

错误！未指定书签。 RADIATED EMISSION MEASUREMENT

3.2.1 APPLICABLE STANDARD

According to FCC Part 15.407(b) and 15.209

3.2.2 CONFORMANCE LIMIT

According to FCC Part 15.407(b)(7): radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a) (see §15.205(c)).

According to FCC Part 15.205, Restricted bands

MHz	MHz	MHz	GHz
0.090-0.110	16.42-16.423	399.9-410	4.5-5.15
0.495-0.505	16.69475-16.69525	608-614	5.35-5.46
2.1735-2.1905	16.80425-16.80475	960-1240	7.25-7.75
4.125-4.128	25.5-25.67	1300-1427	8.025-8.5
4.17725-4.17775	37.5-38.25	1435-1626.5	9.0-9.2
4.20725-4.20775	73-74.6	1645.5-1646.5	9.3-9.5
6.215-6.218	74.8-75.2	1660-1710	10.6-12.7
6.26775-6.26825	123-138	2200-2300	14.47-14.5
8.291-8.294	149.9-150.05	2310-2390	15.35-16.2
8.362-8.366	156.52475-156.52525	2483.5-2500	17.7-21.4
8.37625-8.38675	156.7-156.9	2690-2900	22.01-23.12
8.41425-8.41475	162.0125-167.17	3260-3267	23.6-24.0
12.29-12.293	167.72-173.2	3332-3339	31.2-31.8
12.51975-12.52025	240-285	3345.8-3358	36.43-36.5
12.57675-12.57725	322-335.4	3600-4400	(2)
13.36-13.41			

20dBc in any 100 kHz bandwidth outside the operating frequency band. In case the emission fall within the restricted band specified on 15.205(a), then the 15.209(a) limit in the table below has to be followed.

Restricted Frequency(MHz)	Field Strength (μV/m)	Field Strength (dBμV/m)	Measurement Distance
0.009~0.490	2400/F(KHz)	20 log (uV/m)	300
0.490~1.705	24000/F(KHz)	20 log (uV/m)	30
1.705~30.0	30	29.5	30
30-88	100	40	3
88-216	150	43.5	3
216-960	200	46	3
Above 960	500	54	3

Limits of Radiated Emission Measurement(Above 1000MHz)

Frequency(MHz)	Class B (dBuV/m) (at 3M)	
	PEAK	AVERAGE
Above 1000	74	54

Remark : 1. Emission level in dBuV/m=20 log (uV/m)

2. Measurement was performed at an antenna to the closed point of EUT distance of meters.

3. For Frequency 9kHz~30MHz:

Distance extrapolation factor =40log(Specific distance/ test distance)(dB);

Limit line=Specific limits(dBuV) + distance extrapolation factor.

For Frequency above 30MHz:

Distance extrapolation factor =20log(Specific distance/ test distance)(dB);

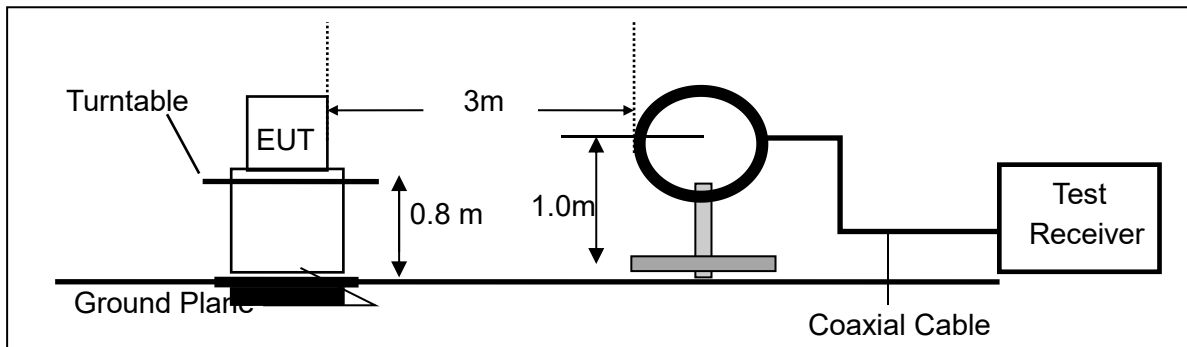
Limit line=Specific limits(dBuV) + distance extrapolation factor.

3.2.3 MEASURING INSTRUMENTS

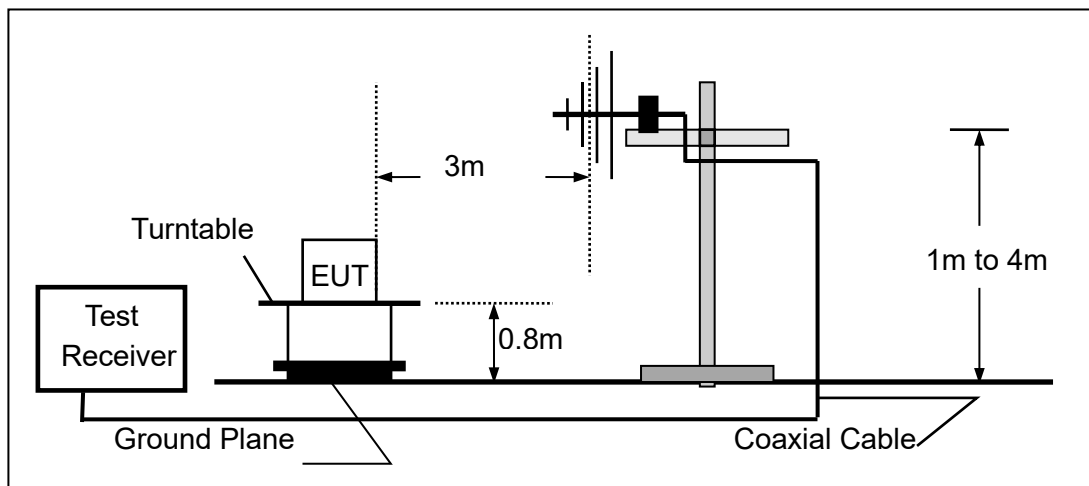
The Measuring equipment is listed in the section 6.3 of this test report.

3.2.4 TEST CONFIGURATION

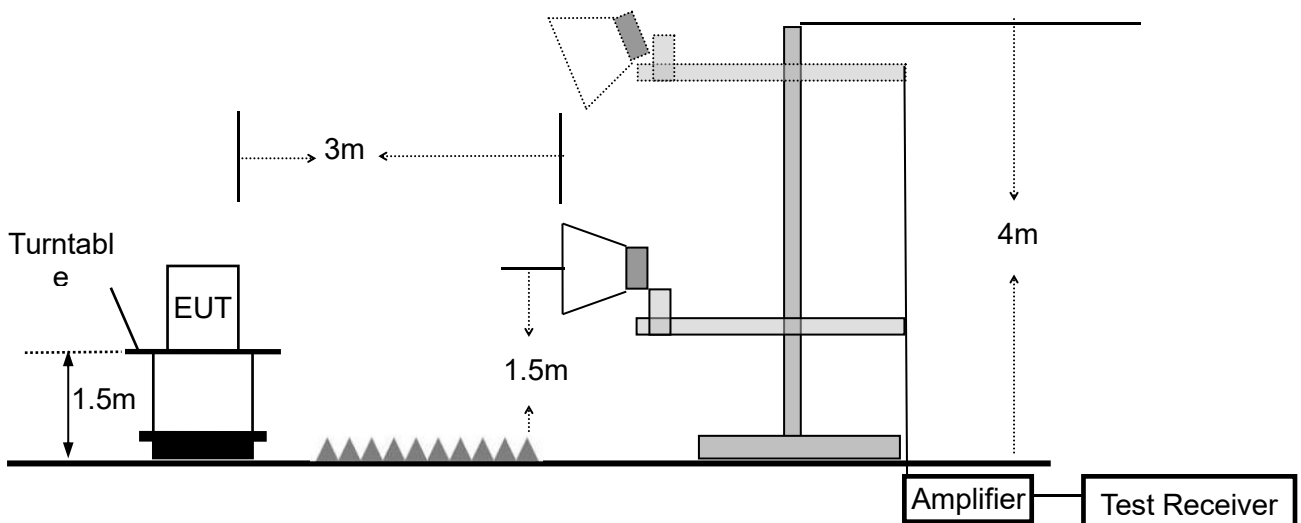
(a) For radiated emissions below 30MHz



(b) For radiated emissions from 30MHz to 1000MHz



(c) For radiated emissions above 1000MHz



3.2.5 TEST PROCEDURE

The test site semi-anechoic chamber has met the requirement of NSA tolerance 4 dB according to the standards: ANSI C63.10-2013. The test distance is 3m. The setup is according to the requirements in Section 13.1.4.1 of ANSI C63.10-2013 and CAN/CSA-CEI/IEC CISPR 22.

This test is required for any spurious emission that falls in a Restricted Band, as defined in Section 15.205. It must be performed with the highest gain of each type of antenna proposed for use with the EUT.

Use the following spectrum analyzer settings:

Spectrum Parameter	Setting
Attenuation	Auto
Start Frequency	1000 MHz
Stop Frequency	10th carrier harmonic
RB / VB (emission in restricted band)	1 MHz / 1 MHz for Peak, 1 MHz / 1MHz for Average

Receiver Parameter	Setting
Attenuation	Auto
Start ~ Stop Frequency	9kHz~150kHz / RB 200Hz for QP
Start ~ Stop Frequency	150kHz~30MHz / RB 9kHz for QP
Start ~ Stop Frequency	30MHz~1000MHz / RB 120kHz for QP

- The measuring distance of at 3 m shall be used for measurements at frequency up to 1GHz. For frequencies above 1GHz, any suitable measuring distance may be used.
- The EUT was placed on the top of a rotating table 0.8 m for below 1GHz and 1.5m for above 1GHz the ground at a 3 meter. The table was rotated 360 degrees to determine the position of the highest radiation.
- The height of the equipment or of the substitution antenna shall be 0.8 m for below 1GHz and 1.5m for above 1GHz; the height of the test antenna shall vary between 1 m to 4 m. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- The initial step in collecting conducted emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured.
- If the Peak Mode measured value compliance with and lower than Quasi Peak Mode Limit, the EUT shall be deemed to meet QP Limits and then no additional QP Mode measurement performed.
- For the actual test configuration, please refer to the related Item –EUT Test Photos.

Note:

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

During the radiated emission test, the Spectrum Analyzer was set with the following configurations:

Frequency Band (MHz)	Function	Resolution bandwidth	Video Bandwidth
30 to 1000	QP	120 kHz	300 kHz
Above 1000	Peak	1 MHz	1 MHz
	Average	1 MHz	1 MHz

Note: for the frequency ranges below 30 MHz, a narrower RBW is used for these ranges but the measured value should add a RBW correction factor (RBWCF) where $RBWCF [dB] = 10 \cdot \lg(100 [kHz] / \text{narrower RBW [kHz]})$. , the narrower RBW is 1 kHz and RBWCF is 20 dB for the frequency 9 kHz to 150 kHz, and the narrower RBW is 10 kHz and RBWCF is 10 dB for the frequency 150 kHz to 30 MHz.

3.2.6 TEST RESULTS (9KHz – 30 MHz)

EUT:	5G Smart Phone	Model Name. :	GQ5002
Temperature:	20 °C	Relative Humidity:	48%
Pressure:	1010 hPa	Test Voltage :	DC 3.85V
Test Mode :	TX	Polarization :	--

Freq.	Reading	Limit	Margin	State
(MHz)	(dBuV/m)	(dBuV/m)	(dB)	P/F
--	--	--	--	N/A
--	--	--	--	N/A

NOTE:

The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.

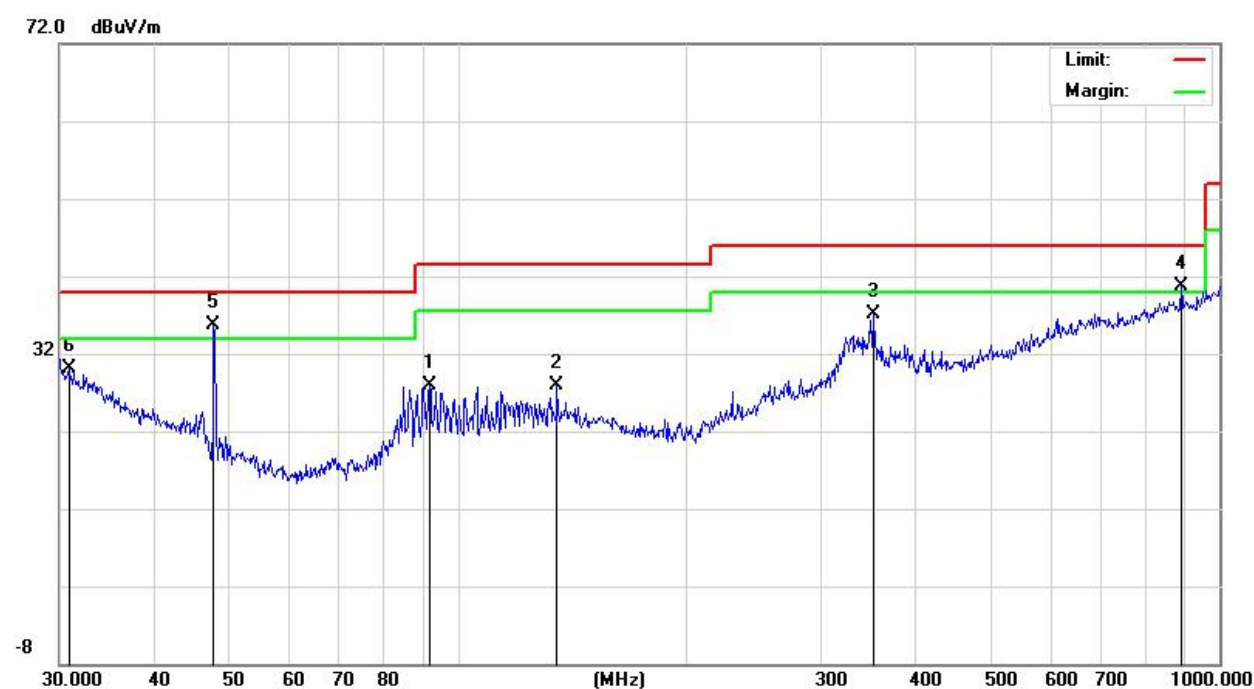
3.2.7 TEST RESULTS (30MHz – 1GHz)

EUT :	5G Smart Phone	Model Name. :	GQ5002
Temperature :	25°C	Relative Humidity :	55%
Pressure :	1010 hPa	Test Voltage :	DC 3.85V
Test Mode :	TX(5.2G)- 802.11a (Low CH)		

Polar (H/V)	Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Remark
	(MHz)	(dBuV)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
V	91.8162	11.69	16.13	27.82	43.50	-15.68	QP
V	135.0319	9.49	18.40	27.89	43.50	-15.61	QP
V	351.7078	14.16	22.93	37.09	46.00	-8.91	QP
V	890.7278	8.55	32.22	40.77	46.00	-5.23	QP
V	47.8260	19.84	15.87	35.71	40.00	-4.29	QP
V	30.8535	5.83	24.36	30.19	40.00	-9.81	QP

Remark:

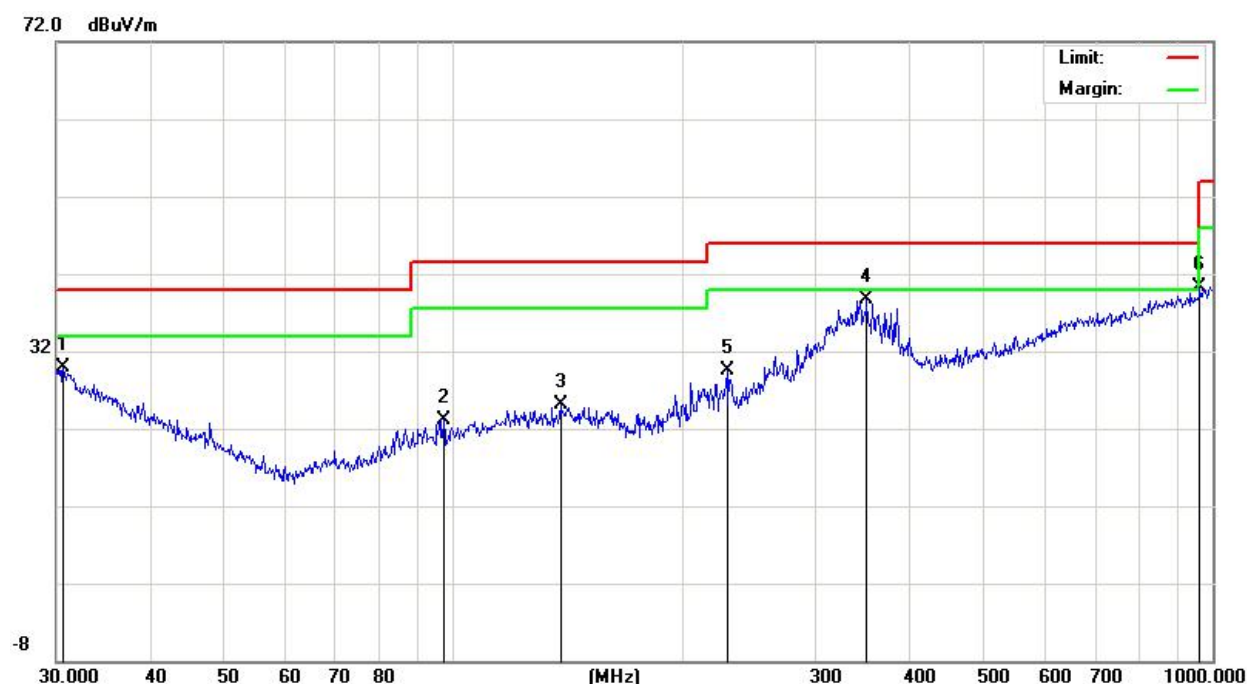
Emission Level = Meter Reading + Factor, Margin= Emission Level - Limit



Polar (H/V)	Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Remark
	(MHz)	(dBuV)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
H	30.6378	5.31	24.59	29.90	40.00	-10.10	QP
H	97.1148	6.75	16.40	23.15	43.50	-20.35	QP
H	138.3873	6.16	18.89	25.05	43.50	-18.45	QP
H	350.4768	15.71	22.95	38.66	46.00	-7.34	QP
H	229.2931	11.80	17.77	29.57	46.00	-16.43	QP
H	962.1622	7.15	33.17	40.32	54.00	-13.68	QP

Remark:

Emission Level = Meter Reading + Factor, Margin= Emission Level - Limit

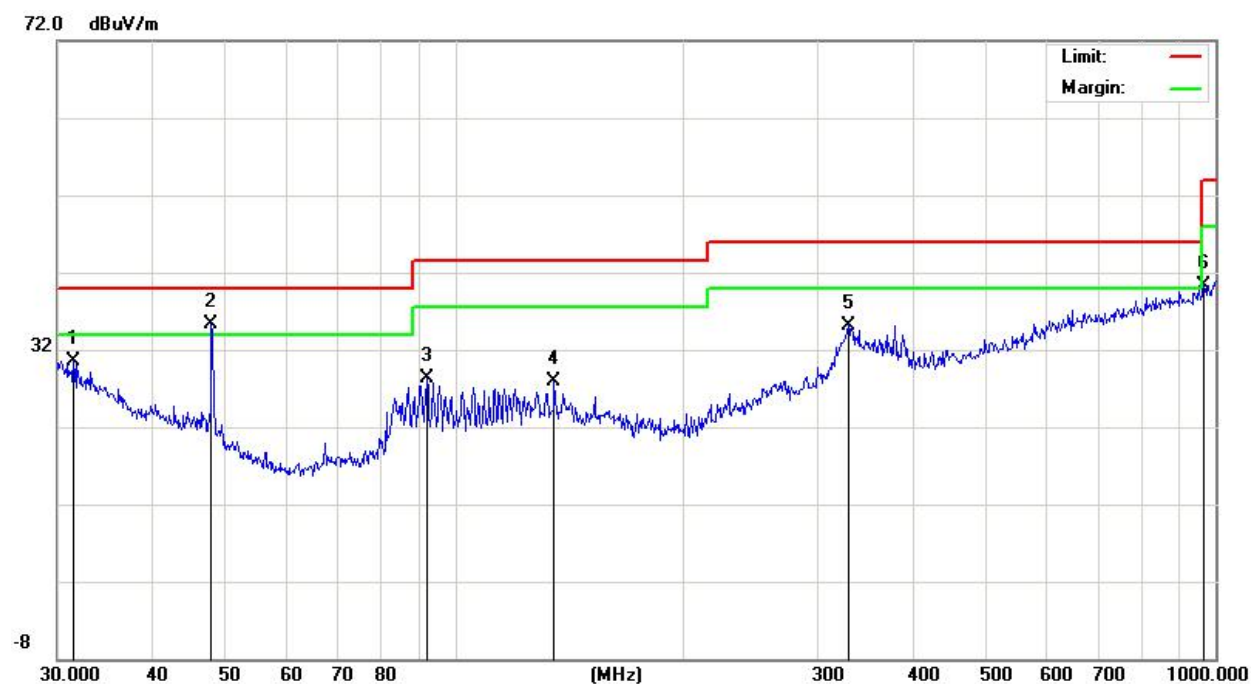


EUT :	5G Smart Phone	Model Name. :	GQ5002
Temperature :	25°C	Relative Humidity :	55%
Pressure :	1010 hPa	Test Voltage :	DC 3.85V
Test Mode :	TX(5.8G)- 802.11ac80 (Low CH)		

Polar (H/V)	Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Remark
	(MHz)	(dBuV)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
V	31.5094	6.95	23.65	30.60	40.00	-9.40	QP
V	47.8260	19.39	15.87	35.26	40.00	-4.74	QP
V	91.8162	12.13	16.13	28.26	43.50	-15.24	QP
V	135.0319	9.49	18.40	27.89	43.50	-15.61	QP
V	329.0389	13.11	22.09	35.20	46.00	-10.80	QP
V	965.5421	7.15	33.25	40.40	54.00	-13.60	QP

Remark:

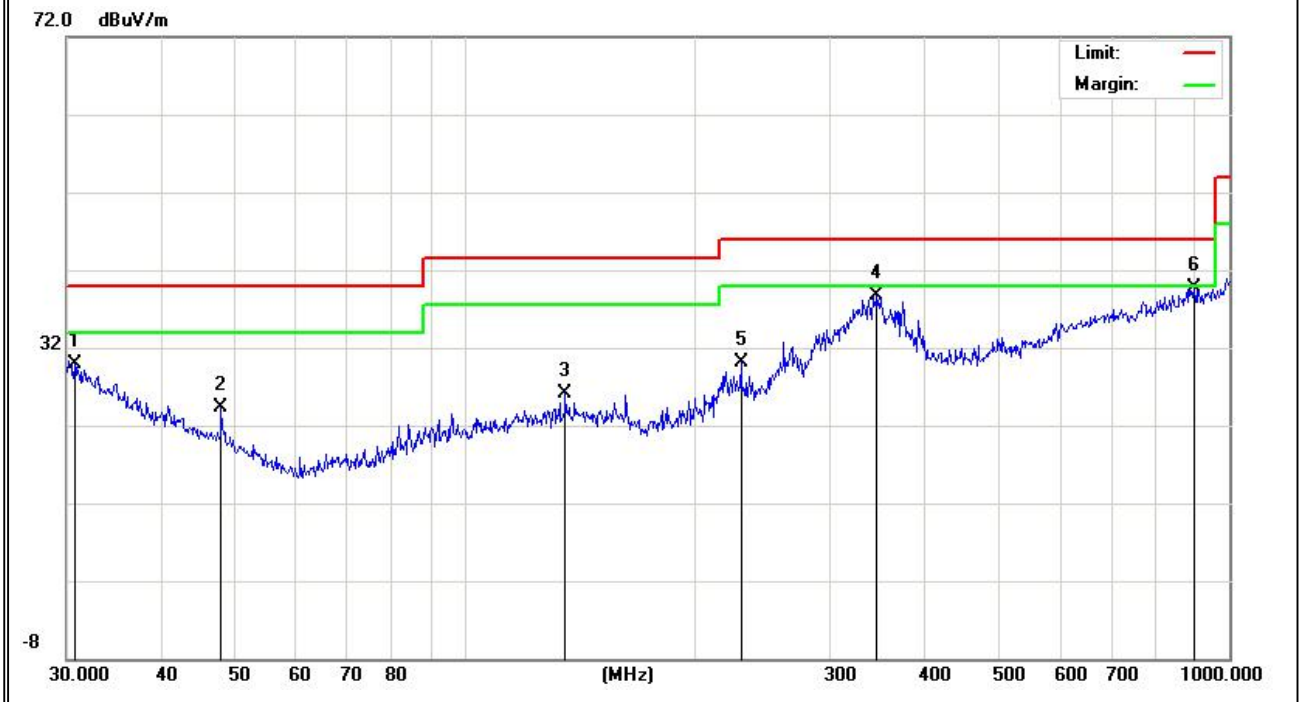
Emission Level = Meter Reading + Factor, Margin= Emission Level - Limit



Polar (H/V)	Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Remark
	(MHz)	(dBuV)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
H	30.7454	5.44	24.47	29.91	40.00	-10.09	QP
H	47.8260	8.45	15.87	24.32	40.00	-15.68	QP
H	135.0319	7.61	18.40	26.01	43.50	-17.49	QP
H	345.5951	15.95	22.72	38.67	46.00	-7.33	QP
H	229.2931	12.36	17.77	30.13	46.00	-15.87	QP
H	900.1473	7.38	32.42	39.80	46.00	-6.20	QP

Remark:

Emission Level = Meter Reading + Factor, Margin= Emission Level - Limit



3.2.8 TEST RESULTS (1GHz-18GHz)

EUT :	5G Smart Phone	Model Name. :	GQ5002
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 3.85V
Test Mode :	TX(5.2G) - 802.11a_5180~5240MHz		

Polar	Frequency	Meter Reading	Cable loss	Antenna Factor	Preamplifier Factor	Emission Level	Limits	Margin	Detector Type
(H/V)	(MHz)	(dBuV)	(dB)	dB/m	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
Low Channel (5180 MHz)-Above 1G									
Vertical	3694.51	61.75	5.94	35.40	44.00	59.09	74.00	-14.91	Pk
Vertical	3694.48	42.71	5.94	35.40	44.00	40.05	54.00	-13.95	AV
Vertical	10360.53	58.89	8.46	39.75	44.50	62.60	68.20	-5.60	Pk
Vertical	15540.79	61.38	10.12	38.80	44.10	66.20	74.00	-7.80	Pk
Vertical	15540.58	39.87	10.12	38.80	42.70	46.09	54.00	-7.91	AV
Horizontal	3713.29	63.75	5.94	35.18	44.00	60.87	74.00	-13.13	Pk
Horizontal	3713.38	43.92	5.94	35.18	44.00	41.04	54.00	-12.96	AV
Horizontal	10360.75	59.15	8.46	38.71	44.50	61.82	68.20	-6.38	Pk
Horizontal	15540.66	57.60	10.12	38.38	44.10	62.00	74.00	-12.00	Pk
Horizontal	15540.68	41.04	10.12	38.38	44.10	45.44	54.00	-8.56	AV
middle Channel (5200 MHz)-Above 1G									
Vertical	3624.43	58.95	6.48	36.35	44.05	57.73	74.00	-16.27	Pk
Vertical	3624.44	43.29	6.48	36.35	44.05	42.07	54.00	-11.93	AV
Vertical	10400.60	60.32	8.47	37.88	44.51	62.16	68.20	-6.04	Pk
Vertical	15600.53	60.48	10.12	38.80	44.10	65.30	74.00	-8.70	Pk
Vertical	15600.57	39.80	10.12	38.80	42.70	46.02	54.00	-7.98	AV
Horizontal	4202.68	58.68	6.48	36.37	44.05	57.48	74.00	-16.52	Pk
Horizontal	4202.60	45.41	6.48	36.37	44.05	44.21	54.00	-9.79	AV
Horizontal	10400.43	61.83	8.47	38.64	44.50	64.44	68.20	-3.76	Pk
Horizontal	15601.07	60.46	10.12	38.38	44.10	64.86	74.00	-9.14	Pk
Horizontal	15601.07	41.59	10.12	38.38	44.10	45.99	54.00	-8.01	AV

High Channel (5240 MHz)-Above 1G									
Vertical	4598.15	64.28	7.10	37.24	43.50	65.12	74.00	-8.88	Pk
Vertical	4598.22	43.59	7.10	37.24	43.50	44.43	54.00	-9.57	AV
Vertical	10480.70	60.63	8.46	37.68	44.50	62.27	68.20	-5.93	Pk
Vertical	15720.54	61.79	10.12	38.80	44.10	66.61	74.00	-7.39	Pk
Vertical	15720.59	40.53	10.12	38.80	42.70	46.75	54.00	-7.25	AV
Horizontal	4589.80	61.41	7.10	37.24	43.50	62.25	74.00	-11.75	Pk
Horizontal	4589.51	41.86	7.10	37.24	43.50	42.70	54.00	-11.30	AV
Horizontal	10481.06	62.41	8.46	38.57	44.50	64.94	68.20	-3.26	Pk
Horizontal	15720.65	60.05	10.12	38.38	44.10	64.45	74.00	-9.55	Pk
Horizontal	15720.65	43.29	10.12	38.38	44.10	47.69	54.00	-6.31	AV
Note: "802.11a" mode is the worst mode. The amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported. Emission level (dBuV/m) = 20 log Emission level (uV/m). Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.									

EUT :	5G Smart Phone	Model Name. :	GQ5002
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 3.85V
Test Mode :	TX (5.8G) -- 802.11ac80_5745~5825MHz		

Polar	Frequency	Meter Reading	Cable loss	Antenna Factor	Preamplifier Factor	Emission Level	Limits	Margin	Detector Type
(H/V)	(MHz)	(dBuV)	(dB)	dB/m	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
Low Channel (5745 MHz)-Above 1G									
Vertical	5122.79	64.00	5.94	35.40	44.00	61.34	74.00	-12.66	Pk
Vertical	5122.78	45.95	5.94	35.40	44.00	43.29	54.00	-10.71	AV
Vertical	11491.06	60.38	8.46	39.75	44.50	64.09	74.00	-9.91	Pk
Vertical	11490.88	43.65	8.46	39.75	44.50	47.36	54.00	-6.64	AV
Vertical	17236.02	52.54	10.12	38.80	44.10	57.36	68.20	-10.84	Pk
Horizontal	5167.04	60.04	5.94	35.18	44.00	57.16	68.20	-11.04	Pk
Horizontal	11490.74	59.19	8.46	38.71	44.50	61.86	74.00	-12.14	Pk
Horizontal	11490.72	42.70	8.46	38.71	44.50	45.37	54.00	-8.63	AV
Horizontal	17235.93	51.57	10.12	38.38	44.10	55.97	68.20	-12.23	Pk
middle Channel (5785 MHz)-Above 1G									
Vertical	5433.65	62.94	6.48	36.35	44.05	61.72	74.00	-12.28	Pk
Vertical	5433.64	43.40	6.48	36.35	44.05	42.18	54.00	-11.82	AV
Vertical	11570.81	61.01	8.47	37.88	44.51	62.85	74.00	-11.15	Pk
Vertical	11570.70	43.39	8.47	37.88	44.51	45.23	54.00	-8.77	AV
Vertical	17356.17	56.22	10.12	38.80	44.10	61.04	68.20	-7.16	Pk
Horizontal	4866.92	60.43	6.48	36.37	44.05	59.23	74.00	-14.77	Pk
Horizontal	4866.98	43.17	6.48	36.37	44.05	41.97	54.00	-12.03	AV
Horizontal	11570.75	62.87	8.47	38.64	44.50	65.48	74.00	-8.52	AV
Horizontal	11570.64	44.33	8.47	38.64	44.50	46.94	54.00	-7.06	Pk
Horizontal	17355.94	56.90	10.12	38.38	44.10	61.30	68.20	-6.90	Pk

High Channel (5825 MHz)-Above 1G									
Vertical	5243.63	61.95	7.10	37.24	43.50	62.79	68.20	-5.41	Pk
Vertical	11651.71	61.78	8.46	37.68	44.50	63.42	74.00	-10.58	Pk
Vertical	11651.77	43.34	8.46	37.68	44.50	44.98	54.00	-9.02	AV
Vertical	17472.99	60.49	10.12	38.80	44.10	65.31	68.20	-2.89	Pk
Vertical	17473.05	60.58	10.12	38.80	44.10	65.40	68.20	-2.80	Pk
Horizontal	5284.41	60.24	7.10	37.24	43.50	61.08	68.20	-7.12	Pk
Horizontal	11651.93	60.30	8.46	38.57	44.50	62.83	74.00	-11.17	Pk
Horizontal	11652.06	41.91	8.46	38.57	44.50	44.44	54.00	-9.56	AV
Horizontal	17473.84	58.21	10.12	38.38	44.10	62.61	68.20	-5.59	Pk
Horizontal	17473.87	58.10	10.12	38.38	44.10	62.50	68.20	-5.70	Pk

Note:"802.11ac80" mode is the worst mode.

The amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported.

Emission level (dBuV/m) = 20 log Emission level (uV/m).

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

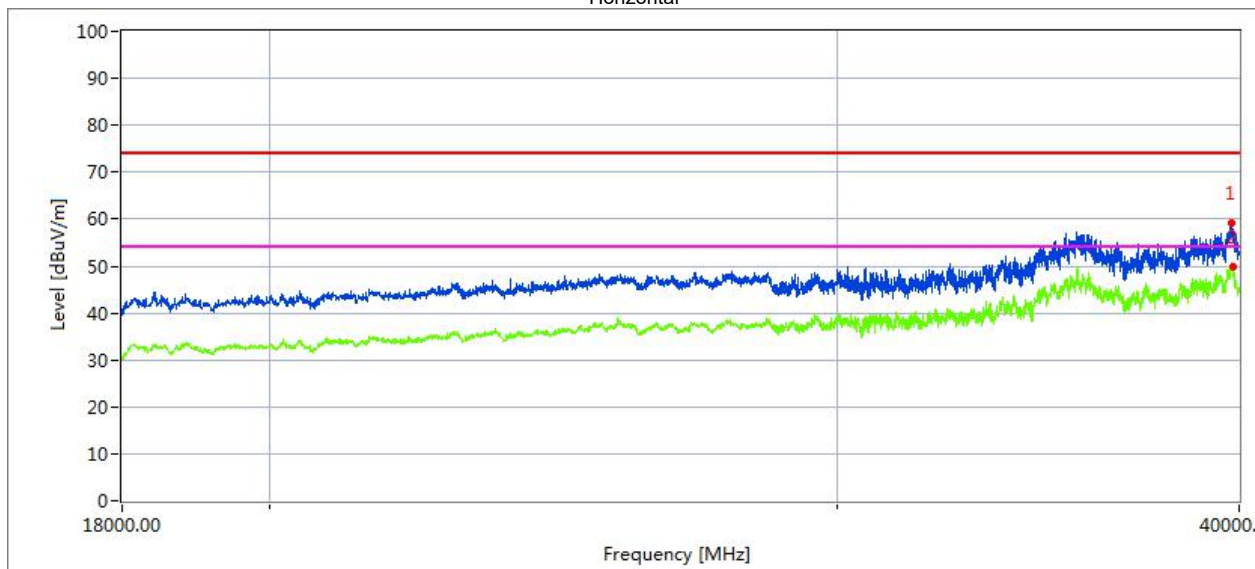
3.2.9 TEST RESULTS (18GHz-40GHz)

EUT :	5G Smart Phone	Model Name. :	GQ5002
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 3.85V
Test Mode :	TX (5.2G)-802.11a 5180MHz~5240MHz, TX (5.8G)-802.11a 5745MHz~5825MHz		

All the modulation modes have been tested, and the worst result was report as below:

Low Channel (5180 MHz)-Above 1G

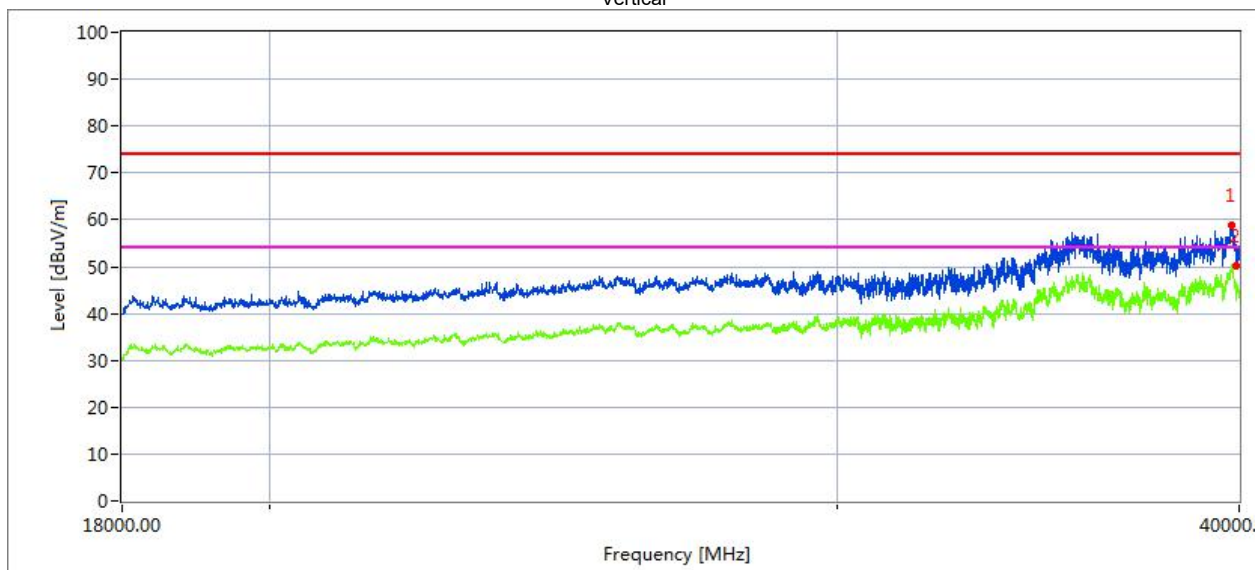
Horizontal



Measurement Result:

Frequency MHz	Meter Reading dBuV	Cable loss dB	Antenna Factor dB/m	Preamplifier Factor dB	Emission Level dBuV/m	Limits dBuV/m	Margin dB	Detector Type
39768.97	39.08	20.09	44.07	43.48	59.76	68.2	8.44	Peak
39766.91	27.36	20.09	44.04	43.48	48.01	54	5.99	AVG

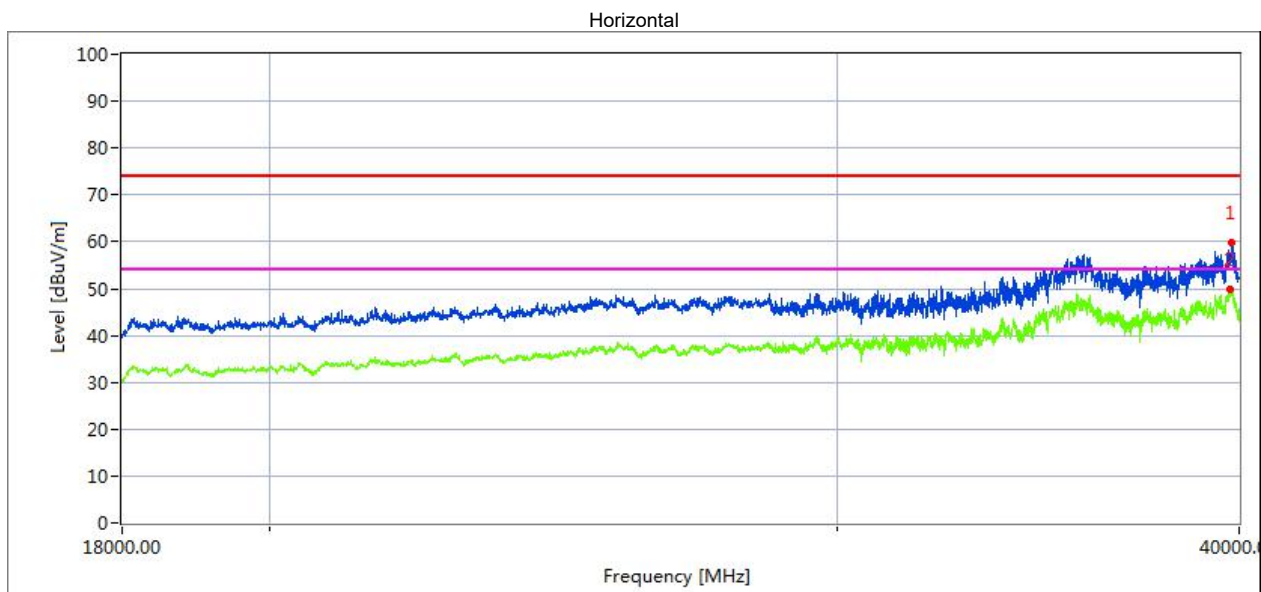
Vertical



Measurement Result:

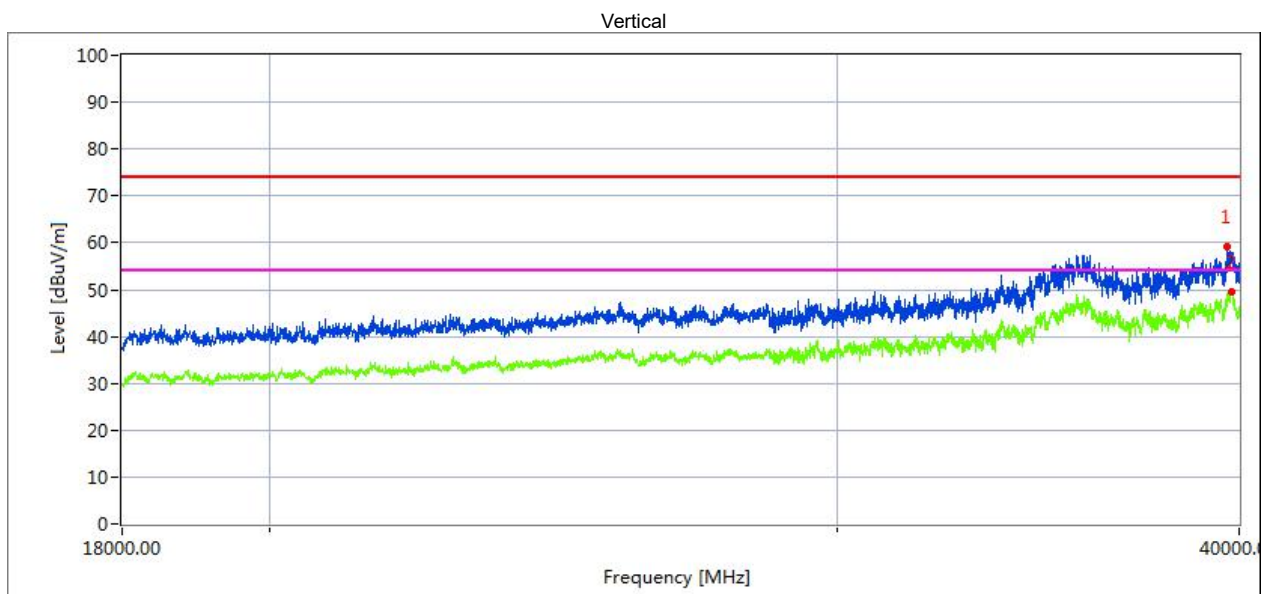
Frequency MHz	Meter Reading dBuV	Cable loss dB	Antenna Factor dB/m	Preamplifier Factor dB	Emission Level dBuV/m	Limits dBuV/m	Margin dB	Detector Type
39769.326	36.28	20.09	44.07	43.48	56.96	68.2	11.24	Peak
39769.185	27.47	20.09	44.04	43.48	48.12	54	5.88	AVG

High Channel (5240 MHz)-Above 1G



Measurement Result:

Frequency MHz	Meter Reading dBuV	Cable loss dB	Antenna Factor dB/m	Preamplifier Factor dB	Emission Level dBuV/m	Limits dBuV/m	Margin dB	Detector Type
35627.84	40.84	19.11	42.73	44.61	58.07	68.2	10.13	Peak
35596.646	31.48	19.11	42.73	44.61	48.71	54	5.29	AVG

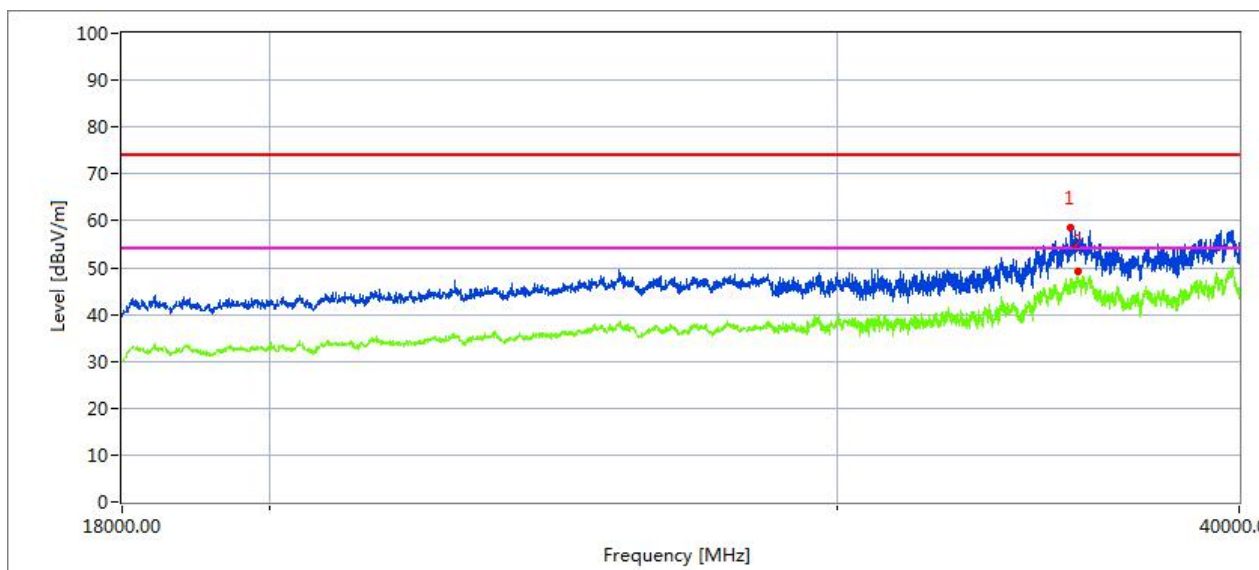


Measurement Result:

Frequency MHz	Meter Reading dBuV	Cable loss dB	Antenna Factor dB/m	Preamplifier Factor dB	Emission Level dBuV/m	Limits dBuV/m	Margin dB	Detector Type
39769.226	37.36	20.09	44.07	43.48	58.04	68.2	10.16	Peak
39769.216	25.32	20.09	44.04	43.48	45.97	54	8.03	AVG

Low Channel (5745 MHz)-Above 1G

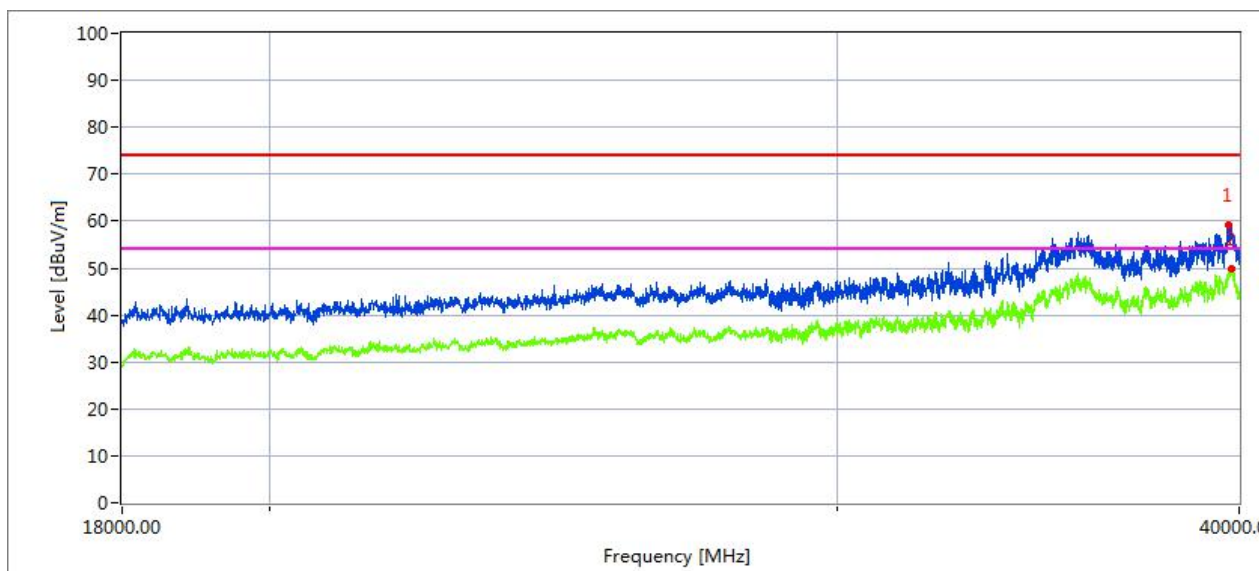
Horizontal



Measurement Result:

Frequency MHz	Meter Reading dBuV	Cable loss dB	Antenna Factor dB/m	Preamp Factor dB	Emission Level dBuV/m	Limits dBuV/m	Margin dB	Detector Type
39669.934	38.46	20.09	44.16	43.48	59.23	68.2	8.97	Peak
39669.804	29.36	20.09	44.16	43.48	50.13	54	3.87	AVG

Vertical

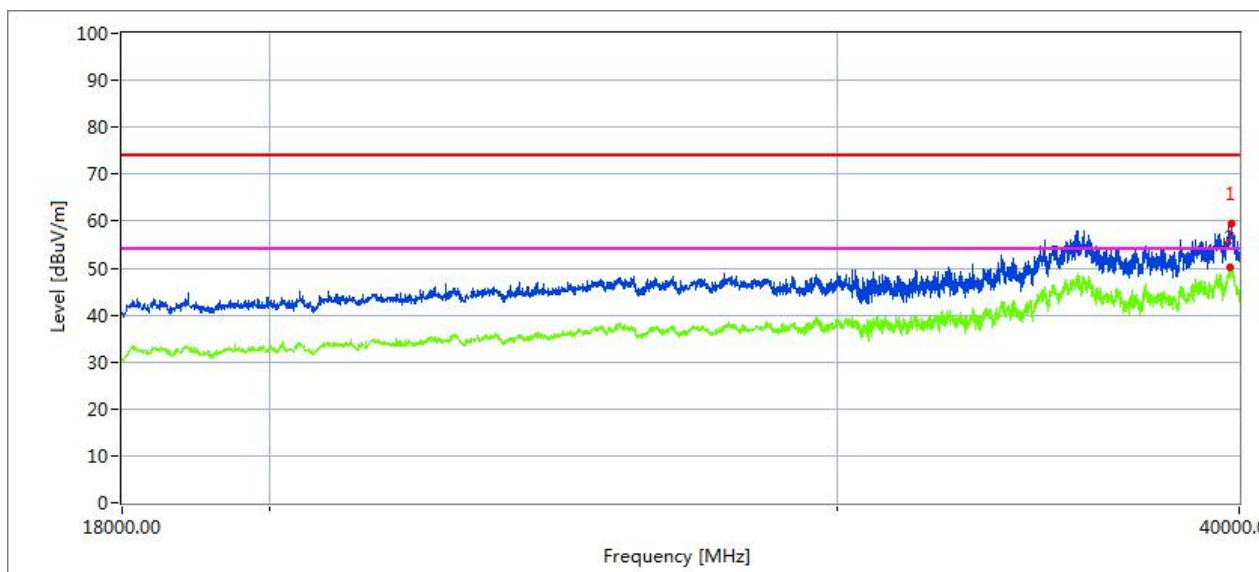


Measurement Result:

Frequency MHz	Meter Reading dBuV	Cable loss dB	Antenna Factor dB/m	Preamp Factor dB	Emission Level dBuV/m	Limits dBuV/m	Margin dB	Detector Type
39731.272	37.55	20.06	44.07	43.21	58.47	68.2	9.73	Peak
39731.172	28.38	20.06	44.07	43.21	49.3	54	4.7	AVG

High Channel (5825 MHz)-Above 1G

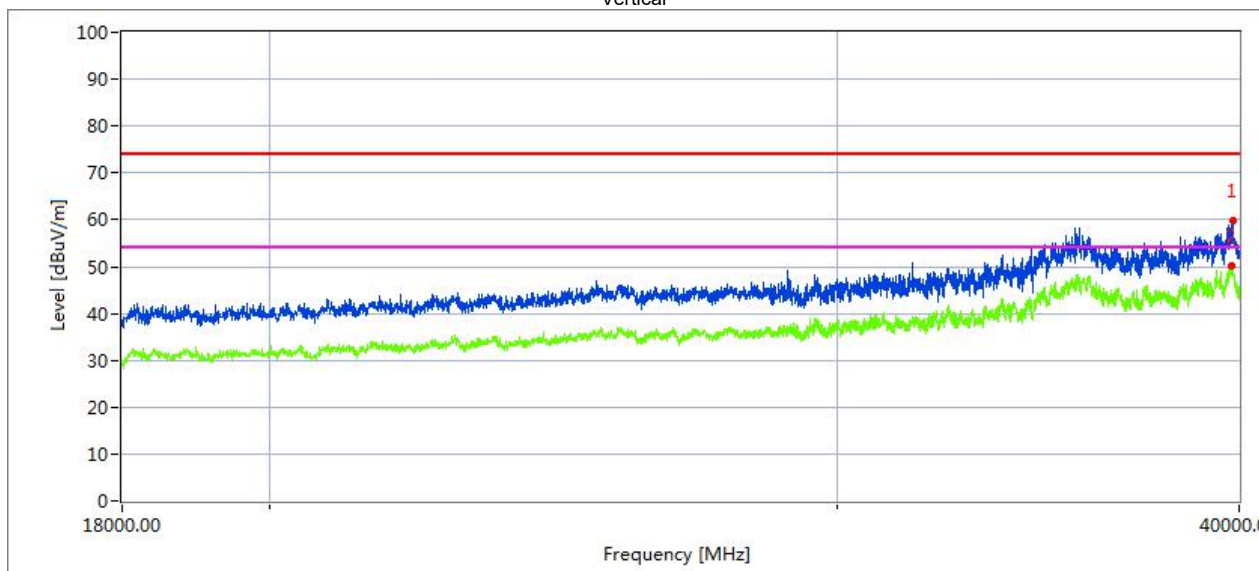
Horizontal



Measurement Result:

Frequency MHz	Meter Reading dBuV	Cable loss dB	Antenna Factor dB/m	Preamp Factor dB	Emission Level dBuV/m	Limits dBuV/m	Margin dB	Detector Type
35627.954	39.44	19.11	42.63	43.48	57.7	68.2	10.5	Peak
35635.758	30.09	19.12	42.63	43.48	48.36	54	5.64	AVG

Vertical



Measurement Result:

Frequency MHz	Meter Reading dBuV	Cable loss dB	Antenna Factor dB/m	Preamp Factor dB	Emission Level dBuV/m	Limits dBuV/m	Margin dB	Detector Type
39821.413	38.49	20.1	44.1	43.22	59.47	68.2	8.73	Peak
39821.553	29.39	20.1	44.1	43.22	50.37	54	3.63	AVG

3.2.10 Spurious Emission in Restricted Band 4.5GHz~5.150 GHz& 5.350GHz~5460GHz

EUT :	5G Smart Phone	Model Name. :	GQ5002
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 3.85V
Test Mode :	TX (5.2G)-802.11a 5150MHz~5250MHz,		

All the modulation modes have been tested, The report just record the worst data mode.

As the modulation modes have been tested, this report just record the worst data mode.

Frequen cy	Meter Reading	Cable Loss	Antenna Factor	Preamp Factor	Emission Level	Limits	Margin	Detec tor	Comment
(MHz)	(dBμV)	(dB)	dB/m	(dB)	(dBμV/m)	(dBμV/m)	(dB)	Type	
5.2G WIFI-802.11a Mode									
4500	56.35	5.2	35.6	44.2	52.95	74	-21.05	Pk	Horizontal
4500	47.33	5.2	35.6	44.2	43.93	54	-10.07	AV	Horizontal
4500	59.47	5.2	35.6	44.2	56.07	74	-17.93	Pk	Horizontal
4500	46.47	5.2	35.6	44.2	43.07	54	-10.93	AV	Horizontal
5150	70.35	5.36	35.66	44.22	67.15	74	-6.85	Pk	Horizontal
5150	79.90	5.36	35.66	44.22	76.7	54	22.7	AV	Horizontal
5150	56.94	5.36	35.66	44.22	53.74	74	-20.26	Pk	Vertical
5150	79.81	5.36	35.66	44.22	76.61	54	22.61	AV	Vertical
5350	65.74	5.68	35.68	44.22	62.88	74	-11.12	Pk	Vertical
5350	47.41	5.68	35.68	44.22	44.55	54	-9.45	AV	Vertical
5350	60.99	5.68	35.68	44.22	58.13	74	-15.87	Pk	Horizontal
5350	45.73	5.68	35.68	44.22	42.87	54	-11.13	AV	Horizontal

Note: (1) Emission Level= Antenna Factor + Cable Loss + Read Level - Preamp Factor

(2) "802.11a " mode is the worst mode. When PK value is lower than the Average value limit, average don't record.

错误！未指定书签。 **POWER SPECTRAL DENSITY TEST**

错误！未指定书签。 **Applied procedures / limit**

According to FCC §15.407(a)(3)

For the band 5.15-5.25 GHz,

(i) For an outdoor access point operating in the band 5.15-5.25 GHz, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. The maximum e.i.r.p. at any elevation angle above 30 degrees as measured from the horizon must not exceed 125 mW (21 dBm).

(ii) For an indoor access point operating in the band 5.15-5.25 GHz, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

(iii) For fixed point-to-point access points operating in the band 5.15-5.25 GHz, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. Fixed point-to-point U-NII devices may employ antennas with directional gain up to 23 dBi without any corresponding reduction in the maximum conducted output power or maximum power spectral density. For fixed point-to-point transmitters that employ a directional antenna gain greater than 23 dBi, a 1 dB reduction in maximum conducted output power and maximum power spectral density is required for each 1 dB of antenna gain in excess of 23 dBi. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple colocated transmitters transmitting the same information. The operator of the U-NII device, or if the equipment is professionally installed, the installer, is responsible for ensuring that systems employing high gain directional antennas are used exclusively for fixed, point-to-point operations.

(iv) For client devices in the 5.15-5.25 GHz band, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

For the band 5.725-5.85 GHz

(3) For the band 5.725-5.85 GHz, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

错误！未指定书签。 TEST PROCEDURE

For devices operating in the bands 5.15-5.25 GHz, 5.25-5.35 GHz, and 5.47-5.725 GHz, the above procedures make use of 1 MHz RBW to satisfy directly the 1 MHz reference bandwidth specified in § 15.407(a)(5). For devices operating in the band 5.725-5.85 GHz, the rules specify a measurement bandwidth of 500 kHz. Many spectrum analyzers do not have 500 kHz RBW, thus a narrower RBW may need to be used. The rules permit the use of a RBWs less than 1 MHz, or 500 kHz, “provided that the measured power is integrated over the full reference bandwidth” to show the total power over the specified measurement bandwidth (i.e., 1 MHz, or 500 kHz). If measurements are performed using a reduced resolution bandwidth (< 1 MHz, or < 500 kHz) and integrated over 1 MHz, or 500 KHz bandwidth, the following adjustments to the procedures apply:

- a) Set $RBW \geq 1/T$, where T is defined in section II.B.I.a).
- b) Set $VBW \geq 3$ RBW.
- c) If measurement bandwidth of Maximum PSD is specified in 500 kHz, add $10\log(500\text{kHz}/RBW)$ to the measured result, whereas $RBW (< 500 \text{ KHz})$ is the reduced resolution bandwidth of the spectrum analyzer set during measurement.
- d) If measurement bandwidth of Maximum PSD is specified in 1 MHz, add $10\log(1\text{MHz}/RBW)$ to the measured result, whereas $RBW (< 1 \text{ MHz})$ is the reduced resolution bandwidth of spectrum analyzer set during measurement.
- e) Care must be taken to ensure that the measurements are performed during a period of continuous transmission or are corrected upward for duty cycle.

Note: As a practical matter, it is recommended to use reduced RBW of 100 KHz for the sections 5.c) and 5.d) above, since $RBW=100 \text{ KHz}$ is available on nearly all spectrum analyzers.

错误！未指定书签。 DEVIATION FROM STANDARD

No deviation.

错误！未指定书签。 TEST SETUP**错误！未指定书签。 EUT OPERATION CONDITIONS**

The EUT tested system was configured as the statements of 2.1 Unless otherwise a special operating condition is specified in the follows during the testing.

错误！未指定书签。 **TEST RESULTS**

EUT :	5G Smart Phone	Model Name. :	GQ5002
Temperature :	25 °C	Relative Humidity :	56%
Pressure :	1015 hPa	Test Voltage :	DC 3.85V
Test Mode :	TX Frequency Band I (5150-5250MHz), Band IV (5725-5850MHz)		

Test data reference attachment.