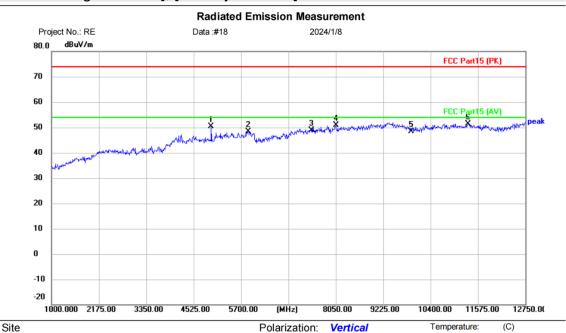


%RH



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



Limit: FCC Part15 (PK)

EUT: RGB Soundbar Speaker

M/N: 25207BLK Mode: TX-2480

Note:

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4959.750	43.81	6.60	50.41	74.00	-23.59	peak	
2		5876.250	39.85	8.54	48.39	74.00	-25.61	peak	
3		7440.000	39.30	9.64	48.94	74.00	-25.06	peak	
4		8050.000	41.17	9.80	50.97	74.00	-23.03	peak	
5		9920.000	36.34	12.14	48.48	74.00	-25.52	peak	
6	*	11328.25	38.80	12.67	51.47	74.00	-22.53	peak	

Power:

*:Maximum data ⟨Reference Only x:Over limit !:over margin FSP40

Engineer Signature

ESR_1 Receiver: Spectrum Analyzer: Antenna: EZ 9120D 1G-18G

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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%				

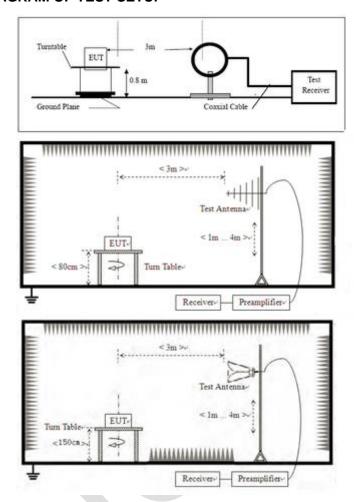
17.1 LIMITS

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.





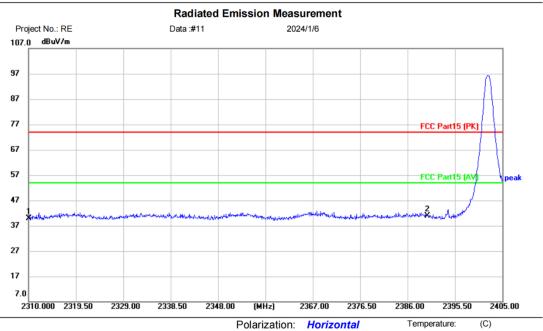
Humidity:

%RH

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17.4 TEST DATA

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



Site Limit: FCC Part15 (PK)

EUT: RGB Soundbar Speaker

M/N: 25207BLK Mode: TX-2402

Note:

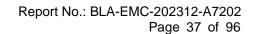
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2310.000	42.89	-2.89	40.00	74.00	-34.00	peak	
2	*	2390.000	43.49	-2.70	40.79	74.00	-33.21	peak	

Power:

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

Receiver: ESR_1 Spectrum Analyzer: FSP40

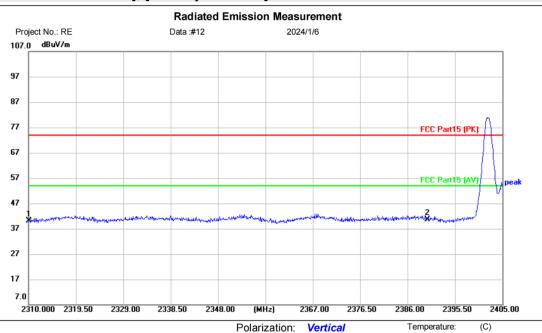
Antenna: EZ 9120D 1G-18G Engineer Signature:



%RH



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



Limit: FCC Part15 (PK)

EUT: RGB Soundbar Speaker

M/N: 25207BLK Mode: TX-2402

Note:

Site

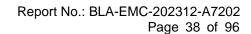
No.	Mk.	. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2310.000	42.91	-2.89	40.02	74.00	-33.98	peak	
2	*	2390.000	43.43	-2.70	40.73	74.00	-33.27	peak	

Power:

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

Receiver: ESR_1 Spectrum Analyzer: FSP40

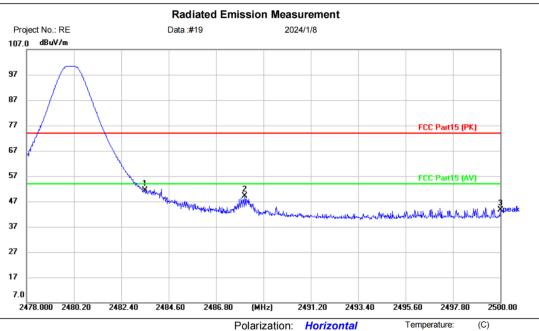
Antenna: EZ 9120D 1G-18G Engineer Signature:



%RH



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



Site Limit: FCC Part15 (PK)

EUT: RGB Soundbar Speaker

M/N: 25207BLK Mode: TX-2480

Note:

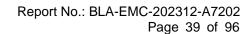
No.	Mk	. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	2483.500	54.37	-2.91	51.46	74.00	-22.54	peak	
2		2488.142	52.06	-2.94	49.12	74.00	-24.88	peak	
3		2500.000	46.59	-3.00	43.59	74.00	-30.41	peak	

Power:

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

Receiver: ESR_1 Spectrum Analyzer: FSP40

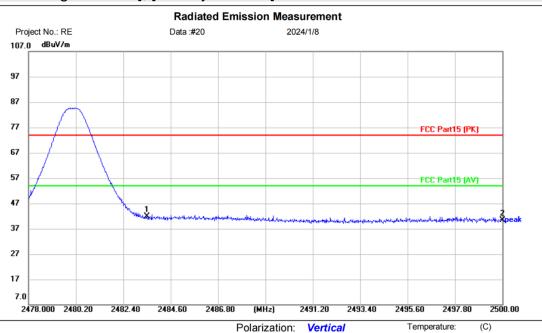
Antenna: EZ 9120D 1G-18G Engineer Signature:



%RH



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



Site Limit: FCC Part15 (PK)

EUT: RGB Soundbar Speaker

M/N: 25207BLK Mode: TX-2480

Note:

No.	M	k.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		
			MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	2483	3.500	44.87	-2.91	41.96	74.00	-32.04	peak	
2		2500	0.000	43.44	-3.00	40.44	74.00	-33.56	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:



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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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18 CONDUCTED BAND EDGES MEASUREMENT

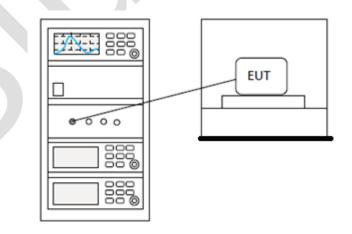
Test Standard	47 CFR Part 15, Subpart C 15.247				
Test Method	ANSI C63.10 (2013) Section 7.8.8 & Section 11.13.3.2				
Test Mode (Pre-Scan)	TX				
Test Mode (Final Test)	TX				
Tester	Jozu				
Temperature	25℃				
Humidity	60%				

18.1 LIMITS

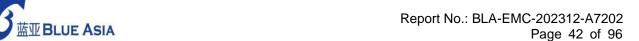
Limit:

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



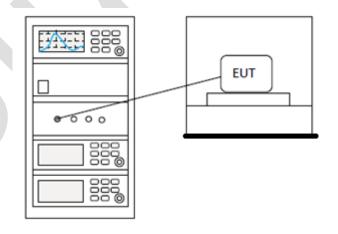


Test Standard	47 CFR Part 15, Subpart C 15.247				
Test Method	ANSI C63.10 (2013) Section 7.8.4				
Test Mode (Pre-Scan)	TX				
Test Mode (Final Test)	TX				
Tester	Jozu				
Temperature	25℃				
Humidity	60%				

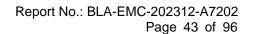
19.1 LIMITS

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





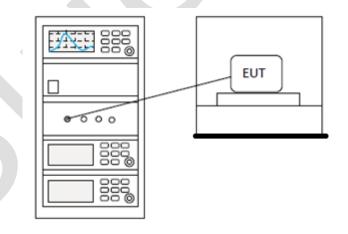
20 HOPPING CHANNEL NUMBER

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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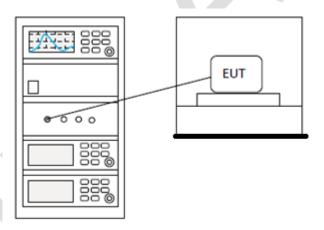
21 CARRIER FREQUENCIES SEPARATION

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

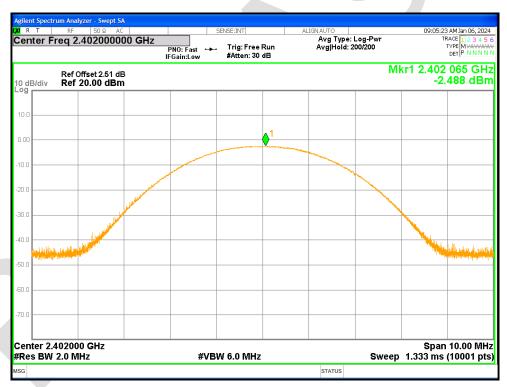


22 APPENDIX1

Maximum Conducted Output Power

Condition	Mode	Frequency	Antenna Conducted Power		Limit	Verdict
		(MHz)		(dBm)	(dBm)	
NVNT	1-DH1	2402	Ant1	-2.488	21	Pass
NVNT	1-DH1	2441	Ant1	-2.173	21	Pass
NVNT	1-DH1	2480	Ant1	-1.332	21	Pass
NVNT	2-DH1	2402	Ant1	-0.563	21	Pass
NVNT	2-DH1	2441	Ant1	-0.648	21	Pass
NVNT	2-DH1	2480	Ant1	-0.597	21	Pass
NVNT	3-DH1	2402	Ant1	-0.814	21	Pass
NVNT	3-DH1	2441	Ant1	-0.244	21	Pass
NVNT	3-DH1	2480	Ant1	-1.479	21	Pass

Power NVNT 1-DH1 2402MHz Ant1



Power NVNT 1-DH1 2441MHz Ant1



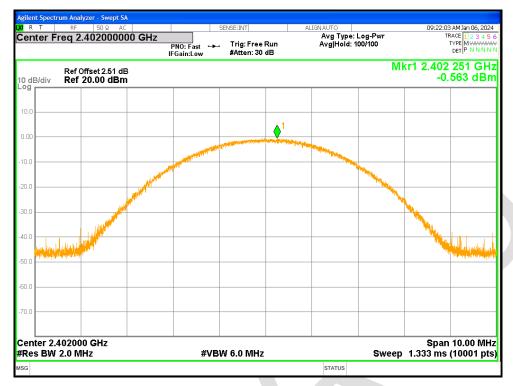


Power NVNT 1-DH1 2480MHz Ant1



Power NVNT 2-DH1 2402MHz Ant1





Power NVNT 2-DH1 2441MHz Ant1



Power NVNT 2-DH1 2480MHz Ant1



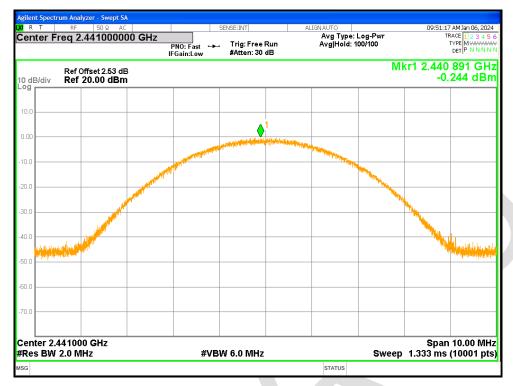


Power NVNT 3-DH1 2402MHz Ant1



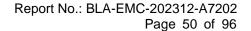
Power NVNT 3-DH1 2441MHz Ant1





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	0.865	N/A	Pass
NVNT	1-DH1	2441	Ant1	0.877	N/A	Pass
NVNT	1-DH1	2480	Ant1	0.826	N/A	Pass
NVNT	2-DH1	2402	Ant1	1.236	N/A	Pass
NVNT	2-DH1	2441	Ant1	1.241	N/A	Pass
NVNT	2-DH1	2480	Ant1	1.247	N/A	Pass
NVNT	3-DH1	2402	Ant1	1.236	N/A	Pass
NVNT	3-DH1	2441	Ant1	1.213	N/A	Pass
NVNT	3-DH1	2480	Ant1	1.218	N/A	Pass

-20dB Bandwidth NVNT 1-DH1 2402MHz Ant1



-20dB Bandwidth NVNT 1-DH1 2441MHz Ant1



:26 AM Jan 06, 2024 Center Freq: 2.441000000 GHz Trig: Free Run Avg #Atten: 30 dB Center Freq 2.441000000 GHz Radio Std: None Avg|Hold: 300/300 #IFGain:Low Mkr3 2.441447 GHz Ref Offset 2.53 dB Ref 22.53 dBm -31.259 dBm 10 dB/div Span 2 MHz Sweep 2.667 ms Center 2.441 GHz #Res BW 30 kHz **#VBW 100 kHz Total Power** -0.62 dBm Occupied Bandwidth 818.85 kHz **Transmit Freq Error** 8.732 kHz **OBW Power** 99.00 % x dB Bandwidth 877.2 kHz x dB -20.00 dB

-20dB Bandwidth NVNT 1-DH1 2480MHz Ant1



-20dB Bandwidth NVNT 2-DH1 2402MHz Ant1



09:22:20 AM Jan 06, 2024 Center Freq: 2.402000000 GHz Trig: Free Run Avg #Atten: 30 dB Center Freq 2.402000000 GHz Radio Std: None Avg|Hold: 300/300 Radio Device: BTS #IFGain:Low Mkr3 2.402636 GHz Ref Offset 2.51 dB Ref 22.51 dBm -24.383 dBm 10 dB/div Span 2 MHz Sweep 2.667 ms Center 2.402 GHz #Res BW 30 kHz **#VBW 100 kHz Total Power** 4.13 dBm Occupied Bandwidth 1.1546 MHz **Transmit Freq Error** 18.107 kHz **OBW Power** 99.00 % x dB Bandwidth 1.236 MHz x dB -20.00 dB

-20dB Bandwidth NVNT 2-DH1 2441MHz Ant1



-20dB Bandwidth NVNT 2-DH1 2480MHz Ant1



Transmit Freq Error

x dB Bandwidth

09:25:06 AM Jan 06, 2024 Center Freq: 2.480000000 GHz Trig: Free Run Avg #Atten: 30 dB Center Freq 2.480000000 GHz Radio Std: None Avg|Hold: 300/300 Radio Device: BTS #IFGain:Low Mkr3 2.480634 GHz Ref Offset 2.58 dB Ref 22.58 dBm -23.300 dBm 10 dB/div Span 2 MHz Sweep 2.667 ms Center 2.48 GHz #Res BW 30 kHz **#VBW 100 kHz Total Power** 4.32 dBm Occupied Bandwidth 1.1584 MHz

-20dB Bandwidth NVNT 3-DH1 2402MHz Ant1

OBW Power

x dB

99.00 %

-20.00 dB

10.924 kHz

1.247 MHz



-20dB Bandwidth NVNT 3-DH1 2441MHz Ant1



09:51:34 AM Jan 06, 2024 Center Freq: 2.441000000 GHz Trig: Free Run Avg #Atten: 30 dB Center Freq 2.441000000 GHz Radio Std: None Avg|Hold: 300/300 #IFGain:Low Mkr3 2.441634 GHz Ref Offset 2.53 dB Ref 22.53 dBm -23.076 dBm 10 dB/div Span 2 MHz Sweep 2.667 ms Center 2.441 GHz #Res BW 30 kHz **#VBW 100 kHz Total Power** 3.73 dBm Occupied Bandwidth 1.1532 MHz **Transmit Freq Error** 27.746 kHz **OBW Power** 99.00 % x dB Bandwidth 1.213 MHz x dB -20.00 dB

-20dB Bandwidth NVNT 3-DH1 2480MHz Ant1





Occupied Channel Bandwidth

Condition	Mode	Frequency (MHz)	Antenna	99% OBW (MHz)
NVNT	1-DH1	2402	Ant1	0.82815
NVNT	1-DH1	2441	Ant1	0.82548
NVNT	1-DH1	2480	Ant1	0.83156
NVNT	2-DH1	2402	Ant1	1.1555
NVNT	2-DH1	2441	Ant1	1.1607
NVNT	2-DH1	2480	Ant1	1.1601
NVNT	3-DH1	2402	Ant1	1.1558
NVNT	3-DH1	2441	Ant1	1.1548
NVNT	3-DH1	2480	Ant1	1.1548

OBW NVNT 1-DH1 2402MHz Ant1



OBW NVNT 1-DH1 2441MHz Ant1



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OBW NVNT 1-DH1 2480MHz Ant1



OBW NVNT 2-DH1 2402MHz Ant1



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OBW NVNT 2-DH1 2441MHz Ant1

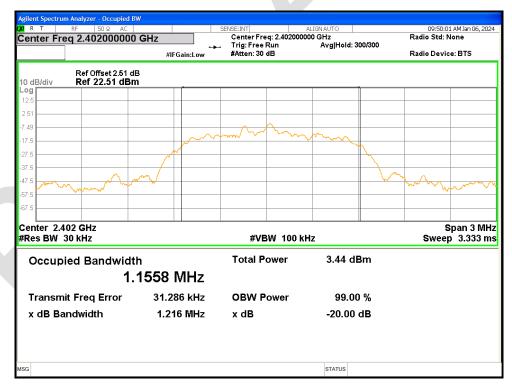


OBW NVNT 2-DH1 2480MHz Ant1



09:24:58 AM Jan 06, 2024 Center Freq: 2.480000000 GHz Trig: Free Run Avg #Atten: 30 dB Center Freq 2.480000000 GHz Radio Std: None Avg|Hold: 300/300 Radio Device: BTS #IFGain:Low Ref Offset 2.58 dB Ref 22.58 dBm 10 dB/div Span 3 MHz Sweep 3.333 ms Center 2.48 GHz #Res BW 30 kHz **#VBW 100 kHz Total Power** 4.47 dBm Occupied Bandwidth 1.1601 MHz **Transmit Freq Error** 13.215 kHz **OBW Power** 99.00 % x dB Bandwidth 1.254 MHz -20.00 dB x dB

OBW NVNT 3-DH1 2402MHz Ant1



OBW NVNT 3-DH1 2441MHz Ant1



09:51:26 AM Jan 06, 2024 Center Freq: 2.441000000 GHz Trig: Free Run Avg #Atten: 30 dB Center Freq 2.441000000 GHz Radio Std: None Avg|Hold: 300/300 #IFGain:Low Radio Device: BTS Ref Offset 2.53 dB Ref 22.53 dBm 10 dB/div Span 3 MHz Sweep 3.333 ms Center 2.441 GHz #Res BW 30 kHz **#VBW** 100 kHz **Total Power** 3.86 dBm Occupied Bandwidth 1.1548 MHz 26.993 kHz **Transmit Freq Error OBW Power** 99.00 % x dB Bandwidth 1.209 MHz x dB -20.00 dB

OBW NVNT 3-DH1 2480MHz Ant1

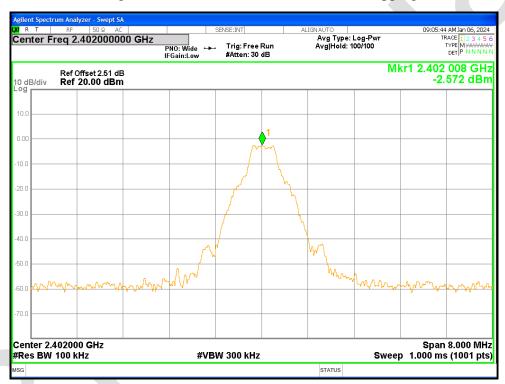




Band Edge

Condition	Mode	Frequency	Antenna	Hopping	Max Value	Limit	Verdict
		(MHz)		Mode	(dBc)	(dBc)	
NVNT	1-DH1	2402	Ant1	No-Hopping	-52.84	-20	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	-50.7	-20	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	-51.6	-20	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	-51.84	-20	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	-51.48	-20	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	-52.28	-20	Pass

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



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