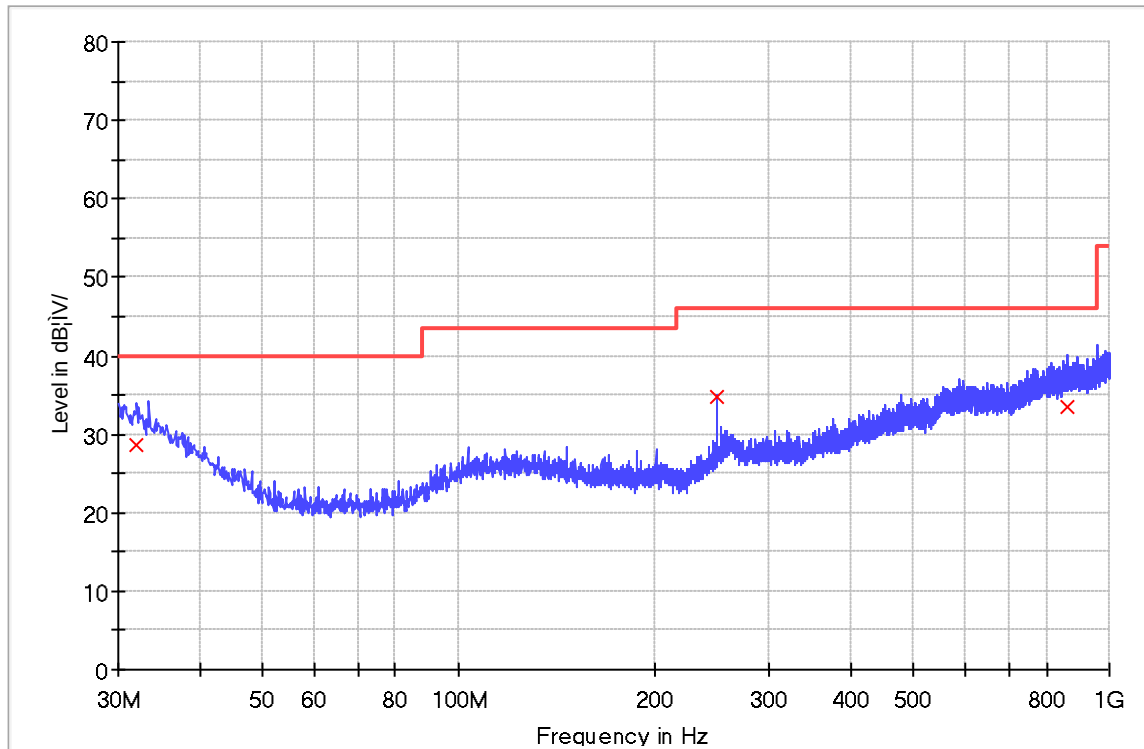


Figure 31: Radiated Spurious Emission, TM3, 30MHz to 1GHz, H

_Radiated emission (30M-1GHz) 1 Range

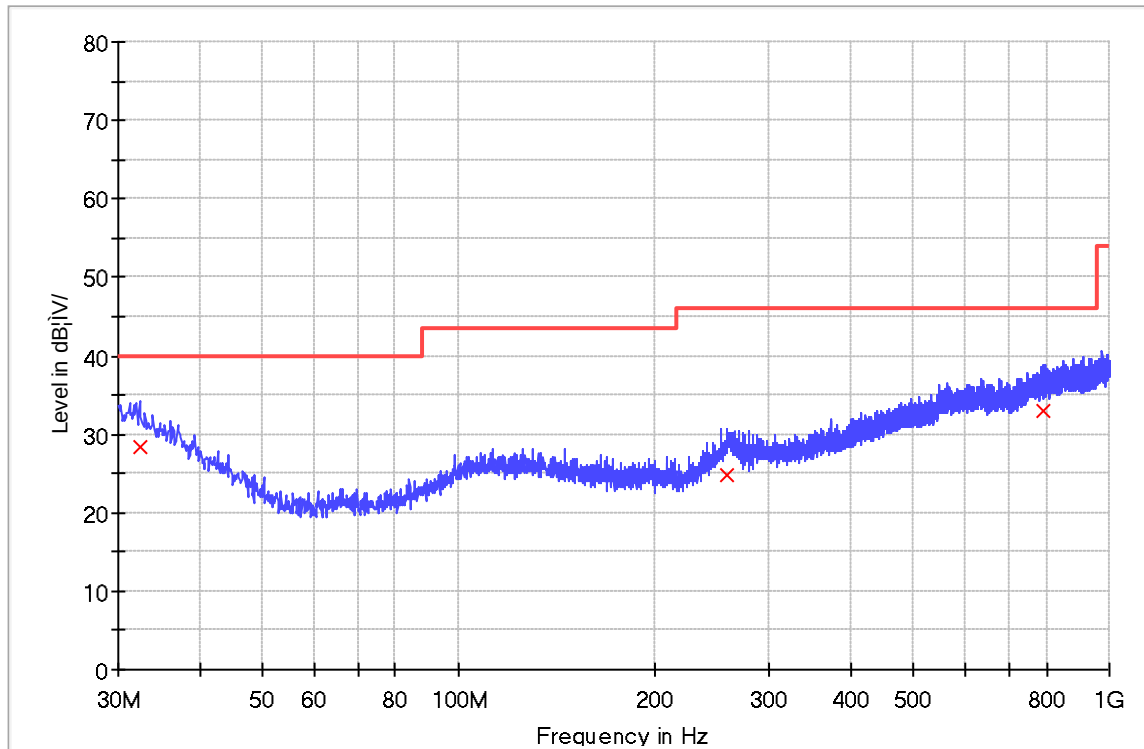


Limit and Margin

Frequency (MHz)	QuasiPeak (dBμV/m)	Pol	Corr. (dB)	Margin - QPK (dB)	Limit - QPK (dBμV/m)
32.061250	28.6	H	24.5	11.4	40.0
249.947500	34.8	H	19.3	11.2	46.0
859.350000	33.6	H	28.0	12.4	46.0

Figure 32: Radiated Spurious Emission, TM3, 30MHz to 1GHz, V

_Radiated emission (30M-1GHz) 1 Range

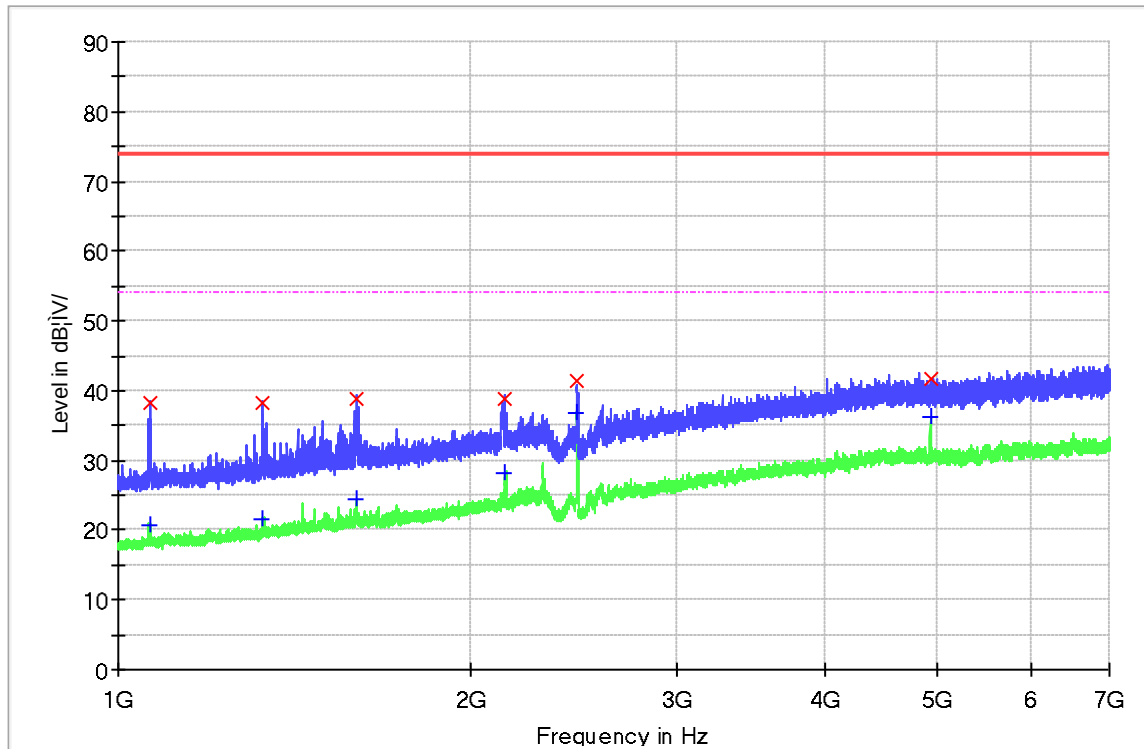


Limit and Margin

Frequency (MHz)	QuasiPeak (dBμV/m)	Pol	Corr. (dB)	Margin - QPK (dB)	Limit - QPK (dBμV/m)
32.425000	28.4	V	24.2	11.6	40.0
258.192500	24.9	V	20.4	21.1	46.0
792.905000	32.9	V	27.6	13.1	46.0

Figure 33: Radiated Spurious Emission, TM3, 1GHz to 7GHz, H

RE_1-18GHz_HL050_FSV40_Pre


Limit and Margin PK

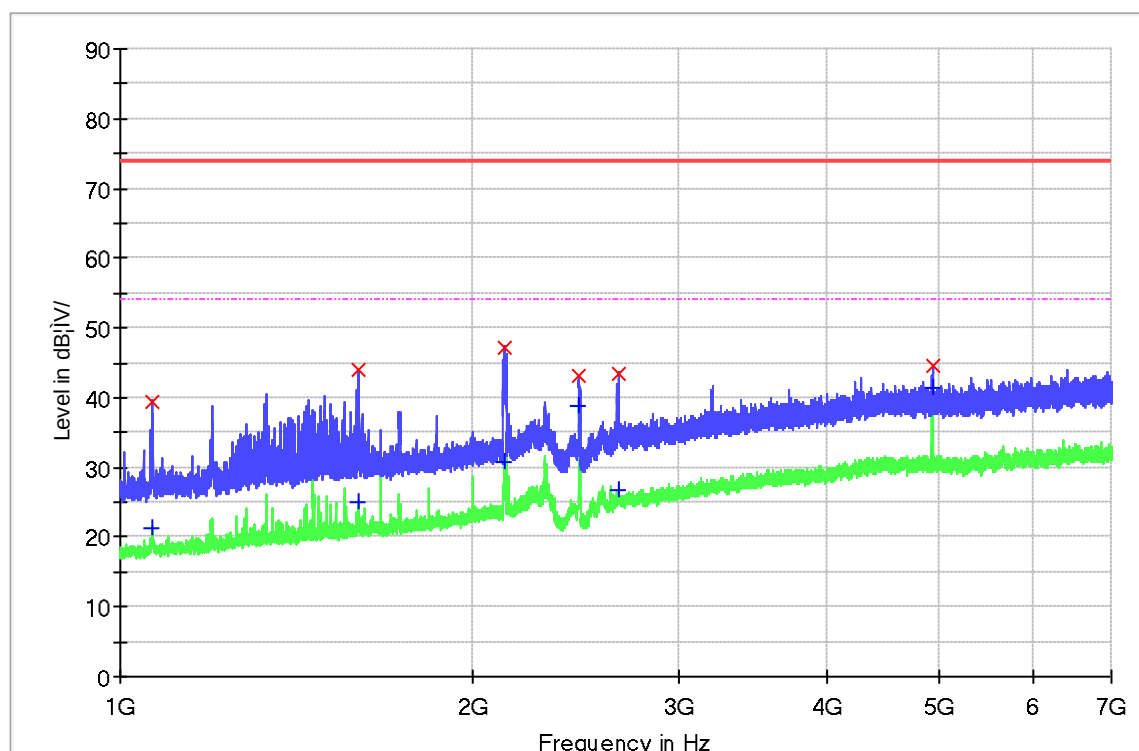
Frequency (MHz)	MaxPeak (dBµV/m)	Pol	Corr. (dB)	Margin - PK+ (dB)	Limit - PK+ (dBµV/m)
1064.687500	38.2	H	-22.1	35.8	74.0
1328.500000	38.2	H	-20.2	35.8	74.0
1598.875000	38.8	H	-18.3	35.2	74.0
2132.875000	38.9	H	-15.7	35.1	74.0
2460.062500	41.3	H	-14.3	32.7	74.0
4923.800000	41.8	H	-6.7	32.2	74.0

Limit and Margin AV

Frequency (MHz)	Average (dBµV/m)	Pol	Corr. (dB)	Margin - AVG (dB)	Limit - AVG (dBµV/m)
1064.687500	20.6	H	-22.1	33.4	54.0
1328.500000	21.5	H	-20.2	32.5	54.0
1598.875000	24.3	H	-18.3	29.7	54.0
2132.875000	28.1	H	-15.7	25.9	54.0
2460.062500	36.7	H	-14.3	17.3	54.0
4923.800000	36.1	H	-6.7	17.9	54.0

Figure 34: Radiated Spurious Emission, TM3, 1GHz to 7GHz, V

RE_1-18GHz_HL050_FSV40_Pre


Limit and Margin PK

Frequency (MHz)	MaxPeak (dBµV/m)	Pol	Corr. (dB)	Margin - PK+ (dB)	Limit - PK+ (dBµV/m)
1066.000000	39.5	V	-22.1	34.5	74.0
1596.812500	44.0	V	-18.3	30.0	74.0
2126.312500	47.1	V	-15.8	26.9	74.0
2462.875000	43.0	V	-14.3	31.0	74.0
2664.062500	43.4	V	-13.3	30.6	74.0
4924.000000	44.6	V	-6.6	29.4	74.0

Limit and Margin AV

Frequency (MHz)	Average (dBµV/m)	Pol	Corr. (dB)	Margin - AVG (dB)	Limit - AVG (dBµV/m)
1066.000000	21.4	V	-22.1	32.6	54.0
1596.812500	24.9	V	-18.3	29.1	54.0
2126.312500	30.7	V	-15.8	23.3	54.0
2462.875000	38.7	V	-14.3	15.3	54.0
2664.062500	26.8	V	-13.3	27.2	54.0
4924.000000	41.4	V	-6.6	12.6	54.0

Figure 35: Radiated Spurious Emission, TM3, 7GHz to 18GHz, H

RE_1-18GHz_HL050_FSV40_Pre

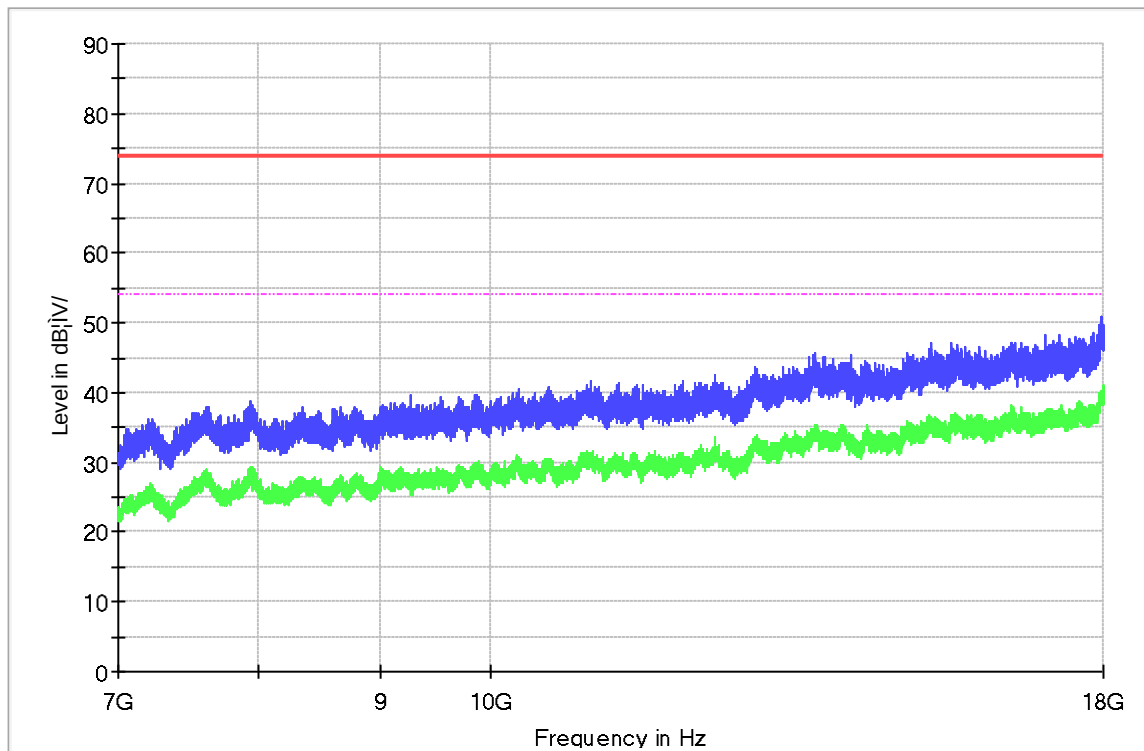


Figure 36: Radiated Spurious Emission, TM3, 7GHz to 18GHz, V

RE_1-18GHz_HL050_FSV40_Pre

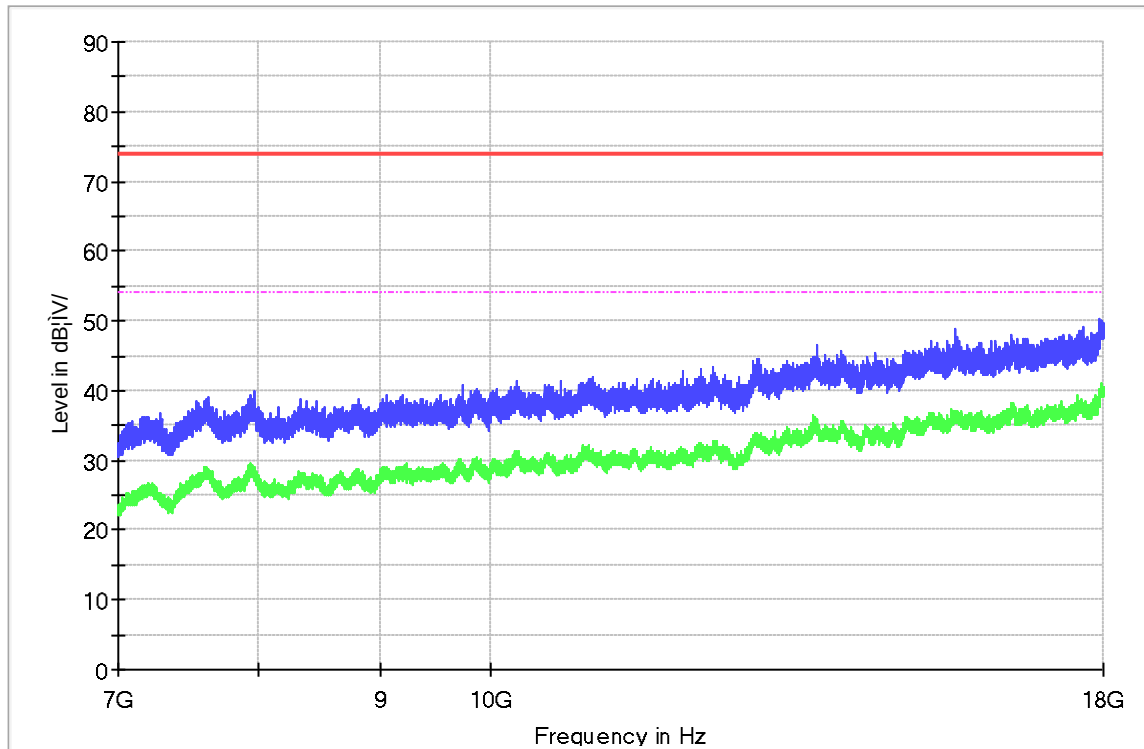


Figure 37: Radiated Spurious Emission, TM3, 18GHz to 25GHz, H

RE_18-40GHz_9170_FSV40_Pre

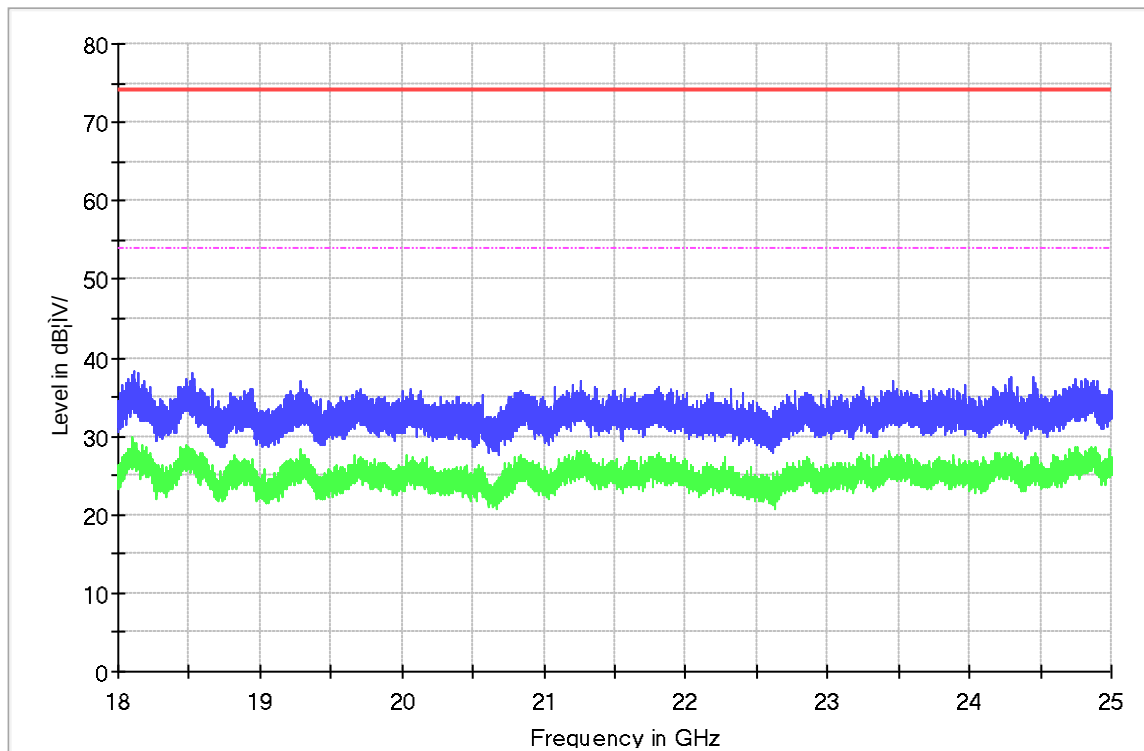


Figure 38: Radiated Spurious Emission, TM3, 18GHz to 25GHz, V

RE_18-40GHz_9170_FSV40_Pre

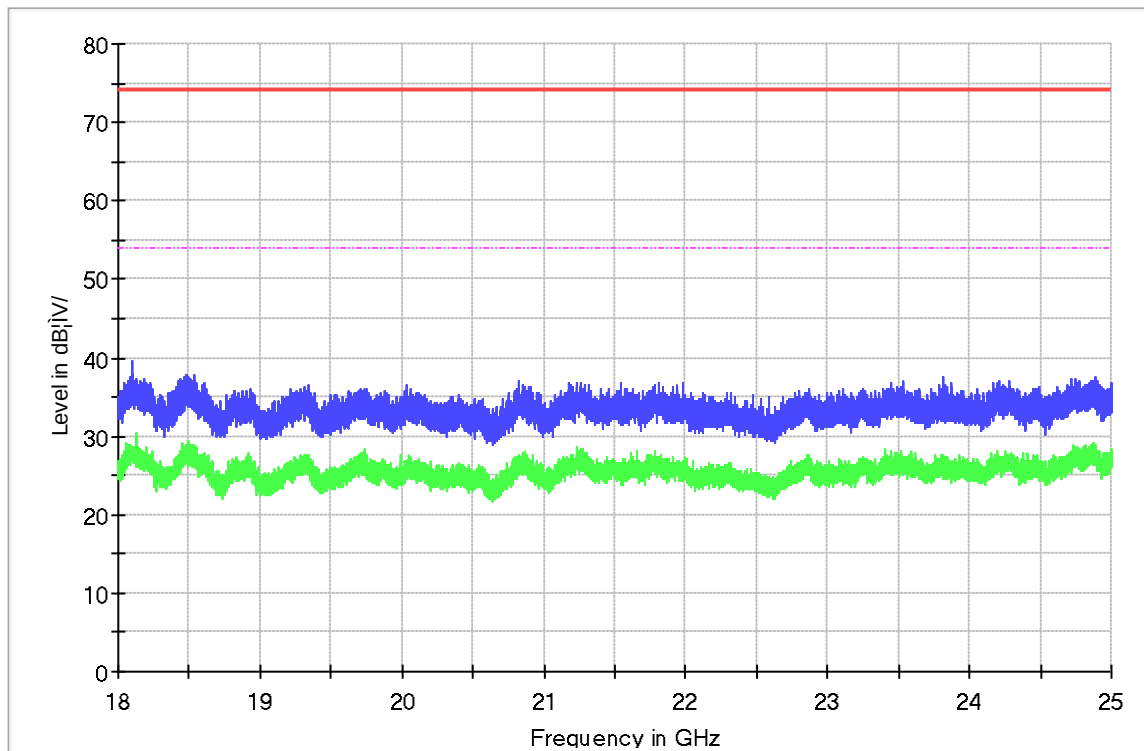
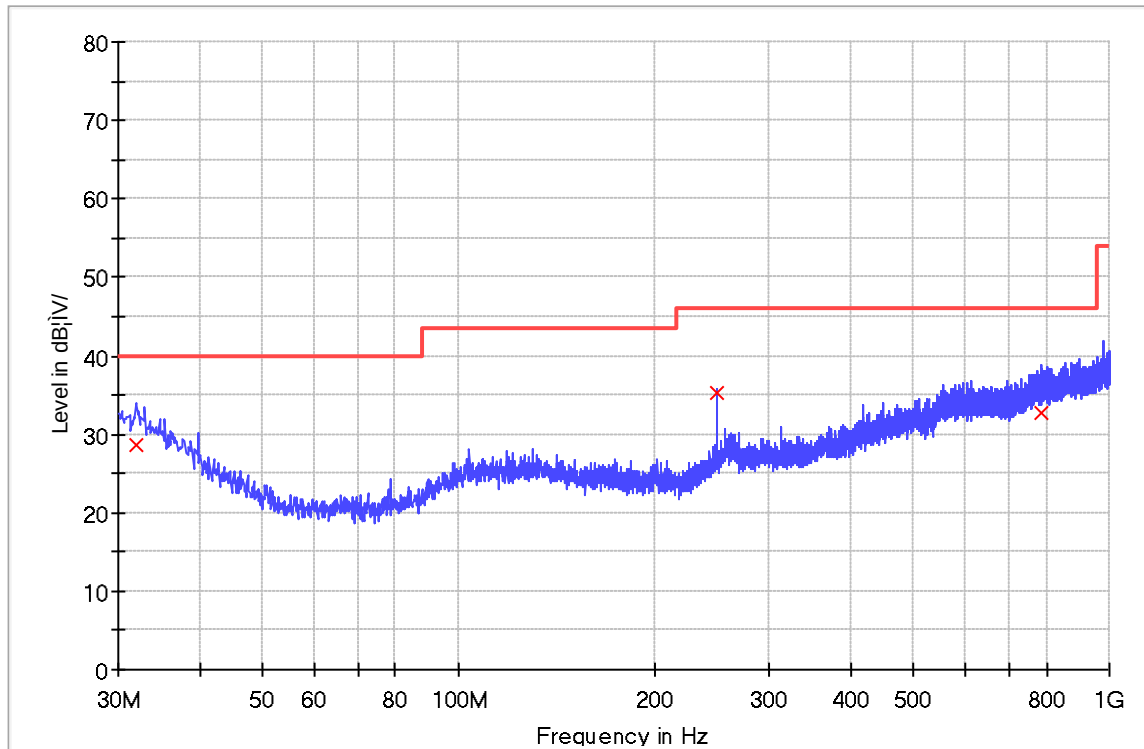


Figure 39: Radiated Spurious Emission, TM4, 30MHz to 1GHz, H

_Radiated emission (30M-1GHz) 1 Range

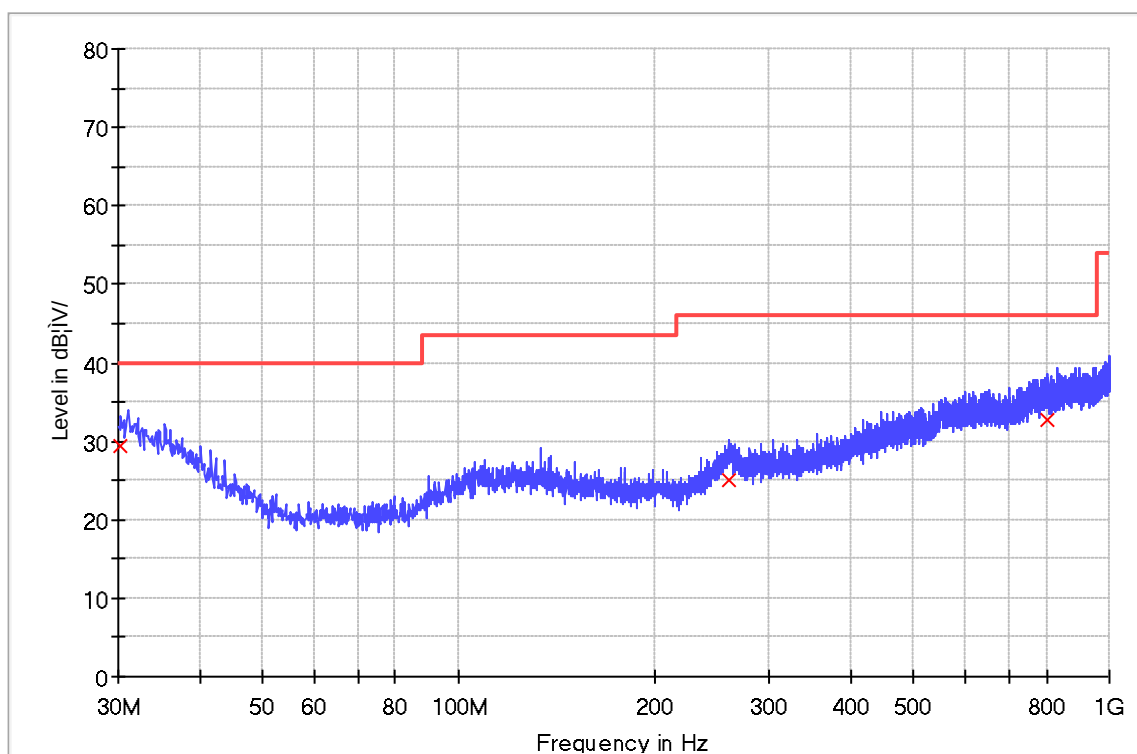


Limit and Margin

Frequency (MHz)	QuasiPeak (dBµV/m)	Pol	Corr. (dB)	Margin - QPK (dB)	Limit - QPK (dBµV/m)
31.940000	28.6	H	24.5	11.4	40.0
249.947500	35.2	H	19.3	10.8	46.0
783.447500	32.6	H	27.4	13.4	46.0

Figure 40: Radiated Spurious Emission, TM4, 30MHz to 1GHz, V

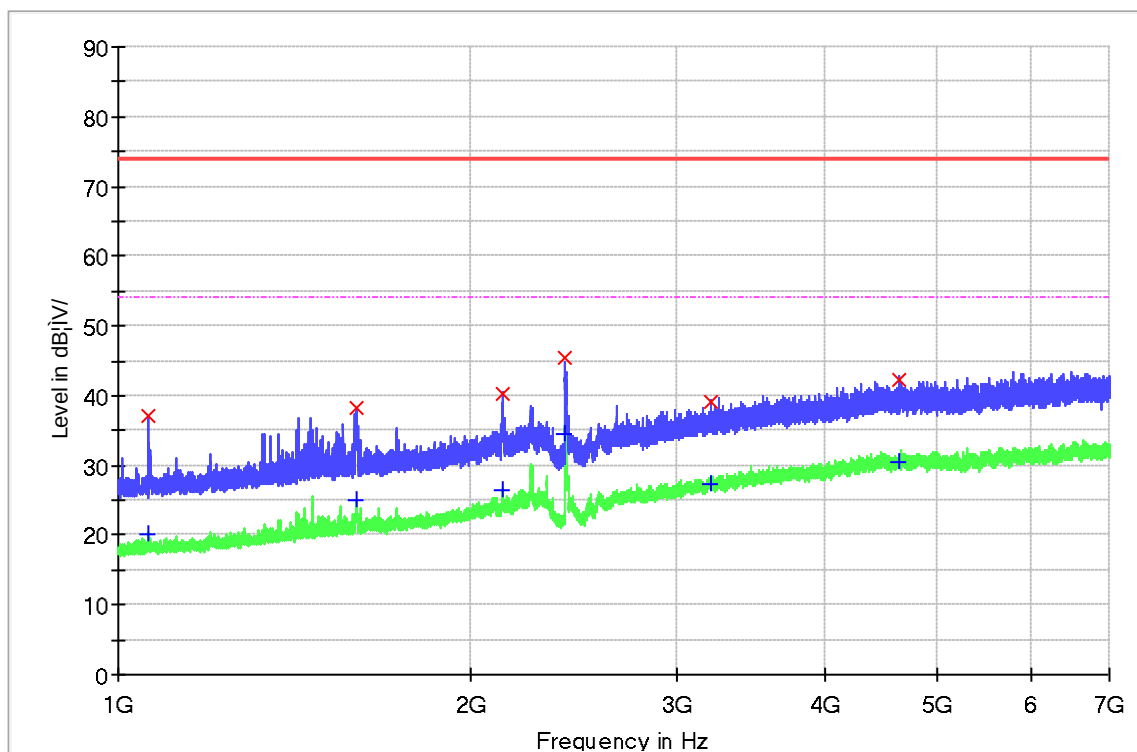
_Radiated emission (30M-1GHz) 1 Range


Limit and Margin

Frequency (MHz)	QuasiPeak (dBμV/m)	Pol	Corr. (dB)	Margin - QPK (dB)	Limit - QPK (dBμV/m)
30.242500	29.4	V	25.3	10.6	40.0
259.405000	25.1	V	20.6	20.9	46.0
801.877500	32.8	V	27.4	13.2	46.0

Figure 41: Radiated Spurious Emission, TM4, 1GHz to 7GHz, H

RE_1-18GHz_HL050_FSV40_Pre


Limit and Margin PK

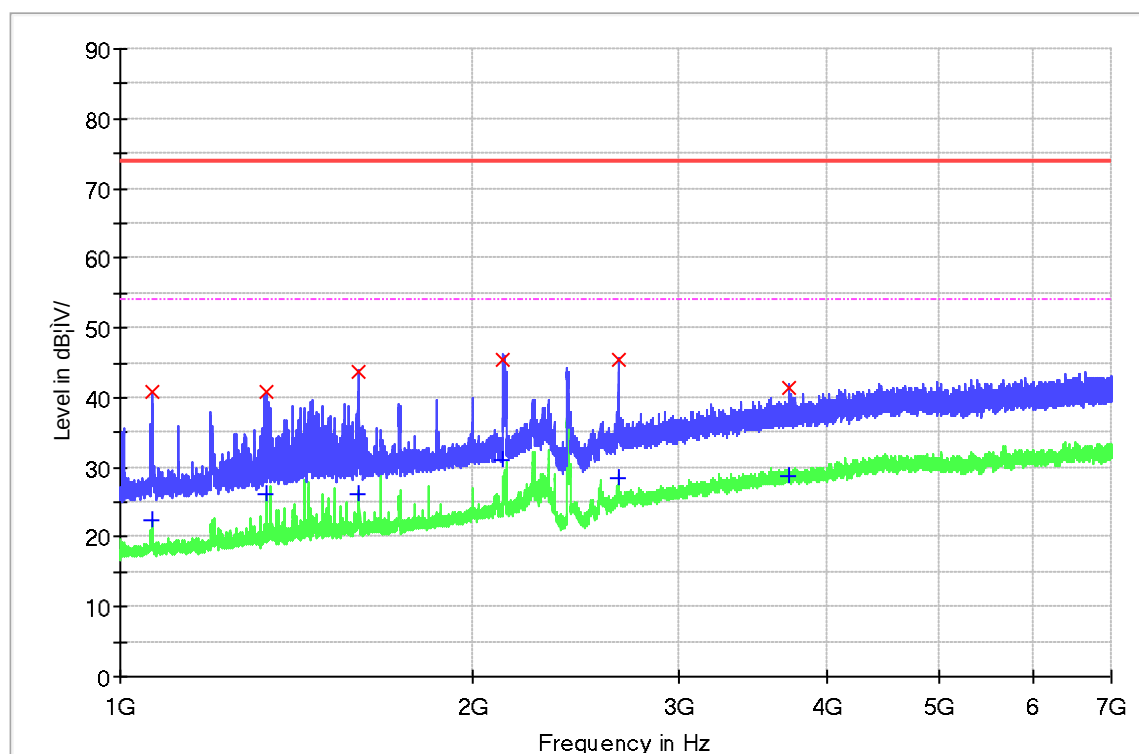
Frequency (MHz)	MaxPeak (dBµV/m)	Pol	Corr. (dB)	Margin - PK+ (dB)	Limit - PK+ (dBµV/m)
1061.875000	37.0	H	-22.1	37.0	74.0
1595.125000	38.1	H	-18.4	35.9	74.0
2129.500000	40.2	H	-15.7	33.8	74.0
2404.937500	45.3	H	-14.4	28.7	74.0
3202.375000	39.0	H	-10.8	35.0	74.0
4628.500000	42.1	H	-6.5	31.9	74.0

Limit and Margin AV

Frequency (MHz)	Average (dBµV/m)	Pol	Corr. (dB)	Margin - AVG (dB)	Limit - AVG (dBµV/m)
1061.875000	20.1	H	-22.1	33.9	54.0
1595.125000	25.0	H	-18.4	29.0	54.0
2129.500000	26.5	H	-15.7	27.5	54.0
2404.937500	34.4	H	-14.4	19.6	54.0
3202.375000	27.4	H	-10.8	26.6	54.0
4628.500000	30.4	H	-6.5	23.6	54.0

Figure 42: Radiated Spurious Emission, TM4, 1GHz to 7GHz, V

RE_1-18GHz_HL050_FSV40_Pre


Limit and Margin PK

Frequency (MHz)	MaxPeak (dBµV/m)	Pol	Corr. (dB)	Margin - PK+ (dB)	Limit - PK+ (dBµV/m)
1064.125000	40.9	V	-22.1	33.1	74.0
1331.125000	40.7	V	-20.2	33.3	74.0
1594.375000	43.7	V	-18.4	30.3	74.0
2122.937500	45.4	V	-15.8	28.6	74.0
2665.375000	45.3	V	-13.3	28.7	74.0
3723.062500	41.5	V	-8.8	32.5	74.0

Limit and Margin AV

Frequency (MHz)	Average (dBµV/m)	Pol	Corr. (dB)	Margin - AVG (dB)	Limit - AVG (dBµV/m)
1064.125000	22.3	V	-22.1	31.7	54.0
1331.125000	26.1	V	-20.2	27.9	54.0
1594.375000	26.1	V	-18.4	27.9	54.0
2122.937500	31.1	V	-15.8	22.9	54.0
2665.375000	28.6	V	-13.3	25.4	54.0
3723.062500	28.8	V	-8.8	25.2	54.0