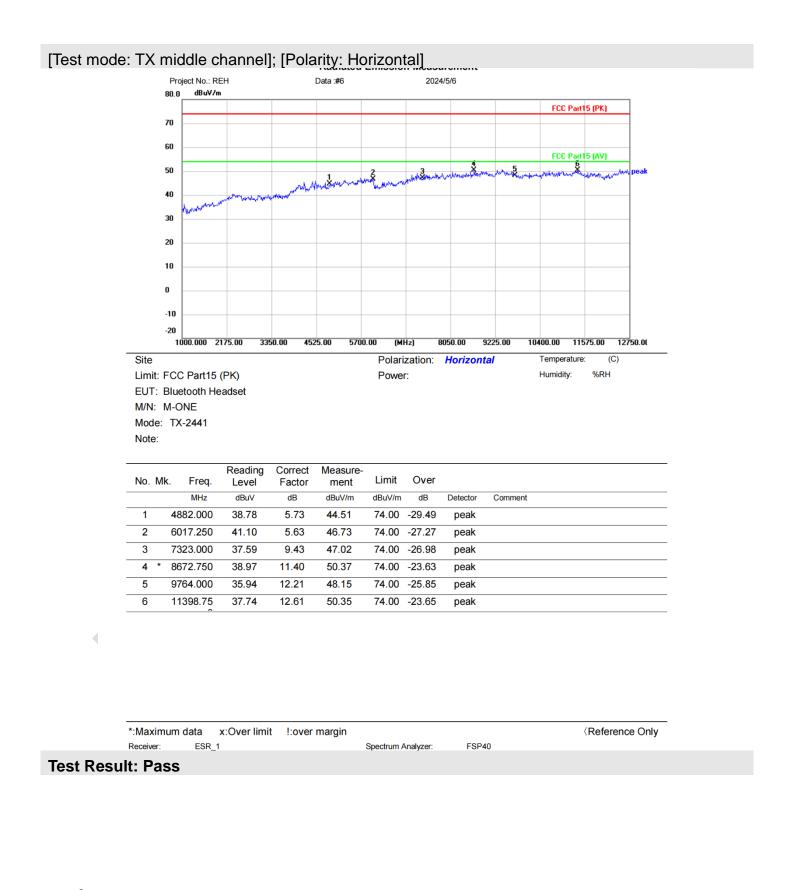


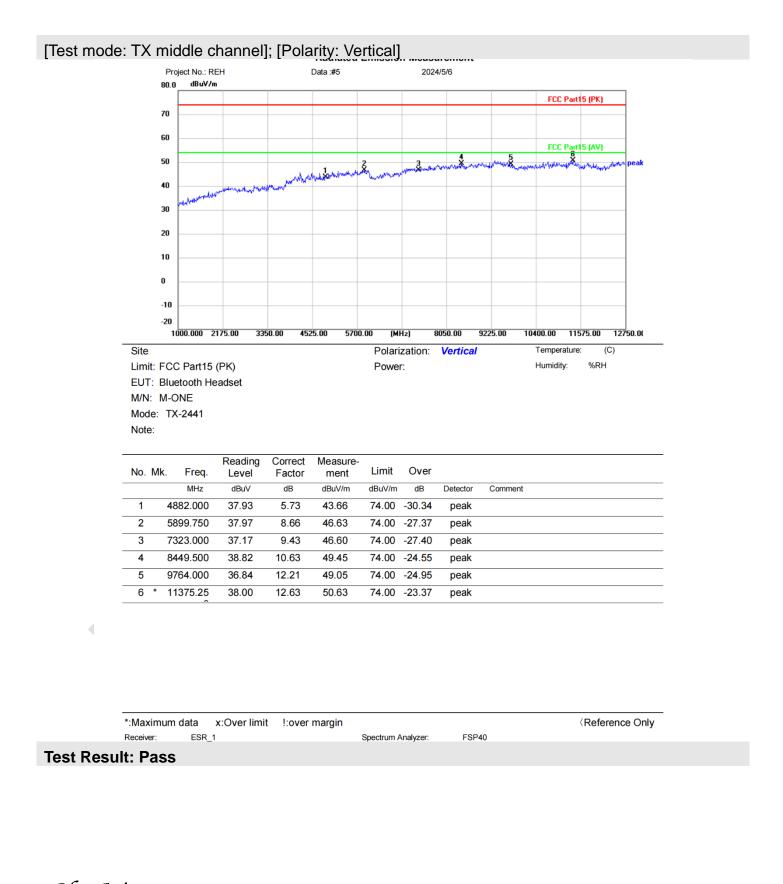
Page 31 of 82



Blue Asia of Technical Services (Shenzhen) Co., Ltd. Tel: +86-755-23059481 Email: marketing@cblueasia.com www.cblueasia.com



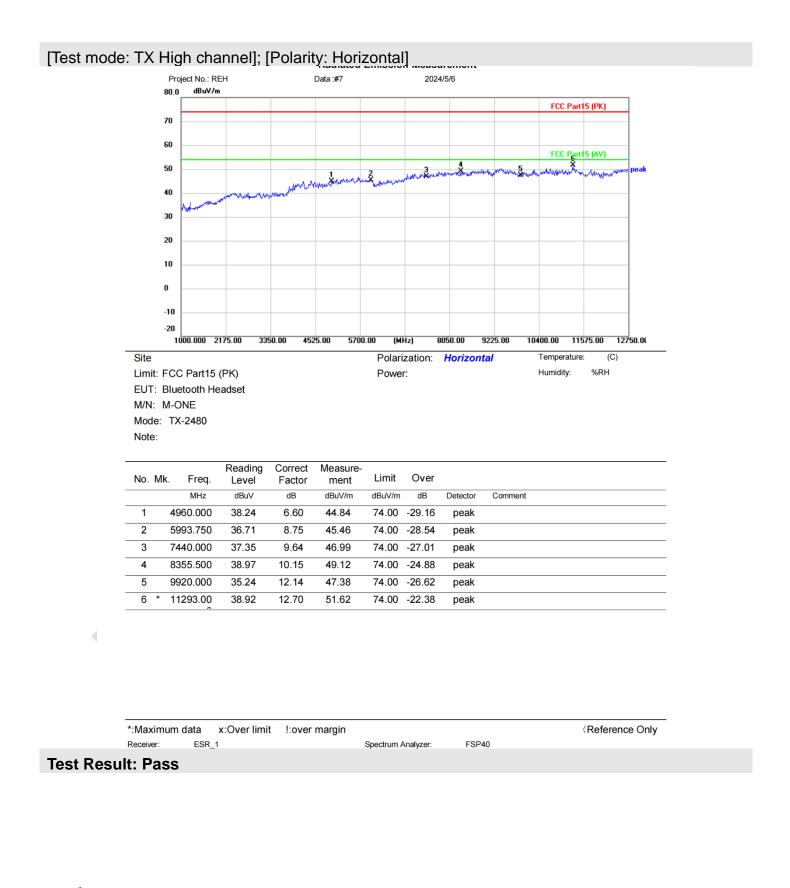
Page 32 of 82



Blue Asia of Technical Services (Shenzhen) Co., Ltd. Tel: +86-755-23059481 Email: marketing@cblueasia.com www.cblueasia.com



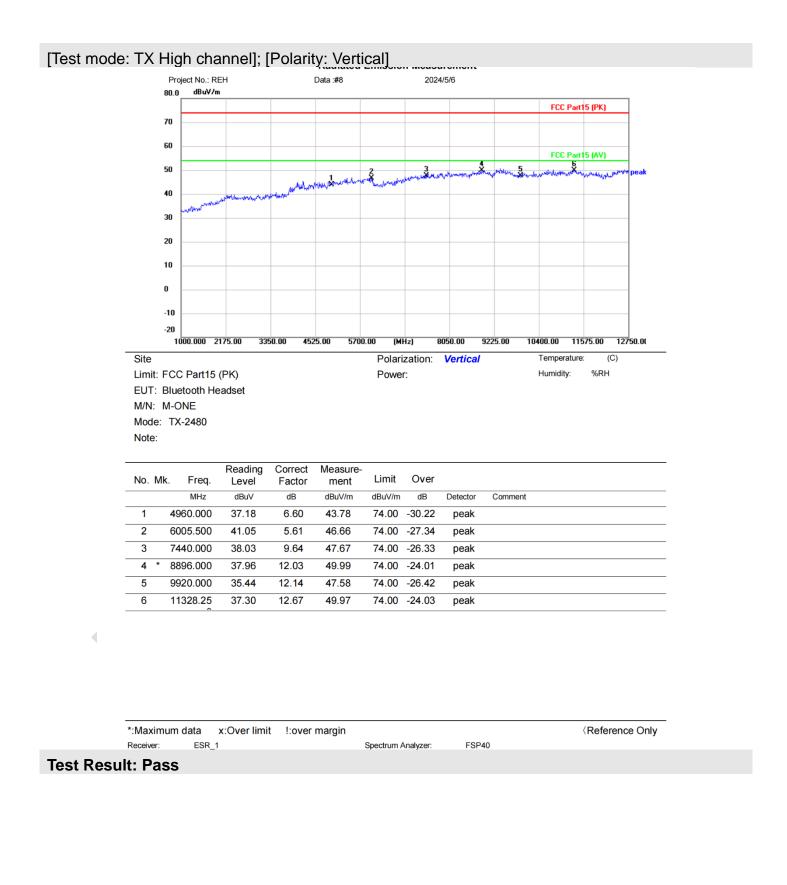
Page 33 of 82



Blue Asia of Technical Services (Shenzhen) Co., Ltd. Tel: +86-755-23059481 Email: marketing@cblueasia.com www.cblueasia.com



Page 34 of 82



Blue Asia of Technical Services (Shenzhen) Co., Ltd. Tel: +86-755-23059481 Email: marketing@cblueasia.com www.cblueasia.com



6.11 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)	ТХ
Test Mode (Final Test)	ТХ

6.11.1 Limit

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.

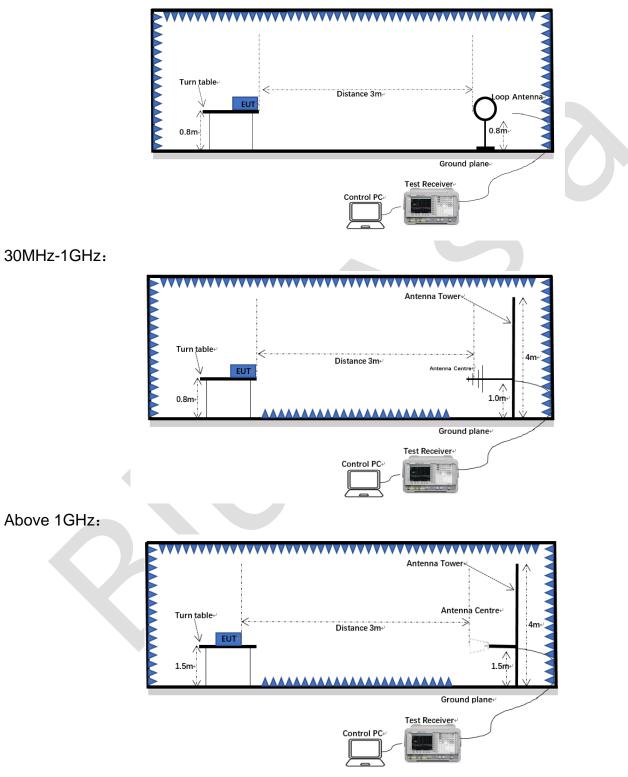
Blue Asia of Technical Services (Shenzhen) Co., Ltd.



Page 36 of 82

6.11.2 Test setup

Below 1GHz:





6.11.3 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.
- 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.

Note 1: Level (dBuV) = Reading (dBuV) + Factor (dB/m)

Note 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.

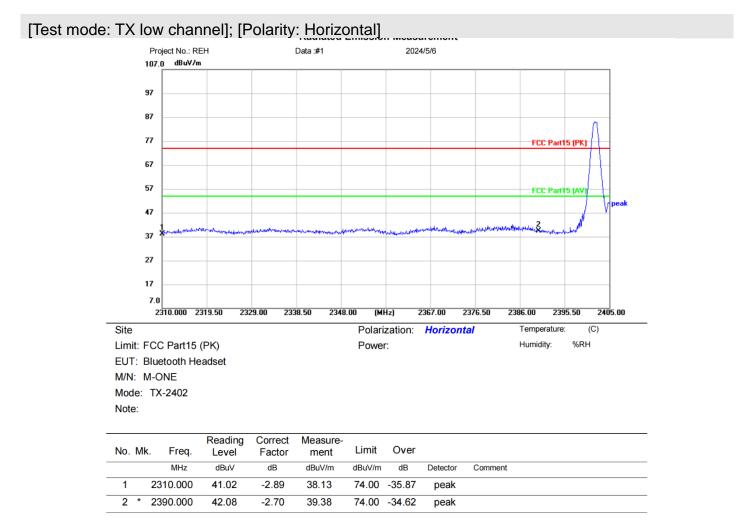
Blue Asia of Technical Services (Shenzhen) Co., Ltd.

Tel: +86-755-23059481 Email: marketing@cblueasia.com www.cblueasia.com



Page 38 of 82

6.11.4 Test data



*:Maximum data	x:Over limit	l:over margin			Reference Only
Receiver: ESR	1		Spectrum Analyzer:	FSP40	

Test Result: Pass

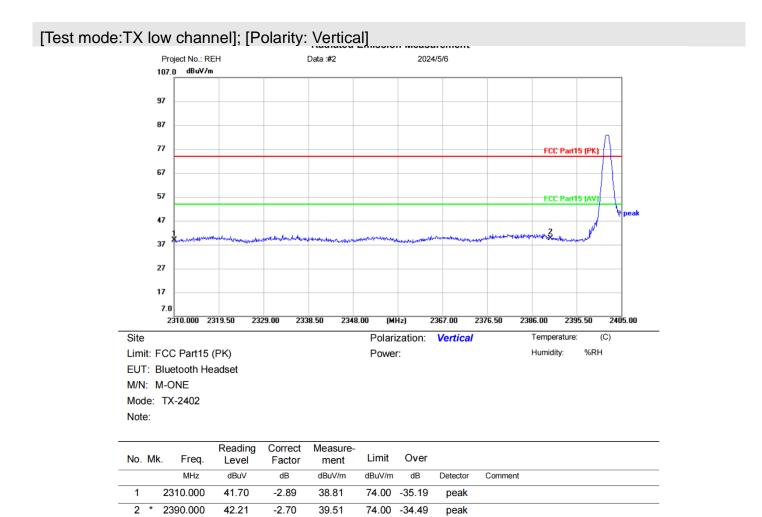
◀

Blue Asia of Technical Services (Shenzhen) Co., Ltd. Tel: +86-755-23059481

Email: marketing@cblueasia.com www.cblueasia.com



Page 39 of 82



*:Maximum data x:Over limit !:over margin Receiver: ESR_1

Spectrum Analyzer:

FSP40

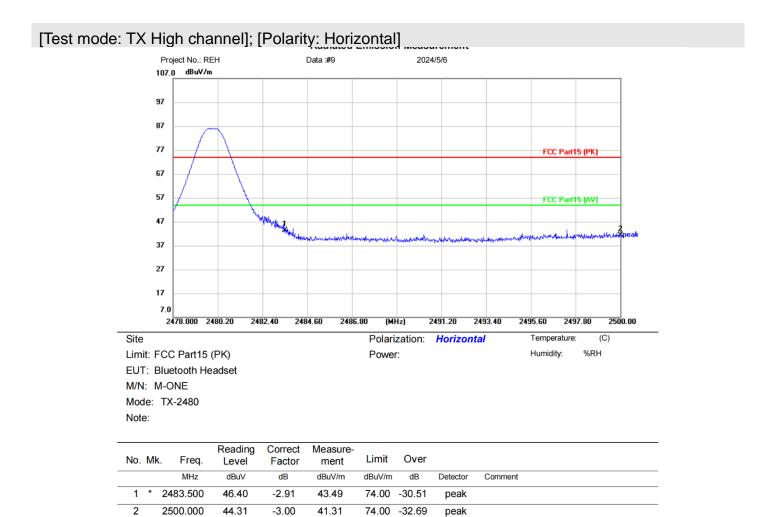
Reference Only

Test Result: Pass

Blue Asia of Technical Services (Shenzhen) Co., Ltd. Tel: +86-755-23059481 Email: marketing@cblueasia.com www.cblueasia.com



Page 40 of 82



*:Maximum data x:Over limit !:over margin Receiver: ESR_1

44.31

-3.00

41.31

Spectrum Analyzer:

FSP40

peak

Reference Only

Test Result: Pass

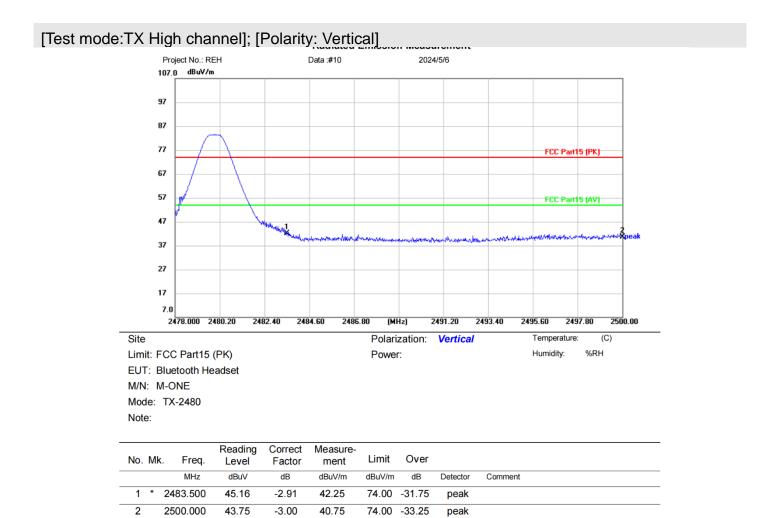
Blue Asia of Technical Services (Shenzhen) Co., Ltd. Tel: +86-755-23059481 Email: marketing@cblueasia.com www.cblueasia.com

2500.000

2



Page 41 of 82



*:Maximum data x:Over limit !:over margin Receiver: ESR_1

Spectrum Analyzer:

FSP40

Reference Only

Test Result: Pass

Blue Asia of Technical Services (Shenzhen) Co., Ltd. Tel: +86-755-23059481 Email: marketing@cblueasia.com www.cblueasia.com



Page 42 of 82

7 Appendix A

7.1 Maximum Conducted Output Power

Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Limit (dBm)	Verdict
NVNT	1-DH1	2402	Ant1	-4.879	21	Pass
NVNT	1-DH1	2441	Ant1	-3.895	21	Pass
NVNT	1-DH1	2480	Ant1	-4.861	21	Pass
NVNT	2-DH1	2402	Ant1	-7.175	21	Pass
NVNT	2-DH1	2441	Ant1	-6.971	21	Pass
NVNT	2-DH1	2480	Ant1	-7.664	21	Pass



Power NVNT 1-DH1 2402MHz Ant1

Power NVNT 1-DH1 2441MHz Ant1

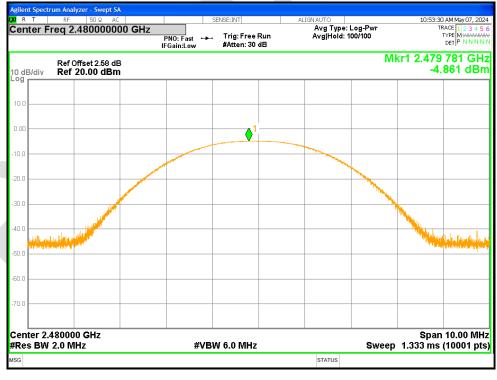
Blue Asia of Technical Services (Shenzhen) Co., Ltd. Tel: +86-755-23059481 Email: marketing@cblueasia.com www.cblueasia.com



Page 43 of 82



Power NVNT 1-DH1 2480MHz Ant1



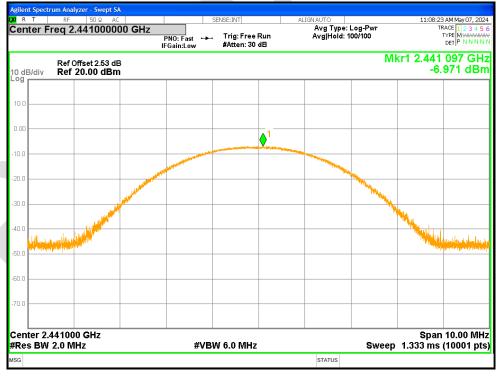
Power NVNT 2-DH1 2402MHz Ant1



Page 44 of 82



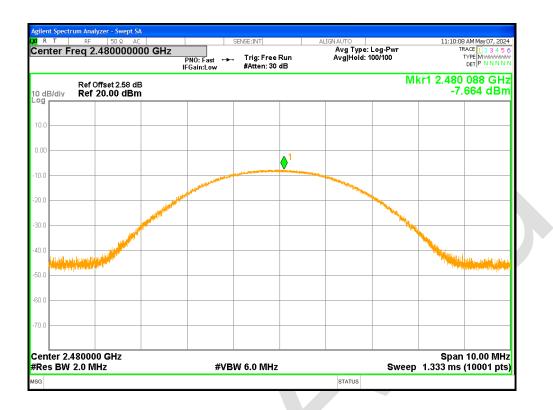
Power NVNT 2-DH1 2441MHz Ant1



Power NVNT 2-DH1 2480MHz Ant1



Page 45 of 82



6

Blue Asia of Technical Services (Shenzhen) Co., Ltd. Tel: +86-755-23059481

Email: <u>marketing@cblueasia.com</u> www.cblueasia.com



Page 46 of 82

7.2-20dB Bandwidth

Condition	Mode	Frequency	Antenna	-20 dB Bandwidth	Limit -20 dB	Verdict
		(MHz)		(MHz)	Bandwidth (MHz)	
NVNT	1-DH1	2402	Ant1	0.983	N/A	Pass
NVNT	1-DH1	2441	Ant1	0.93	N/A	Pass
NVNT	1-DH1	2480	Ant1	0.998	N/A	Pass
NVNT	2-DH1	2402	Ant1	1.237	N/A	Pass
NVNT	2-DH1	2441	Ant1	1.243	N/A	Pass
NVNT	2-DH1	2480	Ant1	1.239	N/A	Pass

-20dB Bandwidth NVNT 1-DH1 2402MHz Ant1



-20dB Bandwidth NVNT 1-DH1 2441MHz Ant1



Page 47 of 82



-20dB Bandwidth NVNT 1-DH1 2480MHz Ant1



-20dB Bandwidth NVNT 2-DH1 2402MHz Ant1



Page 48 of 82



-20dB Bandwidth NVNT 2-DH1 2441MHz Ant1



-20dB Bandwidth NVNT 2-DH1 2480MHz Ant1



Page 49 of 82



Blue Asia of Technical Services (Shenzhen) Co., Ltd.

Tel: +86-755-23059481 Email: <u>marketing@cblueasia.com</u> www.cblueasia.com



Page 50 of 82

7.3 Occupied Channel Bandwidth

Condition	Mode	Frequency (MHz)	Antenna	99% OBW (MHz)
NVNT	1-DH1	2402	Ant1	0.86467
NVNT	1-DH1	2441	Ant1	0.86796
NVNT	1-DH1	2480	Ant1	0.87200
NVNT	2-DH1	2402	Ant1	1.1762
NVNT	2-DH1	2441	Ant1	1.1755
NVNT	2-DH1	2480	Ant1	1.1723

OBW NVNT 1-DH1 2402MHz Ant1



OBW NVNT 1-DH1 2441MHz Ant1

Blue Asia of Technical Services (Shenzhen) Co., Ltd. Tel: +86-755-23059481

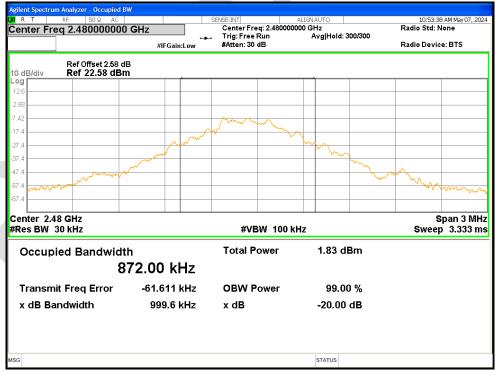
Email: <u>marketing@cblueasia.com</u> www.cblueasia.com



Page 51 of 82



OBW NVNT 1-DH1 2480MHz Ant1



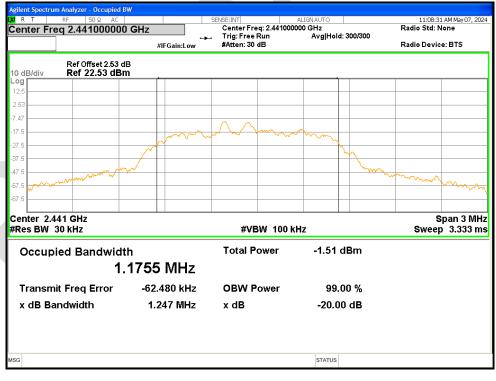
OBW NVNT 2-DH1 2402MHz Ant1



Page 52 of 82



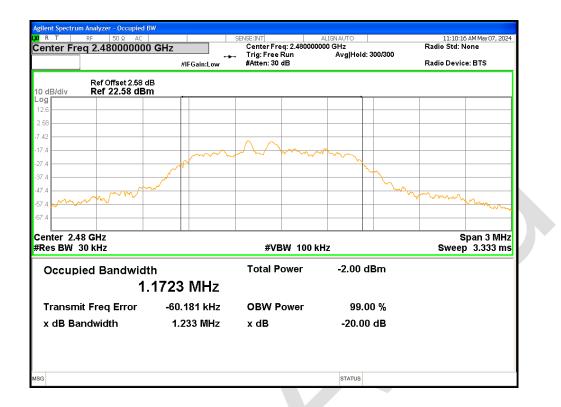
OBW NVNT 2-DH1 2441MHz Ant1



OBW NVNT 2-DH1 2480MHz Ant1



Page 53 of 82



Blue Asia of Technical Services (Shenzhen) Co., Ltd.

Tel: +86-755-23059481 Email: <u>marketing@cblueasia.com</u> www.cblueasia.com



Page 54 of 82

7.4 Band Edge

Condition	Mode	Frequency	Antenna	Hopping	Max Value	Limit	Verdict
		(MHz)		Mode	(dBc)	(dBc)	
NVNT	1-DH1	2402	Ant1	No-Hopping	-50	-20	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	-49.74	-20	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	-46.71	-20	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	-46.17	-20	Pass

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



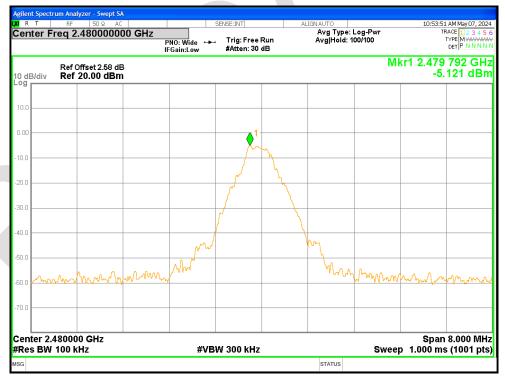
Band Edge NVNT 1-DH1 2402MHz Ant1 No-Hopping Emission



Page 55 of 82



Band Edge NVNT 1-DH1 2480MHz Ant1 No-Hopping Ref



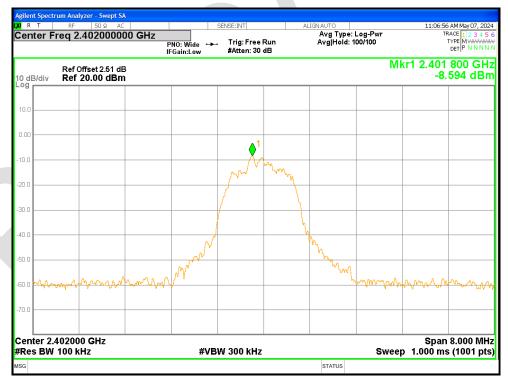
Band Edge NVNT 1-DH1 2480MHz Ant1 No-Hopping Emission



Page 56 of 82



Band Edge NVNT 2-DH1 2402MHz Ant1 No-Hopping Ref



Band Edge NVNT 2-DH1 2402MHz Ant1 No-Hopping Emission



Page 57 of 82



Band Edge NVNT 2-DH1 2480MHz Ant1 No-Hopping Ref



Band Edge NVNT 2-DH1 2480MHz Ant1 No-Hopping Emission



Page 58 of 82

RF 50 Ω r Freq 2.52600	PNC	SENSE:INT D: Fast +++ Trig: I iin:Low #Atter	Free Run n: 30 dB	ALIGN AUTO Avg Type: Avg Hold: 1		TF	AM May 07, 20 RACE 1 2 3 4 5 TYPE M WWW DET P N N N
Ref Offset 2.6 div Ref 20.00 (Mkr1 2.4 -8.	79 9 GH 912 dBi
1							
							-29.04 c
	3						
No harmon	mound man and a second	www.m.m.hmannell	huberna	utiloutonutur	eall-when the mar	hour hours for	mhandunan
2.47600 GHz BW 100 kHz		#\/D\/\ 000			0	Stop 2. p 9.600 ms	57600 GI
	×	#VBW 300		INCTION WIDTH		p 9.000 ms	(1001 p
N 1 f N 1 f N 1 f N 1 f	2.479 9 GHz 2.483 5 GHz 2.500 0 GHz 2.484 0 GHz	-8.912 dBm -57.618 dBm -58.289 dBm -55.218 dBm					
							>

Blue Asia of technical Services (Shenzhen) Co., Ltd.

Tel: +86-755-23059481 Email: <u>marketing@cblueasia.com</u> www.cblueasia.com



Page 59 of 82

7.5 Band Edge(Hopping)

Condition	Mode	Frequency	Antenna	Hopping	Max Value	Limit	Verdict
		(MHz)		Mode	(dBc)	(dBc)	
NVNT	1-DH1	2402	Ant1	Hopping	-47.64	-20	Pass
NVNT	1-DH1	2480	Ant1	Hopping	-46.37	-20	Pass
NVNT	2-DH1	2402	Ant1	Hopping	-44.62	-20	Pass
NVNT	2-DH1	2480	Ant1	Hopping	-43.74	-20	Pass

Band Edge(Hopping) NVNT 1-DH1 2402MHz Ant1 Hopping Ref



Band Edge(Hopping) NVNT 1-DH1 2402MHz Ant1 Hopping Emission



Page 60 of 82



Band Edge(Hopping) NVNT 1-DH1 2480MHz Ant1 Hopping Ref



Band Edge(Hopping) NVNT 1-DH1 2480MHz Ant1 Hopping Emission