--- The final measurement will be done in the position (turntable and elevation) causing the highest emissions with QP detector.

--- The final levels, frequency, measuring time, bandwidth, turntable position, correction factor, margin to the limit and limit will be recorded. Also a plot with the graph of the pre measurement and the limit will be stored.

2) Sequence of testing 30MHz to 1GHz

Setup:

--- The equipment was set up to simulate a typical usage like described in the user manual or described by manufacturer.

--- If the EUT is a tabletop system, a table with 0.8 m height is used, which is placed on the ground plane.

--- If the EUT is a floor standing device, it is placed on the ground plane with insulation between both.

--- Auxiliary equipment and cables were positioned to simulate normal operation conditions

--- The AC power port of the EUT (if available) is connected to a power outlet below the turntable.

--- The measurement distance is 3 meter.

--- The EUT was set into operation.

Pre measurement:

--- The turntable rotates from 0° to 360°.

--- The antenna is polarized vertical and horizontal.

--- The antenna height changes from 1 to 4 meter.

--- At each turntable position, antenna polarization and height the analyzer sweeps three times in peak to find the maximum of all emissions.

Final measurement:

--- The final measurement will be performed with minimum the six highest peaks.

--- According to the maximum antenna and turntable positions of premeasurement the software maximize the peaks by changing turntable rotates from 0° to 360°and antenna movement between 1 and 4 meter.

--- The final measurement will be done with QP detector with an EMI receiver.

--- The final levels, frequency, measuring time, bandwidth, antenna height, antenna polarization, turntable angle, correction factor, margin to the limit and limit will be recorded. Also a plot with the graph of the premeasurement with marked maximum final measurements and the limit will be stored.

3) Sequence of testing 1GHz to 18GHz

Setup:

--- The equipment was set up to simulate a typical usage like described in the user manual or described by manufacturer.

--- If the EUT is a tabletop system, a rotatable table with 1.5 m height is used.

--- If the EUT is a floor standing device, it is placed on the ground plane with insulation between both.

--- Auxiliary equipment and cables were positioned to simulate normal operation conditions

--- The AC power port of the EUT (if available) is connected to a power outlet below the turntable.

--- The measurement distance is 3 meter.

--- The EUT was set into operation.

Pre measurement:

--- The turntable rotates from 0° to 360°.

--- The antenna is polarized vertical and horizontal.

--- The antenna height scan range is 1 meter to 4 meter.

--- At each turntable position and antenna polarization the analyzer sweeps with peak detection to find the maximum of all emissions.

Final measurement:

--- The final measurement will be performed with minimum the six highest peaks.

--- According to the maximum antenna and turntable positions of premeasurement the software maximize the peaks by changing turntable rotates from 0° to 360° and antenna movement between 1 and 4 meter. This procedure is repeated for both antenna polarizations.

--- The final measurement will be done in the position (turntable, EUT-table and antenna polarization) causing the highest emissions with Peak and Average detector.
--- The final levels, frequency, measuring time, bandwidth, turntable position, EUT-table position, antenna polarization, correction factor, margin to the limit and limit will be recorded. Also a plot with the graph of the pre measurement with marked maximum final measurements and the limit will be stored.

4) Sequence of testing above 18GHz
Setup:

--- The equipment was set up to simulate a typical usage like described in the user manual or described by manufacturer.

--- If the EUT is a tabletop system, a rotatable table with 1.5 m height is used.

--- If the EUT is a floor standing device, it is placed on the ground plane with insulation between both.

--- Auxiliary equipment and cables were positioned to simulate normal operation conditions

--- The AC power port of the EUT (if available) is connected to a power outlet below the turntable.

--- The measurement distance is 1 meter.

--- The EUT was set into operation.

Pre measurement:

--- The antenna is moved spherical over the EUT in different polarisations of the antenna.

Final measurement:

--- The final measurement will be performed at the position and antenna orientation for all detected emissions that were found during the premeasurements with Peak and Average detector.
--- The final levels, frequency, measuring time, bandwidth, correction factor, margin to the limit and limit will be recorded. Also a plot with the graph of the premeasurement and the limit will be stored.

NOTE:
(a).The frequency from 9kHz to 150kHz, Set RBW=300Hz(for Peak&AVG), RBW=300Hz(for Peak&AVG). the frequency from 150kHz to 30MHz, Set RBW=9kHz, RBW=9kHz, (for QP Detector).
(b).The frequency from 30MHz to 1GHz, Set RBW=120kHz, RBW=300kHz, (for QP Detector).
(c).The frequency above 1GHz, for Peak detector: Set RBW=1MHz, RBW=3MHz.

(d).The frequency above 1GHz, for Avg detector: Set RBW=1MHz, if the EUT is configured to transmit with duty cycle ≥98%， set VBW≤RBW/100 (i.e.,10kHz) but not less than 10 Hz. if the EUT duty cycle is ＜98%， set VBW≥1/T, Where T is defined in section 2.8.

———— The following blanks ————-

12.3 TEST SETUP

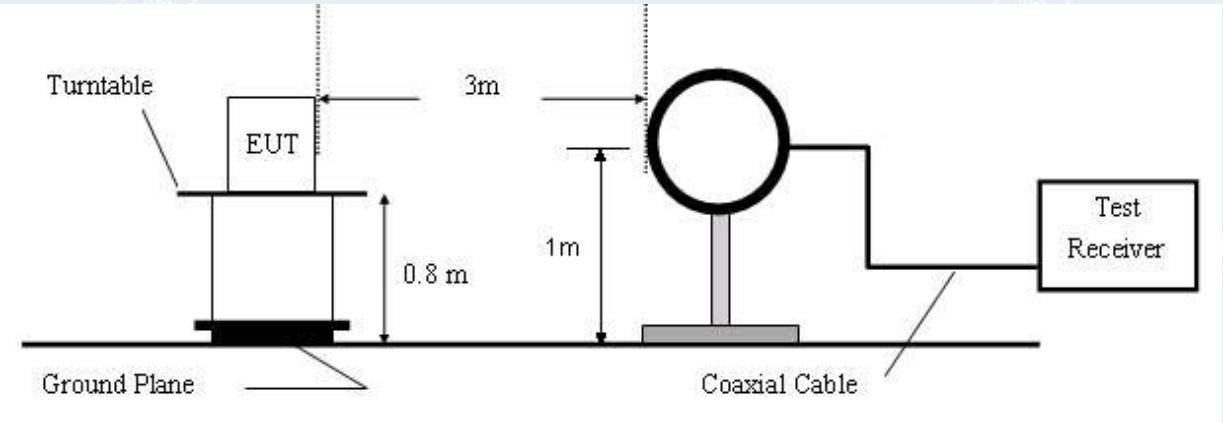


Figure 1. 9kHz to 30MHz radiated emissions test configuration

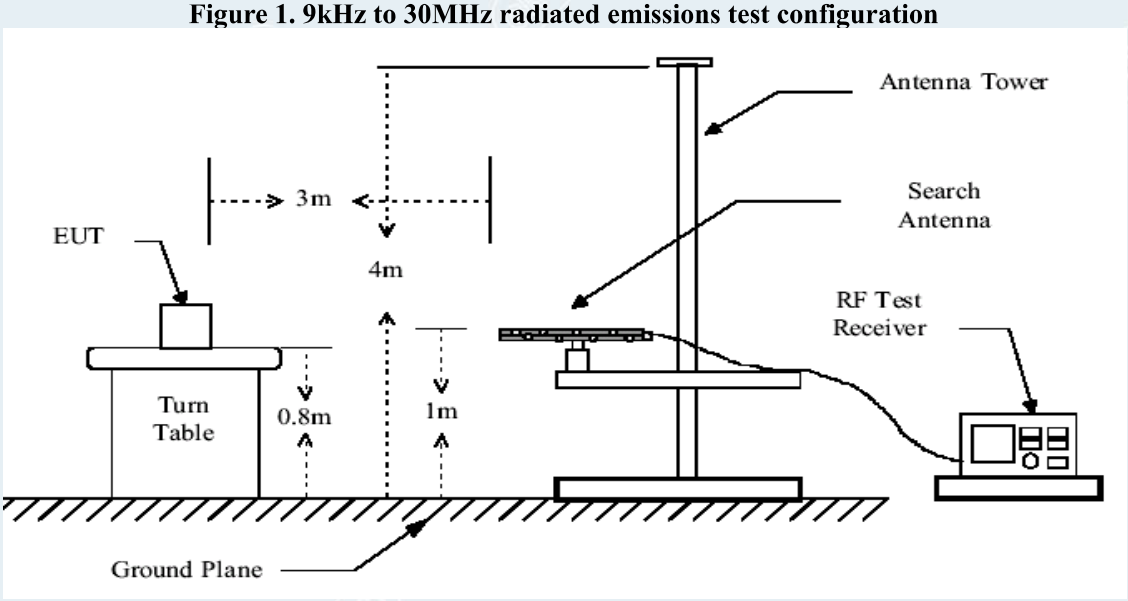


Figure 2. 30MHz to 1GHz radiated emissions test configuration

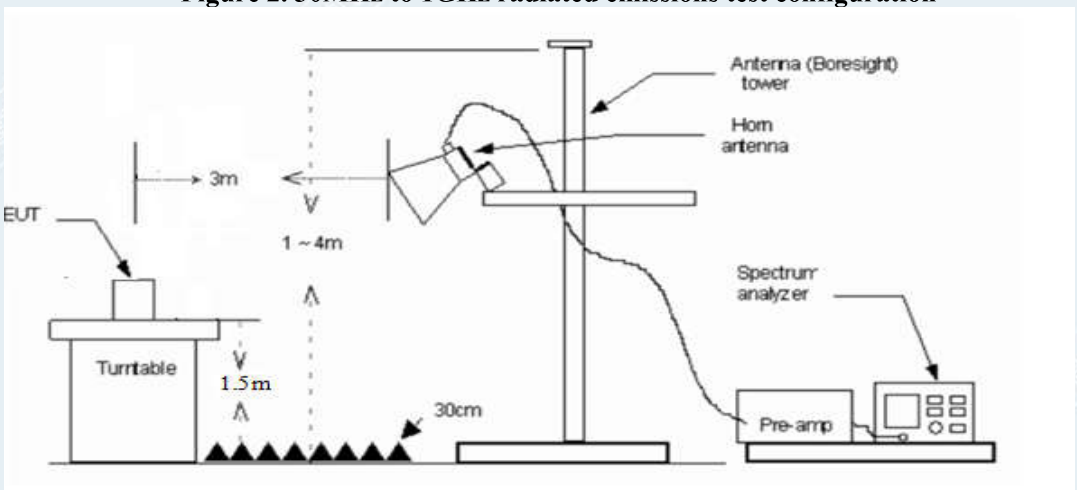


Figure 3. 1GHz to 18GHz radiated emissions test configuration

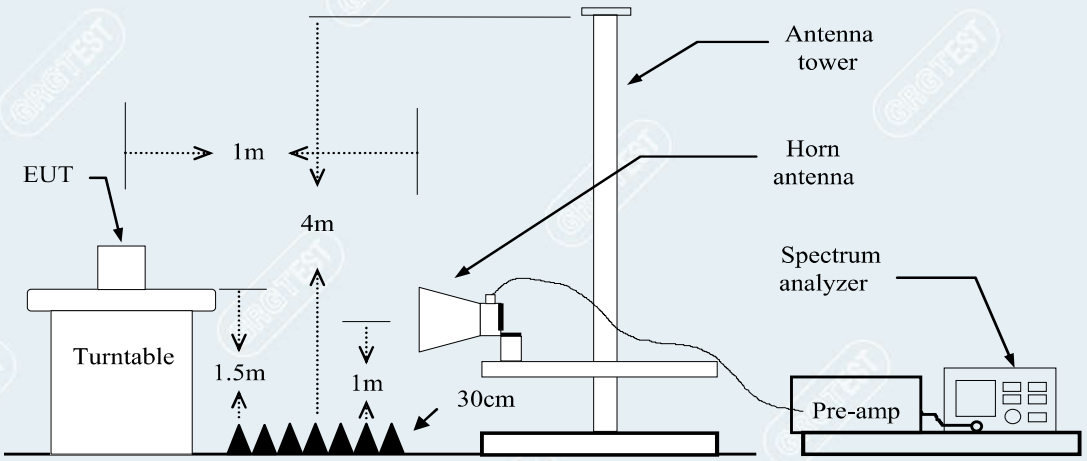


Figure 4. 18GHz to 26.5GHz radiated emissions test configuration

12.4 DATA SAMPLE

30MHz to 1GHz

No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Pole
xxx	xxx	37.06	-15.48	21.58	40.00	-18.42	QP	Vertical

1GHz-18GHz

No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Pole
xxx	xxx	65.45	-11.12	54.33	74.00	-19.67	peak	Vertical
xxx	xxx	63.00	-11.12	51.88	54.00	-2.12	AVG	Vertical

Above 18GHz

No.	Frequency (MHz)	Reading (dBuV/m)	Factor (dB)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Pole
xxx	xxx	68.86	57.66	-11.20	83.54	25.88	peak	Vertical
xxx	xxx	68.89	-11.20	57.69	63.54	5.85	AVG	Vertical

Frequency (MHz) = Emission frequency in MHz

Ant.Pol. (H/V) = Antenna polarization

Reading (dBuV) = Uncorrected Analyzer / Receiver reading

Correction Factor (dB/m) = Antenna factor + Cable loss – Amplifier gain

Result (dBuV/m) = Reading (dBuV) + Correction Factor (dB/m)

Limit (dBuV/m) = Limit stated in standard

Margin (dB) = Remark Result (dBuV/m) – Limit (dBuV/m)

Peak = Peak Reading

QP = Quasi-peak Reading

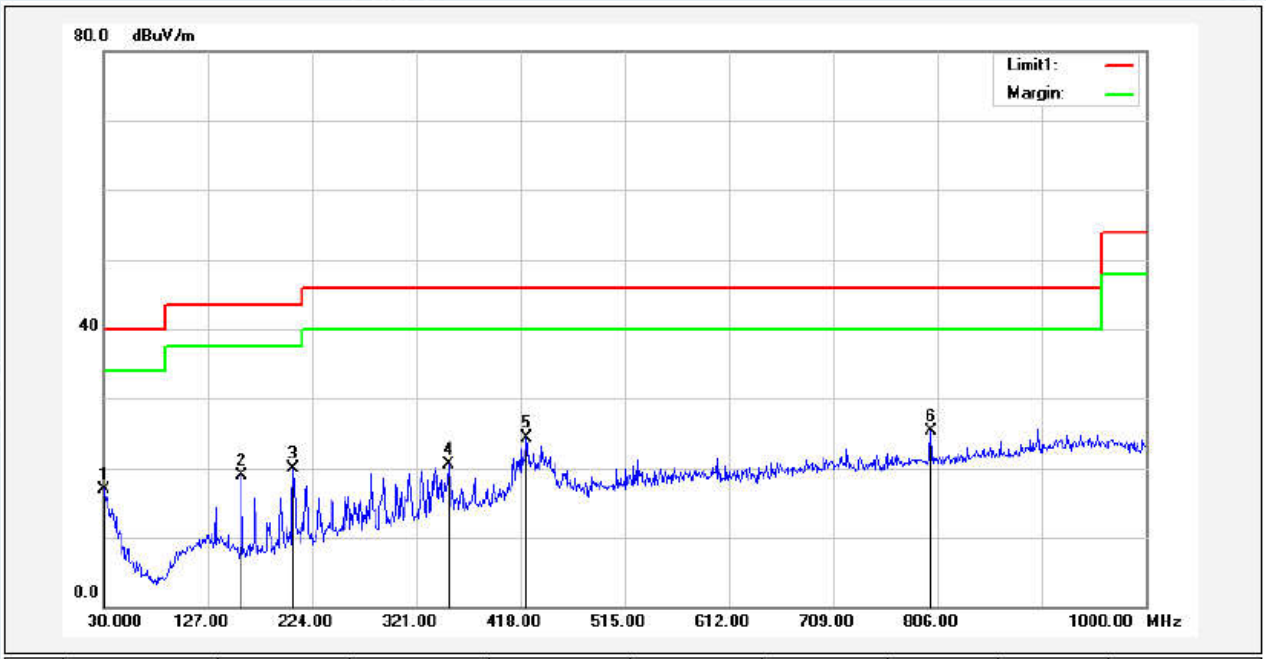
AVG = Average Reading

12.5 TEST RESULTS

Below 1GHz:

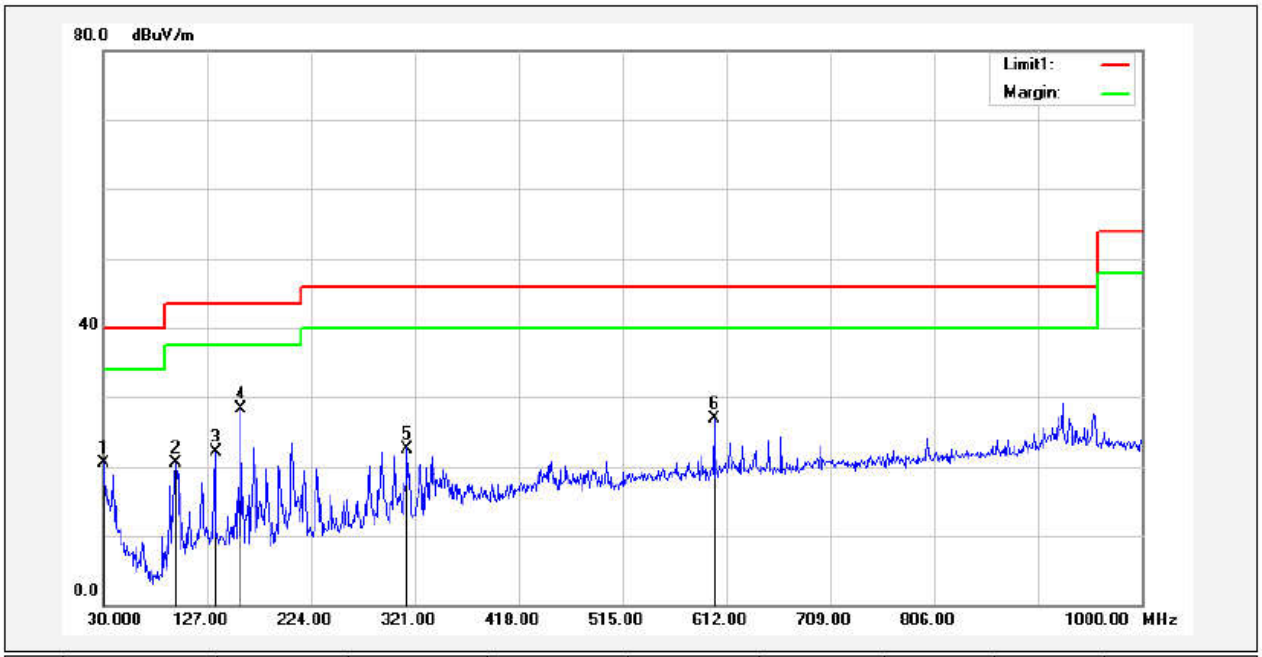
All models were pretested and only the worst modes and channels were recorded in this report(DH5-2441MHz).

Mode: DH5
Middle Frequency (2441MHz) Date: 2022-12-09
Environment:21.8℃/48%RH/101.0kPa Test Voltage: DC 12V
Test Engineer: Huang Xinlong Polarity:Horizontal



No.	Frequency (MHz)	Reading (dBuV)	Correction factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Over (dB)	Degree (deg.)	Height (cm)	Remark
1	30.0000	33.73	-16.85	16.88	40.00	-23.12	360	352	QP
2	159.0100	46.38	-27.52	18.86	43.50	-24.64	111	200	QP
3	206.5400	46.20	-26.30	19.90	43.50	-23.60	270	100	QP
4	351.0700	42.87	-22.30	20.57	46.00	-25.43	226	100	QP
5	423.8200	43.99	-19.69	24.30	46.00	-21.70	177	100	QP
6*	800.1800	39.39	-14.12	25.27	46.00	-20.73	123	100	QP

Mode: DH5
Middle Frequency (2441MHz) Date: 2022-12-09
Environment:21.8℃/48%RH/101.0kPa Test Voltage: DC 12V
Test Engineer: Huang Xinlong Polarity: Vertical



No.	Frequency (MHz)	Reading (dBuV)	Correction factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Over (dB)	Degree (deg.)	Height (cm)	Remark
1	30.0000	37.28	-16.85	20.43	40.00	-19.57	358	100	QP
2	97.9000	49.37	-28.92	20.45	43.50	-23.05	337	100	QP
3	134.7600	47.79	-25.74	22.05	43.50	-21.45	205	100	QP
4*	159.0100	55.78	-27.52	28.26	43.50	-15.24	171	100	QP
5	314.2100	45.88	-23.28	22.60	46.00	-23.40	135	100	QP
6	600.3600	43.43	-16.45	26.98	46.00	-19.02	146	100	QP

Remark:

1 No emission found between lowest internal used/generated frequency to 30MHz.
2 Pre-scan all mode and recorded the worst case results in this report (TX-Mid Channel(1Mbps))
3 Measuring frequencies from 9kHz to the 1GHz.
4 Radiated emissions measured in frequency range from 30MHz to 1GHz were made with an instrument using Peak/Quasi-peak detector mode.
5 Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
6 The IF bandwidth of SPA between 30MHz to 1GHz was 120kHz.

Above 1GHz:

Mode: DH5
Lowest Frequency (2402MHz) Date: 2022-12-13
Environment:24.3℃/51%RH/101.0kPa Test Voltage: DC 12V
Test Engineer: Zhang Zishan

Suspected Data List									
NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1134.2668	65.03	39.91	-25.12	74.00	34.09	100	212	Horizontal
2	1599.825	67.83	45.07	-22.76	74.00	28.93	200	85	Horizontal
3	2231.654	61.07	42.72	-18.35	74.00	31.28	100	308	Horizontal
4	2551.694	62.04	43.55	-18.49	74.00	30.45	100	338	Horizontal
5	6542.3178	53.95	47.76	-6.19	74.00	26.24	100	237	Horizontal
6	17958.7448	35.35	44.91	9.56	74.00	29.09	100	199	Horizontal

Suspected Data List									
NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1049.7562	66.07	43.05	-23.02	74.00	30.95	100	160	Vertical
2	1600.075	76.09	52.13	-23.96	74.00	21.87	200	16	Vertical
3	2015.3769	61.36	41.13	-20.23	74.00	32.87	100	54	Vertical
4	3198.7748	59.23	42.84	-16.39	74.00	31.16	200	92	Vertical
5	6420.4276	53.81	46.78	-7.03	74.00	27.22	100	315	Vertical
6	17968.121	33.37	45.71	12.34	74.00	28.29	200	162	Vertical

AV Final Data List									
NO.	Freq. [MHz]	Factor [dB]	AV Reading [dBμV/m]	AV Value [dBμV/m]	AV Limit [dBμV/m]	AV Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1599.7276	-23.96	70.27	46.31	54.00	7.69	166	17	Vertical

Mode: DH5
Middle Frequency (2441MHz) Date: 2022-12-13
Environment:24.3℃/51%RH/101.0kPa Test Voltage: DC 12V
Test Engineer: Zhang Zishan

Suspected Data List									
NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1134.0168	64.63	39.50	-25.13	74.00	34.50	100	213	Horizontal
2	1599.5749	67.20	44.44	-22.76	74.00	29.56	200	92	Horizontal
3	2238.1548	60.64	42.19	-18.45	74.00	31.81	100	66	Horizontal
4	2536.9421	63.55	45.01	-18.54	74.00	28.99	100	349	Horizontal
5	6562.9454	52.84	46.80	-6.04	74.00	27.20	200	267	Horizontal
6	17666.2083	36.50	45.21	8.71	74.00	28.79	100	256	Horizontal

Suspected Data List									
NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1050.0063	67.13	44.12	-23.01	74.00	29.88	100	162	Vertical
2	1600.075	74.89	50.93	-23.96	74.00	23.07	200	16	Vertical
3	2015.3769	60.01	39.78	-20.23	74.00	34.22	100	35	Vertical
4	3198.7748	58.79	42.40	-16.39	74.00	31.60	200	4	Vertical
5	6382.9229	52.75	45.63	-7.12	74.00	28.37	100	120	Vertical
6	17684.9606	35.61	45.21	9.60	74.00	28.79	100	198	Vertical

AV Final Data List									
NO.	Freq. [MHz]	Factor [dB]	AV Reading [dBμV/m]	AV Value [dBμV/m]	AV Limit [dBμV/m]	AV Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1600.2366	-23.96	70.22	46.26	54.00	7.74	137	10.8	Vertical

Mode: DH5
Highest Frequency (2480MHz) Date: 2022-12-13
Environment:24.3℃/51%RH/101.0kPa Test Voltage: DC 12V
Test Engineer: Zhang Zishan

Suspected Data List									
NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1217.2772	62.73	39.50	-23.23	74.00	34.50	100	105	Horizontal
2	1599.0749	68.55	45.80	-22.75	74.00	28.20	200	73	Horizontal
3	2226.6533	61.40	43.12	-18.28	74.00	30.88	100	319	Horizontal
4	2576.197	63.96	45.60	-18.36	74.00	28.40	100	348	Horizontal
5	5974.1218	54.46	45.53	-8.93	74.00	28.47	200	30	Horizontal
6	17928.7411	37.02	46.43	9.41	74.00	27.57	200	89	Horizontal

Suspected Data List									
NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1133.2667	66.19	42.83	-23.36	74.00	31.17	100	152	Vertical
2	1599.0749	75.43	51.48	-23.95	74.00	22.52	200	15	Vertical
3	2575.697	61.16	42.35	-18.81	74.00	31.65	200	132	Vertical
4	3198.7748	58.94	42.55	-16.39	74.00	31.45	100	0	Vertical
5	5914.1143	54.33	45.31	-9.02	74.00	28.69	200	345	Vertical
6	17947.4934	34.07	45.79	11.72	74.00	28.21	100	148	Vertical

AV Final Data List									
NO.	Freq. [MHz]	Factor [dB]	AV Reading [dBμV/m]	AV Value [dBμV/m]	AV Limit [dBμV/m]	AV Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1600.3015	-23.95	67.58	43.63	54.00	10.37	159	32.1	Vertical

Mode: 2DH5
Lowest Frequency (2402MHz) Date: 2022-12-13
Environment:24.3℃/51%RH/101.0kPa Test Voltage: DC 12V
Test Engineer: Zhang Zishan

Suspected Data List									
NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1134.5168	64.45	39.33	-25.12	74.00	34.67	100	307	Horizontal
2	1600.325	67.00	44.24	-22.76	74.00	29.76	200	280	Horizontal
3	2183.648	62.09	43.38	-18.71	74.00	30.62	100	258	Horizontal
4	3198.7748	57.66	41.97	-15.69	74.00	32.03	100	24	Horizontal
5	6574.1968	53.25	47.25	-6.00	74.00	26.75	100	316	Horizontal
6	17851.8565	34.05	43.97	9.92	74.00	29.03	100	307	Horizontal

Suspected Data List									
NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1050.2563	67.91	44.91	-23.00	74.00	29.09	100	160	Vertical
2	1599.825	74.17	50.21	-23.96	74.00	23.79	100	15	Vertical
3	2075.1344	60.11	39.99	-20.12	74.00	34.01	100	82	Vertical
4	3198.7748	59.47	43.08	-16.39	74.00	30.92	100	336	Vertical
5	6223.5279	53.47	45.35	-8.12	74.00	28.65	100	70	Vertical
6	17891.2364	33.35	44.91	11.56	74.00	29.09	200	158	Vertical

AV Final Data List									
NO.	Freq. [MHz]	Factor [dB]	AV Reading [dBμV/m]	AV Value [dBμV/m]	AV Limit [dBμV/m]	AV Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1600.1259	-23.96	70.61	46.65	54.00	7.35	162	17.5	Vertical

Mode: 2DH5
Middle Frequency (2441MHz) Date: 2022-12-13
Environment:24.3℃/51%RH/101.0kPa Test Voltage: DC 12V
Test Engineer: Zhang Zishan

Suspected Data List									
NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1134.0168	65.13	40.00	-25.13	74.00	34.00	100	211	Horizontal
2	1600.075	67.28	44.52	-22.76	74.00	29.48	100	93	Horizontal
3	2590.4488	61.94	43.64	-18.30	74.00	30.36	100	338	Horizontal
4	3198.7748	58.54	42.85	-15.69	74.00	31.15	100	206	Horizontal
5	5053.3817	55.48	44.35	-11.13	74.00	29.65	200	167	Horizontal
6	17990.6238	35.73	46.08	10.35	74.00	27.92	100	346	Horizontal

Suspected Data List									
NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1050.2563	66.87	43.87	-23.00	74.00	30.13	100	161	Vertical
2	1600.075	74.54	50.58	-23.96	74.00	23.42	200	16	Vertical
3	2656.9571	65.91	48.14	-17.77	74.00	25.86	100	16	Vertical
4	3198.7748	59.36	42.97	-16.39	74.00	31.03	100	2	Vertical
5	4998.9999	54.81	43.73	-11.08	74.00	30.27	100	32	Vertical
6	17519.94	36.12	45.69	9.57	74.00	28.31	100	168	Vertical

AV Final Data List									
NO.	Freq. [MHz]	Factor [dB]	AV Reading [dBμV/m]	AV Value [dBμV/m]	AV Limit [dBμV/m]	AV Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1600.0286	-23.96	69.38	45.42	54.00	8.58	180	16.6	Vertical
2	2657.4183	-17.77	50.15	32.38	54.00	21.62	100	16.7	Vertical

Mode: 2DH5
Highest Frequency (2480MHz) Date: 2022-12-13
Environment:24.3℃/51%RH/101.0kPa Test Voltage: DC 12V
Test Engineer: Zhang Zishan

Suspected Data List									
NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1050.5063	64.40	39.59	-24.81	74.00	34.41	100	205	Horizontal
2	1133.5167	64.87	39.74	-25.13	74.00	34.26	100	215	Horizontal
3	1599.825	66.99	44.23	-22.76	74.00	29.77	100	128	Horizontal
4	2480.185	64.79	45.79	-19.00	74.00	28.21	100	346	Horizontal
5	5062.7578	54.62	43.49	-11.13	74.00	30.51	100	184	Horizontal
6	17984.9981	37.09	47.30	10.21	74.00	26.70	200	167	Horizontal

Suspected Data List									
NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1049.5062	67.50	44.46	-23.04	74.00	29.54	100	168	Vertical
2	1600.325	75.18	51.23	-23.95	74.00	22.77	100	9	Vertical
3	2659.7075	62.26	44.53	-17.73	74.00	29.47	100	266	Vertical
4	3198.7748	60.60	44.21	-16.39	74.00	29.79	200	95	Vertical
5	4931.4914	55.10	44.03	-11.07	74.00	29.97	200	195	Vertical
6	17849.9812	32.68	44.52	11.84	74.00	29.48	100	269	Vertical

AV Final Data List									
NO.	Freq. [MHz]	Factor [dB]	AV Reading [dBμV/m]	AV Value [dBμV/m]	AV Limit [dBμV/m]	AV Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1599.5144	-23.95	67.22	43.27	54.00	10.73	122	28	Vertical

Mode: 3DH5
Lowest Frequency (2402MHz) Date: 2022-12-13
Environment:24.3℃/51%RH/101.0kPa Test Voltage: DC 12V
Test Engineer: Zhang Zishan

Suspected Data List									
NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1133.5167	66.49	41.36	-25.13	74.00	32.64	100	211	Horizontal
2	1599.825	69.01	46.25	-22.76	74.00	27.75	200	85	Horizontal
3	2183.1479	60.75	42.01	-18.74	74.00	31.99	100	260	Horizontal
4	3198.7748	58.40	42.71	-15.69	74.00	31.29	200	197	Horizontal
5	5919.74	53.74	44.64	-9.10	74.00	29.36	200	276	Horizontal
6	17945.6182	33.57	42.92	9.35	74.00	29.08	100	99	Horizontal

Suspected Data List									
NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1050.0063	67.61	44.60	-23.01	74.00	29.40	100	163	Vertical
2	1599.825	75.48	51.52	-23.96	74.00	22.48	100	26	Vertical
3	2215.1519	59.34	40.27	-19.07	74.00	33.73	100	94	Vertical
4	3198.7748	58.76	42.37	-16.39	74.00	31.63	200	90	Vertical
5	6131.6415	54.46	45.70	-8.76	74.00	28.30	200	70	Vertical
6	17399.925	38.14	46.75	8.61	74.00	27.25	200	276	Vertical

AV Final Data List									
NO.	Freq. [MHz]	Factor [dB]	AV Reading [dBμV/m]	AV Value [dBμV/m]	AV Limit [dBμV/m]	AV Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1599.7329	-23.96	69.72	45.76	54.00	8.24	162	16.9	Vertical

Mode: 3DH5
Middle Frequency (2441MHz) Date: 2022-12-13
Environment:24.3℃/51%RH/101.0kPa Test Voltage: DC 12V
Test Engineer: Zhang Zishan

Suspected Data List									
NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1134.2668	65.87	40.75	-25.12	74.00	33.25	100	210	Horizontal
2	1599.825	69.34	46.58	-22.76	74.00	27.42	200	74	Horizontal
3	2553.1941	61.23	42.74	-18.49	74.00	31.26	100	337	Horizontal
4	3198.7748	58.70	43.01	-15.69	74.00	30.99	100	168	Horizontal
5	5919.74	54.15	45.05	-9.10	74.00	28.95	100	33	Horizontal
6	17896.8621	35.03	44.55	9.52	74.00	29.45	200	71	Horizontal

Suspected Data List									
NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1050.0063	67.39	44.38	-23.01	74.00	29.62	100	162	Vertical
2	1600.075	74.14	50.18	-23.96	74.00	23.82	200	16	Vertical
3	2233.1541	61.74	42.60	-19.14	74.00	31.40	200	230	Vertical
4	3198.7748	59.60	43.21	-16.39	74.00	30.79	100	13	Vertical
5	5942.2428	53.99	45.47	-8.52	74.00	28.53	100	316	Vertical
6	17463.683	36.35	45.37	9.02	74.00	27.13	200	120	Vertical

AV Final Data List									
NO.	Freq. [MHz]	Factor [dB]	AV Reading [dBμV/m]	AV Value [dBμV/m]	AV Limit [dBμV/m]	AV Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1600.3756	-23.96	69.22	45.26	54.00	8.74	124	16.5	Vertical

Mode: 3DH5
Highest Frequency (2480MHz) Date: 2022-12-13
Environment:24.3℃/51%RH/101.0kPa Test Voltage: DC 12V
Test Engineer: Zhang Zishan

Suspected Data List									
NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1133.5167	67.10	41.97	-25.13	74.00	32.03	100	211	Horizontal
2	1600.075	68.29	45.53	-22.76	74.00	28.47	100	64	Horizontal
3	2479.935	64.18	45.18	-19.00	74.00	28.82	100	64	Horizontal
4	3198.7748	57.74	42.05	-15.69	74.00	31.95	100	129	Horizontal
5	5404.0505	55.66	44.57	-11.09	74.00	29.43	100	140	Horizontal
6	17503.0629	37.02	45.37	8.35	74.00	28.63	100	2	Horizontal

Suspected Data List									
NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1050.0063	66.12	43.11	-23.01	74.00	30.89	100	161	Vertical
2	1600.075	74.71	50.75	-23.96	74.00	23.25	100	16	Vertical
3	2230.6538	61.16	42.03	-19.13	74.00	31.97	200	84	Vertical
4	3198.7748	58.92	42.53	-16.39	74.00	31.47	200	345	Vertical
5	5972.2465	54.09	45.47	-8.62	74.00	28.53	100	118	Vertical
6	17786.2233	31.26	42.77	11.51	74.00	28.77	200	180	Vertical

AV Final Data List									
NO.	Freq. [MHz]	Factor [dB]	AV Reading [dBμV/m]	AV Value [dBμV/m]	AV Limit [dBμV/m]	AV Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1600.0746	-23.96	70.92	46.96	54.00	7.04	135	16.9	Vertical

Remark:

1 Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.

2 Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.

3 Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.

4 Spectrum setting:
a. Peak Setting 1GHz–26.5GHz, RBW = 1MHz, VBW = 1MHz, Sweep time = auto.
b. AV Setting 1GHz–26.5GHz, Set RBW=1MHz, if the EUT is configured to transmit with duty cycle ≥98%,set VBW≤RBW/100 (i.e.,10kHz) but not less than 10 Hz. if the EUT duty cycle is＜98%,set VBW≥1/T, Where T is defined in section 2.8.

Test result: The unit does meet the requirements.

Above 18GHz:

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.

All models were pretested and only the worst modes were recorded in this report(DH5).

Mode: DH5
Lowest Frequency (2402MHz) Date: 2022-12-14
Environment:21.8℃/55%RH/101.0kPa Test Voltage: DC 12V
Test Engineer: Zhang Zishan

Suspected Data List									
NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	18536.35	53.96	41.78	-12.18	83.54	41.76	150	94	Horizontal
2	20357.05	52.95	42.28	-10.67	83.54	41.26	150	186	Horizontal
3	21285.675	52.73	42.75	-9.98	83.54	40.79	150	313	Horizontal
4	22491.4	51.53	42.34	-9.19	83.54	41.20	150	141	Horizontal
5	23888.8	51.05	42.52	-8.53	83.54	41.02	150	328	Horizontal
6	25233.075	50.58	43.46	-7.12	83.54	40.08	150	141	Horizontal

Suspected Data List									
NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	18552.925	54.05	41.97	-12.08	83.54	41.57	150	344	Vertical
2	19351.075	54.38	42.85	-11.53	83.54	40.69	150	110	Vertical
3	21147.975	53.47	43.50	-9.97	83.54	40.04	150	62	Vertical
4	22129.3	51.99	42.45	-9.54	83.54	41.09	150	329	Vertical
5	24381.375	51.54	43.62	-7.92	83.54	39.92	150	329	Vertical
6	25470.65	50.47	43.13	-7.34	83.54	40.41	150	281	Vertical

Mode: DH5
Middle Frequency (2441MHz) Date: 2022-12-14
Environment:21.8℃/55%RH/101.0kPa Test Voltage: DC 12V
Test Engineer: Zhang Zishan

Suspected Data List									
NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	19200.625	54.06	42.40	-11.66	83.54	41.14	150	159	Horizontal
2	20452.25	53.53	42.98	-10.55	83.54	40.56	150	65	Horizontal
3	21723.425	53.27	43.51	-9.76	83.54	40.03	150	286	Horizontal
4	23655.475	52.10	43.42	-8.68	83.54	40.12	150	65	Horizontal
5	24539.475	51.15	43.40	-7.75	83.54	40.14	150	81	Horizontal
6	26398	50.08	42.93	-7.15	83.54	40.61	150	97	Horizontal

Suspected Data List									
NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	19111.375	54.18	42.46	-11.72	83.54	41.08	150	281	Vertical
2	20209.575	54.40	43.64	-10.76	83.54	39.90	150	92	Vertical
3	21652.45	53.18	43.52	-9.66	83.54	40.02	150	16	Vertical
4	22706.45	51.68	42.84	-8.84	83.54	40.70	150	77	Vertical
5	25100.9	50.44	43.35	-7.09	83.54	40.19	150	109	Vertical
6	26129.825	50.13	42.47	-7.66	83.54	41.07	150	171	Vertical

Mode: DH5
Highest Frequency (2480MHz) Date: 2022-12-14
Environment:21.8℃/55%RH/101.0kPa Test Voltage: DC 12V
Test Engineer: Zhang Zishan

Suspected Data List									
NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	19035.725	54.40	42.63	-11.77	83.54	40.91	150	360	Horizontal
2	20719.15	53.37	43.06	-10.31	83.54	40.48	150	159	Horizontal
3	22109.325	52.40	42.74	-9.66	83.54	40.80	150	190	Horizontal
4	23844.6	51.10	42.54	-8.56	83.54	41.00	150	346	Horizontal
5	24491.45	51.12	43.32	-7.80	83.54	40.22	150	346	Horizontal
6	25373.75	50.62	43.36	-7.26	83.54	40.18	150	144	Horizontal

Suspected Data List									
NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	18629.85	54.04	42.01	-12.03	83.54	41.53	150	219	Vertical
2	20668.15	53.79	43.60	-10.19	83.54	39.94	150	314	Vertical
3	21622.7	52.89	43.23	-9.66	83.54	40.31	150	126	Vertical
4	22997.575	51.78	43.14	-8.64	83.54	40.40	150	2	Vertical
5	24454.9	50.91	43.07	-7.84	83.54	40.47	150	62	Vertical
6	26424.35	49.32	42.32	-7.00	83.54	41.22	150	219	Vertical

13. RESTRICTED BANDS OF OPERATION

13.1 LIMITS

Section 15.247(d) In addition, 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)).

Frequency(MHz)	Frequency(MHz)	Frequency(MHz)	Frequency(GHz)
0.090 - 0.110	16.42 - 16.423	399.9 - 410	4.5 - 5.15
[1]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	108 - 121.94	1718.8 - 1722.2	13.25 - 13.4
6.31175 - 6.31225	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	2655 - 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	
13.36 - 13.41			

Frequency (MHz)	Quasi-peak(μV/m)	Measurement distance(m)	Quasi-peak(dBμV/m)@distance 3m
0.009-0.490	2400/F(kHz)	300	128.5~93.8
0.490-1.705	24000/F(kHz)	30	73.8~63
1.705-30.0	30	30	69.5
30 ~ 88	100	3	40
88~216	150	3	43.5
216 ~ 960	200	3	46
Above 960	500	3	54