



TEST REPORT

FCC ID: 2ATNI-KLJSQ

Product: Control

Model No.: kljsq-1001

Additional Model No.: kljsq-2001

Trade Mark: N/A

Report No.: FCC19060024A

Issued Date: Jun. 20, 2019

Issued for:

Huizhou Kunli Electronic Co Ltd

**Xin wu zai villagers group Dongsheng Village Chenjiang Street Huizhou,
Guangdong 516229 CHINA**

Issued By:

**World Standardization Certification & Testing Group Co., Ltd.
Building A-B, Baoshi Science & Technology Park, Baoshi Road,
Bao'an District, Shenzhen, Guangdong, China**

TEL: +86-755-26996192

FAX: +86-755-86376605



Note: The results contained in this report pertain only to the tested sample. This report shall not be reproduced, except in full, without written approval of World Standardization Certification & Testing Group Co., Ltd. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the U.S. Government.





TABLE OF CONTENTS

1. GENERAL INFORMATION	3
2. GENERAL DESCRIPTION OF EUT	4
3. Facilities and Accreditations	5
3.1. ACCREDITATIONS	5
3.2. TEST DESCRIPTION	6
3.3. SUMMARY OF TEST RESULTS	8
4. MEASUREMENT INSTRUMENTS	9
5. EMC EMISSION TEST	10
5.1 CONDUCTED EMISSION MEASUREMENT	10
6. RADIATED EMISSION MEASUREMENT	15
6.2. TEST RESULTS	19
Radiated Emission Data (Frequency from 30MHz to 1GHz)	19
7. Transmit time	25
8. OCCUPIED BANDWIDTH	27
9. ANTENNA REQUIREMENT	29
10. EUT TEST PHOTO	30
11. PHOTOGRAPHS OF EUT	32





1. GENERAL INFORMATION

Product:	Control
Model No.:	kljsq-1001
Additional Model:	kljsq-2001
Applicant:	Huizhou Kunli Electronic Co Ltd
Address:	Xin wu zai villagers group Dongsheng Village Chenjiang Street Huizhou, Guangdong 516229 CHINA
Manufacturer:	Huizhou Kunli Electronic Co Ltd
Address:	Xin wu zai villagers group Dongsheng Village Chenjiang Street Huizhou, Guangdong 516229 CHINA
Data of receipt:	May. 20, 2019
Date of Test:	May. 20, 2019 to Jun. 15, 2019
Applicable Standards:	FCC CFR Title 47 Part 15 Subpart C Section 15.231

The above equipment has been tested by World Standardization Certification & Testing Group Co., Ltd. and found compliance with the requirements set forth in the technical standards mentioned above. The results of testing in this report apply only to the product/system, which was tested. Other similar equipment will not necessarily produce the same results due to production tolerance and measurement uncertainties.

Tested By:

Pu Shixi
(Pu Shixi)

Date:

Jun. 20, 2019

Check By:

Qin Shuiquan
(Qin Shuiquan)

Date:

Jun. 20, 2019

Approved By:

Wang Fengbing
(Wang Fengbing)

Date:

Jun. 20, 2019



2. GENERAL DESCRIPTION OF EUT

Equipment Type:	Control
Test Model:	kljsq-1001
Additional Model:	kljsq-2001
Trade Mark:	N/A
Applicant:	Huizhou Kunli Electronic Co Ltd
Address:	Xin wu zai villagers group Dongsheng Village Chenjiang Street Huizhou, Guangdong 516229 CHINA
Manufacturer:	Huizhou Kunli Electronic Co Ltd
Address:	Xin wu zai villagers group Dongsheng Village Chenjiang Street Huizhou, Guangdong 516229 CHINA
Hardware version:	V2.0
Software version:	V1.2
Extreme Temp. Tolerance:	-10°C to +65°C
Battery information:	Battery type: dry cell Voltage: 12V
Power supply:	AC 120V 60Hz
Operating Frequency:	303 MHz
Channels:	1
Modulation Type:	FSK
Antenna Type:	Integral Antenna
Antenna gain:	



3. Facilities and Accreditations

All measurement facilities used to collect the measurement data are located at **Building A-B, Baoshi Science & Technology Park, Baoshi Road, Bao'an District, Shenzhen, Guangdong, China of the World Standardization Certification & Testing Group Co., Ltd**

The sites are constructed in conformance with the requirements of ANSI C63.4 and CISPR Publication 22. All receiving equipment conforms to CISPR Publication 16-1, "Radio Interference Measuring Apparatus and Measurement Methods."

Registration Number: 366353

3.1. ACCREDITATIONS

Our laboratories are accredited and approved by the following approval agencies according to ISO/IEC 17025.

USA	NVLAP (The certificate registration number is NVLAP LAB CODE:600142-0)
Japan	VCCI (The certificate registration number is C-4790, R-3684, G-837)
Canada	INDUSTRY CANADA (The certificated registration number is 7700A-1)
China	CNAS (The certificated registration number is L3732)

Copies of granted accreditation certificates are available for downloading from our web site, <http://www.wsct-cert.com>





3.2. TEST DESCRIPTION

3.2.1. MEASUREMENT UNCERTAINTY

The reported uncertainty of measurement $y \pm U$, where expended uncertainty U is based on a standard uncertainty multiplied by a coverage factor of $k=2$, providing a level of confidence of approximately 95 %.

No.	Item	Uncertainty
1	Conducted Emission Test	$\pm 3.2\text{dB}$
2	RF power, conducted	$\pm 0.16\text{dB}$
3	Spurious emissions, conducted	$\pm 0.21\text{dB}$
4	All emissions, radiated(<1G)	$\pm 4.7\text{dB}$
5	All emissions, radiated(>1G)	$\pm 4.7\text{dB}$
6	Temperature	$\pm 0.5^{\circ}\text{C}$
7	Humidity	$\pm 2\%$



3.2.2. DESCRIPTION OF TEST MODES

For Conducted Emission	
Final Test Mode	Description
Mode 1	Receiver working

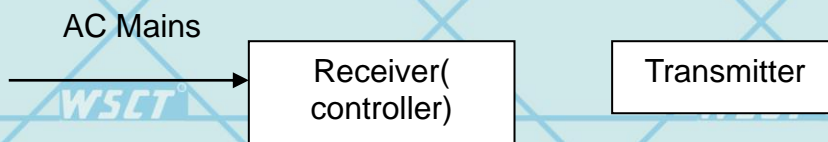
For Radiated Emission	
Final Test Mode	Description
Mode 1	Receiver working
Mode2	Transmitter working

3.2.3. Table of Parameters of Text Software Setting

Test software Version	N/A
-----------------------	-----

Frequency	303MHz
-----------	--------

3.2.4. CONFIGURATION OF SYSTEM UNDER TEST



(EUT:)



3.3. SUMMARY OF TEST RESULTS

Test procedures according to the technical standards:

FCC Part15 (15.231) , Subpart C			
Standard Section	Test Item	Judgment	Remark
15.231	Antenna Requirement	PASS	
15.231	20dB Bandwidth	PASS	
15.35 (c)	Timing of the transmitter (Duty cycle correction factor)	PASS	
15.231(b)	Field strength of fundamental single	PASS	
15.231(b)	Radiated Emissions	PASS	
15.109	Receiver spurious emissions	PASS	
15.107	Conducted limits	PASS	

NOTE:

(1) "N/A" denotes test is not applicable in this test report.



4. MEASUREMENT INSTRUMENTS

NAME OF EQUIPMENT	MANUFACTURER	MODEL	SERIAL NUMBER	Calibration Date	Calibration Due.
EMI Test Receiver	R&S	ESCI	100005	08/19/2018	08/18/2019
LISN	AFJ	LS16	16010222119	08/19/2018	08/18/2019
LISN(EUT)	Mestec	AN3016	04/10040	08/19/2018	08/18/2019
Universal Radio Communication Tester	R&S	CMU 200	1100.0008.02	08/19/2018	08/18/2019
Coaxial cable	Megalon	LMR400	N/A	08/12/2018	08/11/2019
GPIO cable	Megalon	GPIO	N/A	08/12/2018	08/11/2019
Spectrum Analyzer	R&S	FSU	100114	08/19/2018	08/18/2019
Pre Amplifier	H.P.	HP8447E	2945A02715	10/13/2018	10/12/2019
Pre-Amplifier	CDSI	PAP-1G18-38	--	10/13/2018	10/12/2019
Bi-log Antenna	SUNOL Sciences	JB3	A021907	09/13/2018	09/12/2019
9*6*6 Anechoic	--	--	--	08/21/2018	08/20/2019
Horn Antenna	COMPLIANCE ENGINEERING	CE18000	--	09/13/2018	09/12/2019
Horn Antenna	SCHWARZBECK	BBHA9120D	9120D-631	08/23/2018	08/22/2019
Cable	TIME MICROWAVE	LMR-400	N-TYPE04	04/25/2018	04/24/2019
System-Controller	CCS	N/A	N/A	N.C.R	N.C.R
Turn Table	CCS	N/A	N/A	N.C.R	N.C.R
Antenna Tower	CCS	N/A	N/A	N.C.R	N.C.R
RF cable	Murata	MXHQ87WA3000	-	08/21/2018	08/20/2019
Loop Antenna	EMCO	6502	00042960	08/22/2018	08/21/2019
Horn Antenna	SCHWARZBECK	BBHA 9170	1123	08/19/2018	08/18/2019
Power meter	Anritsu	ML2487A	6K00003613	08/23/2018	08/22/2019
Power sensor	Anritsu	MX248XD	--	08/19/2018	08/18/2019



5. EMC EMISSION TEST

5.1 CONDUCTED EMISSION MEASUREMENT

5.1.1 POWER LINE CONDUCTED EMISSION LIMITS (FREQUENCY RANGE 150KHZ-30MHZ)

FREQUENCY (MHz)	Class A (dBuV)		Class B (dBuV)		Standard
	Quasi-peak	Average	Quasi-peak	Average	
0.15 -0.5	79.00	66.00	66 - 56 *	56 - 46 *	FCC
0.50 -5.0	73.00	60.00	56.00	46.00	FCC
5.0 -30.0	73.00	60.00	60.00	50.00	FCC

Note:

- (1) The tighter limit applies at the band edges.
- (2) The limit of " * " marked band means the limitation decreases linearly with the logarithm of the frequency in the range.

The following table is the setting of the receiver

Receiver Parameters	Setting
Attenuation	10 dB
Start Frequency	0.15 MHz
Stop Frequency	30 MHz
IF Bandwidth	9 kHz



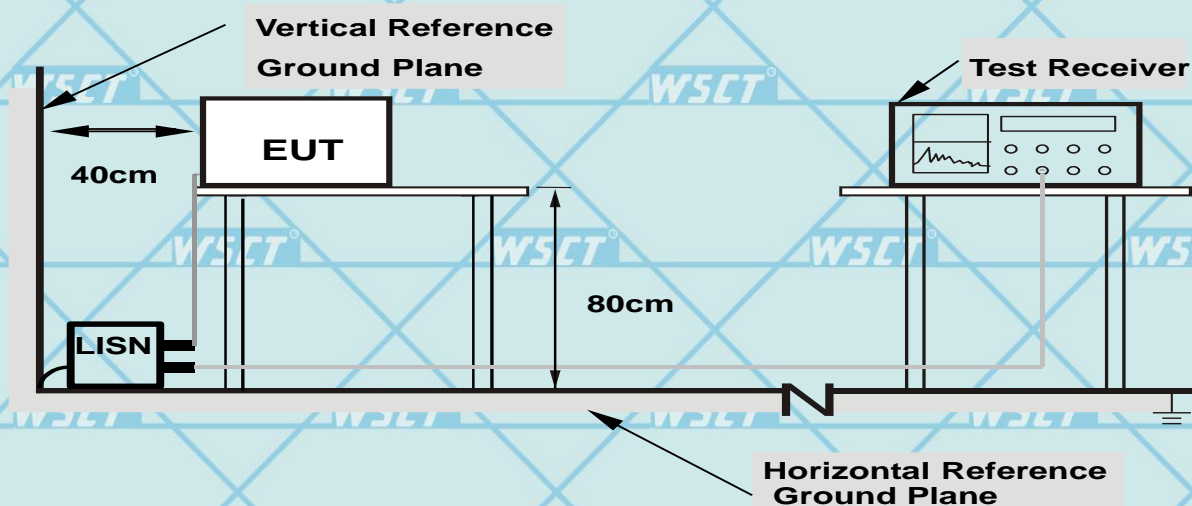
5.1.1. TEST PROCEDURE

- The EUT was placed 0.4 meters from the horizontal ground plane with EUT being connected to the power mains through a line impedance stabilization network (LISN). All other support equipments powered from additional LISN(s). The LISN provide 50 Ohm/ 50uH of coupling impedance for the measuring instrument.
- Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 to 40 cm long.
- I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.
- LISN at least 80 cm from nearest part of EUT chassis.
- For the actual test configuration, please refer to the related Item –EUT Test Photos.

5.1.2. DEVIATION FROM TEST STANDARD

No deviation

5.1.3. TEST SETUP



Note: 1.Support units were connected to second LISN.

2.Both of LISNs (AMN) are 80 cm from EUT and at least 80 from other units and other metal planes



5.1.4. EUT OPERATING CONDITIONS

The EUT was configured for testing in a typical fashion (as a customer would normally use it). The EUT has been programmed to continuously transmit during test. This operating condition was tested and used to collect the included data.

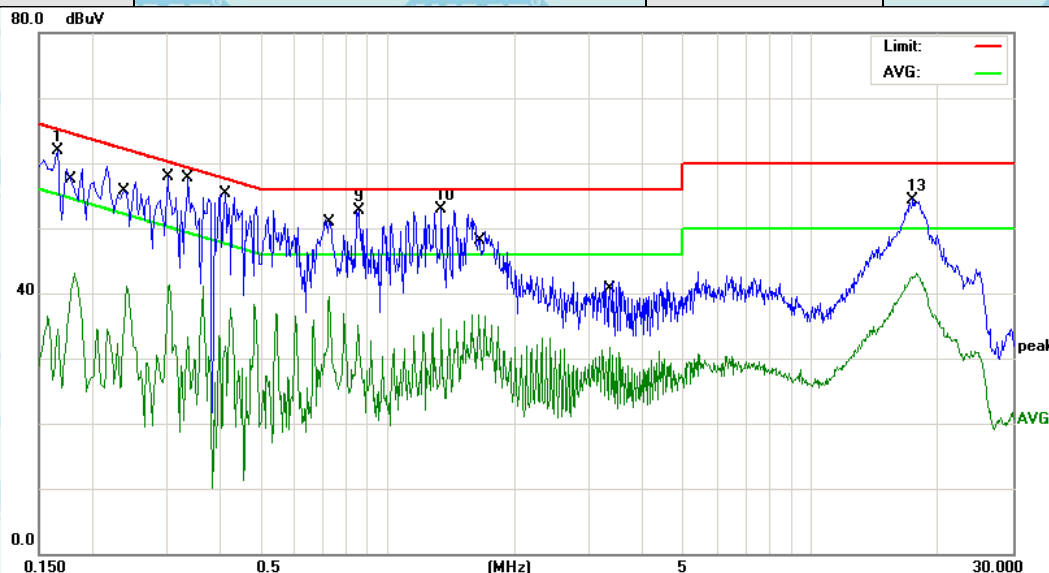




For Question,
Please Contact with WSCT
www.wsct-cert.com

5.1.5. TEST RESULTS

EUT	Control	Model Name	kljsq-1001
Temperature	26 °C	Relative Humidity	54%
Pressure	1010hPa	Phase	L
Voltage	120V/60Hz	Test Mode	Mode 1

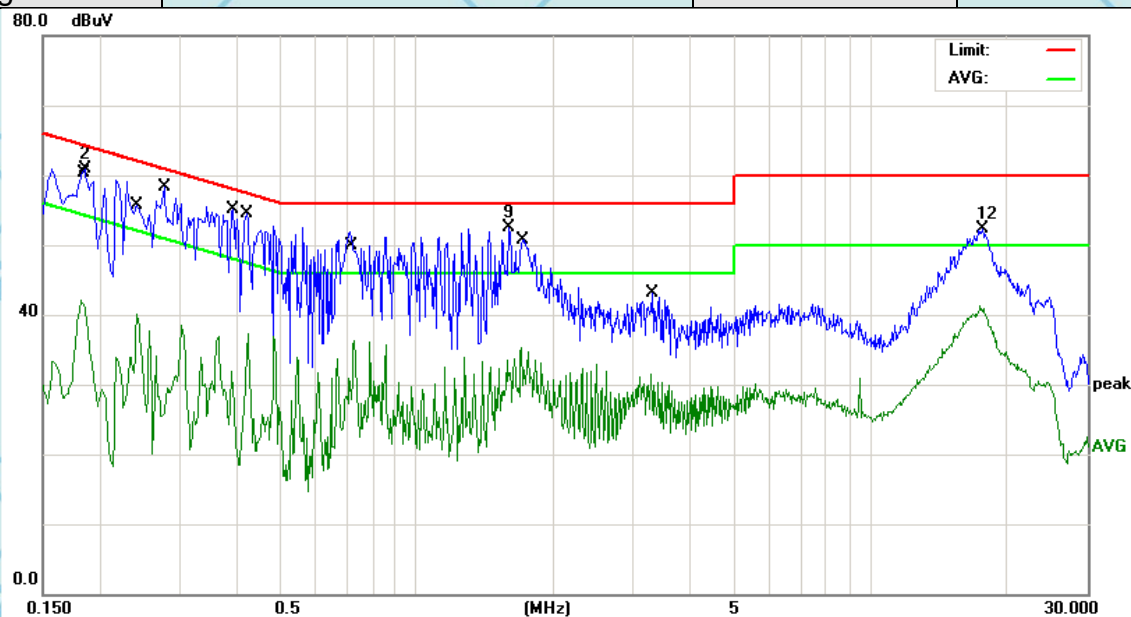


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector
1		0.1660	51.37	10.45	61.82	65.15	-3.33	peak
2		0.1819	32.57	10.45	43.02	54.39	-11.37	AVG
3		0.2420	30.64	10.46	41.10	52.02	-10.92	AVG
4		0.3020	39.22	10.47	49.69	60.19	-10.50	QP
5		0.3060	30.76	10.47	41.23	50.08	-8.85	AVG
6		0.3379	38.76	10.48	49.24	59.25	-10.01	QP
7		0.4140	36.66	10.50	47.16	57.57	-10.41	QP
8		0.7300	29.05	10.53	39.58	46.00	-6.42	AVG
9		0.8540	42.23	10.54	52.77	56.00	-3.23	peak
10	*	1.3380	42.24	10.60	52.84	56.00	-3.16	peak
11		1.6420	26.12	10.65	36.77	46.00	-9.23	AVG
12		3.3460	20.90	10.72	31.62	46.00	-14.38	AVG
13		17.4020	43.27	11.13	54.40	60.00	-5.60	peak

Remark: All the modes have been investigated, and only worst mode is presented in this report.

For Question,
Please Contact with WSCT
www.wsct-cert.com

EUT	Control	Model Name	kljsq-1001
Temperature	26 °C	Relative Humidity	54%
Pressure	1010hPa	Phase	N
Voltage	120V/60Hz	Test Mode	Mode 1



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector
1		0.1819	31.63	10.45	42.08	54.39	-12.31	AVG
2	*	0.1860	50.46	10.45	60.91	64.21	-3.30	peak
3		0.2420	29.73	10.46	40.19	52.02	-11.83	AVG
4		0.2779	36.50	10.47	46.97	60.88	-13.91	QP
5		0.3940	29.31	10.50	39.81	57.98	-18.17	QP
6		0.4220	31.31	10.50	41.81	57.41	-15.60	QP
7		0.4260	26.73	10.50	37.23	47.33	-10.10	AVG
8		0.7300	25.80	10.53	36.33	46.00	-9.67	AVG
9		1.5980	41.93	10.65	52.58	56.00	-3.42	peak
10		1.7020	24.58	10.66	35.24	46.00	-10.76	AVG
11		3.2820	20.86	10.72	31.58	46.00	-14.42	AVG
12		17.6460	41.26	11.12	52.38	60.00	-7.62	peak

Remark: All the modes have been investigated, and only worst mode is presented in this report.



6. RADIATED EMISSION MEASUREMENT

6.1.1. Radiated Emission Limits(Frequency Range 9kHz-1000MHz)

The emissions from an intentional radiator shall not exceed the field strength levels specified in the following table:

Frequency (MHz)	Field strength (microvolts/meter)	Measurement distance (meters)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	30
30-88	100**	3
88-216	150**	3
216-960	200**	3
Above 960	500	3

LIMITS OF RADIATED EMISSION MEASUREMENT (Above 1000MHz)

FREQUENCY (MHz)	Limit (dBuV/m) (at 3M)	
	PEAK	AVERAGE
Above 1000	74	54

Notes:

- (1) The limit for radiated test was performed according to FCC PART 15C.
- (2) The tighter limit applies at the band edges.
- (3) Emission level (dBuV/m)=20log Emission level (uV/m).

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 / 10Hz 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



6.1.2. TEST PROCEDURE

- a. 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.
- b. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter open area test site. The table was rotated 360 degrees to determine the position of the highest radiation.
- c. The height of the equipment or of the substitution antenna shall be 0.8 m; 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.
- d. 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.
- e. 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.
- f. 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

6.1.3. DEVIATION FROM TEST STANDARD

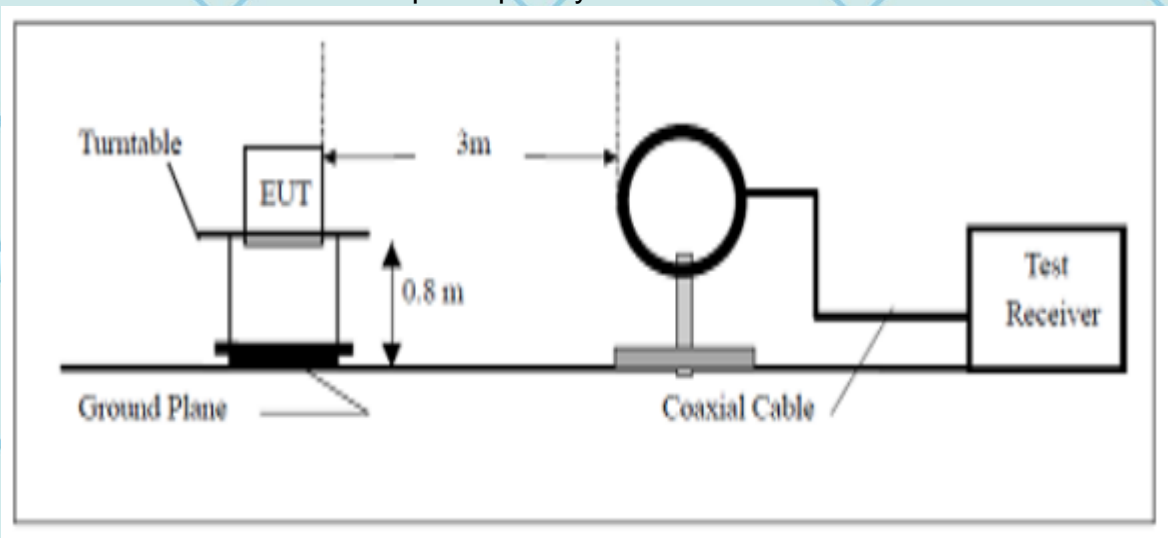
No deviation



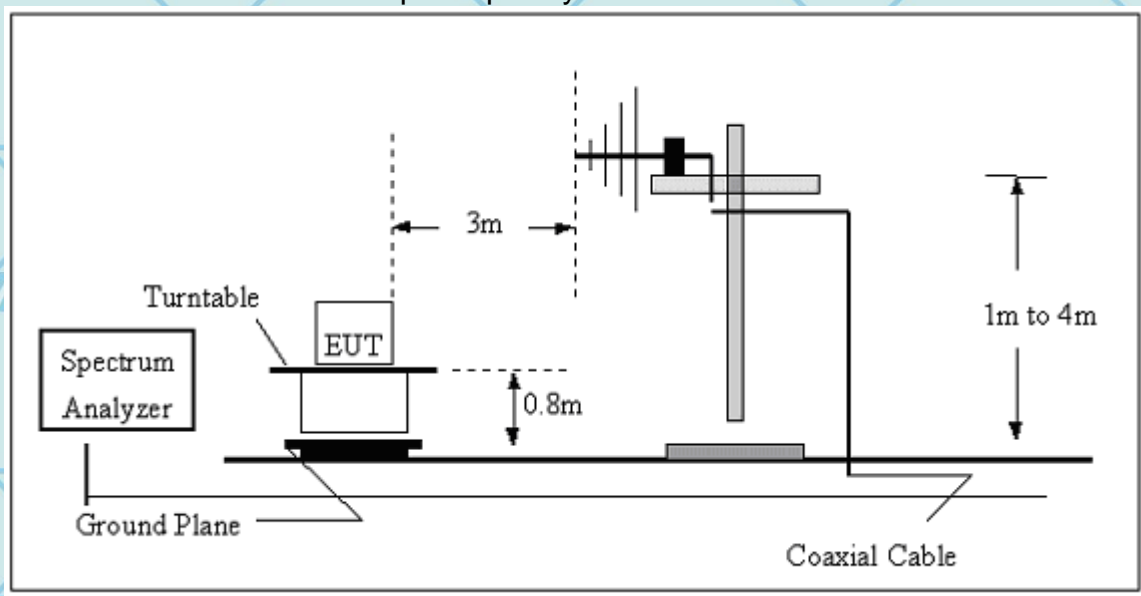


6.1.4. TEST SETUP

(A) Radiated Emission Test-Up Frequency Below 30MHz

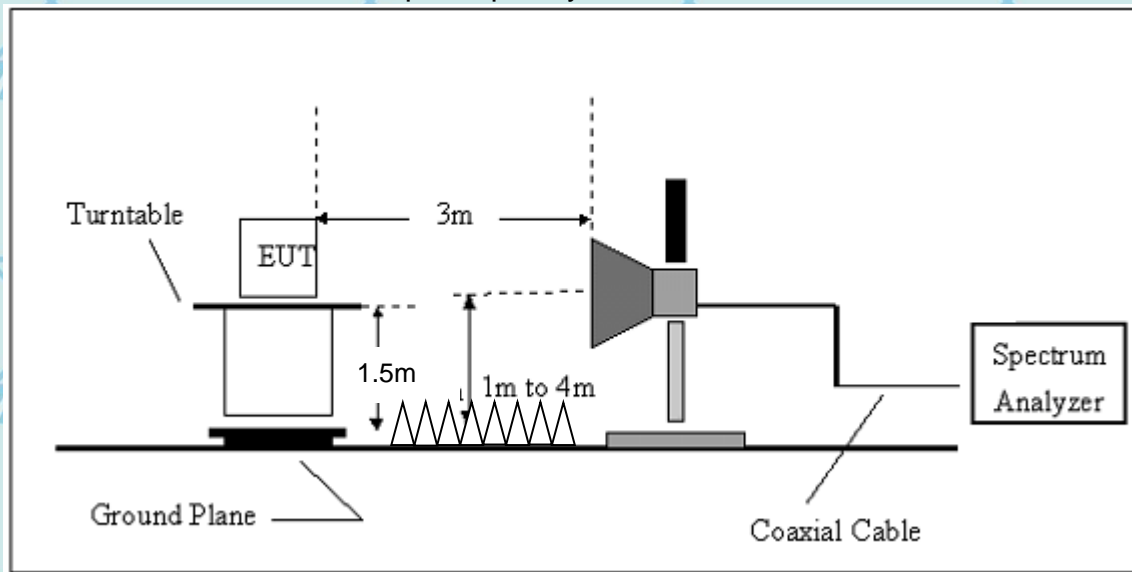


(B) Radiated Emission Test-Up Frequency 30MHz~1GHz





(C) Radiated Emission Test-Up Frequency Above 1GHz



6.1.5. EUT OPERATING CONDITIONS

The EUT tested system was configured as the statements of 2.2 Unless otherwise a special operating condition is specified in the follows during the testing.

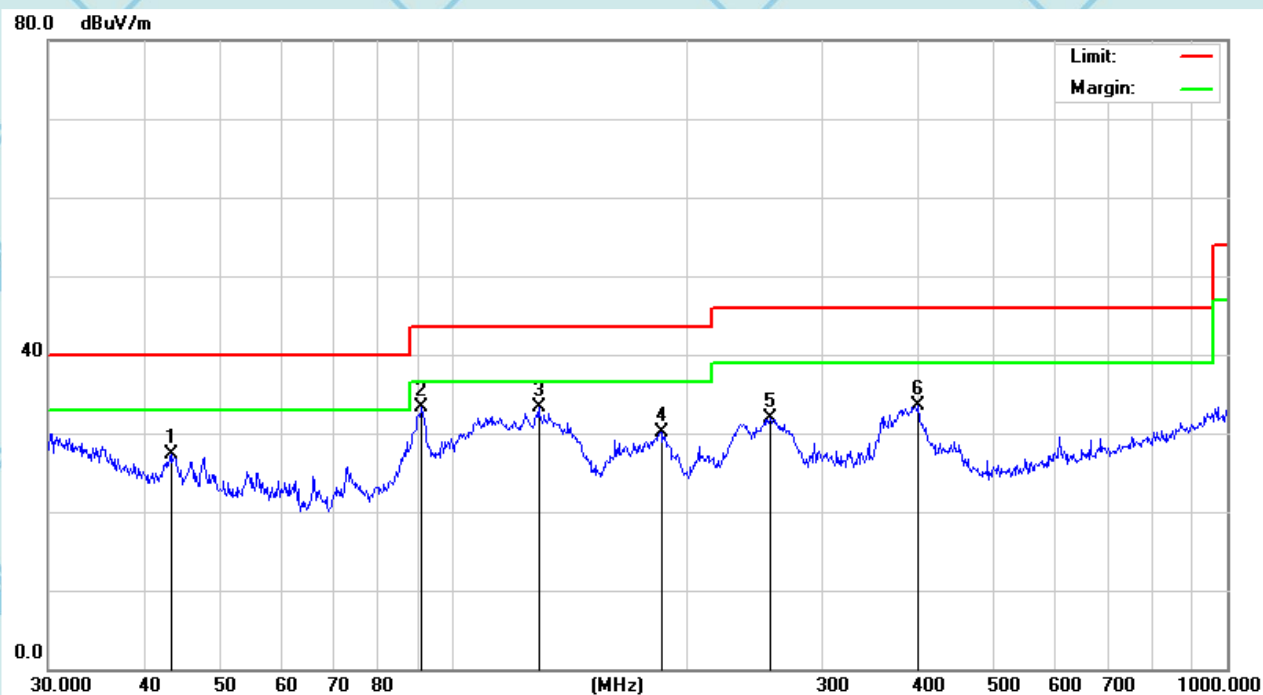


For Question,
Please Contact with WSCT
www.wsct-cert.com

6.2. TEST RESULTS

Radiated Emission Data (Frequency from 30MHz to 1GHz)

EUT	Control	Model Name	kljsq-1001
Temperature	20 °C	Relative Humidity	48%
Pressure	1010 hPa	Polarization :	Horizontal
Test Mode	Mode 1	Test Date	Jun. 05, 2019



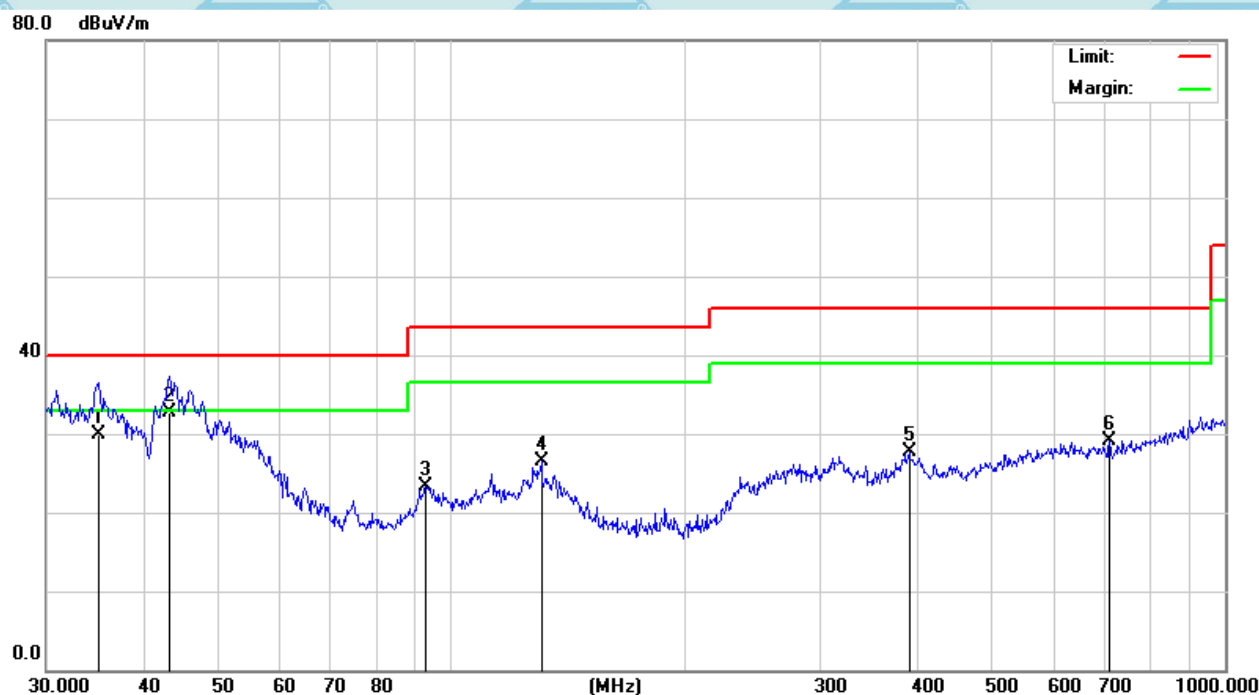
No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector
1		43.2017	28.67	-1.33	27.34	40.00	-12.66	QP
2	*	91.1746	38.88	-5.67	33.21	43.50	-10.29	QP
3		129.0146	36.70	-3.49	33.21	43.50	-10.29	QP
4		185.7882	37.28	-7.12	30.16	43.50	-13.34	QP
5		257.4222	36.28	-4.35	31.93	46.00	-14.07	QP
6		399.0302	34.97	-1.54	33.43	46.00	-12.57	QP

Remark: All the modes have been investigated, and only worst mode is presented in this report.



For Question,
Please Contact with WSCT
www.wsct-cert.com

EUT	Control	Model Name	kljsq-1001
Temperature	20 °C	Relative Humidity	48%
Pressure	1010 hPa	Polarization :	Vertical
Test Mode	Mode 1	Test Date	Jun. 05, 2019



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector
1		34.9262	26.92	2.91	29.83	40.00	-10.17	QP
2	*	43.2148	34.05	-1.34	32.71	40.00	-7.29	QP
3		92.7871	28.57	-5.33	23.24	43.50	-20.26	QP
4		130.8369	30.13	-3.62	26.51	43.50	-16.99	QP
5		390.7226	28.84	-1.11	27.73	46.00	-18.27	QP
6		709.1823	26.74	2.40	29.14	46.00	-16.86	QP

Remark: All the modes have been investigated, and only worst mode is presented in this report.



B. Radiated Emission Data (Frequency above 1GHz)

EUT	Control	Model Name	kljsq-1001
Temperature	20 °C	Relative Humidity	48%
Pressure	1010 hPa	Test Mode	Mode 1
Test Date	Jun. 05, 2019		

Freq. (MHz)	Ant. Pol.	Emission Level(dBuV)		Limit 3m(dBuV/m)		Over(dB)	
		PK	AV	PK	AV	PK	AV
1519.87	V	60.25	39.17	74	54	-13.75	-14.83
2588.89	V	59.37	39.54	74	54	-14.63	-14.46
1670.56	H	59.09	39.87	74	54	-14.91	-14.13
2385.73	H	59.25	40.25	74	54	-14.75	-13.75

Remark:

1.All emissions not reported were more than 20dB below the specified limit or in the noise floor.

Factor = Antenna Factor + Cable Loss – Pre-amplifier.

2.All the x/y/z orientation has been investigated, and only worst case is presented in this report.

3.If average emission measurements are employed, the provisions in §15.35 for averaging pulsed emissions and for limiting peak emissions apply. Therefore:

Emission_AV = Emission_PK +AV Factor

AV Factor=20lg(The duration of one cycle)/(Effective period of the cycle)

According to section 5.3 of this report, the one pulse dwell time is longer than 100ms,so the duty cycle is consider to be 1,AV Factor =0.



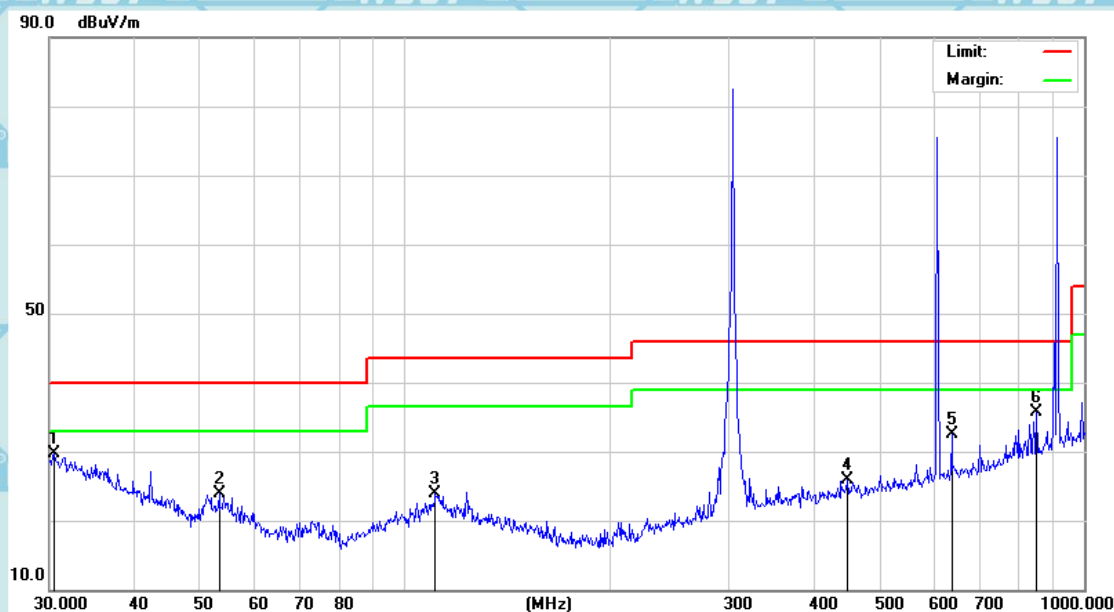


For Question,
Please Contact with WSCT
www.wsct-cert.com

Fundamental and Harmonics:

Operation Mode : mode2 HUMIDITY: 65 % Temperature: 25 °C

H:

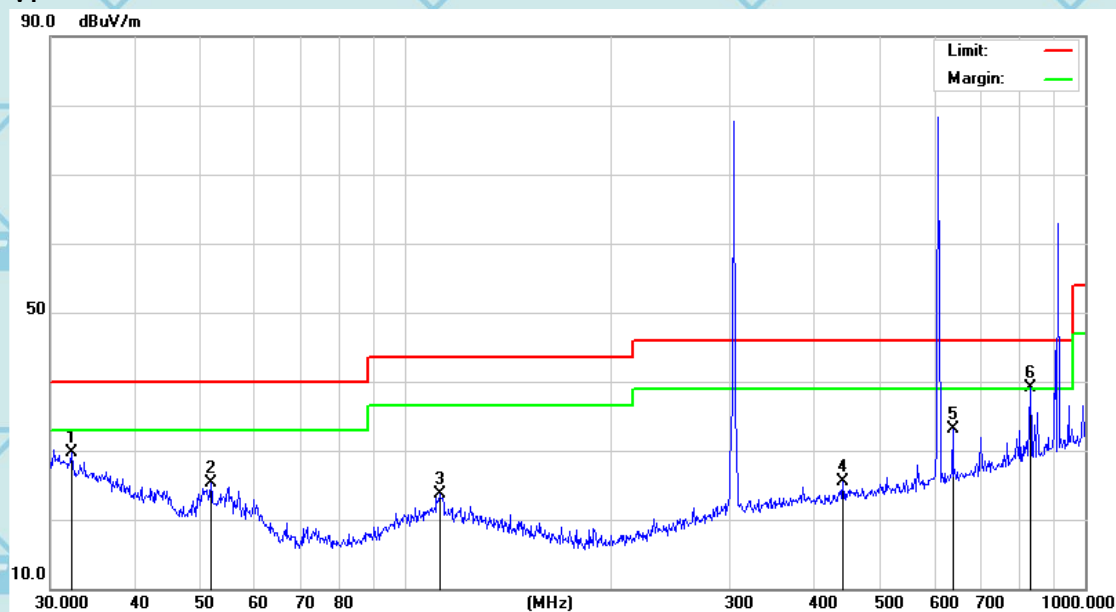


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector
1		30.5304	25.17	4.59	29.76	40.00	-10.24	QP
2		53.3179	29.27	-5.41	23.86	40.00	-16.14	QP
3		110.9569	25.92	-1.96	23.96	43.50	-19.54	QP
4		447.9821	26.61	-0.75	25.86	46.00	-20.14	QP
5		638.3686	31.12	1.40	32.52	46.00	-13.48	QP
6	*	851.0353	31.02	4.75	35.77	46.00	-10.23	QP



For Question,
Please Contact with WSCT
www.wsct-cert.com

V:



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector
1		32.1794	25.67	3.96	29.63	40.00	-10.37	QP
2		51.6613	30.44	-5.22	25.22	40.00	-14.78	QP
3		112.1303	25.70	-2.07	23.63	43.50	-19.87	QP
4		440.1963	25.66	-0.25	25.41	46.00	-20.59	QP
5		638.3686	31.36	1.71	33.07	46.00	-12.93	QP
6	*	830.4002	34.75	4.44	39.19	46.00	-6.81	QP

**Fundamental:****The Field Strength of Radiation Emission Measurement Limits**

Radiation Emission Measurement Limits According to FCC Part 15 Section

15.231(b)

Frequency Range of Fundamental [MHz]	Field Strength of Fundamental Emission [Average] [$\mu\text{V/m}$]	Field Strength of Spurious Emission [Average] [$\mu\text{V/m}$]
40.66-40.70	2250	225
70-130	1250	125
130-174	1250-3750	125-375
174-260	3750	375
260-470	3750-12500	375-1250
Above 470	12500	1250

Where F is the frequency in MHz, the formulas for calculating the maximum permitted fundamental field strengths are as follows: for the band 130-174 MHz, $\mu\text{V/m}$ at 3 meters = $56.81818(F) - 6136.3636$; for the band 260-470 MHz, $\mu\text{V/m}$ at 3 meters = $41.6667(F) - 7083.3333$. The maximum permitted unwanted emission level is 20 dB below the maximum permitted fundamental level.

Frequency (MHz)	Ant Pol H/V	Reading (dBuV) Peak	Factor (dB)	Result @3m (dBuV/m)	Limit @3m (dBuV/m)	Margin (dB)	Detector
303.9	H	61.35	17.45	78.80	94.90	-16.10	Peak
607.8	H	28.95	24.68	53.63	74.90	-21.27	Peak
912.7	H	27.62	28.72	56.34	74.90	-18.56	Peak

Frequency (MHz)	Ant Pol H/V	Reading (dBuV) Peak	Fact or (dB)	Result @3m (dBuV/m)	Limit @3m (dBuV/m)	Margin (dB)	Detector
303.9	V	60.24	17.45	77.69	94.90	-17.21	Peak
607.8	V	29.11	24.68	53.79	74.90	-21.11	Peak
912.7	V	27.96	28.72	56.68	74.90	-18.22	Peak

Result = Reading + Corrected Factor

Where Corrected Factor = Antenna Factor + Cable Loss + High Pass Filter Loss – Amplifier Gain



7. Transmit time

7.1.1. automatically limiting operation LIMITS

§15.35 (c) Unless otherwise specified, e.g., §§15.255(b), and 15.256(l)(5), when the radiated emission limits are expressed in terms of the average value of the emission, and pulsed operation is employed, the measurement field strength shall be determined by averaging over one complete pulse train, including blanking intervals, as long as the pulse train does not exceed 0.1 seconds. As an alternative (provided the transmitter operates for longer than 0.1 seconds) or in cases where the pulse train exceeds 0.1 seconds, the measured field strength shall be determined from the average absolute voltage during a 0.1 second interval during which the field strength is at its maximum value. The exact method of calculating the average field strength shall be submitted with any application for certification or shall be retained in the measurement data file for equipment subject to notification or verification.

Duty cycle of the sample with test mode: 100 %

In normal use the duty cycle is approximately 100% (declared by the manufacturer).

7.1.2. TEST PROCEDURE

The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below.

- Set span to 0 Hz.
- Set RBW = 1kHz.
- Set VBW $\geq 3 \times$ RBW.
- Sweep time = 29S.
- Detector = Peak.

7.1.3. DEVIATION FROM TEST STANDARD

No deviation

7.1.4. TEST SETUP



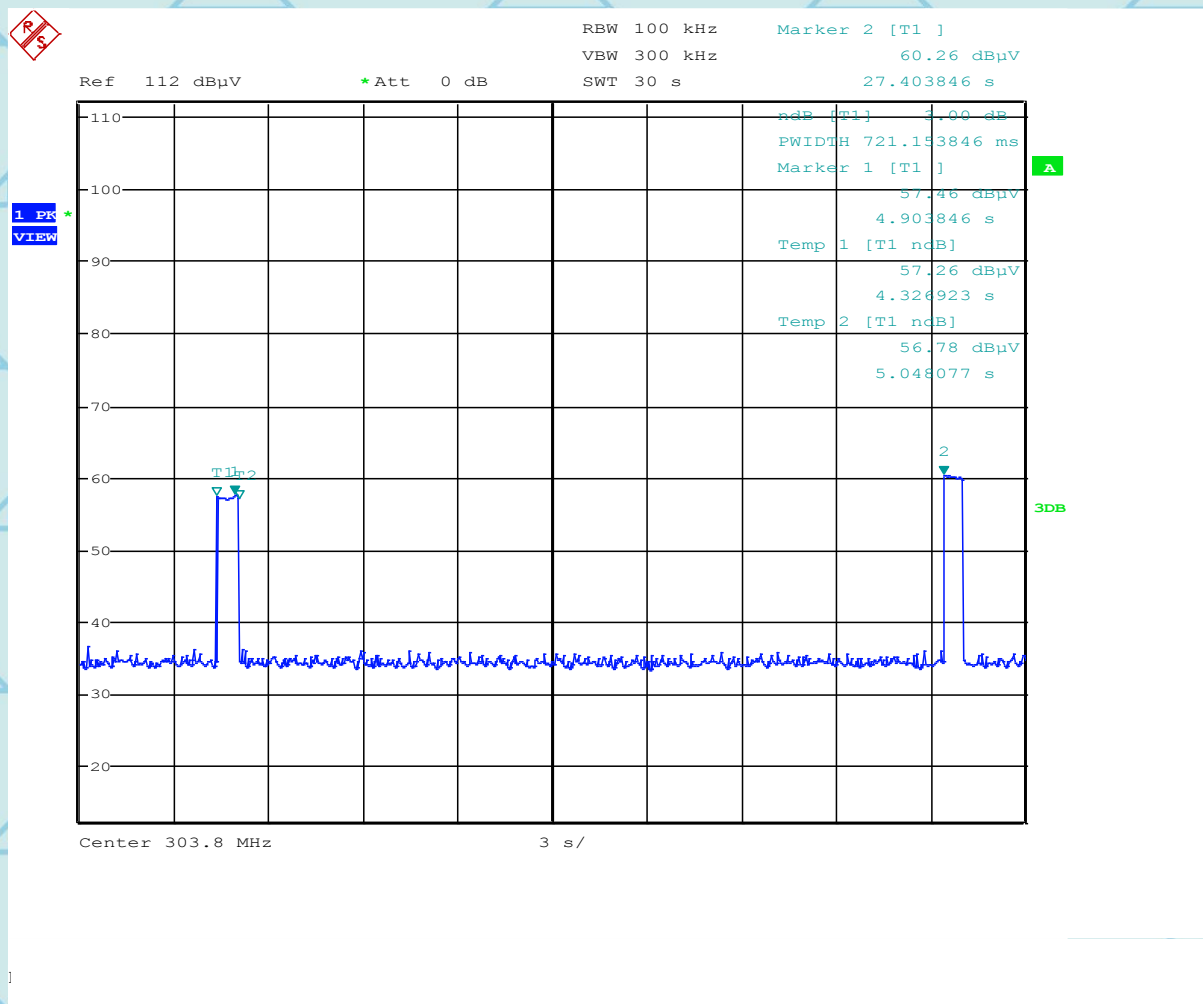
7.1.5. EUT OPERATING CONDITIONS

The EUT was configured for testing in a typical function (as a customer would normally use it). This operating condition was tested and used to collect the included data.



7.1.6. TEST RESULTS

Ton/Toff (s)	Ton/Toff limits(s)	Result
0.721	Ton<1	Pass
27.404	T _{off} >30Ton	Pass





8. OCCUPIED BANDWIDTH

8.1.1. LIMITS OF BAND

The bandwidth of the emission shall be no wider than 0.25% of the center frequency for device operating above 70MHz and below 900MHz.

8.1.2. TEST PROCEDURE

The EUT was placed on a turn table was 0.8meter above ground.

The signal was coupled to the spectrum analyzer through an antenna.

Set SPA RBW:1KHz,VBW:3KHz sweep time :auto

Set SPA trace max hold,then view.

8.1.3. TEST SETUP



8.1.4. TEST RESULT

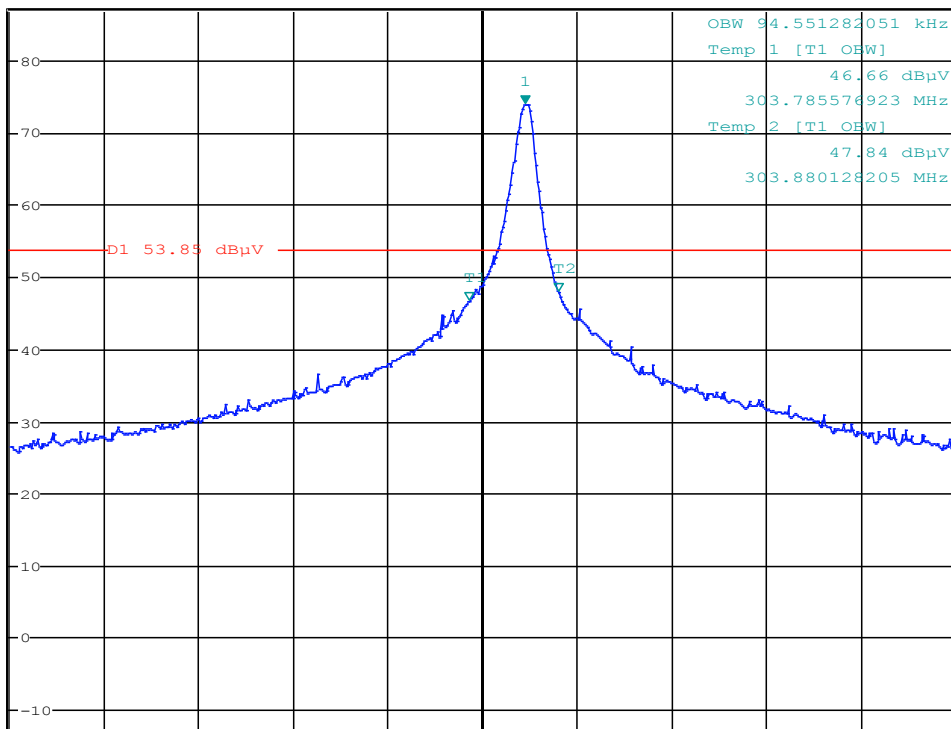
Frequency (kHz)	Occupied Bandwidth (kHz)
20 dB (99%)	94.55kHz

Details please see the following test plots.



Ref 87 dBμV *Att 0 dB *RBW 10 kHz Marker 1 [T1] 73.85 dBμV
*SWT 40 ms 303.844871795 MHz

1 PK
VIEW



Center 303.8 MHz 100 kHz/ Span 1 MHz

Question,
contact with WSCT
wsct-cert.com



世标检测认证股份
World Standardization Certification & Testing Group Co.,Ltd.

ADD: Building A-B Baoshi Science & technology Park, Baoshi Road, Bao'an District, Shenzhen, Guangdong, China
TEL: 86-755-26996143/26996144/26996145/26996192 FAX: 86-755-86376605 E-mail: Fengbing.Wang@wsct-cert.com Http: www.wsct-cert.com

Member of the WSCT INC.



9. ANTENNA REQUIREMENT

9.1 Antenna requirement

The EUT's antenna is met the requirement of FCC part 15C section 15.203.

9.2 Result

The antenna used in this product is an integrated antenna, The antenna's meets the requirement.



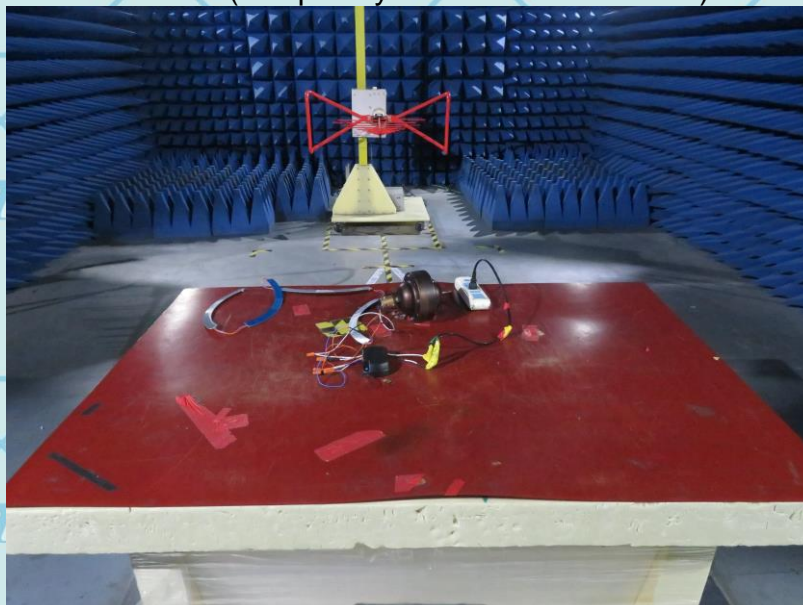


10.EUT TEST PHOTO

CONDUCTED EMISSION TEST



RADIATED EMISSION TEST (Frequency from 30MHz to 1GHz)





RADIATED EMISSION TEST (Frequency above 1GHz)





11. PHOTOGRAPHS OF EUT

Appearance photograph of EUT



Appearance photograph of EUT





Appearance photograph of EUT



Appearance photograph of EUT





Appearance photograph of EUT



Appearance photograph of EUT





Appearance photograph of EUT



Appearance photograph of EUT

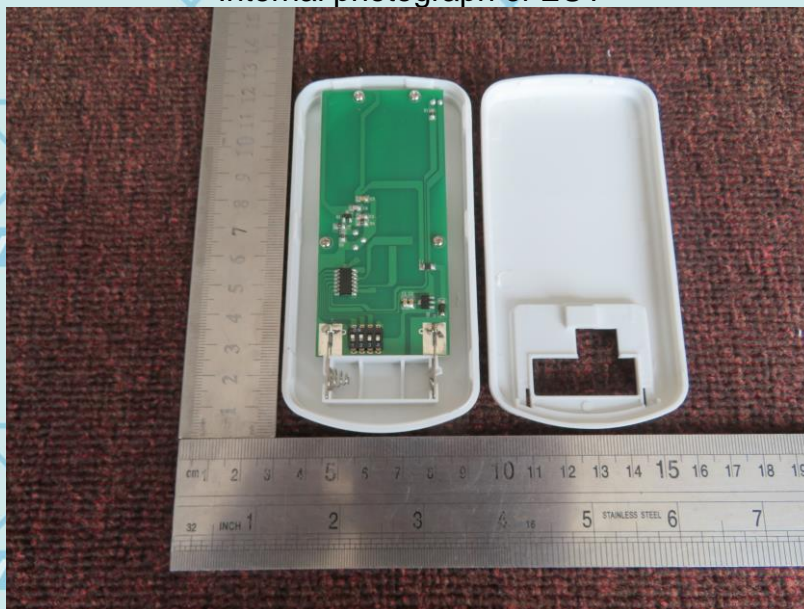




Internal photograph of EUT



Internal photograph of EUT

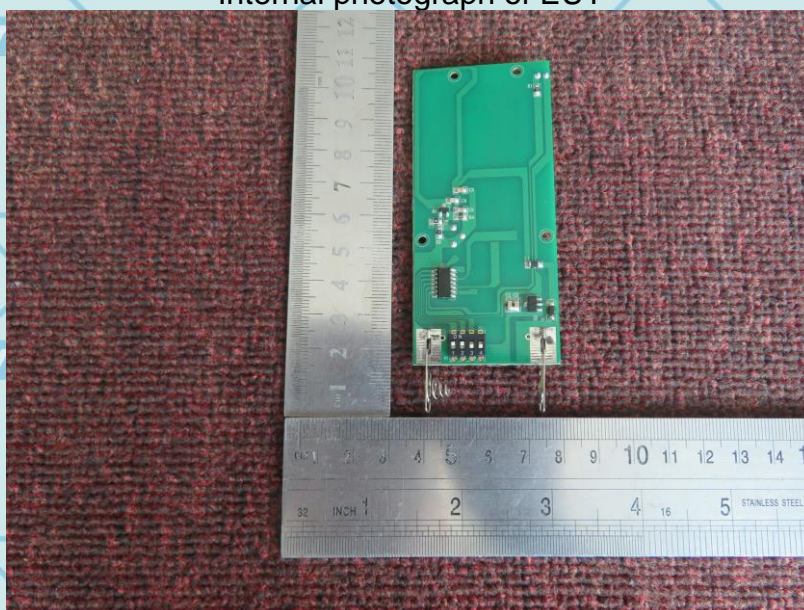




Internal photograph of EUT

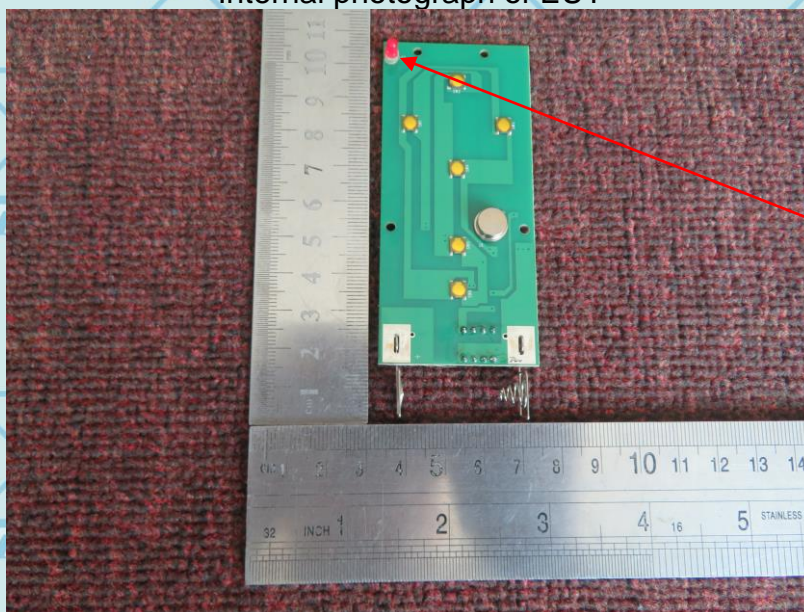


Internal photograph of EUT



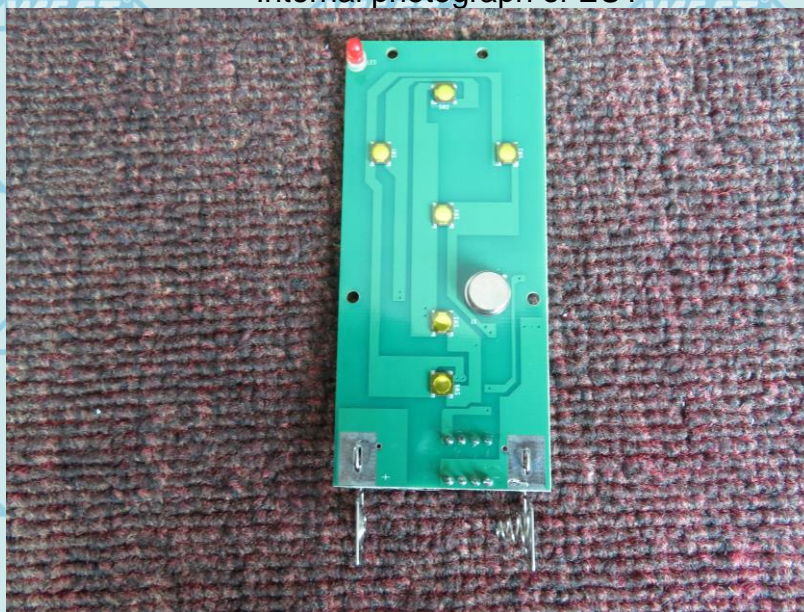


Internal photograph of EUT



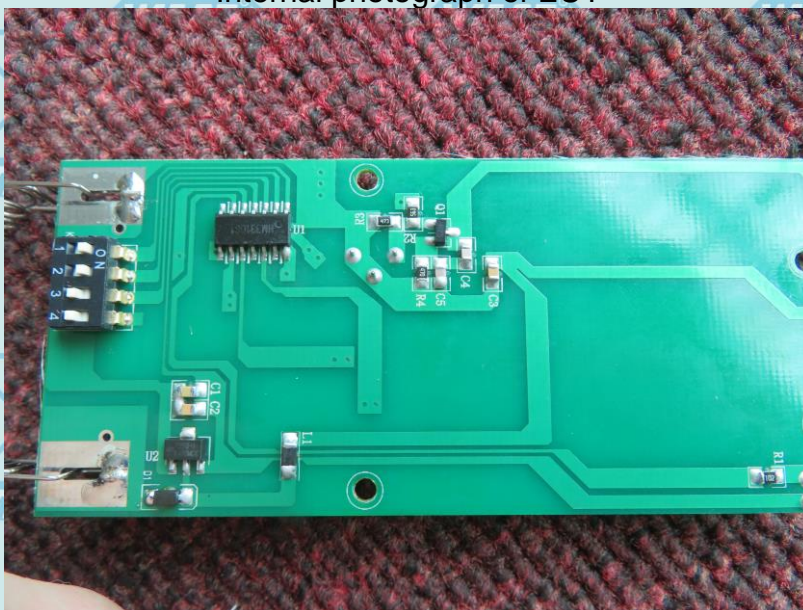
Antenna

Internal photograph of EUT





Internal photograph of EUT



---END OF REPORT---