

FCC PART 15E TEST REPORT FOR CERTIFICATION On Behalf of

KONKA GROUP CO., LTD.

LED TV

Model Number: 32RR683TC

Additional Model: TC-LE32K-AN2401

FCC ID: 2AQX732RR683UN00

Applicant :	KONKA GROUP CO., LTD.
Address:	15-24F, Konka R&D Building, No. 28 Keji South 12th Road,
	Science and Technology Park, Yuehai Subdistrict, Nanshan
	District, Shenzhen, Guangdong ,China
Prepared By:	EST Technology Co., Ltd.
	Chilingxiang, Qishantou, Santun, Houjie, Dongguan,
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Report Number:	ESTE-R2403111-1
Date of Test:	May. 15, 2024 ~ Jun. 11, 2024
Date of Report:	Jun. 21, 2024

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Applicant: Address:	KONKA GROUP CO., LTD. 15-24F, Konka R&D Building, No. 28 Keji South 12th Road, Science and Technology Park, Yuehai Subdistrict, Nanshan District, Shenzhen, Guangdong ,China		
Manufacturer: Address:	KONKA GROUP CO., LTD. 15-24F, Konka R&D Building, No. 28 Keji South 12th Road, Science and Technology Park, Yuehai Subdistrict, Nanshan District, Shenzhen, Guangdong ,China		
Factory: Address:	Dongguan Konka Electronic Co.,Ltd Konka Road, Fenggang Town Dongguan City Guangdong China		
E.U.T:	LED TV		
Model Number:	32RR683TC		
Additional Model:	TC-LE32K-AN2401 Note: They are identical except model name.		
Power Supply:	AC 100-240V, 50/60Hz		
Trade Name:	KONKA, RCA	Serial No.:	-----
Date of Receipt:	May. 15, 2024	Date of Test:	May. 15, 2024 ~ Jun. 11, 2024
Test Specification:	FCC Part 15 Subpart E 15.407 ANSI C63.10:2013 FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01 FCC KDB 662911 D01 Multiple Transmitter Output v02r01		
Test Result:	The device described above is tested by EST Technology Co., Ltd. The measurement results were contained in this test report and EST Technology Co., Ltd. was assumed full responsibility for the accuracy and completeness of these measurements. Also, this report shows that the EUT to be technically compliance with the FCC Rules and Regulations Part 15 Subpart E requirements. This report applies to above tested sample only and shall not be reproduced in part without written approval of EST Technology Co., Ltd. Date: Jun. 21, 2024		

Prepared by:

Reviewed by:

Approved by:

Zephyr Zhu

Zephyr Zhu / Assistant

Seven Wang

Seven Wang / Engineer


Iceman Hu / Manager

Other Aspects: This report base on the previous report with report number: ESTE-R2403111. Add the screen to this report, so just re-tested Conducted Emissions and Radiated Emissions (30-1000Mhz), other test item needn't re-tested.

Abbreviations: OK/P=passed fail/F=failed n.a/N=not applicable E.U.T=equipment under tested

This test report is based on a single evaluation of one sample of above mentioned products ,It is not permitted to be duplicated in extracts without written approval of EST Technology Co., Ltd.

1.GENERAL INFORMATION

1.1.Description of Device (EUT)

FCC ID	:	2AQX732RR683UN00
Product Name	:	LED TV
Model Number	:	32RR683TC
Software Version	:	N/A
Hardware Version	:	N/A
Operation frequency	:	U-NII-1: 5150 MHz~5250 MHz U-NII-2A: 5250 MHz~5350 MHz U-NII-2C: 5470 MHz~5725 MHz U-NII-3: 5725 MHz~5850 MHz
Number of channel	:	U-NII-1: IEEE 802.11a / n HT20 / ac VHT20: 4 Channels; IEEE 802.11n HT40 / ac VHT40: 2 Channels; IEEE 802.11ac VHT80: 1 Channel. U-NII-2A: IEEE 802.11a / n HT20 / ac VHT20: 4 Channels; IEEE 802.11n HT40 / ac VHT40: 2 Channels; IEEE 802.11ac VHT80: 1 Channel. U-NII-2C: IEEE 802.11a / n HT20 / ac VHT20: 11 Channels; IEEE 802.11n HT40 / ac VHT40: 5 Channels; IEEE 802.11ac VHT80: 2 Channel. U-NII-3: IEEE 802.11a / n HT20 / ac VHT20: 5 Channels; IEEE 802.11n HT40 / ac VHT40: 2 Channels; IEEE 802.11ac VHT80: 1 Channel.
Modulation	:	OFDM
Transmit Data Rate	:	IEEE 802.11a: 54, 48, 36, 24, 18, 12, 9, 6Mbps; IEEE 802.11n: up to 300Mbps; IEEE 802.11ac: up to 867Mbps;
Channels Spacing	:	IEEE 802.11a: 20MHz; IEEE 802.11n HT20: 20MHz; IEEE 802.11n HT40: 40MHz; IEEE 802.11ac VHT20: 20MHz; IEEE 802.11ac VHT40: 40MHz; IEEE 802.11ac VHT80: 80MHz;

Transmit Power	:	U-NII-1	IEEE 802.11a: 14.43dBm IEEE 802.11n HT20: 14.42dBm IEEE 802.11n HT40: 14.81dBm IEEE 802.11ac VHT20:15.07 dBm IEEE 802.11ac VHT40: 15.26dBm IEEE 802.11ac VHT80: 15.39dBm
		U-NII-2A	IEEE 802.11a: 15.54dBm IEEE 802.11n HT20: 15.46dBm IEEE 802.11n HT40: 16.09dBm IEEE 802.11ac VHT20: 15.85dBm IEEE 802.11ac VHT40: 16.13dBm IEEE 802.11ac VHT80: 16.75dBm
		U-NII-2C	IEEE 802.11a: 17.28dBm IEEE 802.11n HT20:16.16 dBm IEEE 802.11n HT40: 16.95dBm IEEE 802.11ac VHT20: 16.60dBm IEEE 802.11ac VHT40: 17.56dBm IEEE 802.11ac VHT80: 17.27dBm
		U-NII-3	IEEE 802.11a: 16.24dBm IEEE 802.11n HT20: 15.57dBm IEEE 802.11n HT40: 16.54dBm IEEE 802.11ac VHT20: 15.84dBm IEEE 802.11ac VHT40: 15.59dBm IEEE 802.11ac VHT80: 16.70dBm
Sample Type	:	Prototype production	

Note: For a more detailed features description, please refer to the manufacturer's specifications or the user's manual.

1.2.The antenna information for EUT

Ant No.	Brand	Model Name	Antenna Type	Connector	Gain (dBi)
1	-	-	Internal	-	3.39
2	-	-	Internal	-	3.39

Remark:

(1) The EUT can work as CDD mode in IEEE 802.11n and IEEE 802.11ac, and can operate with one spatial stream.

According to KDB 662911 F 2) f) (i):

$$\text{Directional gain} = 3.39\text{dBi} + 10 \times \log(2/1)\text{dB} = 6.4\text{dBi} > 6\text{dBi}$$

So the output power limit and power spectral density limit need to be reduced 0.4dB.

(2) After pre-test all antenna configurations, the worst case configuration as list below.

(3) The antenna gain is declared by the customer and the laboratory is not responsible for the accuracy of the antenna gain.

(4) The test results of this report only apply to the sample as received.

TX Mode \ ANT No.	SISO Configuration	MIMO Configuration
IEEE 802.11a	ANT 1 and ANT 2	/
IEEE 802.11n HT20	/	ANT1+ANT2
IEEE 802.11n HT40	/	ANT1+ANT2
IEEE 802.11ac VHT20	/	ANT1+ANT2
IEEE 802.11ac VHT40	/	ANT1+ANT2
IEEE 802.11ac VHT80	/	ANT1+ANT2

1.3.Information of RF Cable

Cable Loss(dB)	Provided by
1.0	KONKA GROUP CO., LTD.
Note: 1.The customer declared the loss value of the RF Cable. and the test results of this report only apply to the sample as received. 2.The laboratory is not responsible for the accuracy of the cable loss.	

2.SUMMARY OF TEST

2.1.Summary of test result

No.	Description of Test Item	FCC Standard Section	Results
1	6dB Bandwidth & 26dB Bandwidth & 99% Occupied Bandwidth	15.407(a) 15.407(e)	N/A
2	Maximum Conducted Output Power	15.407(a)	N/A
3	Peak Power Spectral Density	15.407(a)	N/A
4	Unwanted Emissions and Band Edge	15.205 15.209 15.407(b)	PASS
5	Frequency Stability	15.407(g)	N/A
6	AC Power Line Conducted Emissions	15.207 15.407(b)(9)	PASS
7	Antenna Requirement	15.203	N/A

Note:“N/A” denotes test is not applicable in this test report.

2.2.Test Facilities

EMC Lab : Accredited by CNAS, CHINA
Registration No.: L5288
This Accreditation is valid until: November 12, 2029

Recognized by FCC, USA
Designation Number: CN1215
This Recognition is valid until: January 31, 2026

Accredited by A2LA, USA
Registration No.: 4366.01
This Accreditation is valid until: January 31, 2026

Recognized by Industry Canada
CAB identifier No.: CN0035
This Recognition is valid until: January 31, 2026

Recognized by VCCI, Japan
Registration No.:C-14103; T-20073; R-13663;
R-20103; G-20097
Date of registration: Apr. 20, 2020
This Recognition is valid until: Apr. 19, 2026

Recognized by TUV Rheinland, Germany
Registration No.: UA 50413872 0001
Date of registration: July 31, 2018

Recognized by Intertek
Registration No.: 2011-RTL-L2-64
Date of registration: November 08, 2018

Name of Firm : EST Technology Co., Ltd.

Site Location : Chilingxiang, Qishantou, Santun, Houjie, Dongguan,
Guangdong, China

2.3.Measurement uncertainty for EST Technology Co., Ltd.

Test Item	Uncertainty
Uncertainty for Conduction emission test	2.54dB
Uncertainty for spurious emissions test (Below 30MHz)	±1.62 dB
Uncertainty for Radiation Emission test (30MHz-1GHz)	3.62
Uncertainty for Radiation Emission test (1GHz to 18GHz)	4.86
Uncertainty for spurious emissions test (18GHz to 40GHz)	4.67
Uncertainty for radio frequency	7×10^{-8}
Uncertainty for conducted RF Power	1.08dB
Uncertainty for Power density test	0.26dB
Temperature	±0.6°C
Humidity	±4.0 %
Volatage DC	±1.0%
Volatage (AC, <10KHz)	±1.5%

Note: This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

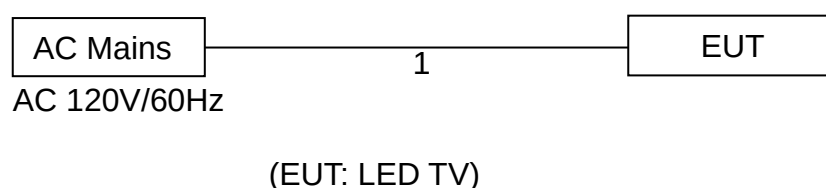
2.4.Assistant equipment used for test

Item	Equipment	Brand	Model Name/Type No.	FCC ID	Series No.
-	-	-	-	-	-

Item	Shielded Type	Ferrite Core	Length	Note
1	NO	NO	1.5m	AC Cable

2.5.Block Diagram

For radiated emissions test: EUT was placed on a turn table, which is 0.8 (or 1.5) meter high above ground.



2.6.Test Mode

Pre-scan has been combined all possible modulations and data rates to determine the worst case test mode,the worst case test mode was selected for the final test as listed below.

Test Item	Test Mode	Channel	Modulation	Data rate
Unwanted Emissions Below 1GHz	IEEE 802.11a	100	OFDM	6Mbps
AC Power Line Conducted Emissions	IEEE 802.11a	100	OFDM	6Mbps

Note: In radiated measurement,the EUT had been pre-scan on the positioned of each 3 axis(X,Y,Z), the worst case was found when positioned on **X-plane**.

2.7.Channel List

Band	Mode	Channel	Frequency (MHz)
U-NII-1	IEEE 802.11a & n HT20 & ac VHT20	36	5180
		40	5200
		44	5220
		48	5240
	IEEE 802.11n HT40 & ac VHT40	38	5190
		46	5230
U-NII-2A	IEEE 802.11a & n HT20 & ac VHT20	42	5210
		52	5260
		56	5280
		60	5300
	IEEE 802.11n HT40 & ac VHT40	64	5320
		54	5270
U-NII-2C	IEEE 802.11a & n HT20 & ac VHT20	62	5310
		58	5290
		100	5500
		104	5520
		108	5540
		112	5560
		116	5580
		120	5600
		124	5620
		128	5640
		132	5660
		136	5680
	IEEE 802.11n HT40 & ac VHT40	140	5700
		102	5510
		110	5550
		118	5590
	IEEE 802.11ac VHT80	126	5630
		134	5670
U-NII-3	IEEE 802.11a & n HT20 & ac VHT20	106	5530
		122	5610
		149	5745
		153	5765
		157	5785
	IEEE 802.11n HT40 & ac VHT40	161	5805
		165	5825
		151	5755
	IEEE 802.11ac VHT80	159	5795
		155	5775

2.8.Power Setting of Test Software

Software Name	MPTool		
U-NII-1			
Frequency(MHz)	5180	5200	5240
IEEE 802.11a Setting	70,70	70,70	70,70
IEEE 802.11n HT20 Setting	65,65	65,65	65,65
IEEE 802.11ac VHT20 Setting	65,65	65,65	65,65
Frequency(MHz)	5190	5230	
IEEE 802.11n HT40 Setting	65,65	65,65	
IEEE 802.11ac VHT40 Setting	65,65	65,65	
Frequency(MHz)	5210		
IEEE 802.11ac VHT80 Setting	65,65		
U-NII-2A			
Frequency(MHz)	5260	5300	5320
IEEE 802.11a Setting	70,70	70,70	70,70
IEEE 802.11n HT20 Setting	65,65	65,65	65,65
IEEE 802.11ac VHT20 Setting	65,65	65,65	65,65
Frequency(MHz)	5270	5310	
IEEE 802.11n HT40 Setting	65,65	65,65	
IEEE 802.11ac VHT40 Setting	65,65	65,65	
Frequency(MHz)	5290		
IEEE 802.11ac VHT80 Setting	65,65		
U-NII-2C			
Frequency(MHz)	5500	5580	5700
IEEE 802.11a Setting	70,70	70,70	70,70
IEEE 802.11n HT20 Setting	65,65	65,65	65,65
IEEE 802.11ac VHT20 Setting	65,65	65,65	65,65
Frequency(MHz)	5510	5590	5670
IEEE 802.11n HT40 Setting	65,65	65,65	65,65
IEEE 802.11ac VHT40 Setting	65,65	65,65	65,65
Frequency(MHz)	5530	5610	
IEEE 802.11ac VHT80 Setting	65,65	65,65	

U-NII-3			
Frequency(MHz)	5745	5785	5825
IEEE 802.11a Setting	70,70	70,70	70,70
IEEE 802.11n HT20 Setting	65,65	65,65	65,65
IEEE 802.11ac VHT20 Setting	65,65	65,65	65,65
Frequency(MHz)	5755	5795	
IEEE 802.11n HT40 Setting	65,65	65,65	
IEEE 802.11ac VHT40 Setting	65,65	65,65	
Frequency(MHz)	5775		
IEEE 802.11ac VHT80 Setting	65,65		

Note: This information is provided by the applicant.

2.9. Test Equipment List

For AC power conducted emissions test						
Equipment	Manufacturer	Model No.	Serial No.	Calibration Body	Last Cal.	Next Cal.
EMI Test Receiver	Rohde & Schwarz	ESHS30	EST-E001	LISAI	June 12,23	1 Year
Artificial Mains Network	Rohde & Schwarz	ENV216	EST-E002	LISAI	June 12,23	1 Year
Pulse Limiter	Rohde & Schwarz	ESH3-Z2	EST-E078	LISAI	June 12,23	1 Year
Test Software	Audix	e3-6.111221a	N/A	N/A	N/A	N/A

For radiated emissions test(9KHz-30MHz)						
Equipment	Manufacturer	Model No.	Serial No.	Calibration Body	Last Cal.	Next Cal.
EMI Test Receiver	Rohde & Schwarz	ESR7	EST-E047	LISAI	June 12,23	1 Year
Active Loop Antenna	SCHWAREBECK	FMZB 1519B	EST-E054	LISAI	June 12,23	1 Year
Test Software	Audix	e3-6.111221a	N/A	N/A	N/A	N/A
9kHz-30MHz Cable	N/A	EST-001	N/A	N/A	N/A	N/A

For radiated emissions test(30MHz-1000MHz)						
Equipment	Manufacturer	Model No.	Serial No.	Calibration Body	Last Cal.	Next Cal.
EMI Test Receiver	Rohde & Schwarz	ESR7	EST-E047	LISAI	June 12,23	1 Year
Bilog Antenna	Teseq	CBL 6111D	EST-E034	LISAI	June 12,23	1 Year
Test Software	Audix	e3-6.111221a	N/A	N/A	N/A	N/A
30-1000MHz Cable	N/A	EST-002	N/A	N/A	N/A	N/A

3.UNWANTED EMISSIONS AND BAND EDGE

3.1.Limit

The maximum emissions outside of the frequency bands of operation shall be attenuated in accordance with the following limits:

- (1) For transmitters operating in the 5.15-5.25 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.
- (2) For transmitters operating in the 5.25-5.35 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.
- (3) For transmitters operating in the 5.47-5.725 GHz band: All emissions outside of the 5.47-5.725 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.
- (4) For transmitters operating in the 5.725-5.85 GHz band: All emissions shall be limited to a level of -27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.

The unwanted emissions which fall in Restricted bands shall not exceed the field strength levels specified in the following table:

15.209 Radiated emission limits

Frequency (MHz)	Field Strength(μ V/m)	Distance(m)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30	30	30
30-88	100	3
88-216	150	3
216-960	200	3
Above 960	500	3

15.205 Restricted frequency band

MHz	MHz	MHz	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	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)

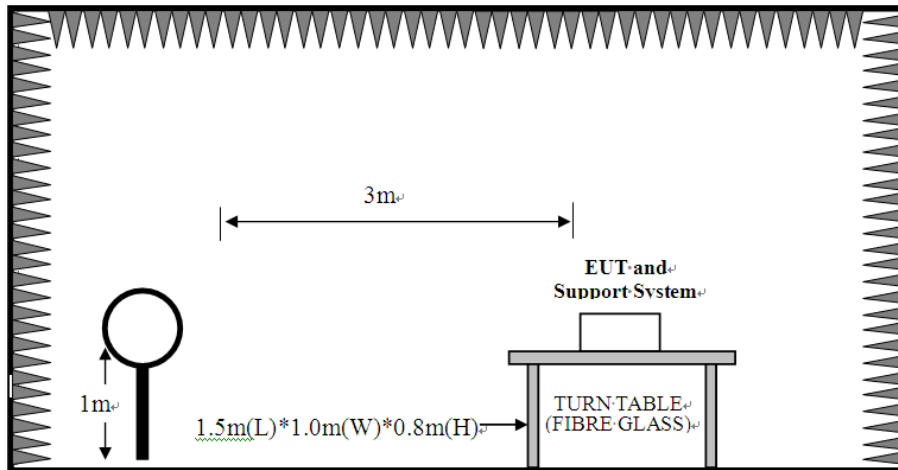
Note:

1. $\text{dB}\mu\text{V}/\text{m} = 20\text{Log}(\mu\text{V}/\text{m})$
2. Above 1GHz the formula is used to convert the EIRP to field strength

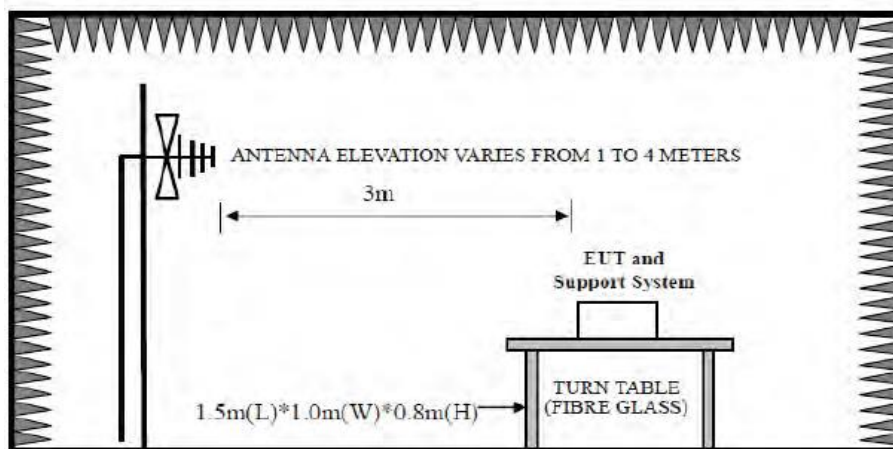
$$E[\text{dB}\mu\text{V}/\text{m}] = \text{EIRP}[\text{dBm}] - 20 \log (d[\text{m}]) + 104.77,$$
 where E is field strength and d is distance at which the field strength limit is specified in the applicable requirements.
 for example, $3\text{m field strength}(\text{dB}\mu\text{V}/\text{m}) = \text{EIRP} - 20\log(3) + 104.77 = \text{EIRP} + 95.2$

3.2.Test Setup

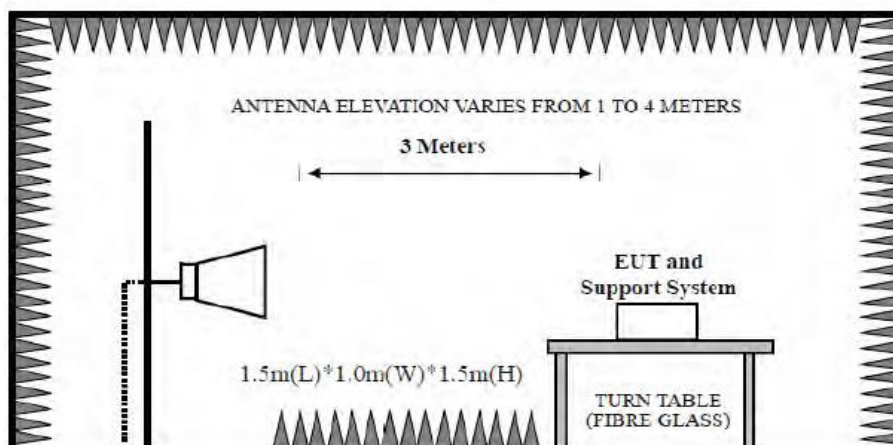
9kHz~30MHz



30~1000MHz



Above 1GHz



3.3.Spectrum Analyzer Setting

For 9KHz-150KHz

Spectrum Parameters	Setting
RBW	300Hz(for Peak&AVG)/CISPR 200Hz(for QP)
VBW	300Hz(for Peak&AVG)/CISPR 200Hz(for QP)
Start frequency	9KHz
Stop frequency	150KHz
Sweep Time	Auto
Detector	PEAK/QP/AVG
Trace Mode	Max Hold

Note : For 9KHz-90KHz&110KHz-150KHz,the detector is average,other frequency is CISPR QP detector.

For 150KHz-30MHz

Spectrum Parameters	Setting
RBW	9KHz
VBW	9KHz
Start frequency	150KHz
Stop frequency	30MHz
Sweep Time	Auto
Detector	QP
Trace Mode	Max Hold

Note : For 150KHz-490KHz,the detector is average,other frequency is CISPR QP detector.

For 30MHz-1GHz

Spectrum Parameters	Setting
RBW	120KHz
VBW	300KHz
Start frequency	30MHz
Stop frequency	1GHz
Sweep Time	Auto
Detector	QP
Trace Mode	Max Hold

For Above 1GHz

Spectrum Parameters	Setting	
RBW	1MHz	
VBW	PEAK Measurement	AVG Measurement
	3MHz	Duty cycle≥98%,VBW=10Hz Duty cycle<98%,VBW≥1/T Video bandwidth mode=RMS (power averaging)
Start frequency	1GHz	
Stop frequency	40GHz	
Sweep Time	Auto	

Detector	PEAK
Trace Mode	Max Hold

Note : T is the on-time time of the duty cycle,when EUT transmit continuously with maximum output power,unit is seconds. reference section 2.7 for the on-time time.

3.4.Test Procedure

- EUT was placed on a turn table, which is 0.8 meter high above ground for below 1GHz test, and which is 1.5 meter high above ground for above 1GHz test.
- EUT is set 3 meters away from the receiving antenna, which is mounted on a antenna tower.
- Set the EUT transmit continuously with maximum output power.
- The turn table can rotate 360 degrees to determine the position of the maximum emission level.
- The antenna can be moved up and down between 1 meter and 4 meters to find out the maximum emission level. Both horizontal and vertical polarization of the antenna are set on test.
- Spectrum analyzer setting parameters in accordance with section 6.3.
- Repeat above procedures until all channels were measured.
- Record the results in the test report.
- IEEE 802.11a, IEEE 802.11n HT20, IEEE 802.11n HT40, IEEE 802.11ac VHT20, IEEE 802.11ac VHT40, IEEE 802.11ac VHT80 all have been tested, only worst case 802.11n HT20 is recorded. The antenna 1 test data is recorded in report.

3.5.Test Result

Radiated Emissions Below 1GHz

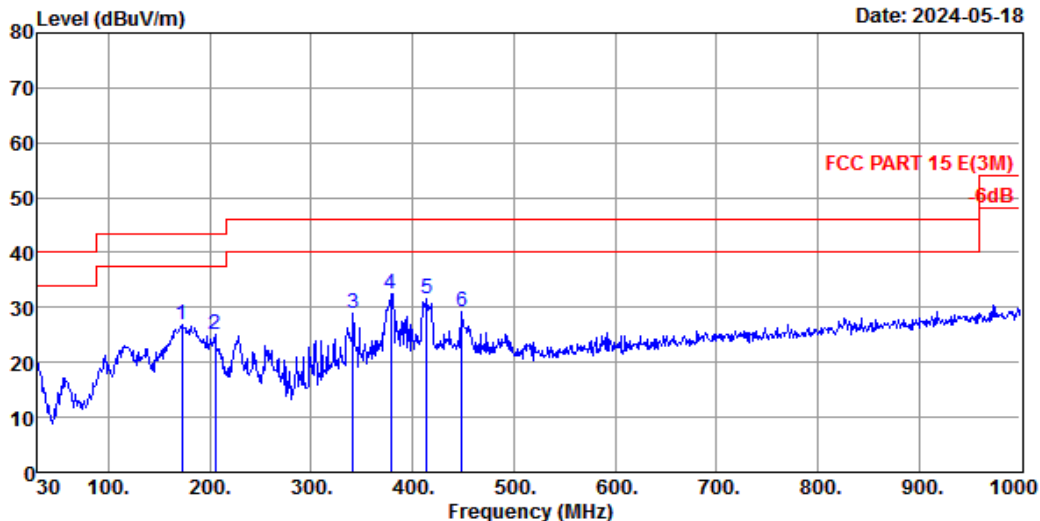
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Data: 23

File: \\EMC-966-2\test data\2024\RF\K\KONKA\32RR683TC.EM6 (24)

Date: 2024-05-18



Site no. : 2# 966 chamber Data no. : 23
Dis. / Ant. : 3m 47018 Ant. pol. : HORIZONTAL
Limit : FCC PART 15 E(3M)
Env. / Ins. : Temp:22℃;Humi:49%;Press:101.52kPa
Engineer : LST
EUT : LED TV
Power : AC 120V/50Hz
M/N : 32RR683TC
Test Mode : TX Mode

	Freq. (MHz)	ANT Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	172.59	10.06	1.60	15.26	26.92	43.50	16.58	QP
2	205.57	9.02	1.76	14.17	24.95	43.50	18.55	QP
3	341.37	15.06	2.42	11.45	28.93	46.00	17.07	QP
4	378.23	16.08	2.53	13.96	32.57	46.00	13.43	QP
5	414.12	16.76	2.63	12.21	31.60	46.00	14.40	QP
6	449.04	17.29	2.75	9.32	29.36	46.00	16.64	QP

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
2. Margin= Limit - Emission Level.
3. The emission levels that are 20dB below the official limit are not reported.

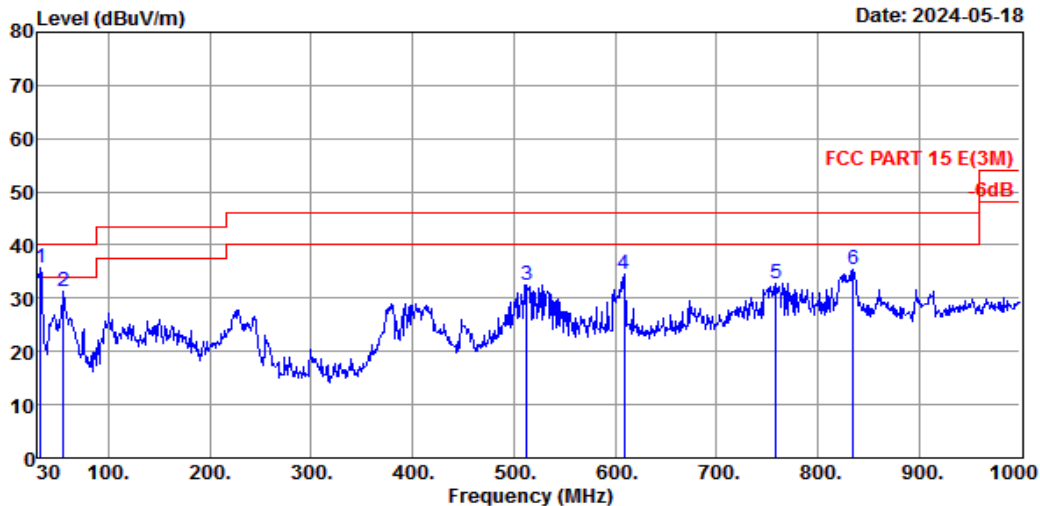
EST Technology

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Data: 24

File: \\EMC-966-2\\test data\\2024\\RF\\K\\KONKA\\32RR683TC.EM6 (24)

Date: 2024-05-18



Site no. : 2# 966 chamber Data no. : 24
Dis. / Ant. : 3m 47018 Ant. pol. : VERTICAL
Limit : FCC PART 15 E(3M)
Env. / Ins. : Temp:22℃;Humi:49%;Press:101.52kPa
Engineer : LST
EUT : LED TV
Power : AC 120V/50Hz
M/N : 32RR683TC
Test Mode : TX Mode

	Freq. (MHz)	ANT Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	32.91	16.45	0.60	18.61	35.66	40.00	4.34	QP
2	55.22	6.45	0.85	23.93	31.23	40.00	8.77	QP
3	513.06	18.83	2.97	10.73	32.53	46.00	13.47	QP
4	609.09	20.58	3.33	10.61	34.52	46.00	11.48	QP
5	758.47	22.55	3.77	6.49	32.81	46.00	13.19	QP
6	835.10	23.75	4.01	7.62	35.38	46.00	10.62	QP

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
2. Margin= Limit - Emission Level.
3. The emission levels that are 20dB below the official limit are not reported.

Note:

1. The amplitude of 9KHz to 30MHz spurious emission that is attenuated by more than 20dB below the permissible limit has no need to be reported.
2. All channels had been pre-test, only the worst case was reported.

4.AC POWER LINE CONDUCTED EMISSIONS

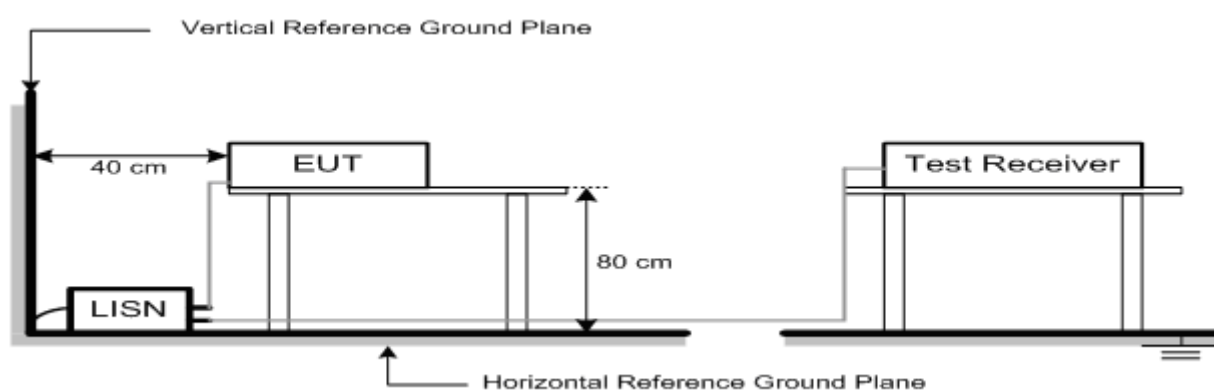
4.1.Limit

Frequency			Maximum RF Line Voltage	
			Quasi-Peak Level dB(μ V)	Average Level dB(μ V)
150kHz	~	500kHz	66 ~ 56*	56 ~ 46*
500kHz	~	5MHz	56	46
5MHz	~	30MHz	60	50

Notes:

1. * Decreasing linearly with logarithm of frequency.
2. The lower limit shall apply at the transition frequencies.

4.2.Test Setup



4.3.Spectrum Analyzer Setting

Spectrum Parameters	Setting
RBW	9KHz
VBW	9KHz
Start frequency	150KHz
Stop frequency	30MHz
Sweep Time	Auto
Detector	QP/AVG
Trace Mode	Max Hold

4.4.Test Procedure

- a. The EUT was placed on a non-metallic table, 80cm above the ground plane.
- b. The EUT Power connected to the power mains through a line impedance stabilization network.
- c. Provides a 50 ohm coupling impedance for the EUT (Please refer the block diagram of the test setup and photographs).
- d. Set the EUT transmit continuously with maximum output power.
- e. Spectrum analyzer setting parameters in accordance with section 8.3.
- f. The AC line are checked to find out the maximum conducted emission. In order to find the maximum emission levels, the relative positions of equipment and all of the interface cables shall be changed according to ANSI C63.10: 2013 on Conducted Emission Test.
- g. Record the results in the test report.

4.5.Test Result

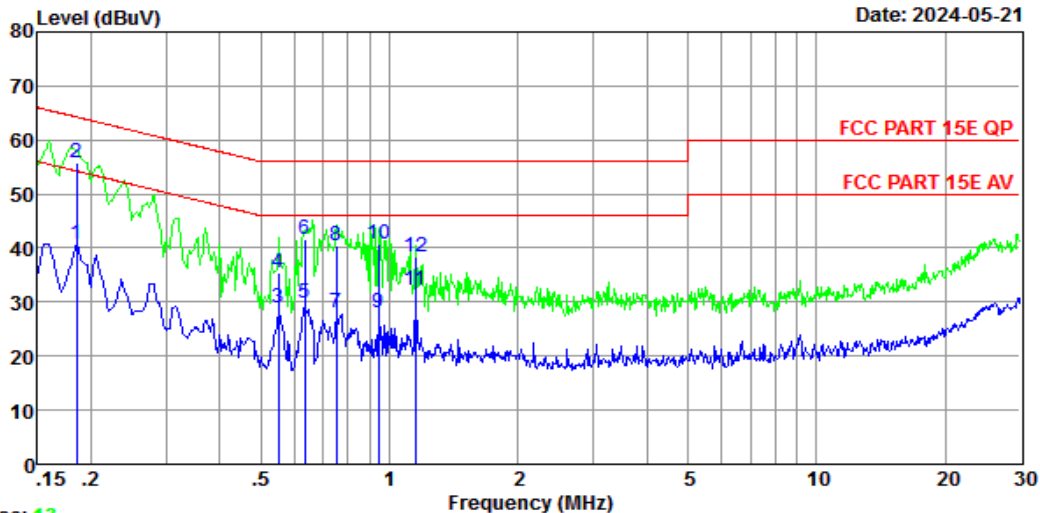
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Data: 14

File: \\EMC-CE-2\\Test Data\\2024\\RF\\K\\Konka\\32RR683TC(5.15).EM6 (32)

Date: 2024-05-21



Trace: 13

Site no : 2#CE Shield Room Data no. : 14
Env. / Ins. : Temp:22.8℃ Humi:49% Press:101.40kPa LINE Phase : LINE
Limit : FCC PART 15E QP
Engineer : ZSX
EUT : LED TV
Power : AC 120V/60Hz
M/N : 32RR683TC
Test Mode : TX Mode

	Freq. (MHz)	LISN Factor (db)	Cable Loss (db)	Reading dBuV)	Emission Level (dBuV)	Limits (dBuV)	Margin (dB)	Remark
1	0.19	10.16	9.93	20.60	40.69	54.24	13.55	Average
2	0.19	10.16	9.93	35.63	55.72	64.24	8.52	QP
3	0.55	10.06	9.95	8.91	28.92	46.00	17.08	Average
4	0.55	10.06	9.95	15.33	35.34	56.00	20.66	QP
5	0.63	10.04	9.98	9.85	29.87	46.00	16.13	Average
6	0.63	10.04	9.98	21.63	41.65	56.00	14.35	QP
7	0.75	10.01	10.00	8.09	28.10	46.00	17.90	Average
8	0.75	10.01	10.00	20.53	40.54	56.00	15.46	QP
9	0.94	9.98	10.04	8.06	28.08	46.00	17.92	Average
10	0.94	9.98	10.04	20.63	40.65	56.00	15.35	QP
11	1.15	9.97	10.04	12.21	32.22	46.00	13.78	Average
12	1.15	9.97	10.04	18.23	38.24	56.00	17.76	QP

Remarks: 1. Emission Level= LISN Factor + Cable Loss + Reading.
2. Margin= Limit - Emission Level.
3. If the average limit is met when using a quasi-peak detector,
the EUT shall be deemed to meet both limits and measurement
with average detector is unnecessary.

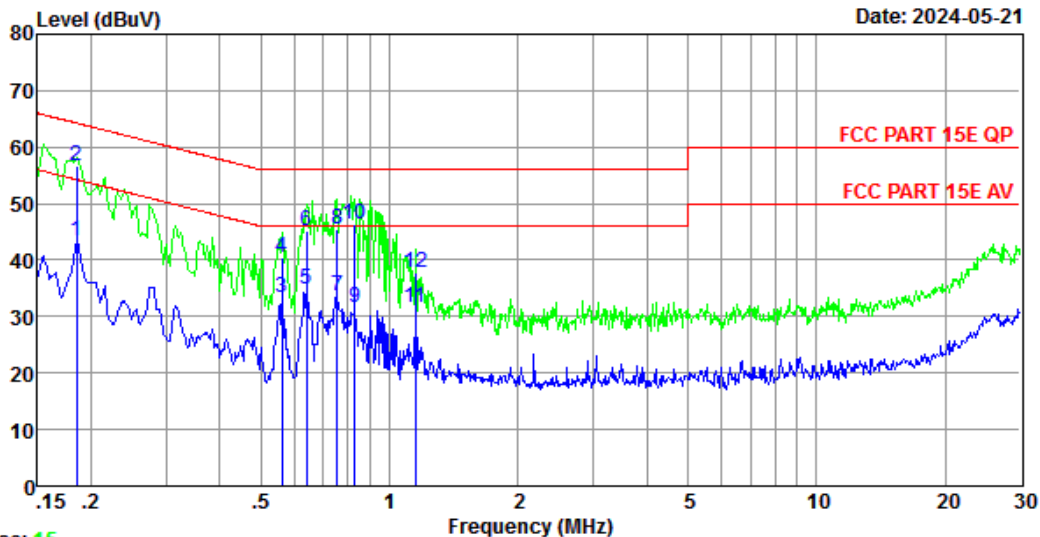
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Data: 16

File: \\EMC-CE-2\Test Data\2024\RF\K\Konka\32RR683TC(5.15).EM6 (32)

Date: 2024-05-21



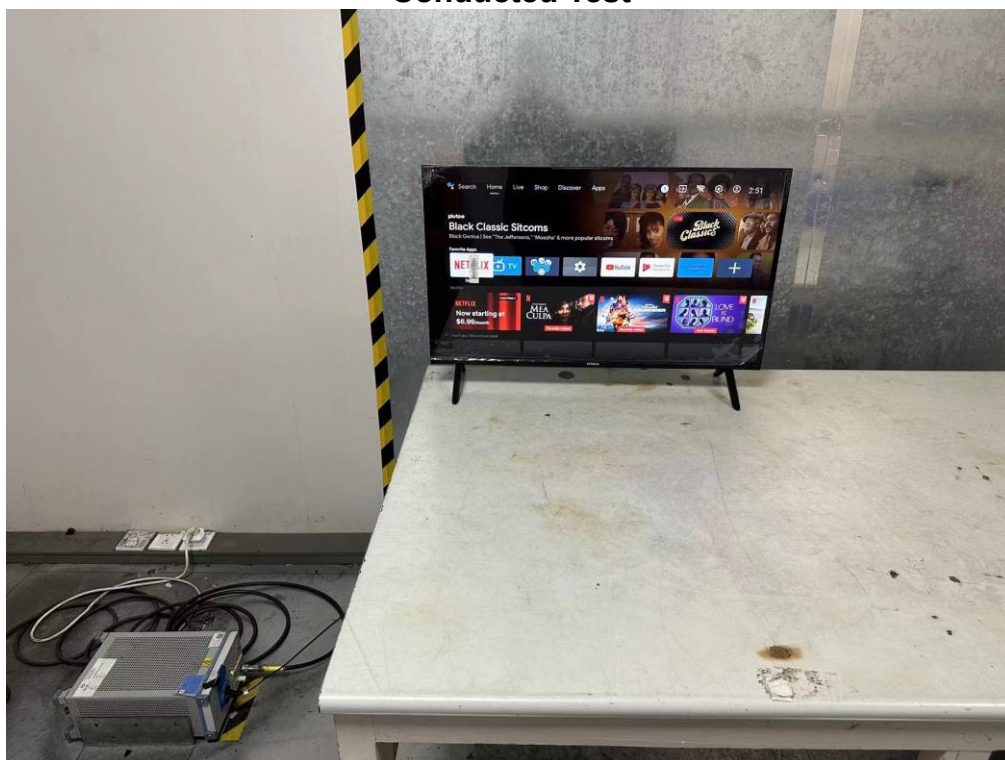
Site no : 2#CE Shield Room Data no. : 16
Env. / Ins. : Temp:22.8℃ Humi:49% Press:101.40kPa LINE Phase : NEUTRAL
Limit : FCC PART 15E QP
Engineer : ZSX
EUT : LED TV
Power : AC 120V/60Hz
M/N : 32RR683TC
Test Mode : TX Mode

	Freq. (MHz)	LISN Factor (db)	Cable Loss (db)	Reading dBuV)	Emission Level (dBuV)	Limits (dBuV)	Margin (dB)	Remark
1	0.19	10.14	9.93	23.36	43.43	54.24	10.81	Average
2	0.19	10.14	9.93	36.53	56.60	64.24	7.64	QP
3	0.56	9.99	9.95	13.54	33.48	46.00	12.52	Average
4	0.56	9.99	9.95	20.53	40.47	56.00	15.53	QP
5	0.64	10.01	9.98	14.87	34.86	46.00	11.14	Average
6	0.64	10.01	9.98	25.31	45.30	56.00	10.70	QP
7	0.75	10.01	10.00	13.62	33.63	46.00	12.37	Average
8	0.75	10.01	10.00	25.52	45.53	56.00	10.47	QP
9	0.83	10.01	10.01	11.66	31.68	46.00	14.32	Average
10	0.83	10.01	10.01	26.32	46.34	56.00	9.66	QP
11	1.15	9.99	10.04	11.61	31.64	46.00	14.36	Average
12	1.15	9.99	10.04	17.64	37.67	56.00	18.33	QP

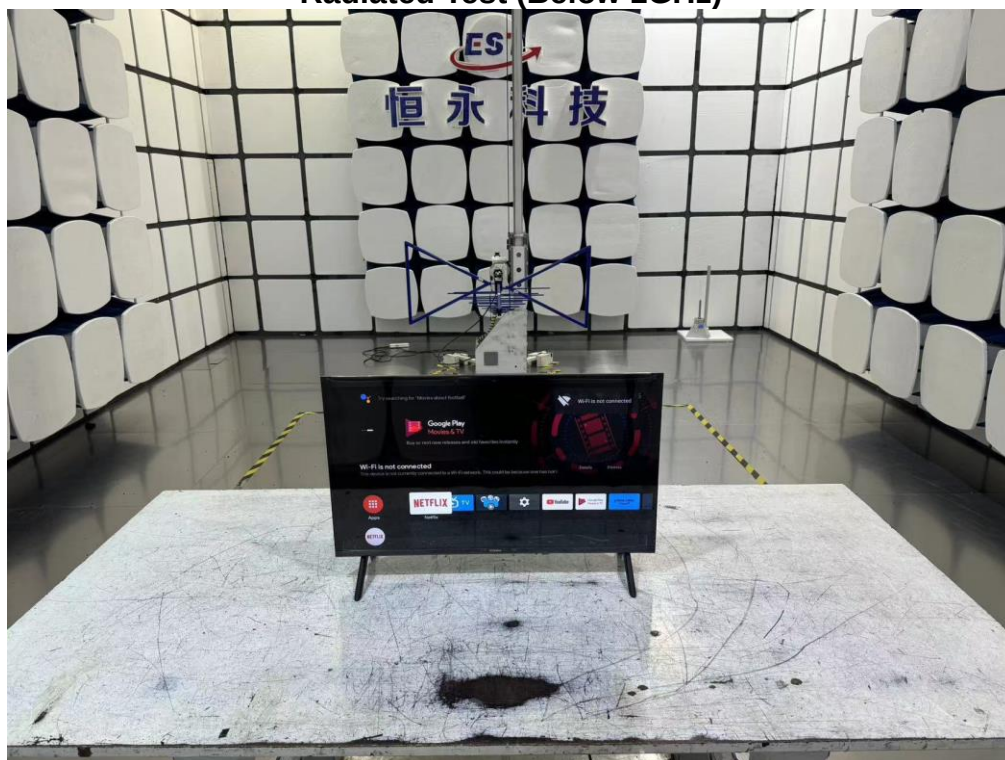
Remarks: 1. Emission Level= LISN Factor + Cable Loss + Reading.
2. Margin= Limit - Emission Level.
3. If the average limit is met when using a quasi-peak detector,
the EUT shall be deemed to meet both limits and measurement
with average detector is unnecessary.

5. TEST SETUP PHOTO

Conducted Test



Radiated Test (Below 1GHz)



6.EUT PHOTO

External Photos M/N: 32RR683TC



External Photos
M/N: 32RR683TC



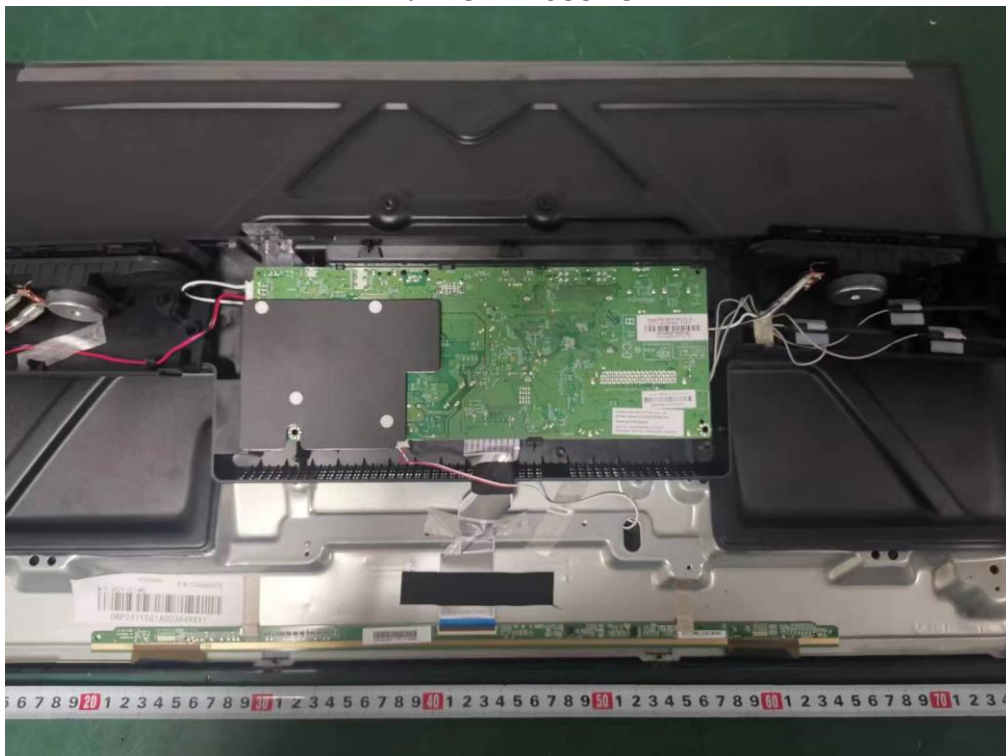
External Photos
M/N: 32RR683TC



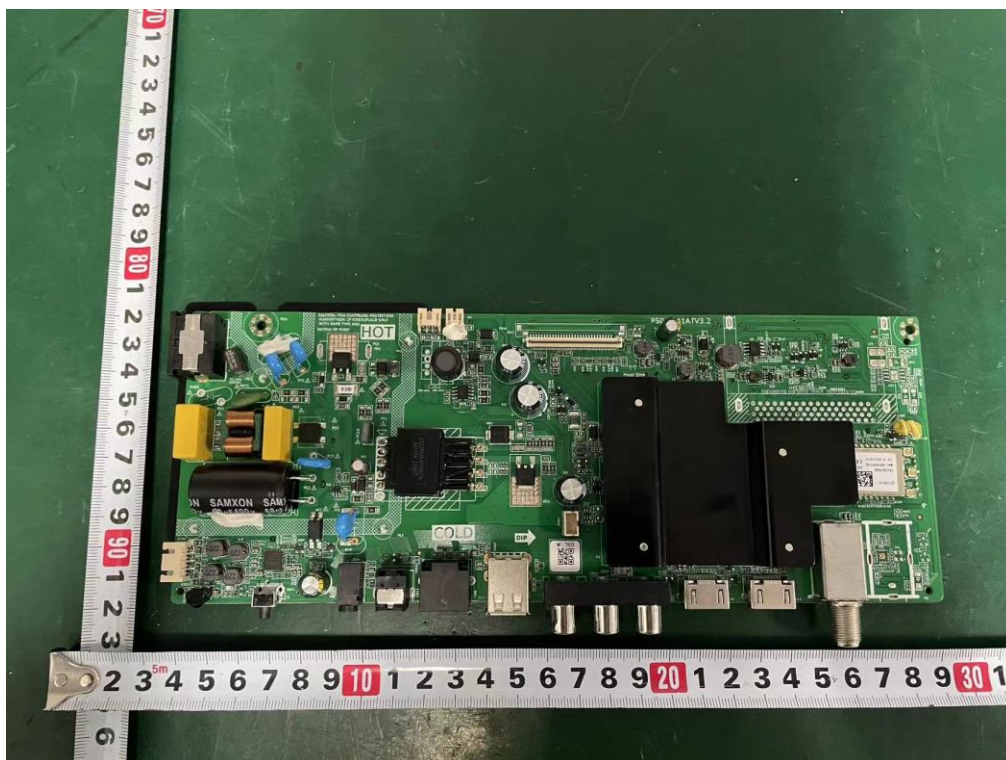
Internal Photos
M/N: 32RR683TC



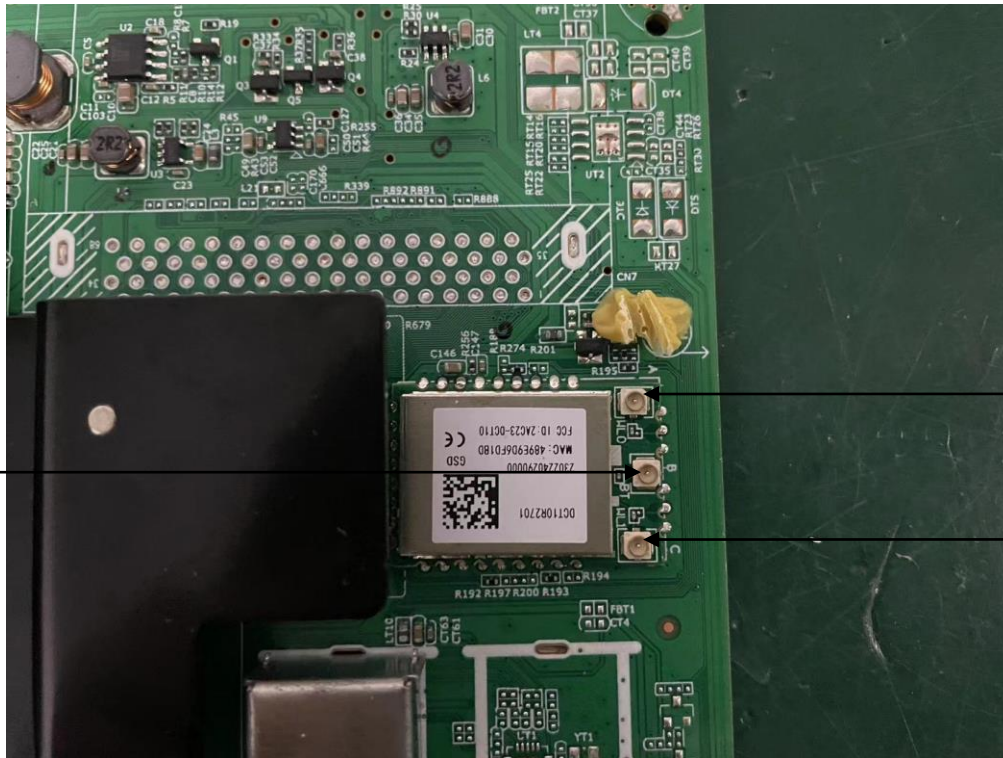
Internal Photos M/N: 32RR683TC



Screen No.: HV320WHB-F70



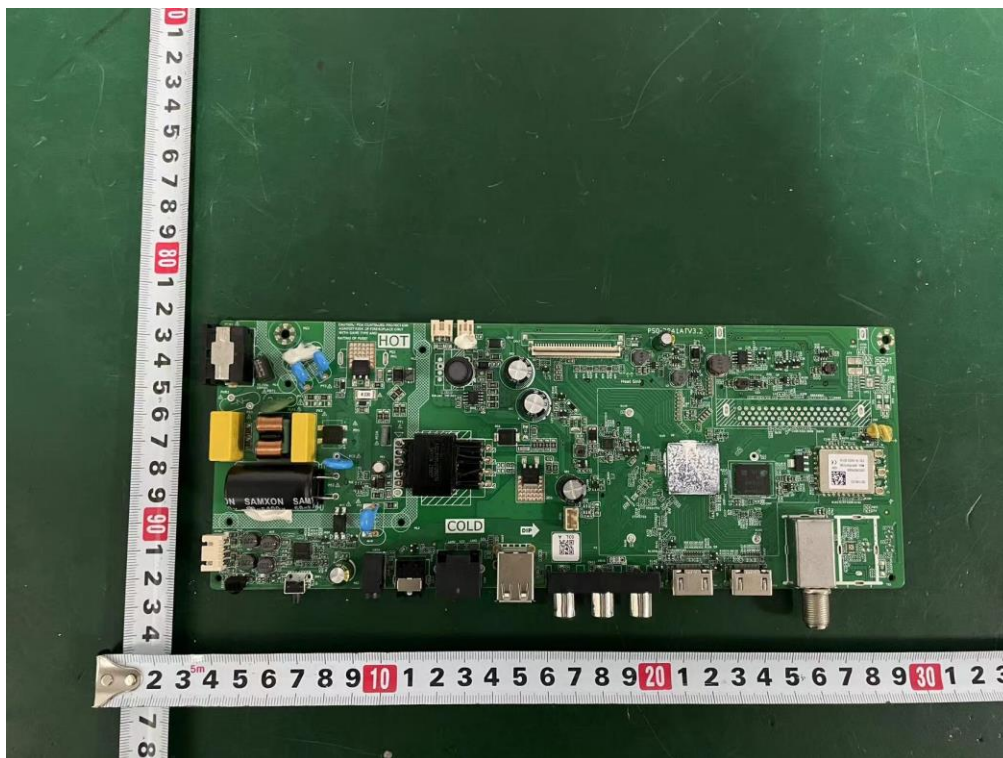
Internal Photos M/N: 32RR683TC



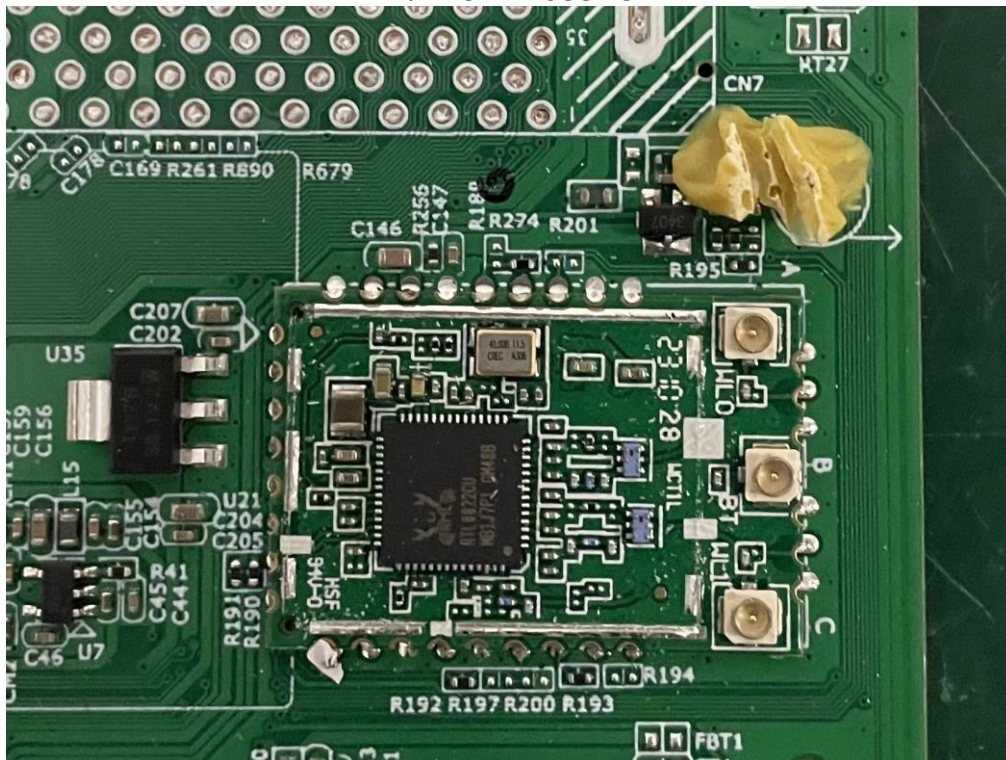
Bluetooth
Connector
Antenna

Wi-Fi 1
Connector
Antenna

Wi-Fi 2
Connector
Antenna



Internal Photos M/N: 32RR683TC



Internal Photos M/N: 32RR683TC



Screen No.: HV320WHB-F56

New Photos

External Photos

M/N: 32RR683TC



External Photos

M/N: 32RR683TC



Internal Photos M/N: 32RR683TC



M/N: 32RR683TC



Internal Photos

M/N: 32RR683TC



End of Test Report