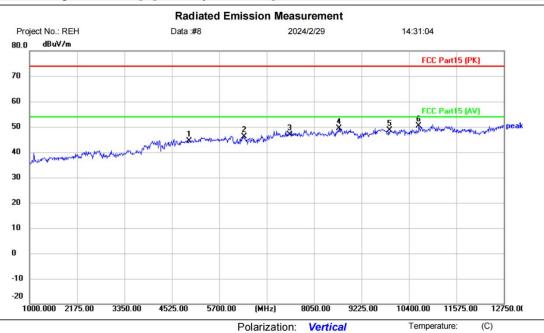


%RH



[TestMode: TX high channel]; [Polarity: Vertical]



Limit: FCC Part15 (PK)

EUT: LED TV

M/N: TC-LE43K-AN2401

Mode: TX-2480

Note:

Site

No. M	k. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		
	MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	4960.000	37.81	6.60	44.41	74.00	-29.59	peak	
2	6322.750	39.57	6.55	46.12	74.00	-27.88	peak	
3	7440.000	37.31	9.64	46.95	74.00	-27.05	peak	
4	8661.000	38.01	11.34	49.35	74.00	-24.65	peak	
5	9920.000	36.59	12.14	48.73	74.00	-25.27	peak	
6 *	10646.75	37.40	12.88	50.28	74.00	-23.72	peak	

Power:

\*:Maximum data x:Over limit !:over margin \( \text{Reference Only}

Engineer Signature

Receiver: ESPI\_1 Spectrum Analyzer: FSP40

**Test Result: Pass** 

EZ 9120D 1G-18G

Antenna:



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## Remark:

- 1. Final Level =Receiver Read level + Correct factor
- 2. Correct factor = Antenna Factor + Cable Loss Preamplifier Factor
- 3. The emission levels of other frequencies are very lower than the limit and not show in test report.





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#### 17 RADIATED EMISSIONS WHICH FALL IN THE RESTRICTED BANDS

Test Standard	47 CFR Part 15, Subpart C 15.247					
Test Method	ANSI C63.10 (2013) Section 6.10.5					
Test Mode (Pre-Scan)	TX					
Test Mode (Final Test)	TX					
Tester	Jozu					
Temperature	25℃					
Humidity	60%					

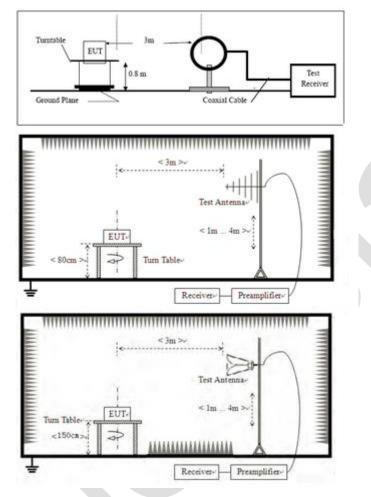
#### **17.1 LIMITS**

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

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.



#### 17.2 BLOCK DIAGRAM OF TEST SETUP



#### 17.3 PROCEDURE

- a. 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.
- b. 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.



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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

Remark 2: 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 any condition of modulation. For the emissions whose peak level is lower than the average limit, only the peak measurement is shown in the report.





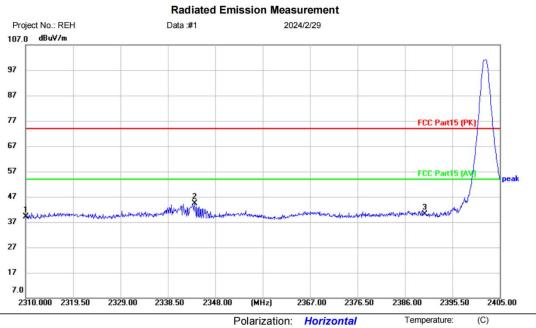
Humidity:

%RH

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#### 17.4 TEST DATA

# [TestMode: TX low channel]; [Polarity: Horizontal]



Site

Limit: FCC Part15 (PK)

EUT: LED TV

M/N: TC-LE43K-AN2401

Mode: TX-2402

Note:

No.	Mk	. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2310.000	41.99	-2.89	39.10	74.00	-34.90	peak	
2	*	2343.915	47.25	-2.81	44.44	74.00	-29.56	peak	
3		2390.000	42.74	-2.70	40.04	74.00	-33.96	peak	

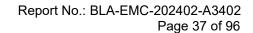
Power:

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

Engineer Signature

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

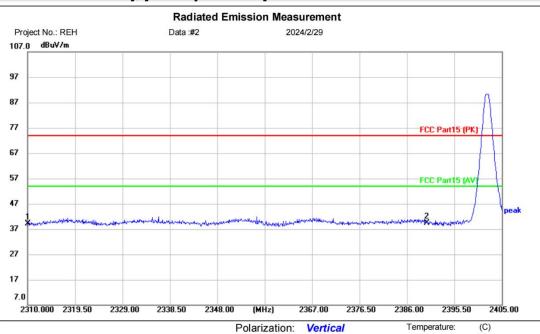
**Test Result: Pass** 



%RH



# [TestMode: TX low channel]; [Polarity: Vertical]



Site Limit: FCC Part15 (PK)

EUT: LED TV

M/N: TC-LE43K-AN2401

Mode: TX-2402

Note:

No.	Mk	. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2310.000	41.92	-2.89	39.03	74.00	-34.97	peak	
2	*	2390.000	42.13	-2.70	39.43	74.00	-34.57	peak	

Power:

\*:Maximum data x:Over limit !:over margin \( \text{Reference Only}

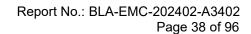
Engineer Signature

Receiver: ESR\_1 Spectrum Analyzer: FSP40

**Test Result: Pass** 

EZ 9120D 1G-18G

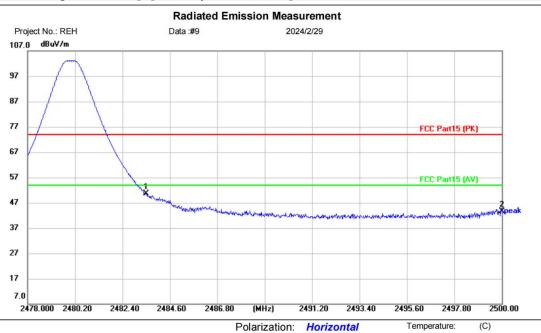
Antenna:



%RH



# [TestMode: TX high channel]; [Polarity: Horizontal]



Site

Limit: FCC Part15 (PK)

EUT: LED TV

M/N: TC-LE43K-AN2401

Mode: TX-2480

Note:

No.	М	k.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		
			MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	2	483.500	51.63	-1.03	50.60	74.00	-23.40	peak	
2		2	500.000	44.89	-1.26	43.63	74.00	-30.37	peak	

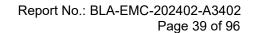
Power:

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

ESR\_1 FSP40 Receiver: Spectrum Analyzer:

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

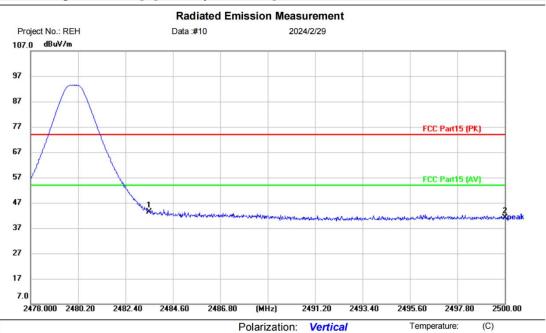
**Test Result: Pass** 



%RH



# [TestMode: TX high channel]; [Polarity: Vertical]



Site Limit: FCC Part15 (PK)

EUT: LED TV

M/N: TC-LE43K-AN2401

Mode: TX-2480

Note:

No.	Λ	Иk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		
-			MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	*	2483.500	44.38	-1.03	43.35	74.00	-30.65	peak	
2			2500.000	42.46	-1.26	41.20	74.00	-32.80	peak	

Power:

\*:Maximum data x:Over limit !:over margin \( \text{Reference Only}

Receiver: ESR\_1 Spectrum Analyzer: FSP40

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

**Test Result: Pass** 

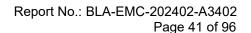


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## Remark:

- 1. Final Level =Receiver Read level + Correct factor
- 2. Correct factor = Antenna Factor + Cable Loss Preamplifier Factor
- 3. The emission levels of other frequencies are very lower than the limit and not show in test report.







18 CONDUCTED BAND EDGES MEASUREMENT

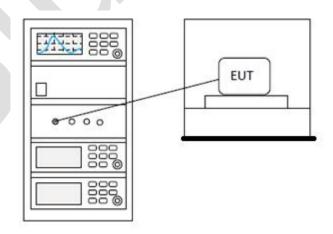
Test Standard	47 CFR Part 15, Subpart C 15.247				
Test Method	ANSI C63.10 (2013) Section 7.8.8 & Section 11.13.3.2				
Test Mode (Pre-Scan)	TX				
Test Mode (Final Test)	TX				
Tester	Jozu				
Temperature	25℃				
Humidity	60%				

#### **18.1 LIMITS**

Limit:

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in §15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a) (see §15.205(c)).

## 18.2 BLOCK DIAGRAM OF TEST SETUP



#### 18.3 TEST DATA



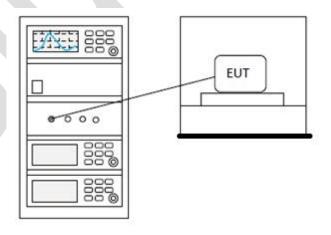
# 19 DWELL TIME

Test Standard	47 CFR Part 15, Subpart C 15.247				
Test Method ANSI C63.10 (2013) Section 7.8.4					
Test Mode (Pre-Scan)	TX				
Test Mode (Final Test)	TX				
Tester	Jozu				
Temperature	25℃				
Humidity	60%				

#### **19.1 LIMITS**

Frequency(MHz)	Limit
	0.4S within a 20S period(20dB
002.029	bandwidth<250kHz)
902-928	0.4S within a 10S period(20dB
	bandwidth≥250kHz)
	0.4S within a period of 0.4S multiplied by the
2400-2483.5	number
	of hopping channels
5725-5850	0.4S within a 30S period

## 19.2 BLOCK DIAGRAM OF TEST SETUP



#### 19.3 TEST DATA



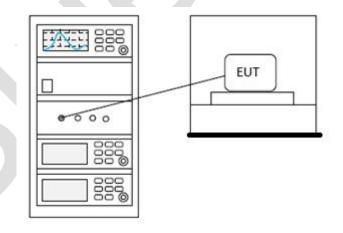
# **20 HOPPING CHANNEL NUMBER**

Test Standard	47 CFR Part 15, Subpart C 15.247					
Test Method	ANSI C63.10 (2013) Section 7.8.3					
Test Mode (Pre-Scan)	TX					
Test Mode (Final Test)	TX					
Tester	Jozu					
Temperature	25℃					
Humidity	60%					

#### **20.1 LIMITS**

Frequency range(MHz)	Number of hopping channels (minimum)
002.020	50 for 20dB bandwidth <250kHz
902-928	25 for 20dB bandwidth ≥250kHz
2400-2483.5	15
5725-5850	75

## 20.2 BLOCK DIAGRAM OF TEST SETUP



## 20.3 TEST DATA



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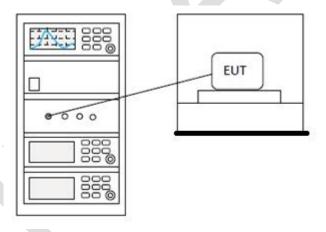
# 21 CARRIER FREQUENCIES SEPARATION

Test Standard	47 CFR Part 15, Subpart C 15.247				
Test Method	ANSI C63.10 (2013) Section 7.8.2				
Test Mode (Pre-Scan)	TX				
Test Mode (Final Test)	TX				
Tester	Jozu				
Temperature	25℃				
Humidity	60%				

#### **21.1 LIMITS**

**Limit:** 2/3 of the 20dB bandwidth base on the transmission power is less than 0.125W

#### 21.2 BLOCK DIAGRAM OF TEST SETUP



#### 21.3 TEST DATA



## 22 APPENDIX1

#### **Maximum Conducted Output Power**

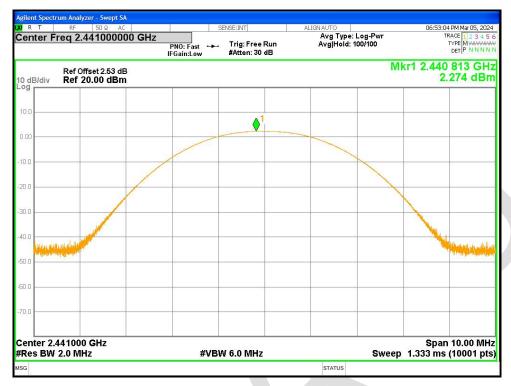
Condition	Mode	Frequency	Antenna Conducted Power		Limit	Verdict
		(MHz)		(dBm)	(dBm)	
NVNT	1-DH1	2402	Ant1	2.023	21	Pass
NVNT	1-DH1	2441	Ant1	2.274	21	Pass
NVNT	1-DH1	2480	Ant1	2.085	21	Pass
NVNT	2-DH1	2402	Ant1	2.089	21	Pass
NVNT	2-DH1	2441	Ant1	2.463	21	Pass
NVNT	2-DH1	2480	Ant1	2.465	21	Pass
NVNT	3-DH1	2402	Ant1	2.572	21	Pass
NVNT	3-DH1	2441	Ant1	2.831	21	Pass
NVNT	3-DH1	2480	Ant1	2.825	21	Pass

## Power NVNT 1-DH1 2402MHz Ant1



Power NVNT 1-DH1 2441MHz Ant1





Power NVNT 1-DH1 2480MHz Ant1



Power NVNT 2-DH1 2402MHz Ant1





Power NVNT 2-DH1 2441MHz Ant1



Power NVNT 2-DH1 2480MHz Ant1





Power NVNT 3-DH1 2402MHz Ant1



Power NVNT 3-DH1 2441MHz Ant1





Power NVNT 3-DH1 2480MHz Ant1





#### -20dB Bandwidth

Condition	Mode	Frequency	Antenna	-20 dB Bandwidth	Limit -20 dB	Verdict
		(MHz)		(MHz)	Bandwidth (MHz)	
NVNT	1-DH1	2402	Ant1	0.924	N/A	Pass
NVNT	1-DH1	2441	Ant1	0.924	N/A	Pass
NVNT	1-DH1	2480	Ant1	0.919	N/A	Pass
NVNT	2-DH1	2402	Ant1	1.223	N/A	Pass
NVNT	2-DH1	2441	Ant1	1.226	N/A	Pass
NVNT	2-DH1	2480	Ant1	1.225	N/A	Pass
NVNT	3-DH1	2402	Ant1	1.209	N/A	Pass
NVNT	3-DH1	2441	Ant1	1.211	N/A	Pass
NVNT	3-DH1	2480	Ant1	1.21	N/A	Pass

### -20dB Bandwidth NVNT 1-DH1 2402MHz Ant1



-20dB Bandwidth NVNT 1-DH1 2441MHz Ant1





-20dB Bandwidth NVNT 1-DH1 2480MHz Ant1

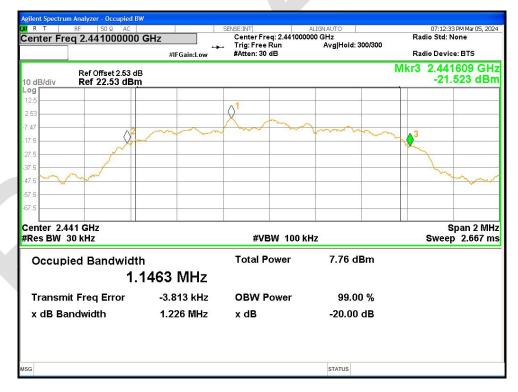


-20dB Bandwidth NVNT 2-DH1 2402MHz Ant1





-20dB Bandwidth NVNT 2-DH1 2441MHz Ant1



-20dB Bandwidth NVNT 2-DH1 2480MHz Ant1





-20dB Bandwidth NVNT 3-DH1 2402MHz Ant1



-20dB Bandwidth NVNT 3-DH1 2441MHz Ant1





#### -20dB Bandwidth NVNT 3-DH1 2480MHz Ant1





#### **Occupied Channel Bandwidth**

Condition	Mode	Frequency (MHz)	Antenna	99% OBW (MHz)
NVNT	1-DH1	2402	Ant1	0.83842
NVNT	1-DH1	2441	Ant1	0.83487
NVNT	1-DH1	2480	Ant1	0.83802
NVNT	2-DH1	2402	Ant1	1.1507
NVNT	2-DH1	2441	Ant1	1.1485
NVNT	2-DH1	2480	Ant1	1.1502
NVNT	3-DH1	2402	Ant1	1.1320
NVNT	3-DH1	2441	Ant1	1.1318
NVNT	3-DH1	2480	Ant1	1.1300

## OBW NVNT 1-DH1 2402MHz Ant1



OBW NVNT 1-DH1 2441MHz Ant1





#### OBW NVNT 1-DH1 2480MHz Ant1

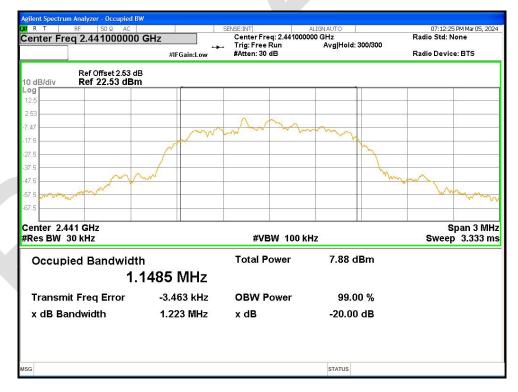


OBW NVNT 2-DH1 2402MHz Ant1





#### OBW NVNT 2-DH1 2441MHz Ant1

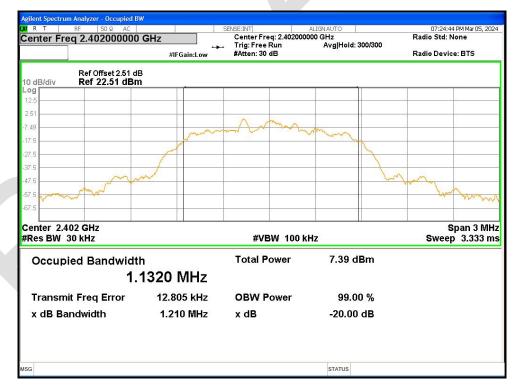


OBW NVNT 2-DH1 2480MHz Ant1





#### OBW NVNT 3-DH1 2402MHz Ant1



OBW NVNT 3-DH1 2441MHz Ant1





#### OBW NVNT 3-DH1 2480MHz Ant1





#### **Band Edge**

Condition	Mode	Frequency	Antenna	Hopping	Max Value	Limit	Verdict
		(MHz)		Mode	(dBc)	(dBc)	
NVNT	1-DH1	2402	Ant1	No-Hopping	-56.81	-20	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	-53.48	-20	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	-55.32	-20	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	-53.42	-20	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	-56.1	-20	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	-53.3	-20	Pass

Band Edge NVNT 1-DH1 2402MHz Ant1 No-Hopping Ref



Band Edge NVNT 1-DH1 2402MHz Ant1 No-Hopping Emission