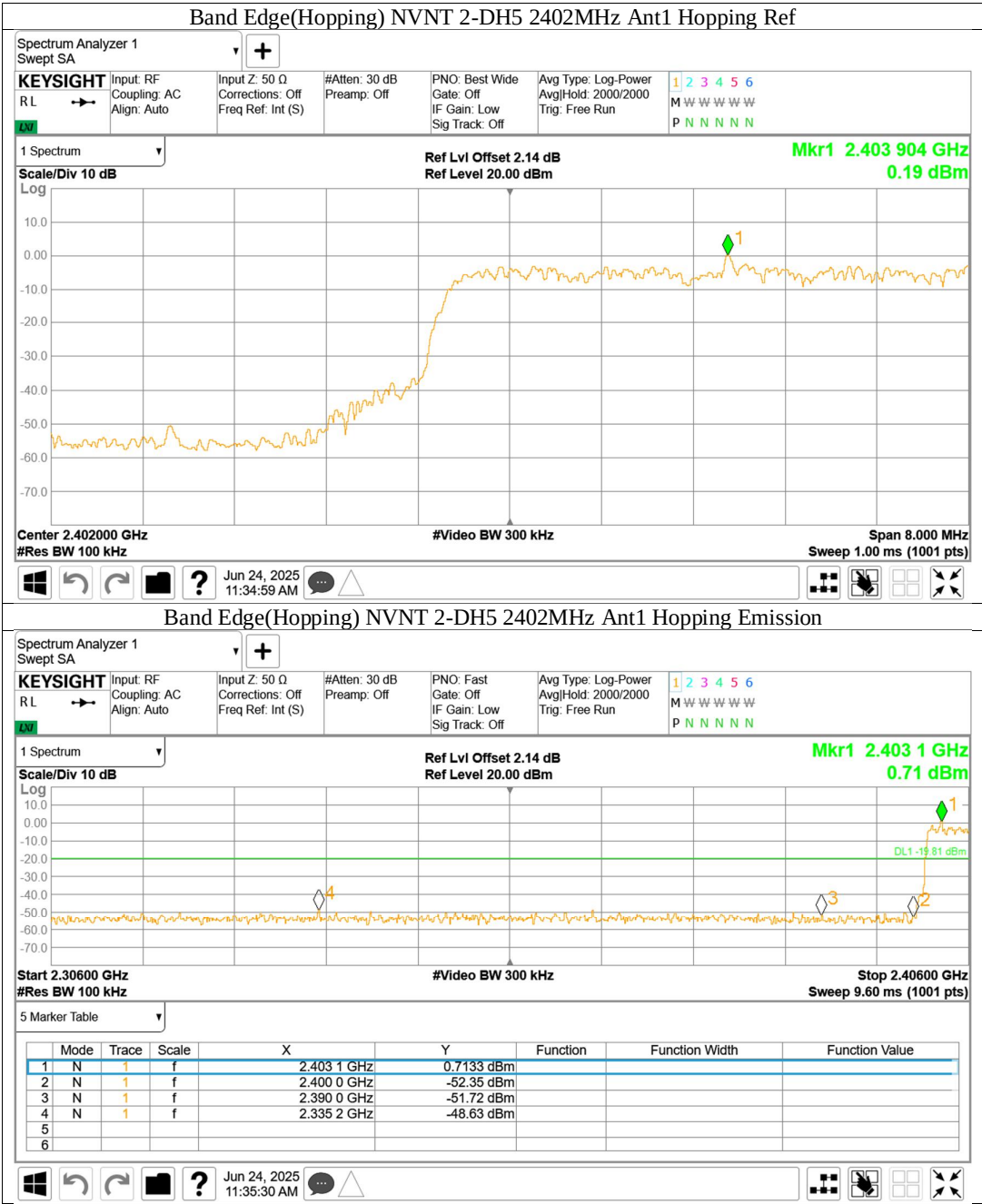
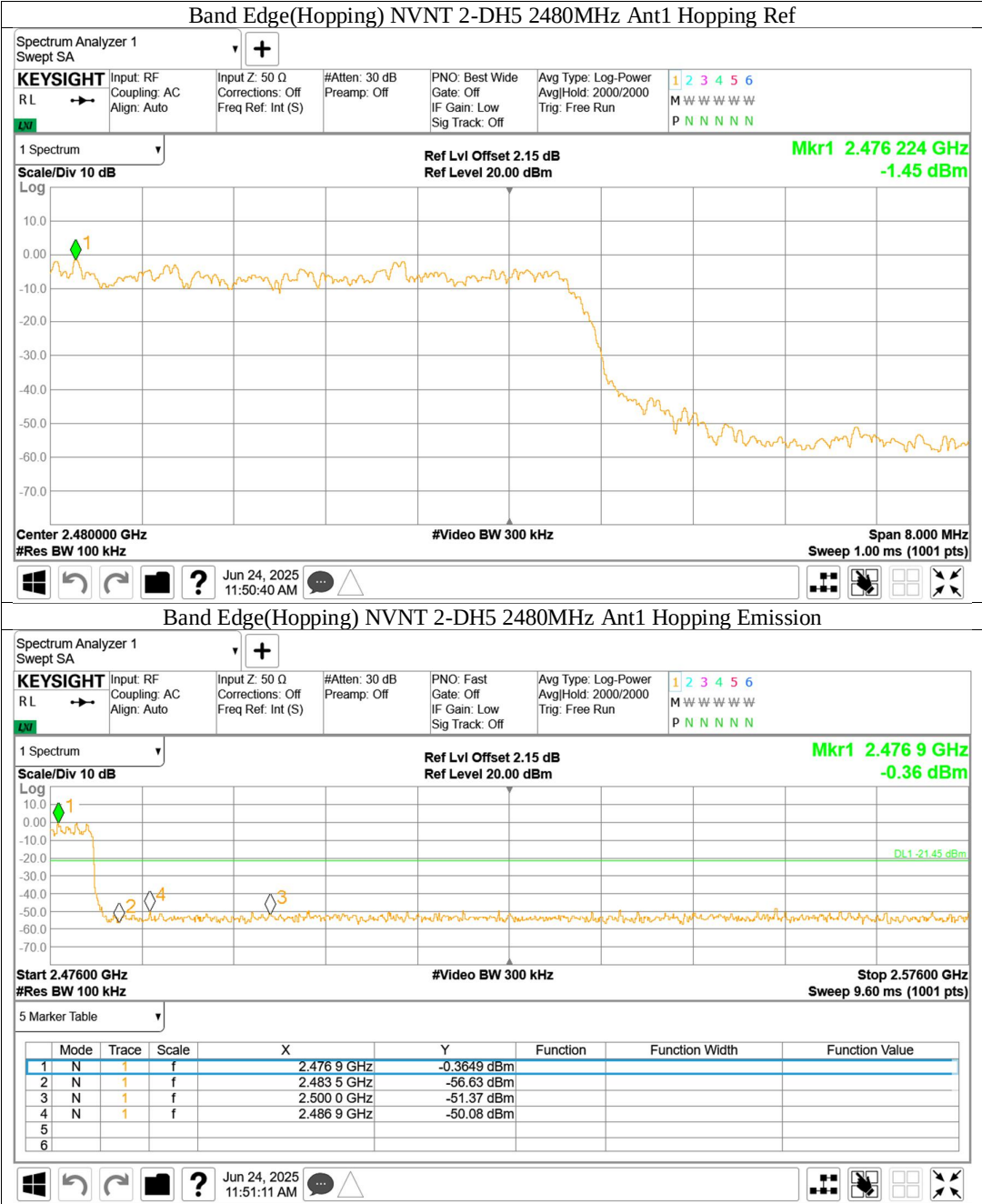




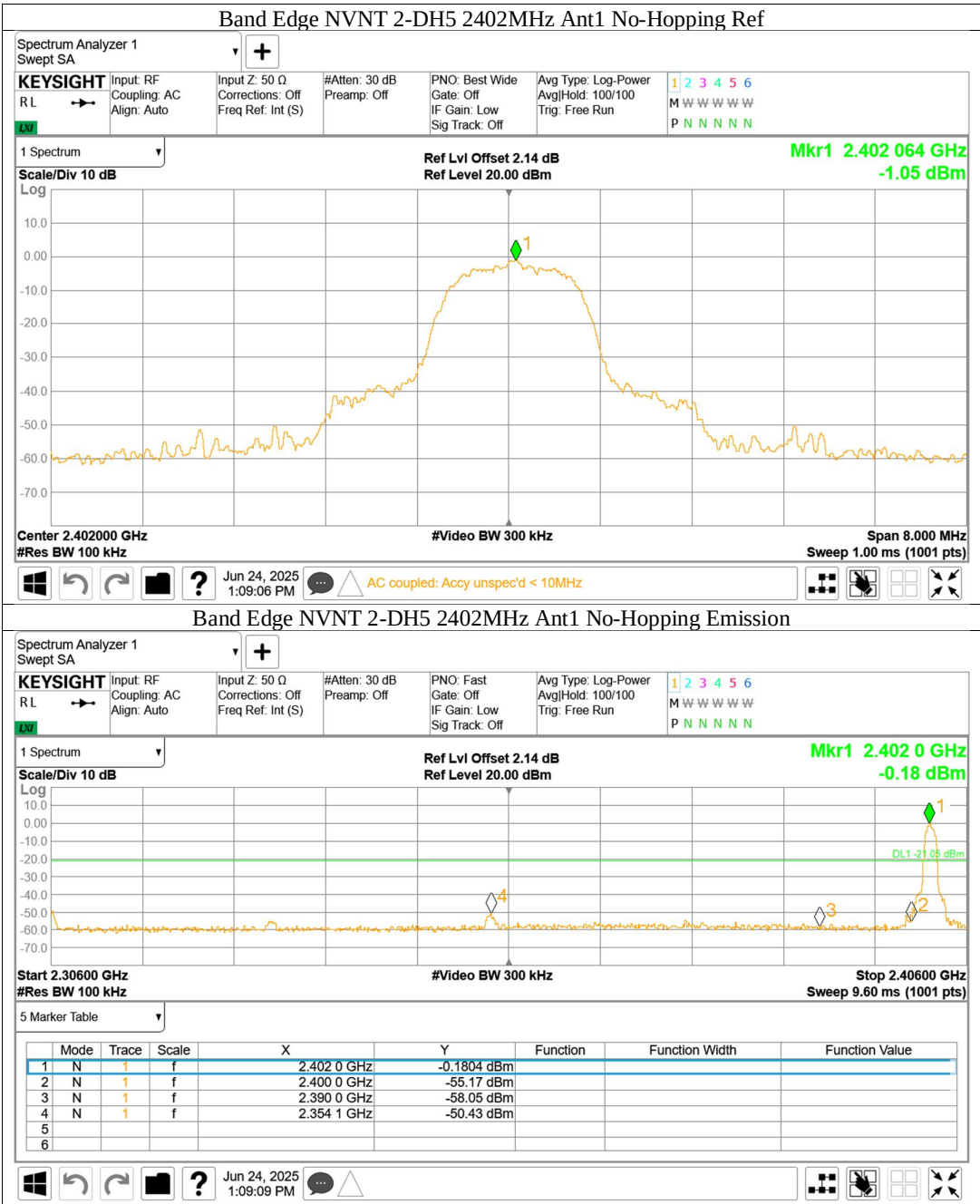
$\pi/4$ -DQPSK Modulation Test Result:
Hopping on mode:

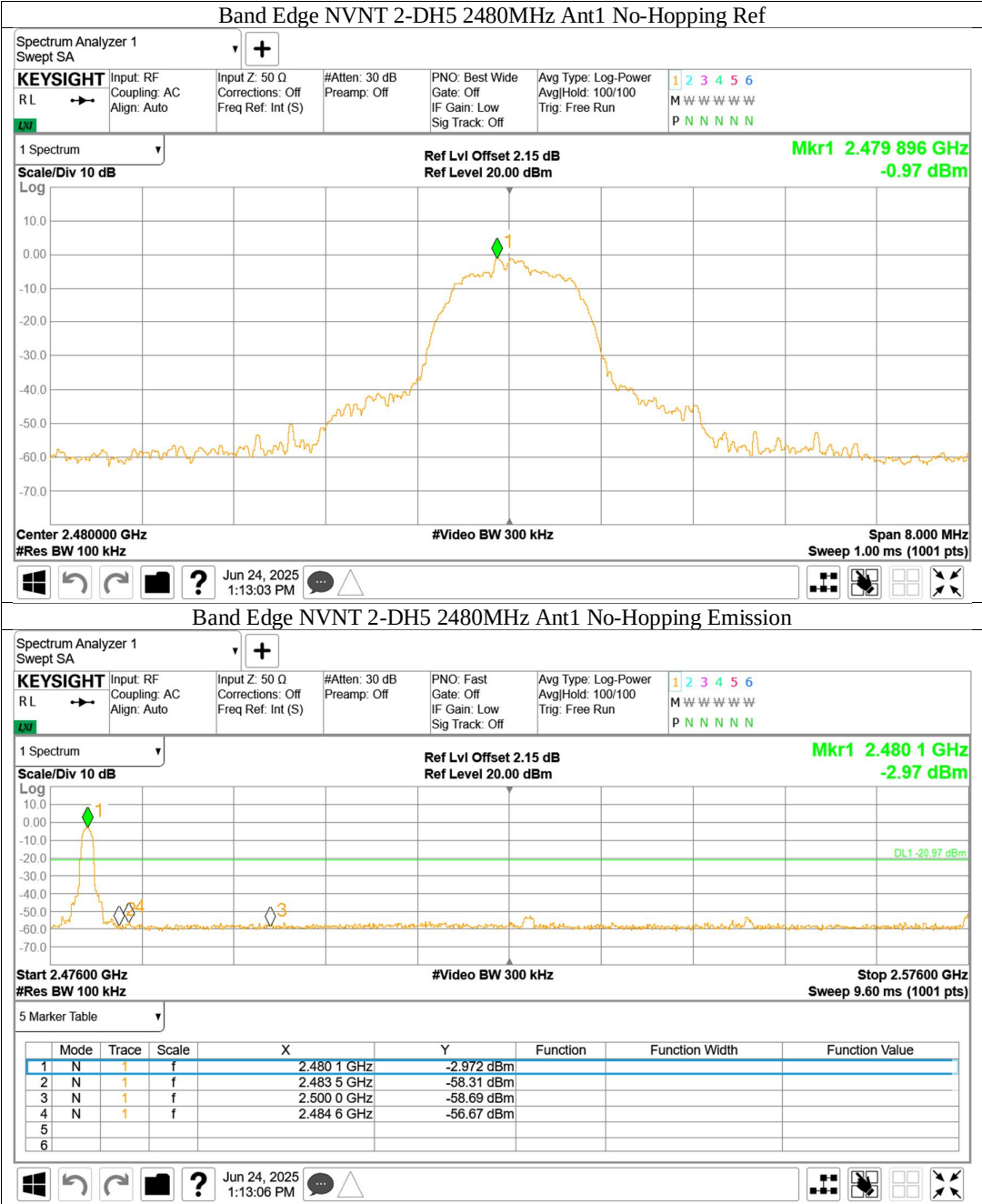






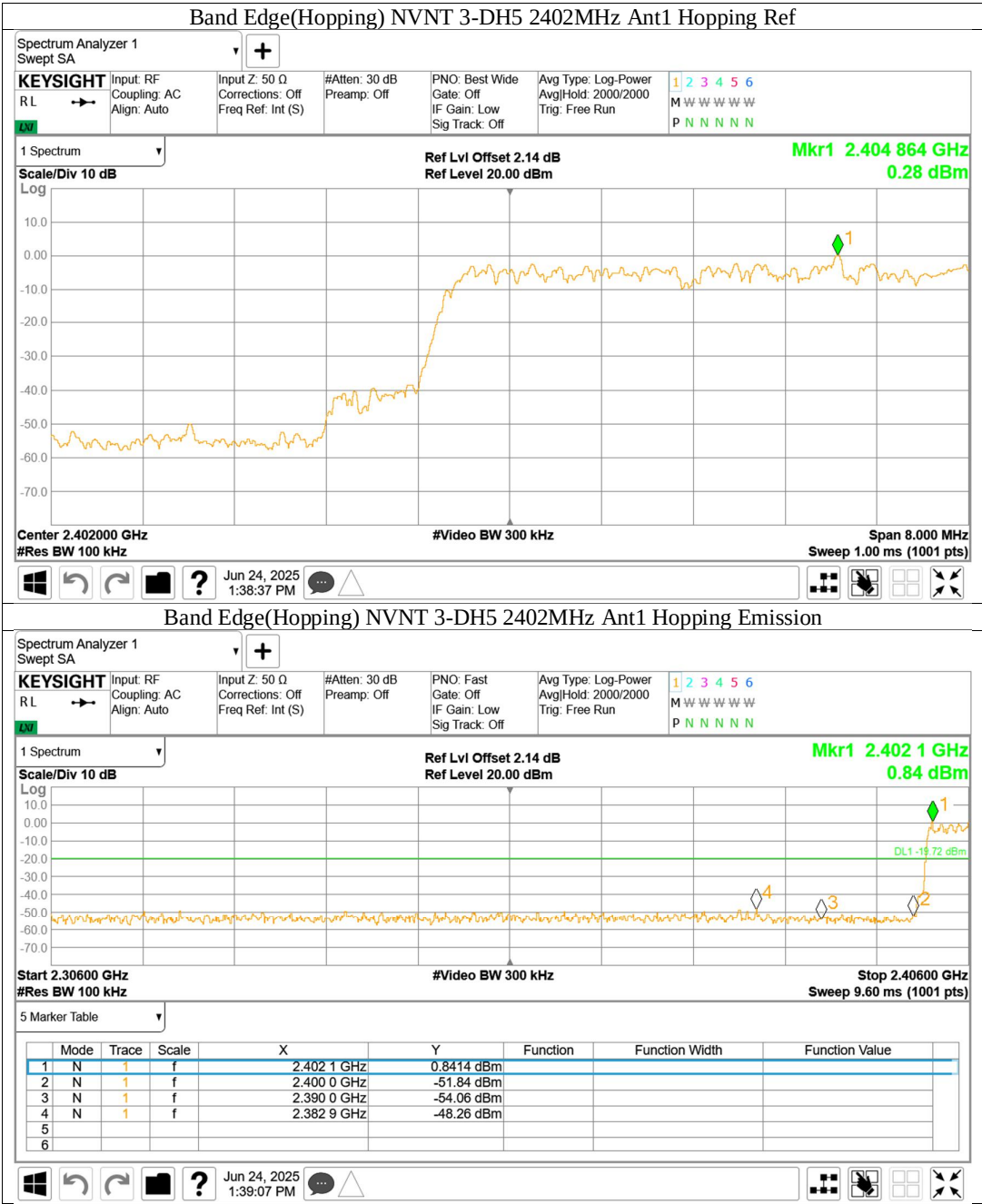
Hopping off mode:

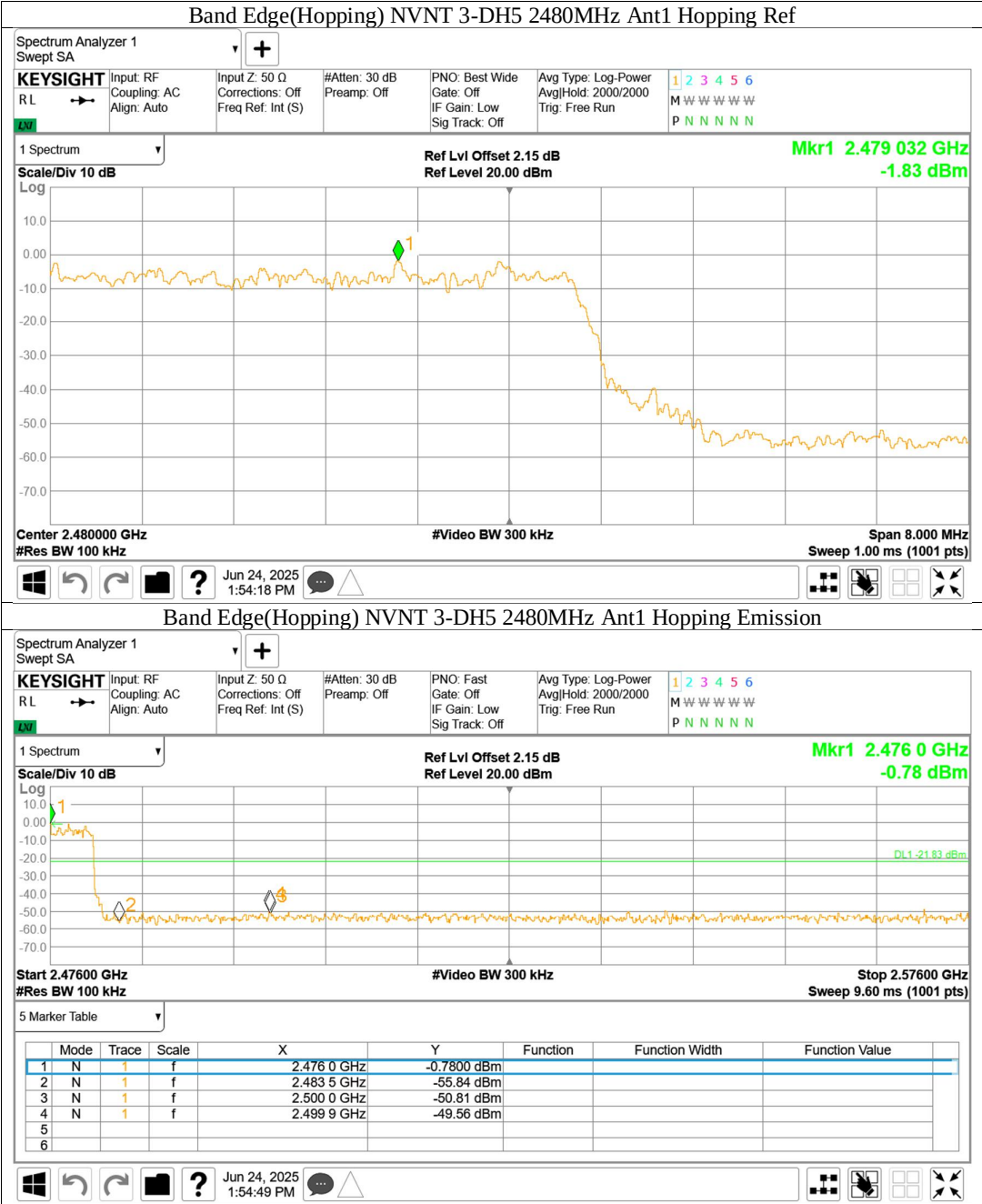






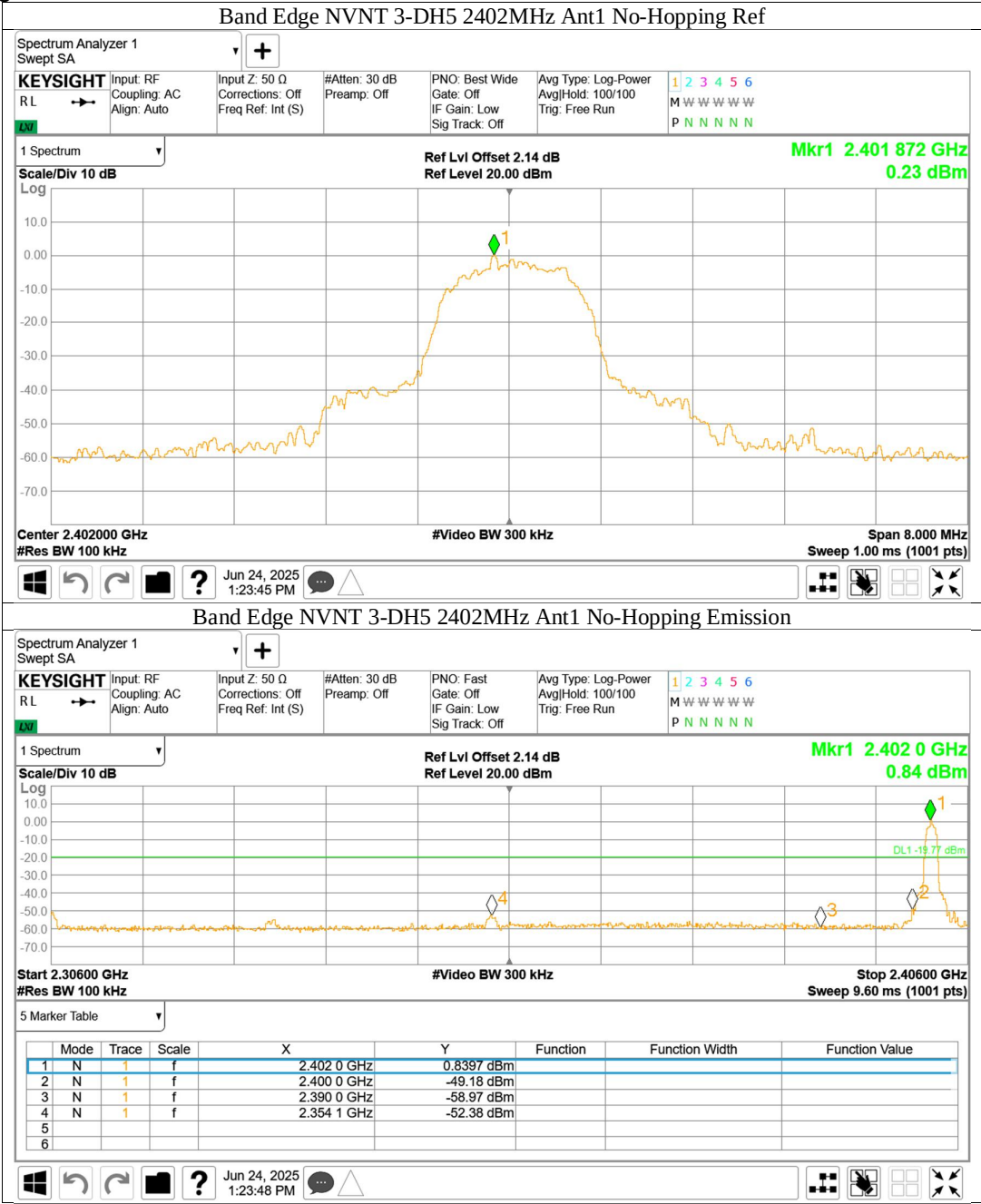
8-DPSK Modulation Test Result:
Hopping on mode:

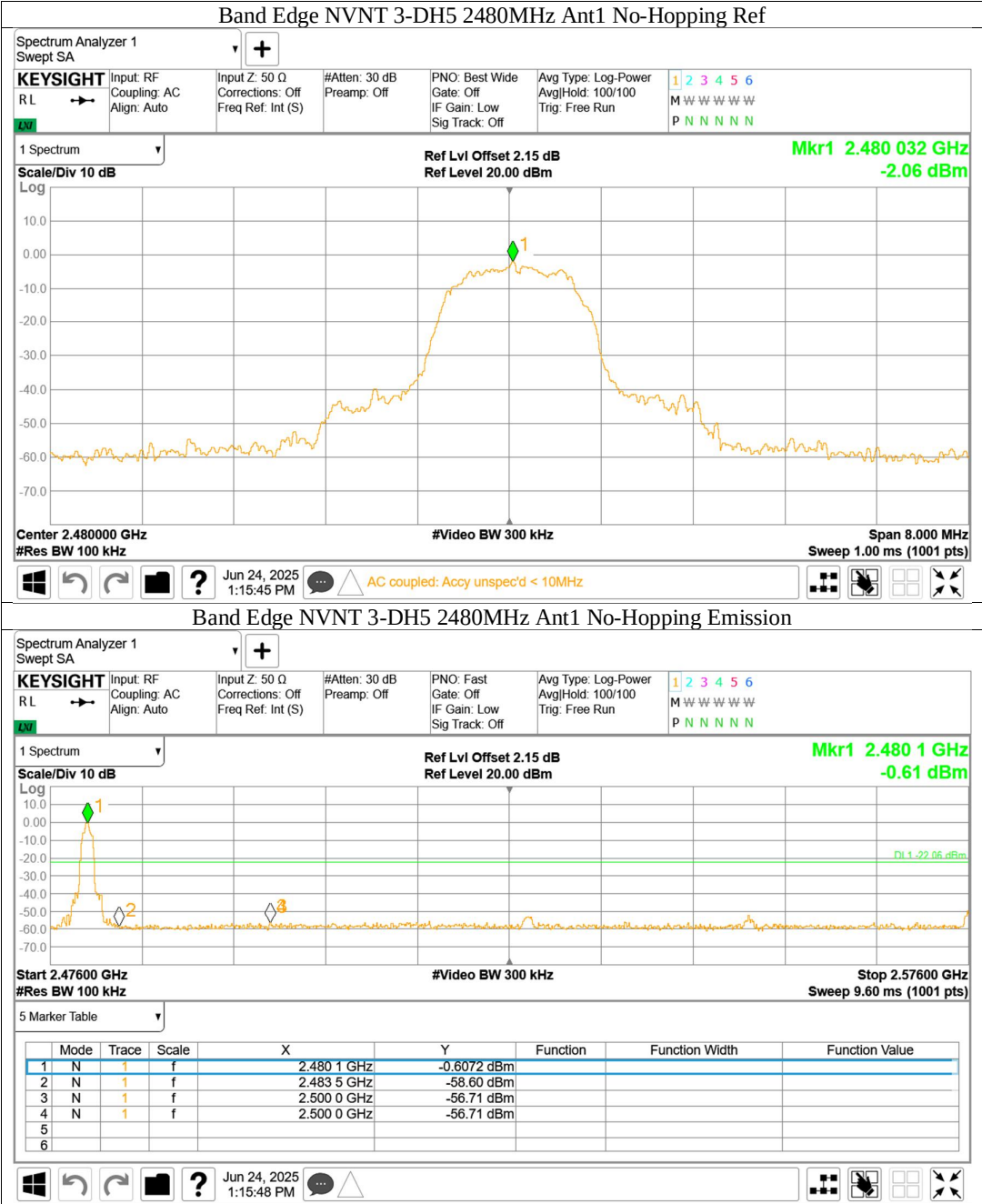






Hopping off mode:





10.9 Spurious radiated emissions for transmitter and receiver

Test Method

1. The EUT was placed on a turn table which is 1.5m above ground plane for above 1GHz and 0.8m above ground for below 1GHz at 3 meters chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.
2. Set to the maximum power setting and enable the EUT transmit continuously
3. The EUT was set 3 meters away from the interference – receiving antenna, which was mounted on the top of a variable – height antenna tower.
4. The height of antenna is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
5. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
6. Use the following test receiver settings According to C63.10:
 - (1) Span shall wide enough to fully capture the emission being measured;
 - (2) Set RBW=100 kHz to 120kHz for $f < 1$ GHz; VBW $\geq$ RBW; Sweep = auto; Detector function = QP; Trace = max hold;
 - (3) Set RBW = 1 MHz, VBW= 3MHz for $f \geq 1$ GHz for peak measurement.For average measurement:

The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is 3MHz for RMS Average ((duty cycle < 98%) for Average detection (AV) at frequency above 1GHz, then the measurement results was added to a correction factor $(20\log(1/\text{duty cycle}))$.

The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is 10Hz (duty cycle > 98%) for Average detection (AV) at frequency above 1GHz.
7. Repeat above procedures until all frequencies measured were complete.

Spurious Radiated Emissions for Transmitter

Limit

The radio emission outside the operating frequency band shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power. Radiated emissions which fall in the restricted bands, as defined in section 15.205, must comply with the radiated emission limits specified in section 15.209.

Frequency MHz	Field Strength $\mu\text{V/m}$	Field Strength $\text{dB}\mu\text{V/m}$	Detector	Measurement distance meters
0.009-0.490	2400/F(kHz)	48.5-13.8	AV	300
0.490-1.705	24000/F(kHz)	33.8-23.0	QP	30
1.705-30	30	29.5	QP	30
30-88	100	40	QP	3
88-216	150	43.5	QP	3
216-960	200	46	QP	3
960-1000	500	54	QP	3
Above 1000	500	54	AV	3
Above 1000	5000	74	PK	3

Note 1: Limit $3\text{m}(\text{dB}\mu\text{V/m}) = \text{Limit } 300\text{m}(\text{dB}\mu\text{V/m}) + 40\text{Log}(300\text{m}/3\text{m})$ (Below 30MHz)

Note 2: Limit $3\text{m}(\text{dB}\mu\text{V/m}) = \text{Limit } 30\text{m}(\text{dB}\mu\text{V/m}) + 40\text{Log}(30\text{m}/3\text{m})$ (Below 30MHz)

Spurious radiated emissions for transmitter

According to C63.10, if the peak (or quasi-peak) measured value complies with the average limit, it is unnecessary to perform an average measurement, so AV emission value did not show in below table if the peak value complies with average limit.

Data of measurement within frequency range 9kHz-30MHz is the noise floor or attenuated more than 20dB below the permissible limits or the field strength is too small to be measured, so test data does not present in this report.

Test result

Worst case Radiated Emission 9KHz-30MHz

0.009-30MHz Radiated Emission

EUT Information

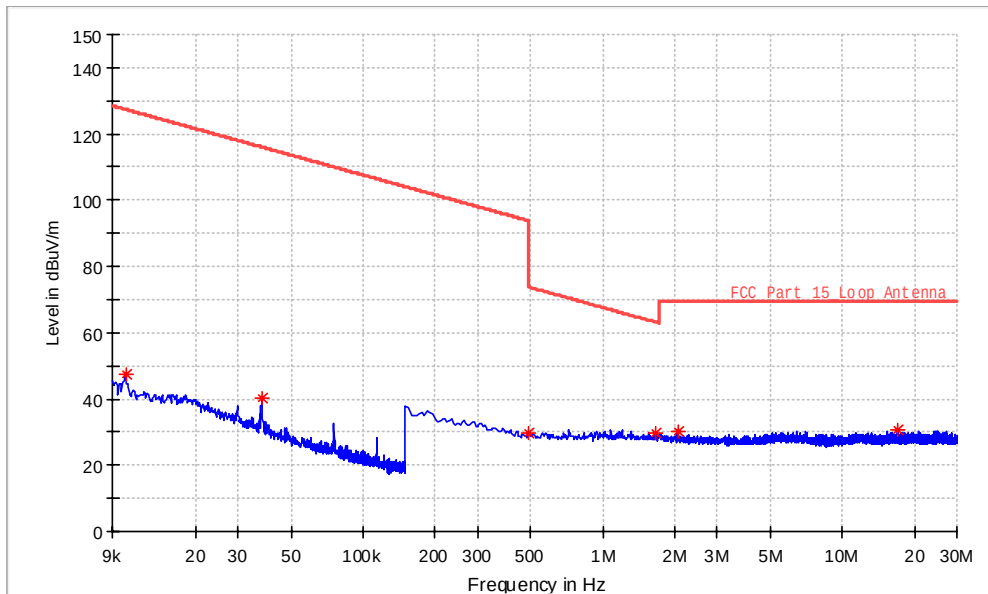
EUT Name: Wireless Headphones
 Model: CE220818
 Client: Balco Brands Pty Ltd
 Op Cond: Power on and TX_2402MHz at GFSK mode
 Operator: Doujun XU
 Test Spec: FCC 15.209 (a)
 Comment: Horizontal
 Sample No: SHA-929061-2

Sweep Setup: RE_Loop E_pre [EMI radiated]

Hardware Setup: RE_Loop Antenna V
 Receiver: [ESR 3]
 Level Unit: dBuV/m

Subrange	Step Size	Detectors	Bandwidth	Sweep Time	Preamp
9 kHz - 150 kHz	88.125 Hz	PK+	200 Hz	0.01 s	0 dB
150 kHz - 30 MHz	4.39 kHz	PK+	9 kHz	0.01 s	0 dB

Full Spectrum

**Critical Freqs**

Frequency (MHz)	MaxPeak (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
0.010234	47.67	127.40	79.74	100.0	H	4.0	19.6
0.037905	40.34	116.03	75.69	100.0	H	207.0	19.0
0.492397	29.82	73.76	43.94	100.0	H	106.0	18.8
1.668838	29.73	63.16	33.42	100.0	H	119.0	19.0
2.068302	30.26	69.54	39.28	100.0	H	282.0	19.1
16.953794	30.75	69.54	38.79	100.0	H	33.0	19.0

0.009-30MHz Radiated Emission

EUT Information

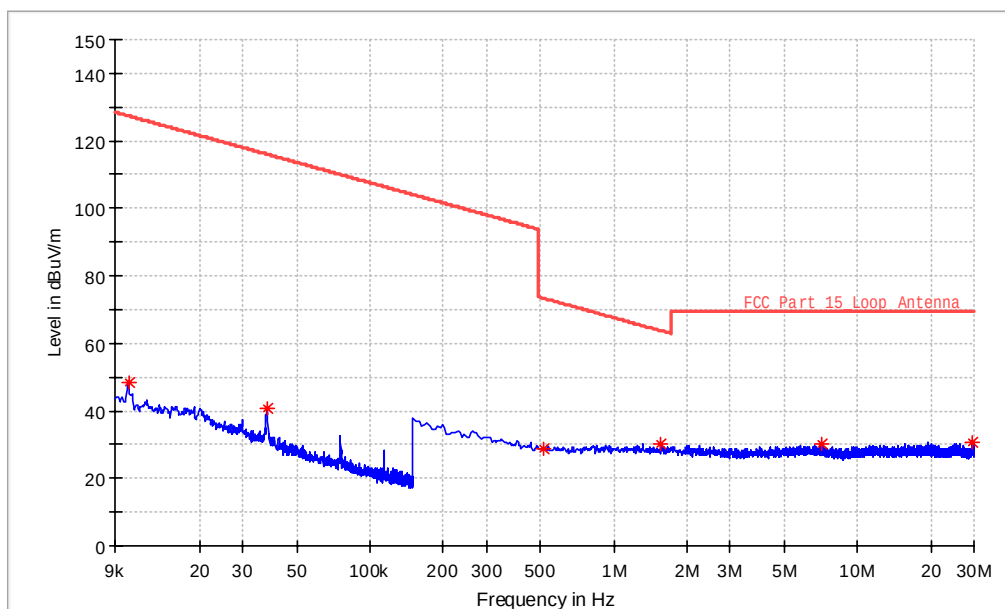
EUT Name: Wireless Headphones
 Model: CE220818
 Client: Balco Brands Pty Ltd
 Op Cond: Power on and TX_2402MHz at GFSK mode
 Operator: Doujun XU
 Test Spec: FCC 15.209 (a)
 Comment: Vertical
 Sample No: SHA-929061-2

Sweep Setup: RE_Loop E_pre [EMI radiated]

Hardware Setup: RE_Loop Antenna V
 Receiver: [ESR 3]
 Level Unit: dBuV/m

Subrange	Step Size	Detectors	Bandwidth	Sweep Time	Preamp
9 kHz - 150 kHz	88.125 Hz	PK+	200 Hz	0.01 s	0 dB
150 kHz - 30 MHz	4.39 kHz	PK+	9 kHz	0.01 s	0 dB

Full Spectrum



Critical Freqs

Frequency (MHz)	MaxPeak (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
0.010234	48.53	127.40	78.87	100.0	V	157.0	19.6
0.037905	40.90	116.03	75.13	100.0	V	357.0	19.0
0.518735	28.95	73.31	44.35	100.0	V	251.0	18.8
1.563485	30.01	63.72	33.71	100.0	V	78.0	19.0
7.138412	30.32	69.54	39.22	100.0	V	0.0	18.8
29.683941	30.83	69.54	38.71	100.0	V	58.0	18.9

Worst case Radiated Emission 30MHz-1GHz 30-1000MHz Radiated Emission

EUT Information

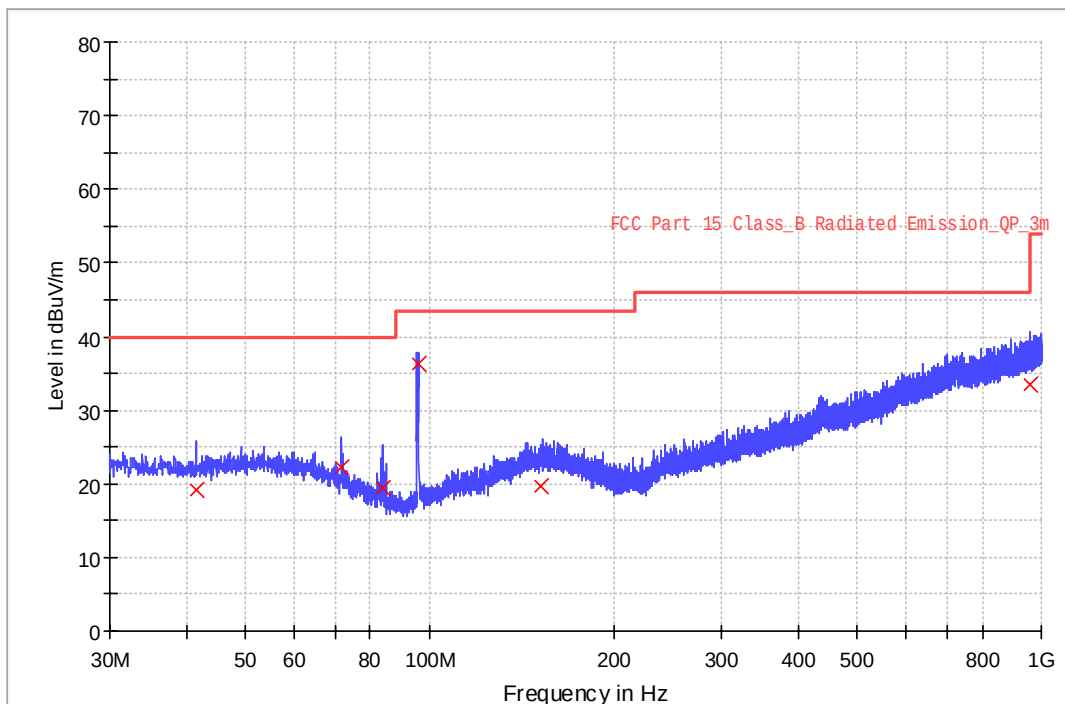
EUT Name:	Wireless Headphones
Model:	CE220818
Client:	Balco Brands Pty Ltd
Op Cond:	Power on and TX_2402MHz at GFSK mode
Operator:	Doujun XU
Test Spec:	FCC 15.209 (a)
Comment:	Horizontal
Sample No:	SHA-929061-2

Sweep Setup: RE_VULB9168_pre_Cont_30-1000 [EMI radiated]

Hardware Setup:	RE_VULB9168
Receiver:	[ESR 3]
Level Unit:	dBuV/m

Subrange	Step Size	Detectors	Bandwidth	Sweep Time	Preamp
30 MHz - 1 GHz	48.5 kHz	PK+	120 kHz	0.2 s	20 dB

RE_VULB9168_pre_Cont_30-1000





Limit and Margin

Frequency (MHz)	QuasiPeak (dBuV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - QPK (dB)	Limit - QPK (dBuV/m)
41.560000	19.1	1000.0	120.000	197.0	H	194.0	20.1	20.9	40.0
71.920000	22.4	1000.0	120.000	250.0	H	163.0	18.2	17.6	40.0
83.840000	19.5	1000.0	120.000	100.0	H	166.0	15.0	20.5	40.0
95.640000	36.3	1000.0	120.000	300.0	H	241.0	15.5	7.2	43.5
152.280000	19.6	1000.0	120.000	150.0	H	314.0	21.0	23.9	43.5
959.560000	33.4	1000.0	120.000	100.0	H	287.0	34.3	12.6	46.0

30-1000MHz Radiated Emission

EUT Information

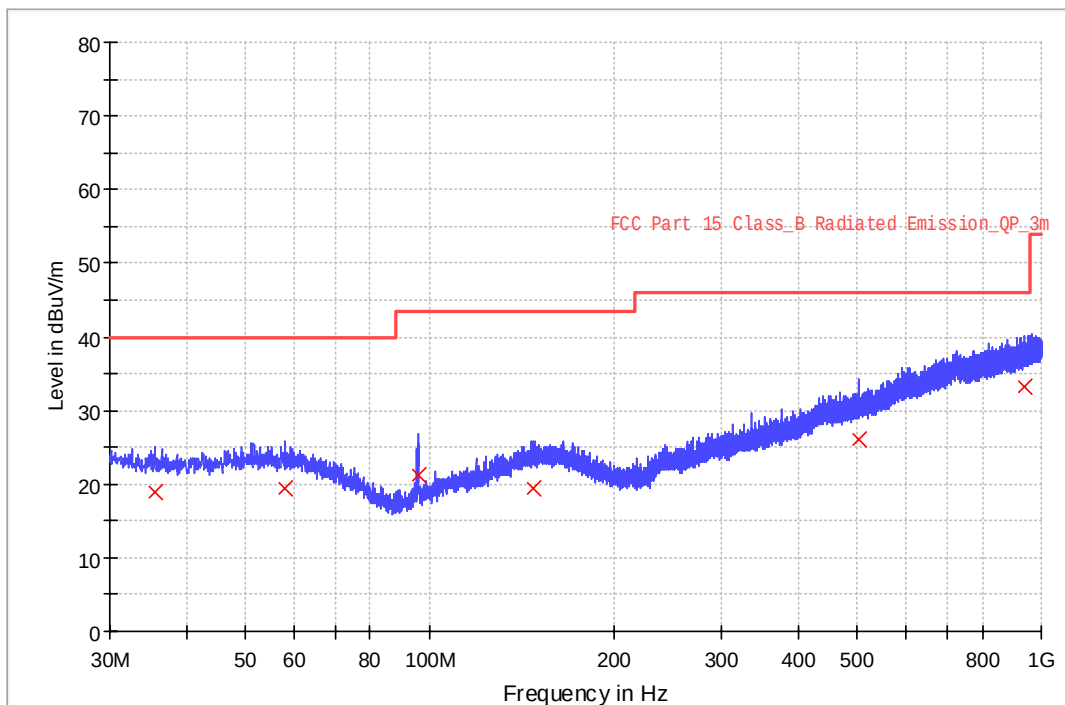
EUT Name: Wireless Headphones
Model: CE220818
Client: Balco Brands Pty Ltd
Op Cond: Power on and TX_2402MHz at GFSK mode
Operator: Doujun XU
Test Spec: FCC 15.209 (a)
Comment: Vertical
Sample No: SHA-929061-2

Sweep Setup: RE_VULB9168_pre_Cont_30-1000 [EMI radiated]

Hardware Setup: RE_VULB9168
Receiver: [ESR 3]
Level Unit: dBuV/m

Subrange	Step Size	Detectors	Bandwidth	Sweep Time	Preamp
30 MHz - 1 GHz	48.5 kHz	PK+	120 kHz	0.2 s	20 dB

RE_VULB9168_pre_Cont_30-1000





Limit and Margin

Frequency (MHz)	QuasiPeak (dBuV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - QPK (dB)	Limit - QPK (dBuV/m)
35.560000	18.9	1000.0	120.000	350.0	V	333.0	19.7	21.1	40.0
58.000000	19.3	1000.0	120.000	100.0	V	281.0	20.5	20.7	40.0
95.800000	21.1	1000.0	120.000	150.0	V	199.0	15.5	22.4	43.5
147.960000	19.4	1000.0	120.000	250.0	V	140.0	21.0	24.1	43.5
504.360000	26.1	1000.0	120.000	150.0	V	75.0	26.9	19.9	46.0
938.920000	33.2	1000.0	120.000	200.0	V	215.0	34.2	12.8	46.0

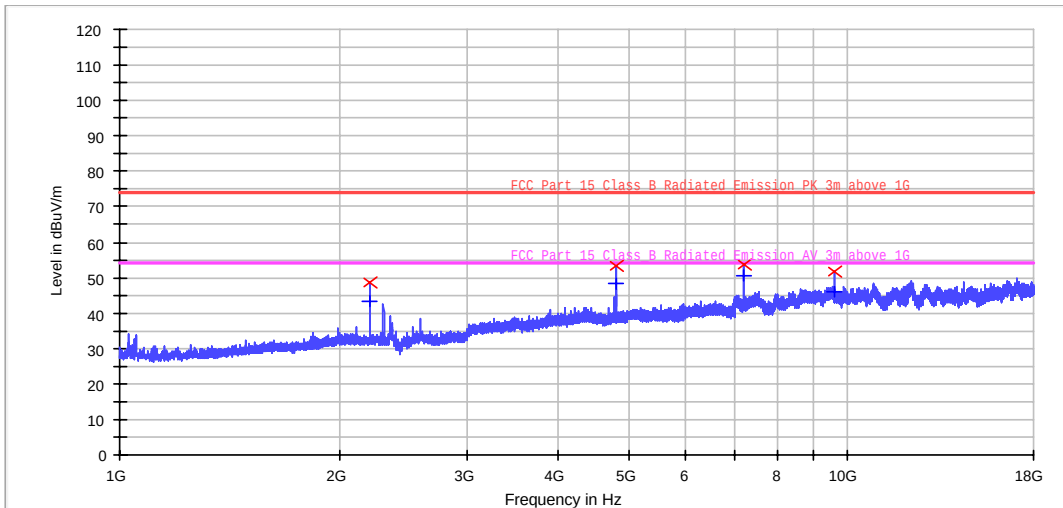
Remark:

- (1) Emission level= Original Receiver Reading + Correct Factor
- (2) Correct Factor = Antenna Factor + Cable Loss -Amplifier gain
- (3) Margin = limit – Corrected Reading

Radiated Emission 1-18 GHz

GFSK: 2402MHz

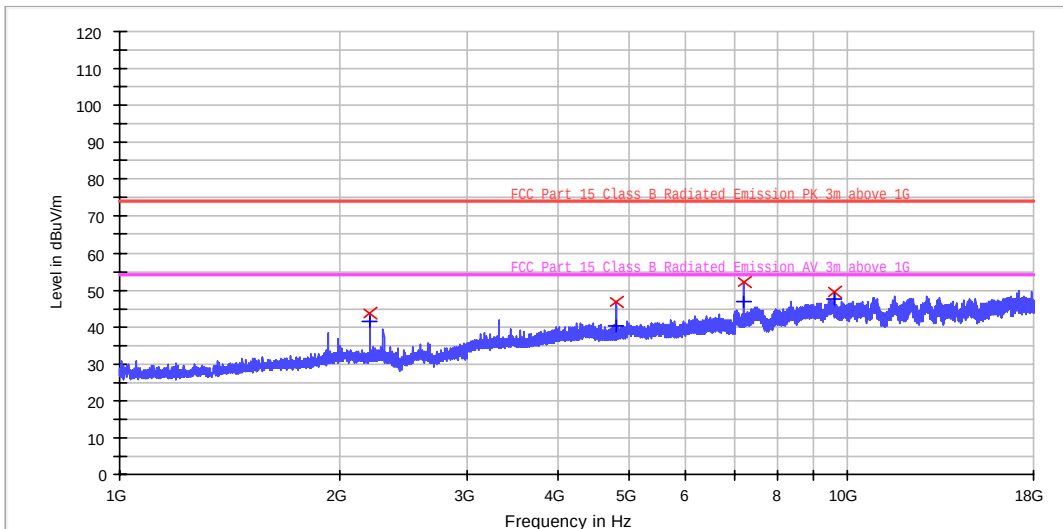
RE_HF907_BRF_Pre



Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	AV (dBuV/m)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBuV/m)	Margin - AV (dB)	Limit - AV (dBuV/m)
2209.600000	48.6	43.3	240.0	H	337.0	-12.6	25.4	74.0	10.7	54.0
4803.700000	53.4	48.3	150.0	H	293.0	-3.4	20.6	74.0	5.7	54.0
7206.700000	53.5	50.5	200.0	H	218.0	0.2	20.5	74.0	3.5	54.0
9608.500000	51.7	46.1	150.0	H	148.0	2.2	22.3	74.0	7.9	54.0

RE_HF907_BRF_Pre

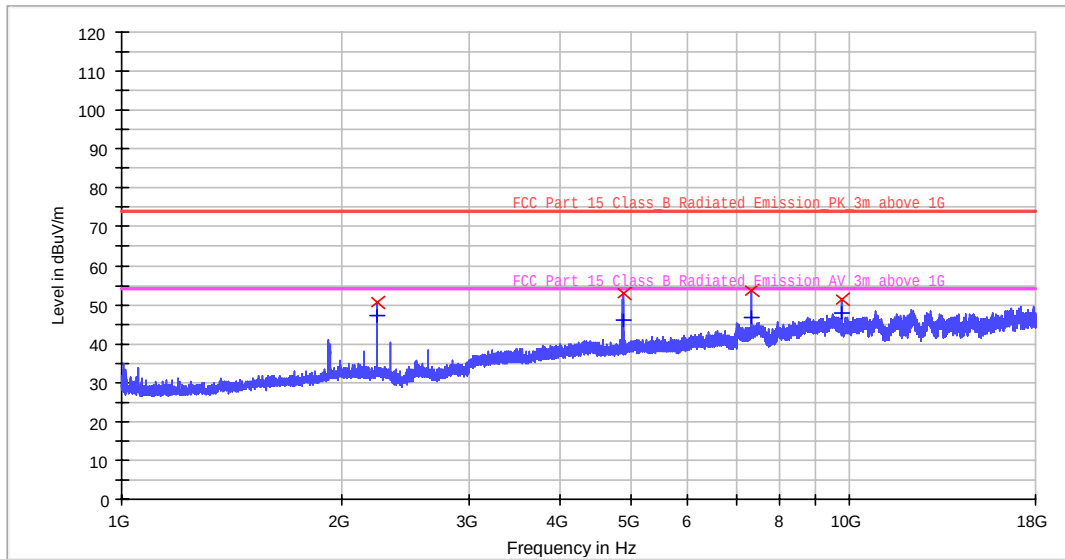


Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	AV (dBuV/m)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBuV/m)	Margin - AV (dB)	Limit - AV (dBuV/m)
2210.200000	43.8	41.3	100.0	V	152.0	-12.6	30.2	74.0	12.7	54.0
4804.300000	46.9	40.1	150.0	V	291.0	-3.4	27.1	74.0	13.9	54.0
7206.100000	52.2	46.7	220.0	V	230.0	0.2	21.8	74.0	7.3	54.0
9608.500000	49.3	47.4	300.0	V	178.0	2.2	24.7	74.0	6.6	54.0

GFSK: 2441MHz

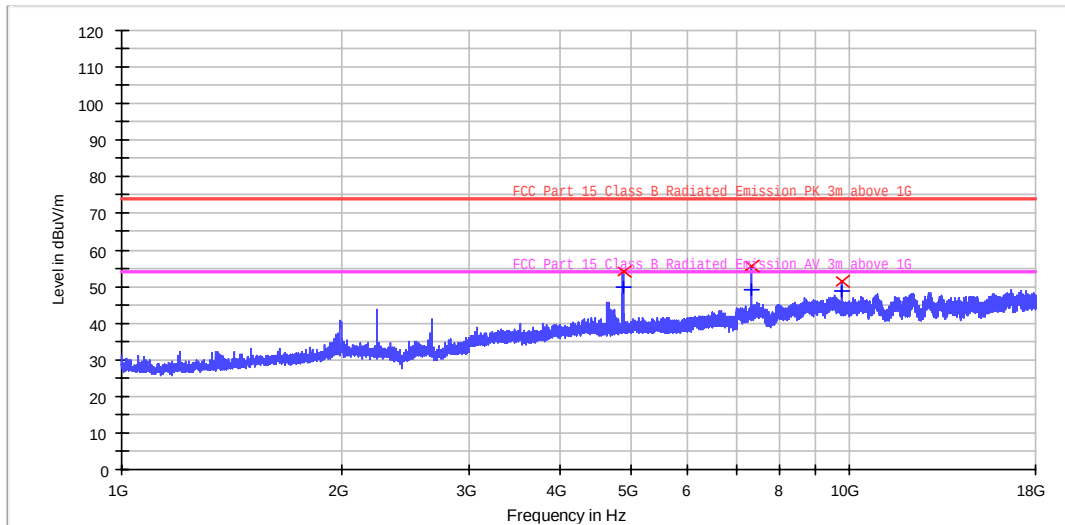
RE_HF907_BRF_Pre



Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	AV (dBuV/m)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBuV/m)	Margin - AV (dB)	Limit - AV (dBuV/m)
2248.900000	50.7	47.1	200.0	H	161.0	-12.4	23.3	74.0	6.9	54.0
4881.700000	53.0	45.8	140.0	H	170.0	-3.1	21.0	74.0	8.2	54.0
7323.400000	53.6	46.7	250.0	H	113.0	0.2	20.4	74.0	7.3	54.0
9763.900000	51.4	47.8	150.0	H	295.0	2.4	22.6	74.0	6.2	54.0

RE_HF907_BRF_Pre

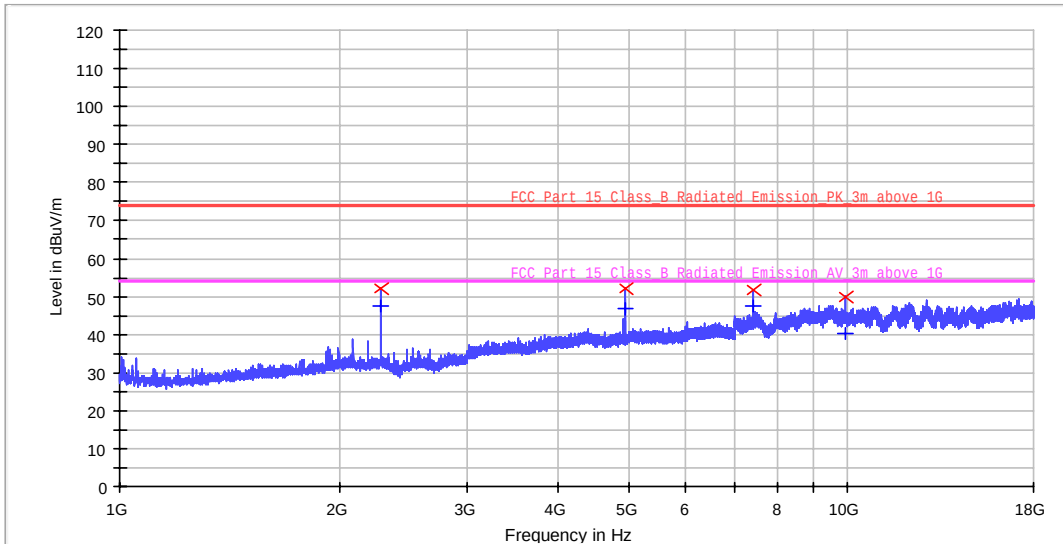


Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	AV (dBuV/m)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBuV/m)	Margin - AV (dB)	Limit - AV (dBuV/m)
4881.700000	54.1	49.7	250.0	V	231.0	-3.1	19.9	74.0	4.3	54.0
7322.500000	55.6	49.2	123.0	V	292.0	0.2	18.4	74.0	4.8	54.0
9763.900000	51.3	48.8	150.0	V	154.0	2.4	22.7	74.0	5.2	54.0

GFSK:2480MHz

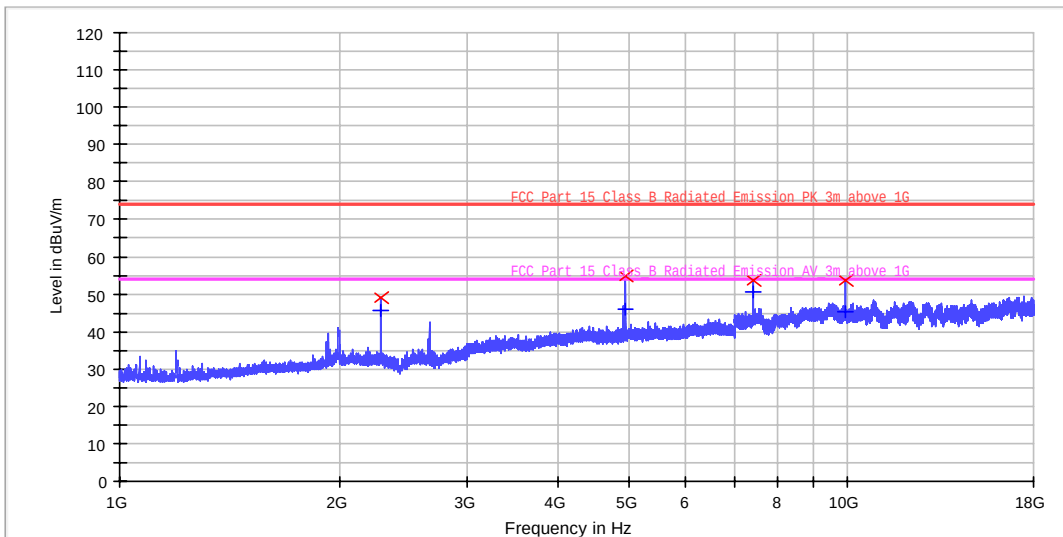
RE_HF907_BRF_Pre



Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	AV (dBuV/m)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBuV/m)	Margin - AV (dB)	Limit - AV (dBuV/m)
2287.600000	52.0	47.6	300.0	H	154.0	-12.4	22.1	74.0	6.4	54.0
4960.600000	52.1	46.7	150.0	H	214.0	-3.0	21.9	74.0	7.3	54.0
7440.400000	51.8	47.6	350.0	H	280.0	0.2	22.2	74.0	6.5	54.0
9919.600000	49.9	40.2	150.0	H	336.0	2.7	24.1	74.0	13.8	54.0

RE_HF907_BRF_Pre



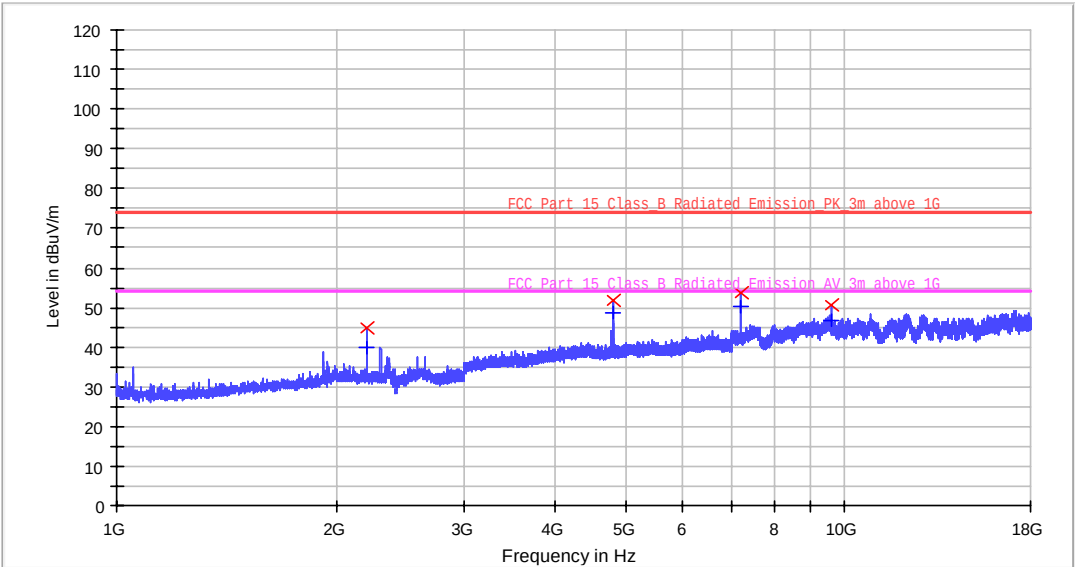
Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	AV (dBuV/m)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBuV/m)	Margin - AV (dB)	Limit - AV (dBuV/m)
2287.600000	48.9	45.8	225.0	V	284.0	-12.4	25.1	74.0	8.2	54.0
4959.400000	54.7	46.0	150.0	V	318.0	-3.0	19.3	74.0	8.0	54.0
7441.000000	53.5	50.6	200.0	V	195.0	0.2	20.5	74.0	3.4	54.0
9920.200000	53.8	45.2	100.0	V	219.0	2.7	20.2	74.0	8.8	54.0



$\pi/4$ -DQPSK:2402MHz

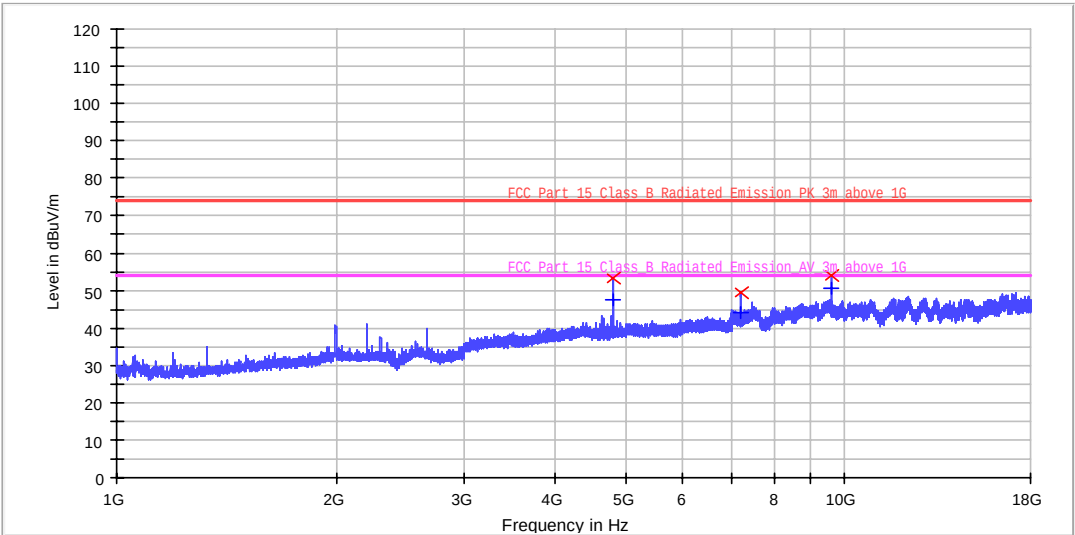
RE_HF907_BRF_Pre



Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	AV (dBuV/m)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)	Margin - PK+ (dB)	Limit - PK+ (dBuV/m)	Margin - AV (dB)	Limit - AV (dBuV/m)
2209.600000	44.7	40.0	200.0	H	247.0	-12.6	29.3	74.0	14.0	54.0
4801.000000	51.9	48.5	150.0	H	210.0	-3.4	22.1	74.0	5.5	54.0
7206.700000	53.5	50.4	100.0	H	154.0	0.2	20.5	74.0	3.6	54.0
9607.900000	50.8	46.9	240.0	H	138.0	2.2	23.2	74.0	7.1	54.0

RE_HF907_BRF_Pre



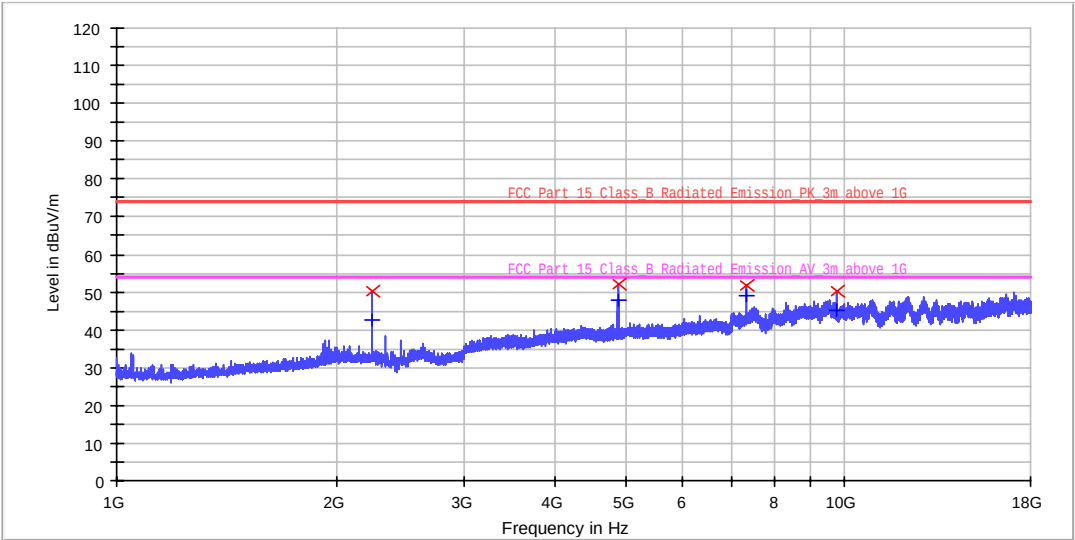
Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	AV (dBuV/m)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)	Margin - PK+ (dB)	Limit - PK+ (dBuV/)	Margin - AV (dB)	Limit - AV (dBuV/)
4803.700000	53.3	47.4	222.0	V	144.0	-3.4	20.7	74.0	6.6	54.0
7206.700000	49.6	44.1	150.0	V	292.0	0.2	24.4	74.0	9.9	54.0
9608.500000	54.1	50.7	250.0	V	138.0	2.2	19.9	74.0	3.3	54.0



$\pi/4$ -DQPSK:2441MHz

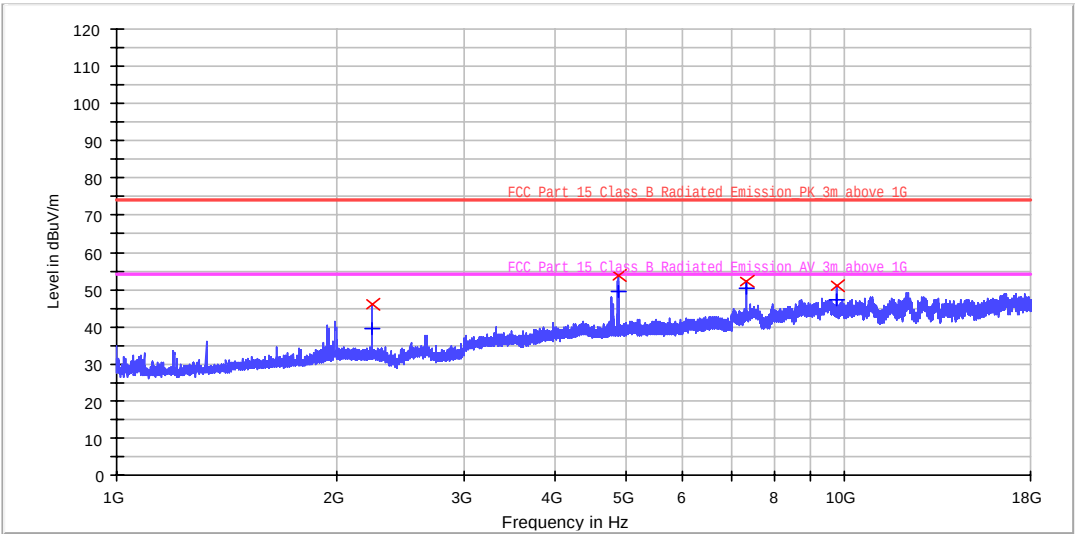
RE_HF907_BRF_Pre



Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	AV (dBuV/m)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)	Margin - PK+ (dB)	Limit - PK+ (dBuV/m)	Margin - AV (dB)	Limit - AV (dBuV/m)
2248.900000	50.3	42.7	110.0	H	152.0	-12.4	23.7	74.0	11.3	54.0
4881.700000	52.2	47.8	150.0	H	201.0	-3.1	21.8	74.0	6.2	54.0
7323.400000	51.8	49.2	200.0	H	253.0	0.2	22.2	74.0	4.8	54.0
9763.900000	50.2	45.3	250.0	H	296.0	2.4	23.8	74.0	8.7	54.0

RE_HF907_BRF_Pre

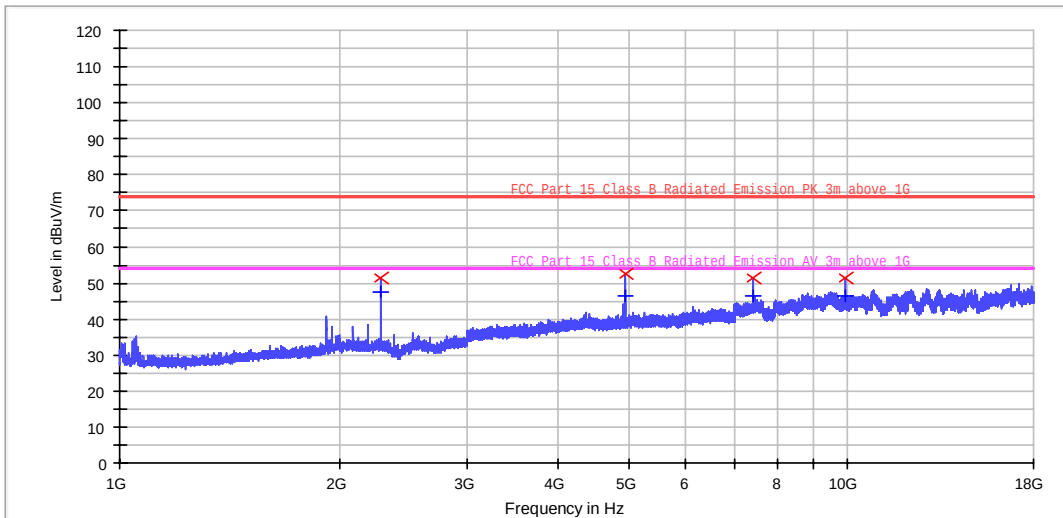


Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	AV (dBuV/m)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)	Margin - PK+ (dB)	Limit - PK+ (dBuV/m)	Margin - AV (dB)	Limit - AV (dBuV/m)
2248.300000	45.9	39.6	260.0	V	273.0	-12.4	28.1	74.0	14.4	54.0
4882.300000	53.6	49.5	154.0	V	216.0	-3.1	20.4	74.0	4.5	54.0
7322.500000	52.2	50.1	286.0	V	158.0	0.2	21.8	74.0	3.9	54.0
9764.500000	50.9	47.0	300.0	V	263.0	2.4	23.1	74.0	7.0	54.0

$\pi/4$ -DQPSK:2480MHz

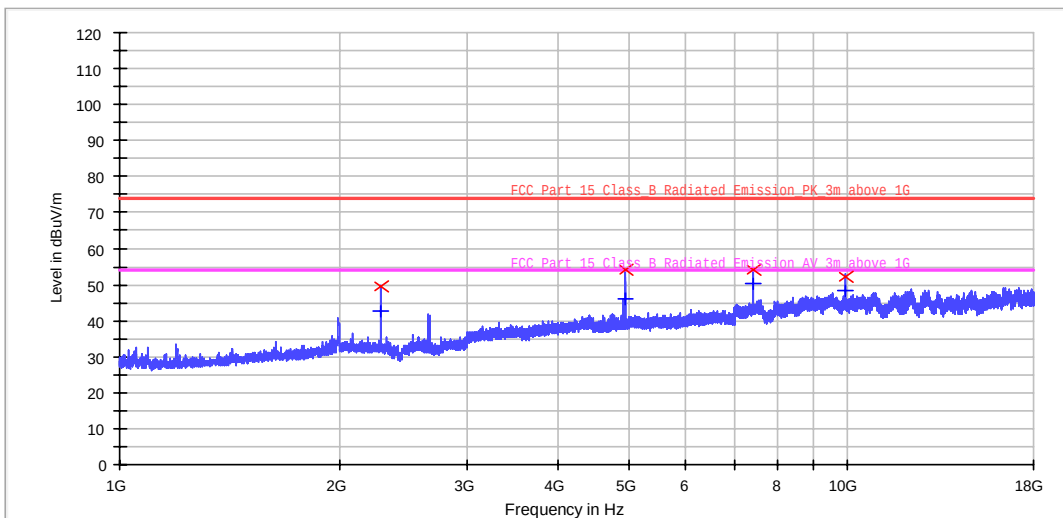
RE_HF907_BRF_Pre



Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	AV (dBuV/m)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBuV/m)	Margin - AV (dB)	Limit - AV (dBuV/m)
2287.600000	51.2	47.6	220.0	H	176.0	-12.4	22.8	74.0	6.4	54.0
4960.000000	52.6	46.4	150.0	H	143.0	-3.0	21.4	74.0	7.6	54.0
7439.200000	51.3	46.2	100.0	H	201.0	0.2	22.7	74.0	7.8	54.0
9919.600000	51.5	46.3	300.0	H	244.0	2.7	22.5	74.0	7.7	54.0

RE_HF907_BRF_Pre

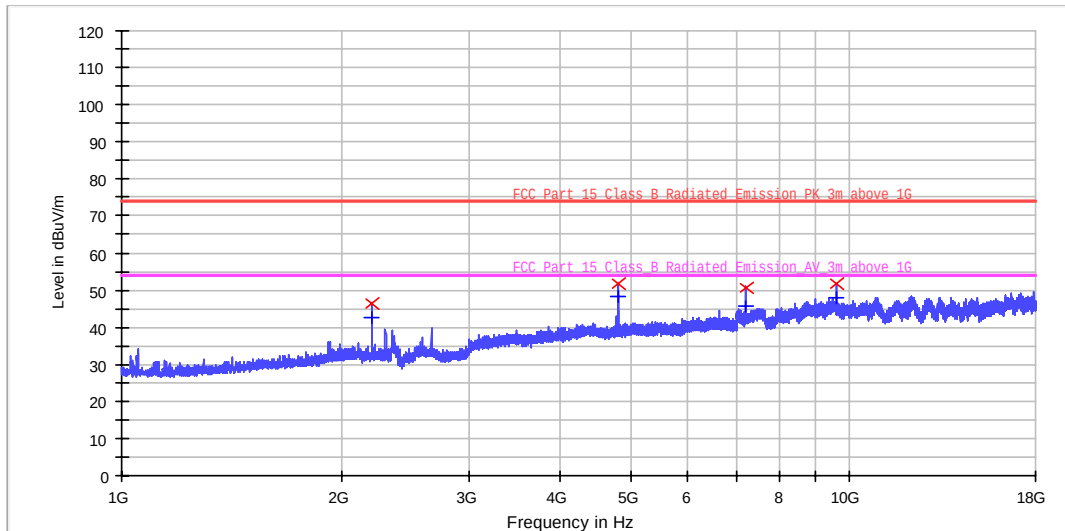


Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	AV (dBuV/m)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBuV/m)	Margin - AV (dB)	Limit - AV (dBuV/m)
2287.600000	49.6	42.5	224.0	V	247.0	-12.4	24.4	74.0	11.5	54.0
4956.700000	54.1	46.1	160.0	V	121.0	-3.0	19.9	74.0	7.9	54.0
7441.000000	53.9	50.2	150.0	V	176.0	0.2	20.1	74.0	3.8	54.0
9919.600000	52.3	48.2	250.0	V	265.0	2.7	21.7	74.0	5.8	54.0

8-DPSK:2402MHz

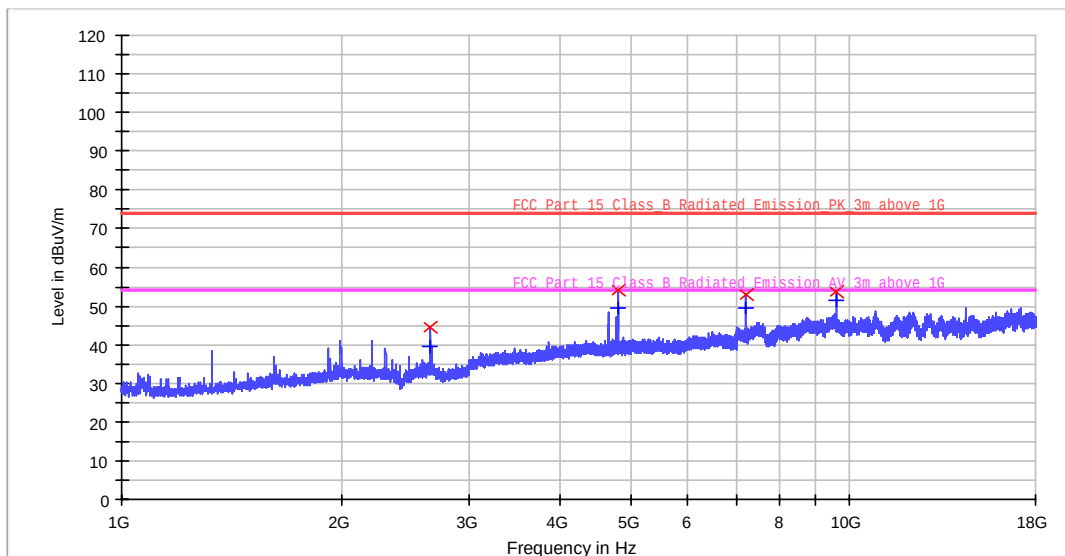
RE_HF907_BRF_Pre



Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	AV (dBuV/m)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)	Margin - PK+ (dB)	Limit - PK+ (dBuV/)	Margin - AV (dB)	Limit - AV (dBuV/)
2210.200000	46.5	42.6	245.0	H	228.0	-12.6	27.5	74.0	11.4	54.0
4804.300000	51.9	48.4	128.0	H	265.0	-3.4	22.1	74.0	5.6	54.0
7207.000000	50.7	45.6	310.0	H	168.0	0.2	23.3	74.0	8.4	54.0
9608.500000	51.6	47.9	150.0	H	285.0	2.2	22.4	74.0	6.1	54.0

RE_HF907_BRF_Pre



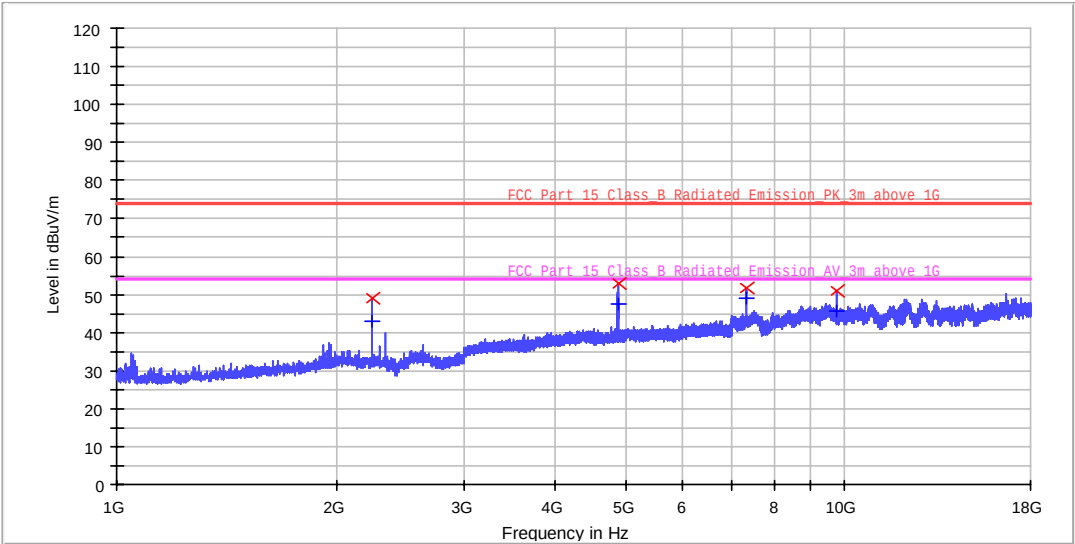
Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	AV (dBuV/m)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)	Margin - PK+ (dB)	Limit - PK+ (dBuV/)	Margin - AV (dB)	Limit - AV (dBuV/)
2659.600000	44.6	39.5	250.0	V	154.0	-10.5	29.4	74.0	14.5	54.0
4803.700000	54.1	49.5	320.0	V	276.0	-3.4	19.9	74.0	4.5	54.0
7206.100000	52.8	49.3	150.0	V	93.0	0.2	21.2	74.0	4.7	54.0
9607.900000	53.5	51.2	100.0	V	109.0	2.2	20.5	74.0	2.8	54.0



8-DPSK:2441MHz

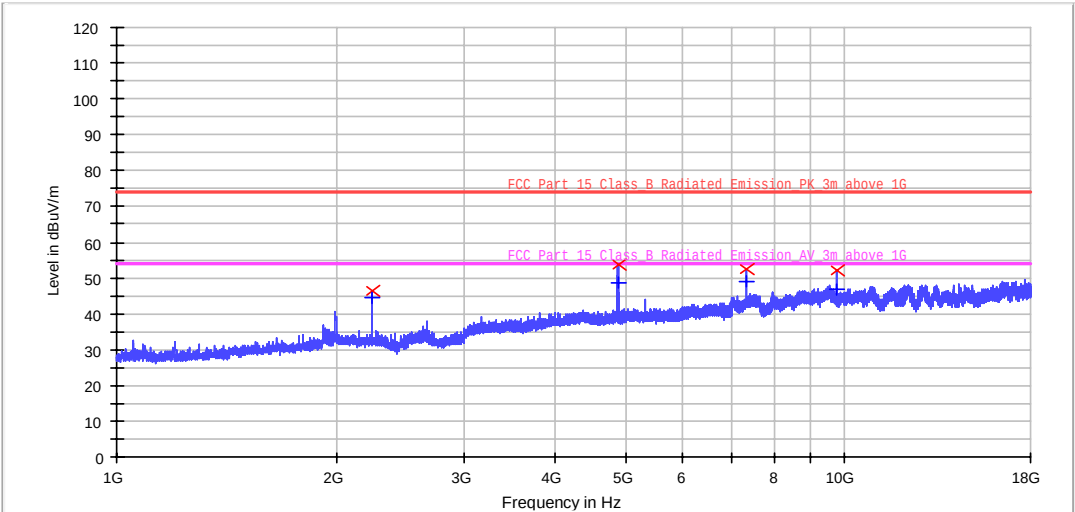
RE_HF907_BRF_Pre



Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	AV (dBuV/m)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)	Margin - PK+ (dB)	Limit - PK+ (dBuV/m)	Margin - AV (dB)	Limit - AV (dBuV/m)
2248.900000	49.1	43.1	225.0	H	199.0	-12.4	24.9	74.0	10.9	54.0
4882.300000	52.7	47.4	164.0	H	84.0	-3.1	21.3	74.0	6.6	54.0
7322.800000	51.7	49.2	267.0	H	268.0	0.2	22.3	74.0	4.8	54.0
9763.600000	51.1	45.8	100.0	H	205.0	2.4	22.9	74.0	8.2	54.0

RE_HF907_BRF_Pre

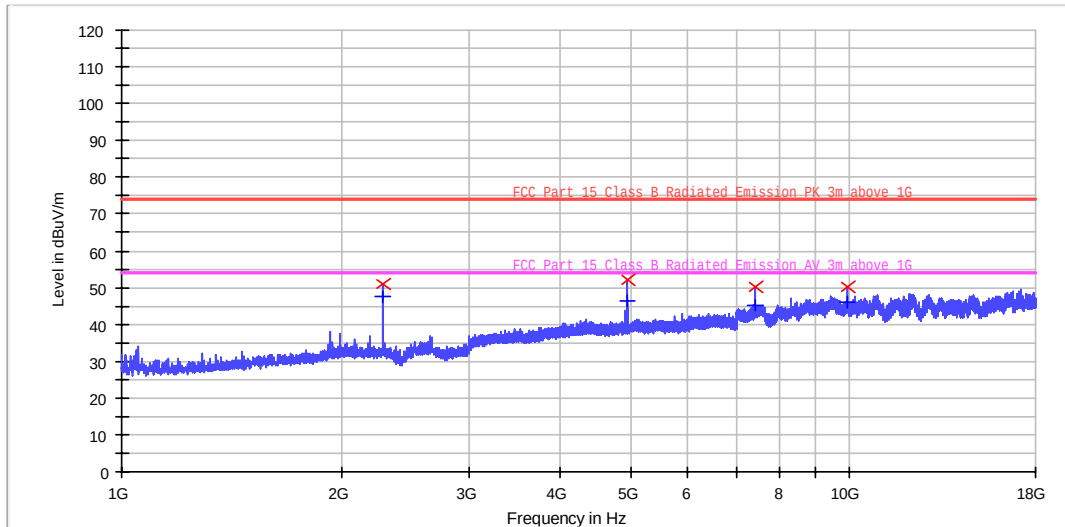


Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	AV (dBuV/m)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)	Margin - PK+ (dB)	Limit - PK+ (dBuV/m)	Margin - AV (dB)	Limit - AV (dBuV/m)
2248.900000	46.4	44.3	250.0	V	288.0	-12.4	27.6	74.0	9.7	54.0
4881.400000	53.6	48.5	300.0	V	126.0	-3.1	20.4	74.0	5.5	54.0
7323.400000	52.7	48.9	100.0	V	259.0	0.2	21.3	74.0	5.1	54.0
9763.900000	52.1	46.7	150.0	V	217.0	2.4	21.9	74.0	7.3	54.0

8-DPSK:2480MHz

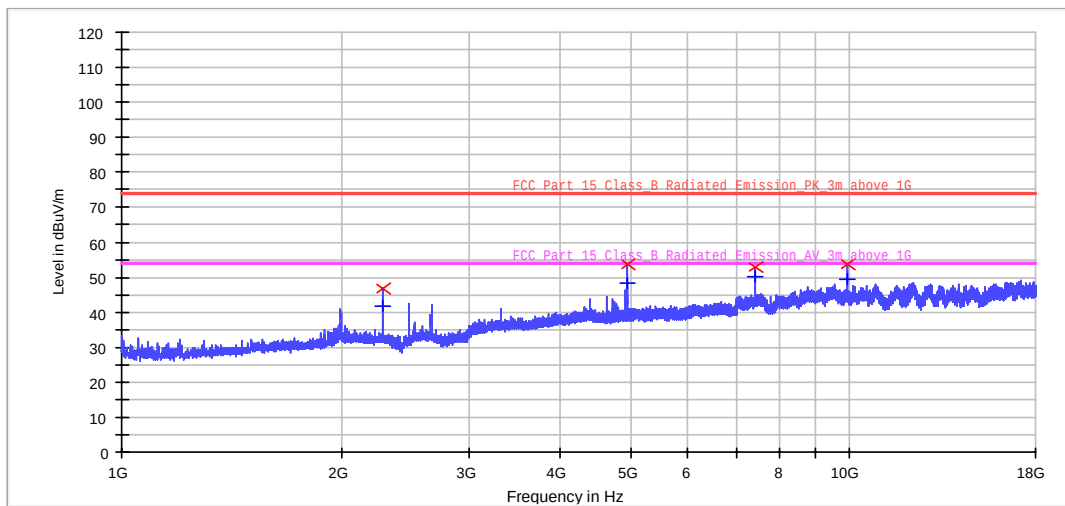
RE_HF907_BRF_Pre



Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	AV (dBuV/m)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)	Margin - PK+ (dB)	Limit - PK+ (dBuV/m)	Margin - AV (dB)	Limit - AV (dBuV/m)
2287.300000	51.0	47.6	250.0	H	315.0	-12.4	23.0	74.0	6.4	54.0
4960.600000	52.1	46.4	300.0	H	146.0	-3.0	21.9	74.0	7.6	54.0
7439.800000	50.2	45.1	220.0	H	234.0	0.2	23.8	74.0	8.9	54.0
9920.200000	50.2	46.0	150.0	H	322.0	2.7	23.8	74.0	8.0	54.0

RE_HF907_BRF_Pre



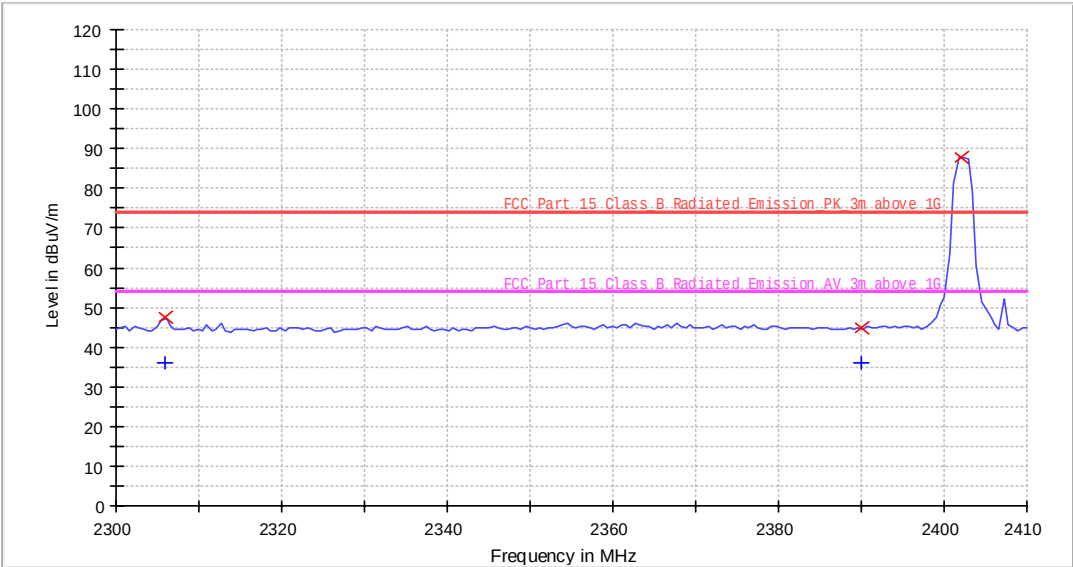
Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	AV (dBuV/m)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)	Margin - PK+ (dB)	Limit - PK+ (dBuV/m)	Margin - AV (dB)	Limit - AV (dBuV/m)
2288.200000	46.8	41.6	350.0	V	315.0	-12.4	27.2	74.0	12.4	54.0
4959.400000	53.8	48.3	240.0	V	211.0	-3.0	20.2	74.0	5.7	54.0
7440.400000	52.9	50.1	150.0	V	249.0	0.2	21.1	74.0	3.9	54.0
9919.600000	53.7	49.6	100.0	V	238.0	2.7	20.3	74.0	4.4	54.0



GFSK: Band edge hopping off at 2402MHz

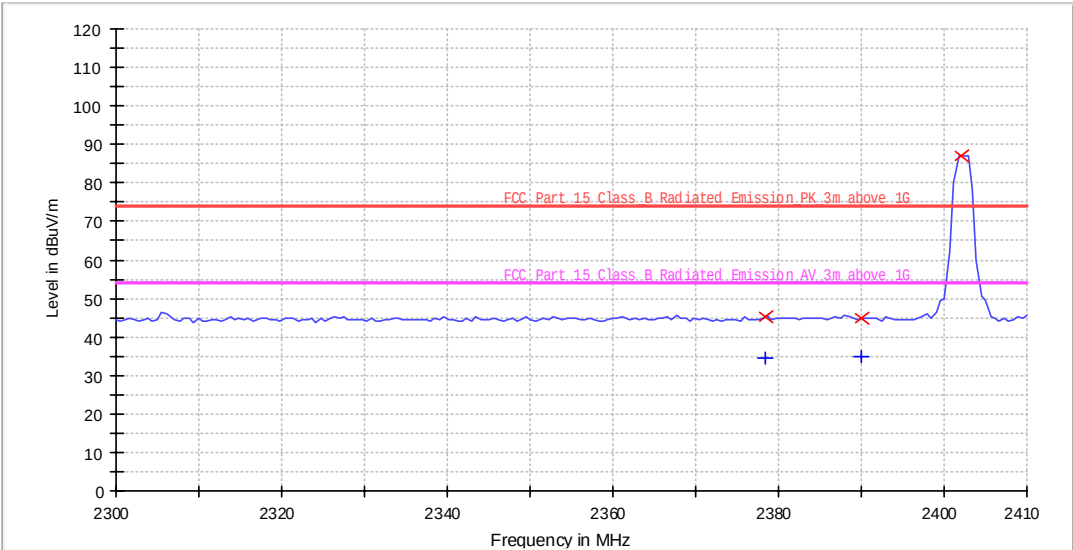
RE_HF907_BRF_Pre



Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	AV (dBuV/m)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBuV/m)	Margin - AV (dB)	Limit - AV (dBuV/m)
2305.900000	47.4	36.0	100.0	H	214.0	-2.3	26.6	74.0	18.0	54.0
2390.000000	44.9	35.9	165.0	H	269.0	-1.9	29.1	74.0	18.1	54.0
2402.000000	87.9	---	200.0	H	180.0	-1.8	-13.9	74.0	---	---

RE_HF907_BRF_Pre

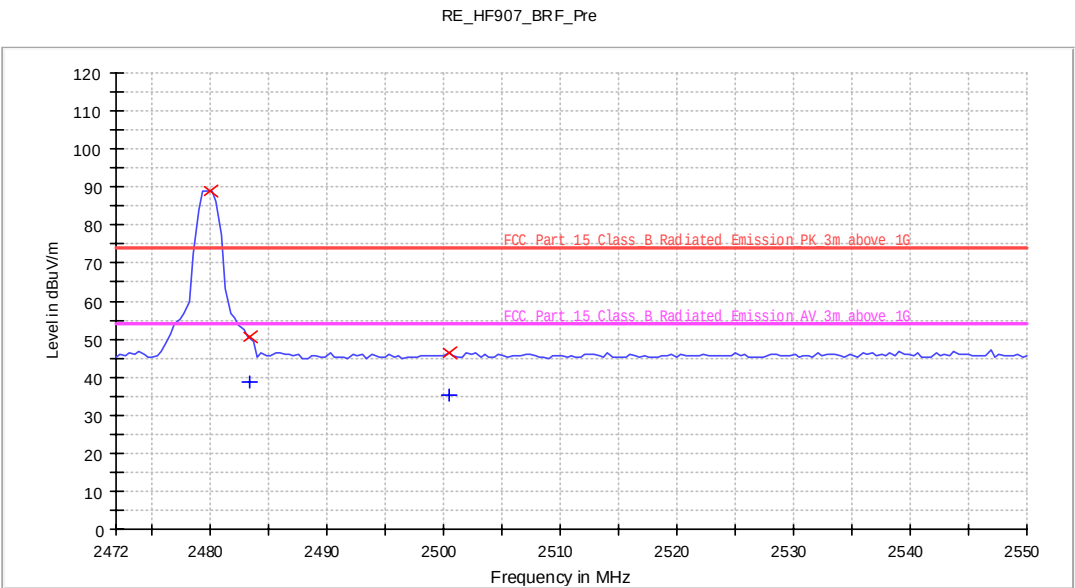


Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	AV (dBuV/m)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBuV/m)	Margin - AV (dB)	Limit - AV (dBuV/m)
2378.500000	45.2	34.7	200.0	V	146.0	-2.0	28.8	74.0	19.3	54.0
2390.000000	45.0	34.8	160.0	V	287.0	-1.9	29.0	74.0	19.2	54.0
2402.000000	87.1	---	225.0	V	312.0	-1.8	-13.1	74.0	---	---

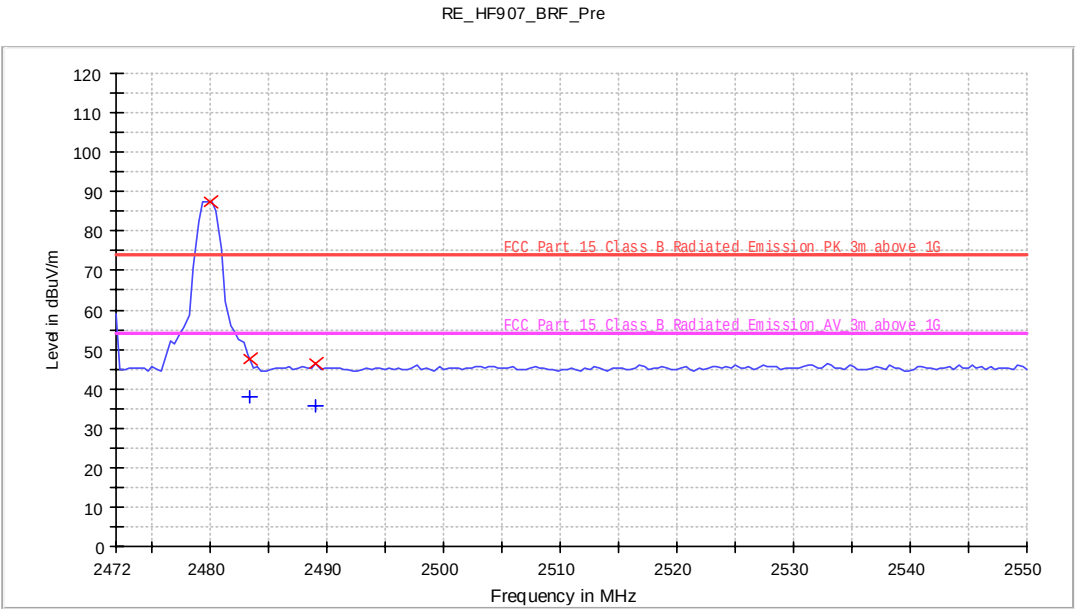


GFSK: Band edge hopping off at 2480MHz



Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	AV (dBuV/m)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBuV/m)	Margin - AV (dB)	Limit - AV (dBuV/m)
2480.000000	89.1	---	150.0	H	311.0	-1.4	-15.1	74.0	---	---
2483.500000	50.6	38.6	230.0	H	128.0	-1.3	23.4	74.0	15.4	54.0
2500.470000	46.4	35.3	165.0	H	197.0	-1.3	27.6	74.0	18.7	54.0

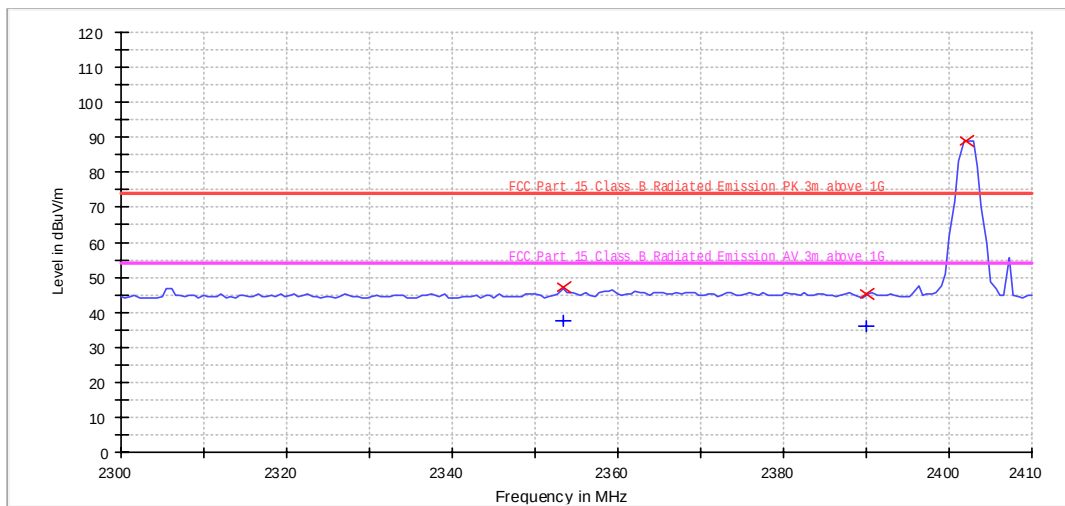


Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	AV (dBuV/m)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBuV/m)	Margin - AV (dB)	Limit - AV (dBuV/m)
2480.000000	87.4	---	255.0	V	182.0	-1.4	-13.4	74.0	---	---
2483.500000	47.4	37.8	146.0	V	253.0	-1.4	26.6	74.0	16.2	54.0
2489.160000	46.3	35.7	150.0	V	228.0	-1.3	27.7	74.0	18.3	54.0

$\pi/4$ -DQPSK: Band edge hopping off at 2402MHz

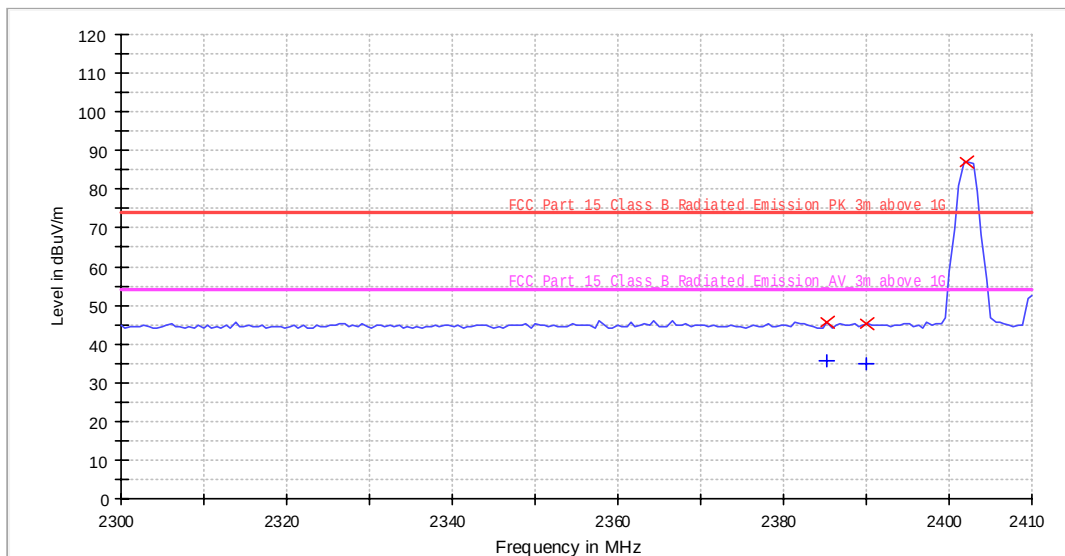
RE_HF907_BRF_Pre



Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	AV (dBuV/m)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBuV/m)	Margin - AV (dB)	Limit - AV (dBuV/m)
2353.300000	47.1	37.6	143.0	H	241.0	-2.1	26.9	74.0	16.4	54.0
2390.000000	45.1	35.9	220.0	H	169.0	-1.9	28.9	74.0	18.1	54.0
2402.000000	88.9	---	150.0	H	312.0	-1.8	-14.9	74.0	---	---

RE_HF907_BRF_Pre



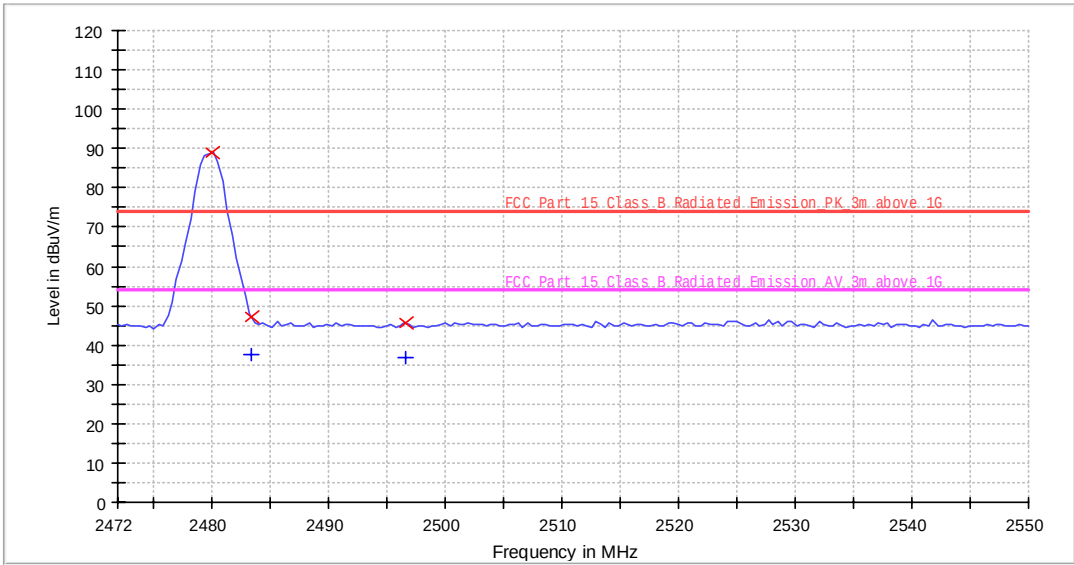
Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	AV (dBuV/m)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBuV/m)	Margin - AV (dB)	Limit - AV (dBuV/m)
2385.250000	45.7	35.6	100.0	V	236.0	-1.9	28.3	74.0	18.4	54.0
2390.000000	45.2	34.8	186.0	V	189.0	-1.9	28.8	74.0	19.2	54.0
2402.000000	87.1	---	250.0	V	274.0	-1.8	-13.1	74.0	---	---



$\pi/4$ -DQPSK: Band edge hopping off at 2480MHz

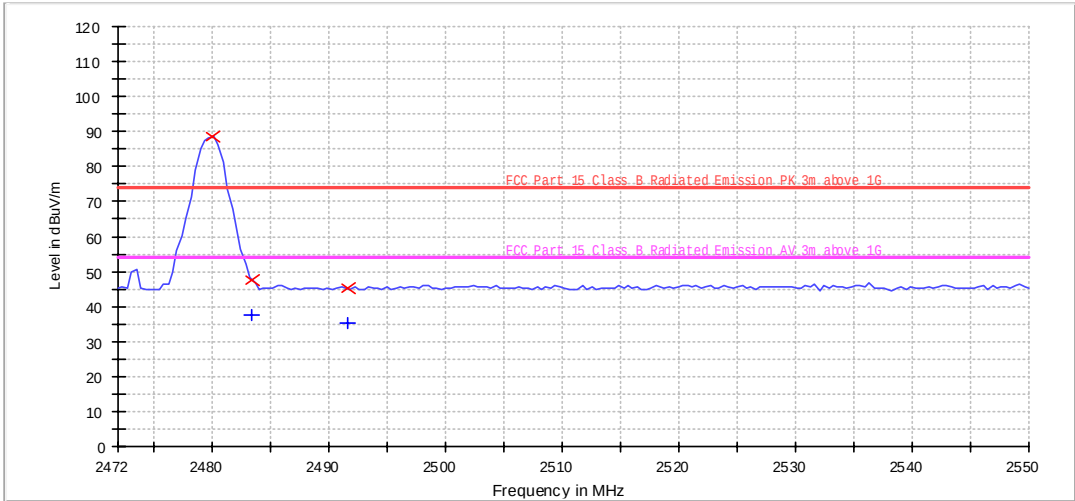
RE_HF907_BRF_Pre



Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	AV (dBuV/m)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBuV/m)	Margin - AV (dB)	Limit - AV (dBuV/m)
2480.000000	88.8	---	330.0	H	182.0	-1.4	-14.8	74.0	---	---
2483.500000	47.3	37.7	241.0	H	249.0	-1.4	26.7	74.0	16.4	54.0
2496.700000	45.6	36.9	152.0	H	223.0	-1.3	28.4	74.0	17.1	54.0

RE_HF907_BRF_Pre

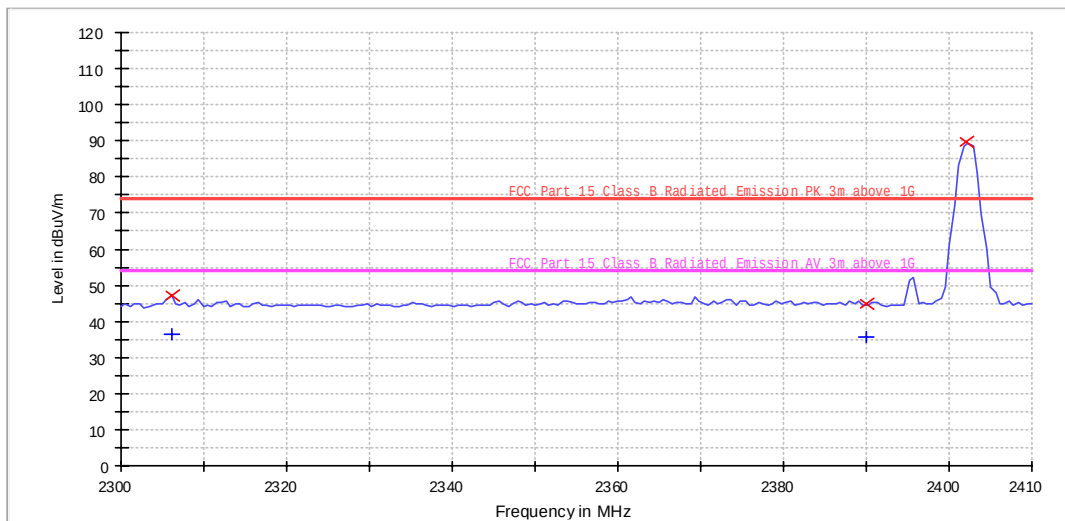


Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	AV (dBuV/m)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBuV/m)	Margin - AV (dB)	Limit - AV (dBuV/m)
2480.000000	88.5	---	250.0	V	266.0	-1.4	-14.5	74.0	---	---
2483.500000	47.6	37.6	150.0	V	147.0	-1.3	26.4	74.0	16.4	54.0
2491.600000	45.1	35.2	200.0	V	285.0	-1.3	28.9	74.0	18.9	54.0

8-DPSK: Band edge hopping off at 2402MHz

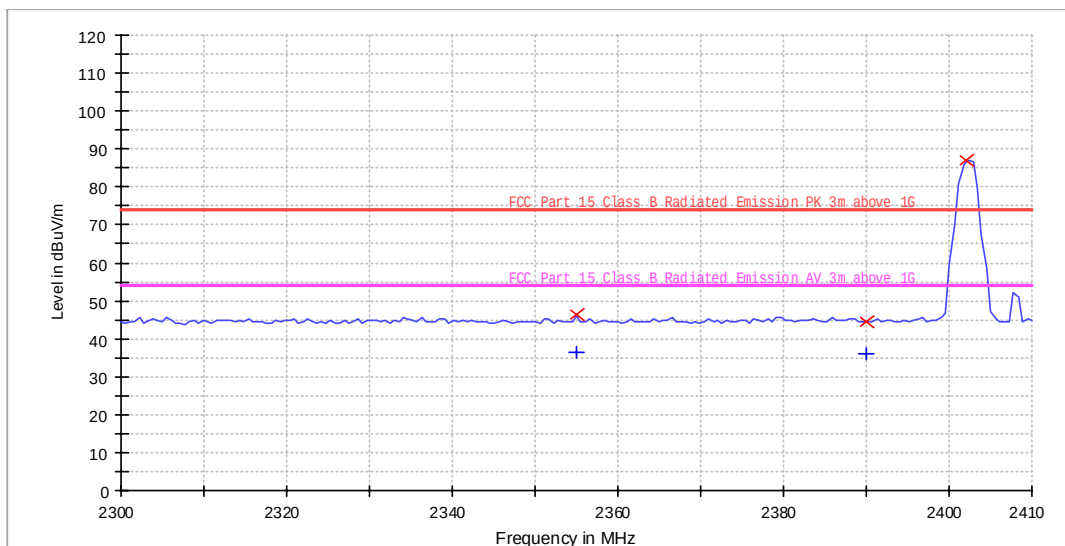
RE_HF907_BRF_Pre



Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	AV (dBuV/m)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBuV/m)	Margin - AV (dB)	Limit - AV (dBuV/m)
2306.050000	47.3	36.3	250.0	H	145.0	-2.3	26.7	74.0	17.7	54.0
2390.000000	45.0	35.8	230.0	H	222.0	-1.9	29.0	74.0	18.2	54.0
2402.000000	89.7	---	120.0	H	199.0	-1.8	-15.7	74.0	---	---

RE_HF907_BRF_Pre

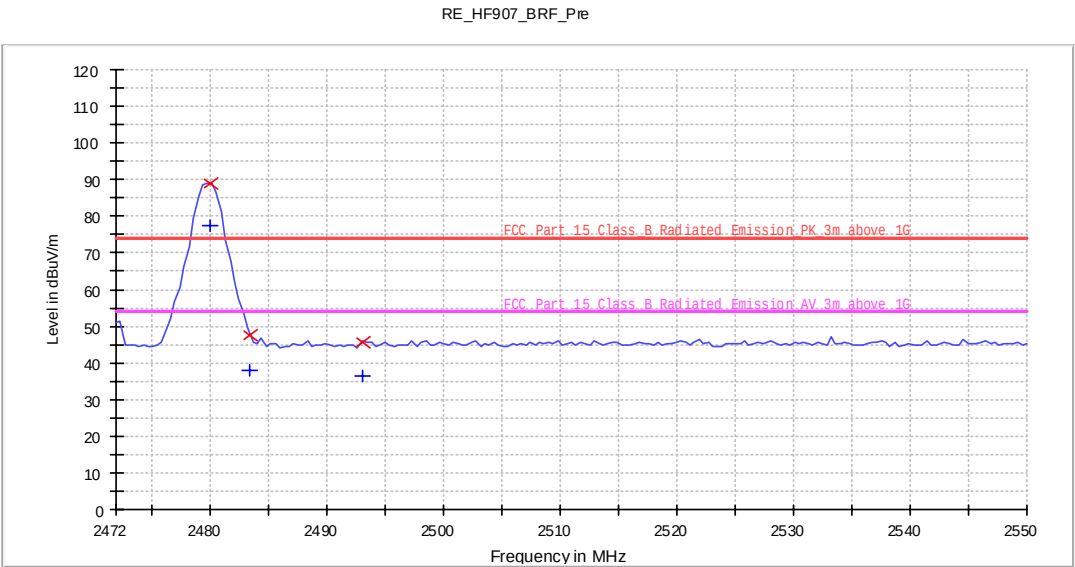


Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	AV (dBuV/m)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBuV/m)	Margin - AV (dB)	Limit - AV (dBuV/m)
2355.100000	46.5	36.4	300.0	V	256.0	-2.1	27.5	74.0	17.6	54.0
2390.000000	44.6	36.0	126.0	V	219.0	-1.9	29.4	74.0	18.0	54.0
2402.000000	86.9	---	210.0	V	137.0	-1.8	-12.9	74.0	---	---

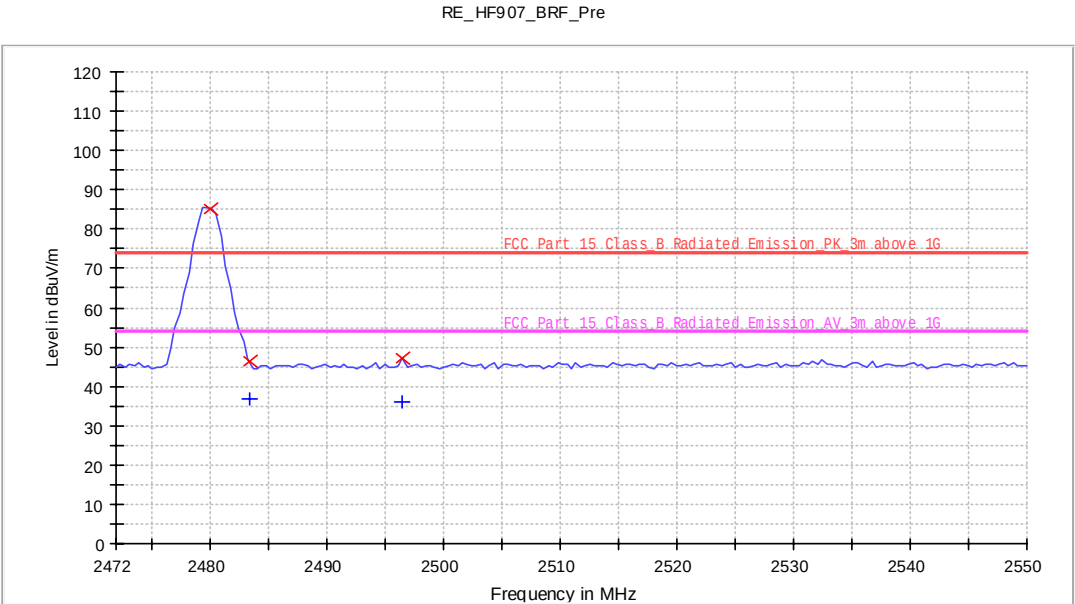


8-DPSK: Band edge hopping off at 2480MHz



Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	AV (dBuV/m)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBuV/m)	Margin - AV (dB)	Limit - AV (dBuV/m)
2480.000000	88.9	77.4	213.0	H	162.0	-1.4	-14.9	74.0	-23.4	54.0
2483.500000	47.7	37.8	10.0	H	127.0	-1.3	26.3	74.0	16.2	54.0
2493.100000	45.8	36.6	210.0	H	298.0	-1.3	28.2	74.0	17.4	54.0



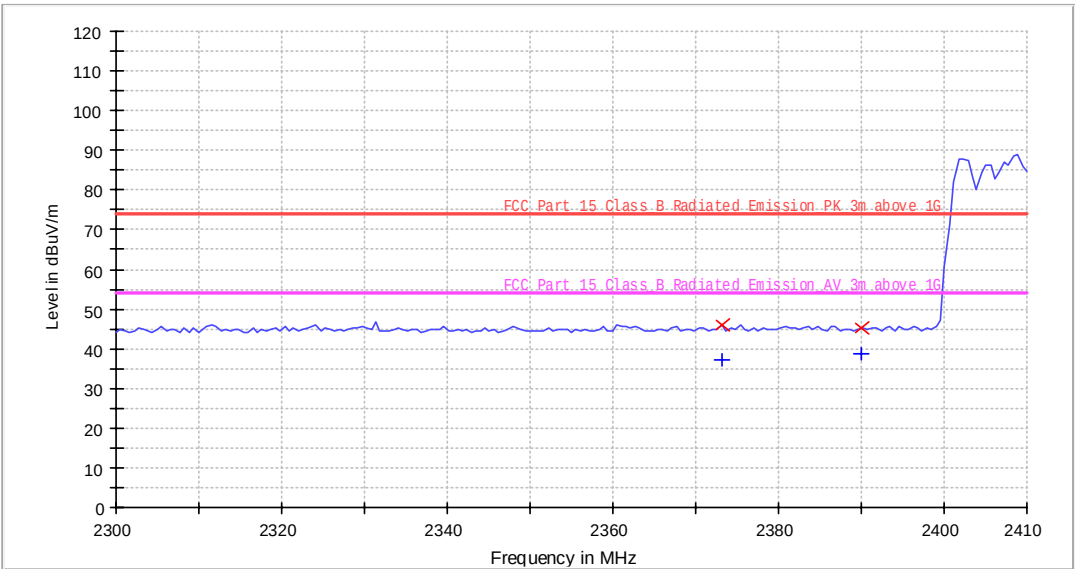
Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	AV (dBuV/m)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBuV/m)	Margin - AV (dB)	Limit - AV (dBuV/m)
2480.000000	85.1	---	220.0	V	313.0	-1.4	-11.1	74.0	---	---
2483.500000	46.2	36.8	250.0	V	236.0	-1.4	27.8	74.0	17.2	54.0
2496.570000	47.2	35.9	150.0	V	158.0	-1.3	26.8	74.0	18.1	54.0



GFSK: Band edge hopping on

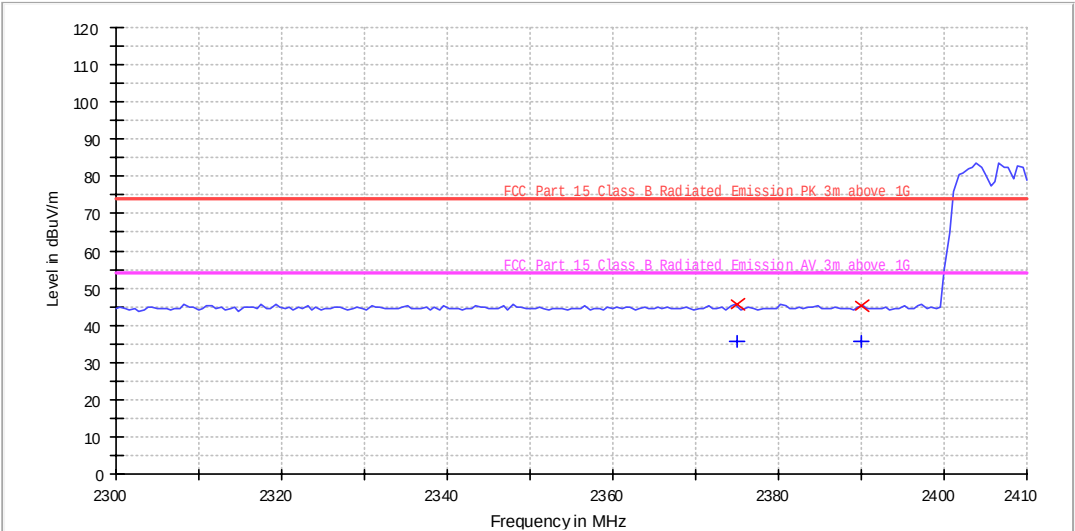
RE_HF907_BRF_Pre



Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	AV (dBuV/m)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBuV/)	Margin - AV (dB)	Limit - AV (dBuV/)
2373.100000	46.0	37.3	233.0	H	142.0	-2.0	28.0	74.0	16.7	54.0
2390.000000	45.1	38.9	150.0	H	291.0	-1.9	28.9	74.0	15.1	54.0

RE_HF907_BRF_Pie

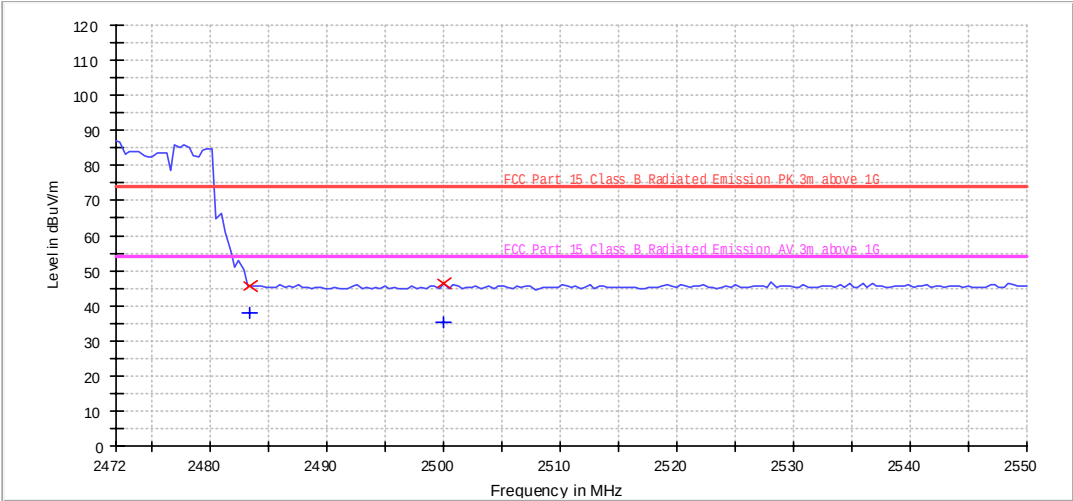


Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	AV (dBuV/m)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBuV/)	Margin - AV (dB)	Limit - AV (dBuV/)
2374.900000	45.5	35.5	220.0	V	211.0	-2.0	28.5	74.0	18.5	54.0
2390.000000	45.3	35.8	100.0	V	189.0	-1.9	28.7	74.0	18.2	54.0



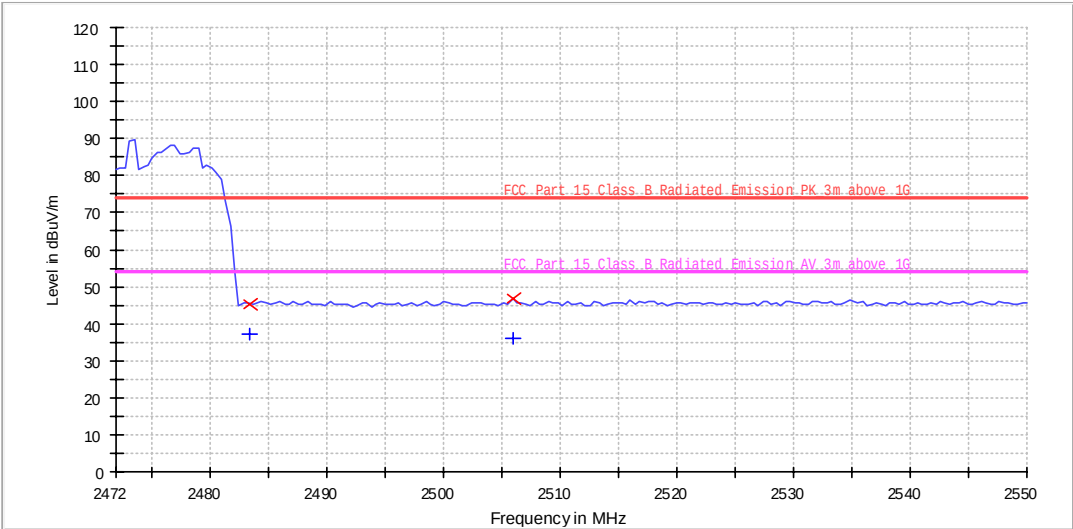
RE_HF907_BRF_Pre



Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	AV (dBuV/m)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBuV/	Margin - AV (dB)	Limit - AV (dBuV/
2483.500000	45.7	38.1	150.0	H	117.0	-1.3	28.3	74.0	15.9	54.0
2500.000000	46.3	35.4	250.0	H	260.0	-1.3	27.7	74.0	18.6	54.0

RE_HF907_BRF_Pre

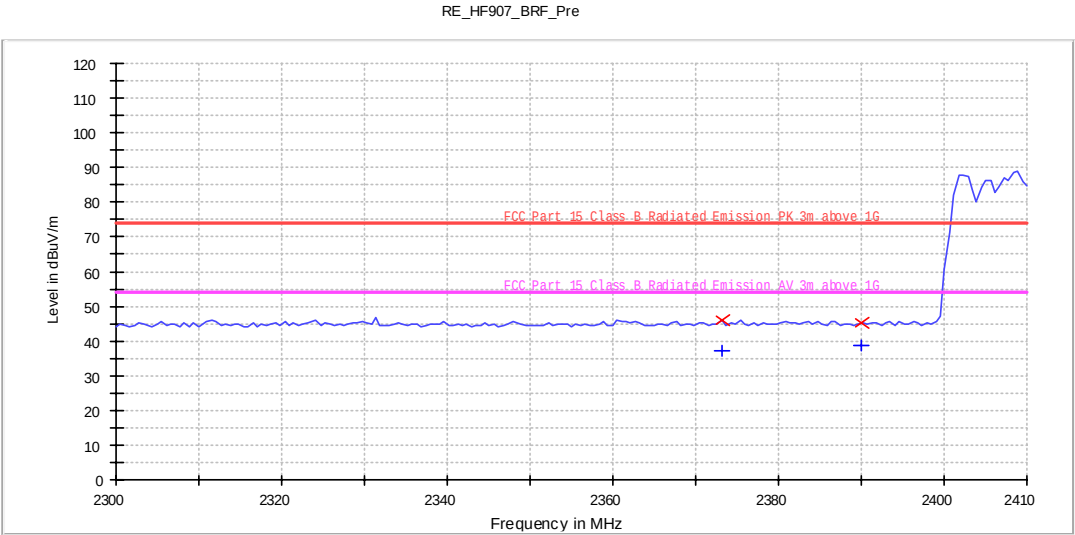


Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	AV (dBuV/m)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBuV/	Margin - AV (dB)	Limit - AV (dBuV/
2483.500000	45.4	37.1	100.0	V	219.0	-1.3	28.6	74.0	16.9	54.0
2506.000000	46.9	35.9	180.0	V	267.0	-1.2	27.1	74.0	18.1	54.0

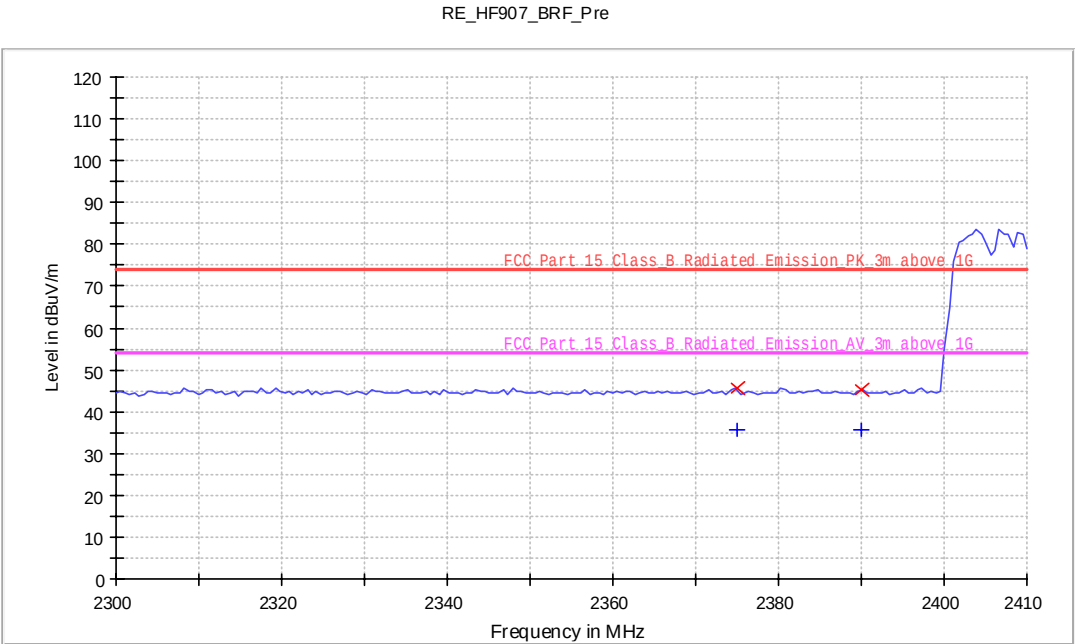


$\pi/4$ -DQPSK: Band edge hopping on



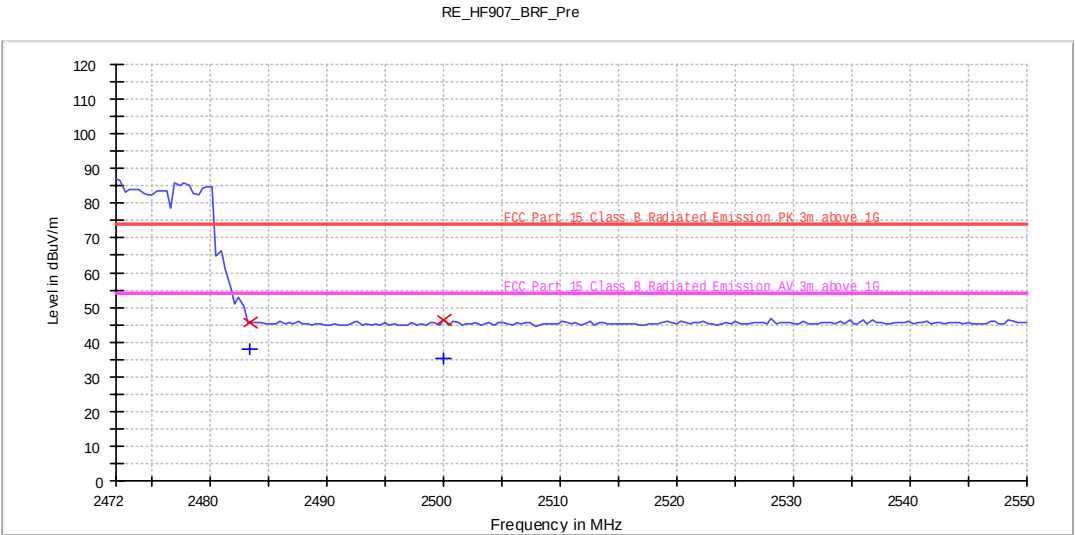
Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	AV (dBuV/m)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBuV/)	Margin - AV (dB)	Limit - AV (dBuV/)
2373.100000	46.0	37.3	233.0	H	142.0	-2.0	28.0	74.0	16.7	54.0
2390.000000	45.1	38.9	150.0	H	291.0	-1.9	28.9	74.0	15.1	54.0



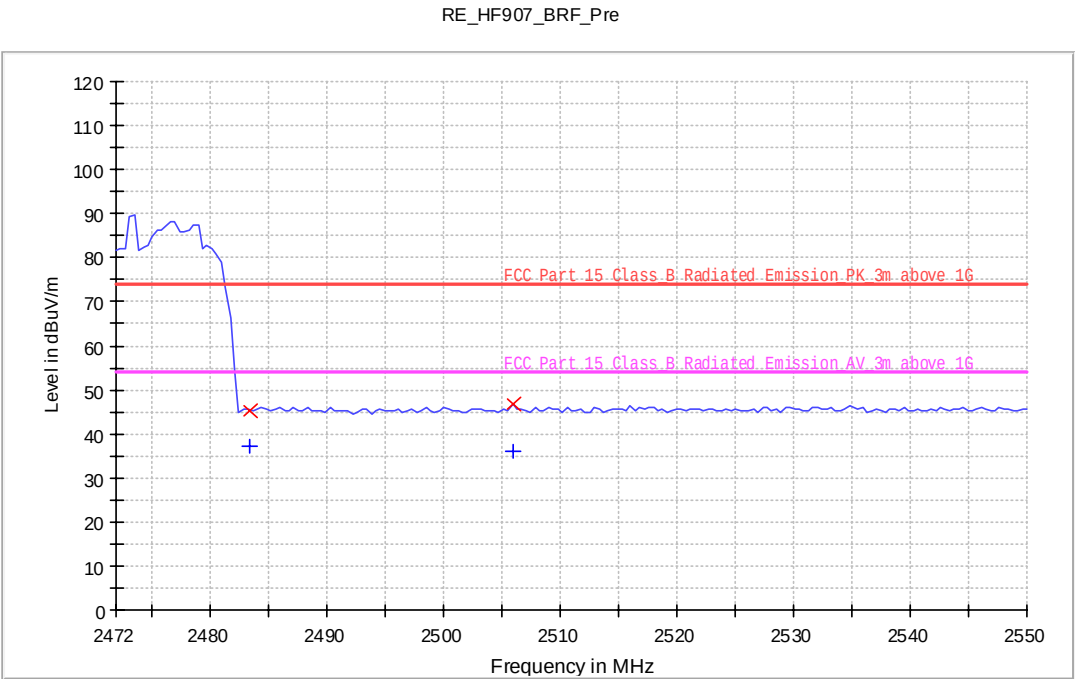
Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	AV (dBuV/m)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBuV/)	Margin - AV (dB)	Limit - AV (dBuV/)
2374.900000	45.5	35.5	220.0	V	211.0	-2.0	28.5	74.0	18.5	54.0
2390.000000	45.3	35.8	100.0	V	189.0	-1.9	28.7	74.0	18.2	54.0



Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	AV (dBuV/m)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBuV/)	Margin - AV (dB)	Limit - AV (dBuV/)
2483.500000	45.7	38.1	150.0	H	117.0	-1.3	28.3	74.0	15.9	54.0
2500.000000	46.3	35.4	250.0	H	260.0	-1.3	27.7	74.0	18.6	54.0



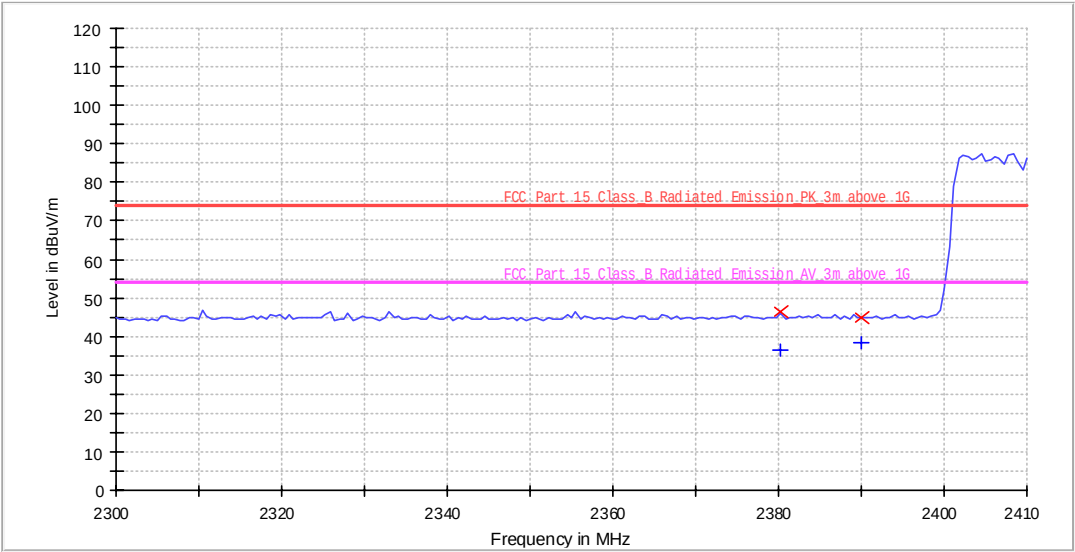
Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	AV (dBuV/m)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBuV/)	Margin - AV (dB)	Limit - AV (dBuV/)
2483.500000	45.4	37.1	100.0	V	219.0	-1.3	28.6	74.0	16.9	54.0
2506.000000	46.9	35.9	180.0	V	267.0	-1.2	27.1	74.0	18.1	54.0



8-DPSK: Band edge hopping on

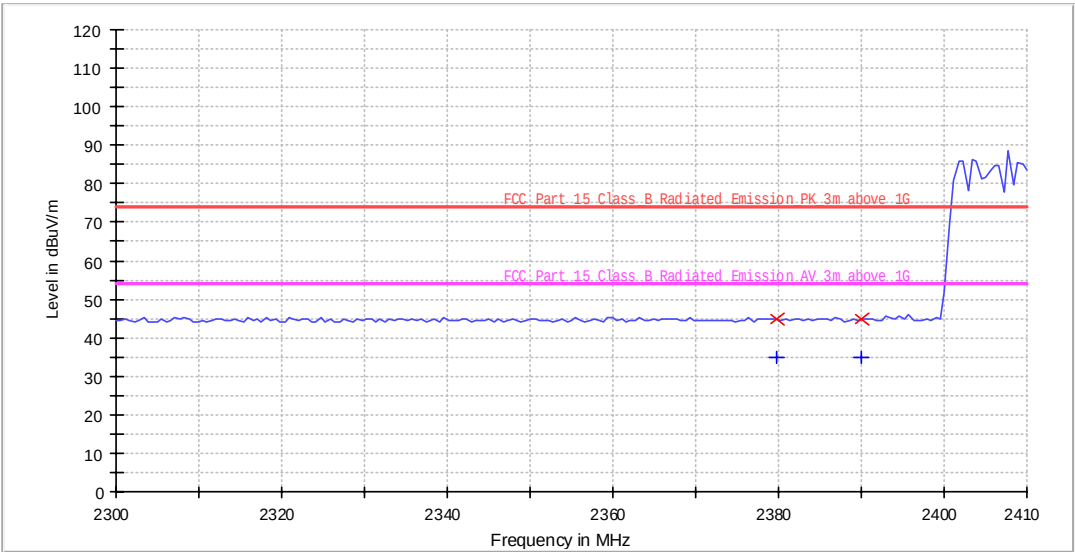
RE_HF907_BRF_Pre



Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	AV (dBuV/m)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBuV)	Margin - AV (dB)	Limit - AV (dBuV)
2380.300000	46.2	36.5	162.0	H	264.0	-1.9	27.8	74.0	17.5	54.0
2390.000000	44.8	38.5	230.0	H	183.0	-1.9	29.2	74.0	15.5	54.0

RE_HF907_BRF_Pre

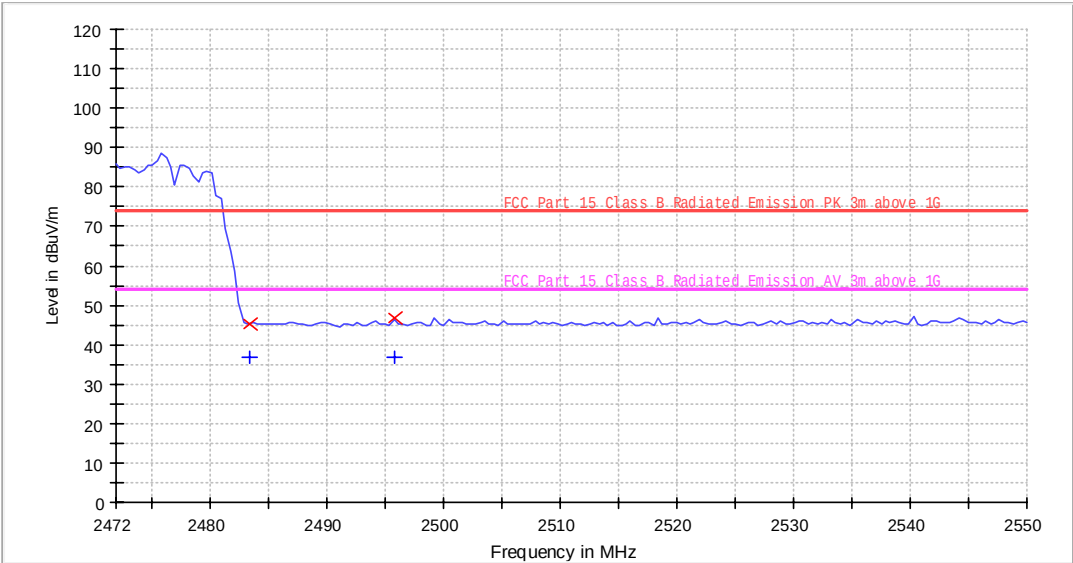


Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	AV (dBuV/m)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBuV)	Margin - AV (dB)	Limit - AV (dBuV)
2379.700000	45.0	34.9	250.0	V	210.0	-1.9	29.0	74.0	19.1	54.0
2390.000000	44.9	34.8	150.0	V	155.0	-1.9	29.1	74.0	19.2	54.0



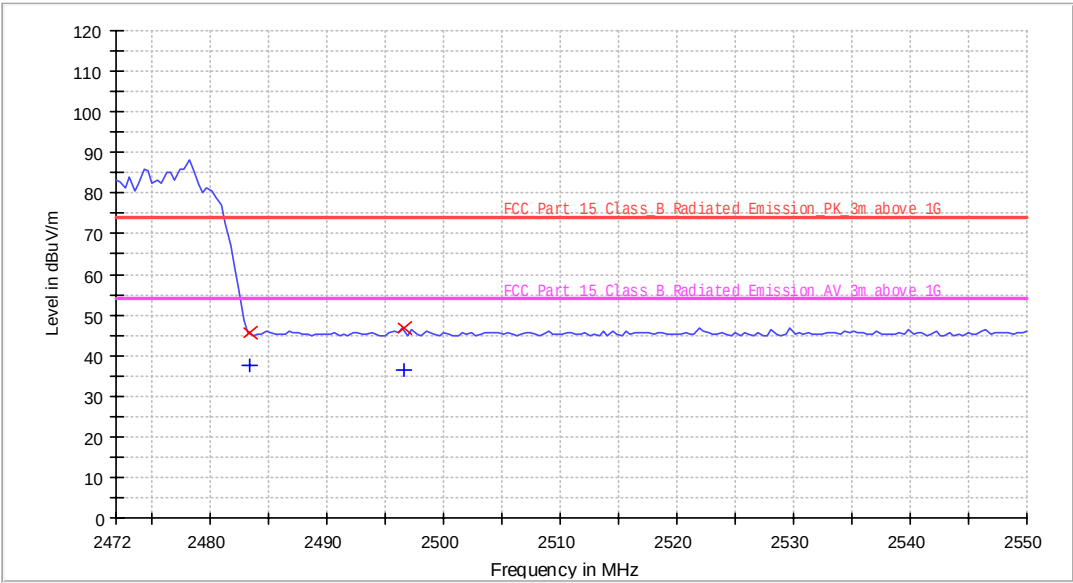
RE_HF907_BRF_Pre



Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	AV (dBuV/m)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBuV/)	Margin - AV (dB)	Limit - AV (dBuV/)
2483.500000	45.1	36.9	255.0	H	239.0	-1.4	28.9	74.0	17.1	54.0
2495.800000	46.7	36.7	100.0	H	152.0	-1.3	27.3	74.0	17.3	54.0

RE_HF907_BRF_Pre



Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	AV (dBuV/m)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBuV/)	Margin - AV (dB)	Limit - AV (dBuV/)
2483.500000	45.7	37.7	250.0	V	225.0	-1.4	28.3	74.0	16.3	54.0
2496.700000	46.8	36.5	150.0	V	314.0	-1.3	27.2	74.0	17.5	54.0

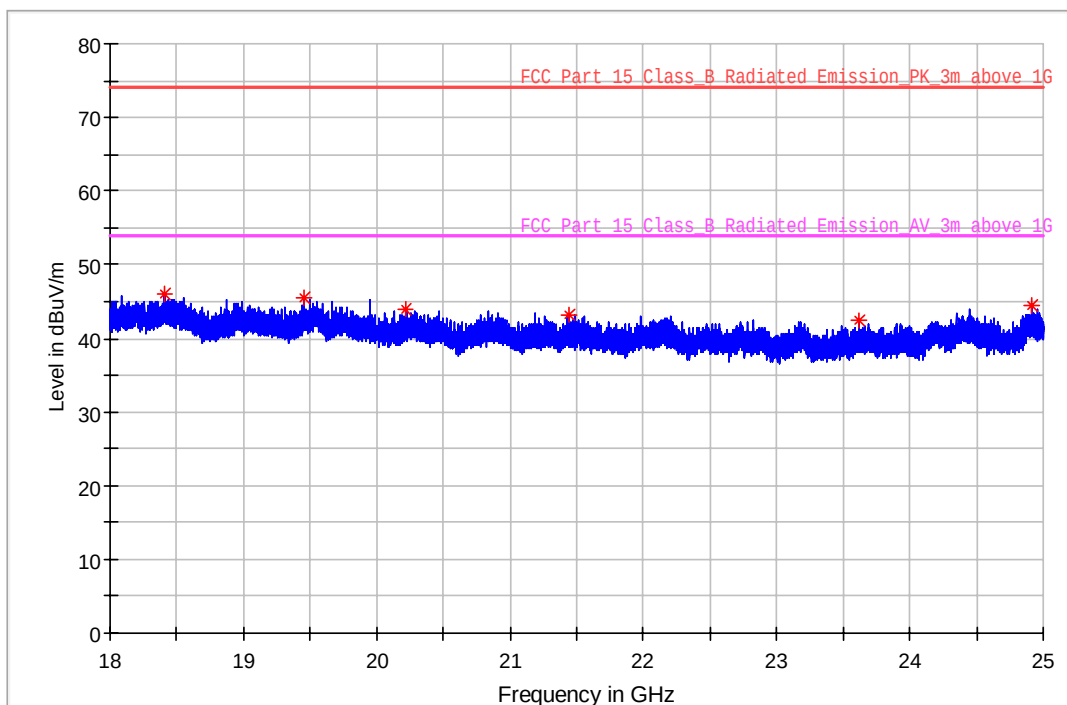
Worst case Radiated Emission 18-25GHz

18-25GHz Radiated Emission

EUT Information

EUT Name: Wireless Headphones
 Model: CE220818
 Client: Balco Brands Pty Ltd
 Op Cond: Power on and TX_2402MHz at GFSK mode
 Operator: Doujun XU
 Test Spec: FCC 15.209 (a)
 Comment: Horizontal
 Sample No: SHA-929061-2

Full Spectrum



Critical Freqs

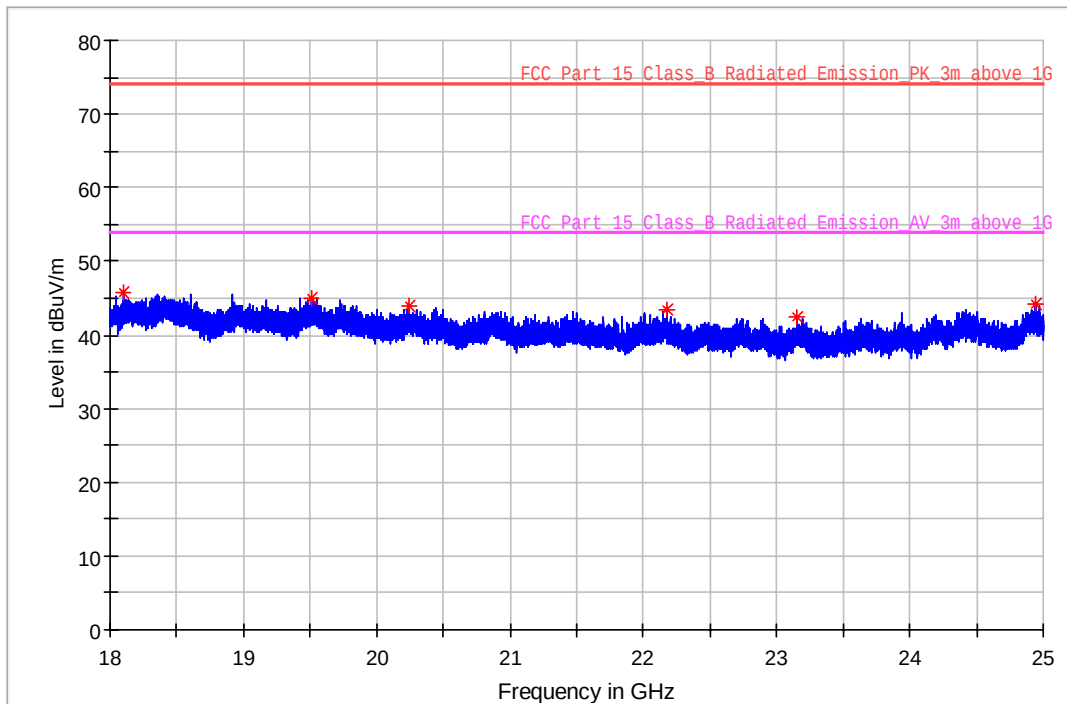
Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
18412.343750	46.04	---	74.00	27.96	100.0	H	156.0	8.1
19459.718750	45.39	---	74.00	28.61	100.0	H	134.0	8.4
20216.375000	44.04	---	74.00	29.96	100.0	H	122.0	8.3
21437.437500	43.12	---	74.00	30.88	100.0	H	81.0	8.6
23613.781250	42.44	---	74.00	31.56	100.0	H	118.0	8.9
24919.500000	44.48	---	74.00	29.52	100.0	H	74.0	9.0

18-25GHz Radiated Emission

EUT Information

EUT Name: Wireless Headphones
 Model: CE220818
 Client: Balco Brands Pty Ltd
 Op Cond: Power on and TX_2402MHz at GFSK mode
 Operator: Doujun XU
 Test Spec: FCC 15.209 (a)
 Comment: Vertical
 Sample No: SHA-929061-2

Full Spectrum



Critical Freqs

Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
18103.250000	45.86	---	74.00	28.14	100.0	V	121.0	8.1
19515.281250	45.05	---	74.00	28.95	100.0	V	33.0	8.4
20238.687500	43.83	---	74.00	30.17	100.0	V	30.0	8.3
22171.781250	43.47	---	74.00	30.53	100.0	V	4.0	8.8
23152.437500	42.41	---	74.00	31.59	100.0	V	330.0	8.9
24942.468750	44.24	---	74.00	29.76	100.0	V	12.0	9.0

11 Test Equipment List

List of Test Instruments Test Site1

	Description	Manufacturer	Model no.	Serial no.	CAL. DATE	CAL. DUE DATE
C	Signal spectrum analyzer	Agilent	N9020B	MY59050168	2025-2-19	2026-2-18
	RF automatic control unit	MWRFTest	MW100-RFCB	S2110418b-YQ-EMC	2024-10-8	2025-10-7
	RF_Cable	UCWAVE ELECTRONIC	UCA500-NJWSM-1.5M	---	2025-8-1	2026-7-31
RE	EMI Test Receiver	Rohde & Schwarz	ESR3	101906	2025-8-1	2026-7-31
	Signal Analyzer	Rohde & Schwarz	FSV40	101091	2025-8-1	2026-7-31
	Trilog Super Broadband Test Antenna	Schwarzbeck	VULB 9168	961	2024-8-30	2025-8-29
	Double-ridged waveguide horn antenna	Rohde & Schwarz	HF907	102393	2025-4-14	2026-4-13
	Pre-amplifier	Shenzhen HzEMC	HPA-081843	HYP A23026	2025-4-14	2026-4-13
	Loop antenna	Rohde & Schwarz	HFH2-Z2	100443	2025-7-4	2026-7-3
	Double Ridged Horn Antenna	ETS-Lindgren	3116C	000222727	2023-7-7	2026-7-6
	RE_Cable_01 Coaxial Cable	JUNFLON	MWX221	1906S057	2025-8-1	2026-7-31
	RE_Cable_02 Coaxial Cable	HUBER+SUHNER	RG214	1358176	2025-8-1	2026-7-31
	RE_Cable_03 Coaxial Cable	JUNFLON	MWX221	J12J102482	2025-8-1	2026-7-31
	RE_Cable_04 Coaxial Cable	PASTERNAK	PE360	2233	2025-8-1	2026-7-31
	3m Semi-anechoic chamber	TDK	9X6X6	----	2024-5-8	2027-5-7
CE	EMI Test Receiver	Rohde & Schwarz	ESR3	101907	2025-8-1	2026-7-31
	LISN	Rohde & Schwarz	ENV216	101924	2025-8-1	2026-7-31
	CE_Cable_01 Coaxial Cable	HUBER+SUHNER	RG400	1002115055	2025-8-1	2026-7-31

Measurement Software Information			
Test Item	Software	Manufacturer	Version
C	MTS 8310	MWRFTest	3.0.0.0
RE	EMC 32	Rohde & Schwarz	V10.50.40
CE	EMC 32	Rohde & Schwarz	V9.15.03

C - Conducted RF tests

- Conducted peak output power
- 20dB bandwidth
- Carrier frequency separation
- Number of hopping frequencies
- Dwell Time - Average Time of Occupancy
- Spurious RF conducted emissions
- Band edge

12 System Measurement Uncertainty

For a 95% confidence level, the measurement expanded uncertainties for defined systems, in accordance with the recommendations of ISO 17025 were:

Items	Extended Uncertainty
Conducted Disturbance at Mains Terminals	150kHz to 30MHz, LISN, 3.16dB
Radiated Disturbance	9kHz to 30MHz, 3.52dB 30MHz to 1GHz, 5.03dB (Horizontal) 5.12dB (Vertical) 1GHz to 18GHz, 5.49dB 18GHz to 40GHz, 5.63dB
RF Conducted Measurement	Power related: 1.16dB Frequency related: 6.00×10^{-8}

Measurement Uncertainty Decision Rule:

Determination of conformity with the specification limits is based on the decision rule according to IEC Guide 115: 2023, clause 4.3.3.



13 Photographs of Test Set-ups

Refer to the < Test Setup photos >.



14 Photographs of EUT

Refer to the < External Photos > & < Internal Photos >.

-----End of Test Report-----