

## 4.6 Unwanted Emissions (Conducted)

### Test Procedures

ANSI C63.10-2013 7.8.6 / ANSI C63.10-2013 7.8.8

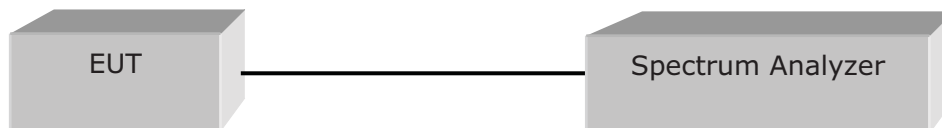
In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated device is operating, the RF power that is produced shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided that the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of root-mean-square averaging over a time interval, as permitted under Section 5.4(4), the attenuation required shall be 30 dB instead of 20 dB.

The bandwidth at 20 dB down from the highest inband spectral density was measured with a spectrum analyzer connected to the antenna terminal, while EUT has its hopping function disabled at the highest, middle and the lowest available channels.

The spectrum analyzer is set to:

Center frequency = the highest, middle and the lowest channels

- |   |                                |
|---|--------------------------------|
| a) RBW = 100 kHz  | b) VBW = 300 kHz ( $\geq$ RBW) |
| c) Span = 30 MHz to 10 times the operating frequency in GHz | d) Detector = peak             |
| e) Trace = max hold   | f) Sweep = auto                |



### Limit

> 20 dBc

### Test Results

All conducted emission in any 100 kHz bandwidth outside of the spectrum band was at least 20 dB lower than the highest level of the in-band spectral density. Therefore the applying equipment meets the requirement.

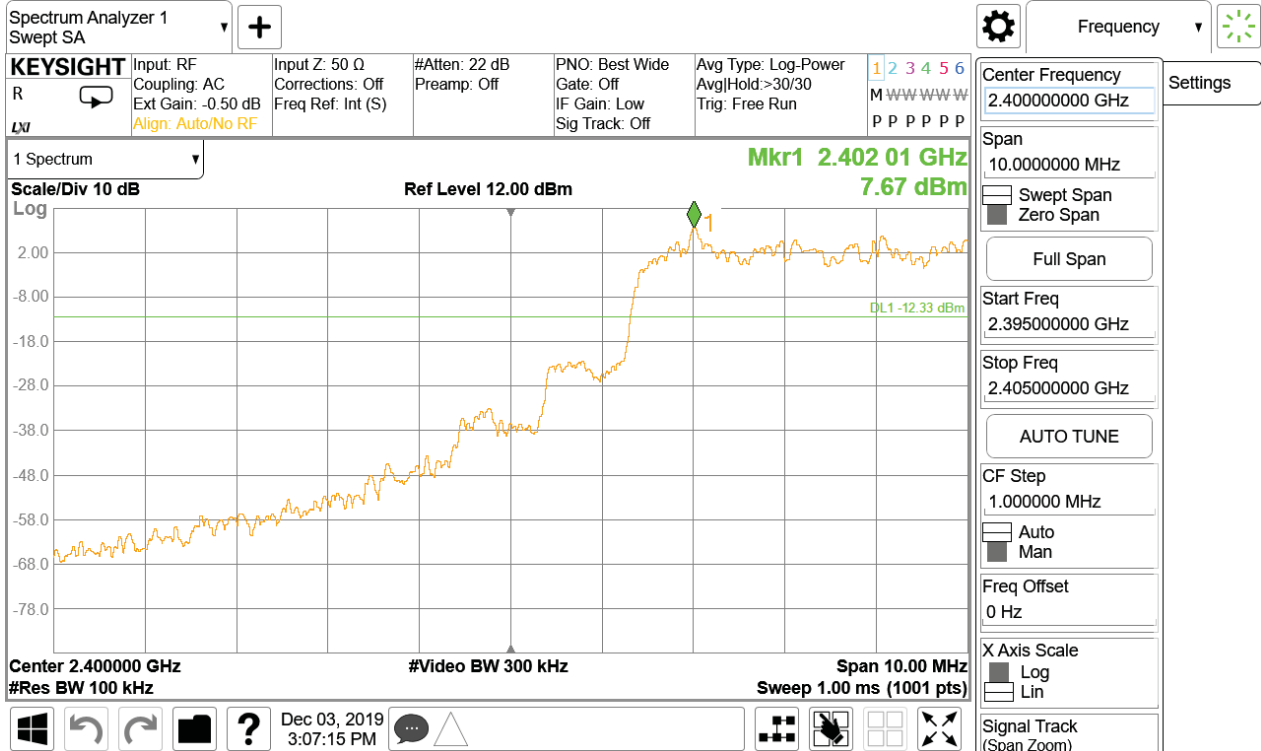
See next pages for actual measured spectrum plots.

## Band Edge

Test Mode : Hopping mode, GFSK



Test Mode : Hopping mode, 8-DPSK



Test Mode : Non-Hopping mode, GFSK



Test Mode : Non-Hopping mode, 8-DPSK





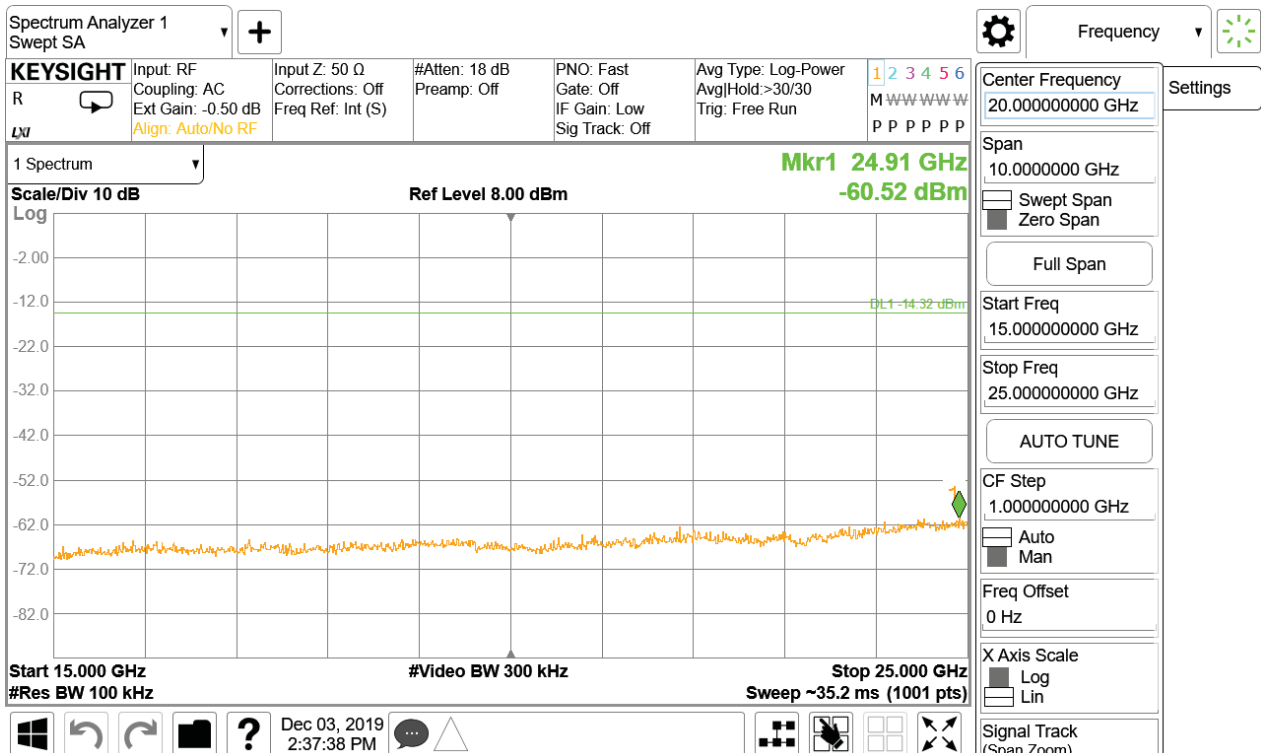
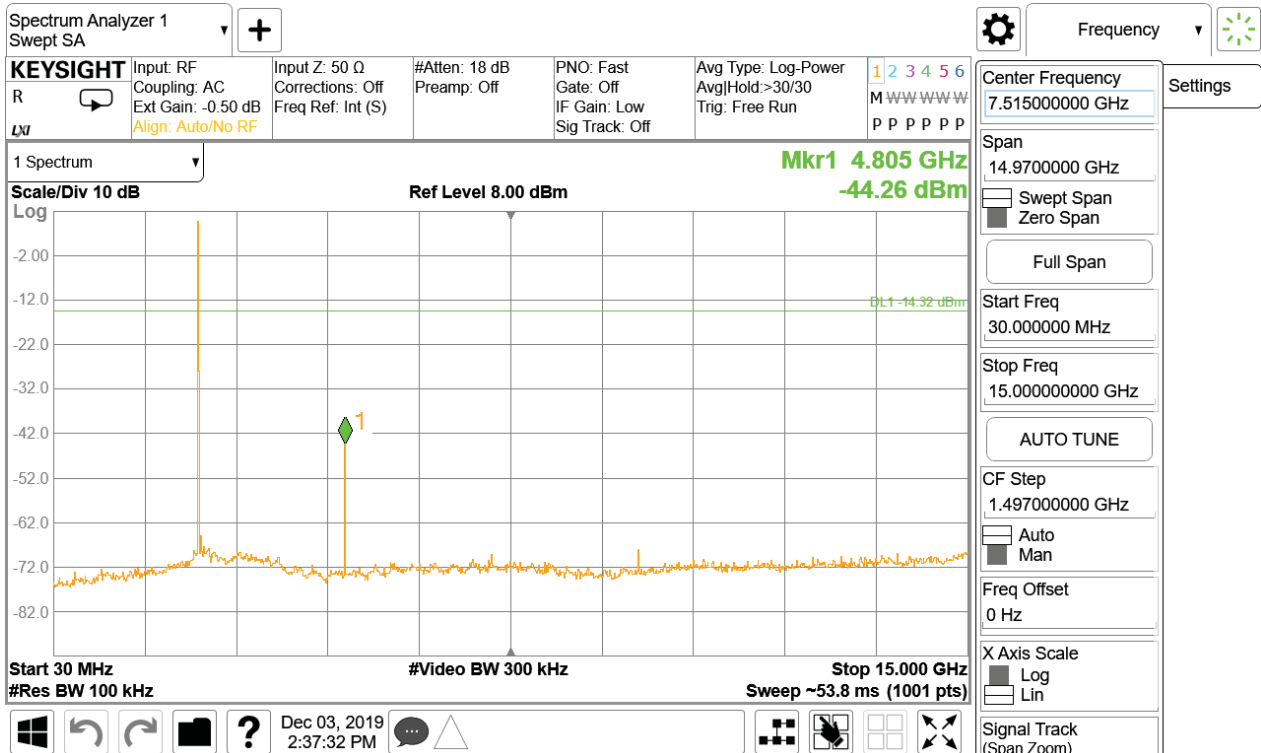
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Report No.:  
CTK-2019-05055  
Page (43) / (69) Pages

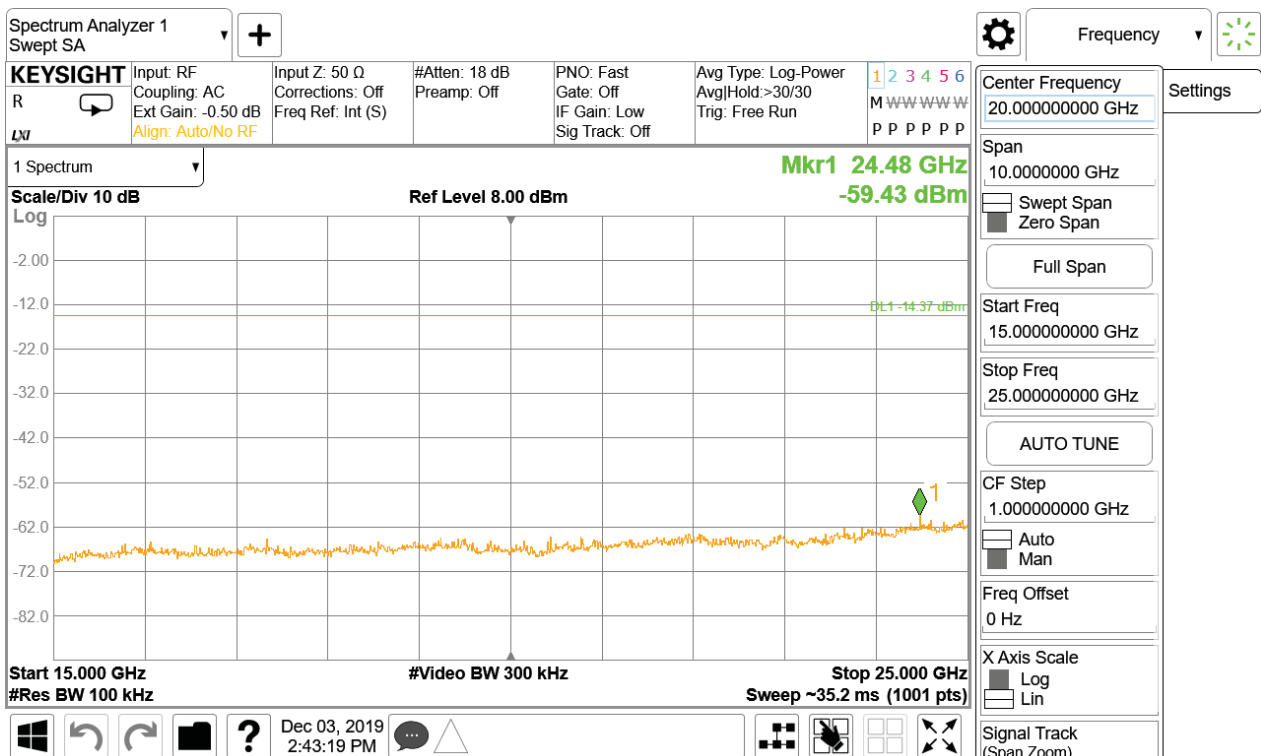
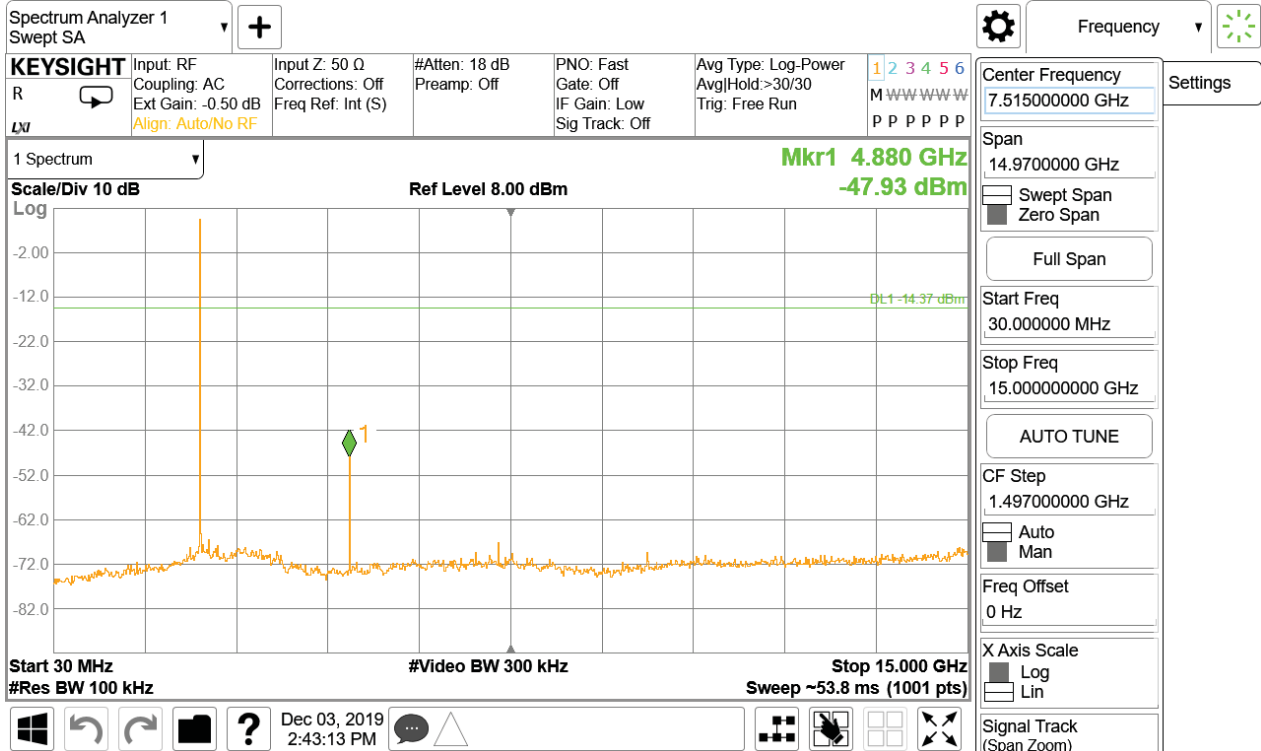
## Spurious Emission

Test Mode : GFSK

[Low Channel]

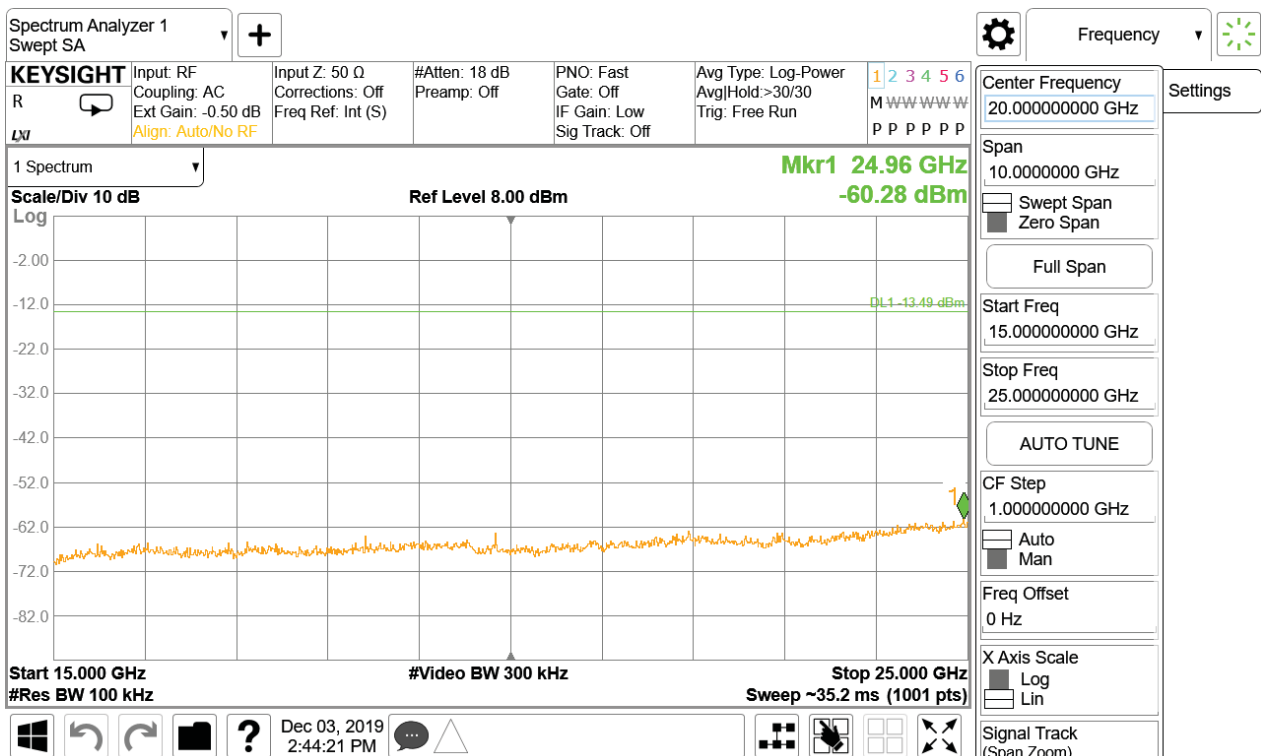
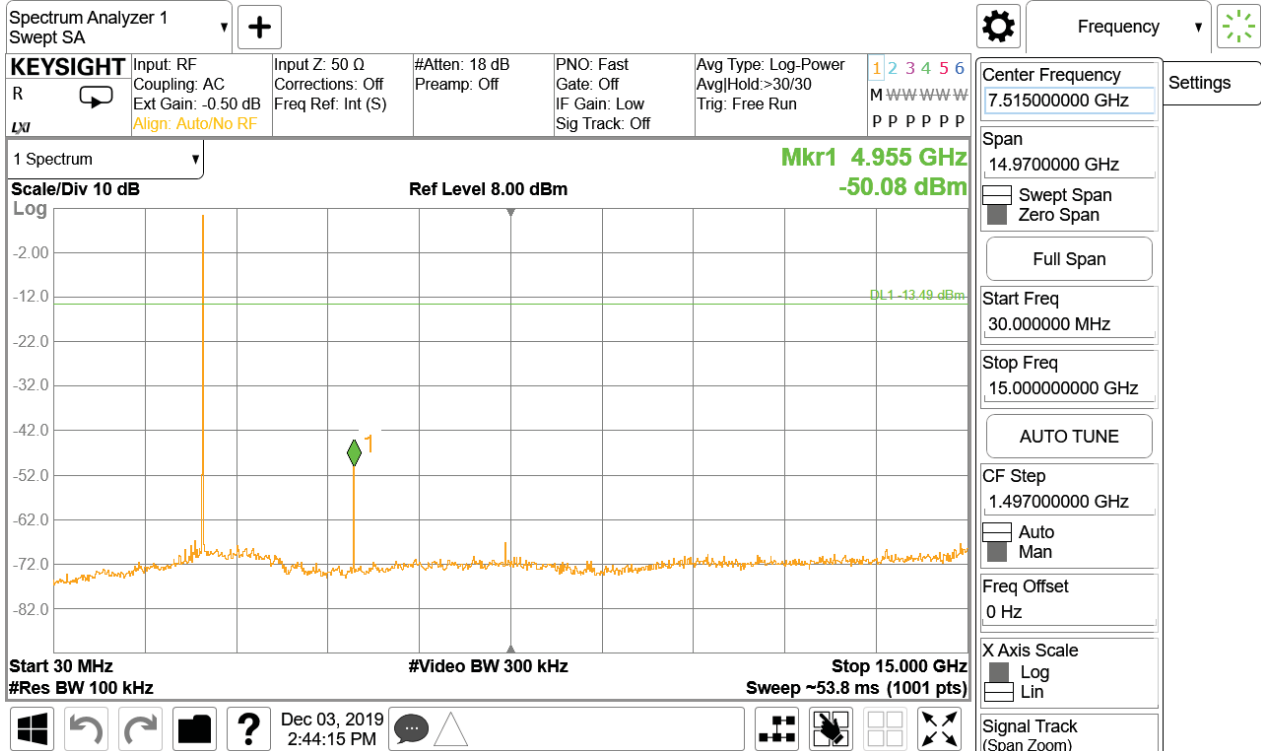


[Middle Channel]





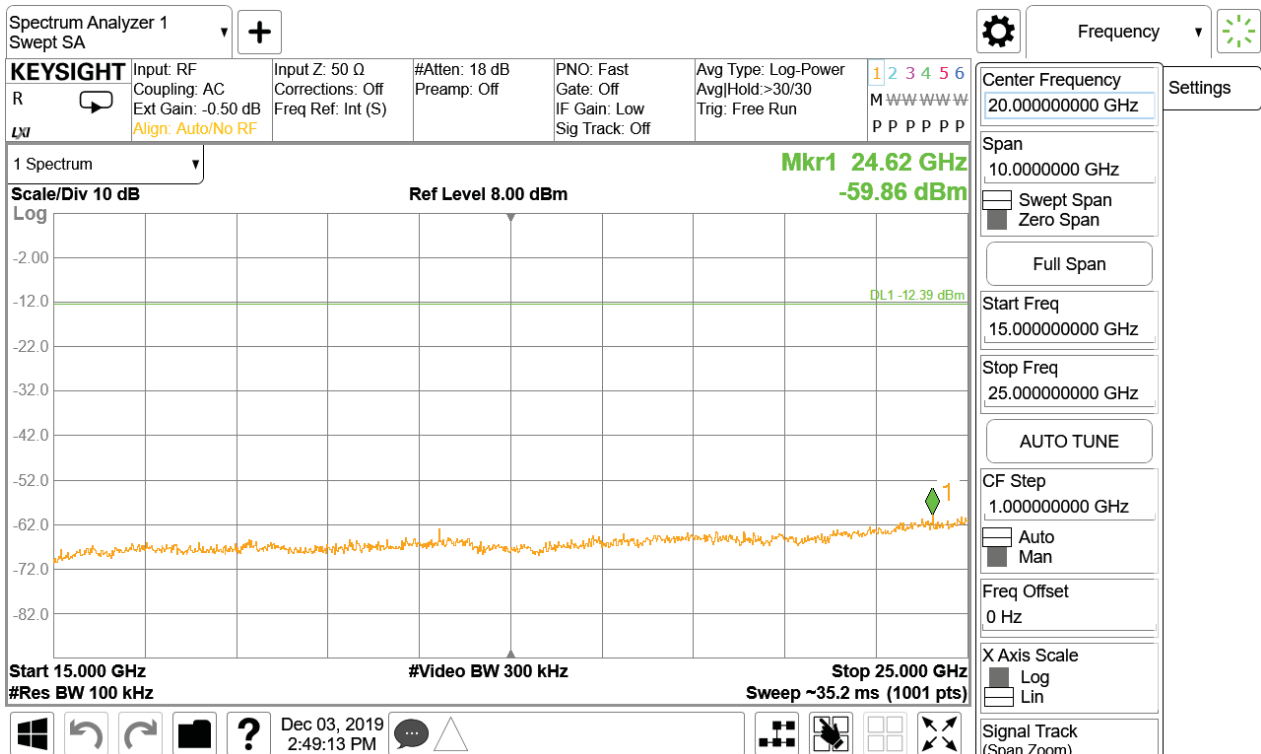
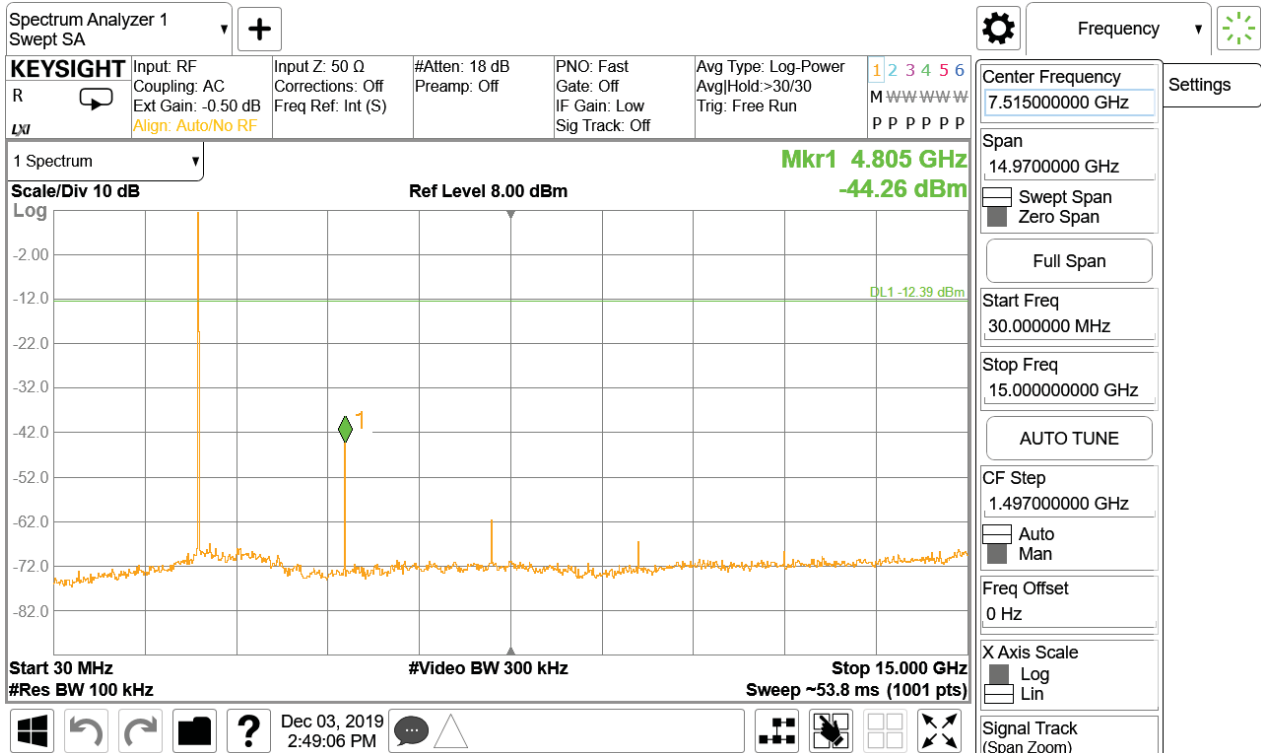
[High Channel]



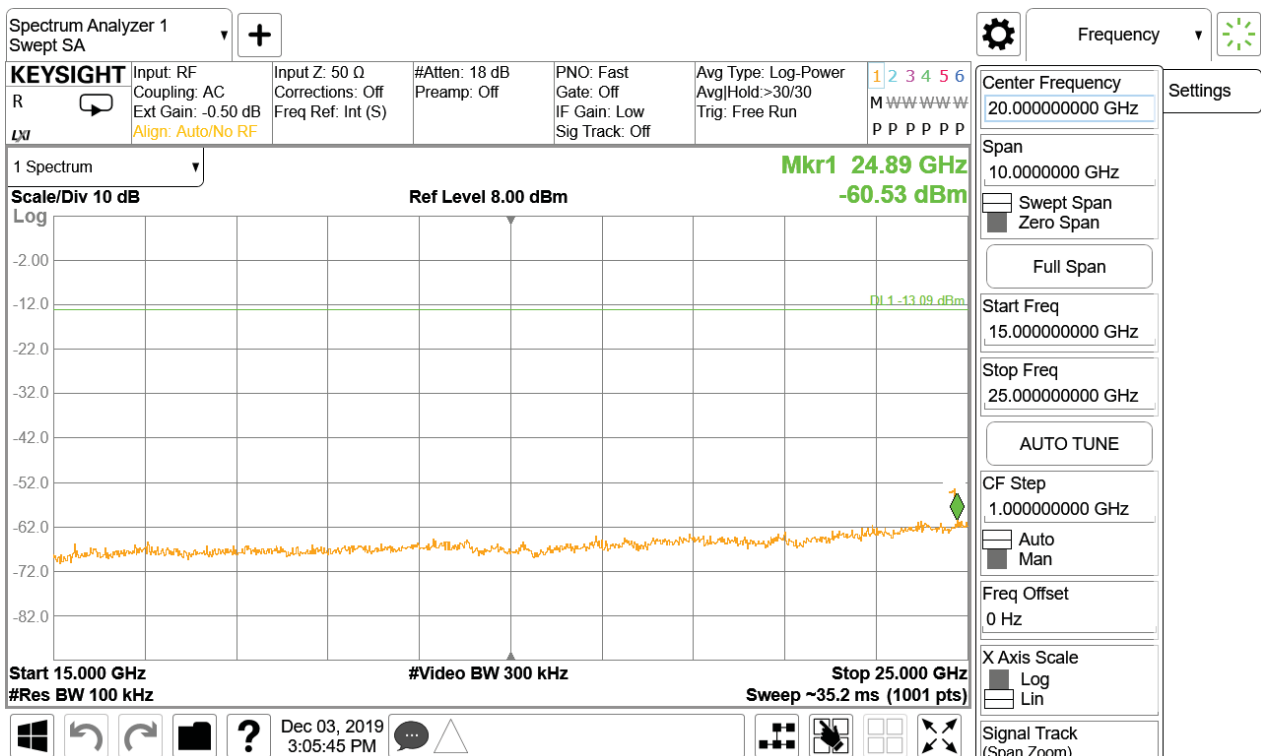
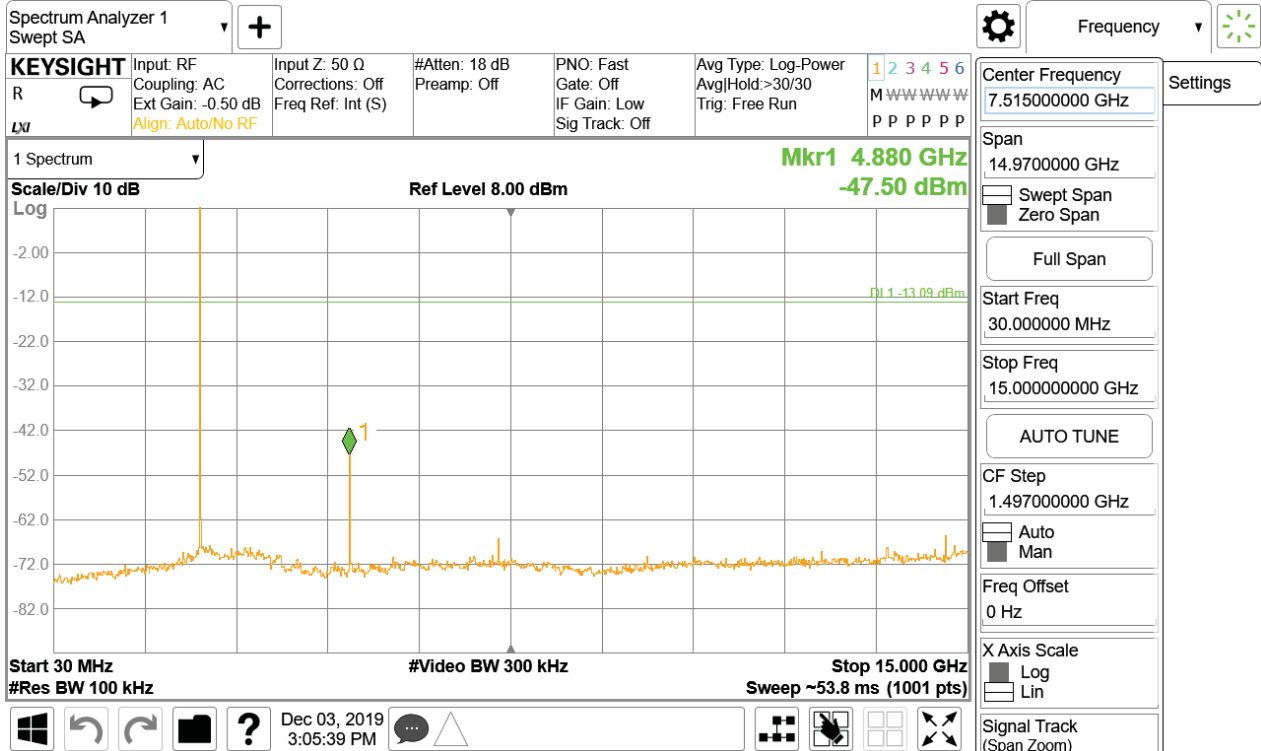


Test Mode : 8-DPSK

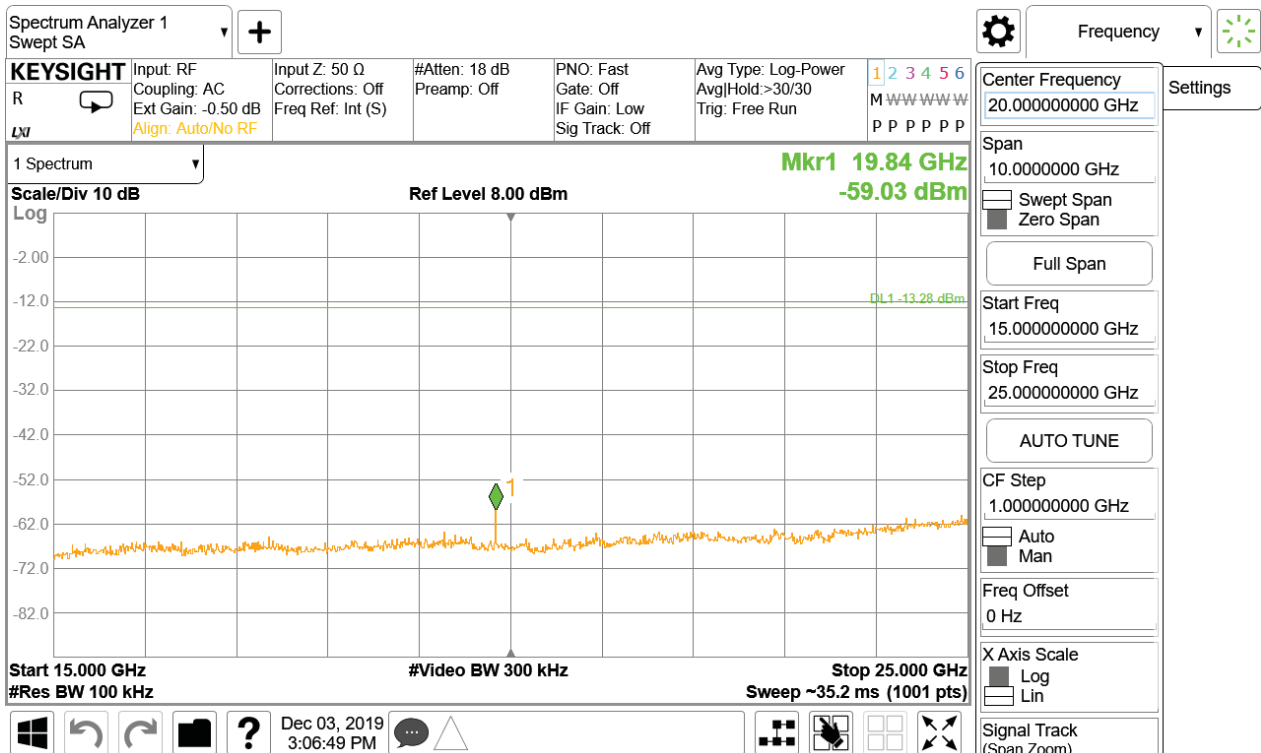
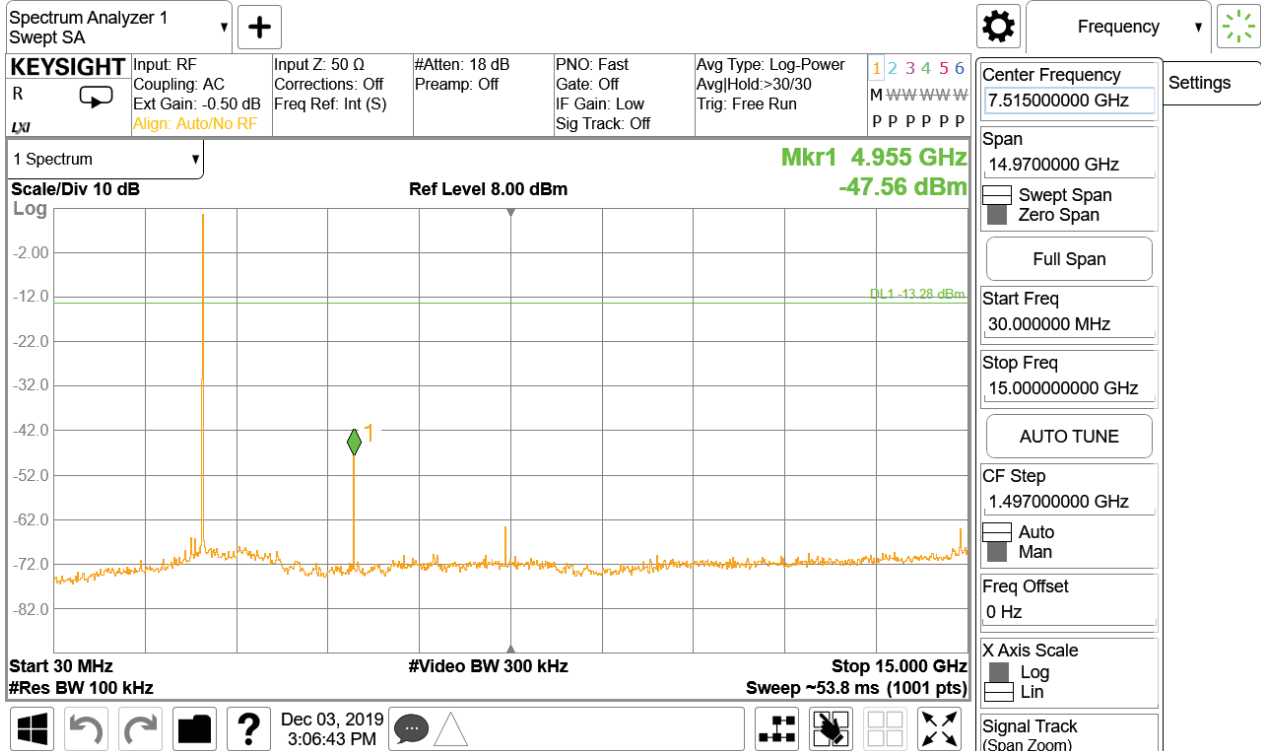
[Low Channel]



[Middle Channel]



[High Channel]



## 4.7 Radiated Emission

### Test Location

- ☒ 10 m SAC (test distance : ☐ 10 m, ☒ 3 m)  
☒ 3 m SAC (test distance : 3 m)

### Test Procedures

- 1) In the frequency range of 9 kHz to 30 MHz, magnetic field is measured with Loop Antenna. The center of the Loop Test Antenna is 1m above the ground. During the measurement the Loop Test Antenna rotates about its vertical axis for maximum response at each azimuth about the EUT.
- 2) In the frequency range above 30 MHz, Bi-Log Test Antenna(30 MHz to 1 GHz) and Horn Test Antenna(above 1 GHz) are used. Test Antenna is 3m away from the EUT. Test Antenna height is carried from 1m to 4m above the ground to determine the maximum value of the field strength. The emissions levels at both horizontal and vertical polarizations should be tested.

### Test Settings:

Frequency Range = 9 kHz ~ 26.5 GHz (2.4 GHz 10<sup>th</sup> harmonic)

- a) RBW = 1 MHz for  $f \geq 1$  GHz, 100 kHz for  $f < 1$  GHz, 9 kHz for  $f < 30$  MHz
- b) VBW  $\geq$  RBW
- c) Sweep time = auto couple

## Limit :

Unwanted emissions that do not fall within the restricted frequency bands of Table 1 shall comply either with the limits specified in the applicable RSS or with those specified in this RSS-Gen.

FCC Part 15 § 15.205 (a) Except as shown in paragraph (d) of this section, only spurious emissions are permitted in any of the frequency bands listed below:

MHz	MHz	MHz	MHz	MHz	GHz
0.09-0.11	8.37626-8.38675	73-74.6	399.9-410	2690-2900	10.6-12.7
<sup>1</sup> 0.495-0.505	8.41425-8.41475	74.8-75.2	608-614	3260-3267	13.25-13.4
2.1735-2.1905	12.29-12.293	108-121.94	960-1240	3332-3339	14.47-14.5
4.125-4.128	12.51975-12.52025	123-138	1300-1427	3345.8-3358	15.35-16.2
4.17725-4.17775	12.57675-12.57725	149.9-150.05	1435-1626.5	3600-4400	17.7-21.4
4.20725-4.20775	13.36-13.41	156.52475-156.52525	1645.5-1646.5	4500-5150	22.01-23.12
6.215-6.218	16.42-16.423	156.7-156.9	1660-1710	5350-5460	23.6-24
6.26775-6.26825	16.69475-16.69525	162.0125-167.17	1718.8-1722.2	7250-7750	31.2-31.8
6.31175-6.31225	16.80425-16.80475	167.72-173.2	2200-2300	8025-8500	36.43-36.5
8.291-8.294	25.5-25.67	240-285	2310-2390	9000-9200	<sup>2</sup> Above 38.6
8.362-8.366	37.5-38.25	322-335.4	2483.5-2500	9300-9500	

<sup>1</sup> Until February 1, 1999, this restricted band shall be 0.490-0.510 MHz.

<sup>2</sup> Above 38.6

§ 15.205 (b) Except as provided in paragraphs (d) and (e), the field strength of emissions appearing within these frequency bands shall not exceed the limits shown in Section 15.209. At frequencies equal to or less than 1000 MHz, compliance with the limits in Section 15.209 shall be demonstrated using measurement instrumentation employing a CISPR quasi-peak detector. Above 1000 MHz, compliance with the emission limits in Section 15.209 shall be demonstrated based on the average value of the measured emissions. The provisions in Section 15.35 apply to these measurements.

FCC Part 15 § 15.209 (a) Except as provided elsewhere in this Subpart, the emissions from an intentional radiator shall not exceed the field strength levels specified in the following table :

Except when the requirements applicable to a given device state otherwise, emissions from licence-exempt transmitters shall comply with the field strength limits shown in Table 2. Additionally, the level of any transmitter emission shall not exceed the level of the transmitter's fundamental emission.

**Table 2. General Field Strength Limits for Licence-Exempt Transmitters**

Frequency(MHz)	Field Strength uV/m	Field Strength dBuV/m	Deasurement Distance (meters)
0.009-0.490	2400/F(kHz)	-	300
0.490-1.705	24000/F(kHz)	-	30
1.705-30	30	-	30
30-88	100**	40	3
88-216	150**	43.5	3
216-960	200**	46	3
Above 960	500	54	3

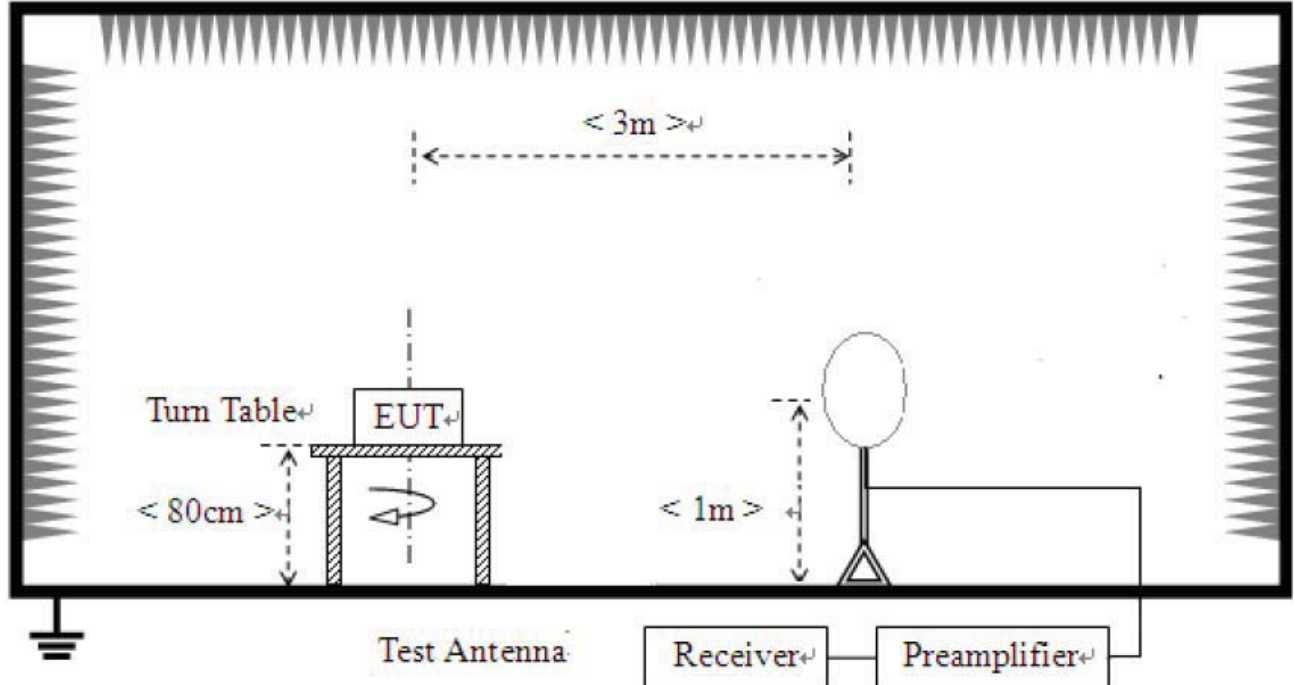
\*\* Except as provided in 15.209(g), fundamental emissions from intentional radiators operating under this Section shall not be located in the frequency bands 54-72MHz, 76-88MHz, 174-216MHz, 470-806MHz. However, operation within these frequency bands is permitted under other sections of this Part, e.g. 15.231 and 15.241.

Note :

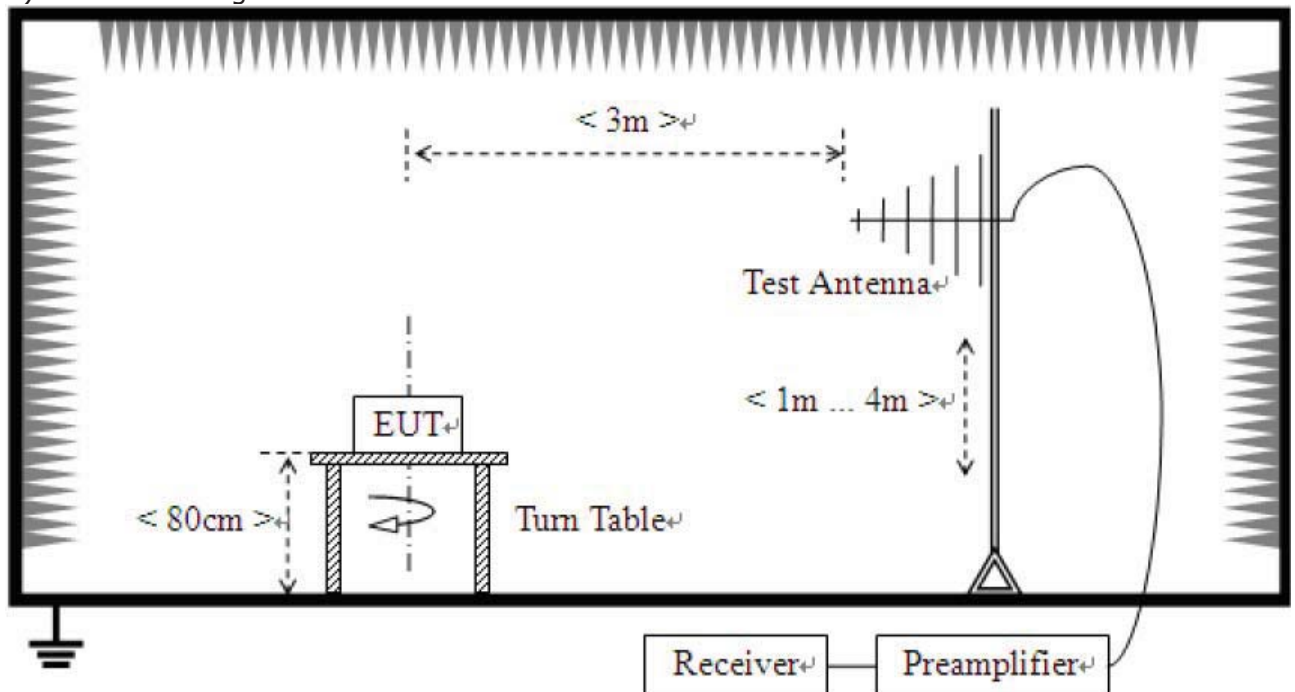
- 1) For above 1 GHz, the emission limit in this paragraph is based on measurement instrumentation employing an average detector, measurement using instrumentation with a peak detector function, corresponding to 20 dB above the maximum permitted average limit.
- 2) For above 1 GHz, limit field strength of harmonics : 54 dBuV/m@3m (AV) and 74 dBuV/m@3m (PK)
- 3) For measurement above 1GHz, the resolution bandwidth is set to 1 MHz and video bandwidth is set to 3 MHz for peak measurement.

### Test Setup:

1) For field strength of emissions from 9 kHz to 30 MHz

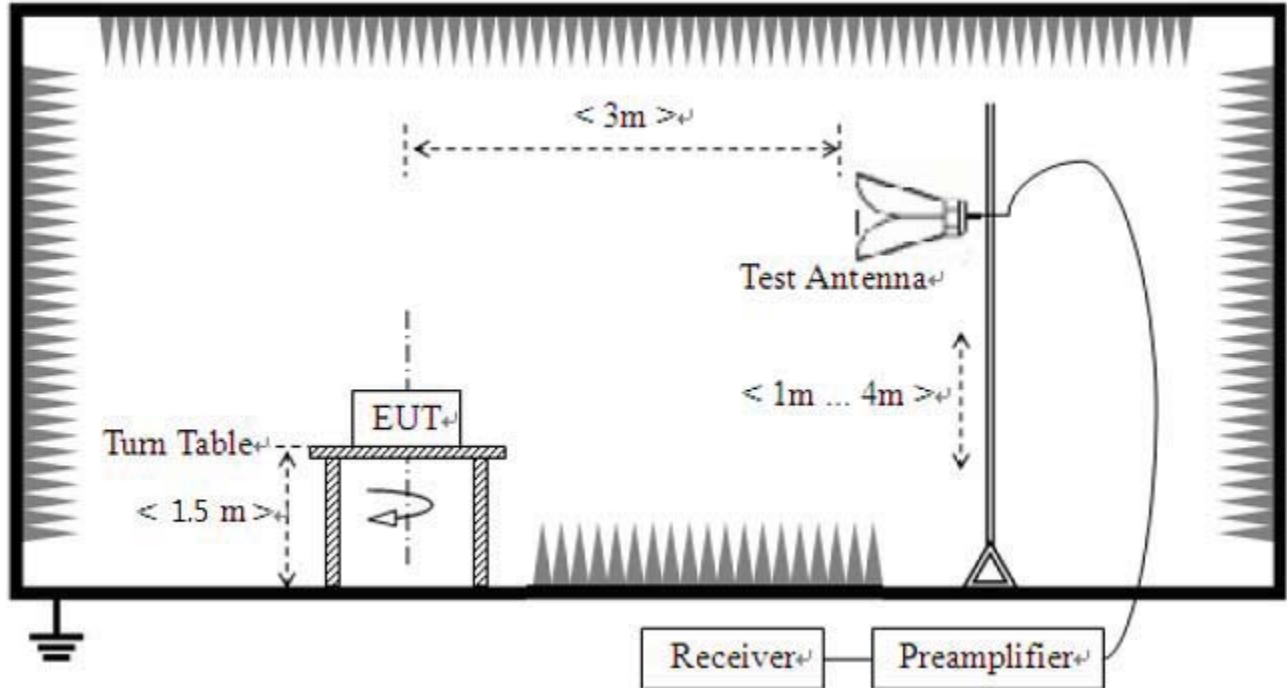


2) For field strength of emissions from 30 MHz to 1 GHz





3) For field strength of emissions above 1 GHz



## Test results

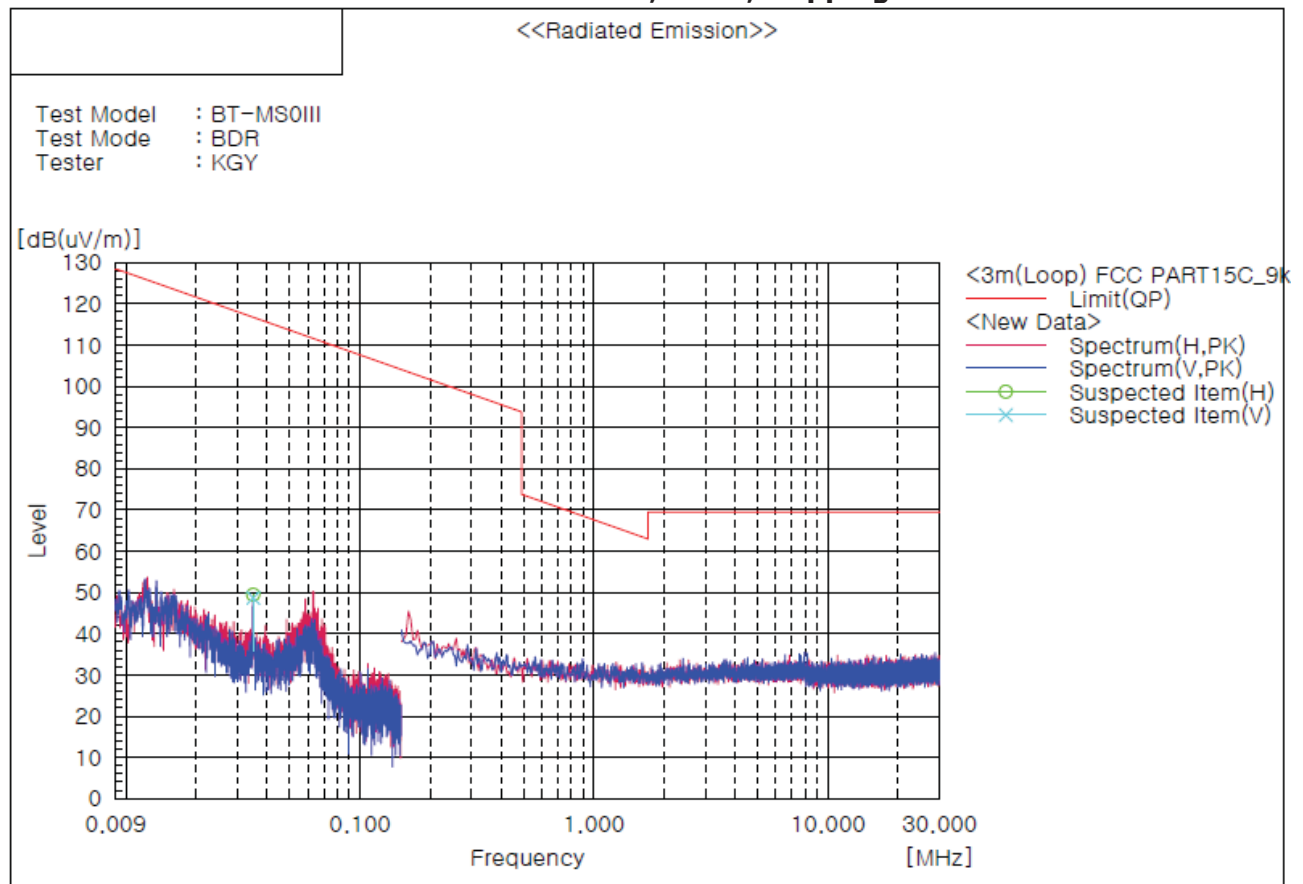
### 1) 9 kHz to 30 MHz

The requirements are:

☒ Complies

## Test Data

### Test mode : Transmitter, GFSK, Hopping mode

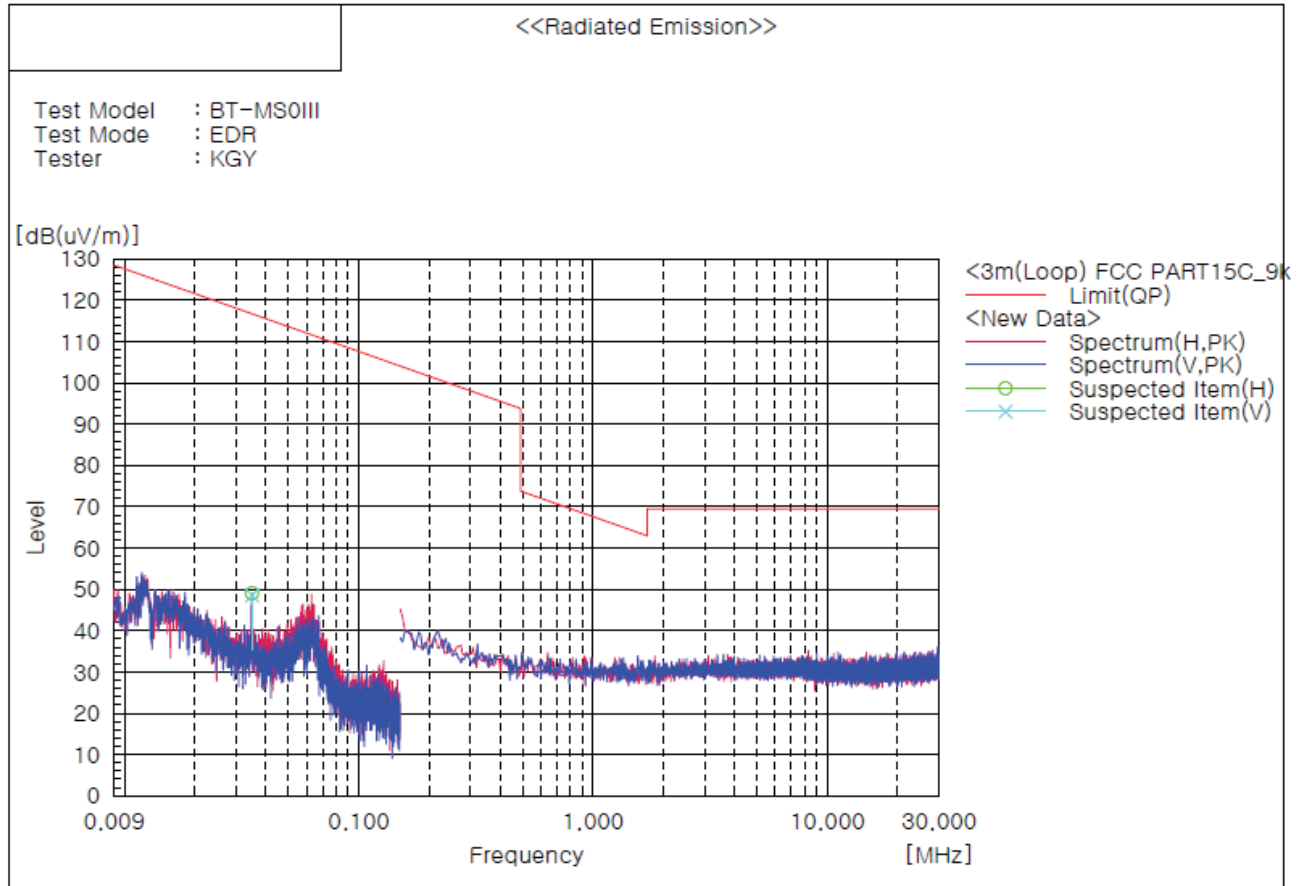


**Result :** No peak found within 20 dB of the limit.

### Remark :

1. Measuring position : The Unwanted emission was measured in the following position: EUT stand-up position(Z axis), lie-down position(X,Y axis). The worst emission was found in stand-up position(Z axis) and the worst case was recorded.
2. Result = Reading + c.f(correction factor)
3. Correction factor = Antenna factor + Cable loss + 6 dB attenuator
4. Distance extrapolation factor =  $40 \log (\text{specific distance} / \text{test distance})$  (dB)
5. This data is the Peak(PK) value.

**Test mode : Transmitter, 8-DPSK, Hopping mode**



**Result :** No peak found within 20 dB of the limit.

**Remark :**

1. Measuring position : The Unwanted emission was measured in the following position: EUT stand-up position(Z axis), lie-down position(X,Y axis). The worst emission was found in stand-up position(Z axis) and the worst case was recorded.
2. Result = Reading + c.f(correction factor)
3. Correction factor = Antenna factor + Cable loss + 6 dB attenuator
4. Distance extrapolation factor =  $40 \log (\text{specific distance} / \text{test distance})$  (dB)
5. This data is the Peak(PK) value.

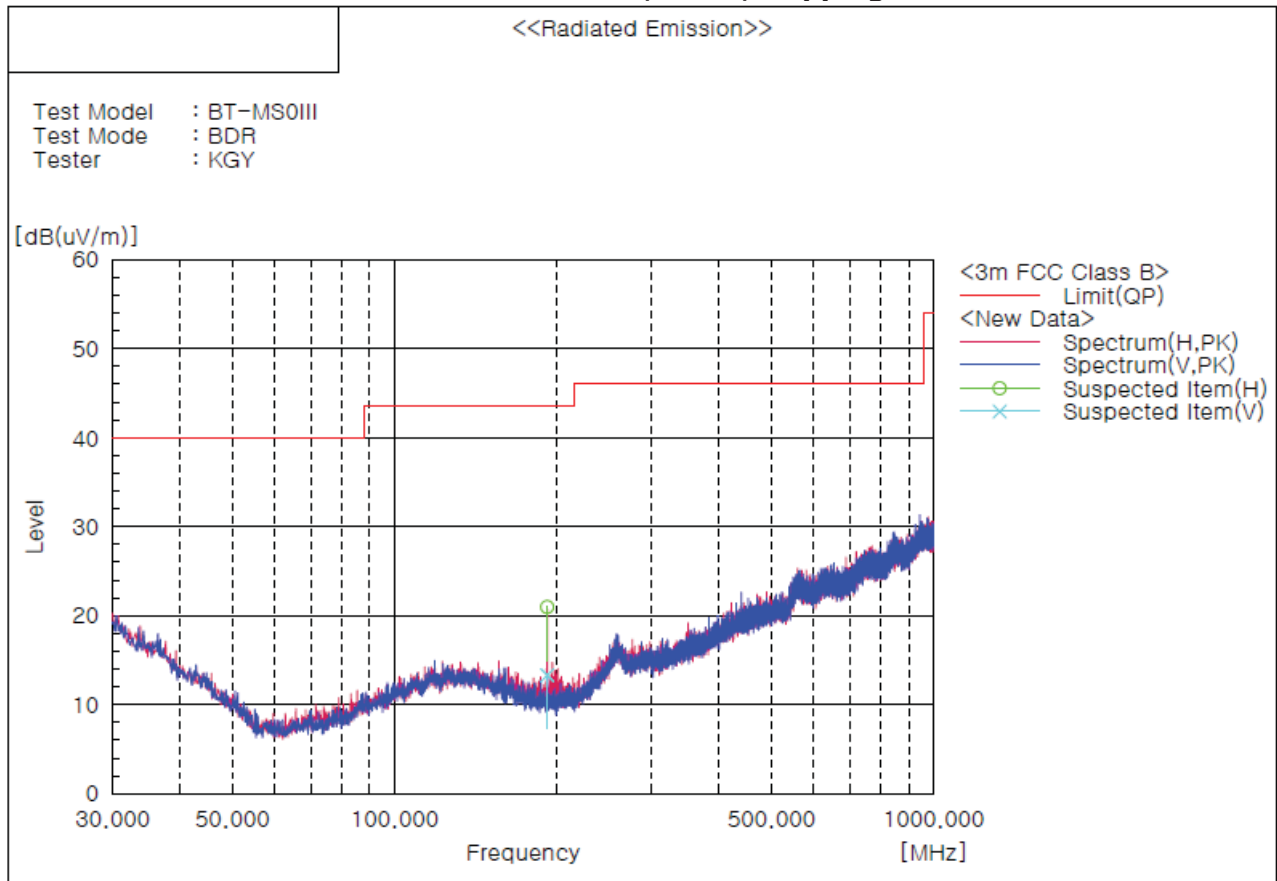
## 2) 30 MHz to 1 GHz

The requirements are:

☒ Complies

### Test Data

#### Test mode : Transmitter, GFSK, Hopping mode



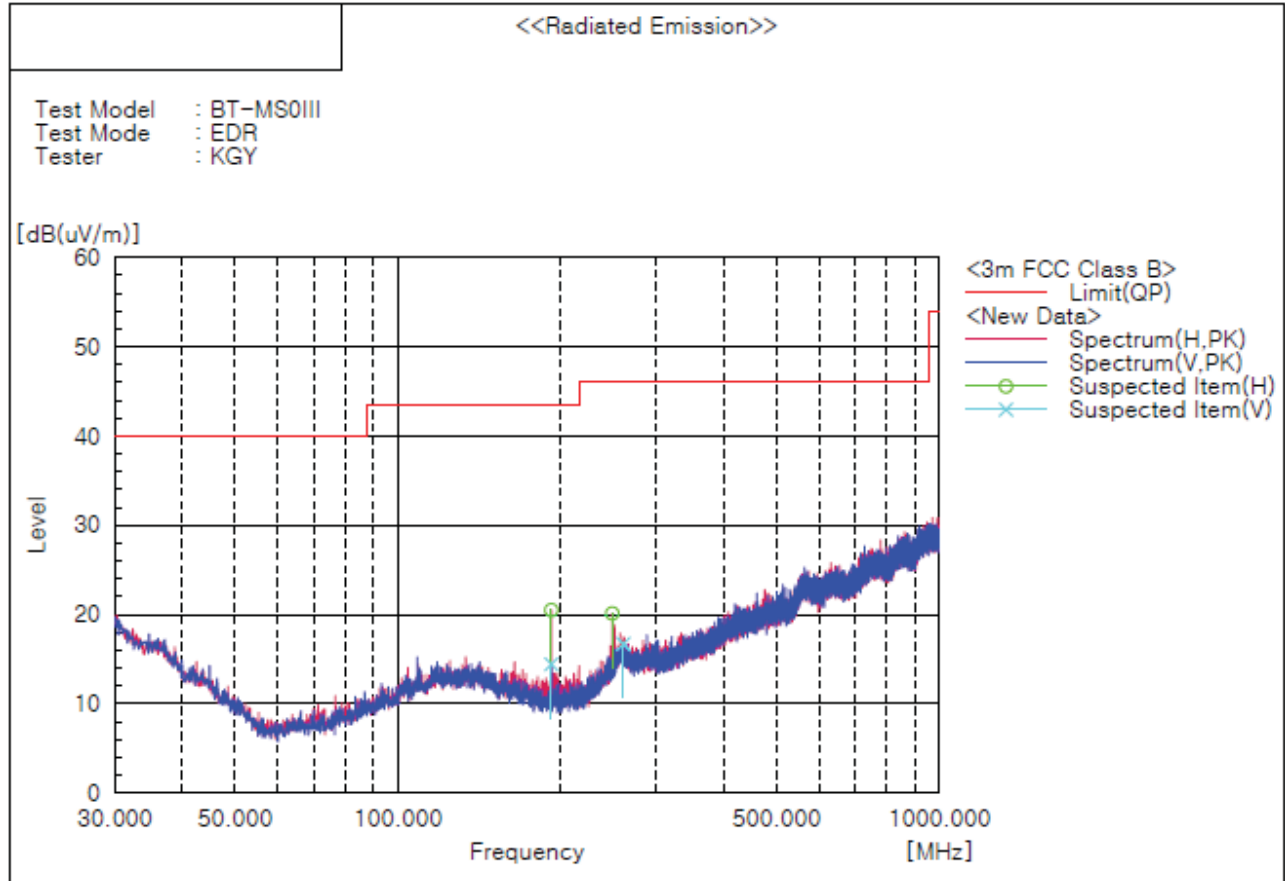
#### Spectrum Selection

No.	Frequency [MHz]	(P)	Reading [dB(uV)]	c.f [dB(1/m)]	Result PK [dB(uV/m)]	Limit QP [dB(uV/m)]	Margin QP [dB]	Height [cm]	Angle [deg]
1	191.990	H	34.8	-13.8	21.0	43.5	22.5	101.0	45.0
2	191.990	V	27.1	-13.8	13.3	43.5	30.2	101.0	54.0

#### Remark :

1. The Unwanted emission was measured in the following position: EUT stand-up position(Z axis), lie-down position(X,Y axis). The worst emission was found in stand-up position(Z axis) and the worst case was recorded.
2. Result = Reading + c.f(Correction factor)
3. Correction factor = Antenna factor + Cable loss + 6 dB attenuator - Amp Gain
4. This data is the Peak(PK) value.

**Test mode : Transmitter, 8-DPSK, Hopping mode**



**Spectrum Selection**

No.	Frequency [MHz]	(P)	Reading [dB(uV)]	c.f [dB(1/m)]	Result PK [dB(uV/m)]	Limit QP [dB(uV/m)]	Margin QP [dB]	Height [cm]	Angle [deg]
1	191.990	H	34.3	-13.8	20.5	43.5	23.0	101.0	38.0
2	191.990	V	28.2	-13.8	14.4	43.5	29.1	101.0	37.0
3	248.735	H	29.7	-9.6	20.1	46.0	25.9	101.0	78.0
4	260.860	V	24.6	-7.9	16.7	46.0	29.3	291.0	64.0

**Remark :**

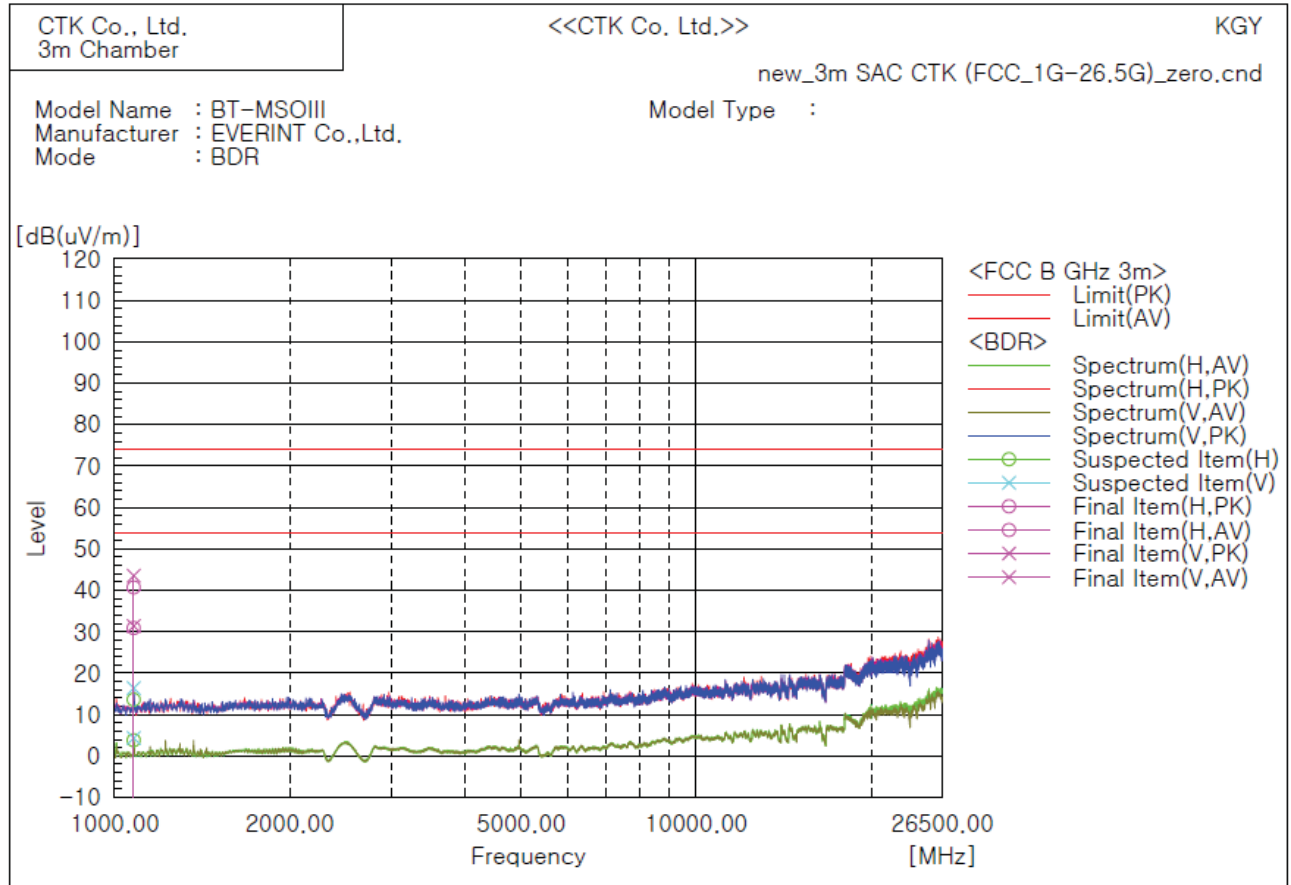
1. The Unwanted emission was measured in the following position: EUT stand-up position(Z axis), lie-down position(X,Y axis). The worst emission was found in stand-up position(Z axis) and the worst case was recorded.
2. Result = Reading + c.f(Correction factor)
3. Correction factor = Antenna factor + Cable loss + 6 dB attenuator - Amp Gain
4. This data is the Peak(PK) value.

### 3) above 1 GHz

**Test mode : Transmitter, GFSK(worst case- Highest frequency)**

The requirements are:

☒ Complies



#### Final Result

No.	Frequency [MHz]	(P)	Reading PK [dB(uV)]	Reading AV [dB(uV)]	c.f [dB(1/m)]	Result PK [dB(uV/m)]	Result AV [dB(uV/m)]	Limit PK [dB(uV/m)]	Limit AV [dB(uV/m)]	Margin PK [dB]	Margin AV [dB]	Height [cm]	Angle [deg]	Remark
1	1078.625	V	53.9		-10.4	43.5		74.0	54.0	30.5		145.0	4.4	
2	1078.625	H	51.1		-10.4	40.7		74.0	54.0	33.3		404.0	299.3	
3	1078.625	V		41.8	-10.4		31.4	74.0	54.0		22.6	145.0	102.8	
4	1078.625	H		41.3	-10.4		30.9	74.0	54.0		23.1	404.0	359.9	

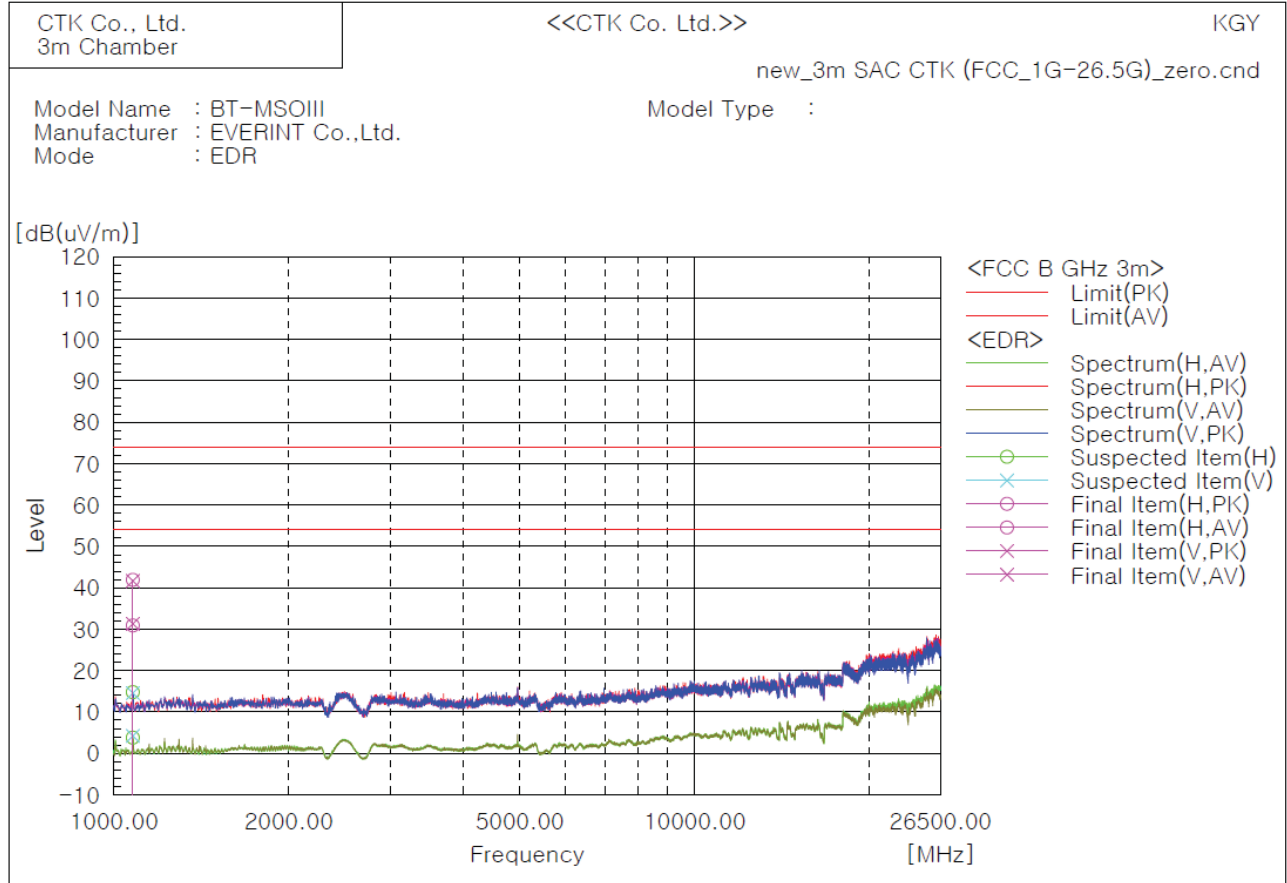
#### Remarks

1. The Unwanted emission was measured in the following position: EUT stand-up position(Z axis), lie-down position(X,Y axis). The worst emission was found in stand-up position(Z axis) and the worst case was recorded.
2. Result = Reading + c.f(correction factor)
3. Correction factor = Antenna factor + Cable loss - Amp Gain
4. Band reject filter was used from 1 GHz to 18 GHz and is not applicable to 18 GHz to 26.5 GHz.

**Test mode : Transmitter, 8-DPSK(worst case- Middle frequency)**

The requirements are:

☒ Complies



**Final Result**

No.	Frequency [MHz]	(P)	Reading PK [dB(uV)]	Reading AV [dB(uV)]	c.f [dB(1/m)]	Result PK [dB(uV/m)]	Result AV [dB(uV/m)]	Limit PK [dB(uV/m)]	Limit AV [dB(uV/m)]	Margin PK [dB]	Margin AV [dB]	Height [cm]	Angle [deg]	Remark
1	1078.625	H	52.3	41.3	-10.4	41.9	30.9	74.0	54.0	32.1	23.1	405.8	355.2	
2	1078.625	H		41.3	-10.4		30.9	74.0	54.0		23.1	405.8	355.2	
3	1078.625	V	52.1	41.7	-10.4	41.7	31.3	74.0	54.0	32.3	22.7	144.4	0.1	
4	1078.625	V		41.7	-10.4		31.3	74.0	54.0		22.7	394.5	60.8	

**Remarks**

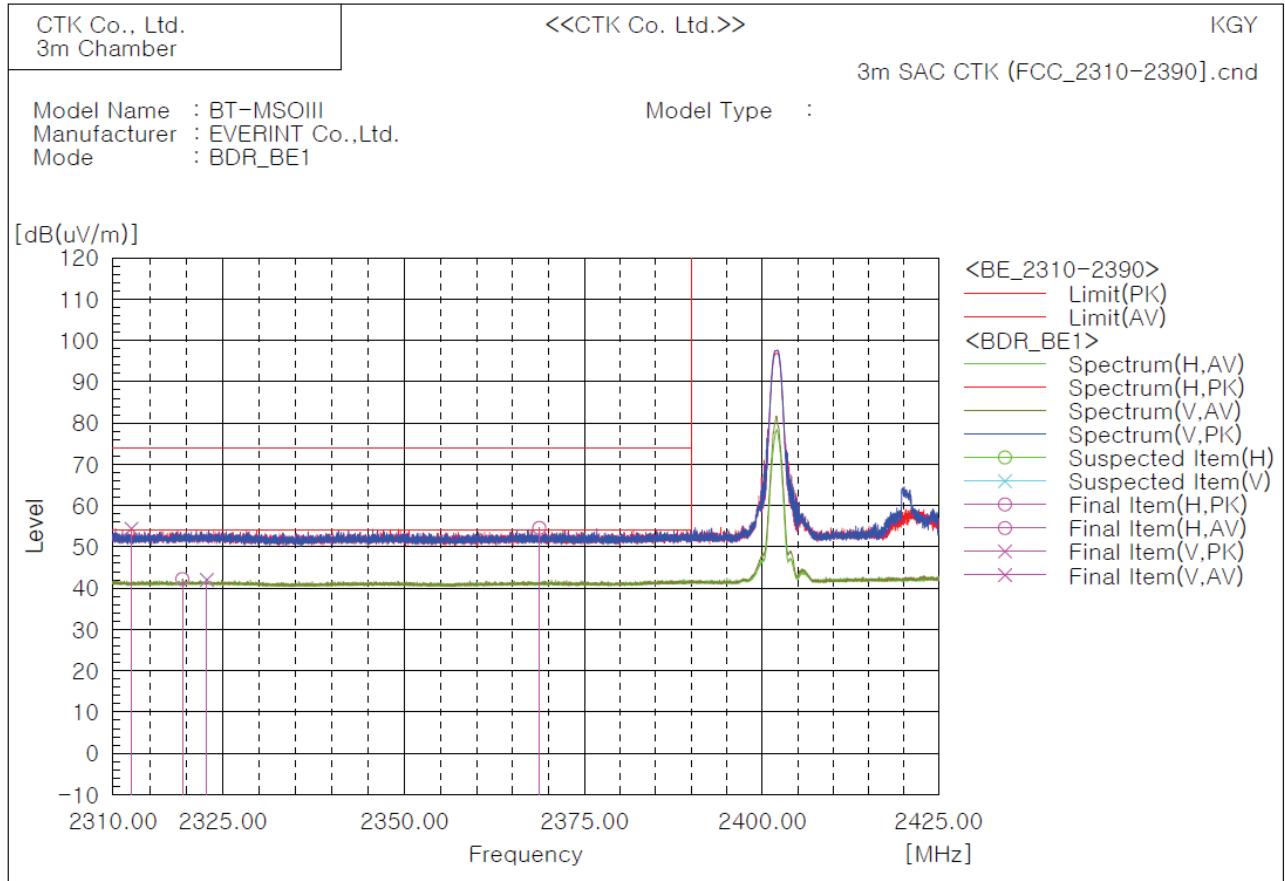
1. The Unwanted emission was measured in the following position: EUT stand-up position(Z axis), lie-down position(X,Y axis). The worst emission was found in stand-up position(Z axis) and the worst case was recorded.
2. Result = Reading + c.f(correction factor)
3. Correction factor = Antenna factor + Cable loss - Amp Gain
4. Band reject filter was used from 1 GHz to 18 GHz and is not applicable to 18 GHz to 26.5 GHz.



#### 4) Restricted Frequency Bands

Test mode : Transmitter, GFSK

Test frequency range : 2 310 MHz – 2 390 MHz



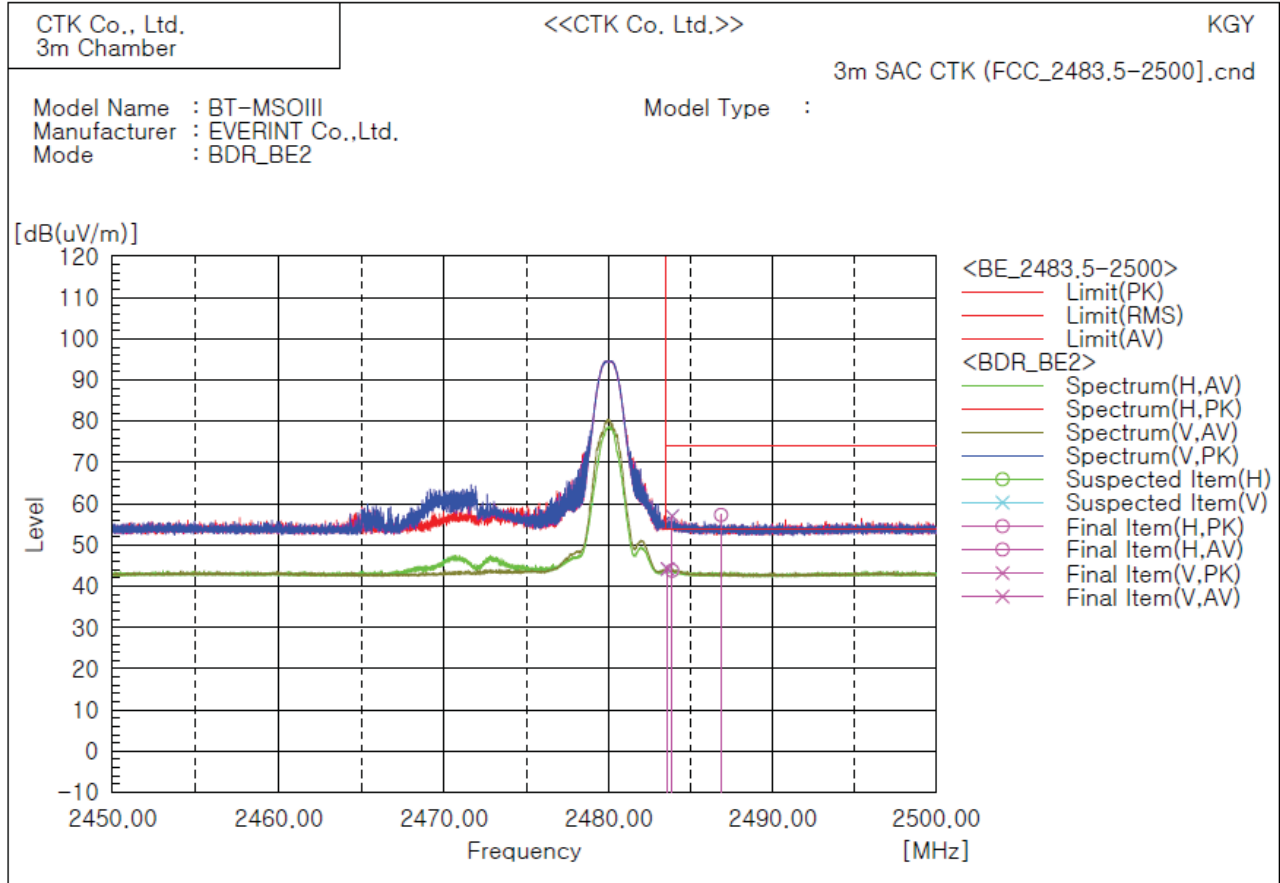
#### Final Result

No.	Frequency [MHz]	(P)	Reading PK [dB(uV)]	Reading AV [dB(uV)]	c.f [dB(1/m)]	Result PK [dB(uV/m)]	Result AV [dB(uV/m)]	Limit PK [dB(uV/m)]	Limit AV [dB(uV/m)]	Margin PK [dB]	Margin AV [dB]	Height [cm]	Angle [deg]	Remark
1	2368.708	H	49.9		4.7	54.6		74.0	54.0	19.4		464.3	170.2	
2	2319.473	H		37.3	4.9		42.2	74.0	54.0		11.8	285.1	0.0	
3	2312.530	V	49.4		5.0	54.4		74.0	54.0	19.6		274.3	354.9	
4	2322.823	V		37.1	4.9		42.0	74.0	54.0		12.0	274.3	359.9	

#### Remarks

- The Unwanted emission was measured in the following position: EUT stand-up position(Z axis), lie-down position(X,Y axis). The worst emission was found in stand-up position(Z axis) and the worst case was recorded.
- Result = Reading + c.f(correction factor)
- Correction factor = Antenna factor + Cable loss - Amp Gain

**Test frequency range : 2 483.5 MHz – 2 500 MHz**



**Final Result**

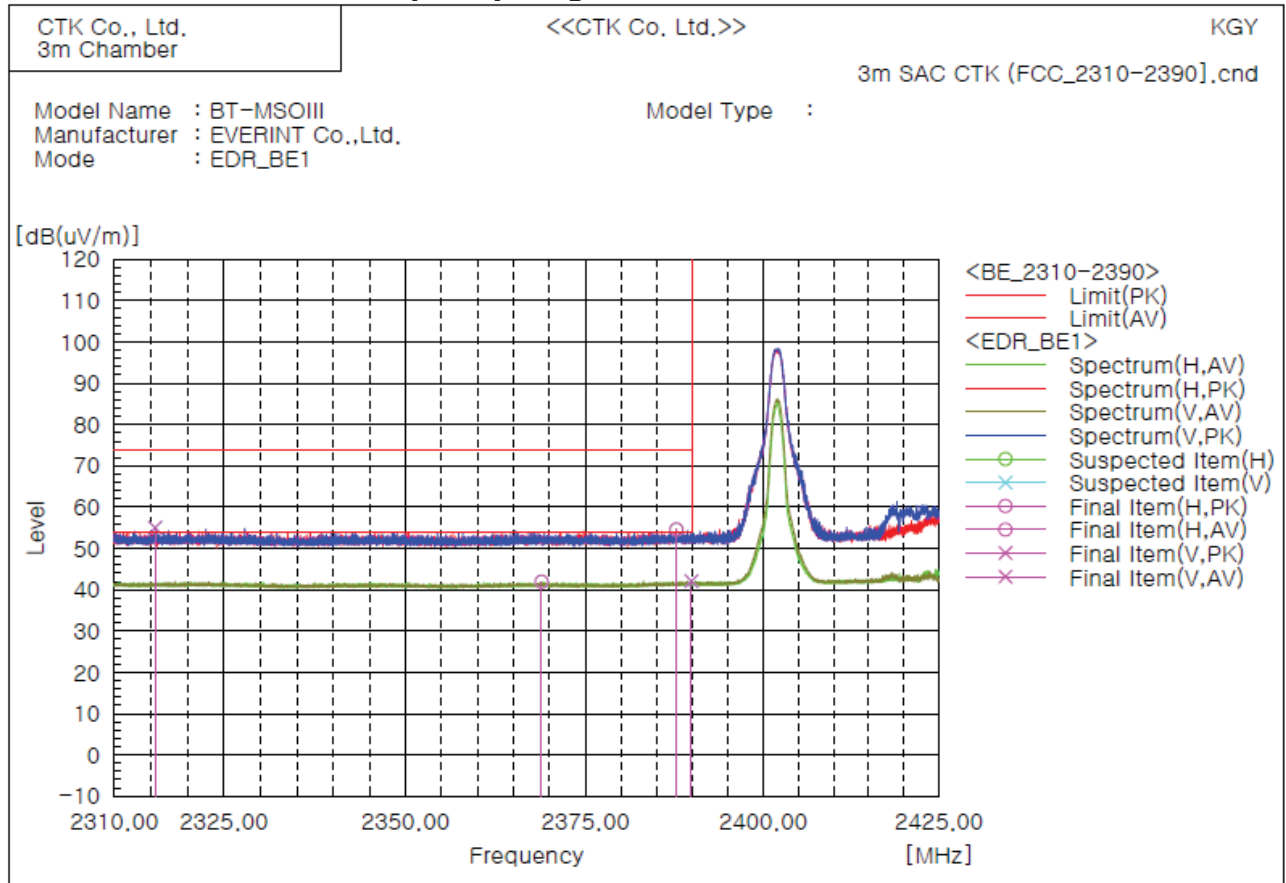
No.	Frequency [MHz]	(P)	Reading PK [dB(uV)]	Reading AV [dB(uV)]	c.f [dB(1/m)]	Result PK [dB(uV/m)]	Result AV [dB(uV/m)]	Limit PK [dB(uV/m)]	Limit AV [dB(uV/m)]	Margin PK [dB]	Margin AV [dB]	Height [cm]	Angle [deg]	Remark
1	2486.850	H	50.6		6.7	57.3		74.0	54.0	16.7		285.0	307.4	
2	2483.869	H		37.1	6.7		43.8	74.0	54.0		10.2	404.3	210.4	
3	2483.869	V	50.3		6.7	57.0		74.0	54.0	17.0		395.0	259.2	
4	2483.581	V		37.5	6.7		44.2	74.0	54.0		9.8	395.0	280.7	

**Remarks**

1. The Unwanted emission was measured in the following position: EUT stand-up position(Z axis), lie-down position(X,Y axis). The worst emission was found in stand-up position(Z axis) and the worst case was recorded.
2. Result = Reading + c.f(correction factor)
3. Correction factor = Antenna factor + Cable loss - Amp Gain

**Test mode : Transmitter, 8-DPSK**

**Test frequency range : 2 310 MHz – 2 390 MHz**



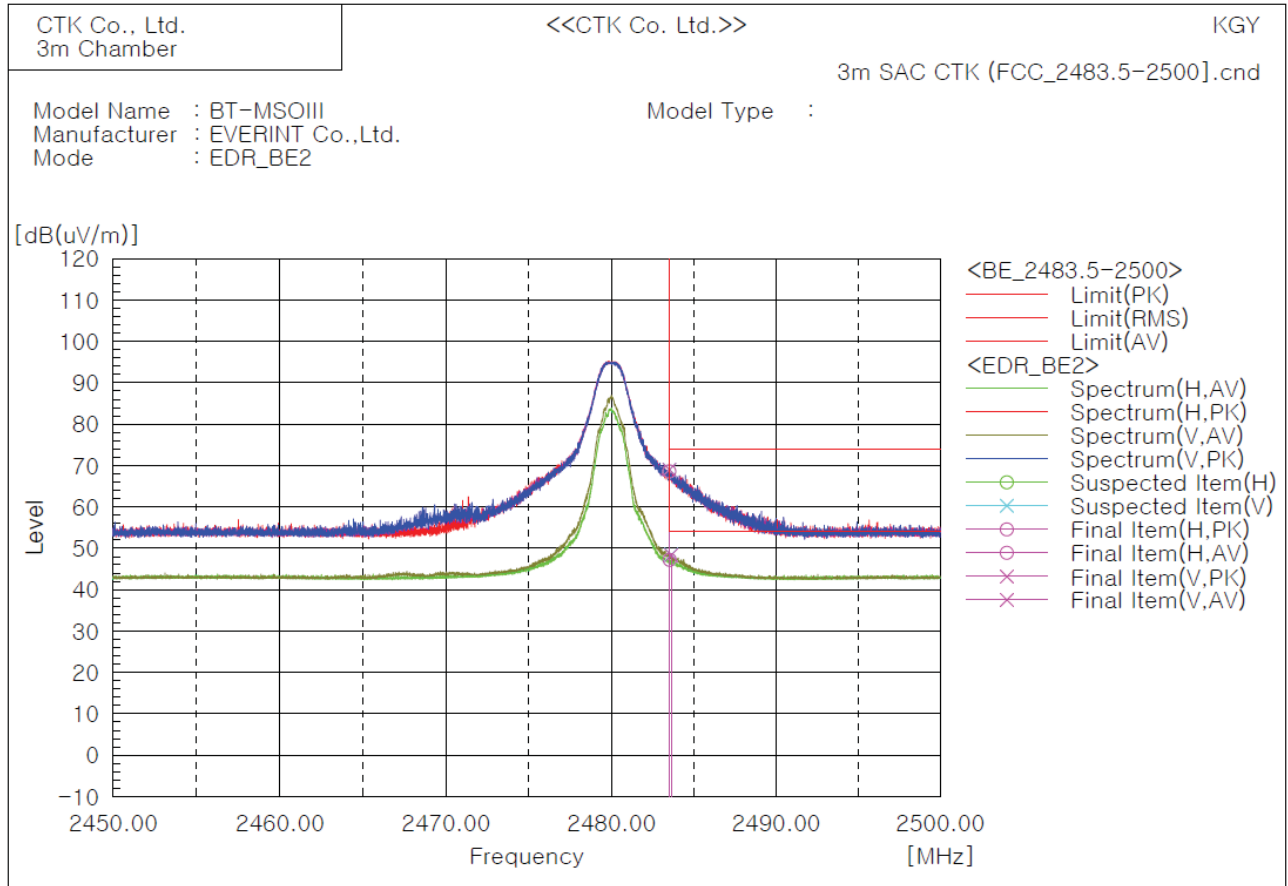
**Final Result**

No.	Frequency [MHz]	(P)	Reading PK [dB(uV)]	Reading AV [dB(uV)]	c.f [dB(1/m)]	Result PK [dB(uV/m)]	Result AV [dB(uV/m)]	Limit PK [dB(uV/m)]	Limit AV [dB(uV/m)]	Margin PK [dB]	Margin AV [dB]	Height [cm]	Angle [deg]	Remark
1	2315.606	V	50.0		5.0	55.0		74.0	54.0	19.0		464.3	355.6	
2	2368.923	H		37.2	4.7		41.9	74.0	54.0		12.1	464.3	0.0	
3	2387.798	H	49.7		4.9	54.6		74.0	54.0	19.4		286.4	173.4	
4	2389.911	V		37.1	5.0		42.1	74.0	54.0		11.9	464.3	0.0	

**Remarks**

1. The Unwanted emission was measured in the following position: EUT stand-up position(Z axis), lie-down position(X,Y axis). The worst emission was found in stand-up position(Z axis) and the worst case was recorded.
2. Result = Reading + c.f(correction factor)
3. Correction factor = Antenna factor + Cable loss - Amp Gain

**Test frequency range : 2 483.5 MHz – 2 500 MHz**



**Final Result**

No.	Frequency [MHz]	(P)	Reading PK [dB(uV)]	Reading AV [dB(uV)]	c.f [dB(1/m)]	Result PK [dB(uV/m)]	Result AV [dB(uV/m)]	Limit PK [dB(uV/m)]	Limit AV [dB(uV/m)]	Margin PK [dB]	Margin AV [dB]	Height [cm]	Angle [deg]	Remark
1	2483.519	H	61.9	40.5	6.7	68.6	47.2	74.0	54.0	5.4	6.8	283.9	237.0	
2	2483.544	H	62.3	41.7	6.7	69.0	48.4	74.0	54.0	5.0	5.6	283.9	347.9	
3	2483.525	V			6.7			74.0	54.0			394.2	276.8	
4	2483.631	V			6.7			74.0	54.0			464.2	141.3	

**Remarks**

1. The Unwanted emission was measured in the following position: EUT stand-up position(Z axis), lie-down position(X,Y axis). The worst emission was found in stand-up position(Z axis) and the worst case was recorded.
2. Result = Reading + c.f(correction factor)
3. Correction factor = Antenna factor + Cable loss - Amp Gain

## 4.8 AC Power Line Conducted Emissions

A radio apparatus that is designed to be connected to the public utility (AC) power line shall ensure that the radio frequency voltage, which is conducted back onto the AC power line on any frequency or frequencies within the band 150 kHz-30 MHz, shall not exceed the limits.

### Instrument Settings

IF Band Width: 9 kHz

### Test Procedures

The EUT was placed on a non-metallic table 0.8m above the metallic, grounded floor and 0.4m from the reference ground plane wall. The distance to other metallic surfaces was at least 0.8m.

Amplitude measurements were performed with a quasi-peak detector and an average detector.

### Limit

Frequency (MHz)	Conducted Limit (dBuV)	
	Quasi-peak	Average**
0.15 ~ 0.5	66 to 56*	56 to 46*
0.5 ~ 5	56	46
5 ~ 30	60	50

\* The level decreases linearly with the logarithm of the frequency.

\*\* A linear average detector is required.

### Test Results

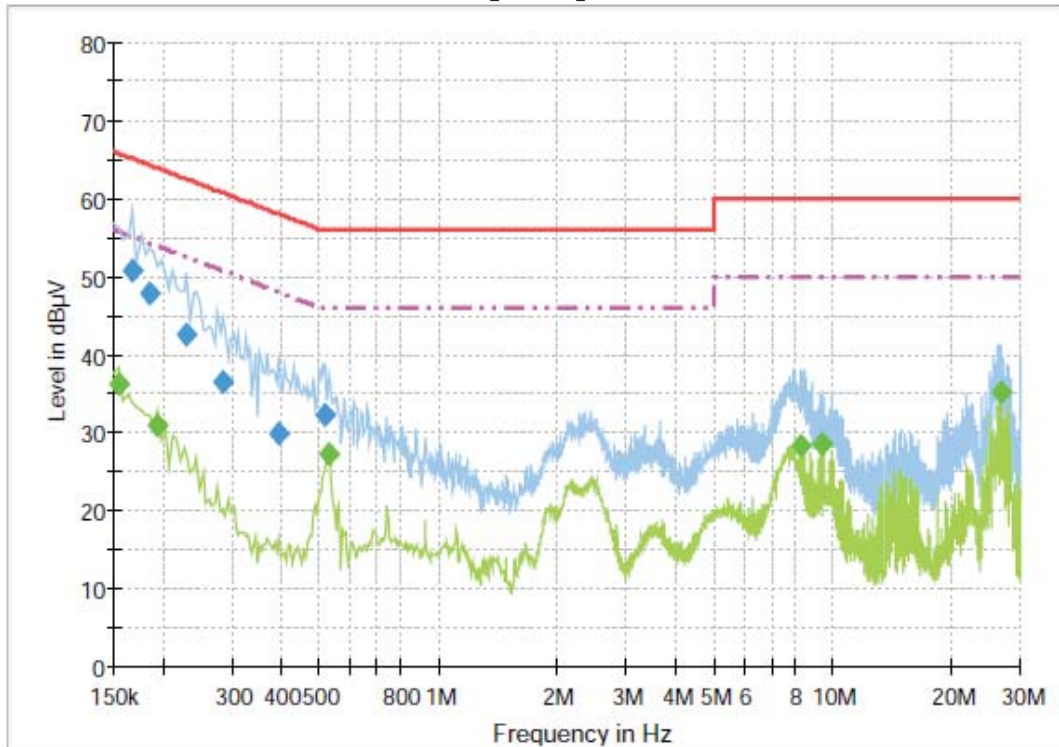
The requirements are:

☒ Complies

## Test Data

Test mode : GFSK

[LINE]



## Final Result 1

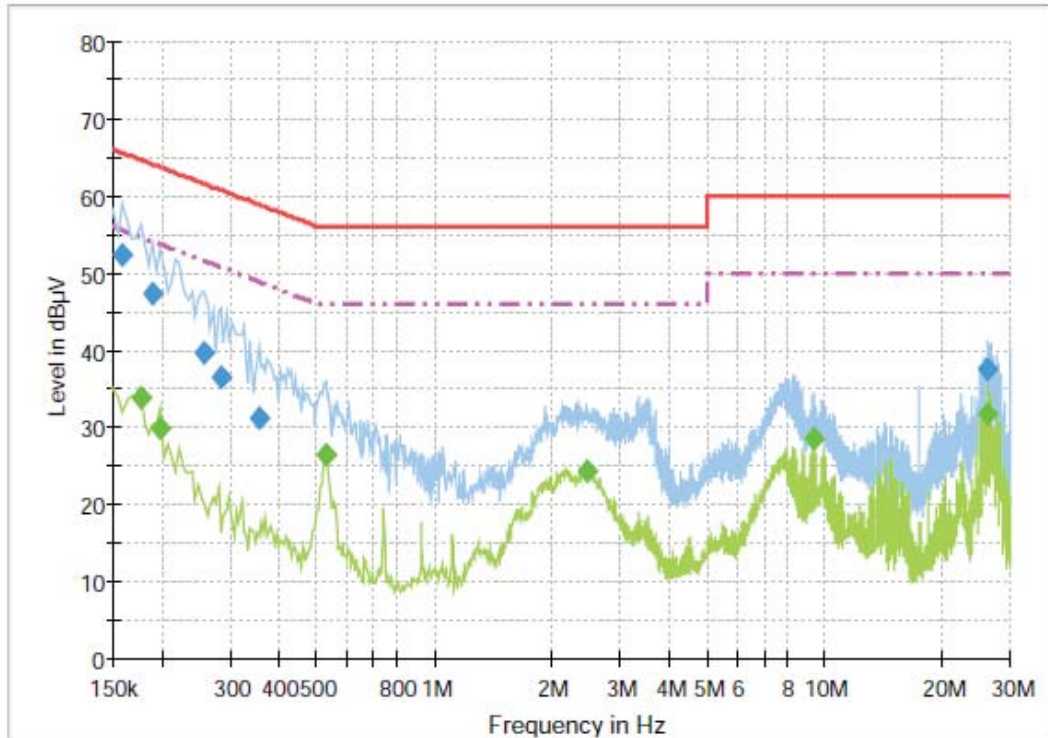
Frequency (MHz)	QuasiPeak (dBμV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.168000	50.6	1000.0	9.000	On	L1	10.1	14.5	65.1
0.186000	47.7	1000.0	9.000	On	L1	10.0	16.5	64.2
0.231000	42.6	1000.0	9.000	On	L1	9.8	19.8	62.4
0.285000	36.3	1000.0	9.000	On	L1	9.8	24.3	60.7
0.393000	29.7	1000.0	9.000	On	L1	10.0	28.3	58.0
0.519000	32.2	1000.0	9.000	On	L1	10.0	23.8	56.0

## Final Result 2

Frequency (MHz)	CAverage (dBμV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.154500	36.1	1000.0	9.000	On	L1	9.9	19.6	55.8
0.195000	31.0	1000.0	9.000	On	L1	10.0	22.9	53.8
0.528000	27.1	1000.0	9.000	On	L1	10.0	18.9	46.0
8.322000	28.2	1000.0	9.000	On	L1	9.9	21.8	50.0
9.402000	28.5	1000.0	9.000	On	L1	9.9	21.5	50.0
26.758500	35.0	1000.0	9.000	On	L1	10.2	15.0	50.0



[NEUTRAL]



**Final Result 1**

Frequency (MHz)	QuasiPeak (dBµV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.159000	52.3	1000.0	9.000	On	N	10.0	13.2	65.5
0.190500	47.3	1000.0	9.000	On	N	10.0	16.7	64.0
0.258000	39.5	1000.0	9.000	On	N	9.7	22.0	61.5
0.285000	36.5	1000.0	9.000	On	N	9.8	24.1	60.7
0.357000	31.2	1000.0	9.000	On	N	10.0	27.6	58.8
26.322000	37.6	1000.0	9.000	On	N	10.2	22.4	60.0

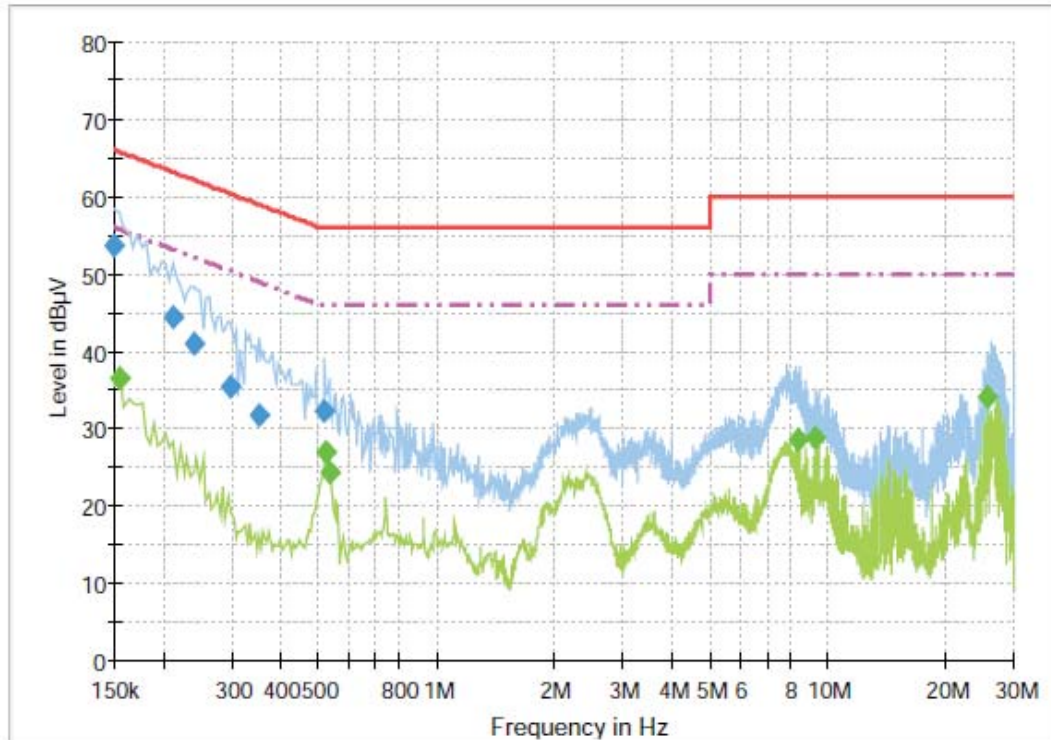
**Final Result 2**

Frequency (MHz)	CAverage (dBµV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.177000	33.9	1000.0	9.000	On	N	10.1	20.7	54.6
0.199500	29.7	1000.0	9.000	On	N	9.9	23.9	53.6
0.528000	26.3	1000.0	9.000	On	N	10.0	19.7	46.0
2.458500	24.4	1000.0	9.000	On	N	9.8	21.6	46.0
9.402000	28.4	1000.0	9.000	On	N	9.8	21.6	50.0
26.322000	31.6	1000.0	9.000	On	N	10.2	18.4	50.0



**Test mode : 8-DPSK**

**[LINE]**



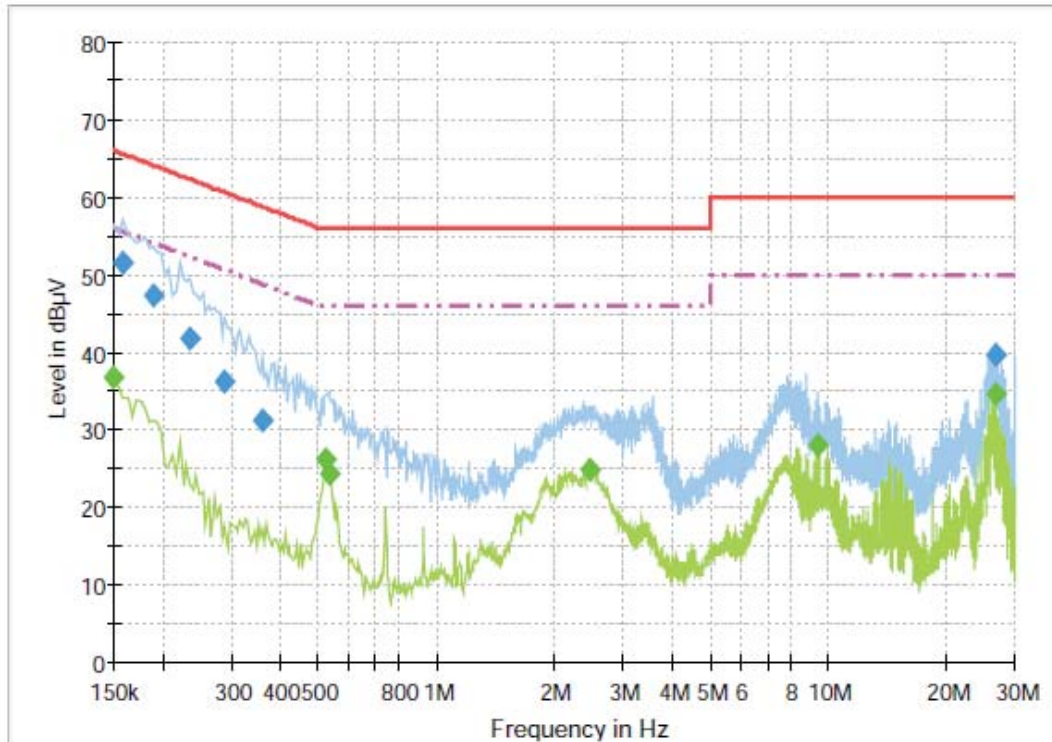
**Final Result 1**

Frequency (MHz)	QuasiPeak (dBμV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.150000	53.6	1000.0	9.000	On	L1	9.8	12.4	66.0
0.213000	44.2	1000.0	9.000	On	L1	9.9	18.8	63.1
0.240000	41.0	1000.0	9.000	On	L1	9.8	21.1	62.1
0.298500	35.4	1000.0	9.000	On	L1	9.8	24.9	60.3
0.352500	31.7	1000.0	9.000	On	L1	10.0	27.2	58.9
0.519000	32.1	1000.0	9.000	On	L1	10.0	23.9	56.0

**Final Result 2**

Frequency (MHz)	CAverage (dBμV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.154500	36.4	1000.0	9.000	On	L1	9.9	19.3	55.8
0.523500	27.0	1000.0	9.000	On	L1	10.0	19.0	46.0
0.537000	24.2	1000.0	9.000	On	L1	10.0	21.8	46.0
8.398500	28.6	1000.0	9.000	On	L1	9.9	21.4	50.0
9.361500	28.8	1000.0	9.000	On	L1	9.9	21.2	50.0
25.719000	34.0	1000.0	9.000	On	L1	10.2	16.0	50.0

**[NEUTRAL]**



**Final Result 1**

Frequency (MHz)	QuasiPeak (dBµV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.159000	51.5	1000.0	9.000	On	N	10.0	14.0	65.5
0.190500	47.3	1000.0	9.000	On	N	10.0	16.7	64.0
0.235500	41.6	1000.0	9.000	On	N	9.8	20.7	62.3
0.289500	36.1	1000.0	9.000	On	N	9.8	24.4	60.5
0.361500	31.2	1000.0	9.000	On	N	10.0	27.5	58.7
26.799000	39.7	1000.0	9.000	On	N	10.2	20.3	60.0

**Final Result 2**

Frequency (MHz)	CAverage (dBµV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.150000	36.7	1000.0	9.000	On	N	9.8	19.3	56.0
0.523500	26.1	1000.0	9.000	On	N	10.0	19.9	46.0
0.537000	24.4	1000.0	9.000	On	N	10.0	21.6	46.0
2.476500	24.7	1000.0	9.000	On	N	9.8	21.3	46.0
9.402000	28.0	1000.0	9.000	On	N	9.8	22.0	50.0
26.758500	34.5	1000.0	9.000	On	N	10.2	15.5	50.0

## APPENDIX A – Test Equipment Used For Tests

	Name of Equipment	Manufacturer	Model No.	Serial No.	Cal Date	Due Date
1	MXA Signal Analyzer	Agilent	N9020B	MY57431080	2019-04-19	2020-04-19
2	Signal Generator	Rohde & Schwarz	SMB100A	175528	2019-10-16	2020-10-16
3	EMI Test Receiver	Rohde & Schwarz	ESCI7	100814	2019-10-22	2020-10-22
4	Bilog Antenna	SCHAFFNER	CBL6111C	2551	2019-04-17	2021-04-17
5	Active Loop Antenna	SCHWARZBECK	FMZB 1513	1513-125	2018-05-02	2020-05-02
6	6dB Attenuator	Rohde & Schwarz	DNF	272.4110.50-2	2019-10-25	2020-10-25
7	AMPLIFIER	SONOMA	310	291721	2019-01-28	2020-01-28
8	EMI Test Receiver	Rohde & Schwarz	ESU40	100336	2019-01-29	2020-01-29
9	Preamplifier	Agilent	8449B	3008A02011	2019-11-25	2020-11-25
10	Double Ridged Guide Antenna	ETS-Lindgren	3117	00154525	2019-02-22	2021-02-22
11	Double Ridged Guide Antenna	ETS-Lindgren	3116	00062916	2019-04-22	2021-04-22
12	Band Reject Filter	Micro Tronics	BRM50702	G233	2019-01-28	2020-01-28
13	Dual-Tracking DC Power Supply	Topward Electric Instruments Co.,Ltd.	6303D	711196	2019-01-21	2020-01-21
14	DC Power Supply	HP	E3632A	MY40011638	2019-10-15	2020-10-15

	Cable	Manufacturer	Model No.	Serial No.	Check Date
1	RF Cable (Radiated)	HUBER+SUHNER	SUCOFLEX 104	MY27558/4	2019-11-22
2	RF Cable (Radiated)	HUBER+SUHNER	SUCOFLEX 104	N/A (below 1GHz)	2019-11-22
3	RF Cable (Radiated)	HUBER+SUHNER	SUCOFLEX 104	MY27573/4	2019-11-22
4	RF Cable (Radiated)	HUBER+SUHNER	SUCOFLEX 106	N/A (above 1GHz)	2019-11-22
5	RF Cable (Radiated)	HUBER+SUHNER	SUCOFLEX 102	MY2374/2	2019-11-22
6	RF Cable (Radiated)	HUBER+SUHNER	SUCOFLEX 102	MY4728/2	2019-11-22
7	RF Cable (Conducted Emissions)	Canare Corporation	L-5D2W	N/A	2019-11-22
8	RF Cable (Conducted)	Junkosha Inc.	MWX221	1510S087	2019-11-22