

Huarui 7layers High Technology (Suzhou) Co., Ltd. Tower N, Innovation Center, 88 Zhuyi Road, High-tech District, Suzhou City, Anhui Province

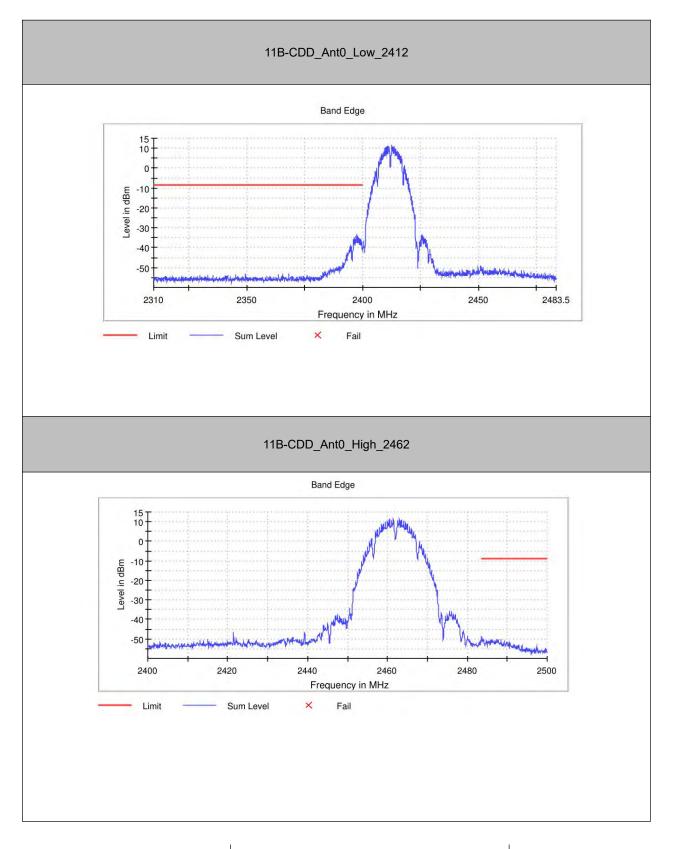


## BAND EDGE MEASUREMENTS

TestMode	Antonno	ChName	Frequency	Result	Limit	Verdict	
Testiviode	Antenna	Chivame	[MHz]	[dBm]	[dBm]	verdici	
	Ant0	Low	2412	See test	See test	PASS	
11B	Anto	LOW	2412	graph	graph	FASS	
	Ant0	High	2462	See test	See test	PASS	
	Anto	riigii	2402	graph	graph	1 400	
	Ant0	Low	2412	See test	See test	PASS	
11G	Anto	LOW	2412	graph	graph	FASS	
i iig	Ant0	High	2462	See test	See test	PASS	
	Anto	riigii	2402	graph	graph	FAGG	
	Ant0 Low	Low	2412	See test	See test	PASS	
11N20	Anto	LOW	2412	graph	graph	FASS	
111120	Ant0	High	2462	See test	See test	PASS	
	Anto	riigii	2402	graph	graph	1 400	
	Ant0	Low	2422	See test	See test	PASS	
11N40			2422	graph	graph	1 400	
111140	Ant0	High	2452	See test	See test	PASS	
	Anto	i ligit	2402	graph	graph	1 400	

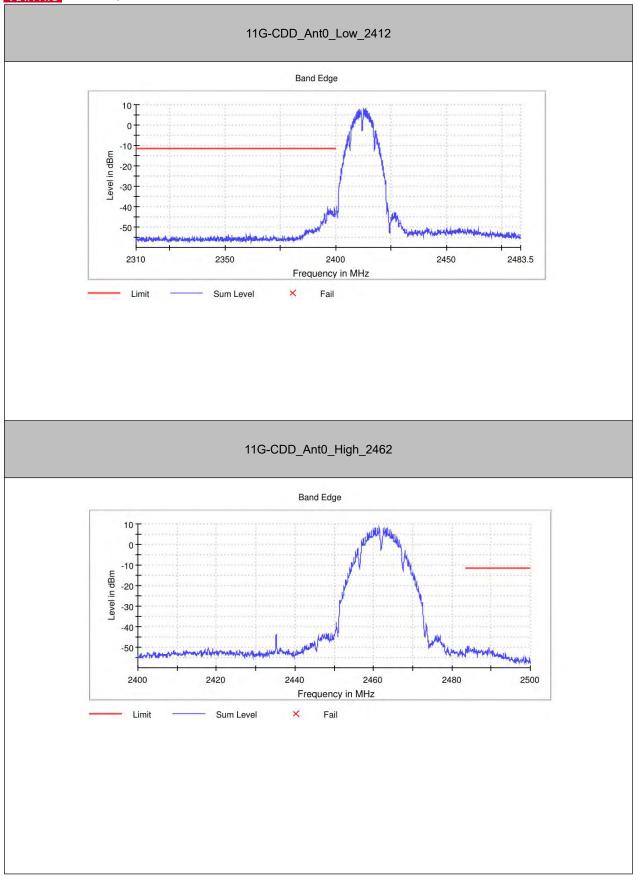


## **TEST GRAPHS**



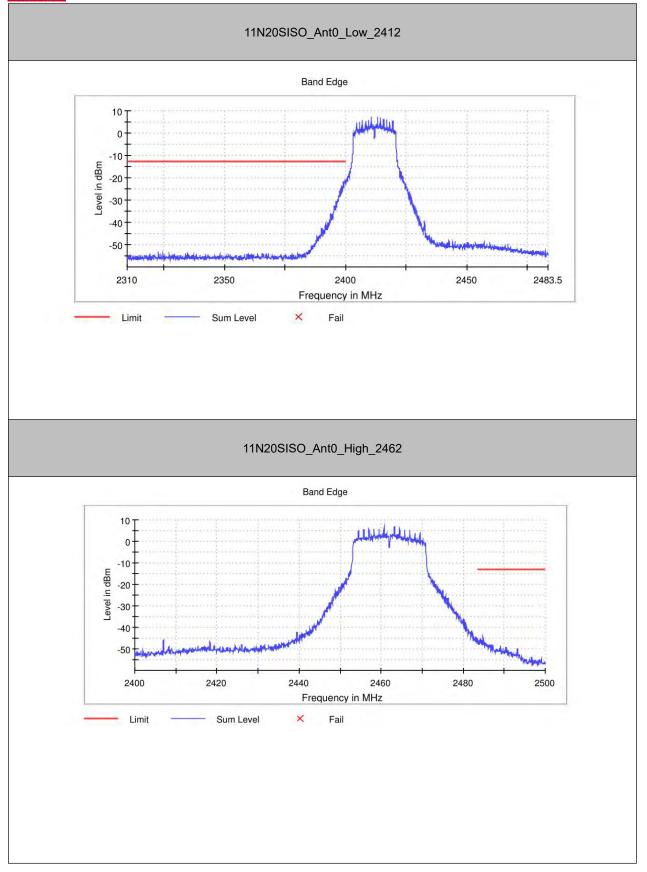
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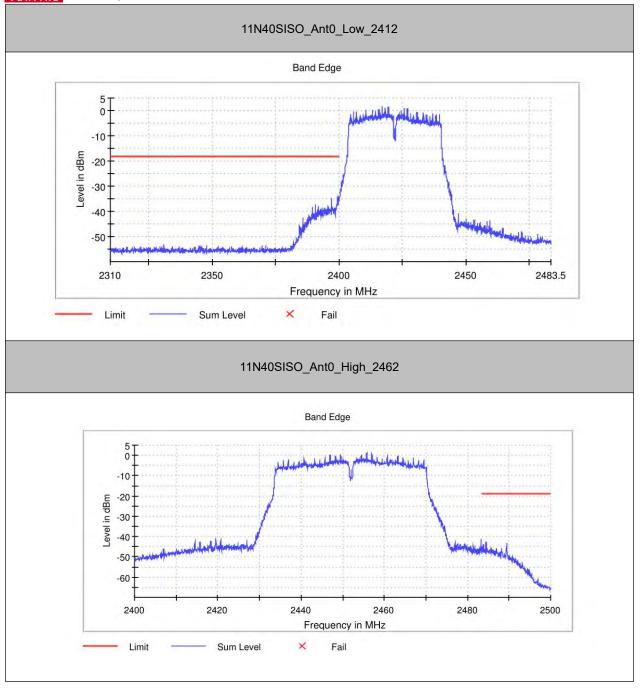
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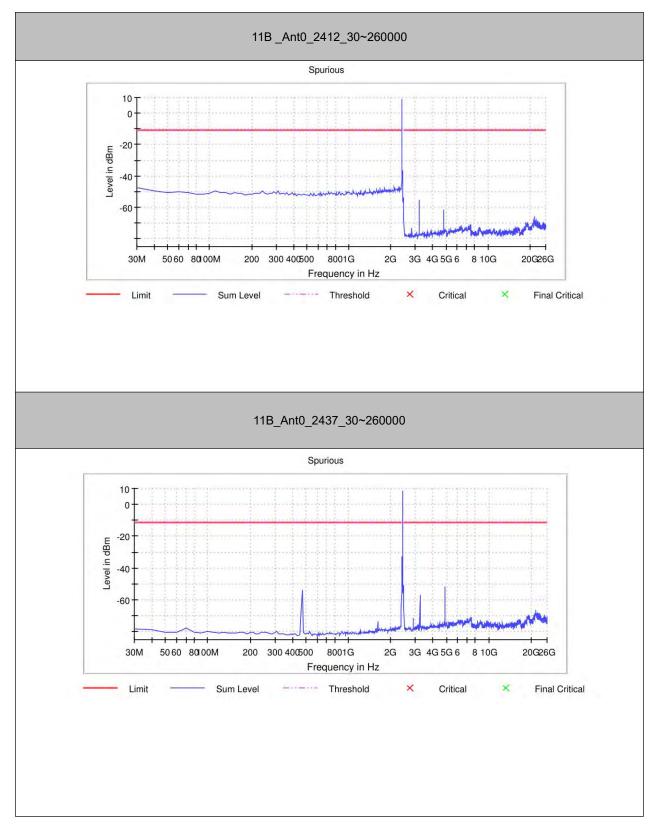


### CONDUCTED SPURIOUS EMISSION

	A		FreqRange	Result	Limit	) (a nali a f	
TestMode	Antenna	Frequency[MHz]	[Mhz]	[dBm]	[dBm]	Verdict	
	Ant0	2412	30~260000	See test	See test	PASS	
	Anto	2412	30~200000	graph	graph	FA33	
11B	Ant0	2437	30~260000	See test	See test	PASS	
		2437	30*200000	graph	graph	1 400	
	Ant0	2462	30~260000	See test	See test	PASS	
		2402	30*200000	graph	graph	1 400	
	Ant0	2412	30~260000	See test	See test	PASS	
		2412	30*200000	graph	graph	1 400	
116	11G Ant0	2/37	30~260000	See test	See test	PASS	
110		2437	30~260000	graph	graph	1 400	
	Ant0	2462	30~260000	See test	See test	PASS	
		2402	30*200000	graph	graph	1 400	
	Ant0	2412	30~260000	See test	See test	PASS	
		2712	30 200000	graph	graph	1700	
11N20	Ant0	2437	30~260000	See test	See test	PASS	
111120		2431	30 200000	graph	graph	1700	
	Ant0	2462	30~260000	See test	See test	PASS	
	Anto	2402	30~200000	graph	graph	FA00	
	Ant0	2422	30~260000	See test	See test	PASS	
	Anto	2422	30~200000	graph	graph	FA00	
11N40	Ant0	2437	30~260000	See test	See test	DAGG	
111140		2437	30~200000	graph	graph	PASS	
	Ant0	2452	30~260000	See test	See test	PASS	
	Anto	2402	30~200000	graph	graph	FA00	



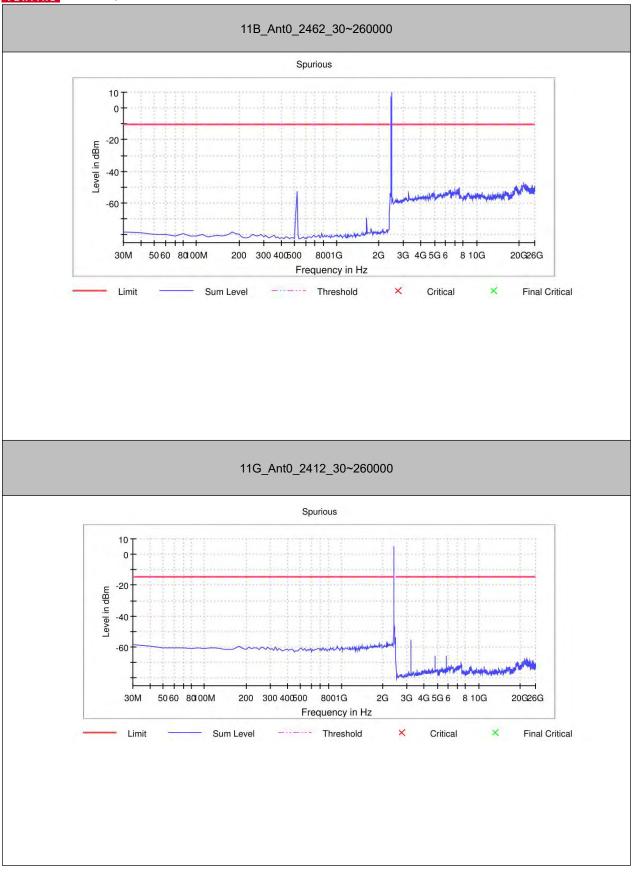
## **TEST GRAPHS**



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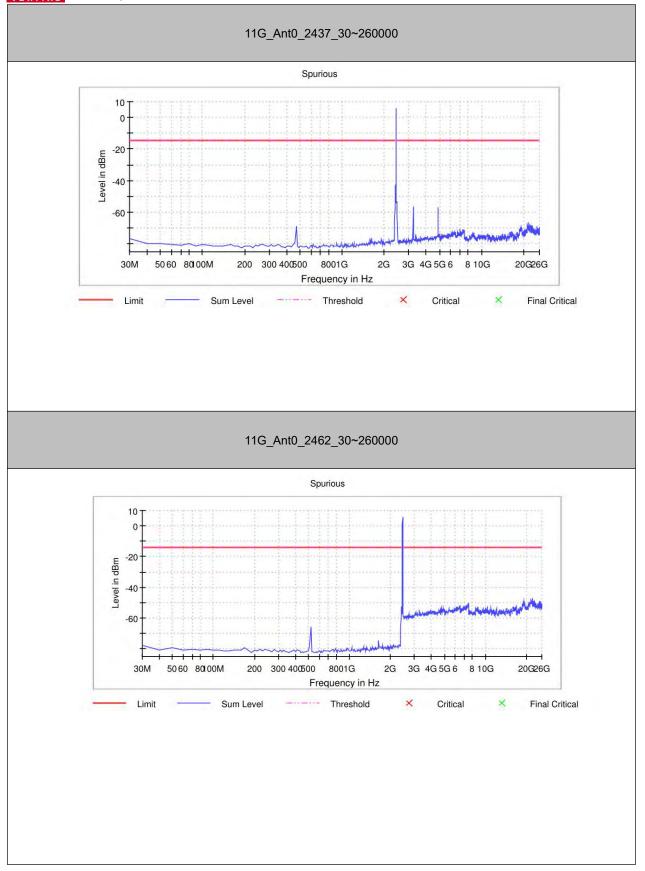
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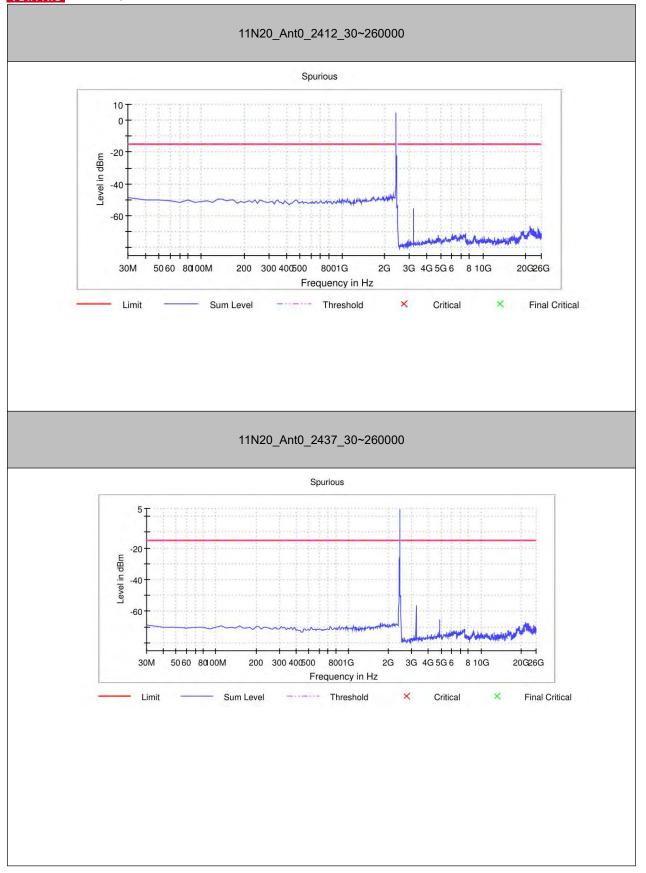




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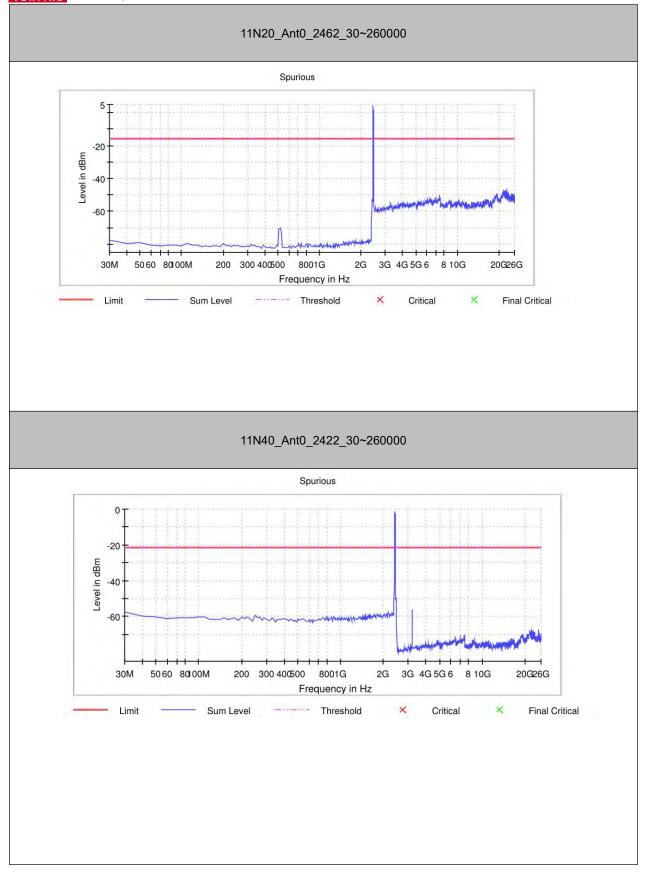




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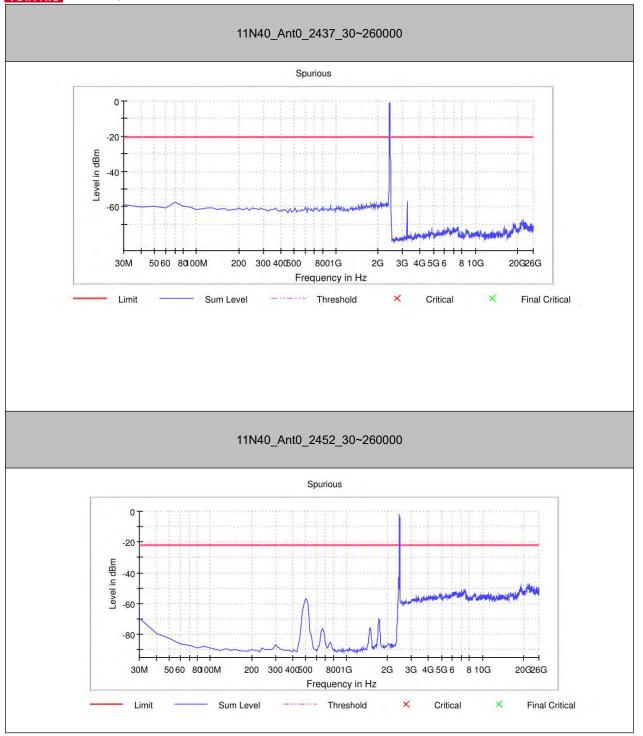




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## DUTY CYCLE

TeetMede	Antenna		Transmission	Transmission	Duty Cycle
TestMode	Antenna	Frequency[MHz]	Duration [ms]	Period [ms]	[%]
11B	Ant0	2412	12.345	12.680	97.36
11G	Ant0	2412	2.052	2.088	98.28
11N20	Ant0	2412	1.909	1.945	98.15
11N40	Ant0	2422	0.940	0.992	94.76



# **TEST GRAPHS**



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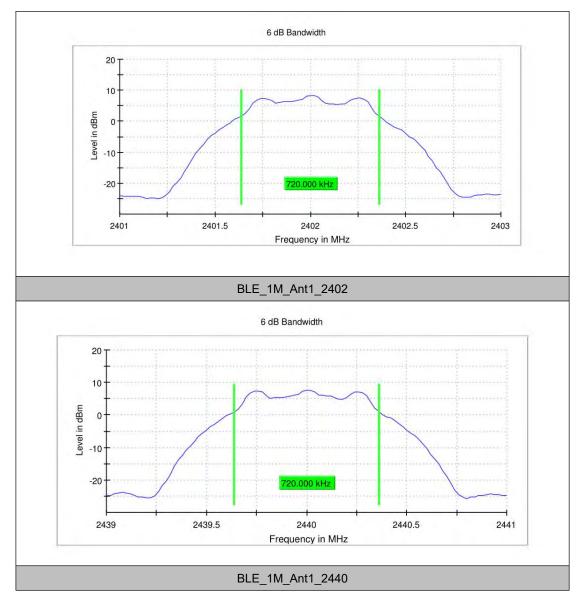
# 7 APPENDIX 2 BLE

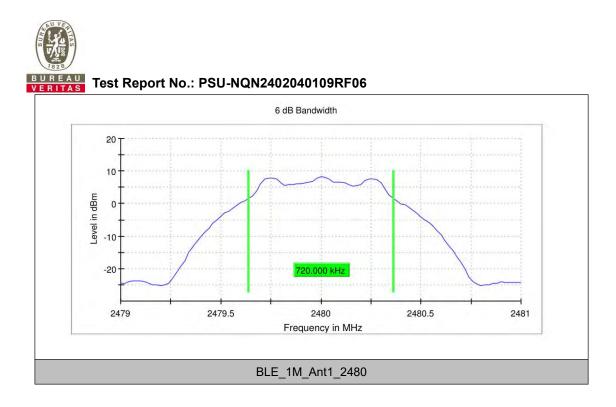
#### DTS BANDWIDTH

TestMode	Antenna	Channel	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
	2402	0.720	2401.640	2402.360	0.5	PASS	
BLE_1M	Ant1	2440	0.720	2439.640	2440.360	0.5	PASS
	-	2480	0.720	2479.640	2480.360	0.5	PASS



# **TEST GRAPHS**





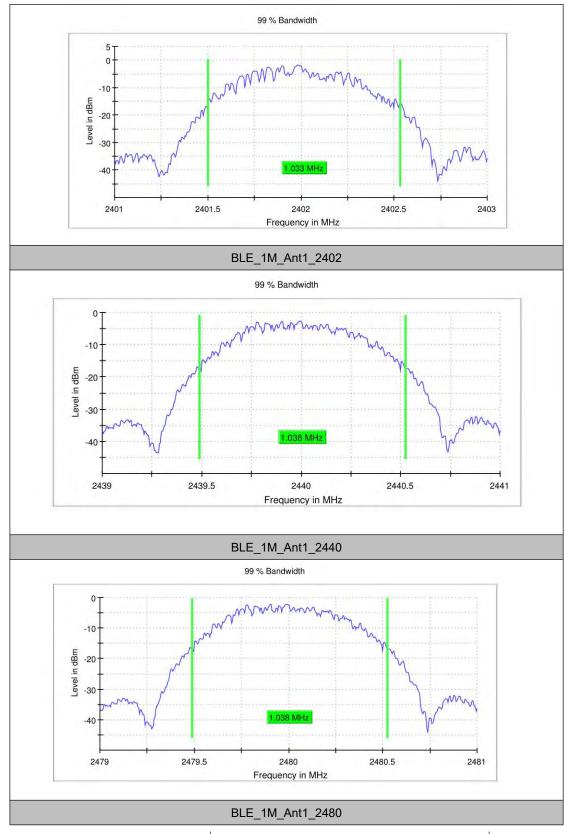


#### **OCCUPIED CHANNEL BANDWIDTH**

TestMode	Antenna	Channel	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
	2402	1.033	2401.501	2402.534		PASS	
BLE_1M	Ant1	2440	1.038	2439.486	2440.524		PASS
		2480	1.038	2479.486	2480.524		PASS



# **TEST GRAPHS**



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#### MAXIMUM CONDUCTED OUTPUT POWER

#### TEST RESULT PEAK

TestMod	Antonno	Channel	Peak	Peak	Conducted	Verdict	Power
е	Antenna		Powert[dBm]	Powert[mw]	Limit[dBm]	verdict	setting
		2402	8.50	7.08	≤30	PASS	Default
1M	Ant1	2440	8.32	6.79	≤30	PASS	Default
		2480	8.67	7.36	≤30	PASS	Default

## **TEST RESULT AVERAGE**

TestMode	Antenna	Channel	Average Power	Conducted Limit[dBm]	Verdict	Power setting
		2402	7.17	/	PASS	Default
1M	Ant1	2440	6.98	/	PASS	Default
		2480	7.34	/	PASS	Default



#### MAXIMUM POWER SPECTRAL DENSITY

TestMode	Antenna	Channel	Result[dBm/3kHz]	Limit[dBm/3kHz]	Verdict
	2402	-9.93	≤8	PASS	
BLE_1M	Ant1	2440	-10.59	≤8	PASS
		2480	-10.29	≤8	PASS



## **TEST GRAPHS**

Ref Level 29.00 dBm		Control Control Control						
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luttiView Spec Ref Level 29,00 dBm Att 20 dB	trum × Sp Offset 1.50 dB	e RBW 3 kHz		_Ant1_240:	2		Wit	1] -10.59 d
lultiView Spec	trum × Sp Offset 1.50 dB	e RBW 3 kHz		_Ant1_240:	2		Mī	1] -10.59 d
IultiView Spec Ref Level 29,00 dBm Att 20 dB requency Sweep	trum × Sp Offset 1.50 dB	e RBW 3 kHz		_Ant1_240;	2		Mi	1] -10.59 d
ultiView Spec Ref Level 29.00 dBm Att 20 dB requency Sweep	trum × Sp Offset 1.50 dB	e RBW 3 kHz		_Ant1_240:	2		MI	1] -10.59 d
ultiView Spec Ref Level 29,00 dBm Att 20 dB requency Sweep dBm dBm	trum X Sp Offset 1.50 dB SWT 1.4 ms (~9.6 ms)	RBW 3 kHz VBW 10 kHz Mod	de Auto FFT					1] -10.59 d 2.440 027 00 0
ultiView Spec Ref Level 29,00 dBm Att 20 dB requency Sweep dBm dBm	trum X Sp Offset 1.50 dB SWT 1.4 ms (~9.6 ms)	RBW 3 kHz VBW 10 kHz Mod	de Auto FFT					1] -10.59 d 2.440 027 00 0
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ultiView Spec Ref Level 29.00 dBm Att 20 dB requency Sweep i dBm dBm dBm 0 dBm 0 dBm 0 dBm 0 dBm	trum X Sp Offset 1.50 dB SWT 1.4 ms (~9.6 ms)	RBW 3 kHz VBW 10 kHz Mod	de Auto FFT			Mmmy		1] -10.59 di 2.440 027 00 0
IultiView Spec Ref Level 29,00 dBm Att 20 dB irequency Sweep 0 dBm dBm	trum X Sp Offset 1.50 dB SWT 1.4 ms (~9.6 ms)	RBW 3 kHz VBW 10 kHz Mod	de Auto FFT			Mmmm		2.440 027 00 0
luttiView Spec Ref Level 29.00 dBm Att 20 dB requency Sweep 0 dBm dBm 0 dBm 0 dBm 0 dBm 0 dBm 0 dBm 0 dBm 0 dBm 0 dBm 0 dBm	trum X Sp Offset 1.50 dB SWT 1.4 ms (~9.6 ms)	RBW 3 kHz VBW 10 kHz Mod	de Auto FFT			Maral		1] -10.59 di 2.440 027 00 0
ultiView Spec Ref Level 29,00 dBm Att 20 dB requency Sweep I dBm dBm dBm D dBm D dBm D dBm D dBm D dBm D dBm D dBm D dBm	trum X Sp Offset 1.50 dB SWT 1.4 ms (~9.6 ms)	RBW 3 kHz VBW 10 kHz Mod	de Auto FFT					1] -10.59 d 2.440 027 00 0
lultiView Spec Ref Level 29,00 dBm Att 20 dB requency Sweep 0 dBm 0 dBm	trum X Sp Offset 1.50 dB SWT 1.4 ms (~9.6 ms)	RBW 3 kHz VBW 10 kHz Mov	le Auto FFT			WWWWW		1] -10.59 d 2.440 027 00 d
luttiView Spec Ref Level 29,00 dBm Att 20 dB requency Sweep 0 dBm 0 dBm 0 dBm 0 dBm 0 dBm 0 dBm 0 dBm 0 dBm	trum X Sp Offset 1.50 dB SWT 1.4 ms (~9.6 ms)	RBW 3 kHz VBW 10 kHz Mod	le Auto FFT			Messuring		1] -10.59 di 2.440 027 00 0

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Frequency Sweep								O 1Pk Max
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IO OBIN	annon	Mumm	man	Mannan	nymm	mmm	moto a	
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40 dBm								
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50 dBm								
F 2.48 GHz	i.	1001 pts		1	08.0 kHz/			Span 1.08 M

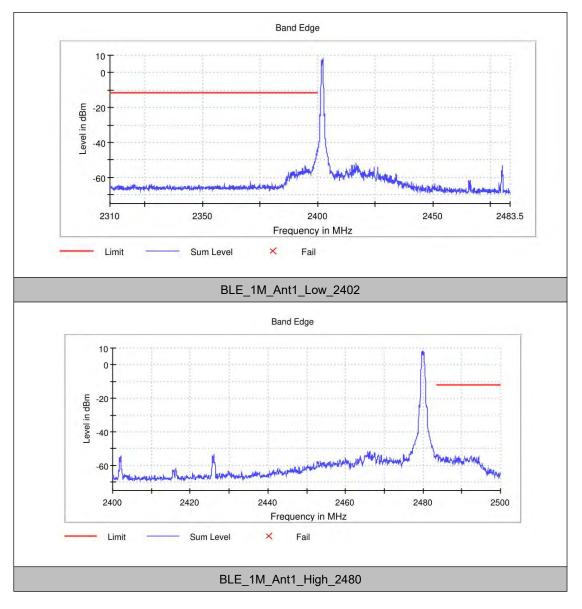


## **BAND EDGE MEASUREMENTS**

TestMode	Antenna	ChName	Channel	Result[dBm]	Limit[dBm]	Verdict
	Low	2402	See test graph	See test graph	PASS	
BLE_1M	Ant1	High	2480	See test graph	See test graph	PASS



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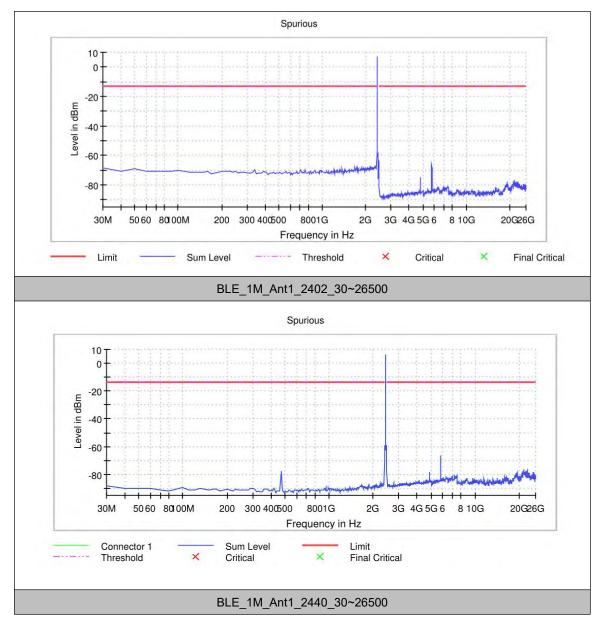


## CONDUCTED SPURIOUS EMISSION

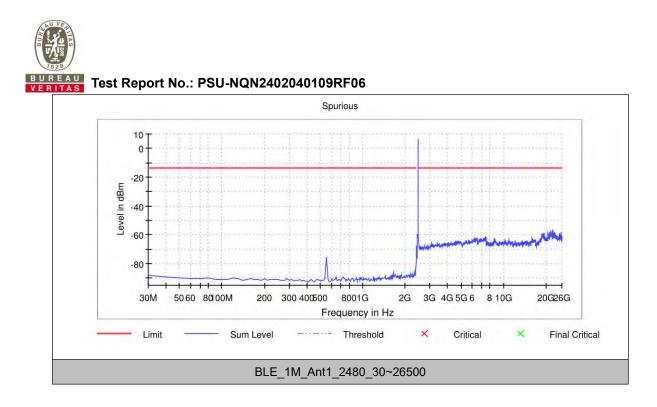
TestMode	Antenna	Channel	FreqRange [MHz]	Result[dBm]	Limit[dBm]	Verdict
		2402	30~26500	See test graph	See test graph	PASS
BLE_1M	Ant1	2440	30~26500	See test graph	See test graph	PASS
		2480	30~26500	See test graph	See test graph	PASS



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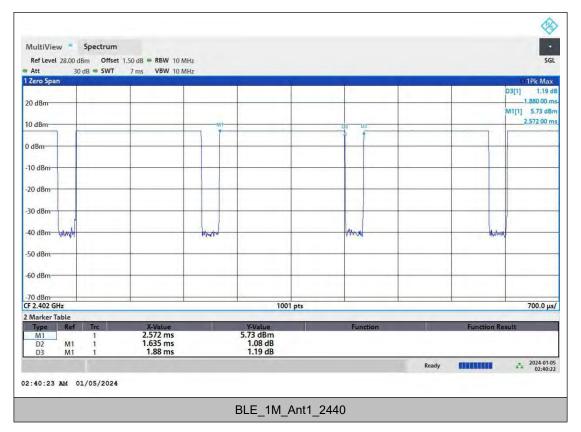


## DUTY CYCLE

TestMode	Antenna	Channel	ON Time [ms]	Period [ms]	x	DC [%]	xFactor	Limit	Verdict
BLE_1M	Ant1	2402	1.635	1.880	0.8697	86.97	0.61		PASS



## **TEST GRAPHS**



--END---