



FCC TEST REPORT

Report No.: ARFR-ESH-P19122504B-A1-1

Product: Smart Camera

Test Model: SC111-WK2,SC111-WK3

Received: May.27, 2020

ISSUED: Jul.03, 2020

Applicant: Hangzhou Tuya Information Technology Co., Ltd

Address: Room701, Building3, More Center,No.87 GuDun Road, Hangzhou,
Zhejiang, China

Issued By: BUREAU VERITAS ADT (Shanghai) Corporation

Lab Location: No. 829, Xinzhuan Road, Shanghai, P.R.China (201612)

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1. TEST PROGRAM

PRODUCT: Smart Camera
TEST MODEL: SC111-WK2,SC111-WK3
APPLICANT: Hangzhou Tuya Information Technology Co., Ltd
TESTED: Jun.01 to Jun.28, 2020
STANDARDS: 47 CFR FCC Part15, Subpart B, Class B
ANSI C63.4:2014

We, BUREAU VERITAS ADT (Shanghai) Corporation, declare that the equipment above has been tested and found compliance with the requirement limits of applicable standards. The test record, data evaluation and Equipment Under Test (EUT) configurations represented herein are true and accurate under the standards herein specified.

PREPARED BY : Will Yan , DATE: Jul.03, 2020
Will YAN
Project Engineer

APPROVED BY : Daniel Sun , DATE: Jul.03, 2020
Daniel Sun
EMC Lab/Manager



2. Summary of Test Procedure and Test Results

EMISSION (47 CFR FCC Part15, Subpart B)		
Test Item	Normative References	Test Result
Conducted Emission	47 CFR FCC Part15, Subpart B 15.107	Meets the Class B requirements
Radiated Emission	47 CFR FCC Part15, Subpart B 15.109	Meets the Class B requirements

Special Comments: This report base on history report No: ARFR-ESH-P19122504B-3 add two adapters and model SC111-WK3. The model of SC111-WK2 and SC111-WK3 are identical to each other except for different model name and sensor board. After evaluation, we choose the model SC111-WK2 to performance full test and the model SC111-WK3 to performance radiated emissions.

3. Test Configuration of Equipment under Test

3.1 Manufacturer information

Manufacturer : Hangzhou Tuya Information Technology Co., Ltd

Address : Room701, Building3, More Center, No.87 GuDun Road, Hangzhou, Zhejiang,
China

3.2 Feature of Equipment under Test

Product Name:	Smart Camera
Test Model:	SC111-WK2, SC111-WK3
EUT Power Rating:	5V === 1A for EUT I/P: 100-240V~, 50/60Hz, 0.25A Max.; O/P: 5V === 1A for AC/DC adapter

Note: 1. Please refer to user manual.

3.3 Description of support units

NO.	PRODUCT	BRAND	MODEL NO.
1	AC adapter	--	TEKA006-0501000UK
2	AC adapter		KA06E-0501000US
3	Mobile Phone	Vivo	--

3.4 Test Mode

Mode	Description
1	Power by adapter with TEKA006-0501000UK
2	Power by adapter with KA06E-0501000US

3.5 Measurement Uncertainty

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT:

This listed uncertainties are the worst case uncertainty for the entire range of measurement. Please note that the uncertainty values are provided for informational purposes only and are not used in determining the PASS/FAIL results.

Measurement		Value
Conducted emissions		2.55 dB
Radiated emissions	30 MHz ~ 1GHz	3.22 dB
	Above 1GHz	2.89 dB

4 Test of Conducted Emission

4.1 Test Limit

TEST STANDARD:

CFR 47 FCC Part 15, Subpart B (Section: 15.107)

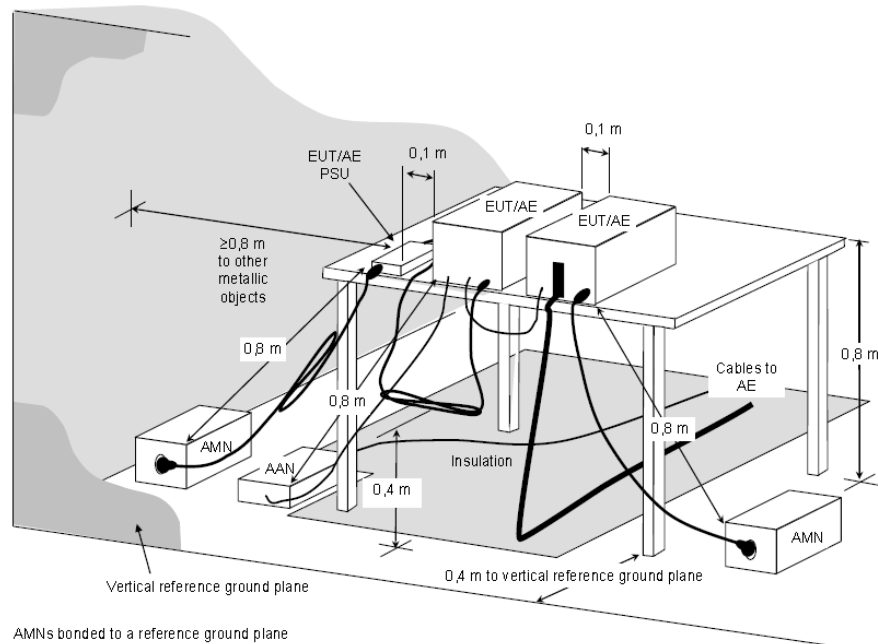
FREQUENCY (MHz)	Class A (dB μ V)		Class B (dB μ V)	
	Quasi-peak	Average	Quasi-peak	Average
0.15 - 0.5	79	66	66 - 56	56 - 46
0.50 - 5.0	73	60	56	46
5.0 - 30.0	73	60	60	50

- NOTES:**
1. The lower limit shall apply at the transition frequencies.
 2. The limit decreases in line with the logarithm of the frequency in the range of 0.15 to 0.50MHz.
 3. All emanations from a class A/B digital device or system, including any network of conductors and apparatus connected thereto, shall not exceed the level of field strengths specified above.

4.2 Test Procedures

1. The EUT was placed on a desk 0.8 meters height from the metal ground plane and 0.4 meter from the conducting wall of the shielding room and it was kept at least 0.8 meters from any other grounded conducting surface.
2. Connect EUT to the power mains through a Artificial Mains Network (AMN).
3. All the support units are connecting to the other AMN.
4. The AMN provides 50 ohm coupling impedance for the measuring instrument.
5. The CISPR states that a 50 ohm, 50 micro-Henry AMN should be used.
6. Both sides of AC line were checked for maximum conducted interference.
7. The frequency range from 150 kHz to 30 MHz was searched
8. Set the test-receiver system to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.

4.3 Typical Test Setup



NOTE The 0,8 m distance specified between EUT/AE/PSU and AMN/AAN, is applicable only to the EUT being measured. If the device is AE then it shall be $\geq 0,8$ m.

**Figure D.2 – Example measurement arrangement for table-top EUT
(Conducted emission measurement – alternative 1)**



4.4 Measurement Equipment

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED UNTIL
Test Receiver ROHDE & SCHWARZ	ESCS30	E1R1001	Mar.03, 2021
LISN ROHDE & SCHWARZ	ENV216	E1L1011	Jul.16, 2021
Software ADT	ADT_Cond_V7.3.0	N/A	N/A

4.5 Test Result and Data

a. Conducted Emission Test Data

SC111-WK2

Mode 1

Phase: LINE

Location: Conduction 1

Date: 6/1/2020

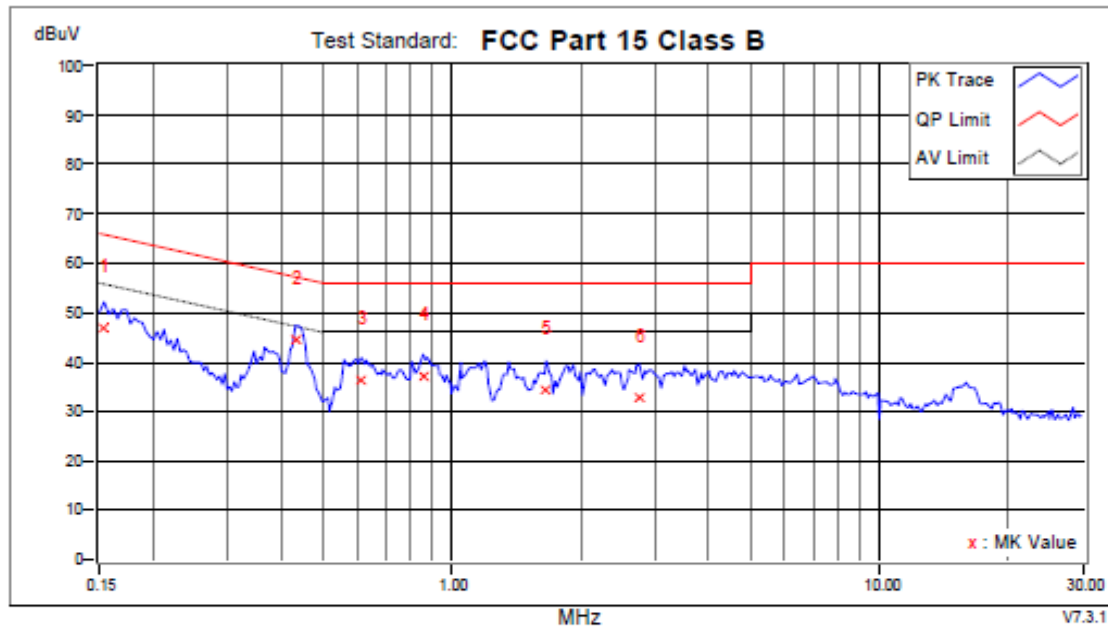
Time: 7:10:02 PM

Phase L1

Temperature (C): 23

Humidity (%): 53

Approved by:



No.	Frequency MHz	Corr. Factor dB	Reading dBuV		Emission dBuV		Limit dBuV		Margins dB		Notes
			QP	AV	QP	AV	QP	AV	QP	AV	
1	0.15391	9.84	36.95	19.72	46.79	29.56	65.79	55.79	-18.99	-26.22	
+2	0.43152	9.72	34.66	24.91	44.38	34.63	57.22	47.22	-12.84	-12.59	
3	0.61529	9.65	26.55	17.02	36.20	26.67	56.00	46.00	-19.80	-19.33	
4	0.85771	9.59	27.34	16.97	36.93	26.56	56.00	46.00	-19.07	-19.44	
5	1.66470	9.71	24.71	14.78	34.42	24.49	56.00	46.00	-21.58	-21.51	
6	2.74777	9.84	22.95	12.82	32.79	22.66	56.00	46.00	-23.21	-23.34	

REMARKS:

1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. The emission levels of other frequencies were very low against the limit.
3. Margin value = Emission level - Limit value
4. Correction factor = Insertion loss + Cable loss
5. Emission Level = Correction Factor + Reading Value.

Phase : NEUTRAL

Location: Conduction 1

Date: 6/1/2020

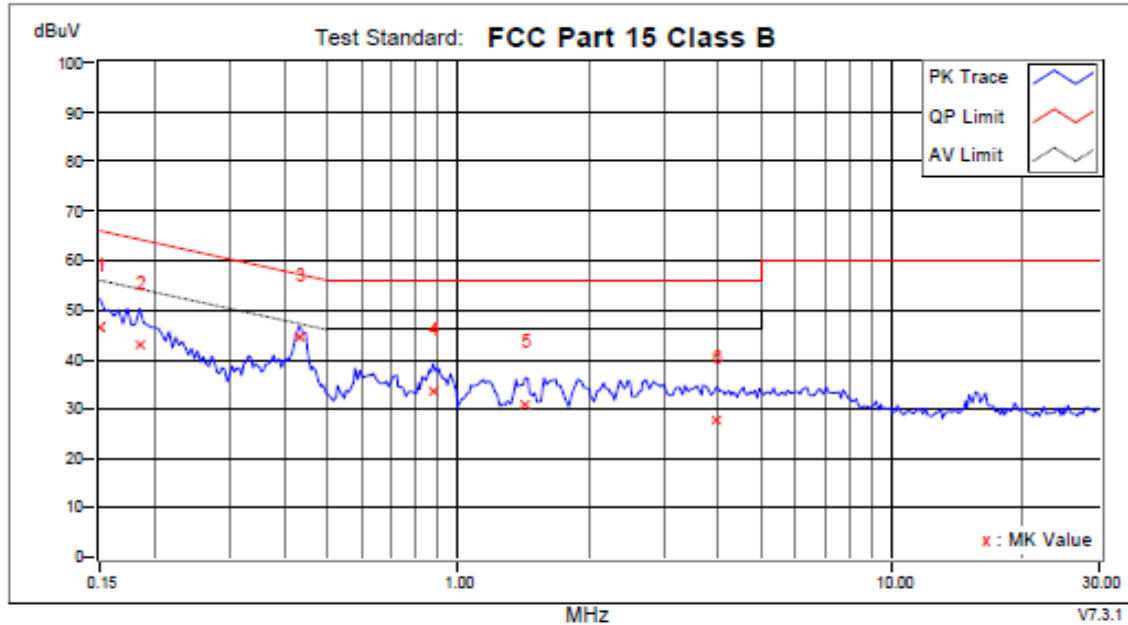
Time: 7:12:41 PM

Phase N

Temperatuer (C): 23

Humidity (%): 53

Approved by:



No.	Frequency MHz	Corr. Factor dB	Reading dBuV		Emission dBuV		Limit dBuV		Margins dB		Notes
			QP	AV	QP	AV	QP	AV	QP	AV	
1	0.15000	9.85	36.62	19.12	46.47	28.97	66.00	56.00	-19.53	-27.03	
2	0.18519	9.81	32.99	18.76	42.80	28.57	64.25	54.25	-21.44	-25.67	
+3	0.43152	9.86	34.58	28.40	44.44	38.26	57.22	47.22	-12.79	-8.97	
4	0.87726	9.89	23.69	16.23	33.58	26.12	56.00	46.00	-22.42	-19.88	
5	1.43010	9.91	20.83	13.29	30.74	23.20	56.00	46.00	-25.26	-22.80	
6	3.94614	9.88	17.79	9.47	27.67	19.35	56.00	46.00	-28.33	-26.65	

REMARKS:

1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. The emission levels of other frequencies were very low against the limit.
3. Margin value = Emission level - Limit value
4. Correction factor = Insertion loss + Cable loss
5. Emission Level = Correction Factor + Reading Value.

SC111-WK2

Mode 2

Phase: LINE

Location: Conduction 1

Date: 6/2/2020

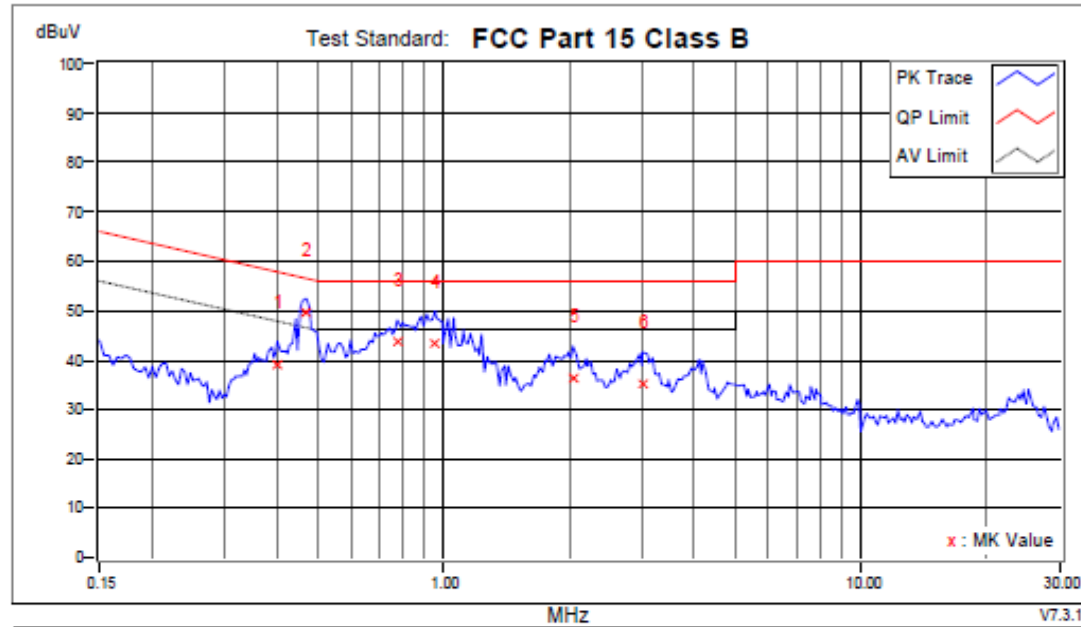
Time: 9:19:25 AM

Phase L1

Temperature (C): 23

Humidity (%): 53

Approved by:



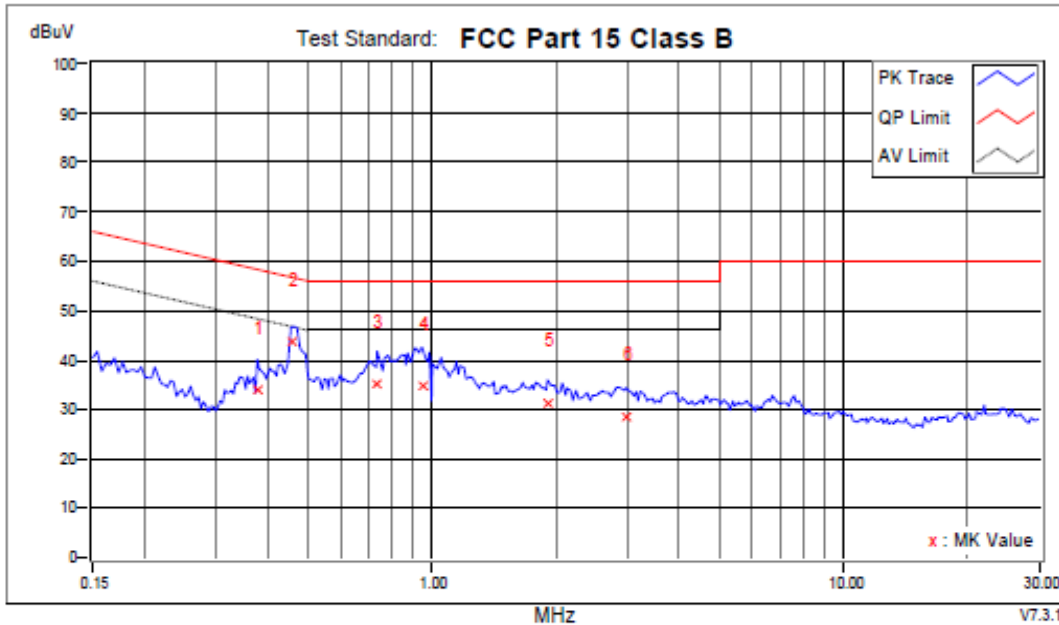
No.	Frequency MHz	Corr. Factor dB	Reading dBuV		Emission dBuV		Limit dBuV		Margins dB		Notes
			QP	AV	QP	AV	QP	AV	QP	AV	
1	0.40024	9.70	29.24	15.65	38.94	25.35	57.85	47.85	-18.91	-22.50	
+2	0.46671	9.71	39.75	26.88	49.46	36.59	56.57	46.57	-7.12	-9.99	
3	0.77580	9.58	34.27	24.69	43.85	34.27	56.00	46.00	-12.15	-11.73	
4	0.95546	9.59	33.58	18.69	43.17	28.28	56.00	46.00	-12.83	-17.72	
5	2.04397	9.75	26.72	16.47	36.47	26.22	56.00	46.00	-19.53	-19.78	
6	2.99410	9.78	25.35	15.68	35.13	25.46	56.00	46.00	-20.87	-20.54	

REMARKS:

1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. The emission levels of other frequencies were very low against the limit.
3. Margin value = Emission level - Limit value
4. Correction factor = Insertion loss + Cable loss
5. Emission Level = Correction Factor + Reading Value.

Phase: NEUTRAL

Location: Conduction 1 Date: 6/2/2020 Time: 9:23:35 AM Phase N
 Temperatur (C): 23 Humidity (%): 53 Approved by:



No.	Frequency	Corr. Factor	Reading dBuV		Emission dBuV		Limit dBuV		Margins dB		Notes
	MHz		QP	AV	QP	AV	QP	AV	QP	AV	
1	0.37678	9.85	24.00	13.29	33.85	23.14	58.35	48.35	-24.50	-25.21	
+2	0.45889	9.84	34.08	20.55	43.92	30.39	58.71	46.71	-12.80	-16.33	
3	0.73650	9.83	25.19	14.25	35.02	24.08	58.00	46.00	-20.98	-21.92	
4	0.94764	9.89	24.90	10.97	34.79	20.86	58.00	46.00	-21.21	-25.14	
5	1.91103	9.91	21.21	8.20	31.12	18.11	58.00	46.00	-24.88	-27.89	
6	2.96282	9.95	18.73	8.06	28.68	18.01	58.00	46.00	-27.32	-27.99	

REMARKS:

1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. The emission levels of other frequencies were very low against the limit.
3. Margin value = Emission level - Limit value
4. Correction factor = Insertion loss + Cable loss
5. Emission Level = Correction Factor + Reading Value.

4.6 Test Photographs



5 Test of Radiated Emission

5.1 Test Limit

TEST STANDARD:

CFR 47 FCC Part 15, Subpart B (Section: 15.109)

FOR FREQUENCY BELOW 1000 MHz

FREQUENCY (MHz)	Class A (at 10m)		Class B (at 3m)	
	$\mu\text{V/m}$	$\text{dB}\mu\text{V/m}$	$\mu\text{V/m}$	$\text{dB}\mu\text{V/m}$
30 – 88	90	39.1	100	40.0
88 – 216	150	43.5	150	43.5
216 – 960	210	46.4	200	46.0
960 – 1000	300	49.5	500	54.0

LIMIT OF RADIATED EMISSION OF FCC PART 15, SUBPART B FOR FREQUENCY ABOVE 1000 MHz

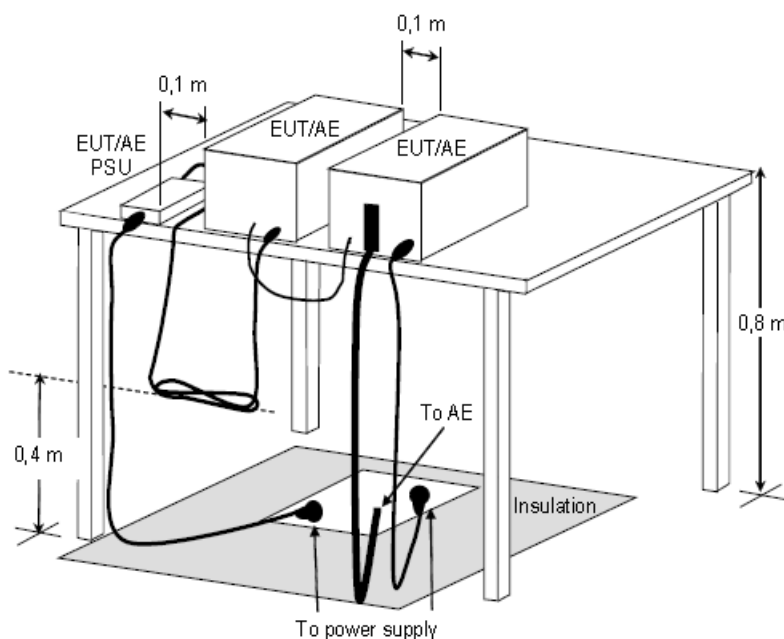
FREQUENCY (MHz)	Class A ($\text{dB}\mu\text{V/m}$) (at 3m)		Class B ($\text{dB}\mu\text{V/m}$) (at 3m)	
	PEAK	AVERAGE	PEAK	AVERAGE
Above 1000	80.0	60.0	74.0	54.0

- Note:**
1. The lower limit shall apply at the transition frequencies.
 2. Emission level ($\text{dB}\mu\text{V/m}$) = $20 \log$ Emission level ($\mu\text{V/m}$).
 3. All emanation from a class A/B digital device or system, including any network of conductors and apparatus connected thereto, shall not exceed the level of field strengths specified above.

5.2 Test Procedures

1. The EUT was placed on a rotatable table top 0.8 meter above ground.
2. The EUT was set 3/10 meters from the interference receiving antenna which was mounted on the top of a variable height antenna tower.
3. The table was rotated 360 degrees to determine the position of the highest radiation.
4. The antenna is a half wave dipole and its height is varied between one meter and four meters above ground to find the maximum value of the field strength both horizontal polarization and vertical polarization of the antenna are set to make the measurement.
5. For each suspected emission the EUT was arranged to its worst case and then tune the antenna tower (from 1 M to 4 M) and turn table (from 0 degree to 360 degrees) to find the maximum reading.
6. Set the test-receiver system to Peak Detect Function and specified bandwidth with Maximum Hold Mode.
7. If the emission level of the EUT in peak mode was 3 dB lower than the limit specified, then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions which do not have 3 dB margin will be repeated one by one using the quasi-peak method and reported.

5.3 Typical Test Setup



**Figure D.8 – Example measurement arrangement for table-top EUT
(Radiated emission measurement)**



5.4 Measurement Equipment

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED UNTIL
EMI Test Spectrum ROHDE & SCHWARZ	ESR7	E1R1005	Dec.02, 2020
Spectrum Analyzer Keysight	N9030B	E1S1003	Jul.21, 2021
Broad-Band Antenna Schwarzbeck	VULB9168	E1A1012	Aug.25, 2020
Double Riaged Vroadband Horn Antenna Schwarzbeck	BBHA9120D	E1A1017	Jan.25, 2021
Preamplifier Agilent	8447D	E1A2001	Oct.13, 2020
Preamplifier Agilent	EMC051845SE	E1A2009	Jul.18, 2020

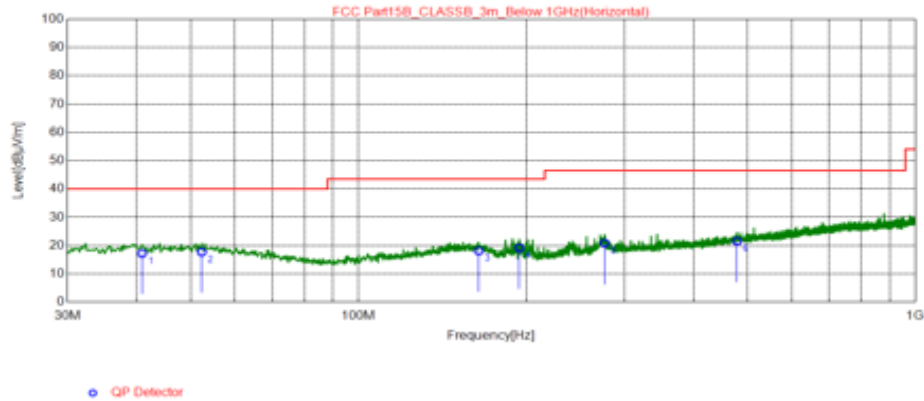
5.5 Test Result and Data (30MHz ~ 1GHz)

SC111-WK2

Mode 1

Position: Horizontal

Test Graph



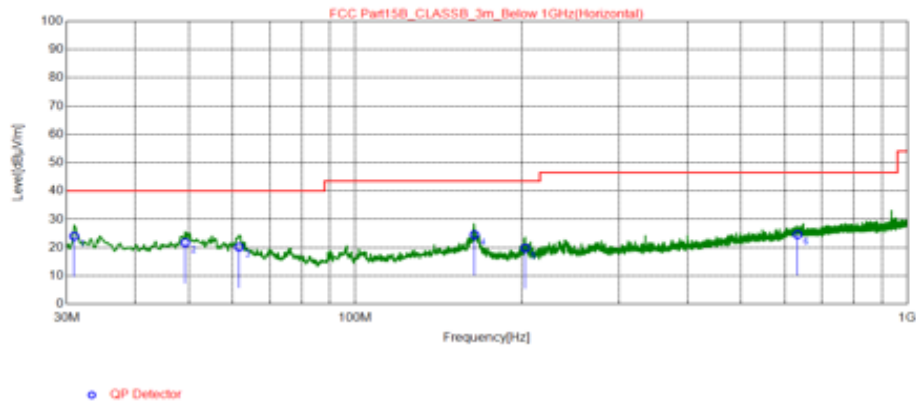
NO.	Freq. [MHz]	QP Reading [dB µV/m]	Factor [dB]	QP Value [dB µV/m]	QP Limit [dB µV/m]	QP Margin [dB]	Height [cm]	Angle [°]	Polarity
1	40.86	26.67	-9.48	17.19	40.00	22.81	100	31	Horizontal
2	52.31	27.57	-9.90	17.67	40.00	22.33	100	263	Horizontal
3	164.4	27.2	-9.12	18.08	43.50	25.42	100	8	Horizontal
4	194.5	31.25	-12.12	19.13	43.50	24.37	100	254	Horizontal
5	276.7	30.55	-9.76	20.79	46.50	25.71	100	213	Horizontal
6	478.5	27.22	-5.71	21.51	46.50	24.99	100	304	Horizontal

REMARKS:

1. Q.P. is abbreviation of quasi-peak individually.
2. The emission levels of other frequencies were very low against the limit.
3. QP Margin value = QP Limit value – QP value.
4. Factor = Antenna Factor + Amplifier Factor + Cable loss.
5. QP value = Factor + Reading Value.

Position: Vertical

Test Graph



NO.	Freq. [MHz]	QP Reading [dB μV/m]	Factor [dB]	QP Value [dB μV/m]	QP Limit [dB μV/m]	QP Margin [dB]	Height [cm]	Angle [°]	Polarity
1	30.97	34.6	-10.59	24.01	40.00	15.99	100	251	Vertical
2	49.20	31.39	-9.68	21.71	40.00	18.29	100	242	Vertical
3	61.62	30.93	-10.81	20.12	40.00	19.88	100	337	Vertical
4	164.4	33.61	-9.12	24.49	43.50	19.01	100	24	Vertical
5	203.2	32.02	-12.22	19.80	43.50	23.70	100	264	Vertical
6	632.7	28.04	-3.47	24.57	46.50	21.93	100	129	Vertical

REMARKS:

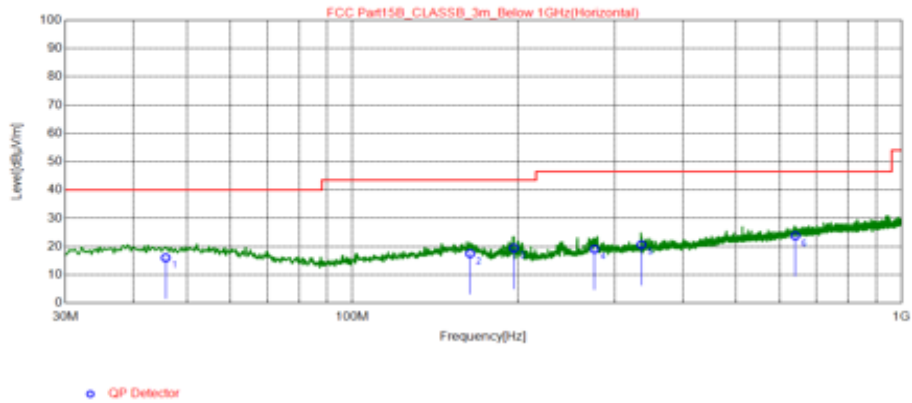
1. Q.P. is abbreviation of quasi-peak individually.
2. The emission levels of other frequencies were very low against the limit.
3. QP Margin value = QP Limit value – QP value
4. Factor = Antenna Factor + Amplifier Factor + Cable loss
5. QP value = Factor + Reading Value.

SC111-WK2

Mode 2

Position: Horizontal

Test Graph



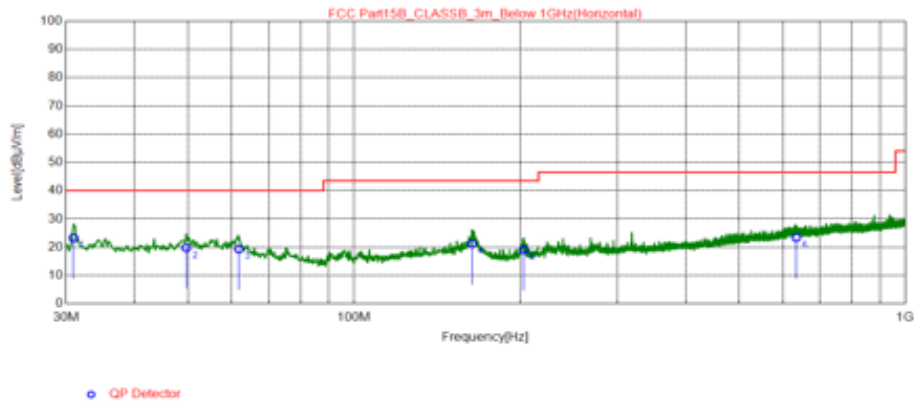
NO.	Freq. [MHz]	QP Reading [dB μV/m]	Factor [dB]	QP Value [dB μV/m]	QP Limit [dB μV/m]	QP Margin [dB]	Height [cm]	Angle [°]	Polarity
1	45.71	25.61	-9.60	16.01	40.00	23.99	100	101	Horizontal
2	163.8	26.58	-9.10	17.48	43.50	26.02	100	274	Horizontal
3	196.8	31.68	-12.22	19.46	43.50	24.04	100	251	Horizontal
4	275.9	28.87	-9.78	19.09	46.50	27.41	100	51	Horizontal
5	335.9	29.54	-8.90	20.64	46.50	25.86	100	110	Horizontal
6	640.9	27.02	-3.25	23.77	46.50	22.73	100	242	Horizontal

REMARKS:

1. Q.P. is abbreviation of quasi-peak individually.
2. The emission levels of other frequencies were very low against the limit.
3. QP Margin value = QP Limit value – QP value.
4. Factor = Antenna Factor + Amplifier Factor + Cable loss.
5. QP value = Factor + Reading Value.

Position: Vertical

Test Graph



NO.	Freq. [MHz]	QP Reading [dB µV/m]	Factor [dB]	QP Value [dB µV/m]	QP Limit [dB µV/m]	QP Margin [dB]	Height [cm]	Angle [°]	Polarity
1	30.97	33.88	-10.59	23.29	40.00	16.71	100	304	Vertical
2	49.59	29.47	-9.69	19.78	40.00	20.22	100	336	Vertical
3	61.81	30.18	-10.84	19.34	40.00	20.66	100	253	Vertical
4	163.6	30.37	-9.09	21.28	43.50	22.22	100	98	Vertical
5	203.0	31.31	-12.22	19.09	43.50	24.41	100	102	Vertical
6	634.3	26.81	-3.42	23.39	46.50	23.11	100	16	Vertical

REMARKS:

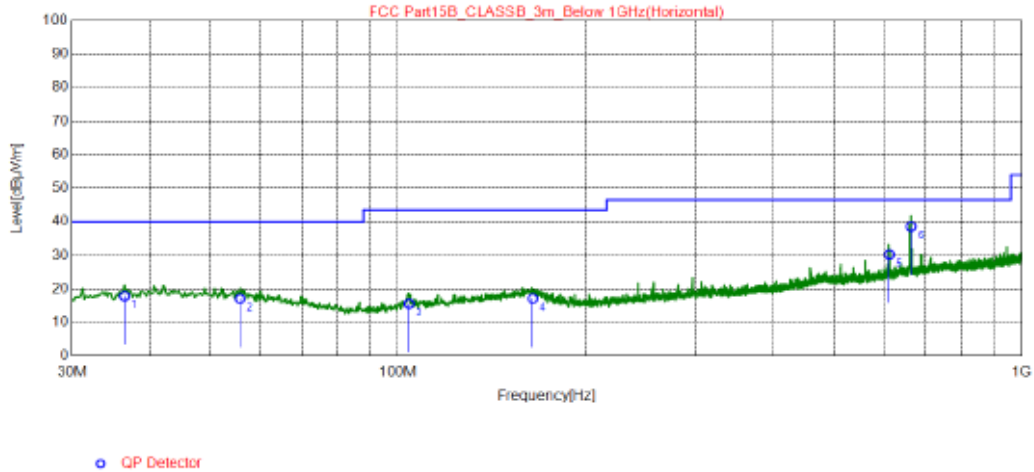
1. Q.P. is abbreviation of quasi-peak individually.
2. The emission levels of other frequencies were very low against the limit.
3. QP Margin value = QP Limit value – QP value
4. Factor = Antenna Factor + Amplifier Factor + Cable loss
5. QP value = Factor + Reading Value.

SC111-WK3

Mode 1

Position: Horizontal

Test Graph



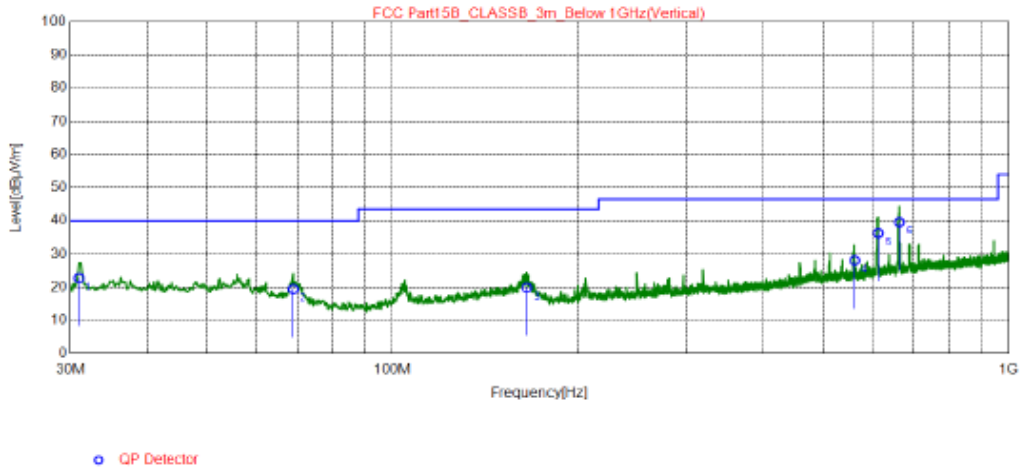
NO.	Freq. [MHz]	QP Reading [dBµV/m]	Factor [dB]	QP Value [dBµV/m]	QP Limit [dBµV/m]	QP Margin [dB]	Height [cm]	Angle [°]	Polarity
1	36.40	27.78	-9.91	17.87	40.00	22.13	200	206	Horizontal
2	55.80	27.25	-10.20	17.05	40.00	22.95	200	237	Horizontal
3	104.1	28.46	-12.90	15.56	43.50	27.94	200	194	Horizontal
4	164.4	26.23	-9.12	17.11	43.50	26.39	200	303	Horizontal
5	613.7	34.19	-3.96	30.23	46.50	16.27	200	245	Horizontal
6	664.9	41.77	-3.19	38.58	46.50	7.92	200	152	Horizontal

REMARKS:

1. Q.P. is abbreviation of quasi-peak individually.
2. The emission levels of other frequencies were very low against the limit.
3. QP Margin value = QP Limit value – QP value.
4. Factor = Antenna Factor + Amplifier Factor + Cable loss.
5. QP value = Factor + Reading Value.

Position: Vertical

Test Graph



NO.	Freq. [MHz]	QP Reading [dBµV/m]	Factor [dB]	QP Value [dBµV/m]	QP Limit [dBµV/m]	QP Margin [dB]	Height [cm]	Angle [°]	Polarity
1	30.97	33.31	-10.59	22.72	40.00	17.28	100	144	Vertical
2	68.99	31.33	-11.95	19.38	40.00	20.62	100	258	Vertical
3	165.2	29	-9.16	19.84	43.50	23.66	100	128	Vertical
4	562.7	33.14	-5.12	28.02	46.50	18.48	100	28	Vertical
5	614.5	40.22	-3.95	36.27	46.50	10.23	100	63	Vertical
6	665.0	42.73	-3.19	39.54	46.50	6.96	107.8	60.3	Vertical

REMARKS:

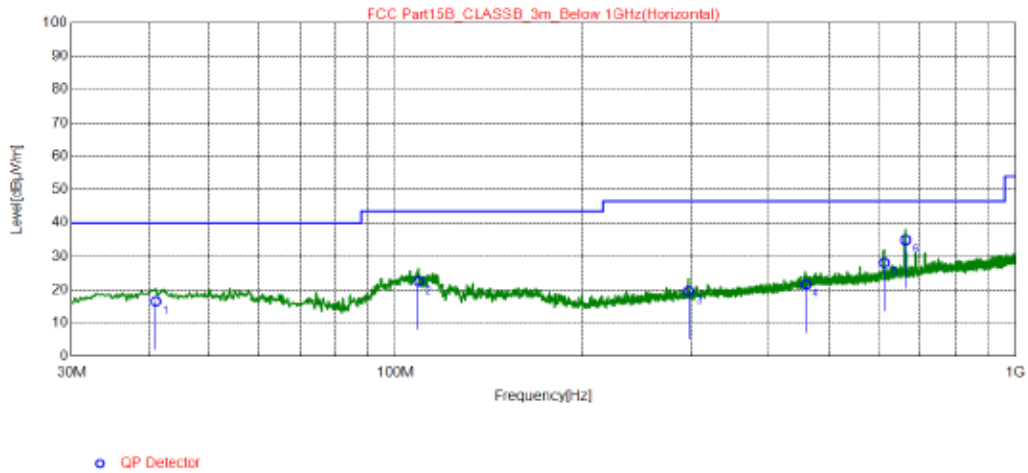
1. Q.P. is abbreviation of quasi-peak individually.
2. The emission levels of other frequencies were very low against the limit.
3. QP Margin value = QP Limit value – QP value
4. Factor = Antenna Factor + Amplifier Factor + Cable loss
5. QP value = Factor + Reading Value.

SC111-WK3

Mode 2

Position: Horizontal

Test Graph



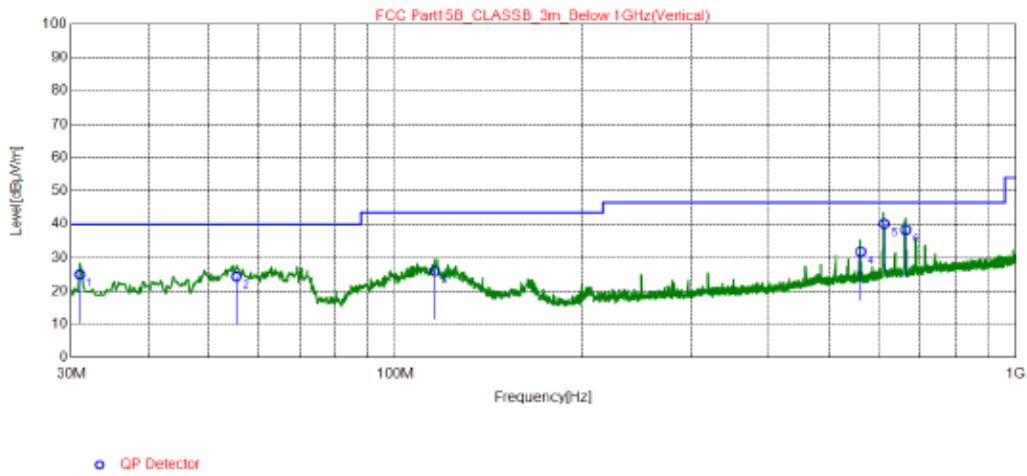
NO.	Freq. [MHz]	QP Reading [dBµV/m]	Factor [dB]	QP Value [dBµV/m]	QP Limit [dBµV/m]	QP Margin [dB]	Height [cm]	Angle [°]	Polarity
1	41.05	25.91	-9.48	16.43	40.00	23.57	200	191	Horizontal
2	108.9	34.68	-12.23	22.45	43.50	21.05	200	122	Horizontal
3	296.9	28.77	-9.28	19.49	46.50	27.01	200	63	Horizontal
4	458.9	28.08	-6.56	21.52	46.50	24.98	200	63	Horizontal
5	614.5	32	-3.95	28.05	46.50	18.45	200	301	Horizontal
6	665.1	38.09	-3.19	34.90	46.50	11.60	200	145	Horizontal

REMARKS:

1. Q.P. is abbreviation of quasi-peak individually.
2. The emission levels of other frequencies were very low against the limit.
3. QP Margin value = QP Limit value – QP value.
4. Factor = Antenna Factor + Amplifier Factor + Cable loss.
5. QP value = Factor + Reading Value.

Position: Vertical

Test Graph



NO.	Freq. [MHz]	QP Reading [dBµV/m]	Factor [dB]	QP Value [dBµV/m]	QP Limit [dBµV/m]	QP Margin [dB]	Height [cm]	Angle [°]	Polarity
1	30.97	35.49	-10.59	24.90	40.00	15.10	100	110	Vertical
2	55.41	34.46	-10.16	24.30	40.00	15.70	100	305	Vertical
3	115.7	37.87	-11.87	26.00	43.50	17.50	100	305	Vertical
4	562.7	36.9	-5.12	31.78	46.50	14.72	100	20	Vertical
5	613.9	44.03	-3.96	40.07	46.50	6.43	100	63	Vertical
6	665.1	41.52	-3.19	38.33	46.50	8.17	100	20	Vertical

REMARKS:

1. Q.P. is abbreviation of quasi-peak individually.
2. The emission levels of other frequencies were very low against the limit.
3. QP Margin value = QP Limit value – QP value
4. Factor = Antenna Factor + Amplifier Factor + Cable loss
5. QP value = Factor + Reading Value.

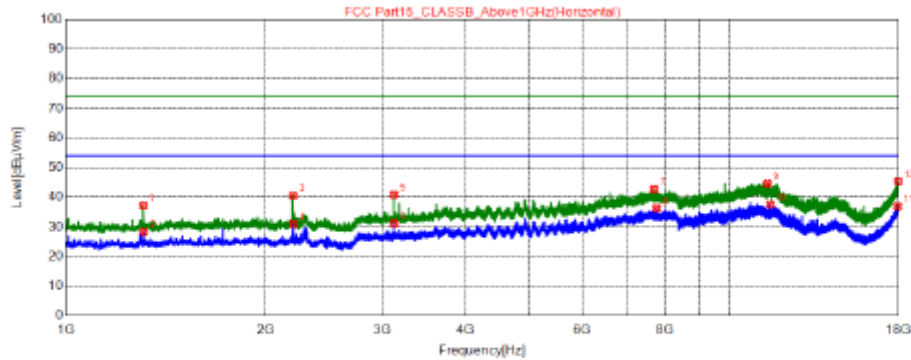
5.6 Test Result and Data (1GHz ~ 18GHz)

SC111-WK2

Mode 1

Position: Horizontal

Test Graph



• AV Detector

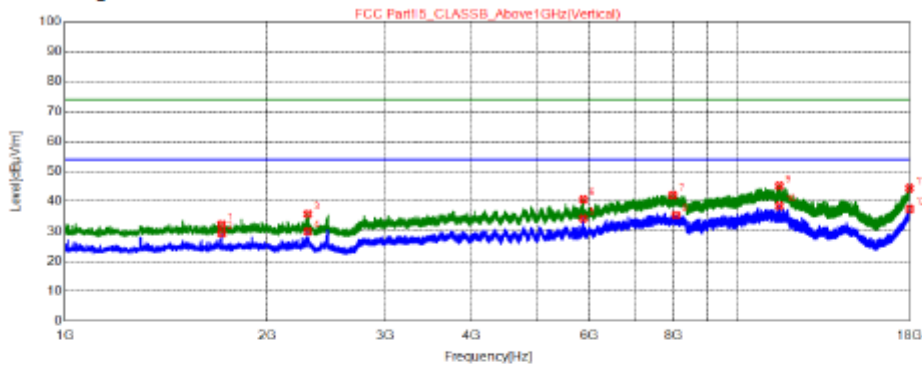
NO.	Freq. [MHz]	Reading [dBµV/m]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity	Detector
1	1309.4000	55.69	37.19	74.00	36.81	100	212	Horizontal	PK
2	1310.2500	46.87	28.37	54.00	25.63	100	212	Horizontal	AV
3	2200.2000	56.89	40.53	74.00	33.47	100	328	Horizontal	PK
4	2201.0500	47.33	30.97	54.00	23.03	100	289	Horizontal	AV
5	3122.4500	54.88	40.89	74.00	33.11	100	97	Horizontal	PK
6	3123.3000	45.14	31.15	54.00	22.85	100	59	Horizontal	AV
7	7702.2500	46.11	42.65	74.00	31.35	100	59	Horizontal	PK
8	7766.8500	39.63	36.30	54.00	17.70	100	97	Horizontal	AV
9	11409.1000	42.90	44.57	74.00	29.43	100	136	Horizontal	PK
10	11517.9000	35.88	37.53	54.00	16.47	100	175	Horizontal	AV
11	17922.8500	25.50	36.87	54.00	17.13	100	136	Horizontal	AV
12	17970.2500	33.66	45.35	74.00	28.65	100	20	Horizontal	PK

REMARKS:

1. The emission levels of other frequencies were very low against the limit.
2. Margin = Limit –Level

Position: Vertical

Test Graph



★ AV Detector

NO.	Freq. [MHz]	Reading [dBµV/m]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity	Detector
1	1711.4500	49.65	32.24	74.00	41.76	100	146	Vertical	PK
2	1712.3000	46.70	29.29	54.00	24.71	100	146	Vertical	AV
3	2298.8000	51.95	35.79	74.00	38.21	100	185	Vertical	PK
4	2299.6500	46.13	29.97	54.00	24.03	100	224	Vertical	AV
5	5869.6500	42.63	34.30	54.00	19.70	100	146	Vertical	AV
6	5874.7500	48.97	40.64	74.00	33.36	100	31	Vertical	PK
7	7978.5000	45.03	42.05	74.00	31.95	100	262	Vertical	PK
8	8072.0000	38.45	35.38	54.00	18.62	100	69	Vertical	AV
9	11498.3500	43.50	45.19	74.00	28.81	100	185	Vertical	PK
10	11499.2000	36.82	38.51	54.00	15.49	100	224	Vertical	AV
11	17966.8500	32.74	44.40	74.00	29.60	100	69	Vertical	PK
12	17984.7000	25.62	37.44	54.00	16.56	100	300	Vertical	AV

REMARKS:

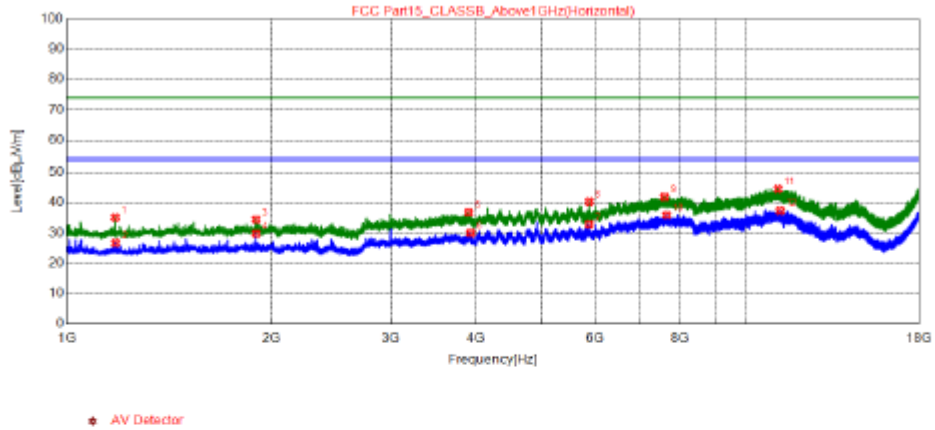
1. The emission levels of other frequencies were very low against the limit.
2. Margin = Limit –Level

SC111-WK2

Mode 2

Position: Horizontal

Test Graph



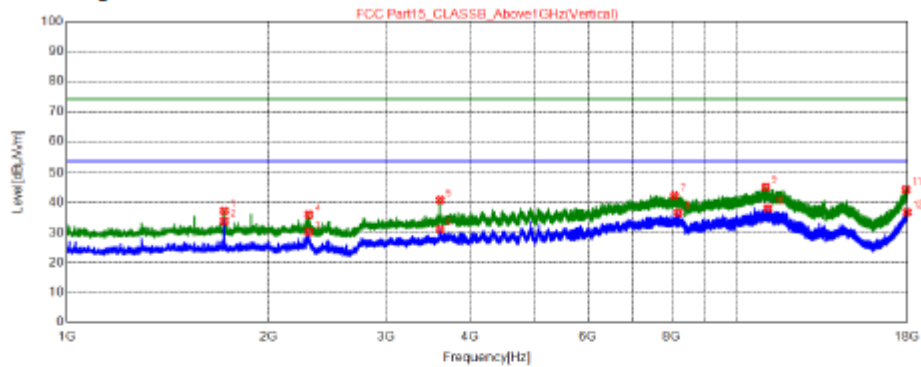
NO.	Freq. [MHz]	Reading [dBµV/m]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity	Detector
1	1179.3500	52.99	35.09	74.00	38.91	100	298	Horizontal	PK
2	1180.2000	45.61	26.71	54.00	27.29	100	298	Horizontal	AV
3	1900.1500	51.40	34.40	74.00	39.60	100	134	Horizontal	PK
4	1901.0000	46.77	29.77	54.00	24.23	100	338	Horizontal	AV
5	3903.6000	48.57	36.80	74.00	37.20	100	18	Horizontal	PK
6	3930.8000	41.68	29.98	54.00	24.02	100	216	Horizontal	AV
7	5873.9000	41.17	32.84	54.00	21.16	100	18	Horizontal	AV
8	5876.4500	48.64	40.31	74.00	33.69	100	56	Horizontal	PK
9	7586.6500	45.52	41.85	74.00	32.15	100	298	Horizontal	PK
10	7643.6000	39.42	35.85	54.00	18.15	100	134	Horizontal	AV
11	11146.4500	42.90	44.49	74.00	29.51	100	18	Horizontal	PK
12	11225.5000	35.71	37.37	54.00	16.63	100	18	Horizontal	AV

REMARKS:

1. The emission levels of other frequencies were very low against the limit.
2. Margin = Limit –Level

Position: Vertical

Test Graph



★ AV Detector

NO.	Freq. [MHz]	Reading [dBµV/m]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity	Detector
1	1719.1000	54.71	37.32	74.00	36.68	100	177	Vertical	PK
2	1719.1000	51.34	32.95	54.00	20.05	100	177	Vertical	AV
3	2300.5000	46.39	30.24	54.00	23.76	100	216	Vertical	AV
4	2300.5000	52.14	35.99	74.00	38.01	100	332	Vertical	PK
5	3610.3500	53.41	40.95	74.00	33.05	100	332	Vertical	PK
6	3610.3500	43.65	31.19	54.00	22.81	100	332	Vertical	AV
7	8086.4500	45.56	42.47	74.00	31.53	100	332	Vertical	PK
8	8188.4500	39.93	36.66	54.00	17.34	100	332	Vertical	AV
9	11069.1000	43.76	45.25	74.00	28.75	100	138	Vertical	PK
10	11137.1000	36.56	38.14	54.00	15.86	100	60	Vertical	AV
11	17915.0000	33.26	44.48	74.00	29.52	100	254	Vertical	PK
12	17985.5500	25.04	36.87	54.00	17.13	100	60	Vertical	AV

REMARKS:

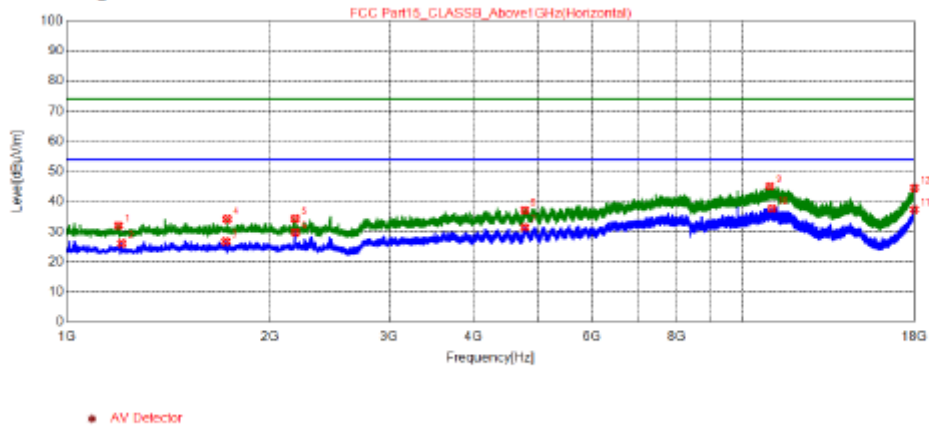
1. The emission levels of other frequencies were very low against the limit.
2. Margin = Limit –Level

SC111-WK3

Mode 1

Position: Horizontal

Test Graph



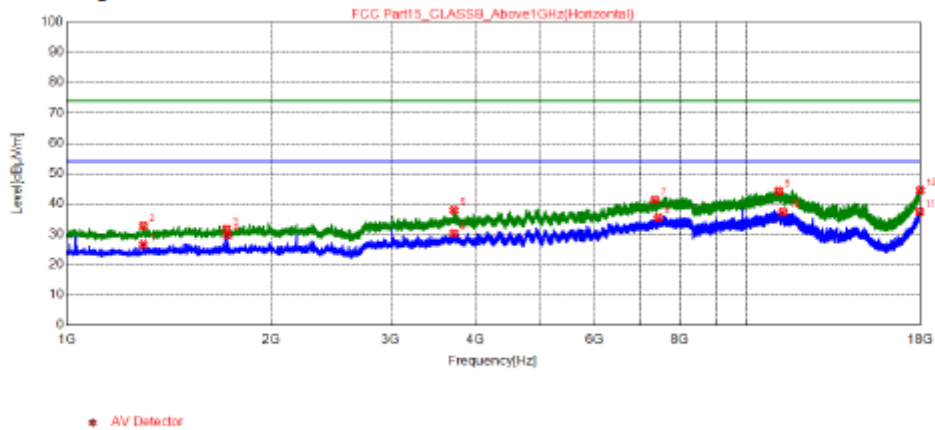
NO.	Freq. [MHz]	Reading [dBµV/m]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity	Detector
1	1193.8000	50.86	32.01	74.00	41.99	100	289	Horizontal	PK
2	1207.4000	44.93	26.12	54.00	27.88	100	212	Horizontal	AV
3	1720.8000	44.13	26.74	54.00	27.26	100	20	Horizontal	AV
4	1729.3000	51.58	34.21	74.00	39.79	100	135	Horizontal	PK
5	2179.8000	50.73	34.33	74.00	39.67	100	212	Horizontal	PK
6	2181.5000	46.13	29.73	54.00	24.27	100	20	Horizontal	AV
7	4763.8000	40.95	31.41	54.00	22.59	100	174	Horizontal	AV
8	4766.3500	46.65	37.11	74.00	36.89	100	174	Horizontal	PK
9	10987.5000	43.74	45.09	74.00	28.91	100	20	Horizontal	PK
10	11064.8500	36.18	37.66	54.00	16.34	100	135	Horizontal	AV
11	17986.4000	25.48	37.31	54.00	16.69	100	59	Horizontal	AV
12	17994.0500	32.55	44.45	74.00	29.55	100	328	Horizontal	PK

REMARKS:

1. The emission levels of other frequencies were very low against the limit.
2. Margin = Limit –Level

Position: Vertical

Test Graph



NO.	Freq. [MHz]	Reading [dBµV/m]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity	Detector
1	1295.8000	45.12	26.58	54.00	27.42	100	301	Vertical	AV
2	1296.6500	51.27	32.73	74.00	41.27	100	340	Vertical	PK
3	1719.9500	49.07	31.68	74.00	42.32	100	70	Vertical	PK
4	1725.0500	47.07	29.69	54.00	24.31	100	301	Vertical	AV
5	3720.8500	50.15	37.95	74.00	36.05	100	340	Vertical	PK
6	3721.7000	42.47	30.27	54.00	23.73	100	340	Vertical	AV
7	7363.1000	45.56	41.31	74.00	32.69	100	148	Vertical	PK
8	7447.2500	39.40	35.40	54.00	18.60	100	301	Vertical	AV
9	11125.2000	42.62	44.19	74.00	29.81	100	32	Vertical	PK
10	11294.3500	35.70	37.37	54.00	16.63	100	301	Vertical	AV
11	17954.1000	25.89	37.45	54.00	16.55	100	262	Vertical	AV
12	17991.5000	32.55	44.43	74.00	29.57	100	224	Vertical	PK

REMARKS:

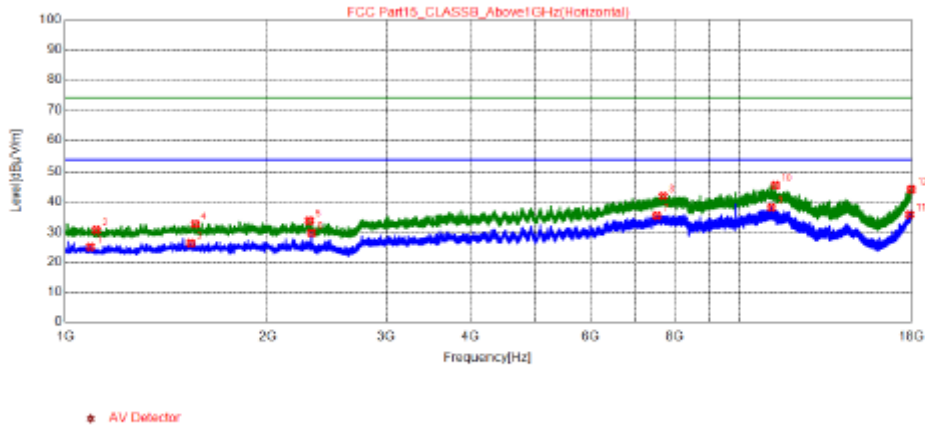
1. The emission levels of other frequencies were very low against the limit.
2. Margin = Limit – Level

SC111-WK3

Mode 2

Position: Horizontal

Test Graph



NO.	Freq. [MHz]	Reading [dBuV/m]	Level [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity	Detector
1	1090.1000	44.20	25.00	54.00	29.00	100	105	Horizontal	AV
2	1112.2000	49.79	30.67	74.00	43.33	100	66	Horizontal	PK
3	1537.2000	44.02	26.20	54.00	27.80	100	143	Horizontal	AV
4	1560.1500	50.40	32.64	74.00	41.36	100	182	Horizontal	PK
5	2306.4500	49.84	33.70	74.00	40.30	100	28	Horizontal	PK
6	2324.3000	45.82	29.72	54.00	24.28	100	298	Horizontal	AV
7	7520.3500	39.22	35.42	54.00	18.58	100	182	Horizontal	AV
8	7685.2500	45.49	42.00	74.00	32.00	100	66	Horizontal	PK
9	11133.7000	36.56	38.14	54.00	15.86	100	182	Horizontal	AV
10	11286.7000	43.84	45.51	74.00	28.49	100	66	Horizontal	PK
11	17862.3000	24.99	35.74	54.00	18.26	100	298	Horizontal	AV
12	17963.4500	32.52	44.16	74.00	29.84	100	66	Horizontal	PK

REMARKS:

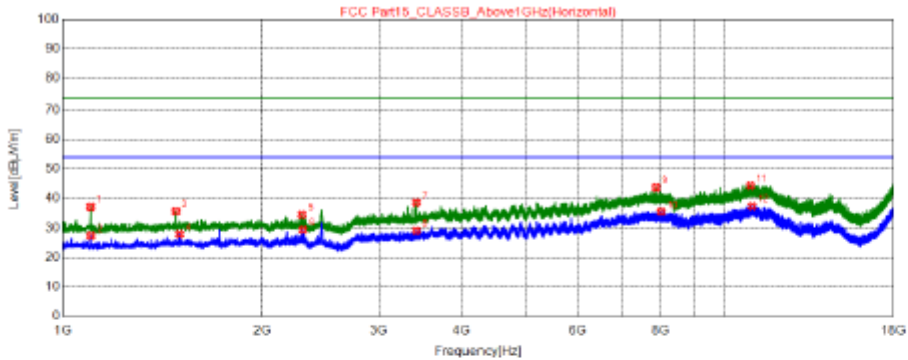
1. The emission levels of other frequencies were very low against the limit.
2. Margin = Limit –Level



BUREAU
VERITAS

Position: Vertical

Test Graph



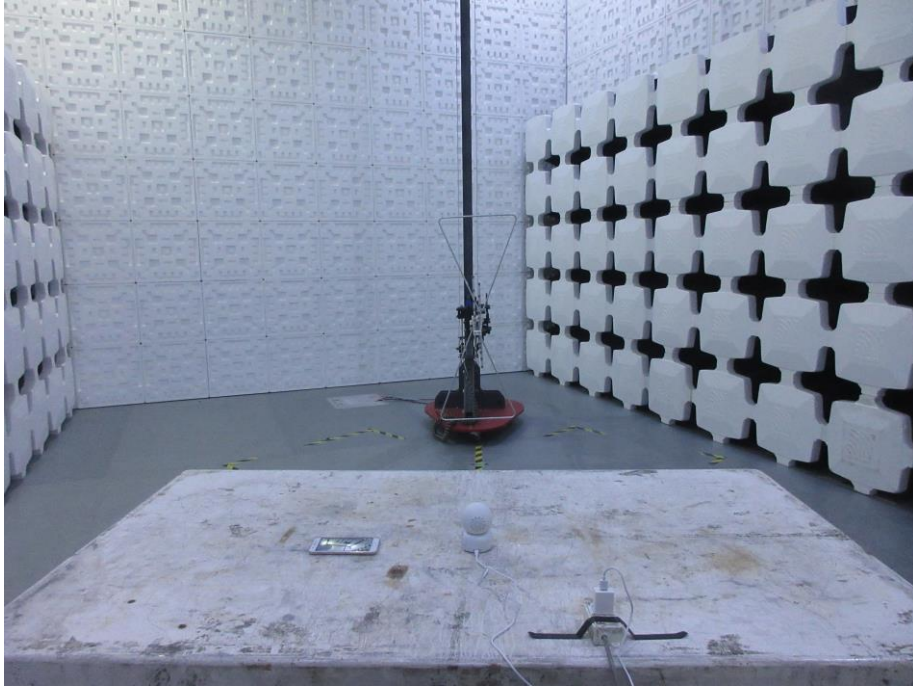
◆ AV Detector

NO.	Freq. [MHz]	Reading [dBµV/m]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity	Detector
1	1102.0000	56.30	37.14	74.00	36.86	100	174	Vertical	PK
2	1102.8500	46.54	27.38	54.00	26.62	100	174	Vertical	AV
3	1482.8000	53.58	35.61	74.00	38.39	100	97	Vertical	PK
4	1500.6500	45.83	27.92	54.00	26.08	100	332	Vertical	AV
5	2298.8000	50.68	34.52	74.00	39.48	100	332	Vertical	PK
6	2306.4500	45.50	29.36	54.00	24.64	100	213	Vertical	AV
7	3420.8000	51.62	38.58	74.00	35.42	100	293	Vertical	PK
8	3421.6500	42.06	29.02	54.00	24.98	100	293	Vertical	AV
9	7871.4000	46.90	43.75	74.00	30.25	100	255	Vertical	PK
10	8015.9000	38.47	35.49	54.00	18.51	100	174	Vertical	AV
11	10937.3500	43.14	44.37	74.00	29.63	100	332	Vertical	PK
12	10997.7000	35.99	37.36	54.00	16.64	100	332	Vertical	AV

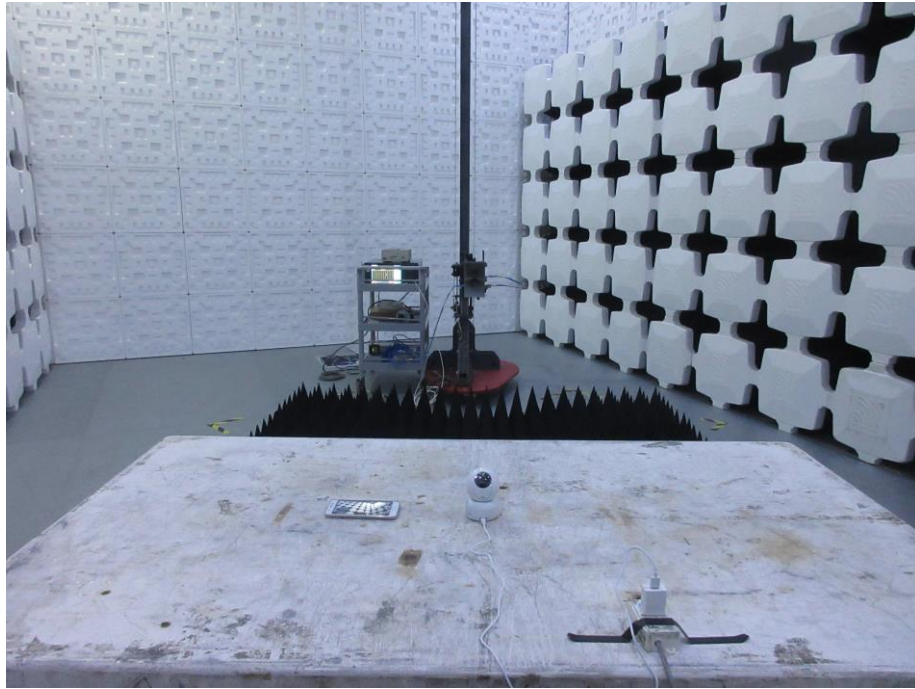
REMARKS:

1. The emission levels of other frequencies were very low against the limit.
2. Margin = Limit –Level

5.7 Test Photographs (30MHz ~ 1000MHz)

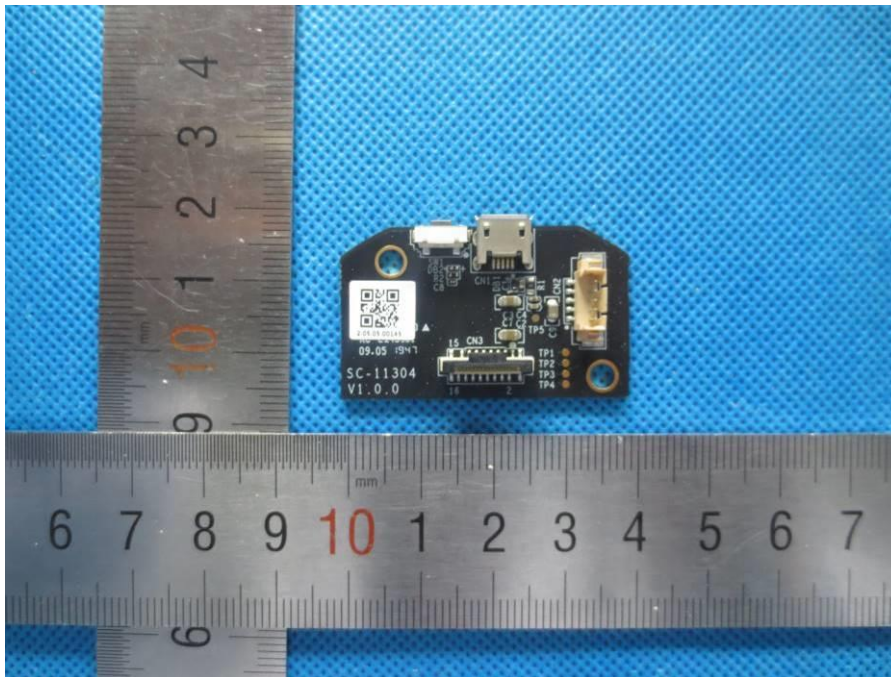


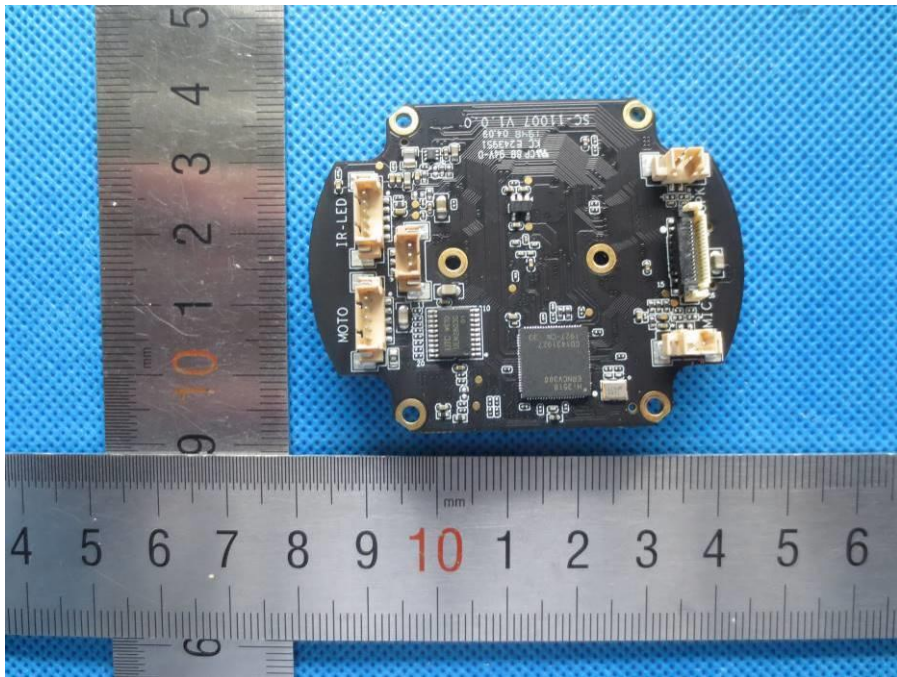
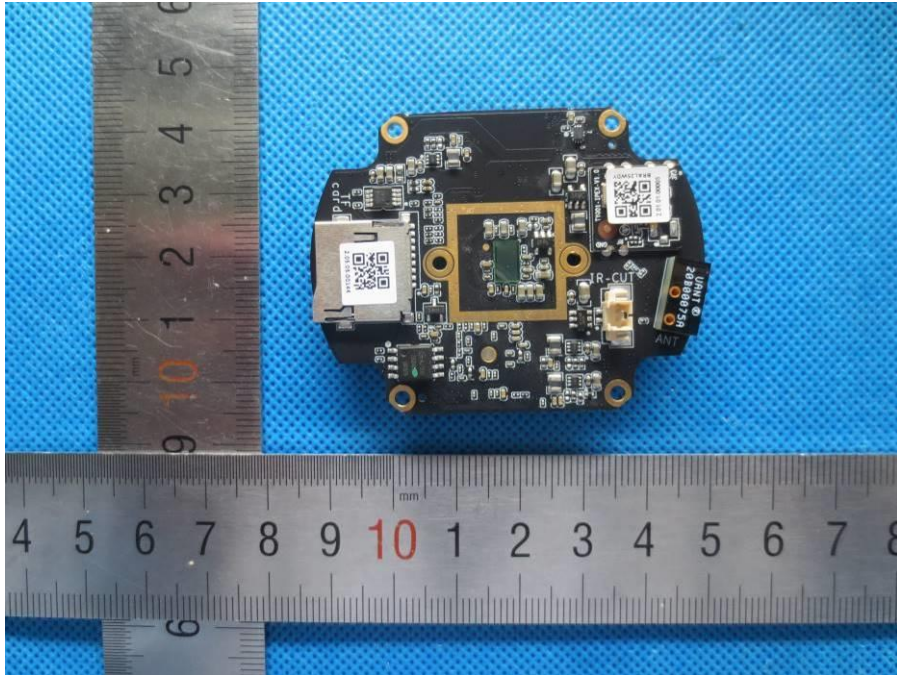
5.8 Test Photographs (1000MHz ~ 18000MHz)

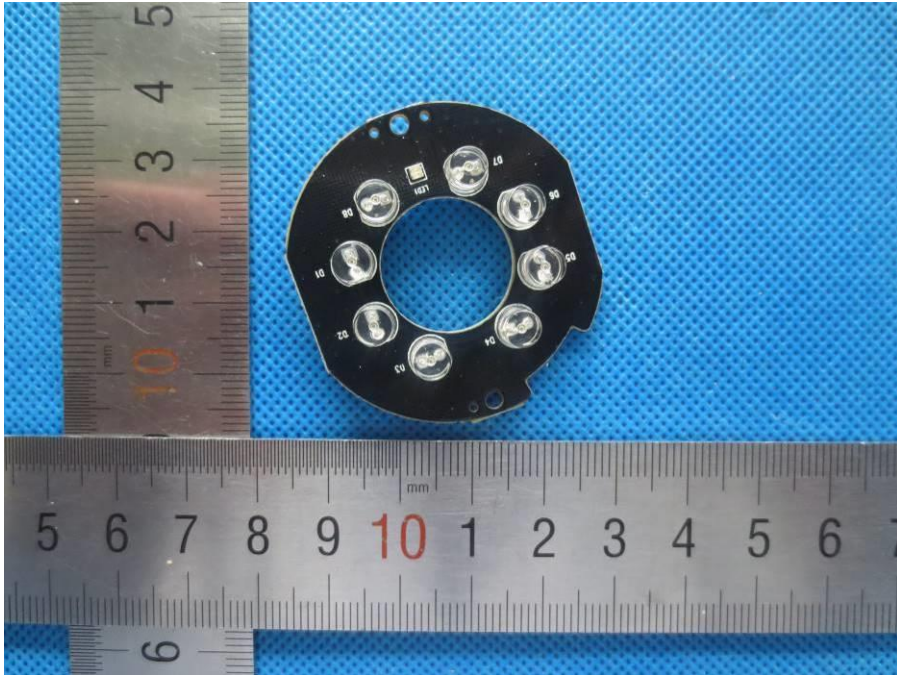


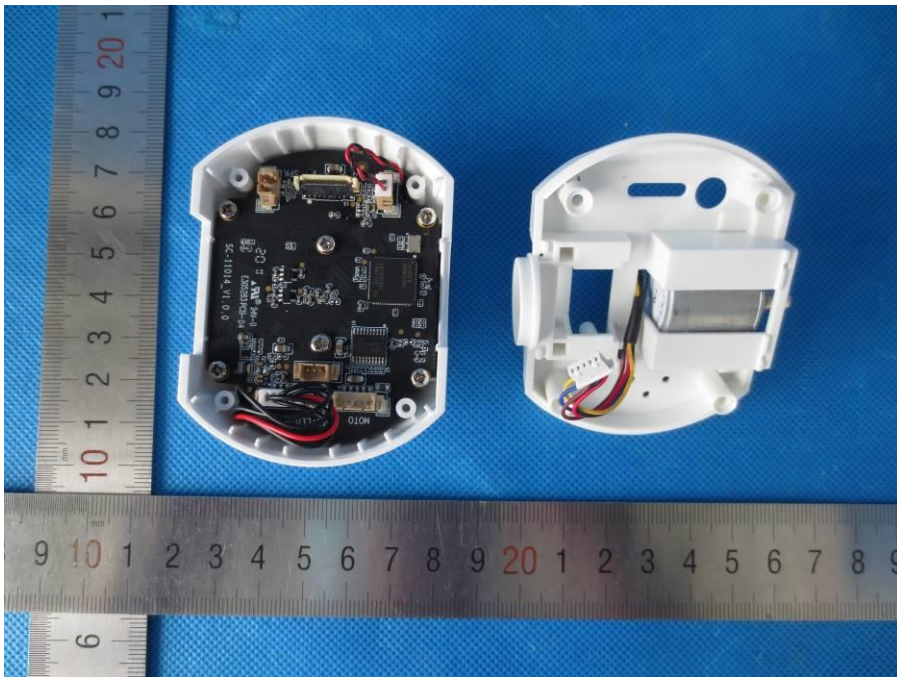
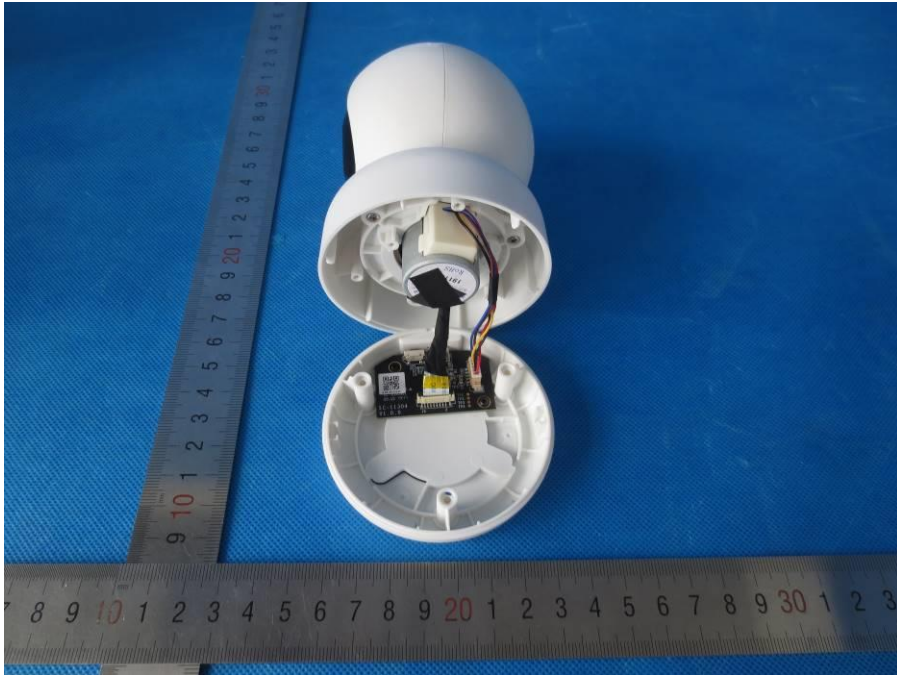
6 Photographs of EUT

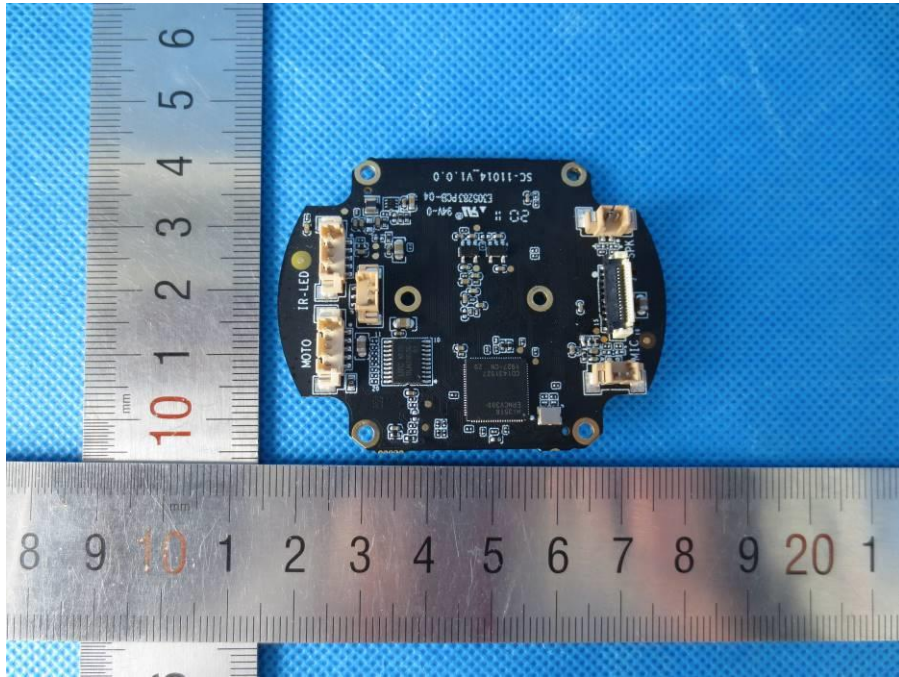
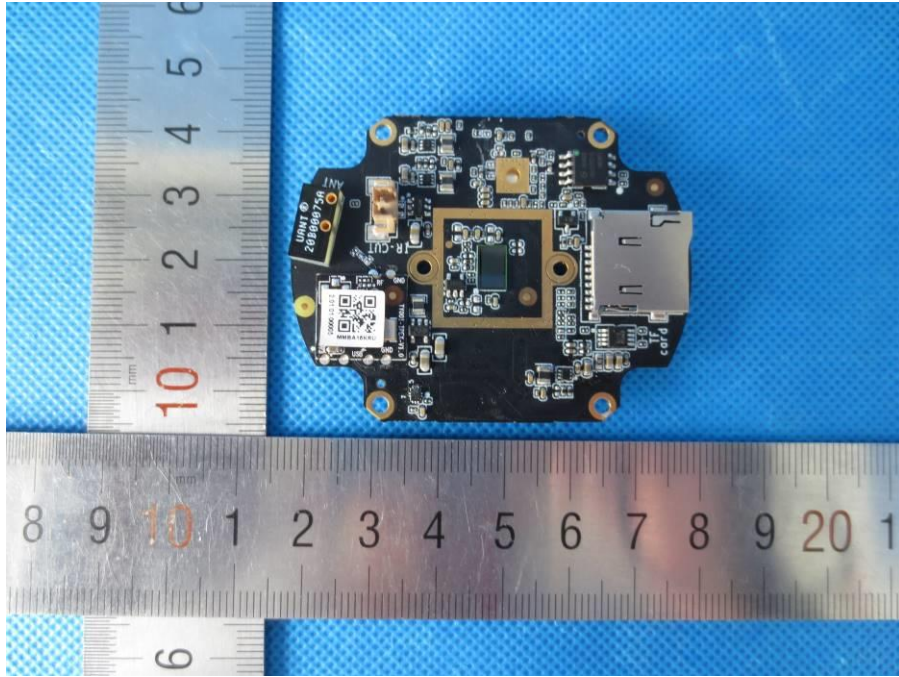


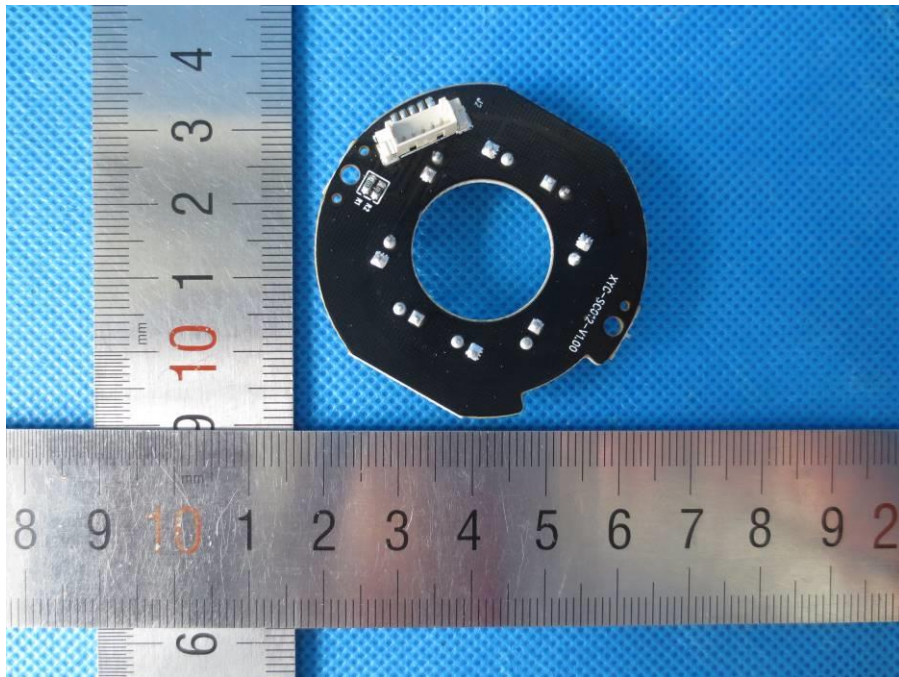
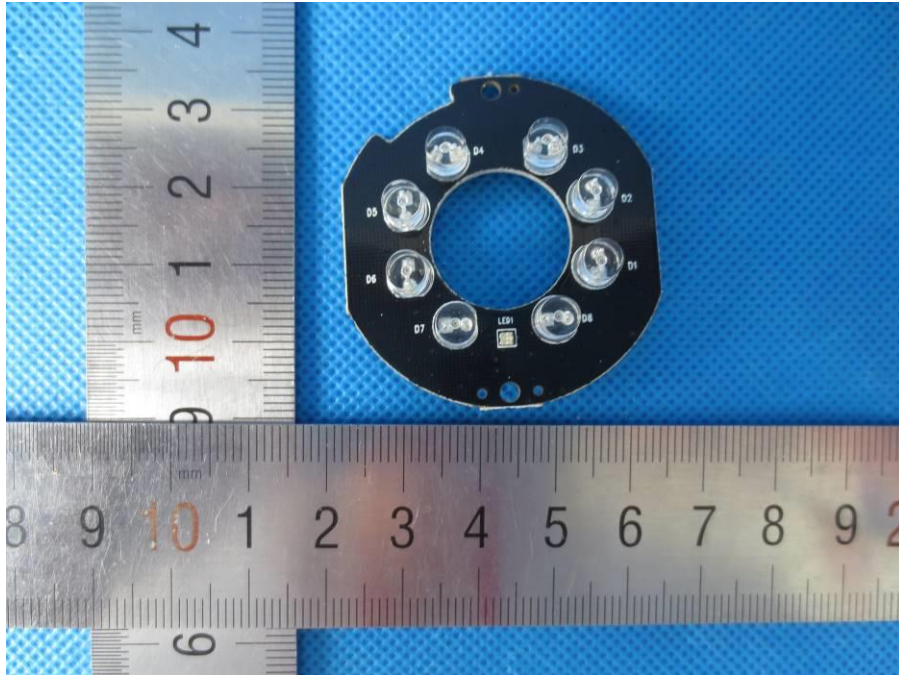












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