

Appendix B: Test Results

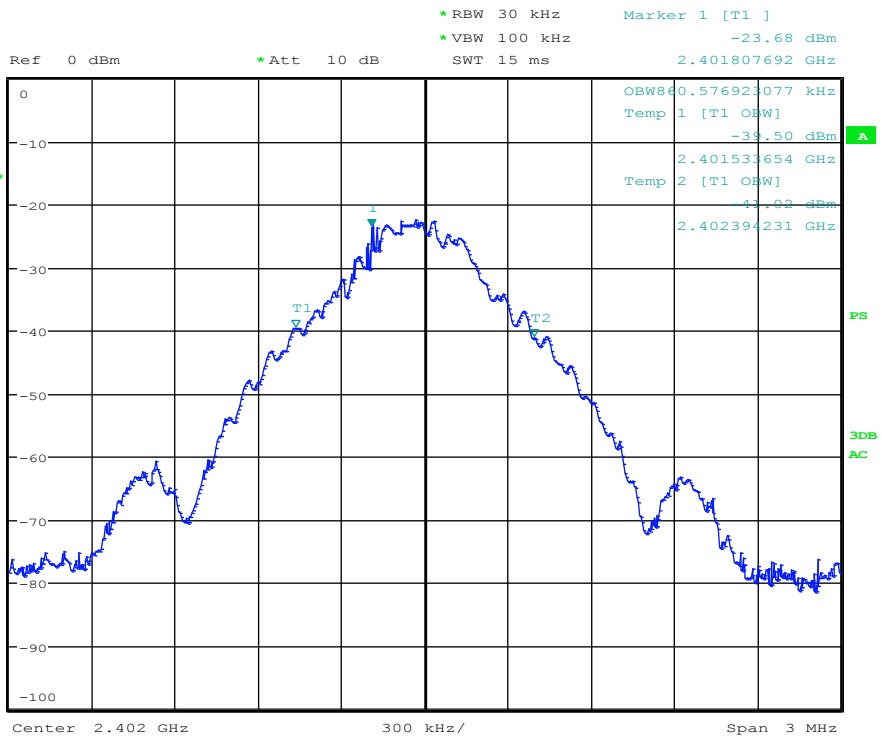
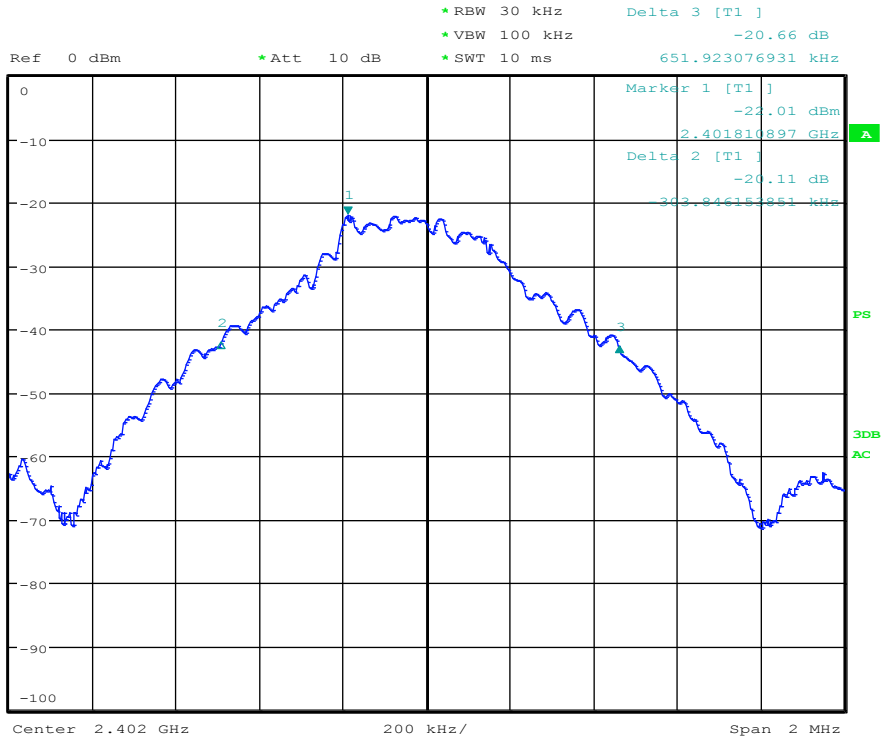
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Appendix B.1: Measurement Equipment List

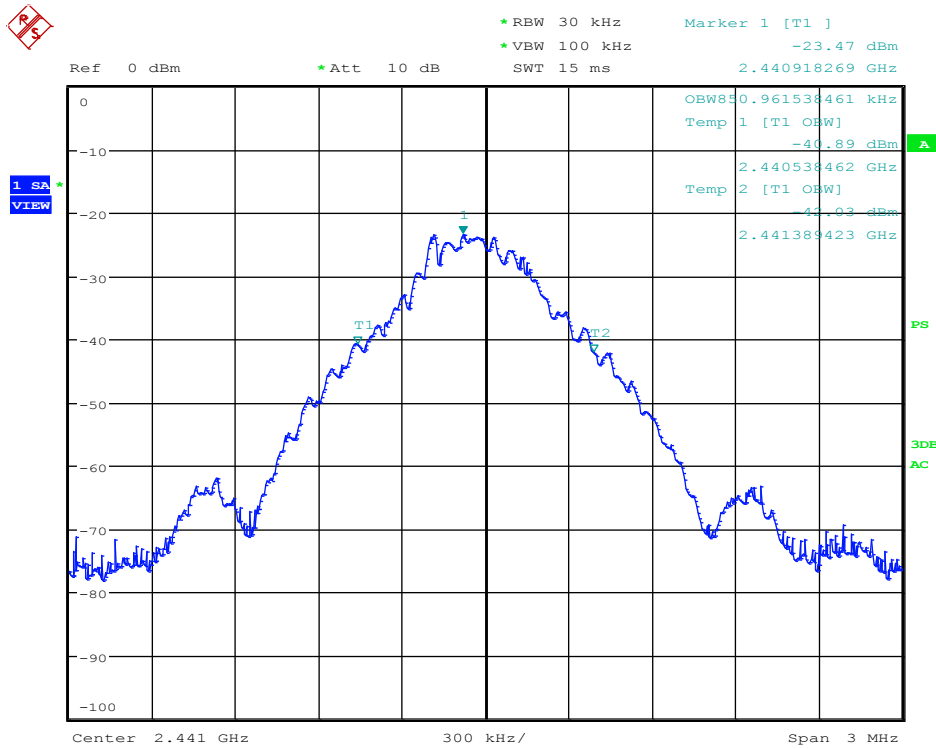
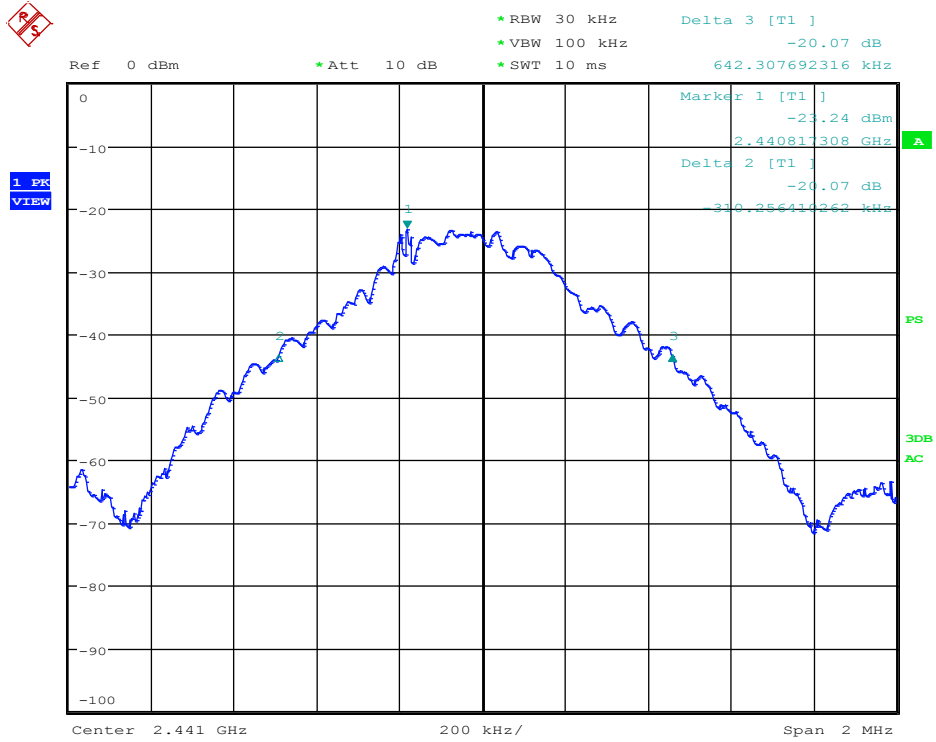
Equipment	Manufacturer	Model No.	Serial No.	Cal Until
EMI Test Receiver	Rohde&Schwarz	ESCI 3	100314	2021-03-15
Two-Line V-Network	Rohde&Schwarz	ENV216	100195	2021-06-01
EMI Test Receiver	Rohde&Schwarz	ESR7	102110	2021-04-09
Artificial Mains Network	AFJ	LT32C/10	32031810253	2021-07-30
Impedance Stabilization Network	TESTQ	ISN T8-Cat6	39916	2021-03-15
Artificial Mains Network	Rohde&Schwarz	ESH2-Z5	100114	2021-03-15
EMI Test Receiver	Rohde & Schwarz	ESU 26	100209	2021-03-16
Spectrum Analyzer	Rohde & Schwarz	FSP30	100286	2020-08-16
Trilog-Broadband Antenna	Schwarzbeckmess-elektronik	VULB9168	684	2021-08-21
Double-Ridged Horn Antenna	Rohde & Schwarz	HF907	100377	2020-10-20
Horn Antenna	EMCO	3160-09	21642	2022-01-19
Pre-Amplifier(1-18GHz)	MITEQ	AFS44-00101800-25-10P-44	1934457	2021-05-28
Pre-Amplifier(18-26GHz)	MITEQ	AFS33-18002650-30-8P-44	1108282	2020-07-30
Band Reject Filter	Micro-Tronics	BRM50702	023	2021-07-04
Highpass Filter	Micro-Tronics	HPM50115-03	001	2021-03-19

Appendix B.2: 20dB Bandwidth & 99% Bandwidth

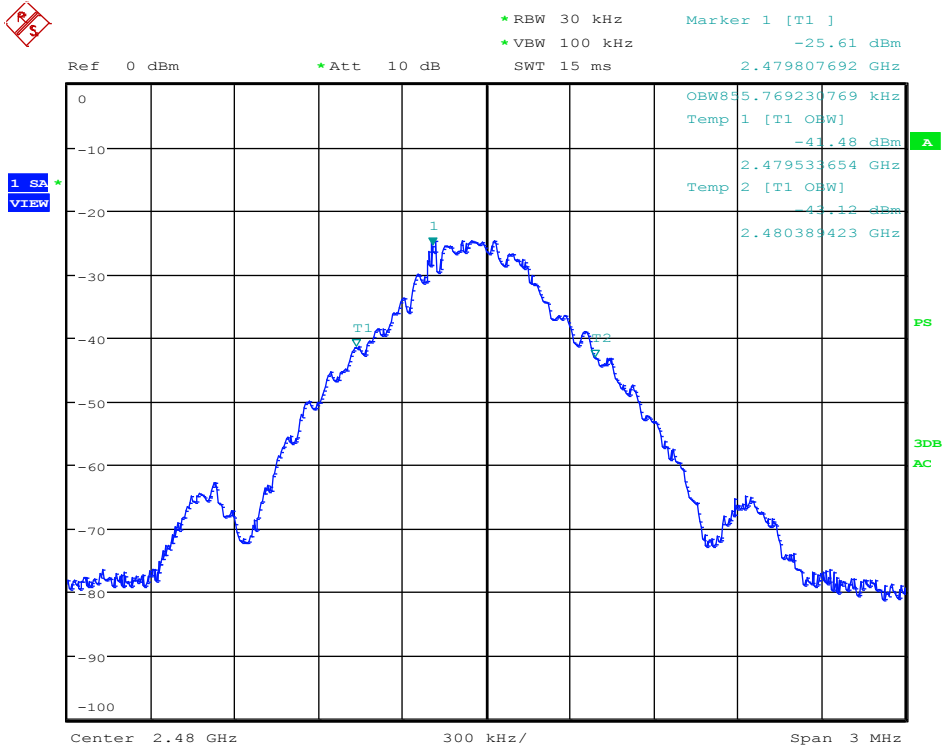
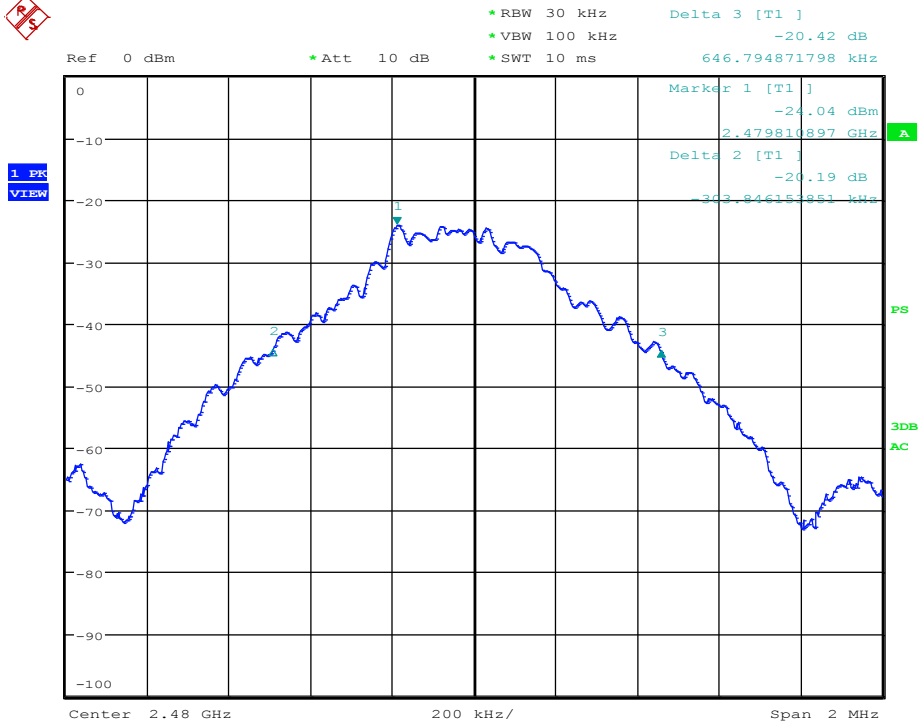
Low Channel of BDR mode



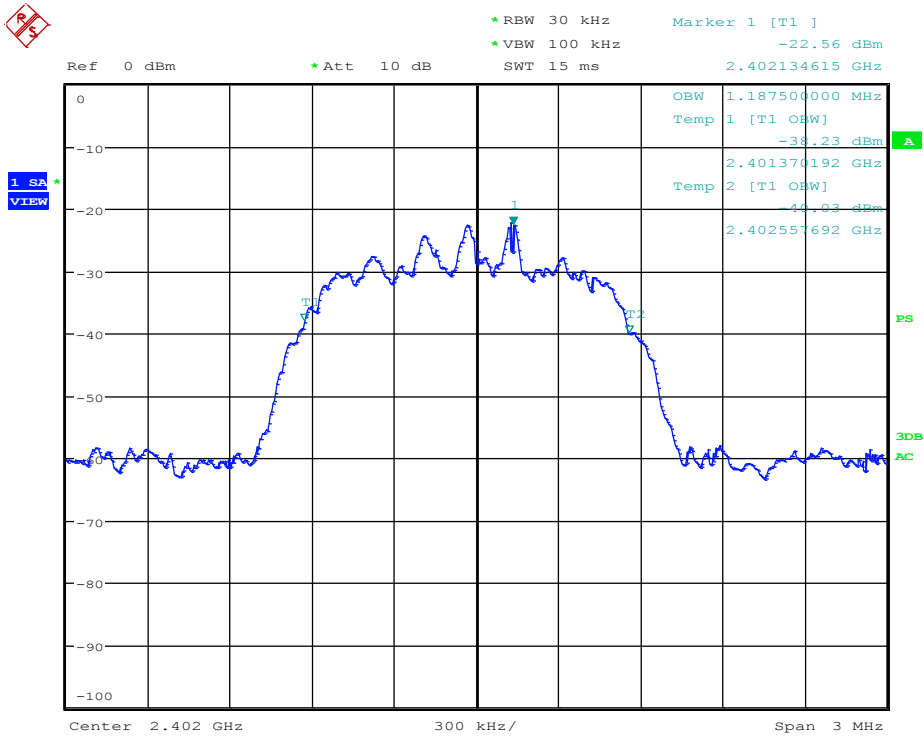
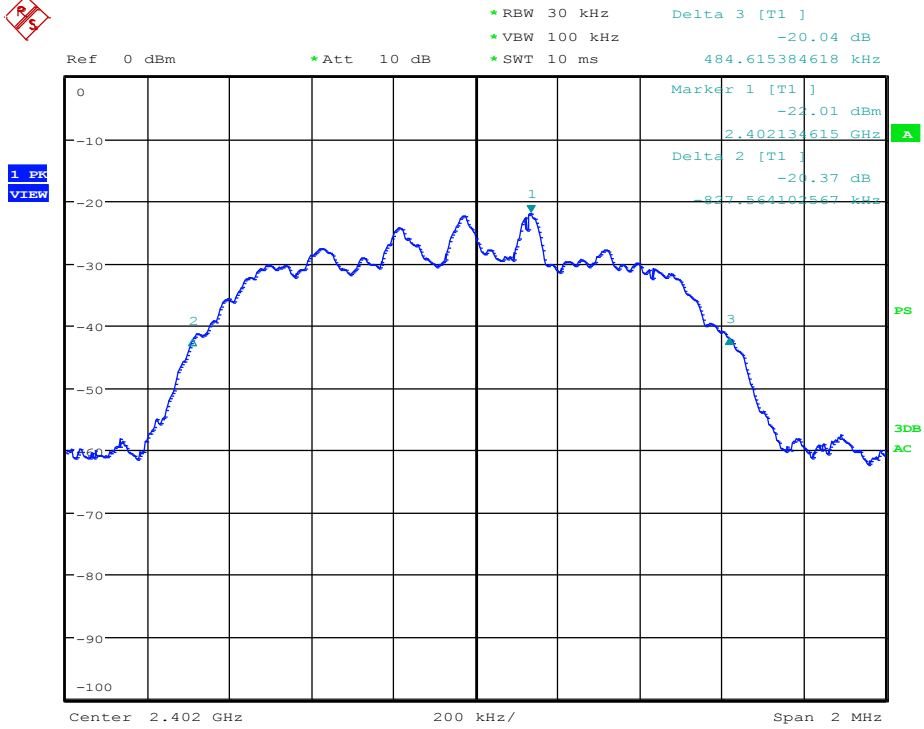
Middle Channel of BDR mode



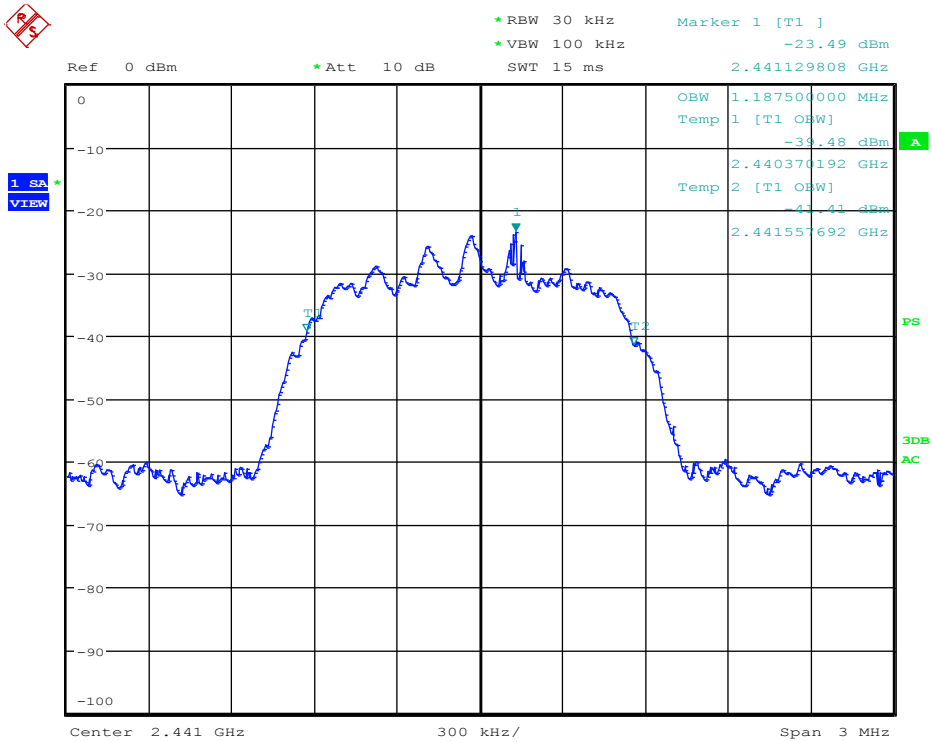
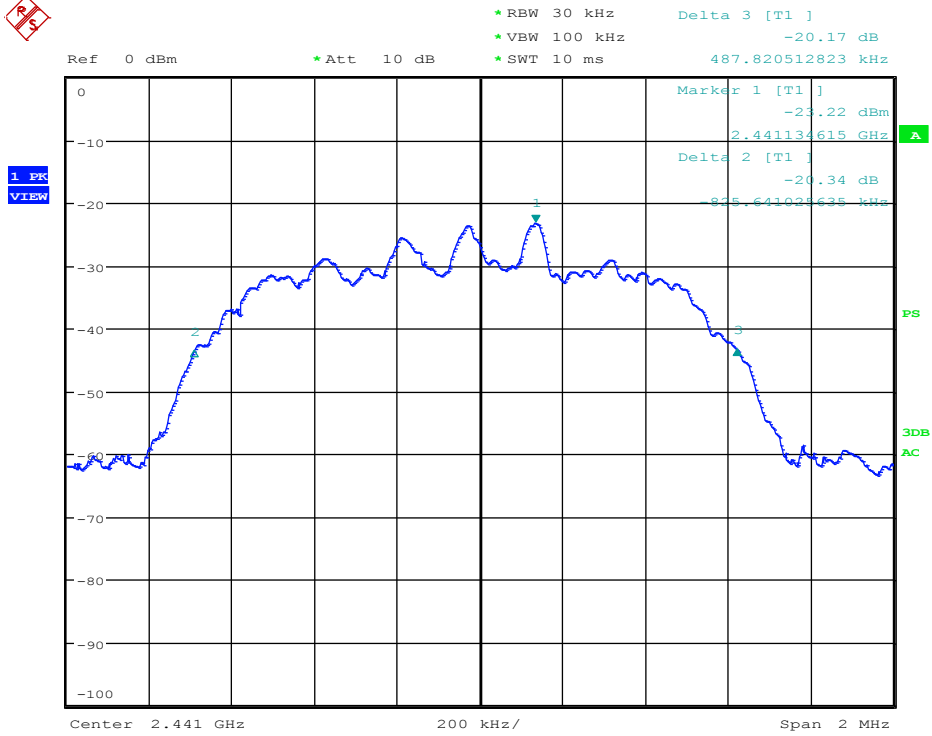
High Channel of BDR mode



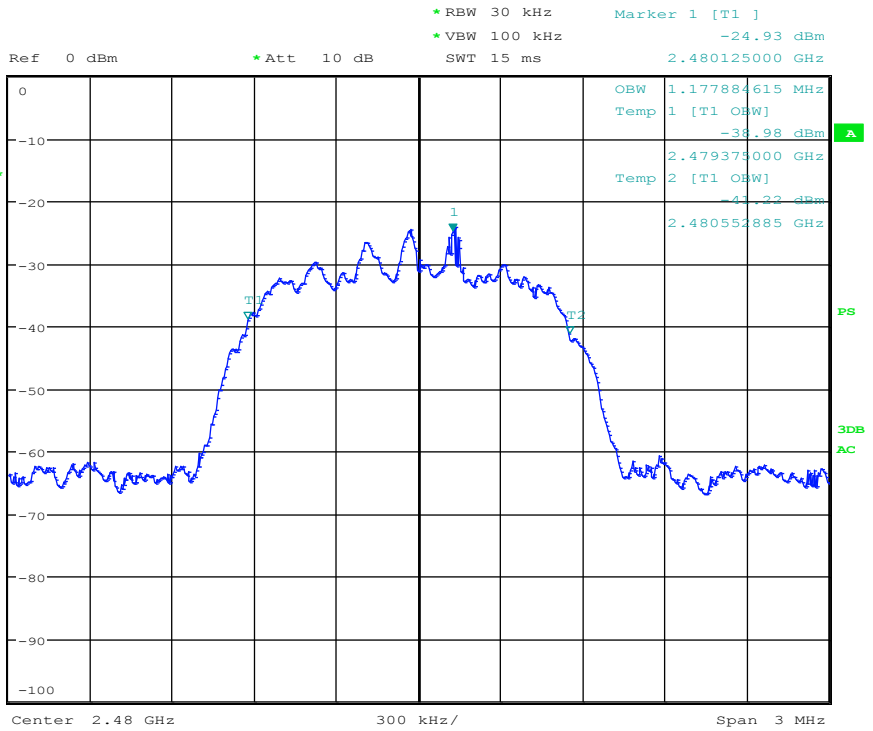
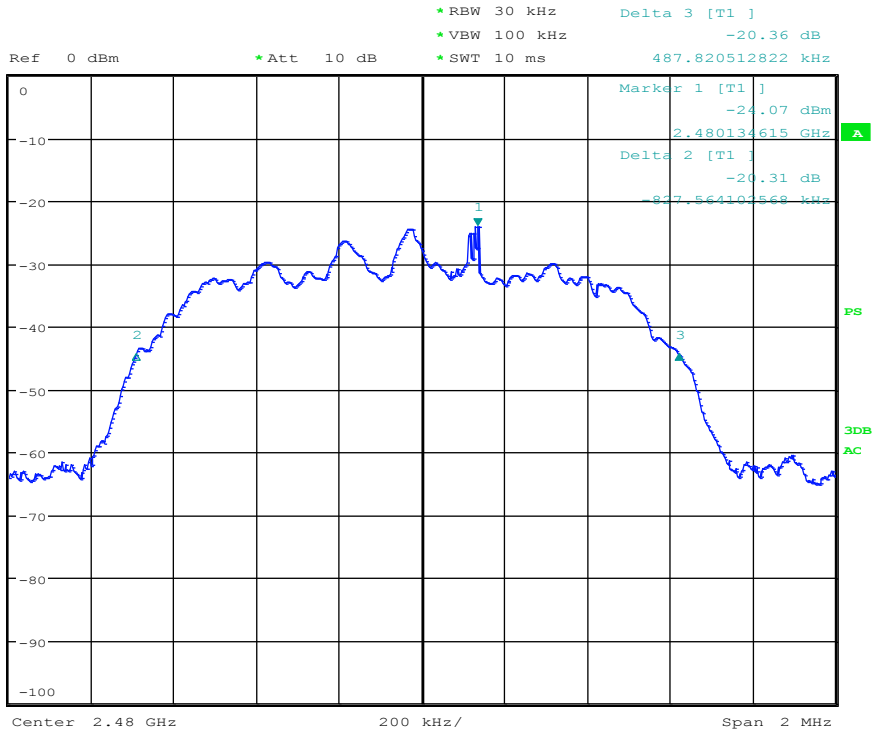
Low Channel of EDR mode



Middle Channel of EDR mode

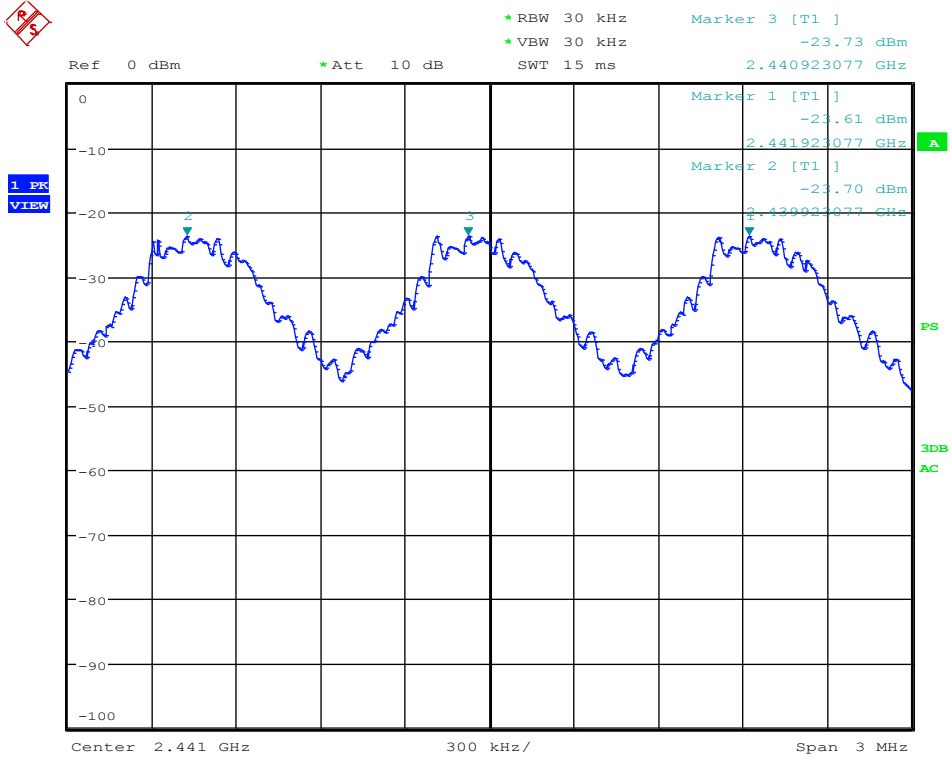


High Channel of EDR mode

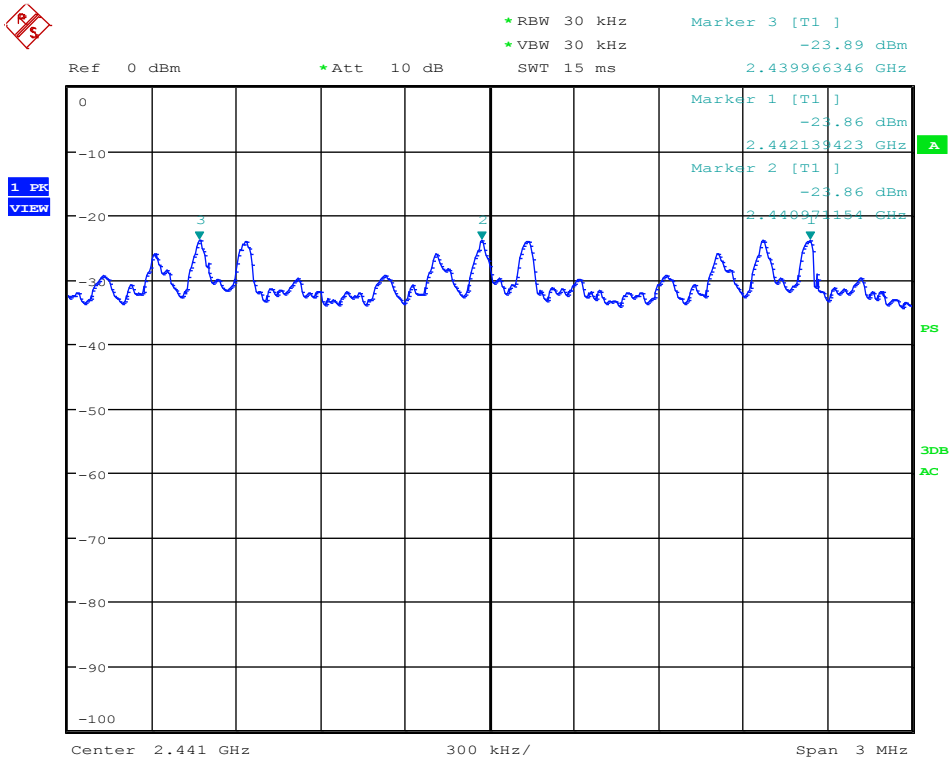


Appendix B.3: Carrier Frequency Separation

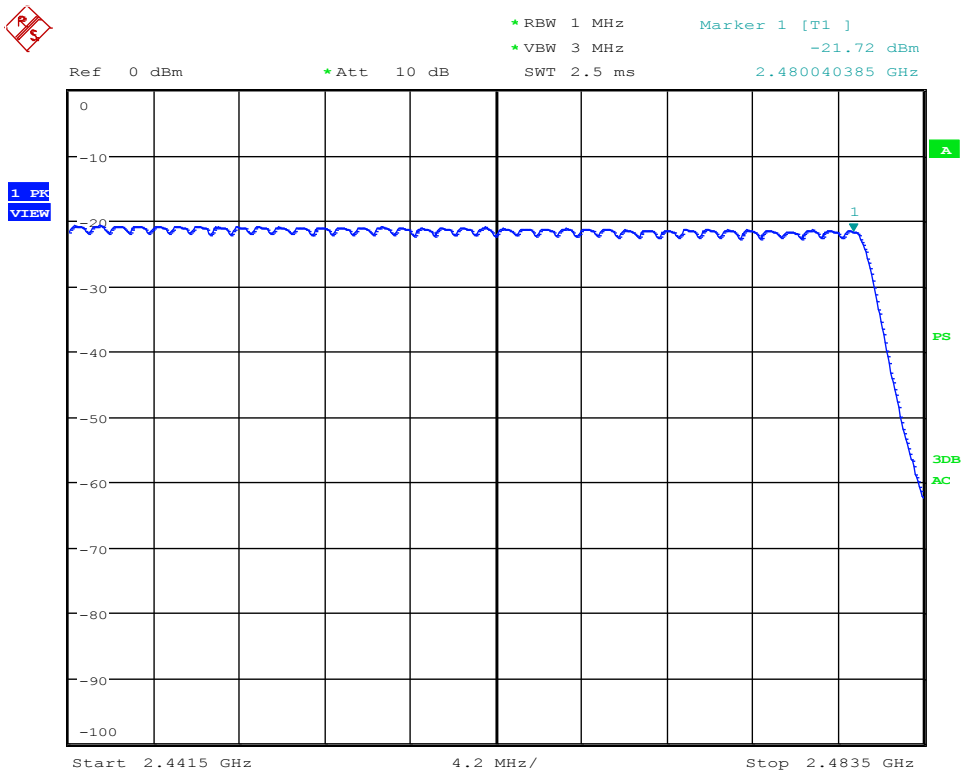
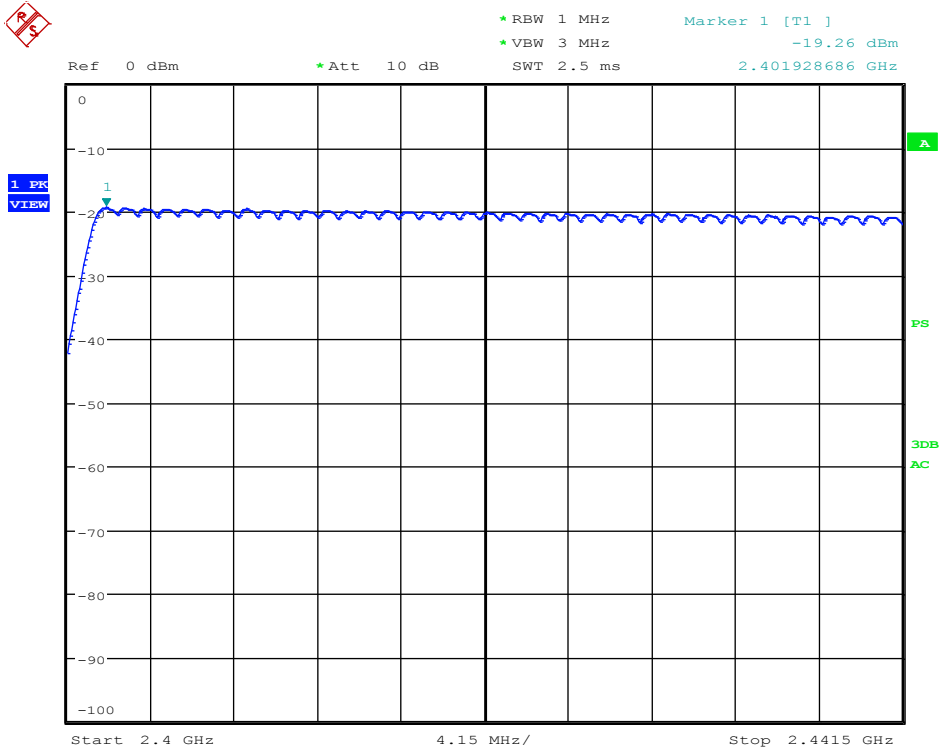
BDR mode



EDR mode

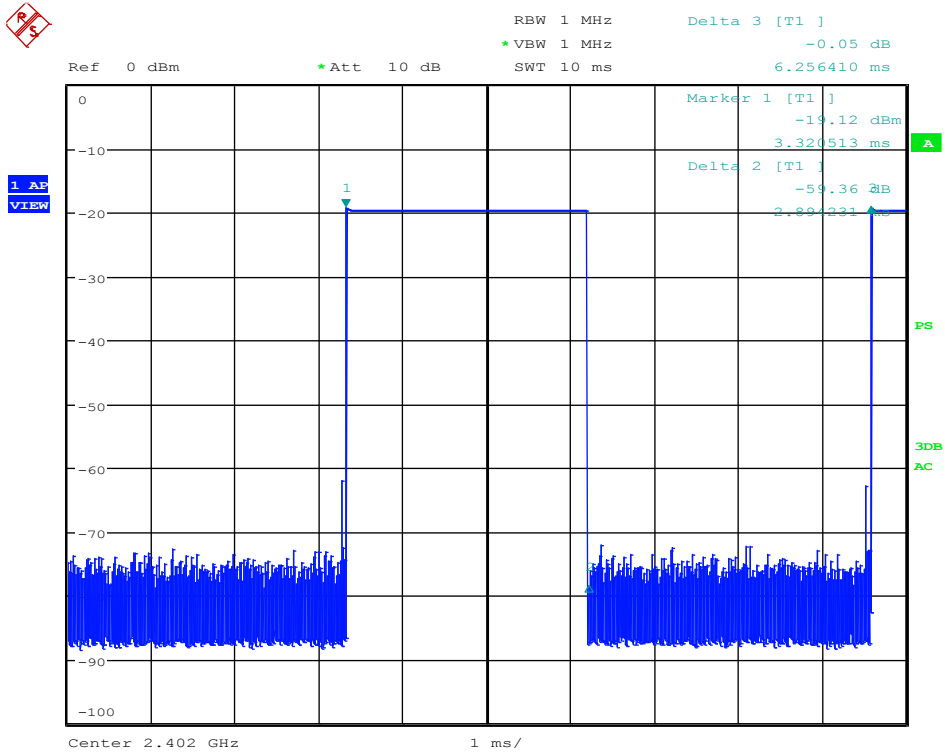


Appendix B.4: Number of Hopping Frequency

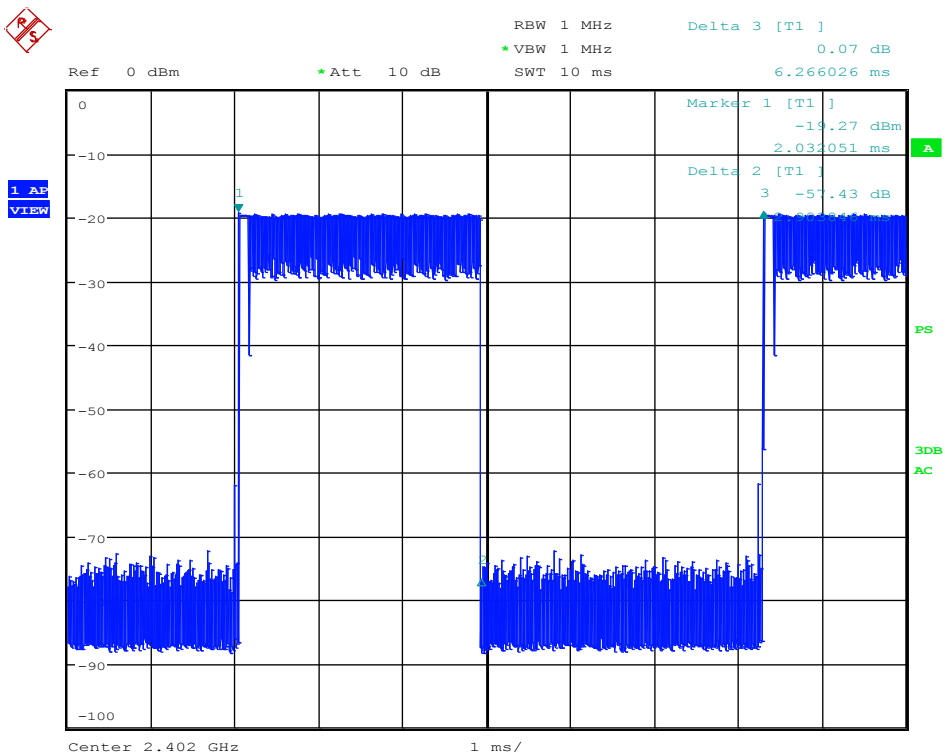


Appendix B.5: Time of Occupancy

BDR mode

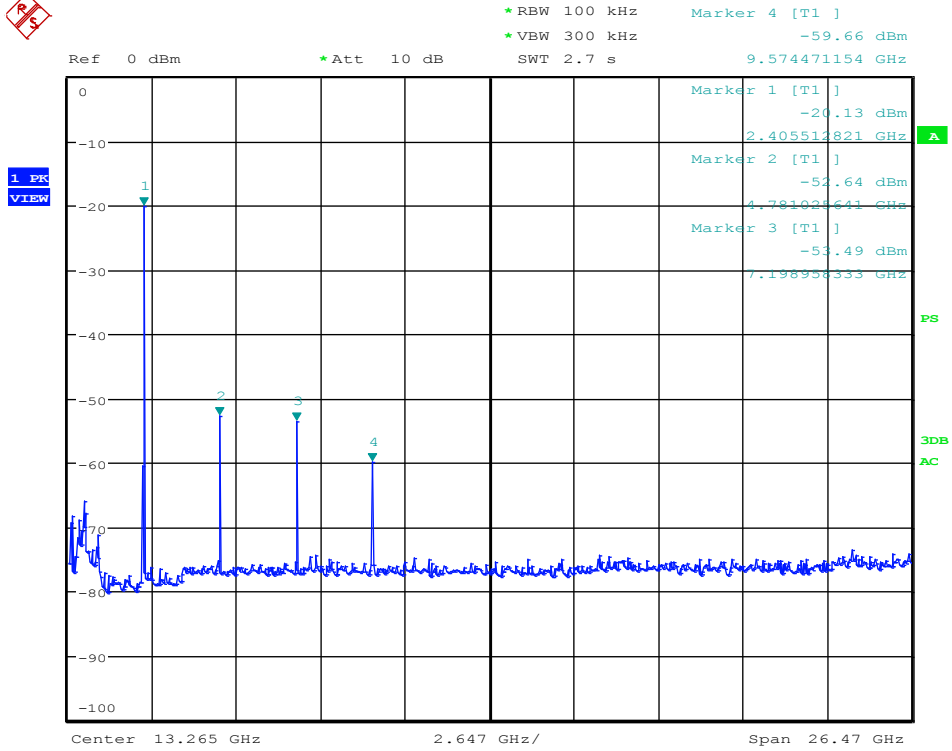


EDR mode

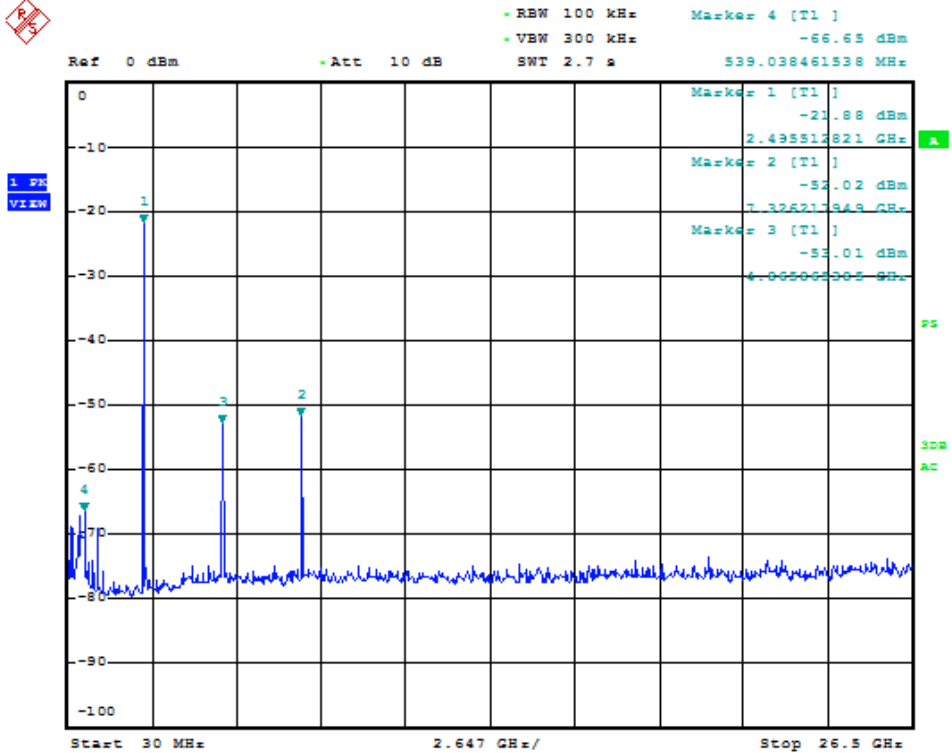


Appendix B.6: Conducted Spurious Emissions Measured in 100 kHz Bandwidth

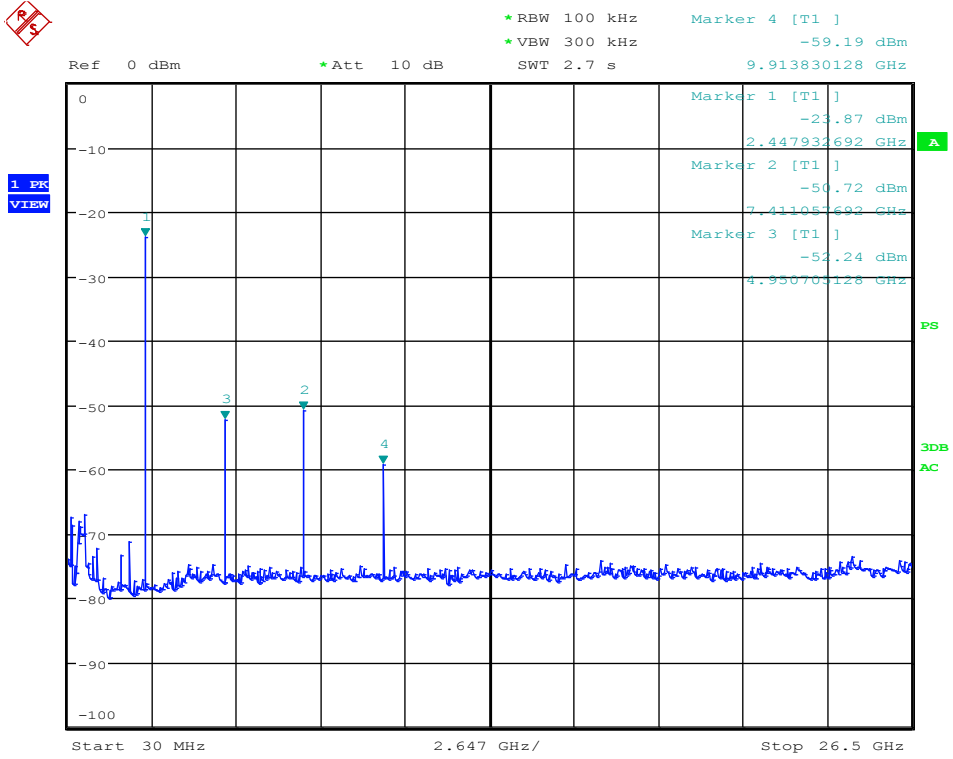
Low Channel of BDR mode



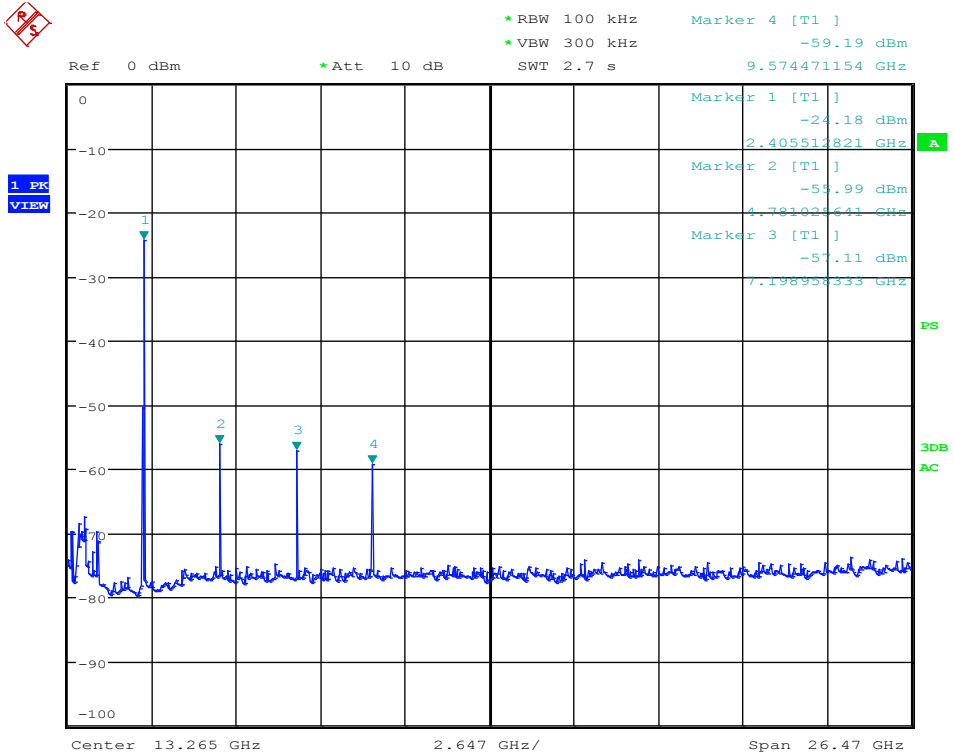
Middle Channel of BDR mode



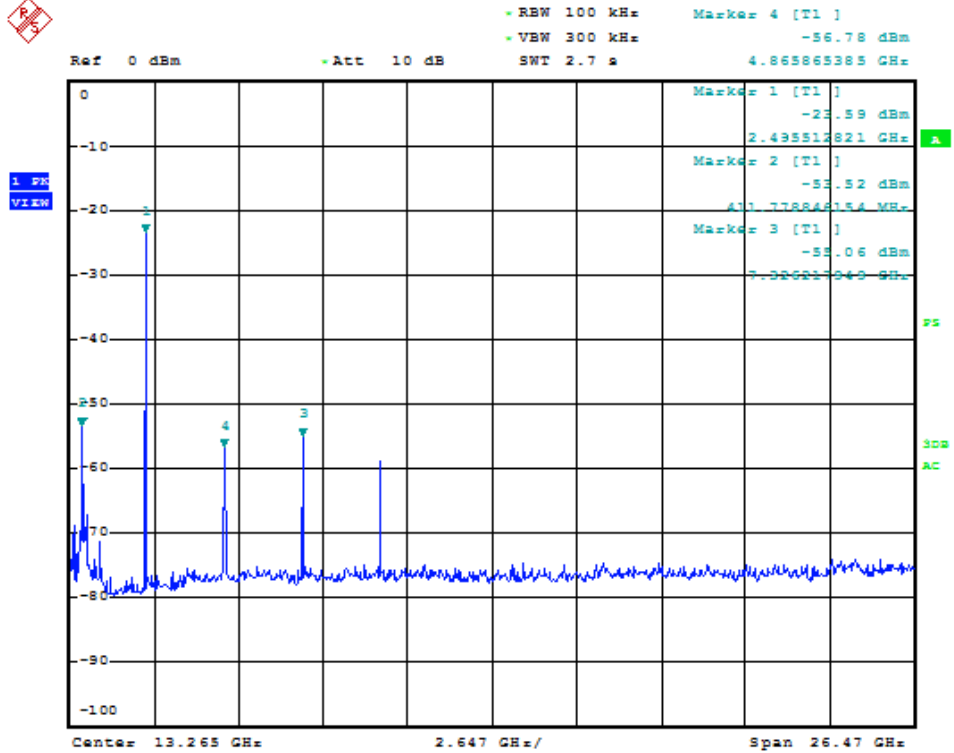
High Channel of BDR mode



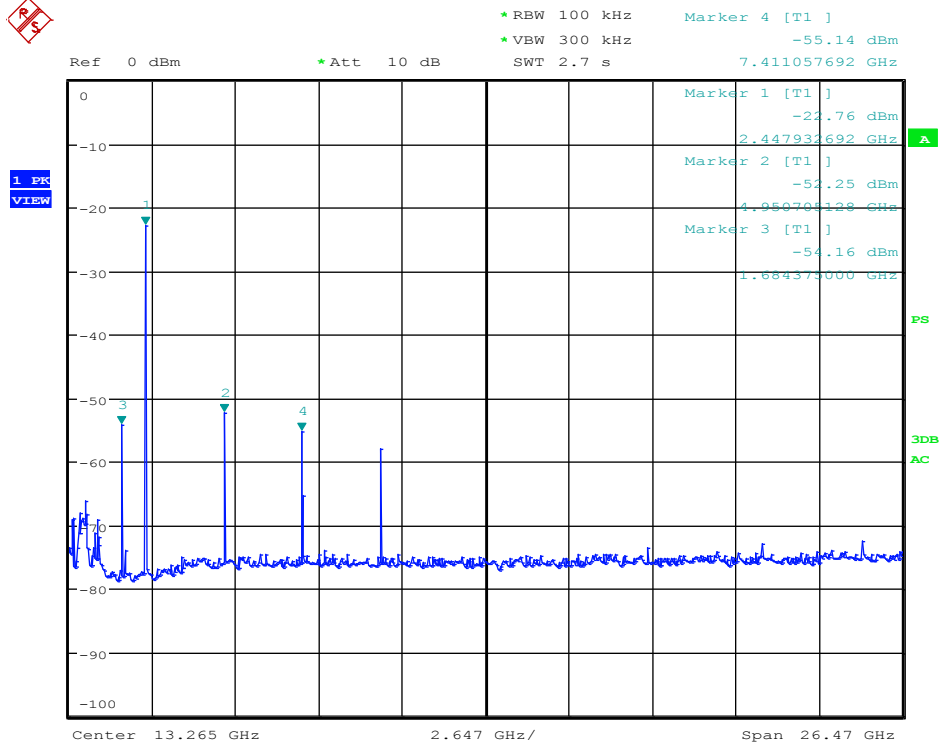
Low Channel of EDR mode



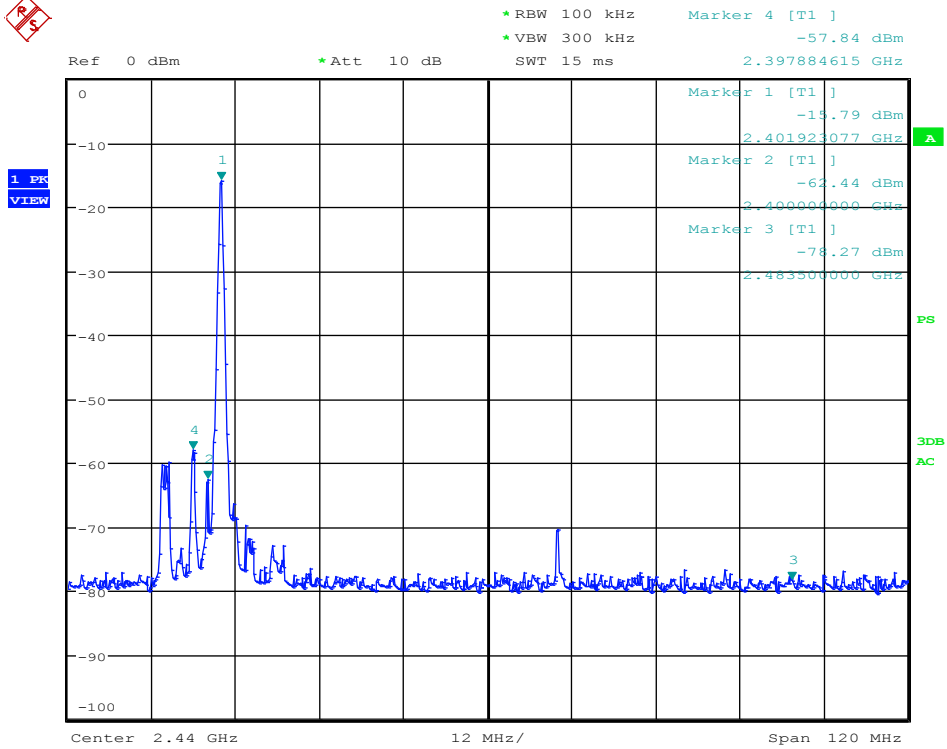
Middle Channel of EDR mode



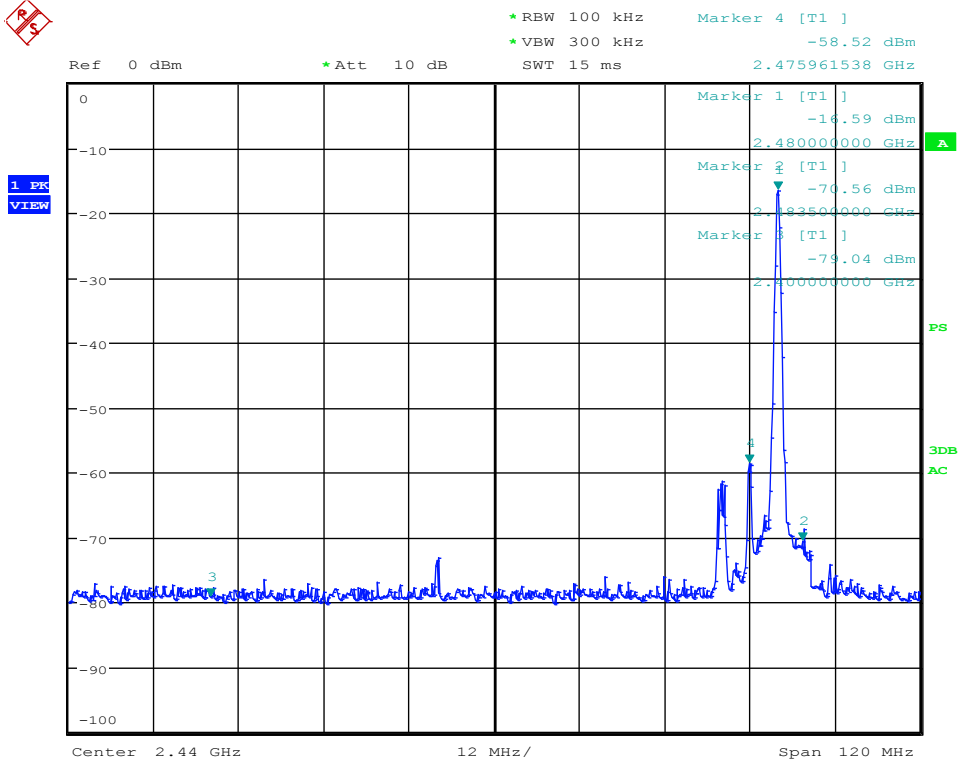
High Channel of EDR mode



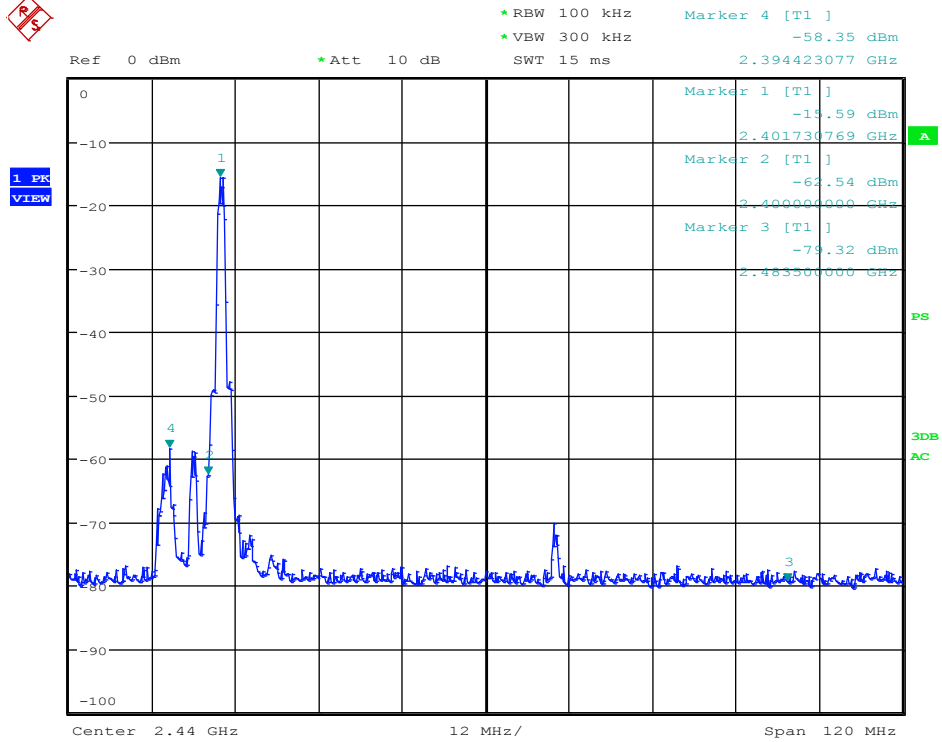
Band Edge, Low Channel of BDR mode



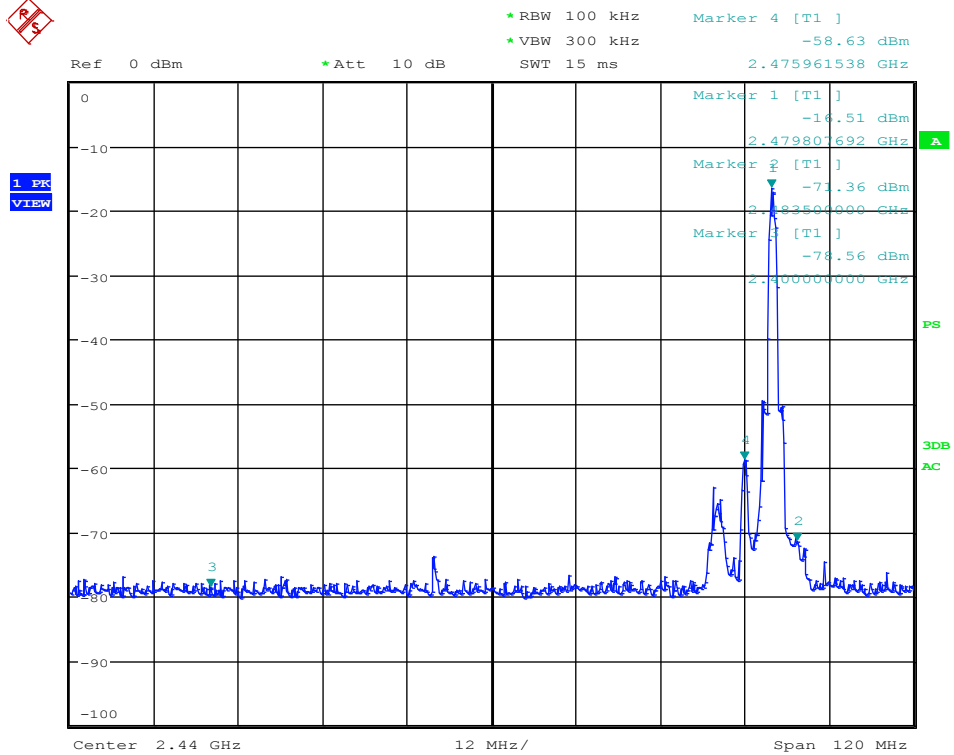
Band Edge, High Channel of BDR mode



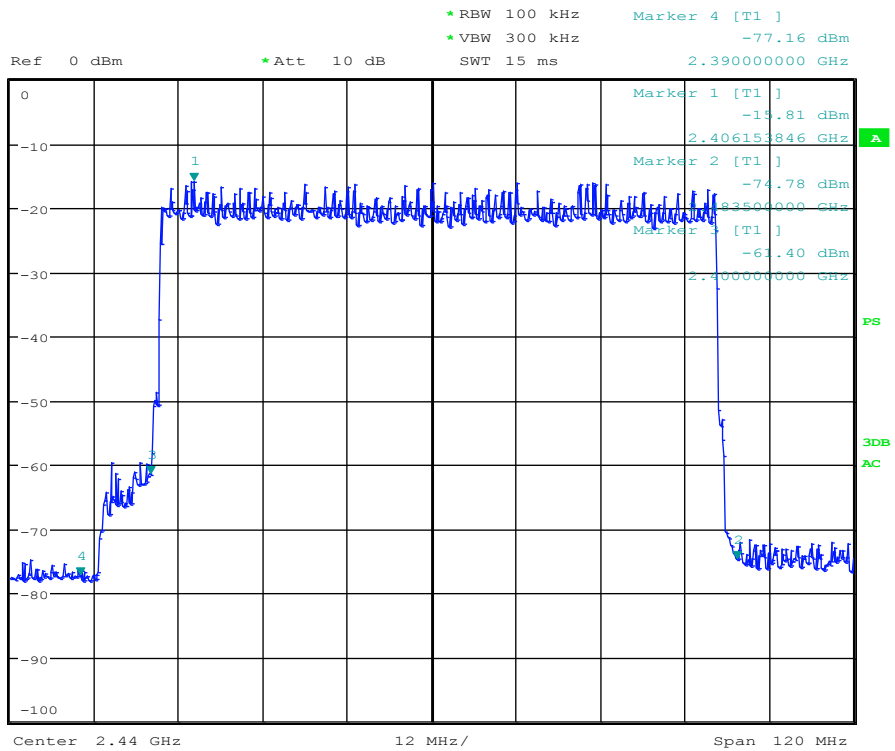
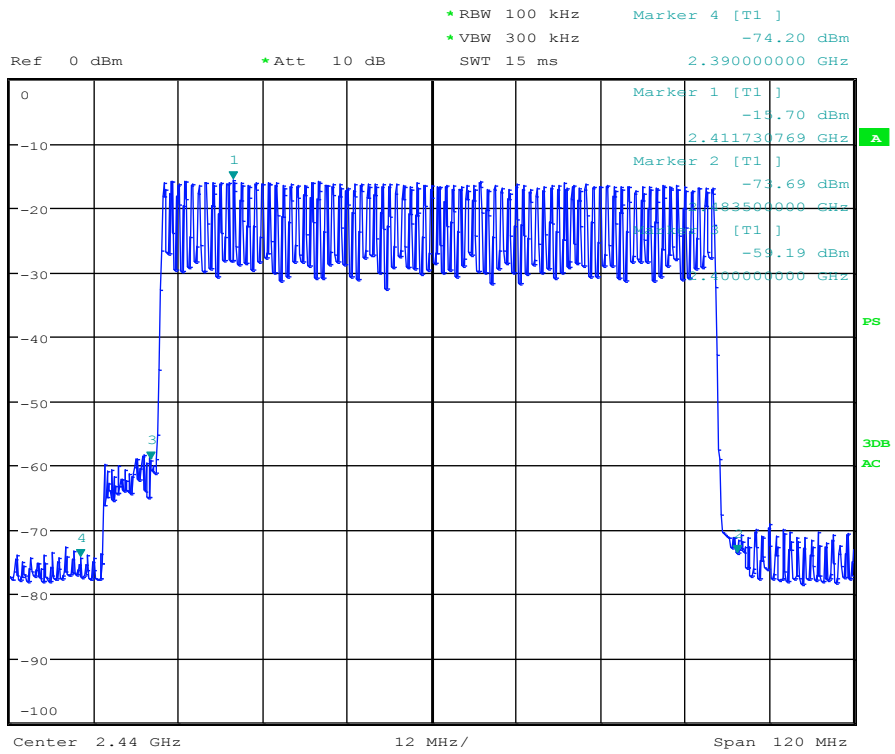
Band Edge, Low Channel of EDR mode



Band Edge, High Channel of EDR mode



Band Edge of hopping mode



Note: Testing was carried out within frequency range 9kHz to the tenth harmonics. The measurement results below 30MHz and 18GHz -26.5GHz were greater than 20dB below the limit, so only the radiated spurious emissions from 30MHz to 18GHz were reported.

Appendix B.7: Test Results of Radiated Spurious Emissions

30MHz - 1GHz

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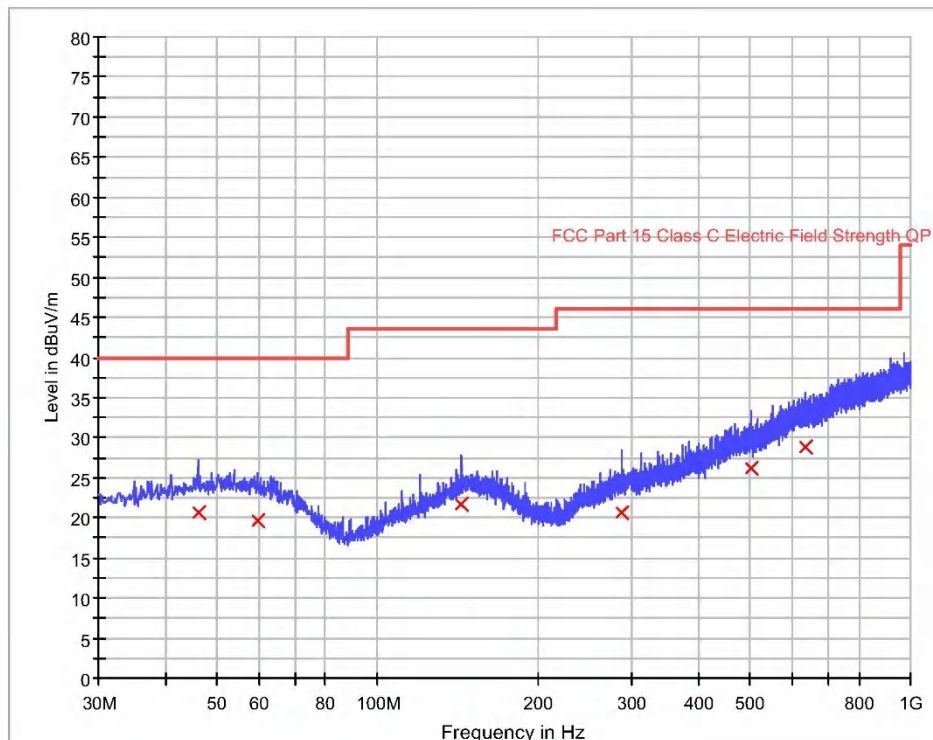
EMC Test Service Hotline: +86-20-28391188

EMC Test Record (Emission)

Common Information

Manufacturer:	INNOVATIVE
Test Item:	Radio cassette recorder
Identification:	VBB-20
Test Standard:	FCC Part 15
Test Detail:	Radiated Emission
Operation Mode:	Transmitting(1DH5-M)
Climate Condition:	23 °C, 60 %, 101 kPa
Test Voltage/ Freq:	AC 120 V / 60 Hz
Receipt No:	170245339
Report No:	
Result:	Pass
Comment:	Test distance is 3m; Horizontal

Subrange 1	
Frequency range:	30-1000MHz
Receiver:	ESCI 3
Transducer:	VULB9168



Tested by *Chris Liang*
20200724

Reviewed by *Jacky Chen*
20200728

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

Limit and Margin

Frequency (MHz)	QuasiPeak (dBuV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB/m)	Margin - QPK (dB)	Limit - QPK (dBuV/m)	Comment
46.120000	20.6	1000.0	120.000	H	20.7	19.4	40.0	
59.600000	19.6	1000.0	120.000	H	20.2	20.4	40.0	
143.960000	21.7	1000.0	120.000	H	20.9	21.8	43.5	
287.880000	20.7	1000.0	120.000	H	21.7	25.3	46.0	
503.120000	26.2	1000.0	120.000	H	27.2	19.8	46.0	
636.120000	28.9	1000.0	120.000	H	30.1	17.2	46.0	

Tested by

Chris Liang

20200724

Reviewed by

Jacky Chen

20200728

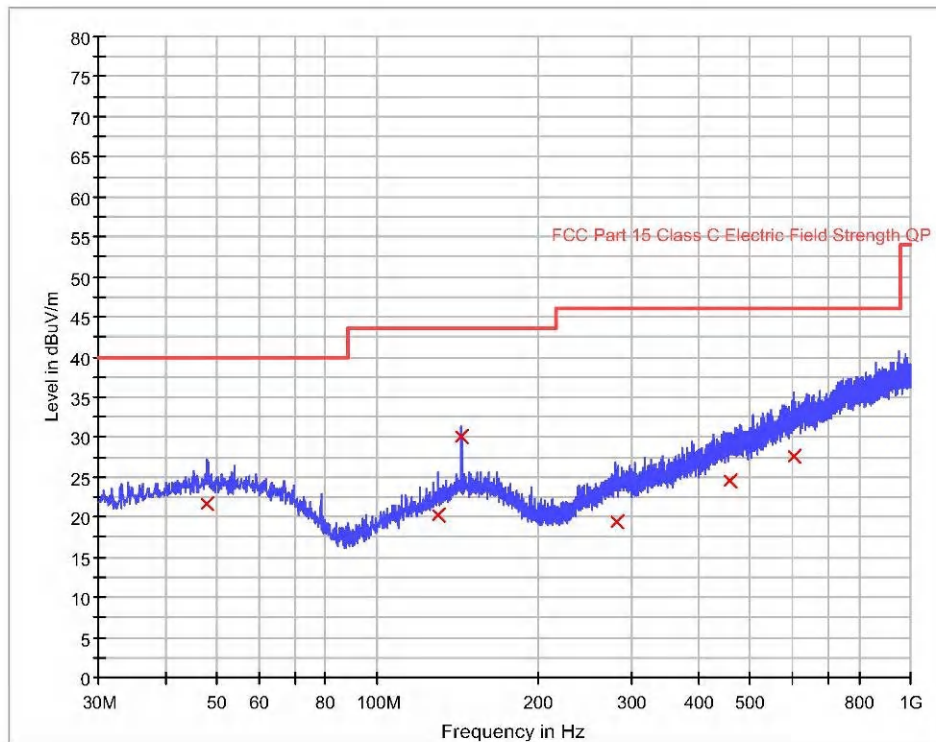
TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

EMC Test Record (Emission)

Common Information

Manufacturer:	INNOVATIVE
Test Item:	Radio cassette recorder
Identification:	VBB-20
Test Standard:	FCC Part 15
Test Detail:	Radiated Emission
Operation Mode:	Transmitting(1DH5-M)
Climate Condition:	23 °C, 60 %, 101 kPa
Test Voltage/ Freq:	AC 120 V / 60 Hz
Receipt No:	170245339
Report No:	
Result:	Pass
Comment:	Test distance is 3m; Vertical
Subrange 1	
Frequency range:	30-1000MHz
Receiver:	ESCI 3
Transducer:	VULB9168



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Reviewed by *Jacky Chen*
20200728

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

Limit and Margin

Frequency (MHz)	QuasiPeak (dBuV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB/m)	Margin - QPK (dB)	Limit - QPK (dBuV/m)	Comment
47.960000	21.7	1000.0	120.000	V	20.6	18.3	40.0	
130.160000	20.3	1000.0	120.000	V	19.3	23.3	43.5	
143.960000	30.1	1000.0	120.000	V	20.9	13.4	43.5	
280.400000	19.4	1000.0	120.000	V	21.5	26.6	46.0	
459.720000	24.5	1000.0	120.000	V	26.6	21.5	46.0	
606.160000	27.7	1000.0	120.000	V	29.8	18.3	46.0	

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1GHz - 18GHz

Note: The measurement results 2402-2483.5MHz was exclusion band, when Band Reject Filter used. So only the radiated spurious emissions of out this exclusion band were evaluated.

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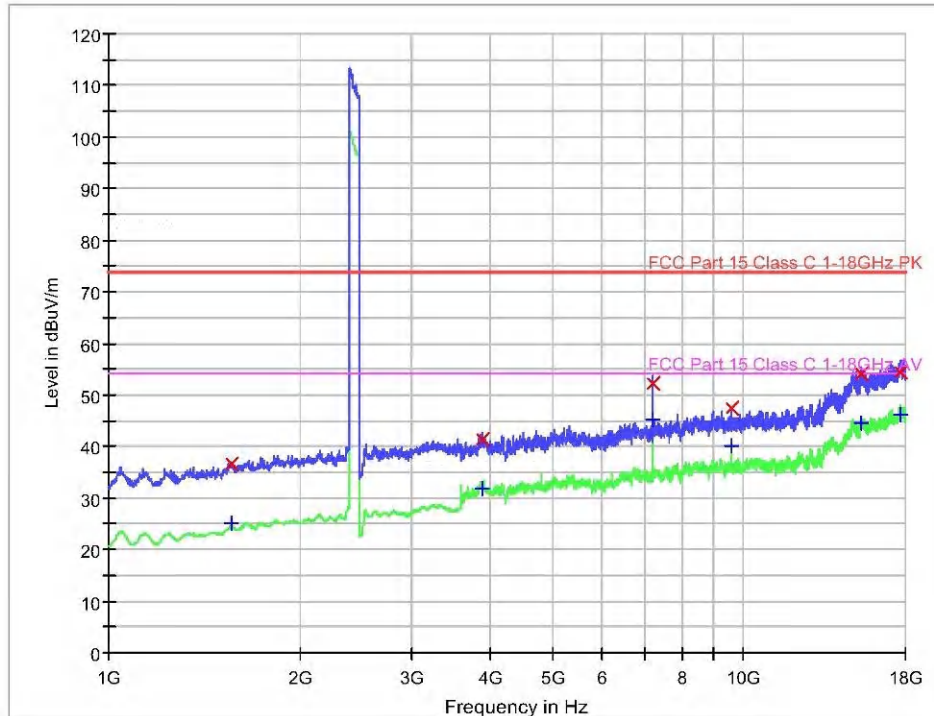
EMC Test Service Hotline: +86-20-28391188

EMC Test Record (Emission)

Common Information

Manufacturer:	INNOVATIVE
Test Item:	Radio cassette recorder
Identification:	VBB-20
Test Standard:	FCC Part 15
Test Detail:	Radiated Emission
Operation Mode:	Transmitting(1DH5-L)
Climate Condition:	23 °C, 60 %, 101 kPa
Test Voltage/ Freq:	AC 120 V / 60 Hz
Receipt No:	170245339
Report No:	
Result:	Pass
Comment:	Test distance is 3m; Horizontal
Subrange 1	
Frequency Range:	1GHz-18GHz
Receiver:	ESU 26
Transducer:	TUV SAC HF907

EMCTT_EREFO11-A02-07_1GHz-18GHz_With PreAMP EXT& Filter 0898



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EMC Test Service Hotline: +86-20-28391188

Limit and Margin PK

Frequency (MHz)	MaxPeak (dBuV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB)	Margin - PK+ (dB)	Limit - PK+ (dBuV/m)
1561.000000	36.5	1000.0	1000.000	H	-17.1	37.6	74.0
3883.500000	41.5	1000.0	1000.000	H	-9.7	32.5	74.0
7205.000000	52.3	1000.0	1000.000	H	-4.8	21.7	74.0
9600.000000	47.5	1000.0	1000.000	H	-0.4	26.5	74.0
15331.000000	54.0	1000.0	1000.000	H	2.4	20.0	74.0
17651.500000	54.5	1000.0	1000.000	H	5.8	19.5	74.0

Limit and Margin AV

Frequency (MHz)	Average (dBuV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB)	Margin - AVG (dB)	Limit - AVG (dBuV/m)
1561.000000	25.2	1000.0	1000.000	H	-17.1	28.9	54.0
3883.500000	31.7	1000.0	1000.000	H	-9.7	22.3	54.0
7205.000000	45.1	1000.0	1000.000	H	-4.8	8.9	54.0
9600.000000	40.0	1000.0	1000.000	H	-0.4	14.0	54.0
15331.000000	44.6	1000.0	1000.000	H	2.4	9.4	54.0
17651.500000	46.1	1000.0	1000.000	H	5.8	7.9	54.0

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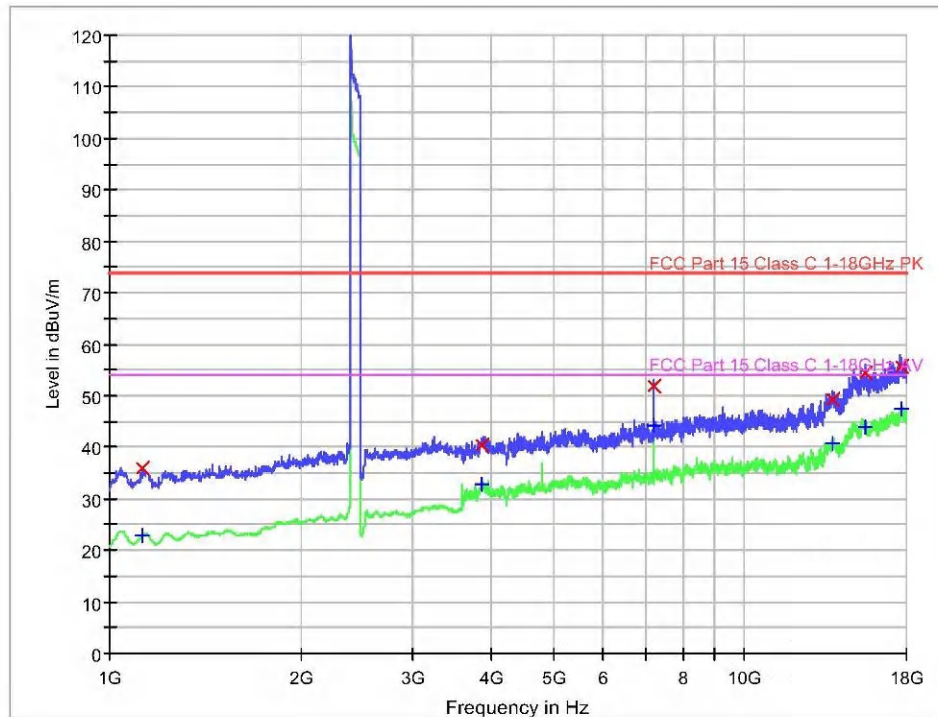
EMC Test Record (Emission)

Common Information

Manufacturer:	INNOVATIVE
Test Item:	Radio cassette recorder
Identification:	VBB-20
Test Standard:	FCC Part 15
Test Detail:	Radiated Emission
Operation Mode:	Transmitting(1DH5-L)
Climate Condition:	23 °C, 60 %, 101 kPa
Test Voltage/ Freq:	AC 120 V / 60 Hz
Receipt No:	170245339
Report No:	
Result:	Pass
Comment:	Test distance is 3m; Vertical

Subrange 1	
Frequency Range:	1GHz-18GHz
Receiver:	ESU 26
Transducer:	TUV SAC HF907

EMCTT_EREFO11-A02-07_1GHz-18GHz_With PreAMP EXT& Filter 0898



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20200724

Reviewed by *Jacky Chen*
20200728

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EMC Test Service Hotline: +86-20-28391188

Limit and Margin PK

Frequency (MHz)	MaxPeak (dBuV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB)	Margin - PK+ (dB)	Limit - PK+ (dBuV/m)
1129.500000	35.9	1000.0	1000.000	V	-18.3	38.2	74.0
3864.500000	40.4	1000.0	1000.000	V	-9.3	33.6	74.0
7205.000000	51.8	1000.0	1000.000	V	-3.8	22.2	74.0
13786.000000	49.4	1000.0	1000.000	V	4.8	24.6	74.0
15479.500000	54.5	1000.0	1000.000	V	8.6	19.5	74.0
17683.500000	55.8	1000.0	1000.000	V	13.0	18.3	74.0

Limit and Margin AV

Frequency (MHz)	Average (dBuV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB)	Margin - AVG (dB)	Limit - AVG (dBuV/m)
1129.500000	23.0	1000.0	1000.000	V	-18.3	31.0	54.0
3864.500000	32.9	1000.0	1000.000	V	-9.3	21.1	54.0
7205.000000	44.3	1000.0	1000.000	V	-3.8	9.7	54.0
13786.000000	40.8	1000.0	1000.000	V	4.8	13.2	54.0
15479.500000	43.8	1000.0	1000.000	V	8.6	10.2	54.0
17683.500000	47.3	1000.0	1000.000	V	13.0	6.7	54.0

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20200728

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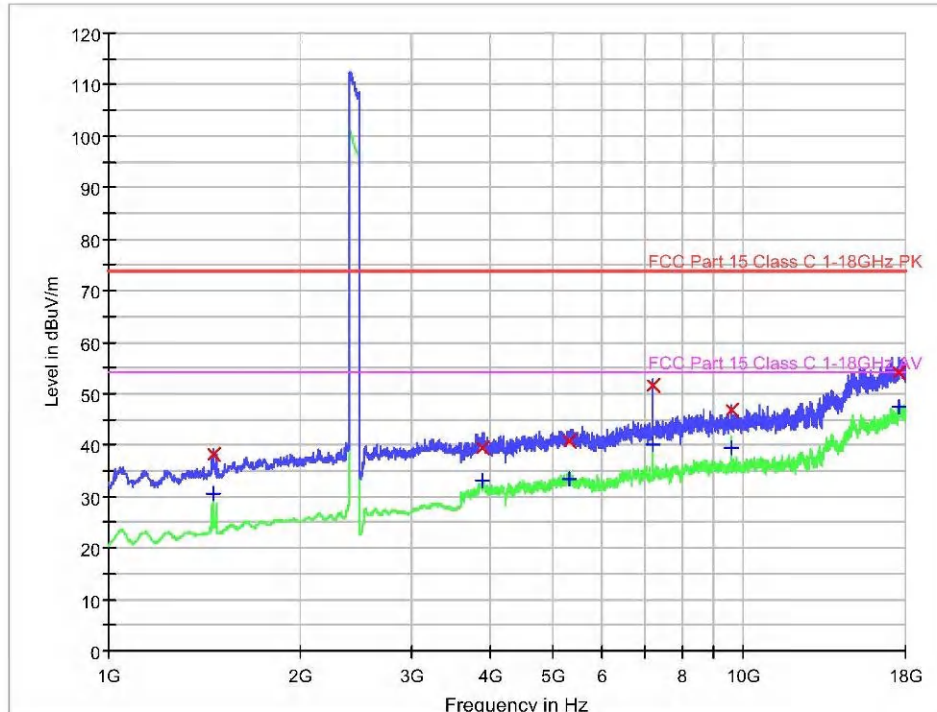
EMC Test Service Hotline: +86-20-28391188

EMC Test Record (Emission)

Common Information

Manufacturer:	INNOVATIVE
Test Item:	Radio cassette recorder
Identification:	VBB-20
Test Standard:	FCC Part 15
Test Detail:	Radiated Emission
Operation Mode:	Transmitting(2DH5-L)
Climate Condition:	23 °C, 60 %, 101 kPa
Test Voltage/ Freq:	AC 120 V / 60 Hz
Receipt No:	170245339
Report No:	
Result:	Pass
Comment:	Test distance is 3m; Horizontal
Subrange 1	
Frequency Range:	1GHz-18GHz
Receiver:	ESU 26
Transducer:	TUV SAC HF907

EMCTT_EREFO11-A02-07_1GHz-18GHz_With PreAMP EXT& Filter 0898



Tested by *Chris Liang*
20200724

Reviewed by *Jacky Chen*
20200728

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EMC Test Service Hotline: +86-20-28391188

Limit and Margin PK

Frequency (MHz)	MaxPeak (dBuV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB)	Margin - PK+ (dB)	Limit - PK+ (dBuV/m)
1465.500000	38.1	1000.0	1000.000	H	-17.1	35.9	74.0
3890.000000	39.5	1000.0	1000.000	H	-9.4	34.5	74.0
5330.500000	40.9	1000.0	1000.000	H	-7.0	33.1	74.0
7205.000000	51.5	1000.0	1000.000	H	-3.8	22.5	74.0
9600.000000	46.8	1000.0	1000.000	H	0.3	27.3	74.0
17617.500000	54.1	1000.0	1000.000	H	12.9	19.9	74.0

Limit and Margin AV

Frequency (MHz)	Average (dBuV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB)	Margin - AVG (dB)	Limit - AVG (dBuV/m)
1465.500000	30.4	1000.0	1000.000	H	-17.1	23.6	54.0
3890.000000	33.0	1000.0	1000.000	H	-9.4	21.0	54.0
5330.500000	33.5	1000.0	1000.000	H	-7.0	20.5	54.0
7205.000000	40.2	1000.0	1000.000	H	-3.8	13.8	54.0
9600.000000	39.6	1000.0	1000.000	H	0.3	14.4	54.0
17617.500000	47.4	1000.0	1000.000	H	12.9	6.6	54.0

Tested by

Chris Liang

20200724

Reviewed by

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TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

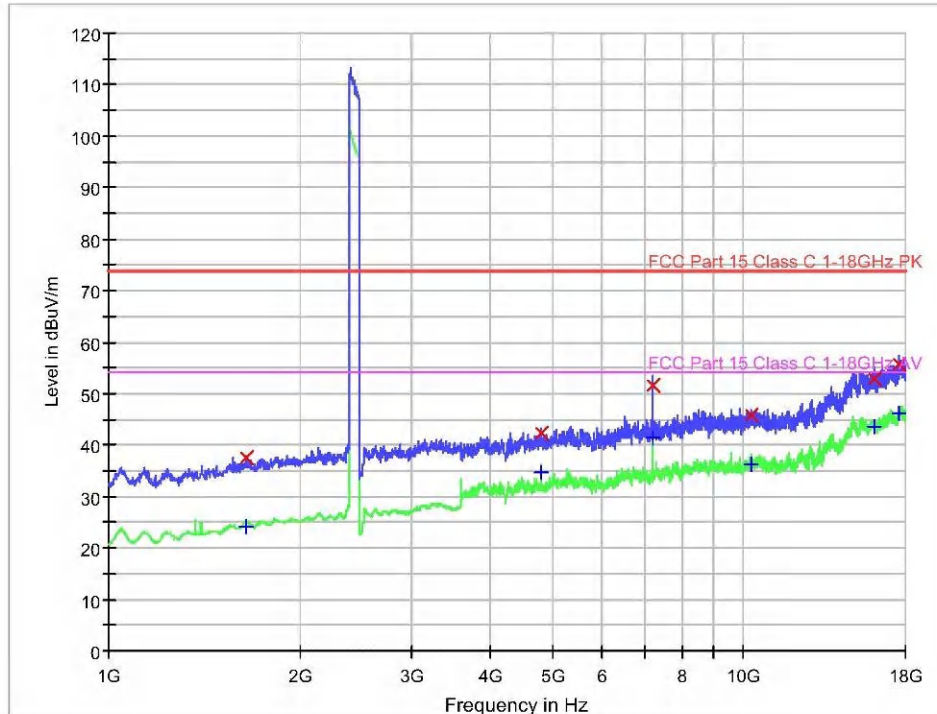
EMC Test Record (Emission)

Common Information

Manufacturer:	INNOVATIVE
Test Item:	Radio cassette recorder
Identification:	VBB-20
Test Standard:	FCC Part 15
Test Detail:	Radiated Emission
Operation Mode:	Transmitting(2DH5-L)
Climate Condition:	23 °C, 60 %, 101 kPa
Test Voltage/ Freq:	AC 120 V / 60 Hz
Receipt No:	170245339
Report No:	
Result:	Pass
Comment:	Test distance is 3m; Vertical

Subrange 1	
Frequency Range:	1GHz-18GHz
Receiver:	ESU 26
Transducer:	TUV SAC HF907

EMCTT_EREFO11-A02-07_1GHz-18GHz_With PreAMP EXT& Filter 0898



Tested by

Chris Liang

20200724

Reviewed by

Jacky Chen

20200728

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

Limit and Margin PK

Frequency (MHz)	MaxPeak (dBuV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB)	Margin - PK+ (dB)	Limit - PK+ (dBuV/m)
1652.500000	37.4	1000.0	1000.000	V	-16.1	36.6	74.0
4803.500000	42.4	1000.0	1000.000	V	-7.7	31.6	74.0
7205.000000	51.5	1000.0	1000.000	V	-3.8	22.5	74.0
10305.500000	46.0	1000.0	1000.000	V	1.2	28.0	74.0
16115.000000	52.9	1000.0	1000.000	V	9.5	21.1	74.0
17624.000000	55.6	1000.0	1000.000	V	12.9	18.4	74.0

Limit and Margin AV

Frequency (MHz)	Average (dBuV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB)	Margin - AVG (dB)	Limit - AVG (dBuV/m)
1652.500000	24.1	1000.0	1000.000	V	-16.1	29.9	54.0
4803.500000	34.7	1000.0	1000.000	V	-7.7	19.3	54.0
7205.000000	41.3	1000.0	1000.000	V	-3.8	12.7	54.0
10305.500000	36.4	1000.0	1000.000	V	1.2	17.6	54.0
16115.000000	43.5	1000.0	1000.000	V	9.5	10.5	54.0
17624.000000	46.2	1000.0	1000.000	V	12.9	7.8	54.0

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EMC Test Service Hotline: +86-20-28391188

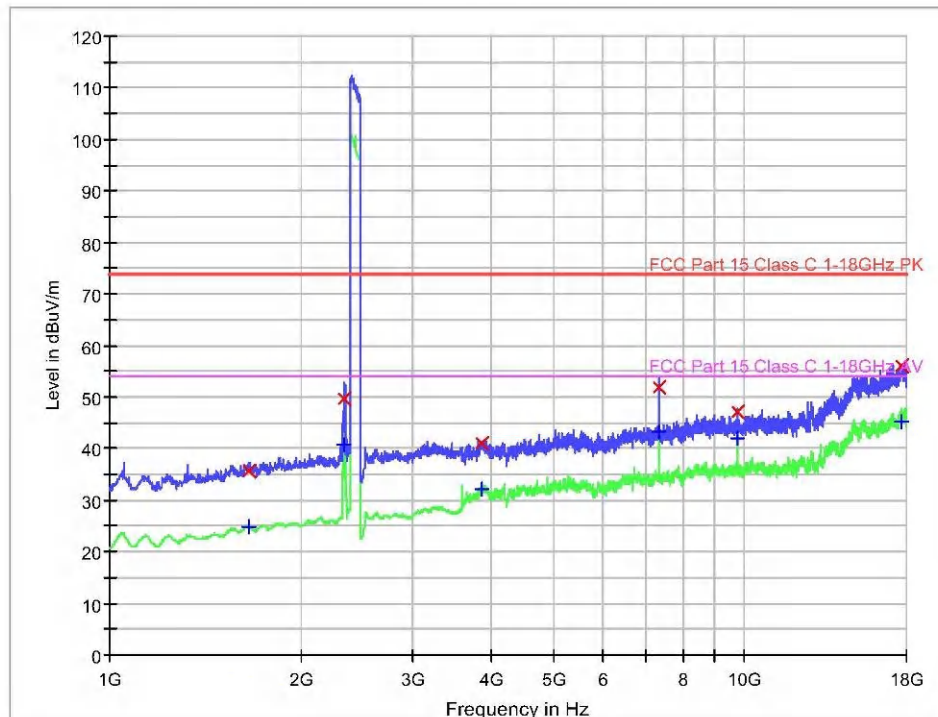
EMC Test Record (Emission)

Common Information

Manufacturer:	INNOVATIVE
Test Item:	Radio cassette recorder
Identification:	VBB-20
Test Standard:	FCC Part 15
Test Detail:	Radiated Emission
Operation Mode:	Transmitting(1DH5-M)
Climate Condition:	23 °C, 60 %, 101 kPa
Test Voltage/ Freq:	AC 120 V / 60 Hz
Receipt No:	170245339
Report No:	
Result:	Pass
Comment:	Test distance is 3m; Horizontal

Subrange 1	
Frequency Range:	1GHz-18GHz
Receiver:	ESU 26
Transducer:	TUV SAC HF907

EMCTT_EREFO11-A02-07_1GHz-18GHz_With PreAMP EXT& Filter 0898



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Reviewed by

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EMC Test Service Hotline: +86-20-28391188

Limit and Margin PK

Frequency (MHz)	MaxPeak (dBuV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBuV/m)
1654.500000	35.7	1000.0	1000.000	H	-16.1	38.3	74.0
2347.000000	49.6	1000.0	1000.000	H	-13.8	24.4	74.0
3862.500000	41.1	1000.0	1000.000	H	-9.3	32.9	74.0
7324.000000	52.0	1000.0	1000.000	H	-3.4	22.0	74.0
9757.000000	47.2	1000.0	1000.000	H	0.5	26.9	74.0
17664.000000	56.1	1000.0	1000.000	H	13.0	17.9	74.0

Limit and Margin AV

Frequency (MHz)	Average (dBuV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB/m)	Margin - AVG (dB)	Limit - AVG (dBuV/m)
1654.500000	24.7	1000.0	1000.000	H	-16.1	29.3	54.0
2347.000000	40.6	1000.0	1000.000	H	-13.8	13.4	54.0
3862.500000	32.2	1000.0	1000.000	H	-9.3	21.8	54.0
7324.000000	43.3	1000.0	1000.000	H	-3.4	10.7	54.0
9757.000000	42.0	1000.0	1000.000	H	0.5	12.0	54.0
17664.000000	45.2	1000.0	1000.000	H	13.0	8.8	54.0

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Reviewed by

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EMC Test Service Hotline: +86-20-28391188

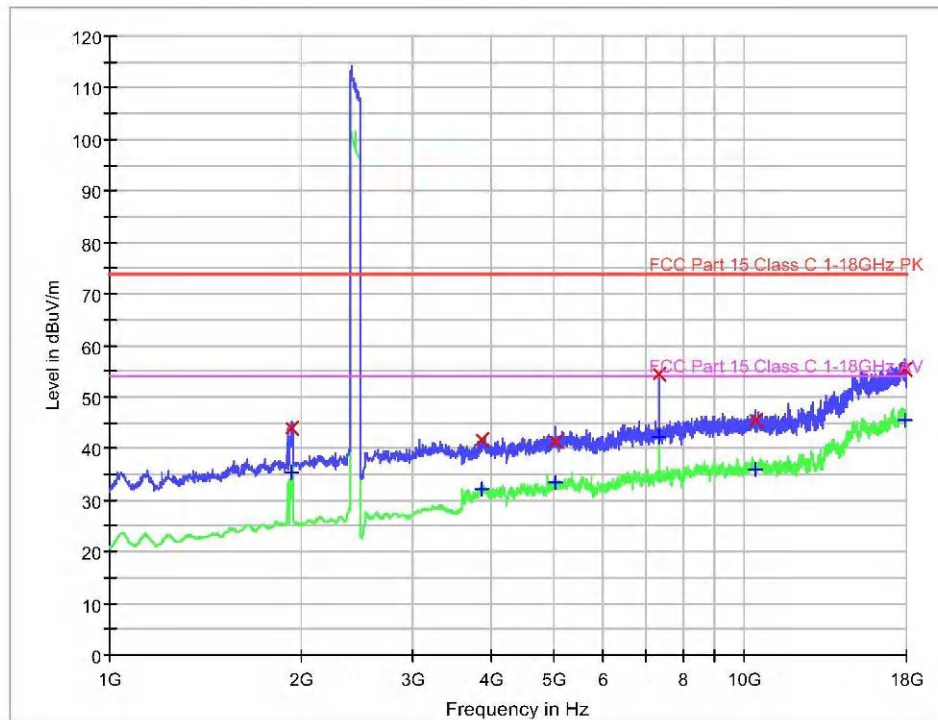
EMC Test Record (Emission)

Common Information

Manufacturer:	INNOVATIVE
Test Item:	Radio cassette recorder
Identification:	VBB-20
Test Standard:	FCC Part 15
Test Detail:	Radiated Emission
Operation Mode:	Transmitting(1DH5-M)
Climate Condition:	23 °C, 60 %, 101 kPa
Test Voltage/ Freq:	AC 120 V / 60 Hz
Receipt No:	170245339
Report No:	
Result:	Pass
Comment:	Test distance is 3m; Vertical

Subrange 1	
Frequency Range:	1GHz-18GHz
Receiver:	ESU 26
Transducer:	TUV SAC HF907

EMCTT_EREFO11-A02-07_1GHz-18GHz_With PreAMP EXT& Filter 0898



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Reviewed by

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EMC Test Service Hotline: +86-20-28391188

Limit and Margin PK

Frequency (MHz)	MaxPeak (dBuV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBuV/m)
1939.500000	43.8	1000.0	1000.000	V	-14.5	30.2	74.0
3858.000000	41.7	1000.0	1000.000	V	-9.3	32.3	74.0
5029.000000	41.4	1000.0	1000.000	V	-7.3	32.6	74.0
7322.000000	54.5	1000.0	1000.000	V	-3.4	19.5	74.0
10435.000000	45.4	1000.0	1000.000	V	1.5	28.6	74.0
17898.000000	55.4	1000.0	1000.000	V	13.3	18.6	74.0

Limit and Margin AV

Frequency (MHz)	Average (dBuV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB/m)	Margin - AVG (dB)	Limit - AVG (dBuV/m)
1939.500000	35.2	1000.0	1000.000	V	-14.5	18.8	54.0
3858.000000	32.3	1000.0	1000.000	V	-9.3	21.7	54.0
5029.000000	33.5	1000.0	1000.000	V	-7.3	20.5	54.0
7322.000000	42.4	1000.0	1000.000	V	-3.4	11.6	54.0
10435.000000	36.1	1000.0	1000.000	V	1.5	17.9	54.0
17898.000000	45.4	1000.0	1000.000	V	13.3	8.6	54.0

Tested by

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20200724

Reviewed by

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20200728

TUV Rheinland (Guangdong) Ltd.

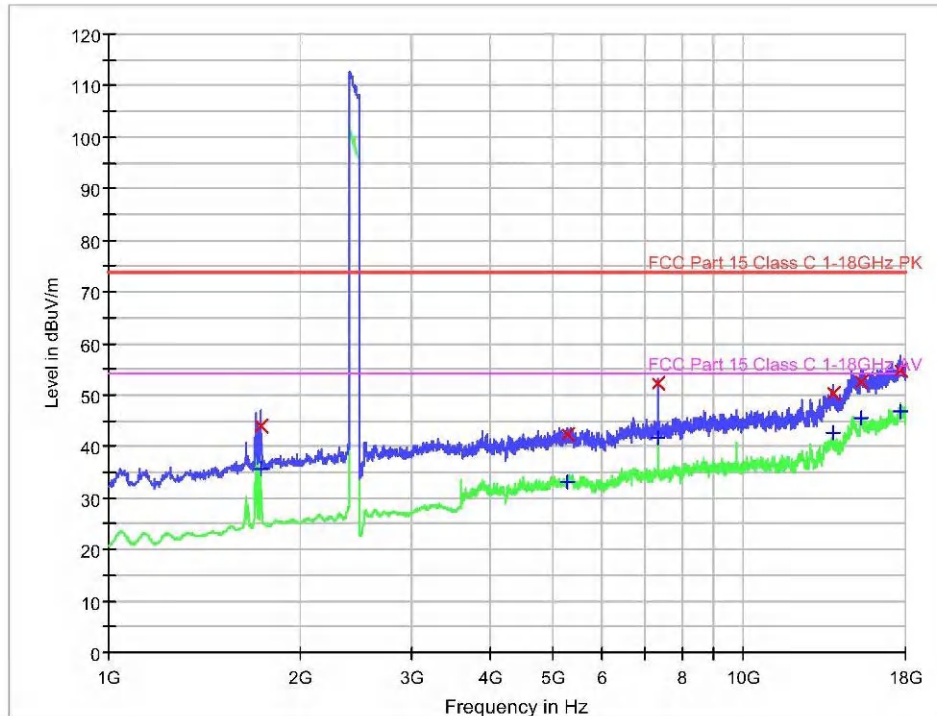
EMC Test Service Hotline: +86-20-28391188

EMC Test Record (Emission)

Common Information

Manufacturer:	INNOVATIVE
Test Item:	Radio cassette recorder
Identification:	VBB-20
Test Standard:	FCC Part 15
Test Detail:	Radiated Emission
Operation Mode:	Transmitting(2DH5-M)
Climate Condition:	23 °C, 60 %, 101 kPa
Test Voltage/ Freq:	AC 120 V / 60 Hz
Receipt No:	170245339
Report No:	
Result:	Pass
Comment:	Test distance is 3m; Horizontal
Subrange 1	
Frequency Range:	1GHz-18GHz
Receiver:	ESU 26
Transducer:	TUV SAC HF907

EMCTT_EREFO11-A02-07_1GHz-18GHz_With PreAMP EXT& Filter 0898



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EMC Test Service Hotline: +86-20-28391188

Limit and Margin PK

Frequency (MHz)	MaxPeak (dBuV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB)	Margin - PK+ (dB)	Limit - PK+ (dBuV/m)
1739.500000	44.0	1000.0	1000.000	H	-15.6	30.0	74.0
5294.500000	42.2	1000.0	1000.000	H	-7.0	31.8	74.0
7322.000000	52.2	1000.0	1000.000	H	-3.4	21.8	74.0
13818.000000	50.3	1000.0	1000.000	H	4.9	23.7	74.0
15373.500000	52.5	1000.0	1000.000	H	8.4	21.5	74.0
17651.500000	54.8	1000.0	1000.000	H	12.9	19.2	74.0

Limit and Margin AV

Frequency (MHz)	Average (dBuV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB)	Margin - AVG (dB)	Limit - AVG (dBuV/m)
1739.500000	35.8	1000.0	1000.000	H	-15.6	18.2	54.0
5294.500000	33.1	1000.0	1000.000	H	-7.0	20.9	54.0
7322.000000	41.7	1000.0	1000.000	H	-3.4	12.3	54.0
13818.000000	42.7	1000.0	1000.000	H	4.9	11.3	54.0
15373.500000	45.4	1000.0	1000.000	H	8.4	8.6	54.0
17651.500000	46.8	1000.0	1000.000	H	12.9	7.3	54.0

Tested by

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TUV Rheinland (Guangdong) Ltd.

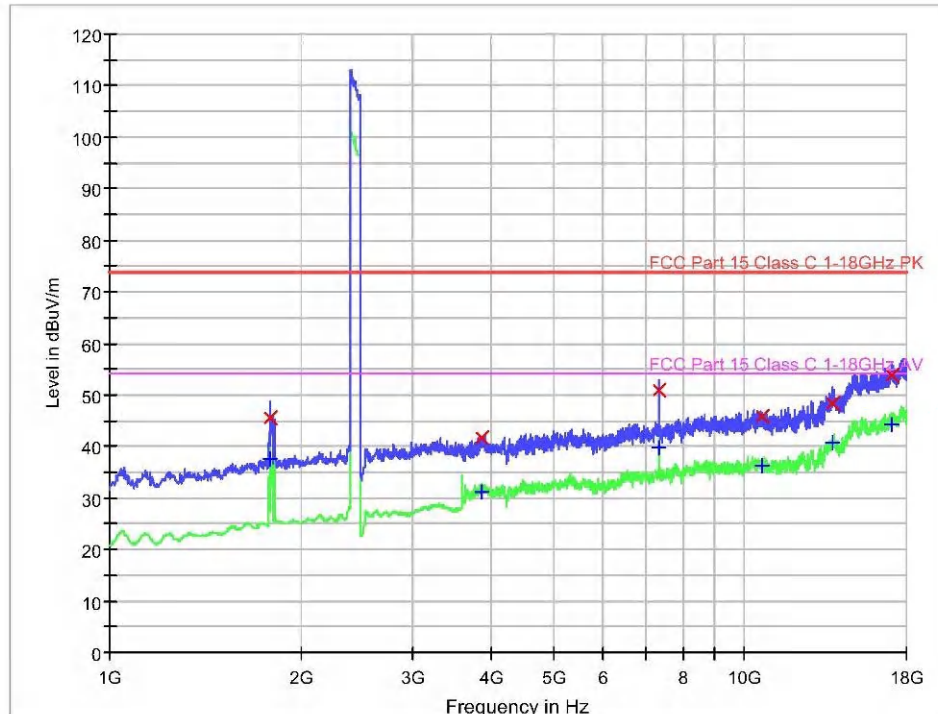
EMC Test Service Hotline: +86-20-28391188

EMC Test Record (Emission)

Common Information

Manufacturer:	INNOVATIVE
Test Item:	Radio cassette recorder
Identification:	VBB-20
Test Standard:	FCC Part 15
Test Detail:	Radiated Emission
Operation Mode:	Transmitting(2DH5-M)
Climate Condition:	23 °C, 60 %, 101 kPa
Test Voltage/ Freq:	AC 120 V / 60 Hz
Receipt No:	170245339
Report No:	
Result:	Pass
Comment:	Test distance is 3m; Vertical
Subrange 1	
Frequency Range:	1GHz-18GHz
Receiver:	ESU 26
Transducer:	TUV SAC HF907

EMCTT_EREFO11-A02-07_1GHz-18GHz_With PreAMP EXT& Filter 0898



Tested by *Chris Liang*
20200724

Reviewed by *Jacky Chen*
20200728

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

Limit and Margin PK

Frequency (MHz)	MaxPeak (dBuV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB)	Margin - PK+ (dB)	Limit - PK+ (dBuV/m)
1788.500000	45.4	1000.0	1000.000	V	-15.3	28.6	74.0
3862.500000	41.7	1000.0	1000.000	V	-9.3	32.3	74.0
7322.000000	50.9	1000.0	1000.000	V	-3.4	23.1	74.0
10649.500000	45.8	1000.0	1000.000	V	1.8	28.2	74.0
13811.500000	48.4	1000.0	1000.000	V	4.8	25.6	74.0
17101.000000	53.9	1000.0	1000.000	V	12.3	20.1	74.0

Limit and Margin AV

Frequency (MHz)	Average (dBuV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB)	Margin - AVG (dB)	Limit - AVG (dBuV/m)
1788.500000	37.5	1000.0	1000.000	V	-15.3	16.5	54.0
3862.500000	31.2	1000.0	1000.000	V	-9.3	22.8	54.0
7322.000000	39.8	1000.0	1000.000	V	-3.4	14.2	54.0
10649.500000	36.2	1000.0	1000.000	V	1.8	17.8	54.0
13811.500000	40.8	1000.0	1000.000	V	4.8	13.2	54.0
17101.000000	44.3	1000.0	1000.000	V	12.3	9.7	54.0

Tested by

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EMC Test Service Hotline: +86-20-28391188

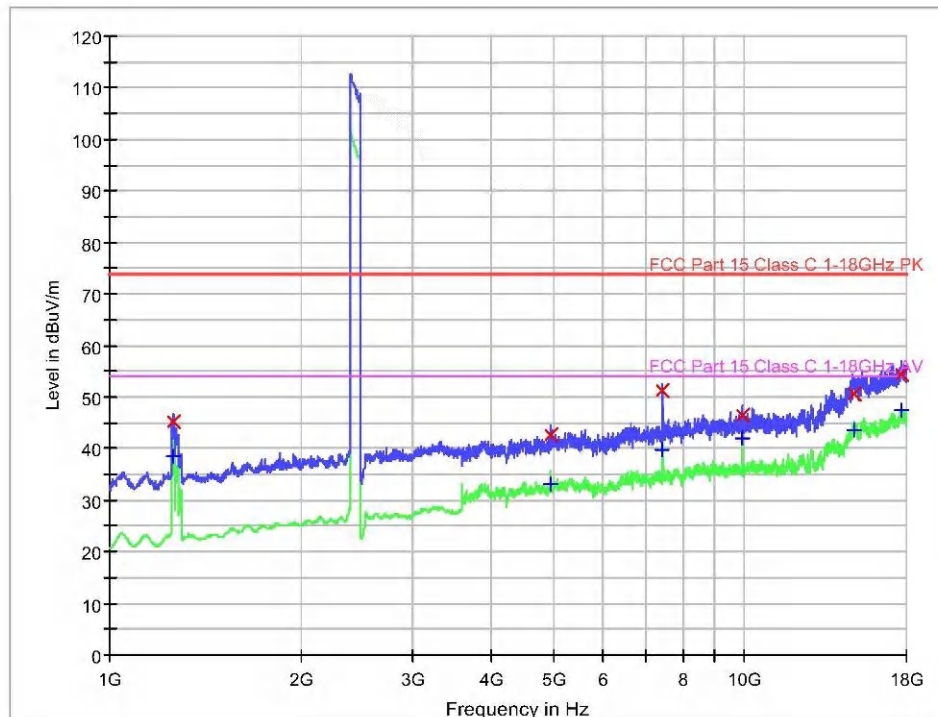
EMC Test Record (Emission)

Common Information

Manufacturer:	INNOVATIVE
Test Item:	Radio cassette recorder
Identification:	VBB-20
Test Standard:	FCC Part 15
Test Detail:	Radiated Emission
Operation Mode:	Transmitting(1DH5-H)
Climate Condition:	23 °C, 60 %, 101 kPa
Test Voltage/ Freq:	AC 120 V / 60 Hz
Receipt No:	170245339
Report No:	
Result:	Pass
Comment:	Test distance is 3m; Horizontal

Subrange 1	
Frequency Range:	1GHz-18GHz
Receiver:	ESU 26
Transducer:	TUV SAC HF907

EMCTT_EREFO11-A02-07_1GHz-18GHz_With PreAMP EXT& Filter 0898



Tested by *Chris Liang*
20200724

Reviewed by *Jacky Chen*
20200728

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

Limit and Margin PK

Frequency (MHz)	MaxPeak (dBuV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB)	Margin - PK+ (dB)	Limit - PK+ (dBuV/m)
1263.500000	45.3	1000.0	1000.000	H	-18.2	28.8	74.0
4961.000000	42.6	1000.0	1000.000	H	-7.8	31.4	74.0
7441.000000	51.3	1000.0	1000.000	H	-4.2	22.8	74.0
9912.000000	46.5	1000.0	1000.000	H	0.2	27.5	74.0
14855.000000	50.7	1000.0	1000.000	H	1.8	23.3	74.0
17719.500000	54.4	1000.0	1000.000	H	5.9	19.6	74.0

Limit and Margin AV

Frequency (MHz)	Average (dBuV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB)	Margin - AVG (dB)	Limit - AVG (dBuV/m)
1263.500000	38.6	1000.0	1000.000	H	-18.2	15.4	54.0
4961.000000	33.0	1000.0	1000.000	H	-7.8	21.0	54.0
7441.000000	39.8	1000.0	1000.000	H	-4.2	14.2	54.0
9912.000000	42.0	1000.0	1000.000	H	0.2	12.0	54.0
14855.000000	43.7	1000.0	1000.000	H	1.8	10.3	54.0
17719.500000	47.6	1000.0	1000.000	H	5.9	6.4	54.0

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EMC Test Service Hotline: +86-20-28391188

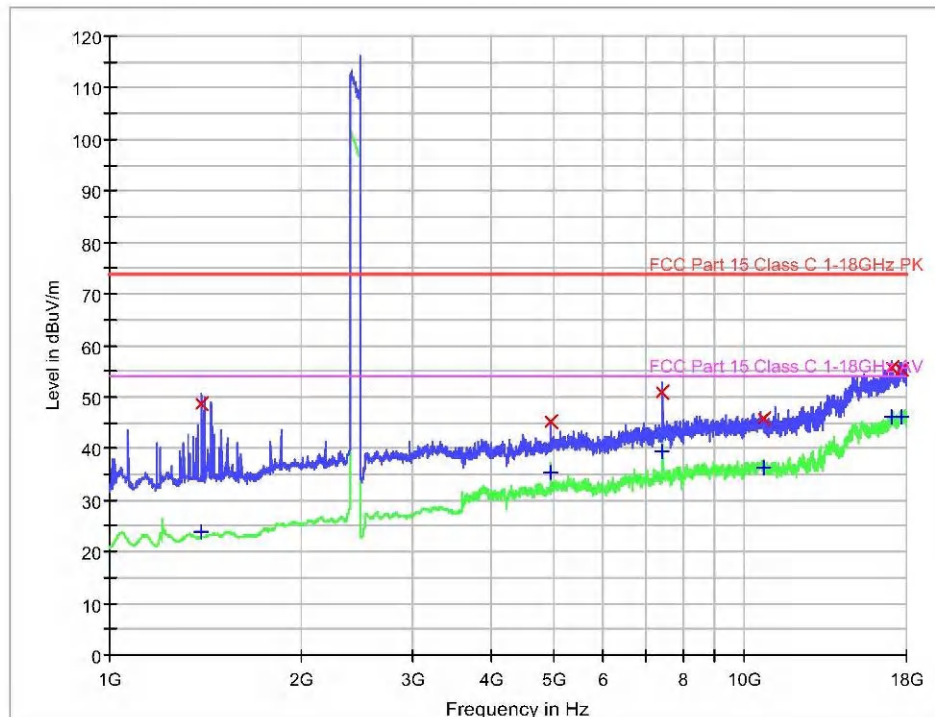
EMC Test Record (Emission)

Common Information

Manufacturer: INNOVATIVE
Test Item: Radio cassette recorder
Identification: VBB-20
Test Standard: FCC Part 15
Test Detail: Radiated Emission
Operation Mode: Transmitting(1DH5-H)
Climate Condition: 23 °C, 60 %, 101 kPa
Test Voltage/ Freq: AC 120 V / 60 Hz
Receipt No: 170245339
Report No:
Result: Pass
Comment: Test distance is 3m; Vertical

Subrange 1
Frequency Range: 1GHz-18GHz
Receiver: ESU 26
Transducer: TUV SAC HF907

EMCTT_EREFO11-A02-07_1GHz-18GHz_With PreAMP EXT& Filter 0898



Tested by

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Reviewed by

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TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

Limit and Margin PK

Frequency (MHz)	MaxPeak (dBuV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB)	Margin - PK+ (dB)	Limit - PK+ (dBuV/m)
1397.500000	48.6	1000.0	1000.000	V	-17.8	25.4	74.0
4959.000000	45.3	1000.0	1000.000	V	-7.8	28.7	74.0
7438.500000	51.0	1000.0	1000.000	V	-4.2	23.0	74.0
10698.500000	45.8	1000.0	1000.000	V	0.6	28.2	74.0
17099.000000	55.6	1000.0	1000.000	V	5.4	18.4	74.0
17668.500000	55.4	1000.0	1000.000	V	5.8	18.6	74.0

Limit and Margin AV

Frequency (MHz)	Average (dBuV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB)	Margin - AVG (dB)	Limit - AVG (dBuV/m)
1397.500000	23.8	1000.0	1000.000	V	-17.8	30.2	54.0
4959.000000	35.3	1000.0	1000.000	V	-7.8	18.7	54.0
7438.500000	39.6	1000.0	1000.000	V	-4.2	14.4	54.0
10698.500000	36.3	1000.0	1000.000	V	0.6	17.7	54.0
17099.000000	46.1	1000.0	1000.000	V	5.4	7.9	54.0
17668.500000	46.2	1000.0	1000.000	V	5.8	7.8	54.0

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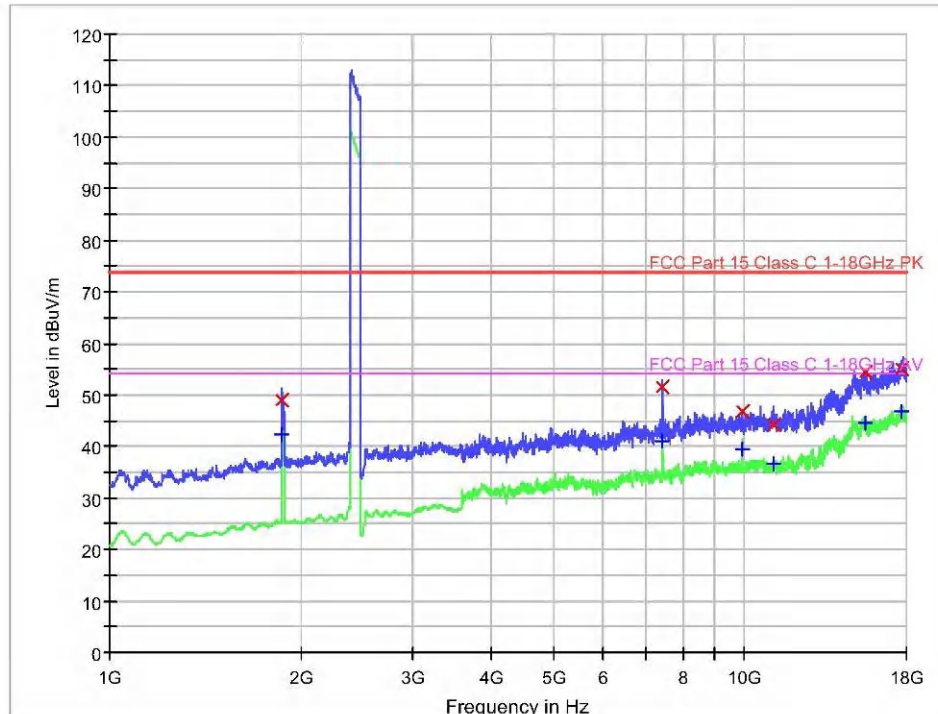
EMC Test Service Hotline: +86-20-28391188

EMC Test Record (Emission)

Common Information

Manufacturer:	INNOVATIVE
Test Item:	Radio cassette recorder
Identification:	VBB-20
Test Standard:	FCC Part 15
Test Detail:	Radiated Emission
Operation Mode:	Transmitting(2DH5-H)
Climate Condition:	23 °C, 60 %, 101 kPa
Test Voltage/ Freq:	AC 120 V / 60 Hz
Receipt No:	170245339
Report No:	
Result:	Pass
Comment:	Test distance is 3m; Horizontal
Subrange 1	
Frequency Range:	1GHz-18GHz
Receiver:	ESU 26
Transducer:	TUV SAC HF907

EMCTT_EREFO11-A02-07_1GHz-18GHz_With PreAMP EXT& Filter 0898



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20200724

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20200728

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EMC Test Service Hotline: +86-20-28391188

Limit and Margin PK

Frequency (MHz)	MaxPeak (dBuV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB)	Margin - PK+ (dB)	Limit - PK+ (dBuV/m)
1871.000000	49.0	1000.0	1000.000	H	-14.9	25.0	74.0
7441.000000	51.4	1000.0	1000.000	H	-3.1	22.6	74.0
9912.000000	46.9	1000.0	1000.000	H	0.8	27.1	74.0
11144.500000	44.3	1000.0	1000.000	H	2.1	29.7	74.0
15477.500000	54.5	1000.0	1000.000	H	8.6	19.5	74.0
17662.000000	55.0	1000.0	1000.000	H	13.0	19.0	74.0

Limit and Margin AV

Frequency (MHz)	Average (dBuV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB)	Margin - AVG (dB)	Limit - AVG (dBuV/m)
1871.000000	42.4	1000.0	1000.000	H	-14.9	11.6	54.0
7441.000000	41.0	1000.0	1000.000	H	-3.1	13.0	54.0
9912.000000	39.5	1000.0	1000.000	H	0.8	14.5	54.0
11144.500000	38.7	1000.0	1000.000	H	2.1	17.3	54.0
15477.500000	44.5	1000.0	1000.000	H	8.6	9.5	54.0
17662.000000	46.7	1000.0	1000.000	H	13.0	7.4	54.0

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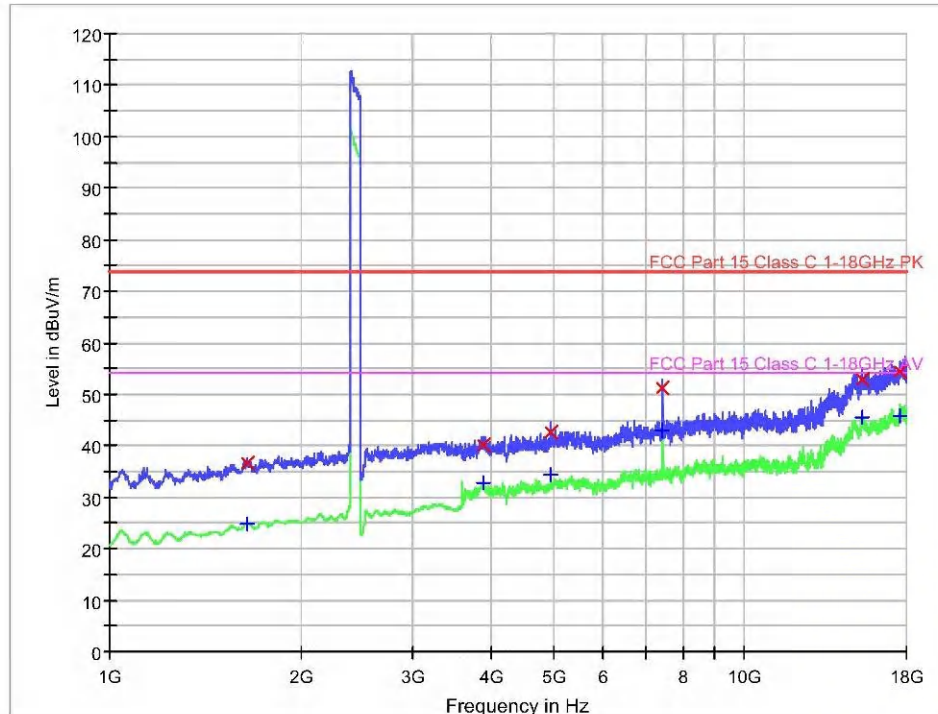
EMC Test Service Hotline: +86-20-28391188

EMC Test Record (Emission)

Common Information

Manufacturer:	INNOVATIVE
Test Item:	Radio cassette recorder
Identification:	VBB-20
Test Standard:	FCC Part 15
Test Detail:	Radiated Emission
Operation Mode:	Transmitting(2DH5-H)
Climate Condition:	23 °C, 60 %, 101 kPa
Test Voltage/ Freq:	AC 120 V / 60 Hz
Receipt No:	170245339
Report No:	
Result:	Pass
Comment:	Test distance is 3m; Vertical
Subrange 1	
Frequency Range:	1GHz-18GHz
Receiver:	ESU 26
Transducer:	TUV SAC HF907

EMCTT_EREFO11-A02-07_1GHz-18GHz_With PreAMP EXT& Filter 0898



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EMC Test Service Hotline: +86-20-28391188

Limit and Margin PK

Frequency (MHz)	MaxPeak (dBuV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB)	Margin - PK+ (dB)	Limit - PK+ (dBuV/m)
1646.000000	36.7	1000.0	1000.000	V	-16.1	37.3	74.0
3883.500000	40.2	1000.0	1000.000	V	-9.3	33.8	74.0
4961.000000	42.7	1000.0	1000.000	V	-7.3	31.3	74.0
7441.000000	51.1	1000.0	1000.000	V	-3.1	22.9	74.0
15301.000000	52.9	1000.0	1000.000	V	8.3	21.1	74.0
17626.000000	54.4	1000.0	1000.000	V	12.9	19.6	74.0

Limit and Margin AV

Frequency (MHz)	Average (dBuV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB)	Margin - AVG (dB)	Limit - AVG (dBuV/m)
1646.000000	24.9	1000.0	1000.000	V	-16.1	29.1	54.0
3883.500000	32.8	1000.0	1000.000	V	-9.3	21.2	54.0
4961.000000	34.5	1000.0	1000.000	V	-7.3	19.6	54.0
7441.000000	43.1	1000.0	1000.000	V	-3.1	10.9	54.0
15301.000000	45.4	1000.0	1000.000	V	8.3	8.6	54.0
17626.000000	45.8	1000.0	1000.000	V	12.9	8.3	54.0

Tested by

Chris Liang

20200724

Reviewed by

Jacky Chen

20200728

Appendix B.8: Test Results of Radiated Emissions in Restricted Bands

Low channel

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

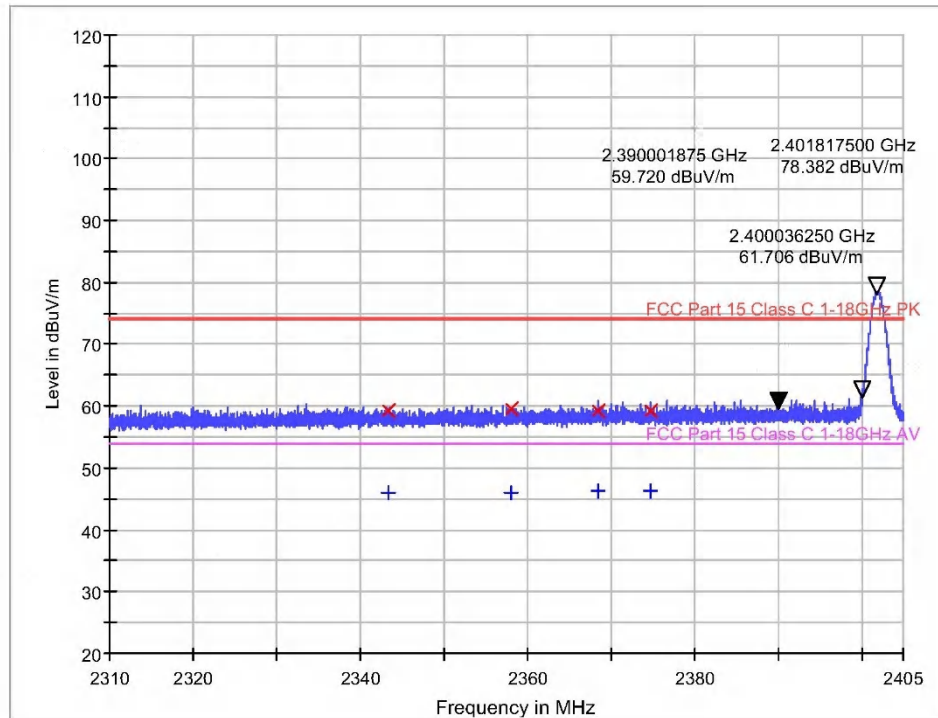
EMC Test Record (Emission)

Common Information

Manufacturer:	INNOVATIVE
Test Item:	Radio cassette recorder
Identification:	VBB-20
Test Standard:	FCC Part 15
Test Detail:	Band-edge
Operation Mode:	Transmitting(1DH5-L)
Climate Condition:	23 °C, 60 %, 101 kPa
Test Voltage/ Freq:	AC 120 V / 60 Hz
Receipt No:	170245339
Report No:	
Result:	Pass
Comment:	Test distance is 3m; Horizontal

Subrange 1	
Frequency Range:	1GHz-18GHz
Receiver:	ESU 26
Transducer:	TUV SAC HF907

EMCTT_EREFO11-A02-04_1GHz-18GHz



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EMC Test Service Hotline: +86-20-28391188

Limit and Margin PK

Frequency (MHz)	MaxPeak (dBuV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBuV/m)
2343.280000	59.2	1000.0	1000.000	H	32.9	14.8	74.0
2358.040000	59.4	1000.0	1000.000	H	33.0	14.6	74.0
2368.480000	59.4	1000.0	1000.000	H	33.0	14.6	74.0
2374.720000	59.3	1000.0	1000.000	H	33.0	14.7	74.0

Limit and Margin AV

Frequency (MHz)	Average (dBuV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB/m)	Margin - AVG (dB)	Limit - AVG (dBuV/m)
2343.280000	45.9	1000.0	1000.000	H	32.9	8.1	54.0
2358.040000	46.0	1000.0	1000.000	H	33.0	8.0	54.0
2368.480000	46.1	1000.0	1000.000	H	33.0	7.9	54.0
2374.720000	46.2	1000.0	1000.000	H	33.0	7.8	54.0

Tested by

Chris Liang

20200724

Reviewed by

Jacky Chen

20200728

TUV Rheinland (Guangdong) Ltd.

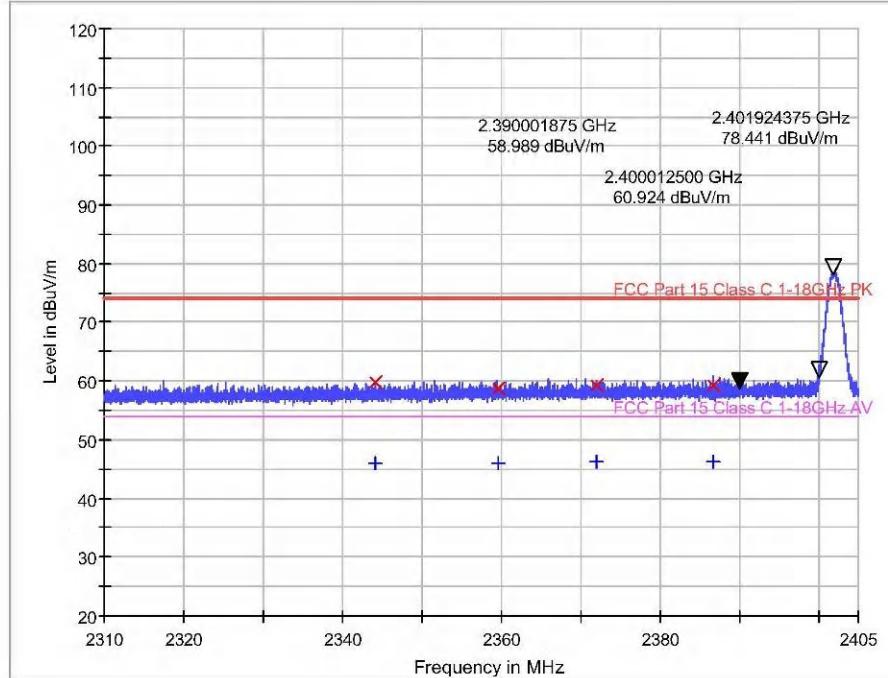
EMC Test Service Hotline: +86-20-28391188

EMC Test Record (Emission)

Common Information

Manufacturer:	INNOVATIVE
Test Item:	Radio cassette recorder
Identification:	VBB-20
Test Standard:	FCC Part 15
Test Detail:	Band-edge
Operation Mode:	Transmitting(1DH5-L)
Climate Condition:	23 °C, 60 %, 101 kPa
Test Voltage/ Freq:	AC 120 V / 60 Hz
Receipt No:	170245339
Report No:	
Result:	Pass
Comment:	Test distance is 3m; Vertical
Subrange 1	
Frequency Range:	1GHz-18GHz
Receiver:	ESU 26
Transducer:	TUV SAC HF907

EMCTT_EREFO11-A02-04_1GHz-18GHz



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EMC Test Service Hotline: +86-20-28391188

Limit and Margin PK

Frequency (MHz)	MaxPeak (dBuV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBuV/m)
2344.240000	59.8	1000.0	1000.000	V	32.9	14.2	74.0
2359.600000	58.6	1000.0	1000.000	V	33.0	15.4	74.0
2372.080000	59.3	1000.0	1000.000	V	33.0	14.8	74.0
2386.720000	59.3	1000.0	1000.000	V	33.0	14.8	74.0

Limit and Margin AV

Frequency (MHz)	Average (dBuV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB/m)	Margin - AVG (dB)	Limit - AVG (dBuV/m)
2344.240000	45.9	1000.0	1000.000	V	32.9	8.1	54.0
2359.600000	46.1	1000.0	1000.000	V	33.0	8.0	54.0
2372.080000	46.2	1000.0	1000.000	V	33.0	7.8	54.0
2386.720000	46.4	1000.0	1000.000	V	33.0	7.6	54.0

Tested by

Chris Liang

20200724

Reviewed by

Jacky Chen

20200728

TUV Rheinland (Guangdong) Ltd.

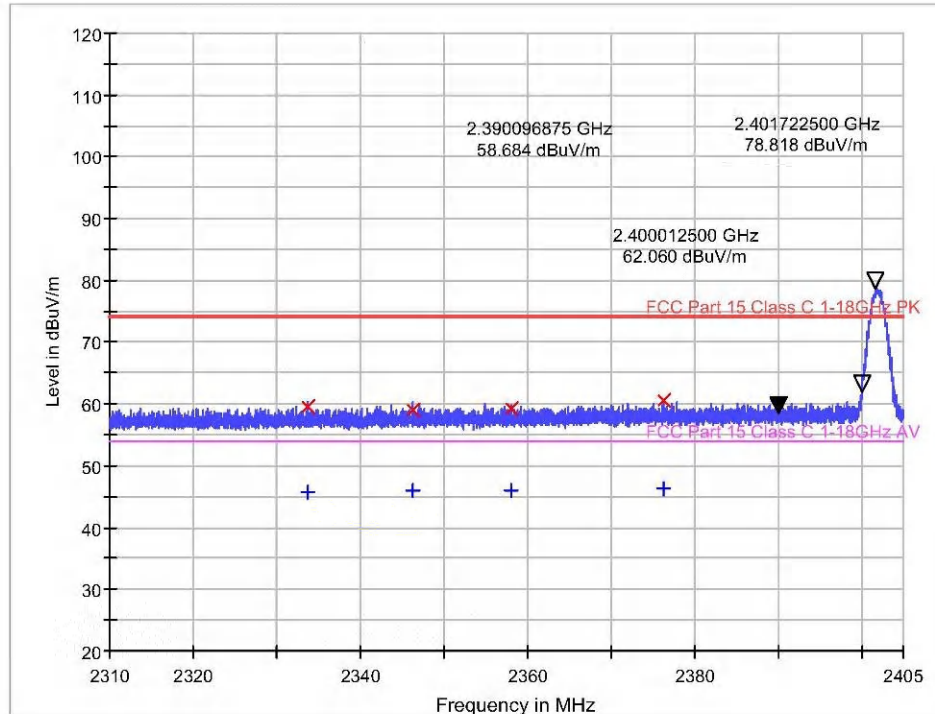
EMC Test Service Hotline: +86-20-28391188

EMC Test Record (Emission)

Common Information

Manufacturer:	INNOVATIVE
Test Item:	Radio cassette recorder
Identification:	VBB-20
Test Standard:	FCC Part 15
Test Detail:	Band-edge
Operation Mode:	Transmitting(2DH5-L)
Climate Condition:	23 °C, 60 %, 101 kPa
Test Voltage/ Freq:	AC 120 V / 60 Hz
Receipt No:	170245339
Report No:	
Result:	Pass
Comment:	Test distance is 3m; Horizontal
Subrange 1	
Frequency Range:	1GHz-18GHz
Receiver:	ESU 26
Transducer:	TUV SAC HF907

EMCTT_EREFO11-A02-04_1GHz-18GHz



Tested by *Chris Liang*
20200724

Reviewed by *Jacky Chen*
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EMC Test Service Hotline: +86-20-28391188

Limit and Margin PK

Frequency (MHz)	MaxPeak (dBuV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBuV/m)
2333.800000	59.7	1000.0	1000.000	H	32.9	14.4	74.0
2346.400000	59.0	1000.0	1000.000	H	32.9	15.0	74.0
2358.160000	59.3	1000.0	1000.000	H	33.0	14.7	74.0
2376.400000	60.6	1000.0	1000.000	H	33.0	13.4	74.0

Limit and Margin AV

Frequency (MHz)	Average (dBuV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB/m)	Margin - AVG (dB)	Limit - AVG (dBuV/m)
2333.800000	45.8	1000.0	1000.000	H	32.9	8.2	54.0
2346.400000	45.9	1000.0	1000.000	H	32.9	8.1	54.0
2358.160000	46.0	1000.0	1000.000	H	33.0	8.0	54.0
2376.400000	46.2	1000.0	1000.000	H	33.0	7.8	54.0

Tested by

Chris Liang

20200724

Reviewed by

Jacky Chen

20200728

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EMC Test Service Hotline: +86-20-28391188

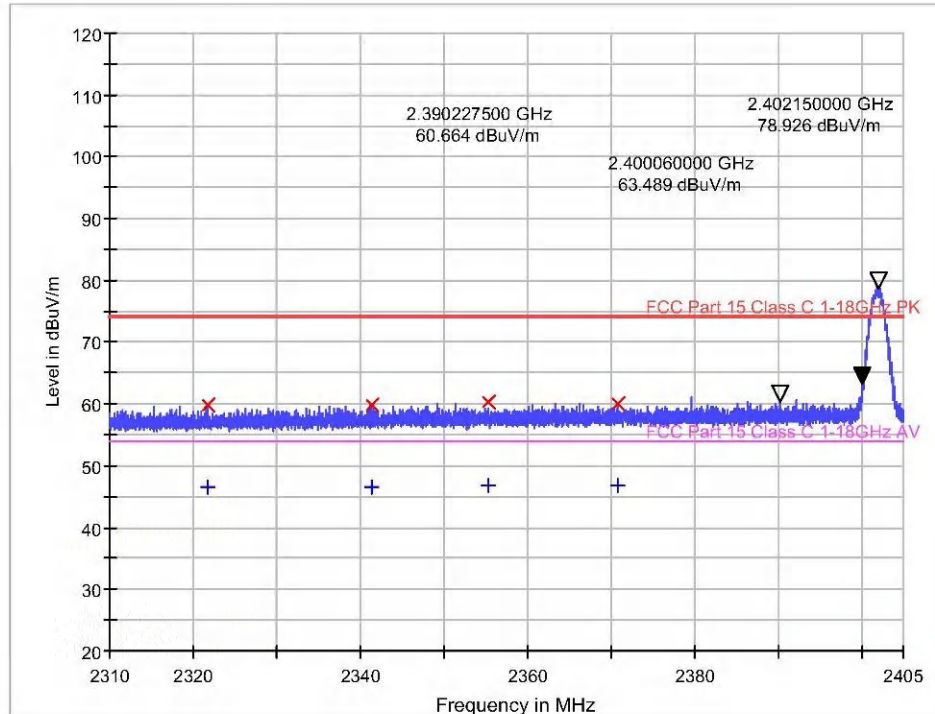
EMC Test Record (Emission)

Common Information

Manufacturer:	INNOVATIVE
Test Item:	Radio cassette recorder
Identification:	VBB-20
Test Standard:	FCC Part 15
Test Detail:	Band-edge
Operation Mode:	Transmitting(2DH5-L)
Climate Condition:	23 °C, 60 %, 101 kPa
Test Voltage/ Freq:	AC 120 V / 60 Hz
Receipt No:	170245339
Report No:	
Result:	Pass
Comment:	Test distance is 3m; Vertical

Subrange 1	
Frequency Range:	1GHz-18GHz
Receiver:	ESU 26
Transducer:	TUV SAC HF907

EMCTT_EREFO11-A02-04_1GHz-18GHz



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20200724

Reviewed by *Jacky Chen*
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Limit and Margin PK

Frequency (MHz)	MaxPeak (dBuV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBuV/m)
2321.800000	59.7	1000.0	1000.000	V	32.9	14.3	74.0
2341.360000	59.9	1000.0	1000.000	V	32.9	14.1	74.0
2355.280000	60.4	1000.0	1000.000	V	33.0	13.6	74.0
2370.760000	60.1	1000.0	1000.000	V	33.0	13.9	74.0

Limit and Margin AV

Frequency (MHz)	Average (dBuV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB/m)	Margin - AVG (dB)	Limit - AVG (dBuV/m)
2321.800000	46.5	1000.0	1000.000	V	32.9	7.5	54.0
2341.360000	46.7	1000.0	1000.000	V	32.9	7.4	54.0
2355.280000	46.7	1000.0	1000.000	V	33.0	7.3	54.0
2370.760000	46.7	1000.0	1000.000	V	33.0	7.3	54.0

Tested by

Chris Liang

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Reviewed by

Jacky Chen

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High channel

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EMC Test Service Hotline: +86-20-28391188

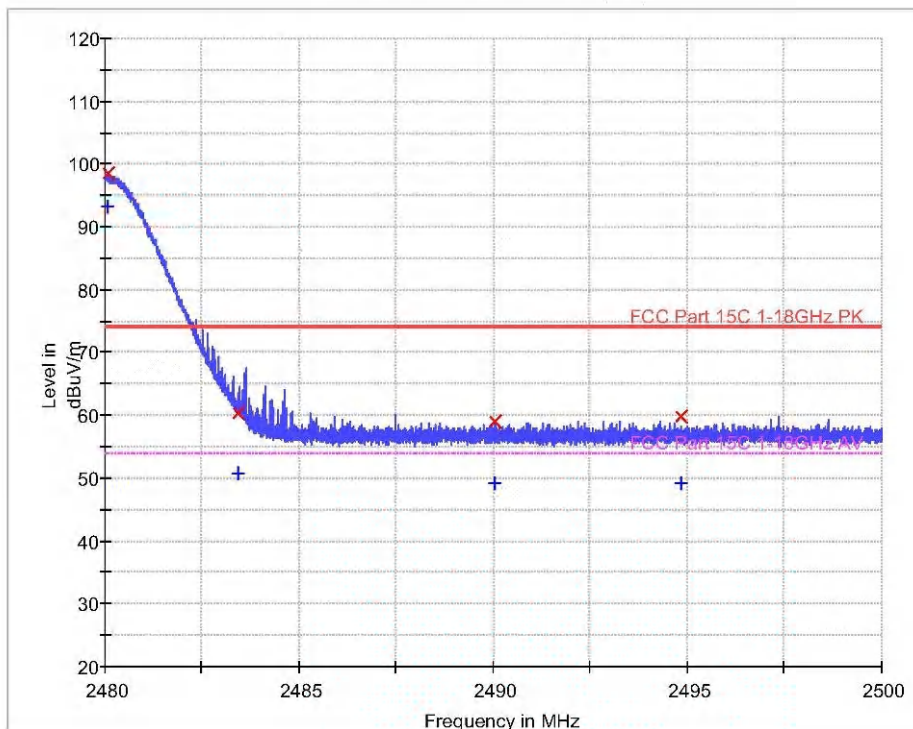
EMC Test Record (Emission)

Common Information

Manufacturer:	Bohan
Test Item:	Helmet Remote Control
Identification:	FT03
Test Standard:	FCC Part 15
Test Detail:	Band edge
Operation Mode:	Transmitting(1DH5-High)
Climate Condition:	20 °C, 50 %, 100 k Pa
Test Voltage/ Freq:	DC 3.7 V
Receipt No:	170103327
Report No:	/
Result:	Pass
Comment:	Horizontal

Subrange 1	
Frequency Range:	1GHz-18GHz
Receiver:	TUV FSP30
Transducer:	TUV SAC HF907/ TUV FSP30-TUV SAC HF907

EMCTT_EREFO11-A02-04_1GHz-18GHz



Tested by:

Jason Wu

Reviewed by:

Jacky Chen

20190617

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Limit and Margin PK

Frequency (MHz)	MaxPeak (dBuV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBuV/m)
2480.080000	98.4	1000.0	1000.000	H	33.2	/	/
2483.500000	60.2	1000.0	1000.000	H	33.2	13.8	74.0
2490.040000	59.1	1000.0	1000.000	H	33.2	14.9	74.0
2494.840000	59.7	1000.0	1000.000	H	33.2	14.3	74.0

Limit and Margin AV

Frequency (MHz)	Average (dBuV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB/m)	Margin - AVG (dB)	Limit - AVG (dBuV/m)
2480.080000	93.2	1000.0	1000.000	H	33.2	/	/
2483.500000	50.8	1000.0	1000.000	H	33.2	3.2	54.0
2490.040000	49.1	1000.0	1000.000	H	33.2	4.9	54.0
2494.840000	49.2	1000.0	1000.000	H	33.2	4.8	54.0

Tested by: Jason Wu

Reviewed by: Jacky Chen

20190617

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EMC Test Service Hotline: +86-20-28391188

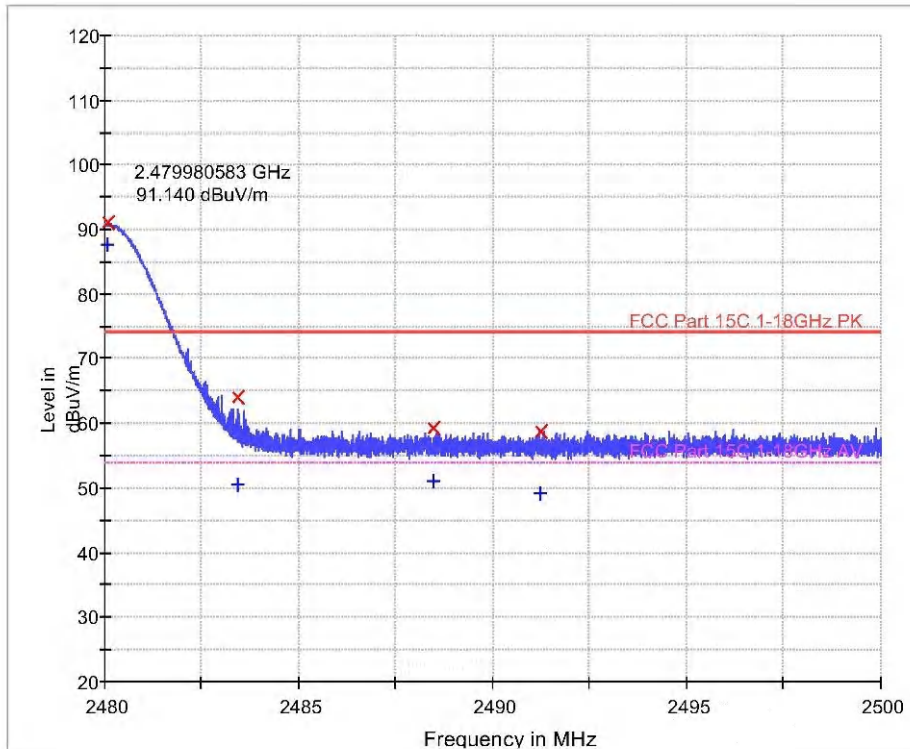
EMC Test Record (Emission)

Common Information

Manufacturer:	Bohan
Test Item:	Helmet Remote Control
Identification:	FT03
Test Standard:	FCC Part 15
Test Detail:	Band edge
Operation Mode:	Transmitting(1DH5-High)
Climate Condition:	20 °C, 50 %, 100 k Pa
Test Voltage/ Freq:	DC 3.7 V
Receipt No:	170103327
Report No:	/
Result:	Pass
Comment:	Vertical

Subrange 1	
Frequency Range:	1GHz-18GHz
Receiver:	TUV FSP30
Transducer:	TUV SAC HF907/ TUV FSP30-TUV SAC HF907

EMCTT_EREFO11-A02-04_1GHz-18GHz



Tested by: Jason Wu

Reviewed by: Jacky Chen

20190617

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EMC Test Service Hotline: +86-20-28391188

Limit and Margin PK

Frequency (MHz)	MaxPeak (dBuV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBuV/m)
2480.080000	91.1	1000.0	1000.000	V	33.2	/	/
2483.500000	64.0	1000.0	1000.000	V	33.2	10.0	74.0
2488.480000	59.3	1000.0	1000.000	V	33.2	14.7	74.0
2491.240000	58.7	1000.0	1000.000	V	33.2	15.3	74.0

Limit and Margin AV

Frequency (MHz)	Average (dBuV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB/m)	Margin - AVG (dB)	Limit - AVG (dBuV/m)
2480.080000	87.7	1000.0	1000.000	V	33.2	/	/
2483.500000	50.4	1000.0	1000.000	V	33.2	3.6	54.0
2488.480000	51.1	1000.0	1000.000	V	33.2	2.9	54.0
2491.240000	49.1	1000.0	1000.000	V	33.2	4.9	54.0

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Reviewed by: Jacky Chen

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EMC Test Service Hotline: +86-20-28391188

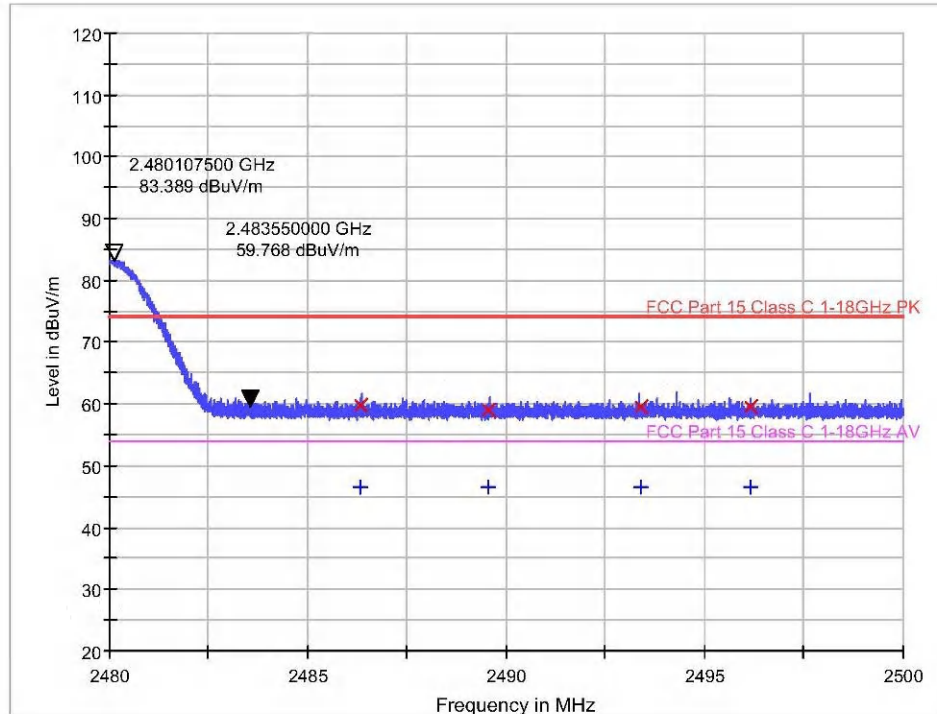
EMC Test Record (Emission)

Common Information

Manufacturer:	INNOVATIVE
Test Item:	Radio cassette recorder
Identification:	VBB-20
Test Standard:	FCC Part 15
Test Detail:	Band-edge
Operation Mode:	Transmitting(2DH5-H)
Climate Condition:	23 °C, 60 %, 101 kPa
Test Voltage/ Freq:	AC 120 V / 60 Hz
Receipt No:	170245339
Report No:	
Result:	Pass
Comment:	Test distance is 3m; Horizontal

Subrange 1	
Frequency Range:	1GHz-18GHz
Receiver:	ESU 26
Transducer:	TUV SAC HF907

EMCTT_EREFO11-A02-04_1GHz-18GHz



Tested by

Chris Liang

20200724

Reviewed by

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Limit and Margin PK

Frequency (MHz)	MaxPeak (dBuV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBuV/m)
2486.320000	59.7	1000.0	1000.000	H	33.2	14.3	74.0
2489.560000	59.1	1000.0	1000.000	H	33.2	14.9	74.0
2493.400000	59.5	1000.0	1000.000	H	33.2	14.5	74.0
2496.160000	59.5	1000.0	1000.000	H	33.2	14.5	74.0

Limit and Margin AV

Frequency (MHz)	Average (dBuV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB/m)	Margin - AVG (dB)	Limit - AVG (dBuV/m)
2486.320000	46.6	1000.0	1000.000	H	33.2	7.4	54.0
2489.560000	46.6	1000.0	1000.000	H	33.2	7.4	54.0
2493.400000	46.6	1000.0	1000.000	H	33.2	7.4	54.0
2496.160000	46.6	1000.0	1000.000	H	33.2	7.4	54.0

Tested by

Chris Liang

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Reviewed by

Jacky Chen

20200728

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

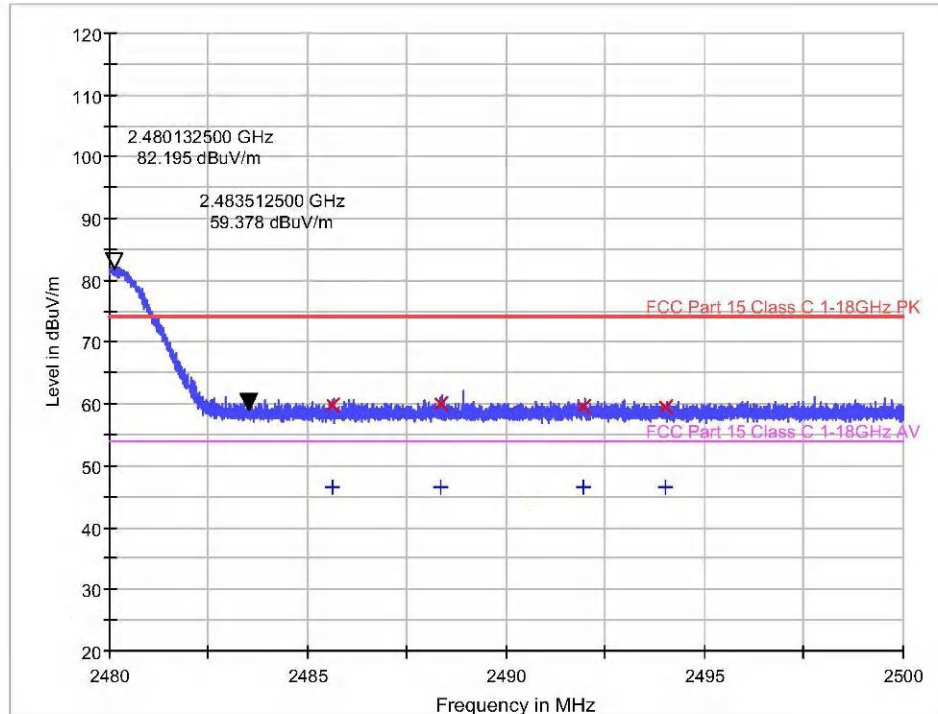
EMC Test Record (Emission)

Common Information

Manufacturer:	INNOVATIVE
Test Item:	Radio cassette recorder
Identification:	VBB-20
Test Standard:	FCC Part 15
Test Detail:	Band-edge
Operation Mode:	Transmitting(2DH5-H)
Climate Condition:	23 °C, 60 %, 101 kPa
Test Voltage/ Freq:	AC 120 V / 60 Hz
Receipt No:	170245339
Report No:	
Result:	Pass
Comment:	Test distance is 3m; Vertical

Subrange 1	
Frequency Range:	1GHz-18GHz
Receiver:	ESU 26
Transducer:	TUV SAC HF907

EMCTT_EREFO11-A02-04_1GHz-18GHz



Tested by

Chris Liang

20200724

Reviewed by

Jacky Chen

20200728

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

Limit and Margin PK

Frequency (MHz)	MaxPeak (dBuV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBuV/m)
2485.600000	59.9	1000.0	1000.000	V	33.2	14.2	74.0
2488.360000	60.2	1000.0	1000.000	V	33.2	13.8	74.0
2491.960000	59.6	1000.0	1000.000	V	33.2	14.4	74.0
2494.000000	59.5	1000.0	1000.000	V	33.2	14.5	74.0

Limit and Margin AV

Frequency (MHz)	Average (dBuV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB/m)	Margin - AVG (dB)	Limit - AVG (dBuV/m)
2485.600000	46.6	1000.0	1000.000	V	33.2	7.4	54.0
2488.360000	46.6	1000.0	1000.000	V	33.2	7.4	54.0
2491.960000	46.6	1000.0	1000.000	V	33.2	7.4	54.0
2494.000000	46.6	1000.0	1000.000	V	33.2	7.4	54.0

Tested by

Chris Liang

20200724

Reviewed by

Jacky Chen

20200728

Appendix B.9: Test Results of Conducted Emission on AC Mains

TUV Rheinland (Guangdong) Ltd.

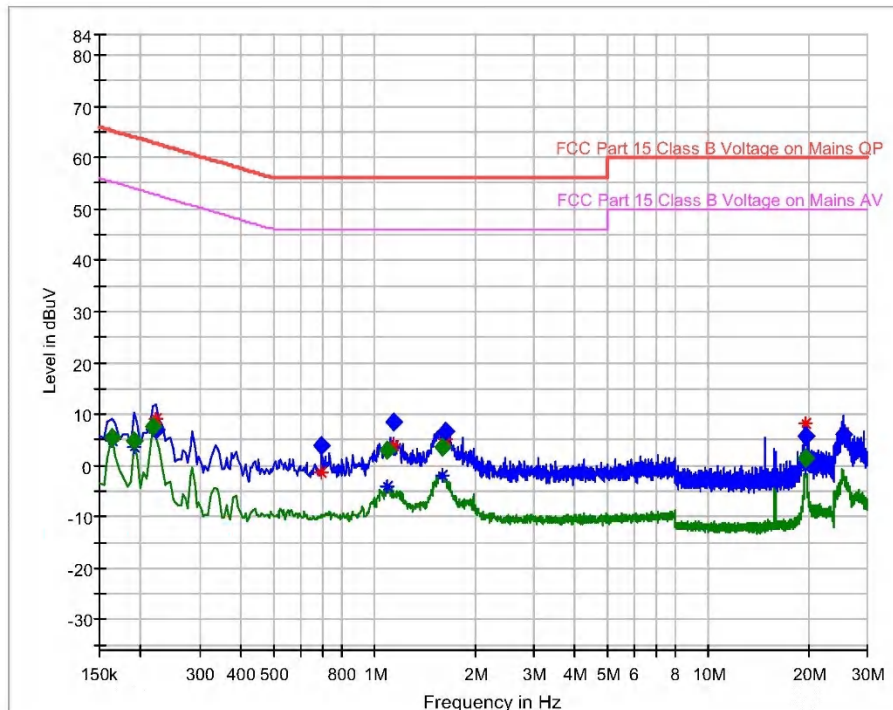
EMC Test Service Hotline: +86-20-28391188

EMC Test Record (EMISSION)

Common Information

Manufacturer: INNOVATIVE
Test Item: BLUETOOTH BOOMBOX
Identification: VBB-20
Test Standard: FCC Part 15
Test Detail: Conducted Emission
Operation Mode: A
Climate Condition: 22 °C; 50 %RH; 101 kPa.
Test Voltage/Freq.: AC 120 V/ 60 Hz
Port/Line: AC Mains(L1+N)
Receive No.: 170245339
Report No.:
Result: Pass
Comment: /
Hardware setup: 1phase LISN ENV216 to ESCI 3
Level Unit: dBuV

Subrange	Detectors	IF Bandwidth	Step Size	Meas. Time	Receiver
150kHz - 30MHz	Peak; Average	9kHz	4.5kHz	10ms	ESCI 3



Tested by: *Chris Liang* Reviewed by: *Jacky Chen*

20200703

20200706

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

Final Result

Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line
0.163500	---	5.41	55.28	49.88	1000.	9.000	L1
0.190500	---	4.74	54.02	49.28	1000.	9.000	L1
0.217500	---	7.48	52.91	45.44	1000.	9.000	L1
0.222000	7.08	---	62.74	55.66	1000.	9.000	N
0.694500	4.00	---	56.00	52.00	1000.	9.000	N
1.090500	---	3.07	46.00	42.93	1000.	9.000	L1
1.140000	8.62	---	56.00	47.38	1000.	9.000	N
1.603500	---	3.51	46.00	42.49	1000.	9.000	N
1.639500	6.52	---	56.00	49.48	1000.	9.000	N
19.648500	---	1.30	50.00	48.70	1000.	9.000	N
19.734000	5.87	---	60.00	54.13	1000.	9.000	L1
25.606500	5.90	---	60.00	54.10	1000.	9.000	L1

Tested by:

Chris Liang

Reviewed by:

Jacky Chen

20200703

20200706