

# TEST REPORT

**Product Name** : 43 FULL HD SMART TV  
**Brand Mark** : KONKA/RCA  
**Model No.** : TC-LE43K-AN2401  
**Extension model** : 43RR683TC  
**Report Number** : BLA-EMC-202402-A3404  
**FCC ID** : 2AQX743RR683UN00  
**Date of Sample Receipt** : 2024/2/23  
**Date of Test** : 2024/2/23 to 2024/3/12  
**Date of Issue** : 2024/3/12  
**Test Standard** : 47 CFR Part 15, Subpart E 15.407  
**Test Result** : Pass

Prepared for:

**KONKA GROUP CO., LTD.**

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Prepared by:

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Date:

2024/3/12



**REPORT REVISE RECORD**

<b>Version No.</b>	<b>Date</b>	<b>Description</b>
00	2024/3/12	Original

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## 1 TEST SUMMARY

Test item	Test Requirement	Test Method	Class/Severity	Result
Frequency Stability	47 CFR Part 15, Subpart E 15.407	ANSI C63.10 (2013) Section 6.8	47 CFR Part 15, Subpart C 15.407 (g)	Pass
Radiated Emissions which fall in the restricted bands	47 CFR Part 15, Subpart E 15.407	KDB 789033 D02 II G	47 CFR Part 15, Subpart C 15.209 & 15.407(b)	Pass
Radiated Emissions	47 CFR Part 15, Subpart E 15.407	KDB 789033 D02 II G	47 CFR Part 15, Subpart C 15.209 & 15.407(b)	Pass
DFS: Channel Closing Transmission Time	47 CFR Part 15, Subpart E 15.407	KDB 905462 D02 Section 7.8.3	KDB 905462 D02 Section 5.1	N/A
DFS: Non-occupancy period	47 CFR Part 15, Subpart E 15.407	KDB 905462 D02 Section 7.8.3	KDB 905462 D02 Section 5.1	N/A
Peak Power spectrum density	47 CFR Part 15, Subpart E 15.407	KDB 789033 D02 II F	47 CFR Part 15, Subpart C 15.407 (a)	Pass
Transmitter Power Control	47 CFR Part 15, Subpart E 15.407	KDB 789033 D02 II E	47 CFR Part 15, Subpart C 15.407 (h)(1)	N/A
Maximum Conducted output power	47 CFR Part 15, Subpart E 15.407	KDB 789033 D02 II E	47 CFR Part 15, Subpart C 15.407 (a)	Pass
Minimum 6 dB bandwidth (5.725-5.85 GHz band )	47 CFR Part 15, Subpart E 15.407	KDB 789033 D02 II C 2	47 CFR Part 15, Subpart C 15.407 (e)	Pass
26dB Emission bandwidth	47 CFR Part 15, Subpart E 15.407	KDB 789033 D02 II C 1	47 CFR Part 15, Subpart C 15.407 (a)	Pass
99% Bandwidth	47 CFR Part 15, Subpart E 15.407	KDB 789033 II D	N/A	Pass
Duty Cycle	47 CFR Part 15, Subpart E 15.407	KDB 789033 II B 1	KDB 789033 D02 II B 1	Pass
Conducted Emissions at AC Power Line (150kHz-30MHz)	47 CFR Part 15, Subpart E 15.407	ANSI C63.10 (2013) Section 6.2	47 CFR Part 15, Subpart C 15.207 & 15.407 b(6)	Pass
Antenna Requirement	47 CFR Part 15, Subpart E 15.407	N/A	47 CFR Part 15, Subpart C 15.203	Pass
User Access Restrictions	47 CFR Part 15, Subpart E 15.407	N/A	47 CFR Part 15, Subpart C 15.407 (i)(1)	PASS

Remark:

N/A: Not Applicable

## 2 GENERAL INFORMATION

<b>Applicant</b>	KONKA GROUP CO., LTD.
<b>Address</b>	No. 28 Keji South 12th Road, Nanshan District Shenzhen,Guangdong
<b>Manufacturer</b>	KONKA GROUP CO., LTD.
<b>Address</b>	15-24F, Konka R&D Building, No. 28 Keji South 12th Road, Science and Technology Park, Yuehai Subdistrict,Nanshan District, Shenzhen , Guangdong ,China
<b>Factory</b>	Dongguan Konka Electronic Co.,Ltd
<b>Address</b>	Konka Road,Fenggang Town Dongguan City Guangdong China
<b>Product Name</b>	43 FULL HD SMART TV
<b>Test Model No.</b>	TC-LE43K-AN2401
<b>Extension model</b>	43RR683TC
<b>Note</b>	All above models are identical in the same PCB layout, interior structure and electrical circuits. The differences are model name for commercial purpose.

## 3 GENERAL DESCRIPTION OF E.U.T.

<b>Hardware Version</b>	N/A
<b>Software Version</b>	N/A
<b>Operation Frequency:</b>	Band 1 : 5180MHz-5240MHz; Band 4 : 5745MHz-5825MHz
<b>Channel numbers:</b>	Band 1: 802.11a/802.11n(HT20)/802.11ac(HT20): 4, 802.11n(HT40)/802.11ac(HT40):2 802.11ac(HT80): 1 Band 4: 802.11a/802.11(HT20)/802.11ac(HT20): 5, 802.11n(HT40)/802.11ac(HT40): 2, 802.11ac(HT80): 1
<b>Channel separation:</b>	802.11a/n/ac(HT20): 20MHz, 802.11n/ac(HT40): 40MHz, 802.11ac(HT80): 80MHz
<b>Modulation technology: (IEEE 802.11a/n/ac)</b>	BPSK, QPSK, 16-QAM, 64-QAM, 256QAM
<b>Data speed(IEEE 802.11a)</b>	6Mbps, 9Mbps, 12Mbps, 18Mbps, 24Mbps, 36Mbps, 48Mbps, 54Mbps
<b>Data speed (IEEE 802.11n/ac):</b>	Up to 866.7Mbps
<b>Antenna Type:</b>	Internal antenna
<b>Antenna gain:</b>	Band1: Antenna 1: 0.90dBi, Antenna 2: 0.90dBi Band4: Antenna 1: 3.39dBi, Antenna 2: 3.39dBi
<b>Note:</b>	Antenna number : 2 SISO mode: 802.11a MIMO mode: 802.11n(HT20)/ 802.11n(HT40)/ 802.11ac(HT20)/ 802.11ac(HT40)/ 802.11ac(HT80) Directional gain of MIMO mode: $3.39+10\log 2=6.40$ dBi
Remark:The Antenna Gain is supplied by the customer.BlueAsia is not responsible for this data	

Note: if transmitting antennas of directional gain greater than 6 dBi are used, then the limit should be reduced.

Because the directional gain = 6.40dB > 6.0 dBi, the limit should be calculated as below:

Power band4:

$$\text{Limit} = 30 \text{ dBm} - (\text{ANT Gain} + 10 \cdot \log(N=2)) - 6 \text{ dBi}$$

$$= 30 \text{ dBm} - (6.40 - 6) \text{ dBi} = 29.60 \text{ dBm}$$

#### Operation Frequency each of channel

Band 1: 5150-5250MHz					
802.11a/802.11n20/802.11ac20		802.11ac40/802.11n40		802.11ac80	
Channel	Frequency	Channel	Frequency	Channel	Frequency
36	5180MHz	38	5190MHz	42	5210MHz
40	5200MHz	46	5230MHz		
44	5220MHz				
48	5240MHz				

Band 4: 5745-5825MHz					
802.11a/802.11n20/802.11ac20		802.11ac40/802.11n40		802.11ac80	
Channel	Frequency	Channel	Frequency	Channel	Frequency
149	5745MHz	151	5755MHz	155	5775MHz
153	5765MHz	159	5795MHz		
157	5785MHz				
161	5805MHz				
165	5825MHz				

#### 4 TEST ENVIRONMENT

Environment	Temperature	Voltage
Normal	25°C	AC120V

#### 5 TEST MODE

TEST MODE	TEST MODE DESCRIPTION
Transmitting mode	Keep the EUT in continuously transmitting mode with modulation.
Remark: 802.11a/ac(HT20)/n(HT20) and 802.11n(HT40)/ac(HT40), 802.11ac(HT80) all have been tested, During the radiated spurious emission test, 802.11a/ac(HT20)/n(HT20) and 802.11n(HT40)/ac(HT40), 802.11ac(HT80) modulations all have been tested, only worse case 802.11a is reported.	

#### 6 MEASUREMENT UNCERTAINTY

Parameter	Expanded Uncertainty (Confidence of 95%)
Radiated Emission(9kHz-30MHz)	±4.34dB
Radiated Emission(30Mz-1000MHz)	±4.24dB
Radiated Emission(1GHz-18GHz)	±4.68dB
AC Power Line Conducted Emission(150kHz-30MHz)	±3.45dB



## 7 DESCRIPTION OF SUPPORT UNIT

Device Type	Manufacturer	Model Name	Serial No.	Remark
N/A	N/A	N/A	N/A	N/A

## 8 TEST FACILITY

The test facility is recognized, certified, or accredited by the following organizations:

- FCC — Designation No.: CN1252

BlueAsia of Technical Services(Shenzhen) Co., Ltd has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in files. Designation CN1252.

- ISED — CAB identifier No.: CN0028

BlueAsia of Technical Services(Shenzhen) Co., Ltd has been registered by Certification and Engineering Bureau of ISED for radio equipment testing with CAB identifier CN0028.

## 9 LABORATORY LOCATION

All tests were performed at:

BlueAsia of Technical Services(Shenzhen) Co., Ltd.

Building C, No. 107, Shihuan Road, Shiyuan Sub-District, Baoan District, Shenzhen, Guangdong Province, China

Telephone: TEL: +86-755-28682673 FAX: +86-755-28682673

No tests were sub-contracted.

## 10 TEST INSTRUMENTS LIST

Test Equipment Of Radiated Spurious Emissions					
Equipment	Manufacturer	Model	S/N	Cal.Date	Cal.Due
Chamber 1	SKET	966	N/A	2023/11/16	2026/11/15
Chamber 2	SKET	966	N/A	2021/07/20	2024/07/19
Spectrum	R&S	FSP40	100817	2023/08/30	2024/08/29
Receiver	R&S	ESR7	101199	2023/08/30	2024/08/29
Receiver	R&S	ESPI7	101477	2023/07/07	2024/07/06
broadband Antenna	Schwarzbeck	VULB9168	00836 P:00227	2022/10/12	2025/10/11
Horn Antenna	Schwarzbeck	BBHA9120D	01892 P:00331	2022/09/13	2025/09/12
Horn Antenna	Schwarzbeck	BBHA 9170	1106	2022/04/24	2024/04/23
Amplifier	SKET	LNPA_30M01G-30	SK2021060801	2023/07/07	2024/07/06
Amplifier	SKET	PA-000318G-45	N/A	2023/08/30	2024/08/29
Amplifier	SKET	LNPA_18G40G-50	SK2022071301	2023/07/14	2024/07/13
Filter group	SKET	2.4G/5G Filter group r	N/A	2023/07/07	2024/07/06
EMI software	EZ	EZ-EMC	EEMC-3A1	N/A	N/A
Loop antenna	SCHNARZBECK	FMZB1519B	00102	2022/09/14	2025/09/13
1kHz calibration audio source	SKET	MCS-ABT-C35	N/A	2023/09/04	2024/09/03
Free Field Microphone	SKET	MGS MP 663	0414	2023/09/04	2024/09/03
Audio shielding box	SKET	SB-ABT-C35	N/A	2023/03/30	2024/03/29
Controller	SKET	N/A	N/A	N/A	N/A
Coaxial Cable	BlueAsia	BLA-XC-02	N/A	N/A	N/A
Coaxial Cable	BlueAsia	BLA-XC-03	N/A	N/A	N/A
Coaxial Cable	BlueAsia	BLA-XC-01	N/A	N/A	N/A
Signal Generator DTV	ECREDIX	DSG-1000	N/A	N/A	N/A

<b>Test Equipment Of Conducted Emissions at AC Power Line (150kHz-30MHz)</b>					
<b>Equipment</b>	<b>Manufacturer</b>	<b>Model</b>	<b>S/N</b>	<b>Cal.Date</b>	<b>Cal.Due</b>
Shield room	SKET	833	N/A	2023/11/16	2025/11/15
Receiver	R&S	ESPI3	101082	2023/08/30	2024/08/29
LISN	R&S	ENV216	3560.6550.15	2023/08/30	2024/08/29
LISN	AT	AT166-2	AKK1806000003	2023/08/30	2024/08/29
ISN	TESEQ	ISNT8-cat6	53580	2023/08/30	2024/08/29
Single-channel vehicle artificial power network	Schwarzbeck	NNBM 8124	01045	2023/07/07	2024/07/06
Single-channel vehicle artificial power network	Schwarzbeck	NNBM 8124	01075	2023/07/07	2024/07/06
EMI software	EZ	EZ-EMC	EEMC-3A1	N/A	N/A

<b>Test Equipment Of RF Conducted Test</b>					
<b>Equipment</b>	<b>Manufacturer</b>	<b>Model</b>	<b>S/N</b>	<b>Cal.Date</b>	<b>Cal.Due</b>
Spectrum	R&S	FSP40	100817	2023/08/30	2024/08/29
Spectrum	Agilent	N9020A	MY49100060	2023/08/30	2024/08/29
Spectrum	Agilent	N9020A	MY54420161	2023/08/30	2024/08/29
Signal Generator	Agilent	N5182A	MY47420955	2023/08/30	2024/08/29
Signal Generator	Agilent	N5181A	MY46240904	2023/07/07	2024/07/06
Signal Generator	R&S	CMW500	132429	2023/08/30	2024/08/29
BluetoothTester	Anritsu	MT8852B	06262047872	2023/08/30	2024/08/29
Power probe	DARE	RPR3006W	14I00889SN042	2023/09/01	2024/08/31
Power detection box	CDKMV	MW100-PSB	MW201020JYT	2023/07/07	2024/07/06
DCPowersupply	zhaoxin	KXN-305D	20K305D1221363	2023/08/30	2024/08/29
DCPowersupply	zhaoxin	RXN-1505D	19R1505D050168	2023/08/30	2024/08/29
2.4GHz/5GHz RF Test software	MTS	MTS 8310	Version 2.0.0.0	N/A	N/A
Audio Analyzer	Audio Precision	ATS-1	ATS141094	2023/07/07	2024/07/06

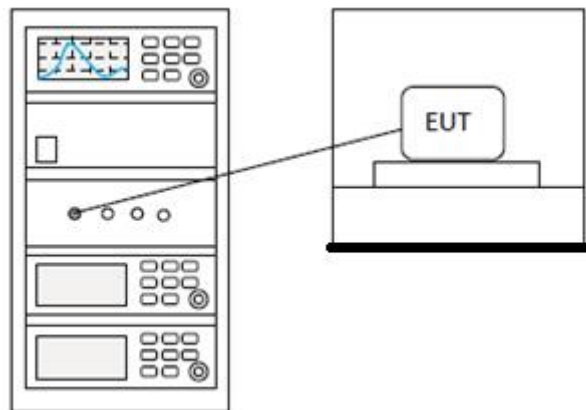
## 11 FREQUENCY STABILITY

<b>Test Standard</b>	47 CFR Part 15, Subpart E 15.407
<b>Test Method</b>	ANSI C63.10 (2013) Section 6.8
<b>Test Mode (Pre-Scan)</b>	TX
<b>Test Mode (Final Test)</b>	TX
<b>Tester</b>	Jozu
<b>Temperature</b>	25°C
<b>Humidity</b>	60%

### 11.1 LIMITS

<b>Limit:</b>	The frequency tolerance shall be maintained within the band of operation frequency over a temperature variation of 0 degrees to 35 degrees C at normal supply voltage, and for a variation in the primary supply voltage from 85% to 115% of the rated supply voltage at a temperature of 20 degrees C.
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### 11.2 BLOCK DIAGRAM OF TEST SETUP



### 11.3 TEST DATA

**Pass: Please Refer To Appendix: Appendix1 For Details**

## 12 RADIATED EMISSIONS WHICH FALL IN THE RESTRICTED BANDS

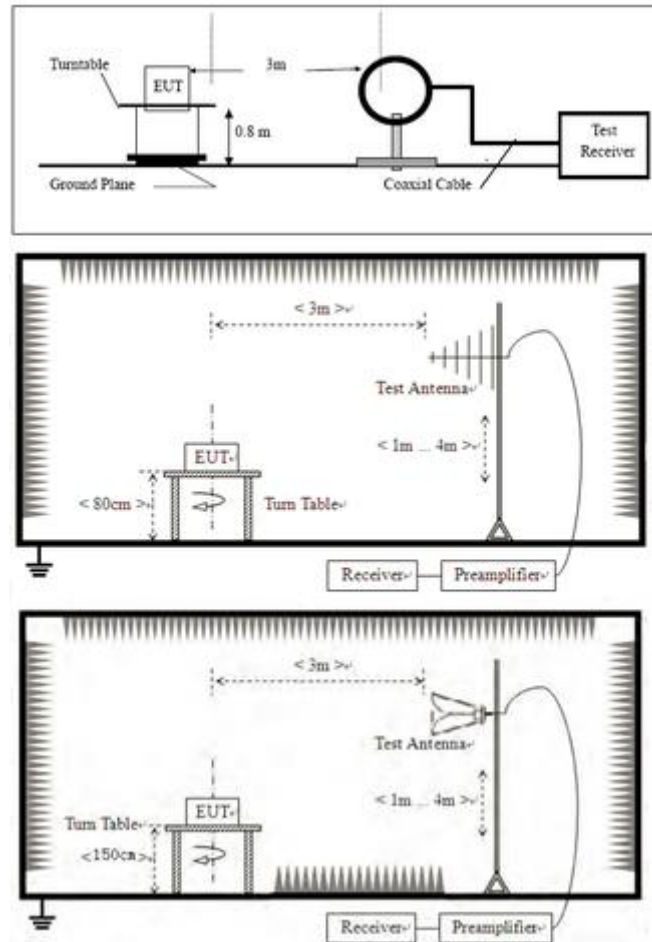
<b>Test Standard</b>	47 CFR Part 15, Subpart E 15.407
<b>Test Method</b>	KDB 789033 D02 II G
<b>Test Mode (Pre-Scan)</b>	TX
<b>Test Mode (Final Test)</b>	TX
<b>Tester</b>	Jozu
<b>Temperature</b>	25°C
<b>Humidity</b>	60%

### 12.1 LIMITS

<b>Frequency(MHz)</b>	<b>Field strength(microvolts/meter)</b>	<b>Measurement distance(meters)</b>
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

Remark: The emission limits shown in the above table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9-90kHz, 110-490kHz and above 1000 MHz. Radiated emission limits in these three bands are based on measurements employing an average detector, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation.

## 12.2 BLOCK DIAGRAM OF TEST SETUP



## 12.3 PROCEDURE

- For below 1GHz, the EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 or 10 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- For above 1GHz, the EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meter fully-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- The EUT was set 3 or 10 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters (for the test frequency of below 30MHz, the antenna was tuned to heights 1 meter) and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
- If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.

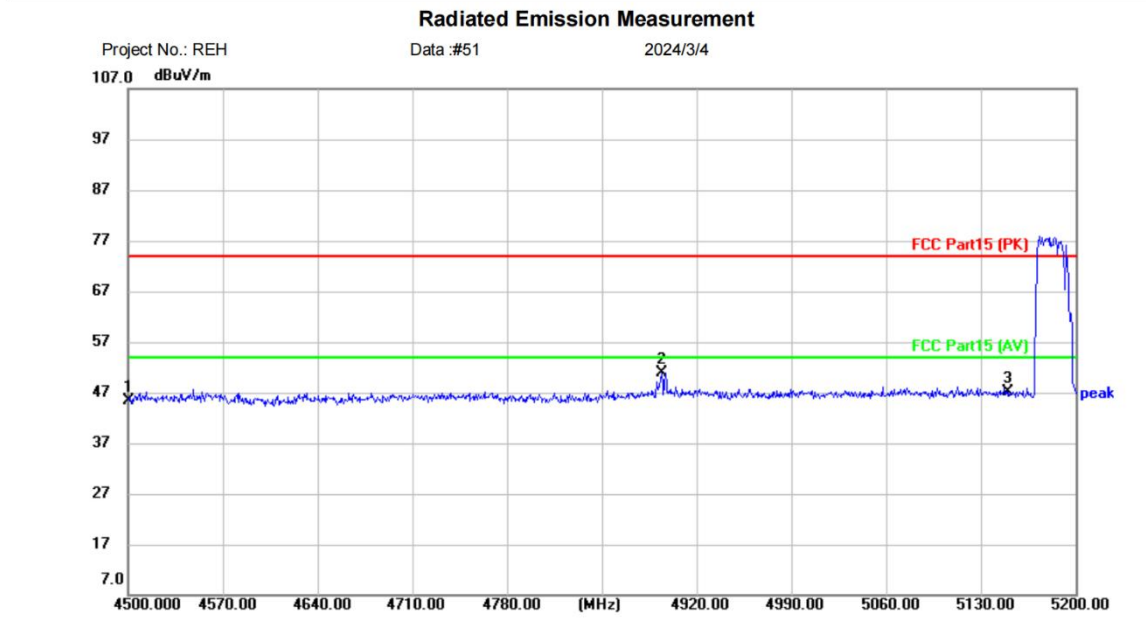
- h. Test the EUT in the lowest channel, the middle channel, the Highest channel.
  - i. The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, and found the X axis positioning which it is the worst case.
  - j. Repeat above procedures until all frequencies measured was complete.
- Remark: Level= Read Level+ Cable Loss+ Antenna Factor- Preamp Factor

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### 12.4 TEST DATA

Remark: During the test, pre-scan the 802.11a/n/ac mode, and found the 802.11a mode which it is worse case.

[TestMode: TX band 1 a 5180 channel]; [Polarity: Horizontal]



Site	Polarization: <b>Horizontal</b>	Temperature: (C)
Limit: FCC Part15 (PK)	Power:	Humidity: %RH
EUT: LED TV		
M/N: TC-LE43K-AN2401		
Mode: 5G-5180		
Note:		

No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Detector	Comment
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB		
1		4500.000	42.95	2.52	45.47	74.00	-28.53	peak	
2	*	4894.100	47.18	3.79	50.97	74.00	-23.03	peak	
3		5150.000	42.66	4.39	47.05	74.00	-26.95	peak	

\*:Maximum data    x:Over limit    !:over margin      (Reference Only)

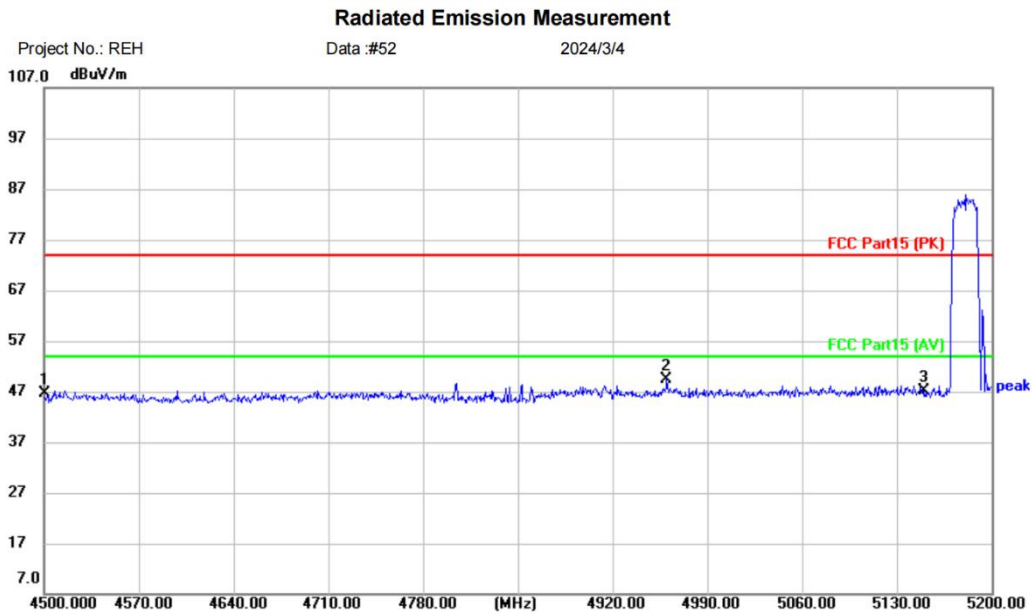
Receiver: ESR\_1      Spectrum Analyzer: FSP40

Antenna: EZ 9120D 1G-18G      Engineer Signature:

**Test Result: Pass**



[TestMode: TX band 1 a 5180 channel]; [Polarity: Vertical]



Site:      Polarization: **Vertical**      Temperature: (C)  
 Limit: FCC Part15 (PK)      Power:      Humidity: %RH  
 EUT: LED TV  
 M/N: TC-LE43K-AN2401  
 Mode: 5G-5180  
 Note:

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1		4500.000	44.05	2.52	46.57	74.00	-27.43	peak	
2	*	4959.900	45.41	4.09	49.50	74.00	-24.50	peak	
3		5150.000	42.70	4.39	47.09	74.00	-26.91	peak	

\*:Maximum data    x:Over limit    !:over margin

<Reference Only

Receiver: ESR\_1

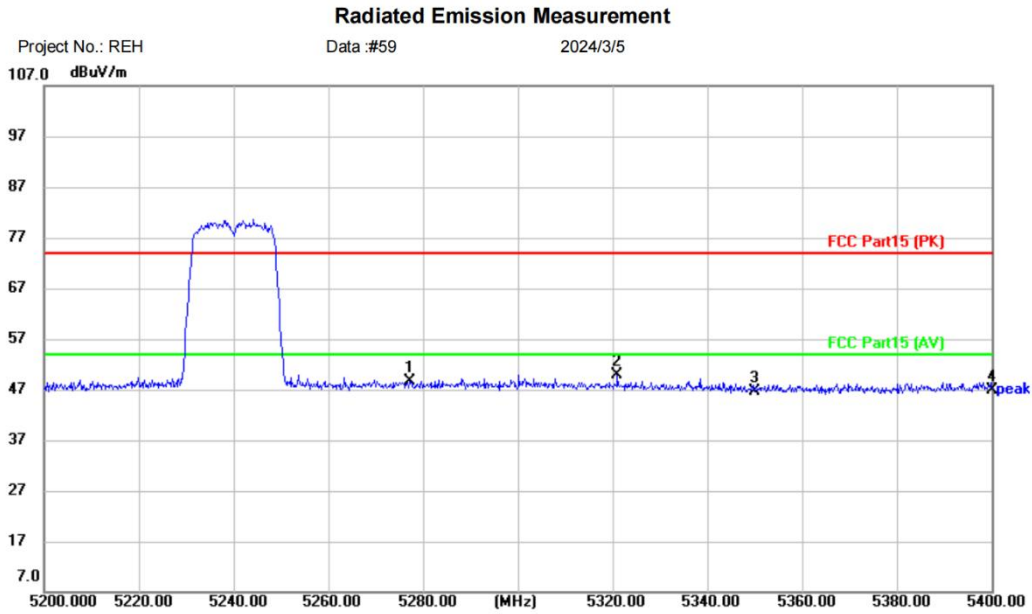
Spectrum Analyzer: FSP40

Antenna: EZ 9120D 1G-18G

Engineer Signature:

**Test Result: Pass**

[TestMode: TX band1 a 5240 channel]; [Polarity: Horizontal]



Site:      Polarization: **Horizontal**      Temperature: (C)  
 Limit: FCC Part15 (PK)      Power:      Humidity: %RH  
 EUT: LED TV  
 M/N: TC-LE43K-AN2401  
 Mode: 5G-5240  
 Note:

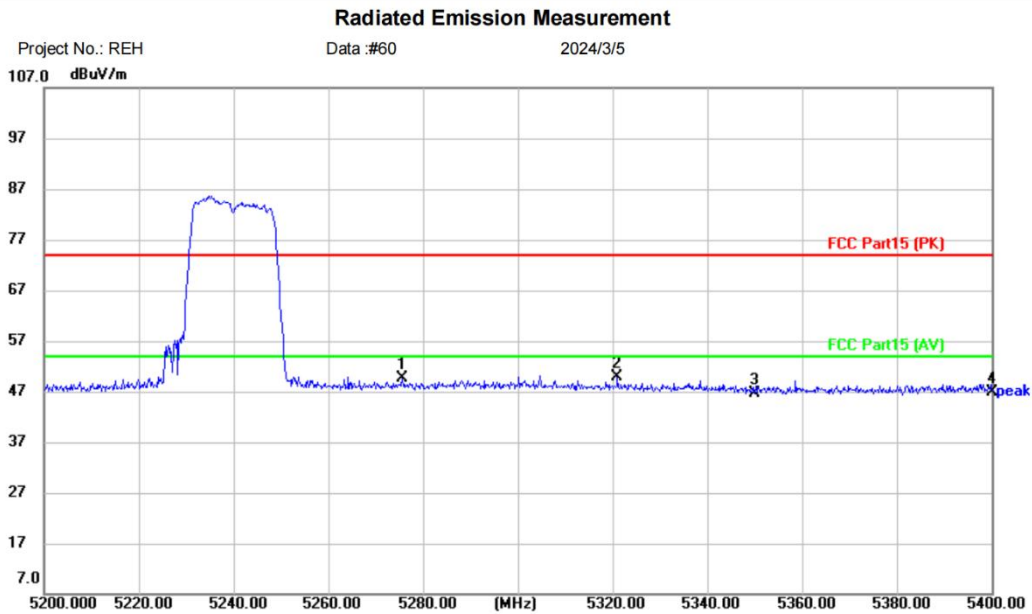
No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1		5277.200	43.90	4.82	48.72	74.00	-25.28	peak	
2	*	5321.000	44.94	4.83	49.77	74.00	-24.23	peak	
3		5350.000	41.77	4.85	46.62	74.00	-27.38	peak	
4		5400.000	41.96	4.99	46.95	74.00	-27.05	peak	

\*:Maximum data    x:Over limit    !:over margin      <Reference Only

Receiver:      ESR\_1      Spectrum Analyzer:      FSP40  
 Antenna:      EZ 9120D 1G-18G      Engineer Signature:

**Test Result: Pass**

[TestMode: TX band1 a 5240 channel]; [Polarity: Vertical]



Site:      Polarization: **Vertical**      Temperature: (C)  
 Limit: FCC Part15 (PK)      Power:      Humidity: %RH  
 EUT: LED TV  
 M/N: TC-LE43K-AN2401  
 Mode: 5G-5240  
 Note:

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1		5275.600	44.78	4.82	49.60	74.00	-24.40	peak	
2	*	5321.000	44.94	4.83	49.77	74.00	-24.23	peak	
3		5350.000	41.85	4.85	46.70	74.00	-27.30	peak	
4		5400.000	41.96	4.99	46.95	74.00	-27.05	peak	

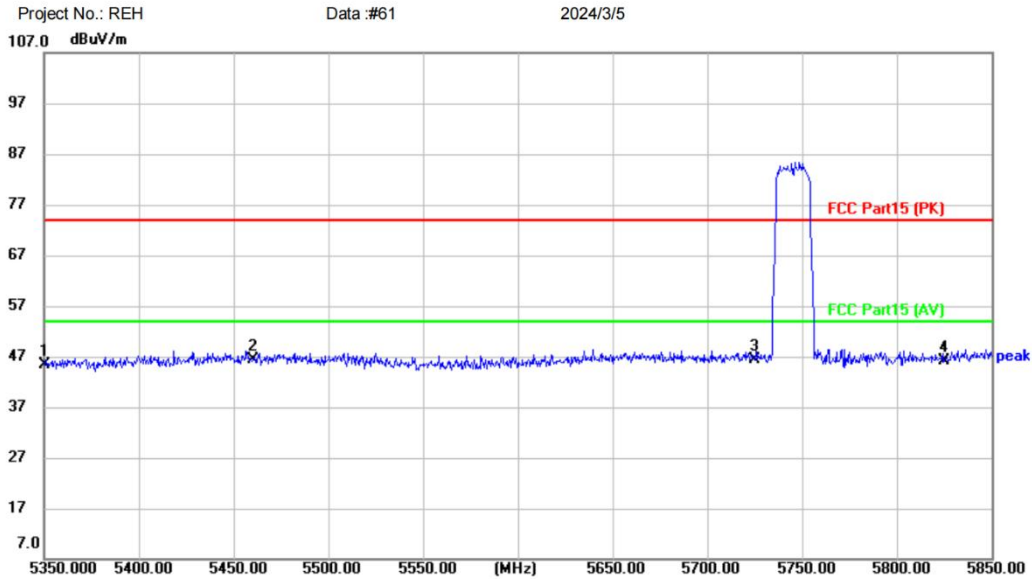
\*:Maximum data    x:Over limit    !:over margin      <Reference Only

Receiver:      ESR\_1      Spectrum Analyzer:      FSP40  
 Antenna:      EZ 9120D 1G-18G      Engineer Signature:

**Test Result: Pass**

[TestMode: TX band4 a 5745 channel]; [Polarity: Vertical]

**Radiated Emission Measurement**



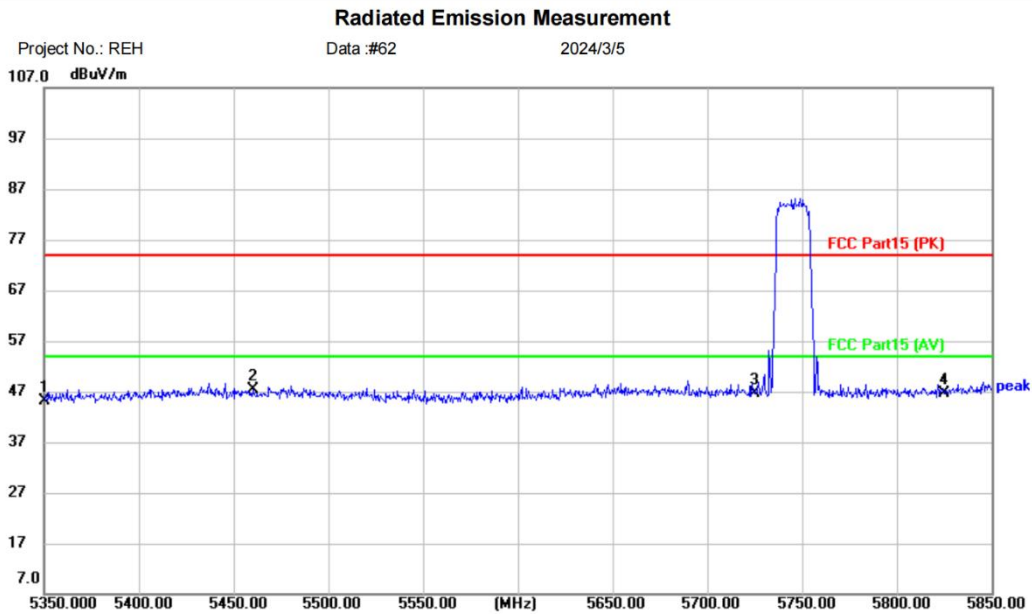
Site: Polarization: **Vertical** Temperature: (C)  
 Limit: FCC Part15 (PK) Power: Humidity: %RH  
 EUT: LED TV  
 M/N: TC-LE43K-AN2401  
 Mode: 5G-5745  
 Note:

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1		5350.000	40.43	4.85	45.28	74.00	-28.72	peak	
2		5460.000	41.10	5.16	46.26	74.00	-27.74	peak	
3	*	5725.000	40.41	5.94	46.35	74.00	-27.65	peak	
4		5825.000	40.12	6.08	46.20	74.00	-27.80	peak	

\*:Maximum data x:Over limit !:over margin (Reference Only)  
 Receiver: ESR\_1 Spectrum Analyzer: FSP40  
 Antenna: EZ 9120D 1G-18G Engineer Signature:

**Test Result: Pass**

[TestMode: TX band4 a 5745 channel]; [Polarity: Horizontal]



Site:      Polarization: **Horizontal**      Temperature: (C)  
 Limit: FCC Part15 (PK)      Power:      Humidity: %RH  
 EUT: LED TV  
 M/N: TC-LE43K-AN2401  
 Mode: 5G-5745  
 Note:

No. Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measurement dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1	5350.000	40.34	4.85	45.19	74.00	-28.81	peak	
2 *	5460.000	42.28	5.16	47.44	74.00	-26.56	peak	
3	5725.000	40.77	5.94	46.71	74.00	-27.29	peak	
4	5825.000	40.66	6.08	46.74	74.00	-27.26	peak	

\*:Maximum data    x:Over limit    !:over margin      <Reference Only

Receiver:      ESR\_1      Spectrum Analyzer:      FSP40  
 Antenna:      EZ 9120D 1G-18G      Engineer Signature:

**Test Result: Pass**



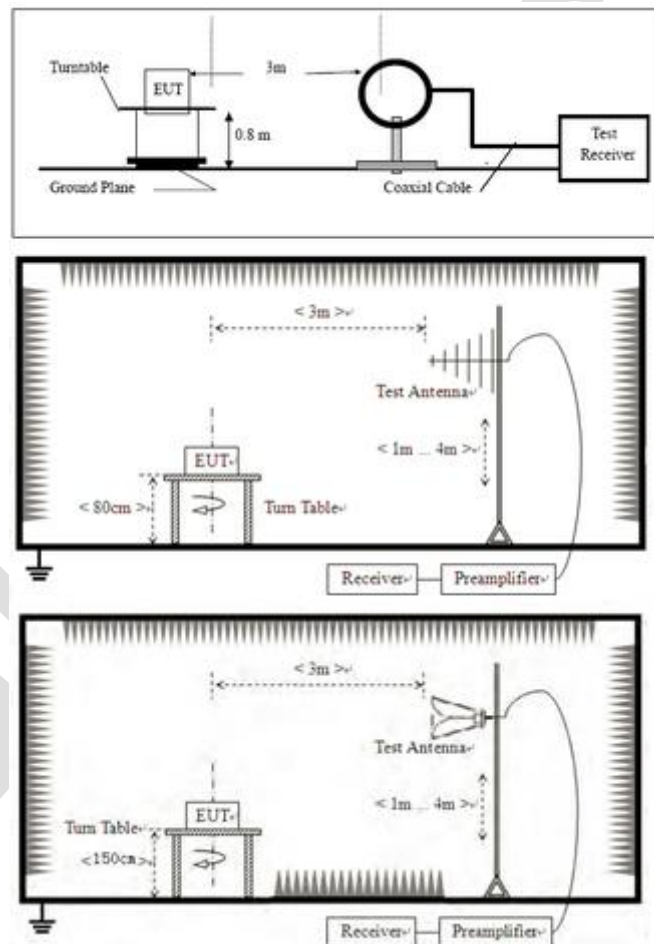




### 13 RADIATED EMISSIONS

Test Standard	47 CFR Part 15, Subpart E 15.407
Test Method	KDB 789033 D02 II G
Test Mode (Pre-Scan)	TX
Test Mode (Final Test)	TX
Tester	Jozu
Temperature	25°C
Humidity	60%

#### 13.1 BLOCK DIAGRAM OF TEST SETUP



#### 13.2 PROCEDURE

- For below 1GHz, the EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 or 10 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- For above 1GHz, the EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meter fully-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest



radiation.

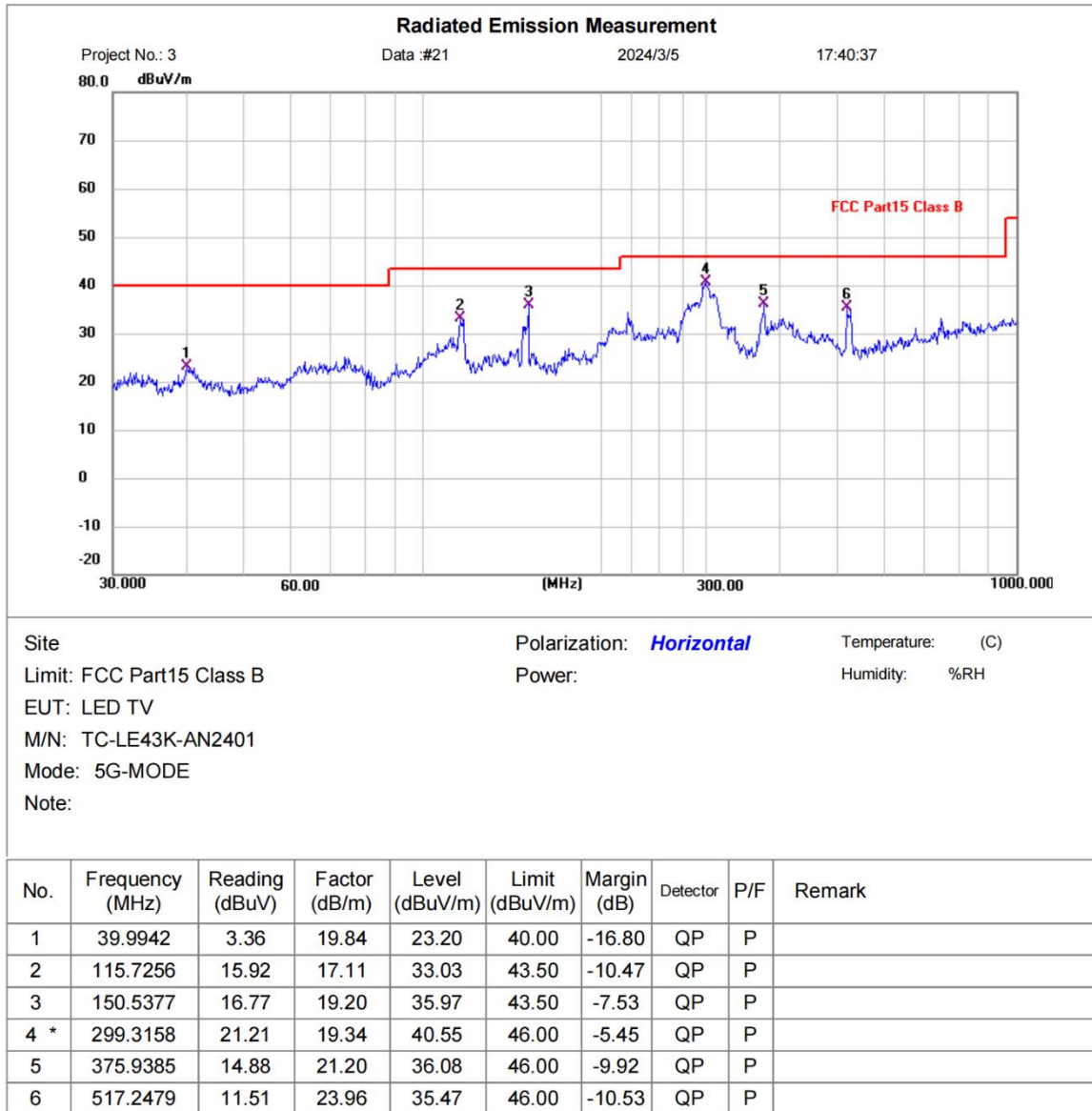
- c. The EUT was set 3 or 10 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- d. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- e. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters (for the test frequency of below 30MHz, the antenna was tuned to heights 1 meter) and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- f. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
- g. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.
- h. Test the EUT in the lowest channel, the middle channel, the Highest channel.
- i. The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, and found the X axis positioning which it is the worst case.
- j. Repeat above procedures until all frequencies measured was complete.

Remark:

1. Level= Read Level+ Cable Loss+ Antenna Factor- Preamp Factor
2. For emission below 1GHz, through the pre-scan found the worst case is the lowest channel of 802.11a. Only the worst case is recorded in the report.
3. Scan from 9kHz to 40GHz, the disturbance above 12.75GHz and below 30MHz was very low. The points marked on above plots are the highest emissions could be found when testing, so only above points had been displayed. The amplitude of spurious emissions from the radiator which are attenuated more than 20dB below the limit need not be reported. fundamental frequency is blocked by filter, and only spurious emission is shown.
4. As shown in this section, for frequencies above 1GHz, the field strength limits are based on average limits. However, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under condition of modulation. For the emissions whose peak level is lower than the average limit, only the peak measurement is shown in the report.

### 13.3 TEST DATA

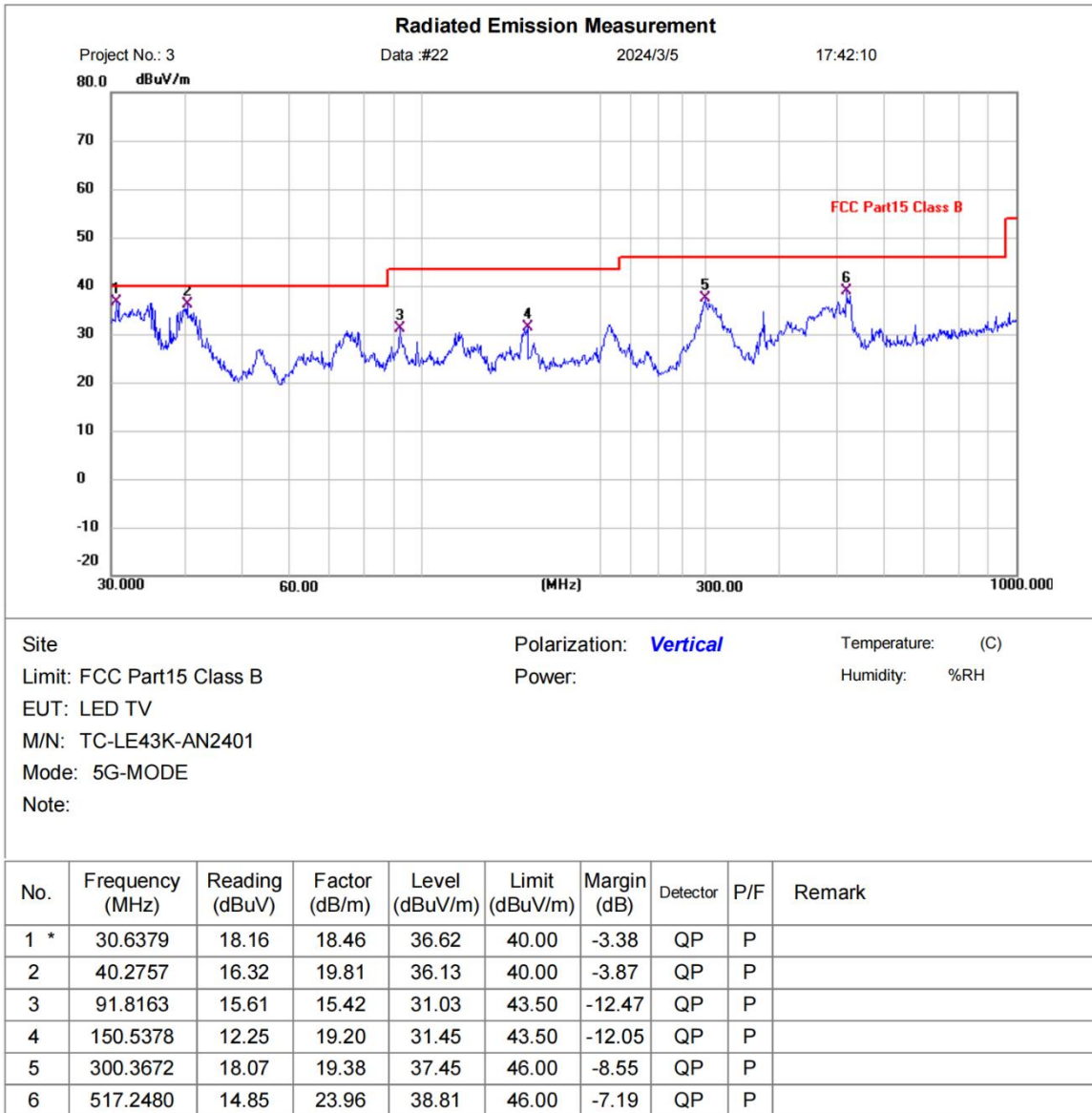
[TestMode: TX below 1G]; [Polarity: Horizontal]



\*:Maximum data    x:Over limit    !:over margin

**Test Result: Pass**

[TestMode: TX below 1G]; [Polarity: Vertical]

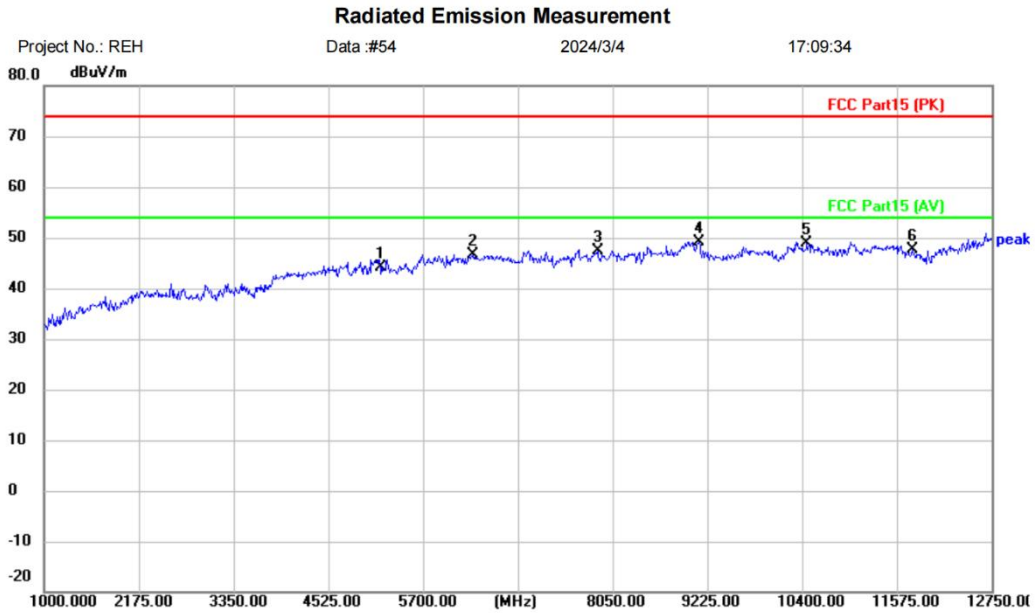


\*:Maximum data    x:Over limit    !:over margin

**Test Result: Pass**

Remark: During the test, pre-scan the 802.11a/n/ac mode, and found the 802.11a mode which it is worse case.

[TestMode: TX band1 a 5180 channel]; [Polarity: Vertical]



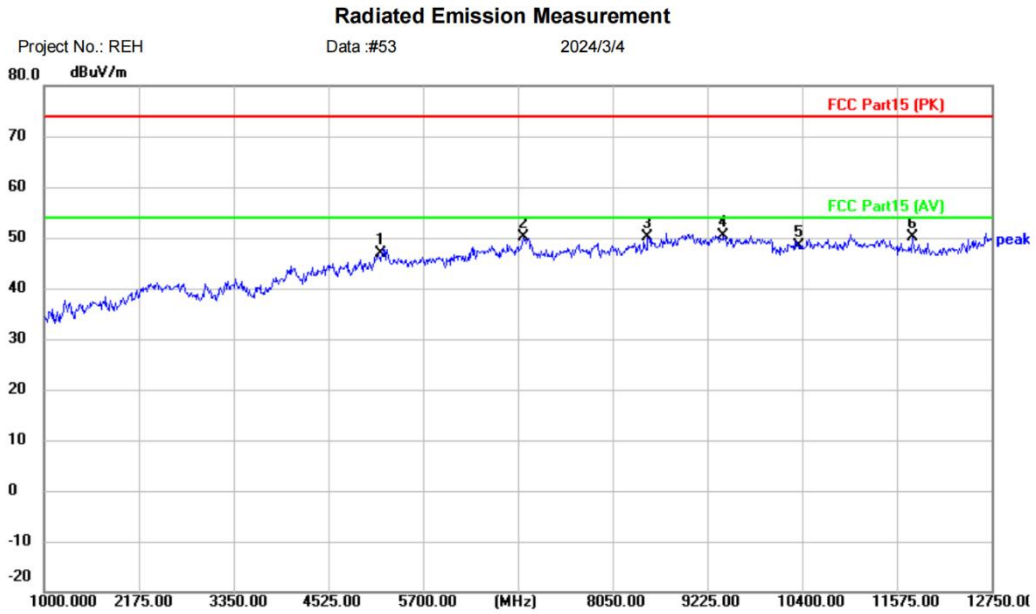
Site:      Polarization: **Vertical**      Temperature: (C)  
 Limit: FCC Part15 (PK)      Power:      Humidity: %RH  
 EUT: LED TV  
 M/N: TC-LE43K-AN2401  
 Mode: 5G-5180  
 Note:

No. Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measurement dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1	5180.000	35.66	8.42	44.08	74.00	-29.92	peak	
2	6322.750	37.52	9.09	46.61	74.00	-27.39	peak	
3	7862.000	37.39	9.91	47.30	74.00	-26.70	peak	
4 *	9119.250	36.71	12.54	49.25	74.00	-24.75	peak	
5	10458.75	36.14	12.82	48.96	74.00	-25.04	peak	
6	11763.00	35.88	11.78	47.66	74.00	-26.34	peak	

\*:Maximum data    x:Over limit    !:over margin      <Reference Only  
 Receiver:    ESPI\_1      Spectrum Analyzer:    FSP40  
 Antenna:    EZ 9120D 1G-18G      Engineer Signature:

**Test Result: Pass**

[TestMode: TX band1 a 5180 channel]; [Polarity: Horizontal]



Site	Polarization: <b>Horizontal</b>	Temperature: (C)
Limit: FCC Part15 (PK)	Power:	Humidity: %RH
EUT: LED TV		
M/N: TC-LE43K-AN2401		
Mode: 5G-5180		
Note:		

No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Detector	Comment
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB		
1		5180.000	38.49	8.42	46.91	74.00	-27.09	peak	
2		6945.500	38.86	11.24	50.10	74.00	-23.90	peak	
3		8484.750	39.17	10.84	50.01	74.00	-23.99	peak	
4	*	9424.750	37.89	12.48	50.37	74.00	-23.63	peak	
5		10360.000	35.53	12.87	48.40	74.00	-25.60	peak	
6		11763.000	38.38	11.78	50.16	74.00	-23.84	peak	

\*:Maximum data    x:Over limit    !:over margin

<Reference Only

Receiver: ESR\_1

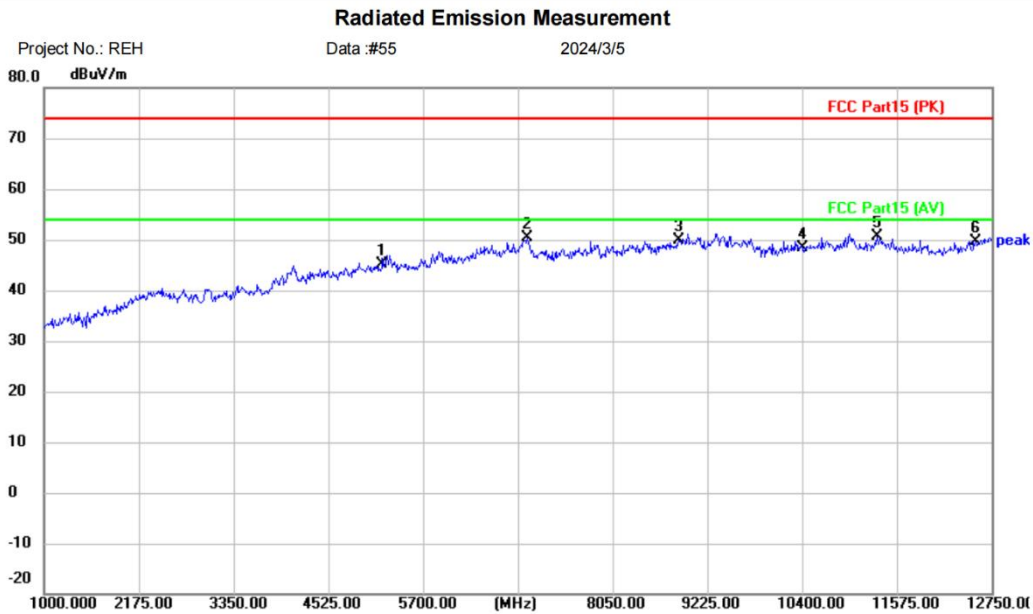
Spectrum Analyzer: FSP40

Antenna: EZ 9120D 1G-18G

Engineer Signature:

**Test Result: Pass**

[TestMode: TX band1 a 5200 channel]; [Polarity: Horizontal]



Site	Polarization: <b>Horizontal</b>	Temperature: (C)
Limit: FCC Part15 (PK)	Power:	Humidity: %RH
EUT: LED TV		
M/N: TC-LE43K-AN2401		
Mode: 5G-5200		
Note:		

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1		5200.000	38.92	6.29	45.21	74.00	-28.79	peak	
2		6992.500	39.08	11.30	50.38	74.00	-23.62	peak	
3		8872.500	38.06	11.90	49.96	74.00	-24.04	peak	
4		10400.00	35.50	12.89	48.39	74.00	-25.61	peak	
5	*	11328.25	37.98	12.67	50.65	74.00	-23.35	peak	
6		12550.25	36.93	12.81	49.74	74.00	-24.26	peak	

\*:Maximum data    x:Over limit    !:over margin      <Reference Only

Receiver:      ESR\_1      Spectrum Analyzer:      FSP40

Antenna:      EZ 9120D 1G-18G      Engineer Signature:

**Test Result: Pass**