





BUREAU
VERITAS

Test Report No.: PSU-QSU2306120115RF12



11AX20MIMO_Ant1_2462_106Tone_RU54_30~1000



11AX20MIMO_Ant1_2462_106Tone_RU54_1000~26500



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Test Report No.: PSU-QSU2306120115RF12



11AX20MIMO_Ant1_2462_242Tone_RU61_0~Reference



11AX20MIMO_Ant1_2462_242Tone_RU61_30~1000





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Test Report No.: PSU-QSU2306120115RF12



11AX20MIMO_Ant2_2462_26Tone_RU8_30~1000



11AX20MIMO_Ant2_2462_26Tone_RU8_1000~26500



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Test Report No.: PSU-QSU2306120115RF12



11AX20MIMO_Ant2_2462_52Tone_RU40_0~Reference



11AX20MIMO_Ant2_2462_52Tone_RU40_30~1000



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Test Report No.: PSU-QSU2306120115RF12



11AX20MIMO_Ant2_2462_52Tone_RU40_1000~26500



11AX20MIMO_Ant2_2462_106Tone_RU54_0~Reference



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Test Report No.: PSU-QSU2306120115RF12



11AX20MIMO_Ant2_2462_106Tone_RU54_30~1000



11AX20MIMO_Ant2_2462_106Tone_RU54_1000~26500



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Test Report No.: PSU-QSU2306120115RF12



11AX20MIMO_Ant2_2462_242Tone_RU61_0~Reference

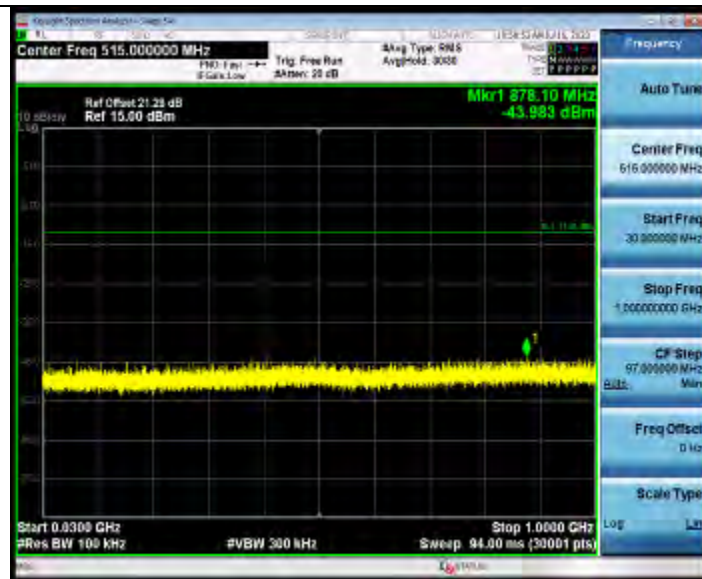


11AX20MIMO_Ant2_2462_242Tone_RU61_30~1000



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Test Report No.: PSU-QSU2306120115RF12



11AX20MIMO_Ant2_2462_242Tone_RU61_1000~26500



11AX40MIMO_Ant1_2422_242Tone_RU61_0~Reference



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VERITAS

Test Report No.: PSU-QSU2306120115RF12



11AX40MIMO_Ant1_2422_242Tone_RU61_30~1000



11AX40MIMO_Ant1_2422_242Tone_RU61_1000~26500



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Test Report No.: PSU-QSU2306120115RF12



11AX40MIMO_Ant1_2422_484Tone_RU65_0~Reference



11AX40MIMO_Ant1_2422_484Tone_RU65_30~1000



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Test Report No.: PSU-QSU2306120115RF12



11AX40MIMO_Ant1_2422_484Tone_RU65_1000~26500



11AX40MIMO_Ant2_2422_242Tone_RU61_0~Reference



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Test Report No.: PSU-QSU2306120115RF12



11AX40MIMO_Ant2_2422_242Tone_RU61_30~1000



11AX40MIMO_Ant2_2422_242Tone_RU61_1000~26500



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Test Report No.: PSU-QSU2306120115RF12



11AX40MIMO_Ant2_2422_484Tone_RU65_0~Reference



11AX40MIMO_Ant2_2422_484Tone_RU65_30~1000



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Test Report No.: PSU-QSU2306120115RF12



11AX40MIMO_Ant2_2422_484Tone_RU65_1000~26500



11AX40MIMO_Ant1_2437_484Tone_RU65_0~Reference



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Test Report No.: PSU-QSU2306120115RF12



11AX40MIMO_Ant1_2437_484Tone_RU65_30~1000



11AX40MIMO_Ant1_2437_484Tone_RU65_1000~26500



Keysight Spectrum Analyzer - Sweep On

Center Freq 13.750000000 GHz

Trig: Free Run

Span: 20 dB

Mag Type: dBm

Avg Mode: RMS

Bandwidth: 9000

Resolution: 100 kHz

Ref Offset 21.22 dB

Ref 15.00 dBm

Mkr2 24.856 95 GHz

-24.320 dBm

Start 1.00 GHz

#Res BW 100 kHz

#VBW 300 kHz

Stop 26.50 GHz

Sweep 2.438 s (30001 pts)

MARK	MODE	FREQ	AMPL
1	N	F	F
2	N	F	F
3			
4			
5			
6			
7			
8			
9			
10			
11			

Frequency

Auto Tune

Center Freq 13.750000000 GHz

Start Freq 1.000000000 GHz

Stop Freq 26.500000000 GHz

CF Step 2.560000000 GHz

Bandwidth 9000

Resolution 100 kHz

Frequency Offset 0.000000000 GHz

Scale Type Log

Keysight Spectrum Analyzer - Sweep 501

Center Freq 2.437000000 GHz

Ref Offset 21 dB
Ref 30.00 dBm

Mkr1 2.432 02 GHz
0.714 dBm

Auto Tune

Center Freq
2.437000000 GHz

Start Freq
2.437600000 GHz

Stop Freq
2.467000000 GHz

CF Step
6.000000 MHz

Freq Offset
0 Hz

Scale Type
Log

Center 2.43700 GHz
#Res BW 100 kHz

#VBW 300 kHz

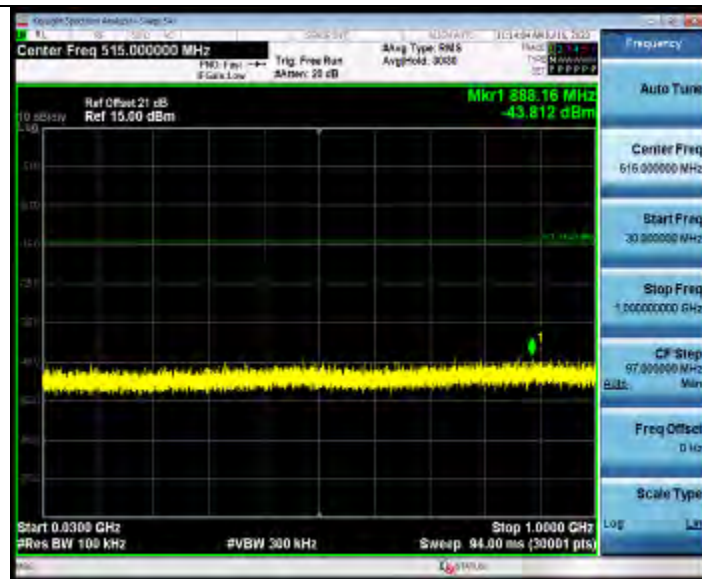
Span 60.00 MHz
Sweep 5.886 ms (1001 pts)

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Test Report No.: PSU-QSU2306120115RF12



11AX40MIMO_Ant2_2437_484Tone_RU65_1000~26500



11AX40MIMO_Ant1_2452_242Tone_RU62_0~Reference



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VERITAS

Test Report No.: PSU-QSU2306120115RF12



11AX40MIMO_Ant1_2452_242Tone_RU62_30~1000



11AX40MIMO_Ant1_2452_242Tone_RU62_1000~26500

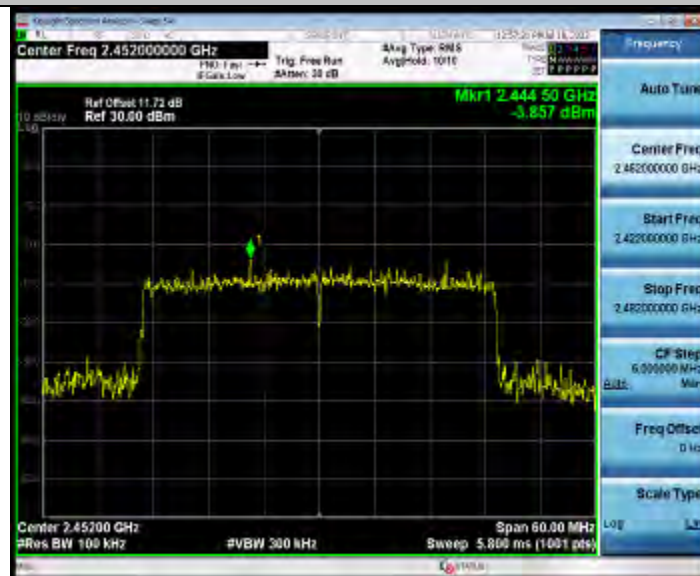


BUREAU
VERITAS

Test Report No.: PSU-QSU2306120115RF12



11AX40MIMO_Ant1_2452_484Tone_RU65_0~Reference



11AX40MIMO_Ant1_2452_484Tone_RU65_30~1000



BUREAU
VERITAS

Test Report No.: PSU-QSU2306120115RF12



11AX40MIMO_Ant1_2452_484Tone_RU65_1000~26500



11AX40MIMO_Ant2_2452_242Tone_RU62_0~Reference



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Test Report No.: PSU-QSU2306120115RF12



11AX40MIMO_Ant2_2452_242Tone_RU62_30~1000



11AX40MIMO_Ant2_2452_242Tone_RU62_1000~26500

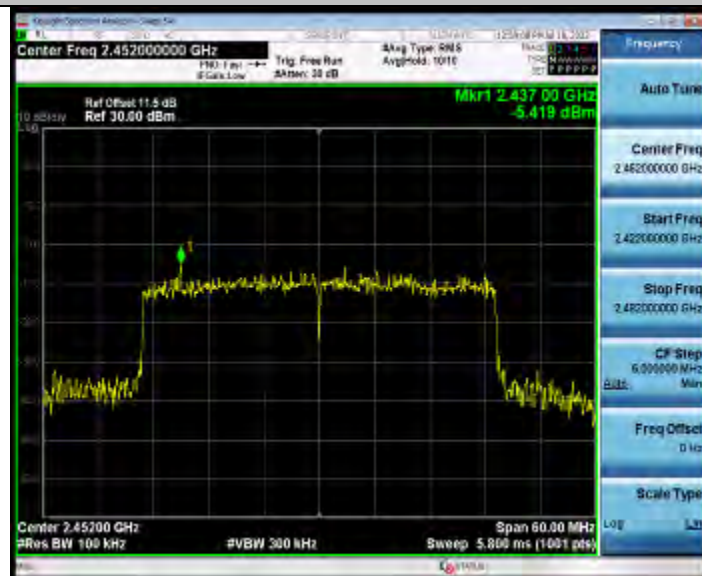


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VERITAS

Test Report No.: PSU-QSU2306120115RF12



11AX40MIMO_Ant2_2452_484Tone_RU65_0~Reference



11AX40MIMO_Ant2_2452_484Tone_RU65_30~1000



BUREAU
VERITAS

Test Report No.: PSU-QSU2306120115RF12



11AX40MIMO_Ant2_2452_484Tone_RU65_1000~26500





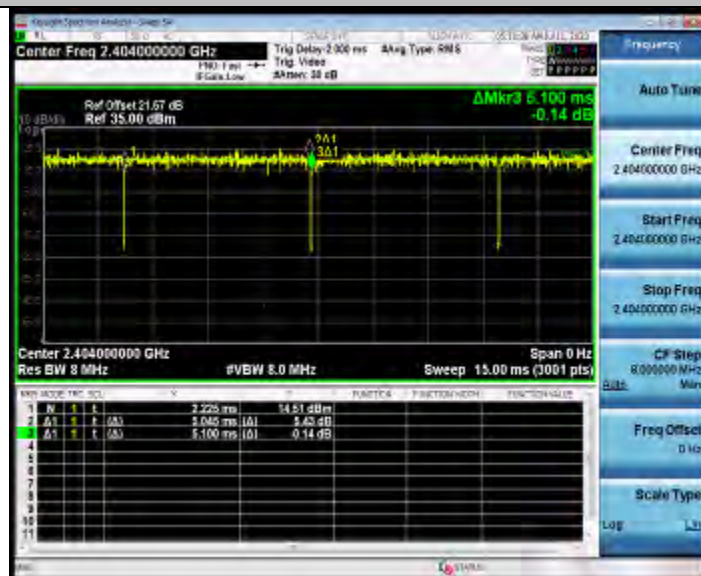
Test Report No.: PSU-QSU2306120115RF12

DUTY CYCLE TEST RESULT

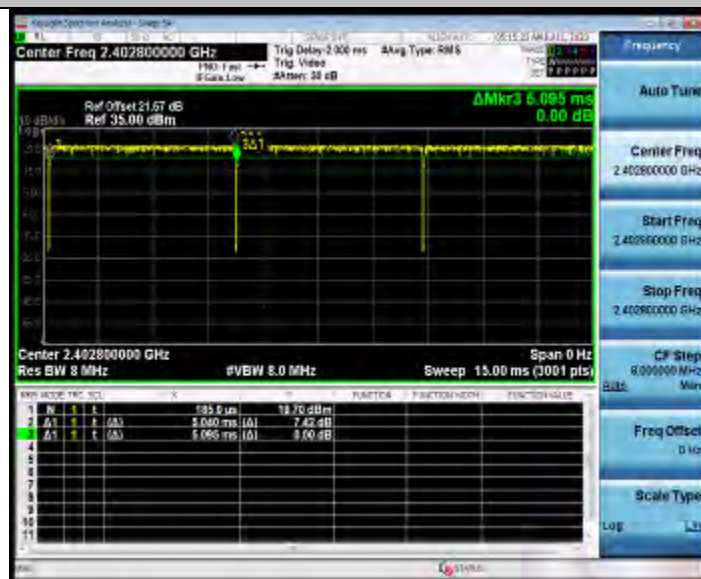
TestMode	Antenna	Frequency[MHz]	RuSize	RuIndex	Transmission Duration [ms]	Transmission Period [ms]	Duty Cycle [%]
11AX20MIMO	Ant1	2412	26Tone	RU0	5.05	5.10	99.02
			52Tone	RU37	5.04	5.10	98.82
			106Tone	RU53	2.40	2.46	97.56
			242Tone	RU61	1.08	1.13	95.58
	Ant2	2412	26Tone	RU0	5.05	5.10	99.02
			52Tone	RU37	5.04	5.10	98.82
			106Tone	RU53	2.40	2.46	97.56
			242Tone	RU61	1.08	1.13	95.58
	Ant1	2437	242Tone	RU61	1.08	1.14	94.74
	Ant2	2437	242Tone	RU61	1.08	1.13	95.58
	Ant1	2462	26Tone	RU8	5.05	5.10	99.02
			52Tone	RU40	5.04	5.10	98.82
			106Tone	RU54	2.40	2.46	97.56
			242Tone	RU61	1.08	1.13	95.58
	Ant2	2462	26Tone	RU8	5.05	5.10	99.02
			52Tone	RU40	5.04	5.10	98.82
			106Tone	RU54	2.40	2.45	97.96
			242Tone	RU61	1.08	1.14	94.74
11AX40MIMO	Ant1	2422	242Tone	RU61	1.08	1.13	95.58
			484Tone	RU65	0.57	0.62	91.94
	Ant2	2422	242Tone	RU61	1.08	1.13	95.58
			484Tone	RU65	0.57	0.62	91.94
	Ant1	2437	484Tone	RU65	0.57	0.62	91.94
	Ant2	2437	484Tone	RU65	0.57	0.62	91.94
	Ant1	2452	242Tone	RU62	1.08	1.13	95.58
			484Tone	RU65	0.57	0.62	91.94
	Ant2	2452	242Tone	RU62	1.08	1.13	95.58
			484Tone	RU65	0.57	0.62	91.94

TEST GRAPHS

11AX20MIMO_Ant1_2412_26Tone_RU0



11AX20MIMO_Ant1_2412_52Tone_RU37

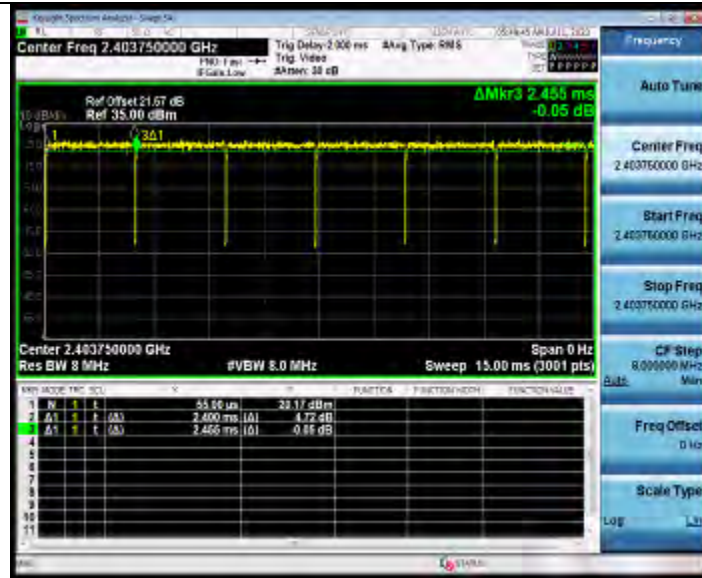


11AX20MIMO_Ant1_2412_106Tone_RU53

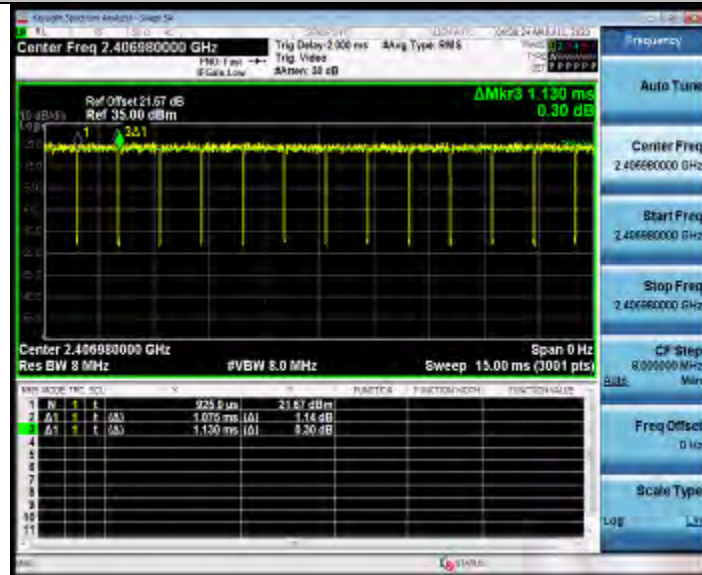


BUREAU
VERITAS

Test Report No.: PSU-QSU2306120115RF12



11AX20MIMO_Ant1_2412_242Tone_RU61

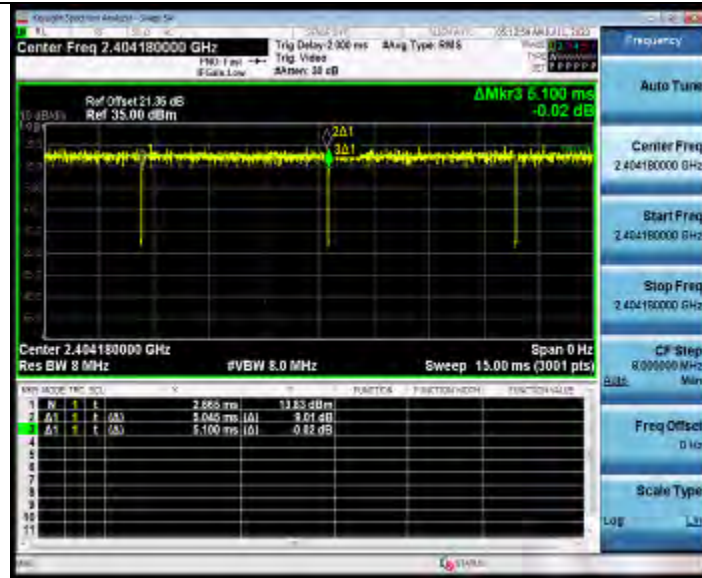


11AX20MIMO_Ant2_2412_26Tone_RU0

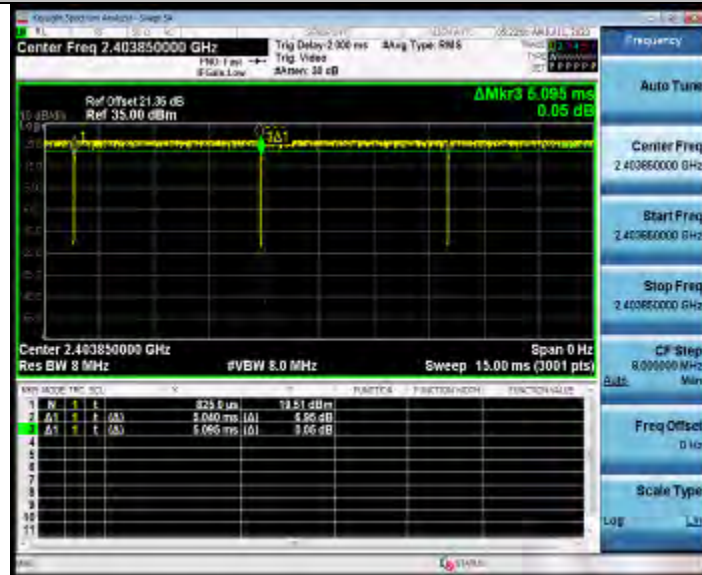


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VERITAS

Test Report No.: PSU-QSU2306120115RF12



11AX20MIMO_Ant2_2412_52Tone_RU37

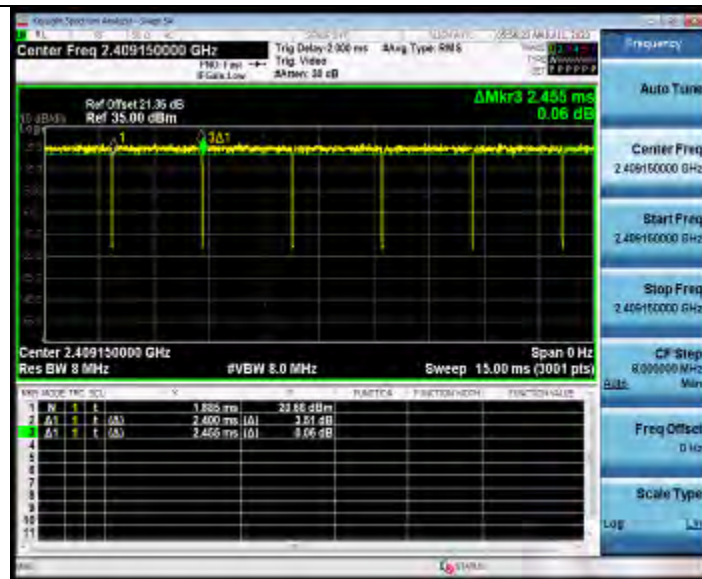


11AX20MIMO_Ant2_2412_106Tone_RU53

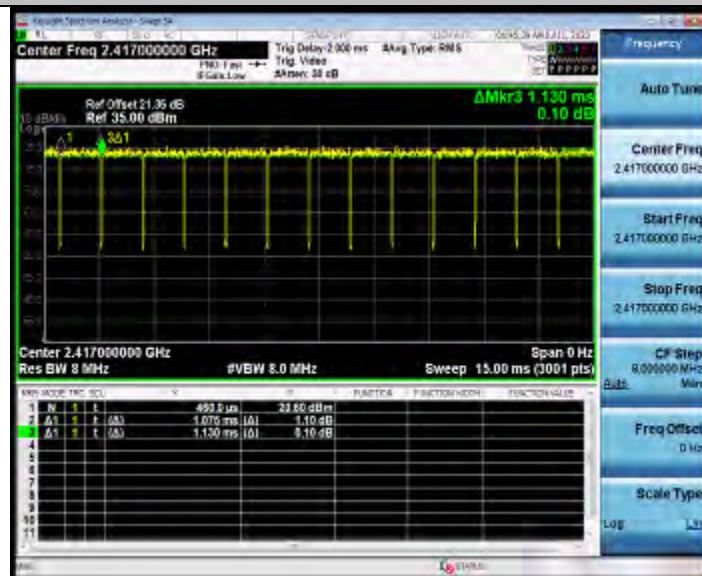


BUREAU
VERITAS

Test Report No.: PSU-QSU2306120115RF12



11AX20MIMO_Ant2_2412_242Tone_RU61

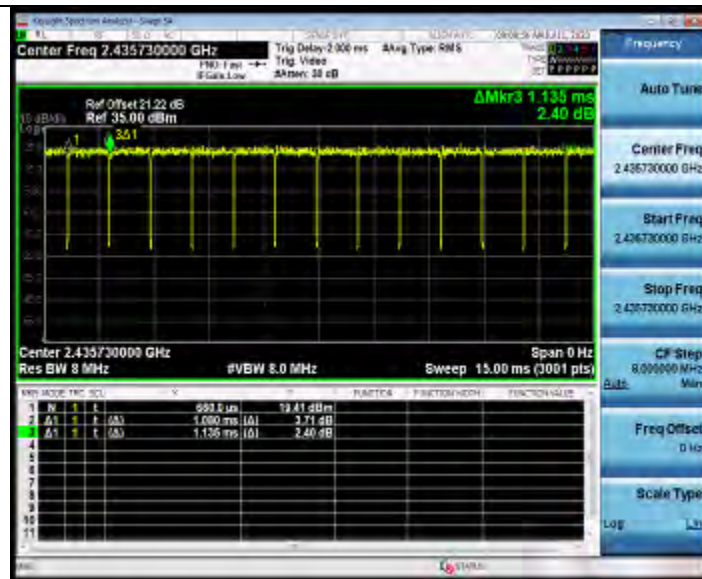


11AX20MIMO_Ant1_2437_242Tone_RU61

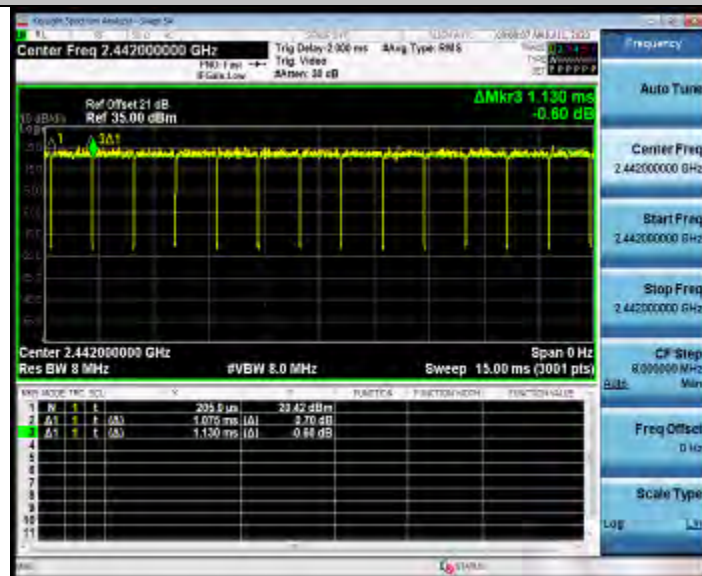


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VERITAS

Test Report No.: PSU-QSU2306120115RF12



11AX20MIMO_Ant2_2437_242Tone_RU61

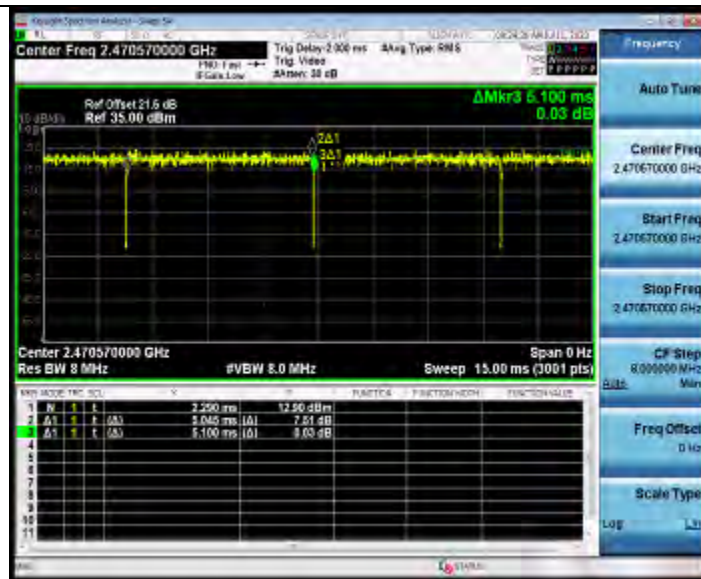


11AX20MIMO_Ant1_2462_26Tone_RU8

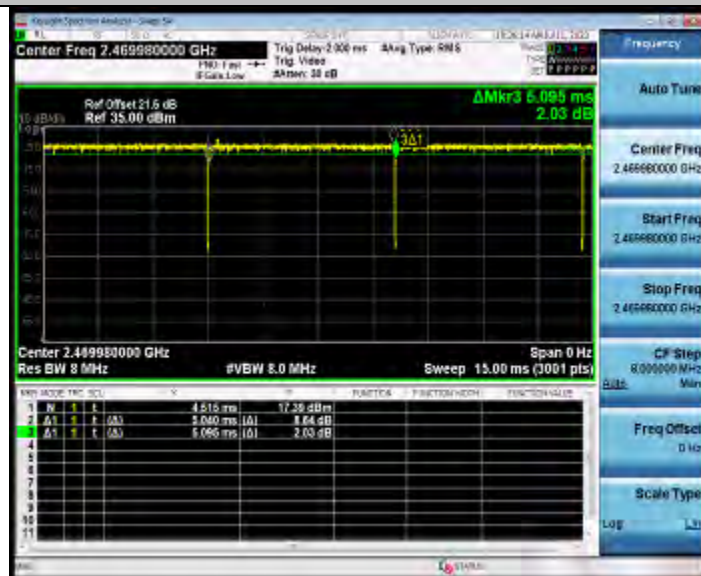


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VERITAS

Test Report No.: PSU-QSU2306120115RF12



11AX20MIMO_Ant1_2462_52Tone_RU40

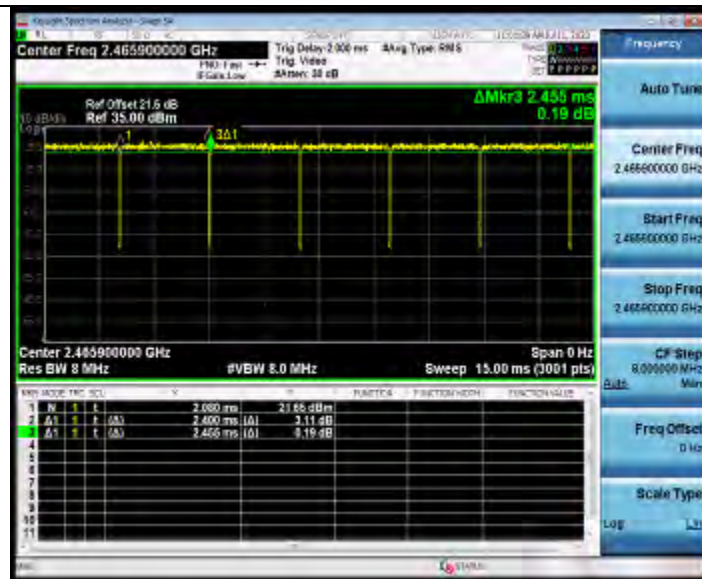


11AX20MIMO_Ant1_2462_106Tone_RU54

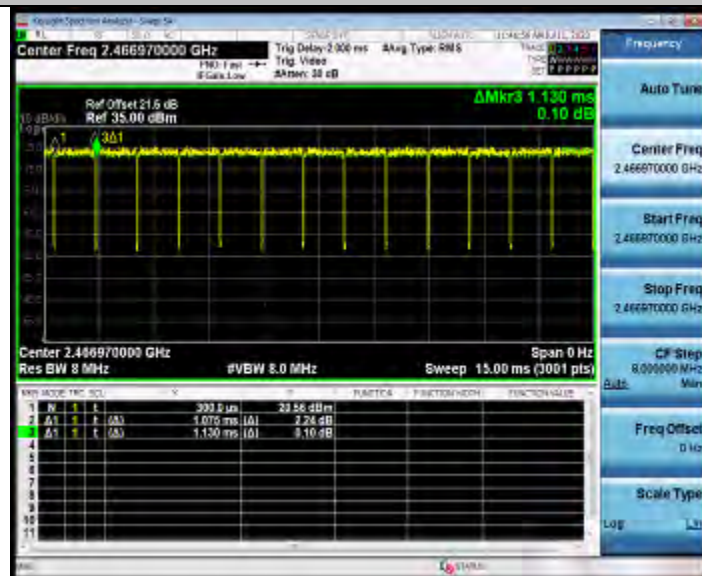


BUREAU
VERITAS

Test Report No.: PSU-QSU2306120115RF12



11AX20MIMO_Ant1_2462_242Tone_RU61

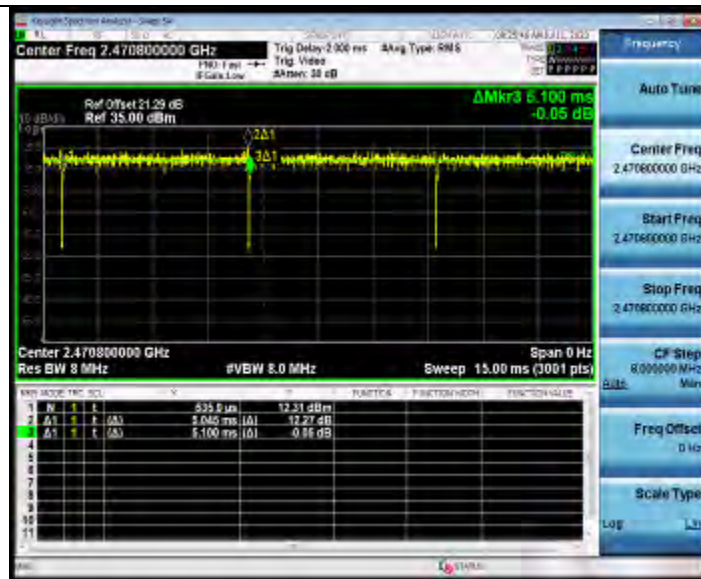


11AX20MIMO_Ant2_2462_26Tone_RU8

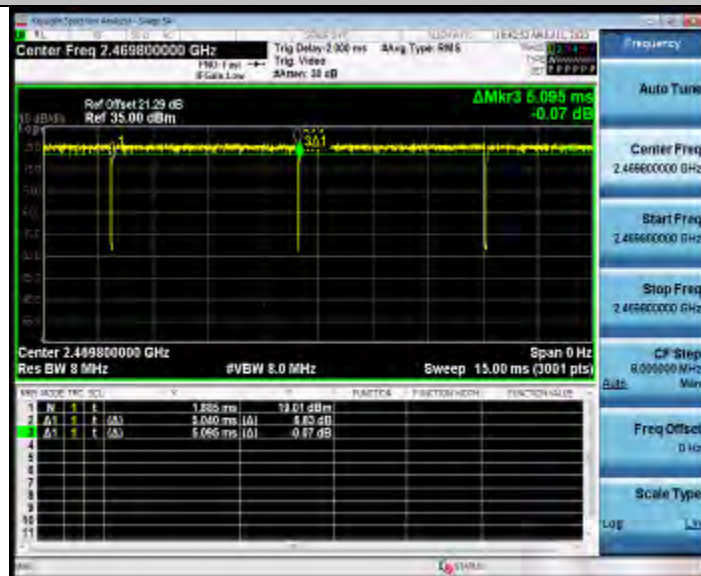


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VERITAS

Test Report No.: PSU-QSU2306120115RF12



11AX20MIMO_Ant2_2462_52Tone_RU40

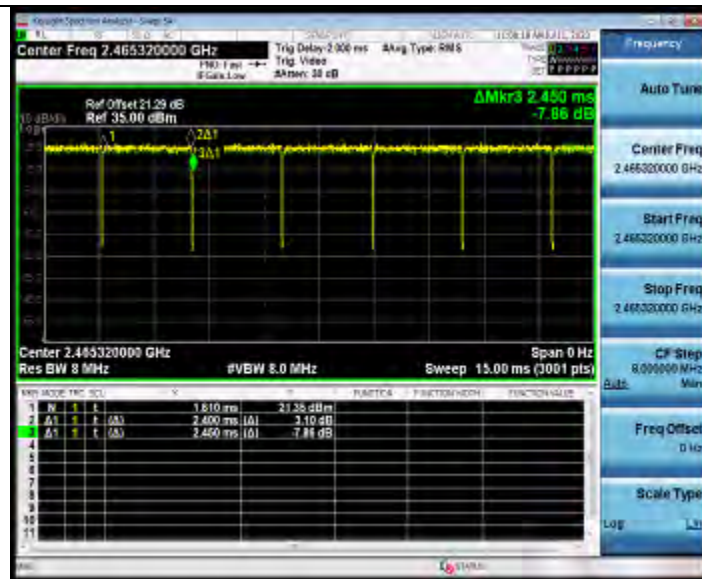


11AX20MIMO_Ant2_2462_106Tone_RU54

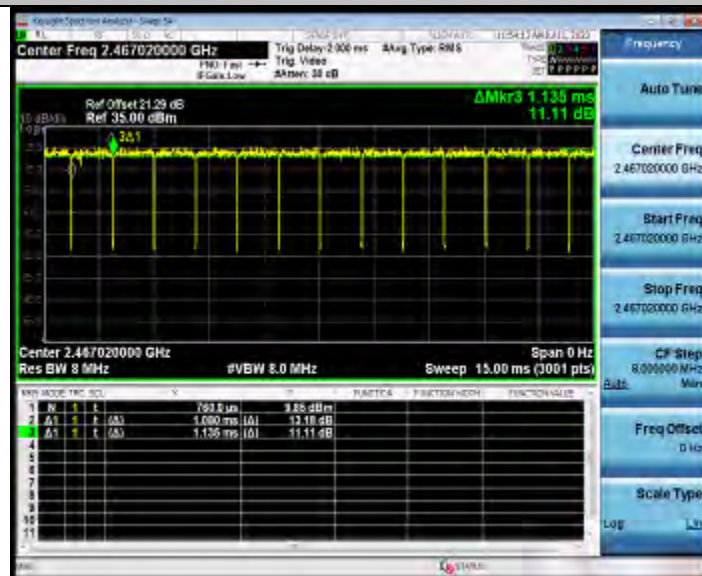


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VERITAS

Test Report No.: PSU-QSU2306120115RF12



11AX20MIMO_Ant2_2462_242Tone_RU61

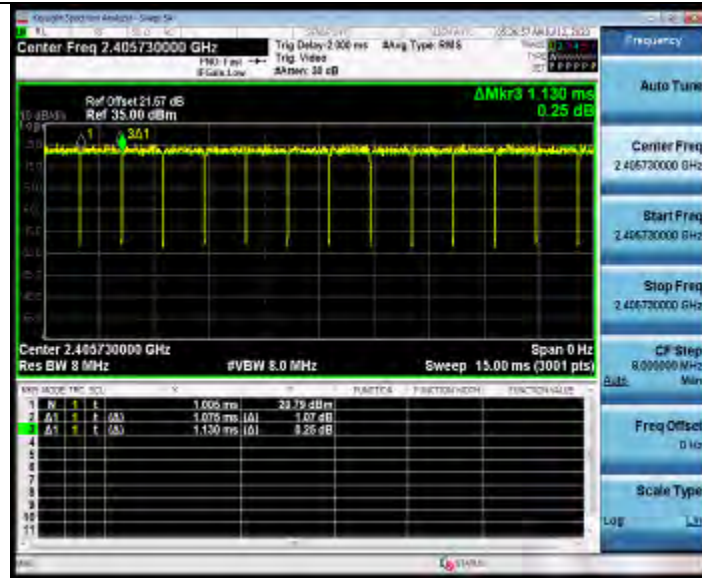


11AX40MIMO_Ant1_2422_242Tone_RU61

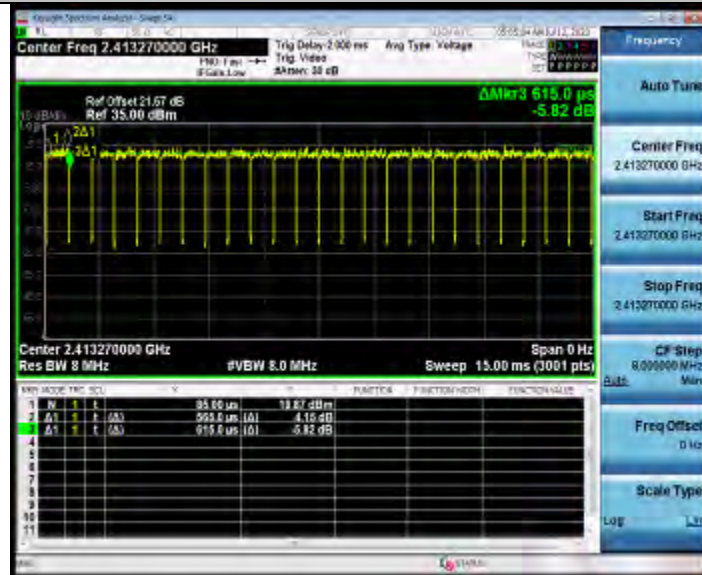


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Test Report No.: PSU-QSU2306120115RF12



11AX40MIMO_Ant1_2422_484Tone_RU65

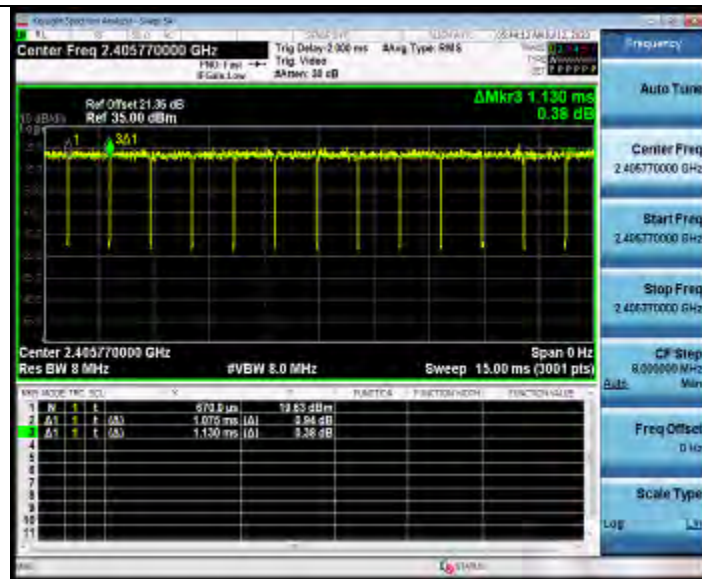


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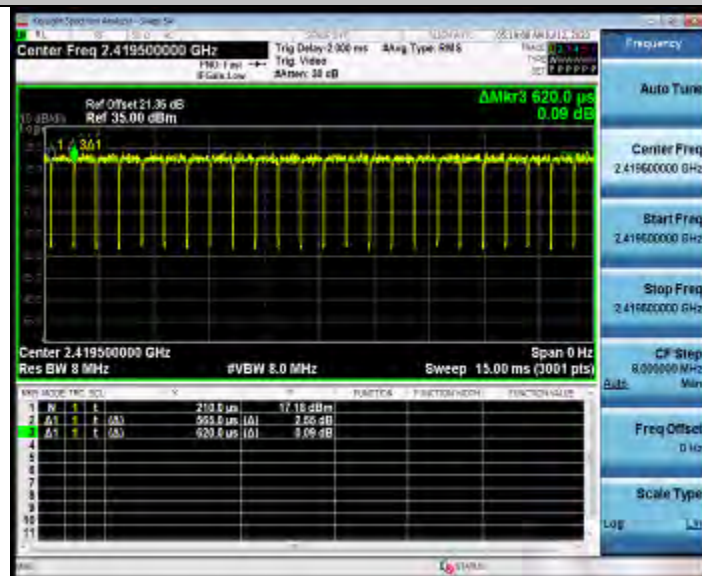


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VERITAS

Test Report No.: PSU-QSU2306120115RF12



11AX40MIMO_Ant2_2422_484Tone_RU65



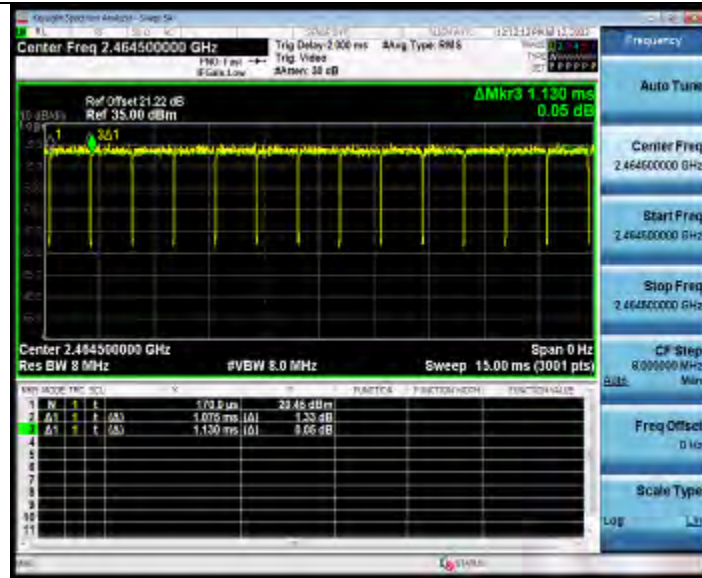
11AX40MIMO_Ant1_2437_484Tone_RU65



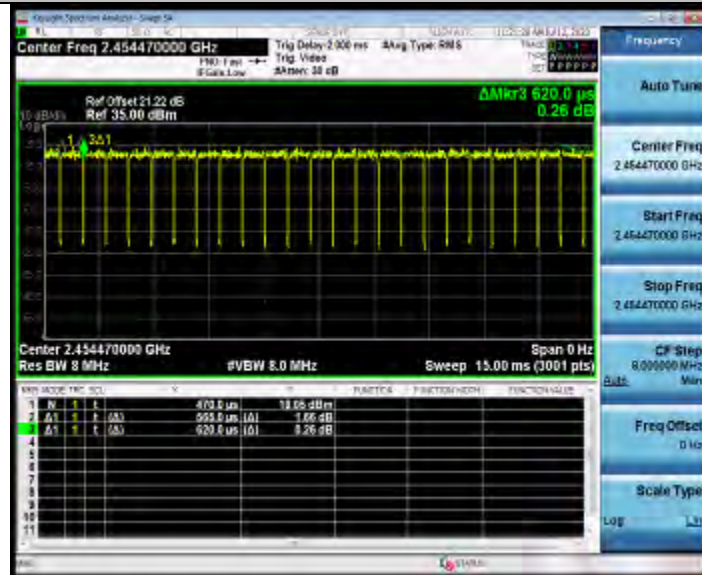


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Test Report No.: PSU-QSU2306120115RF12



11AX40MIMO_Ant1_2452_484Tone_RU65

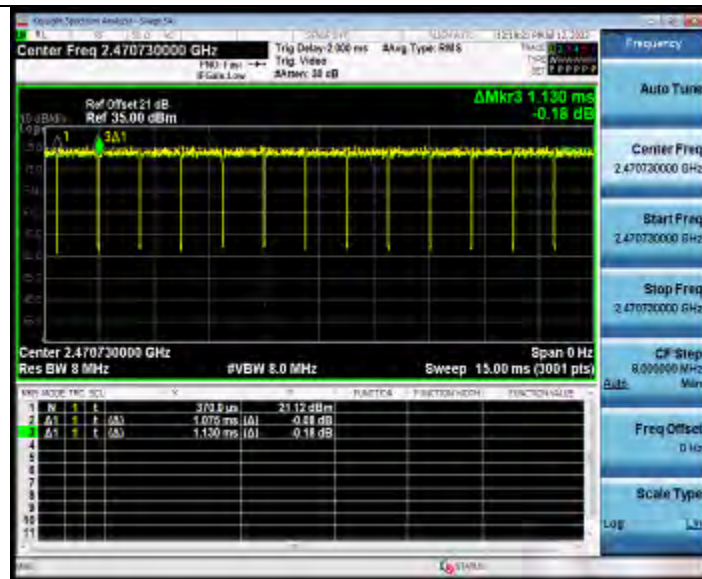


11AX40MIMO_Ant2_2452_242Tone_RU62

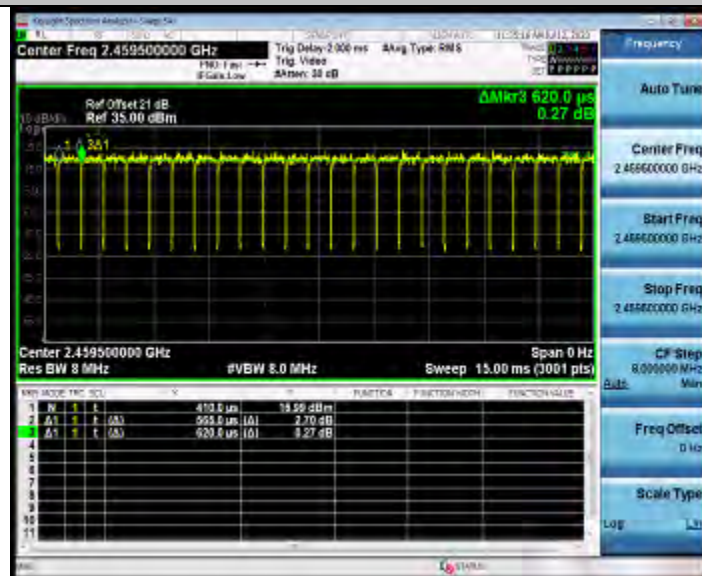


BUREAU
VERITAS

Test Report No.: PSU-QSU2306120115RF12



11AX40MIMO_Ant2_2452_484Tone_RU65





Test Report No.: PSU-QSU2306120115RF12

7 APPENDIX 2 BLE DTS BANDWIDTH

TEST RESULT

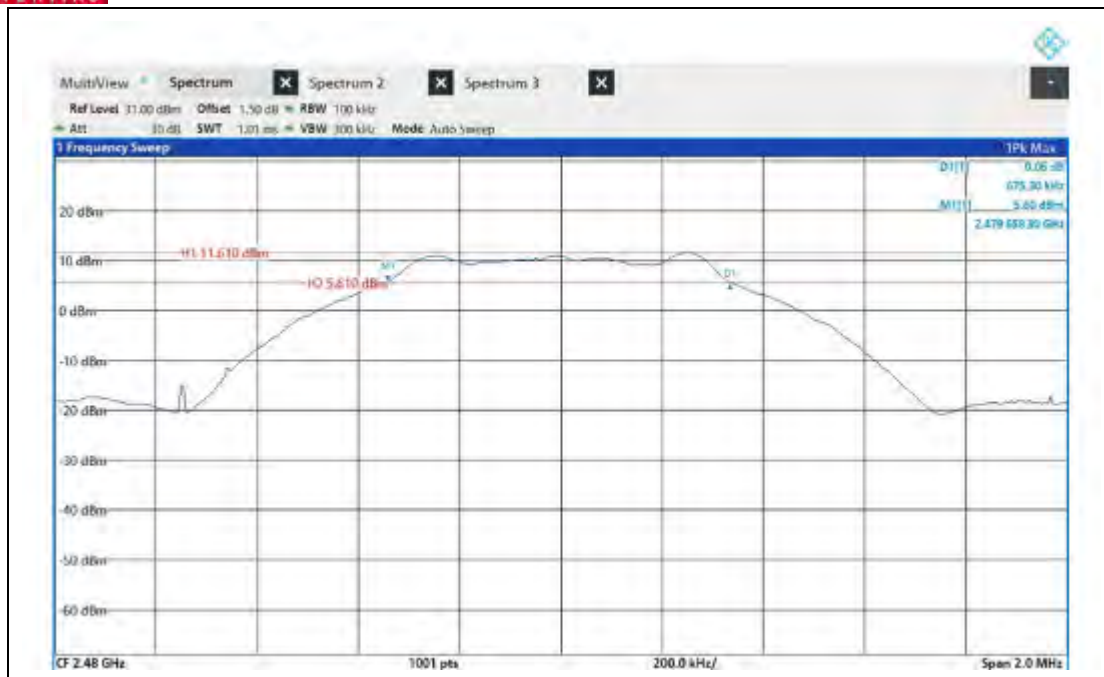
TestMode	Antenna	Channel	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant0	2402	0.6693	2401.6643	2402.3336	0.5	PASS
		2440	0.6733	2439.6603	2440.3336	0.5	PASS
		2480	0.6753	2479.6583	2480.3336	0.5	PASS
BLE_2M	Ant0	2404	1.1908	2403.4006	2404.5914	0.5	PASS
		2440	1.1868	2439.4046	2440.5914	0.5	PASS
		2478	1.1908	2477.4006	2478.5914	0.5	PASS

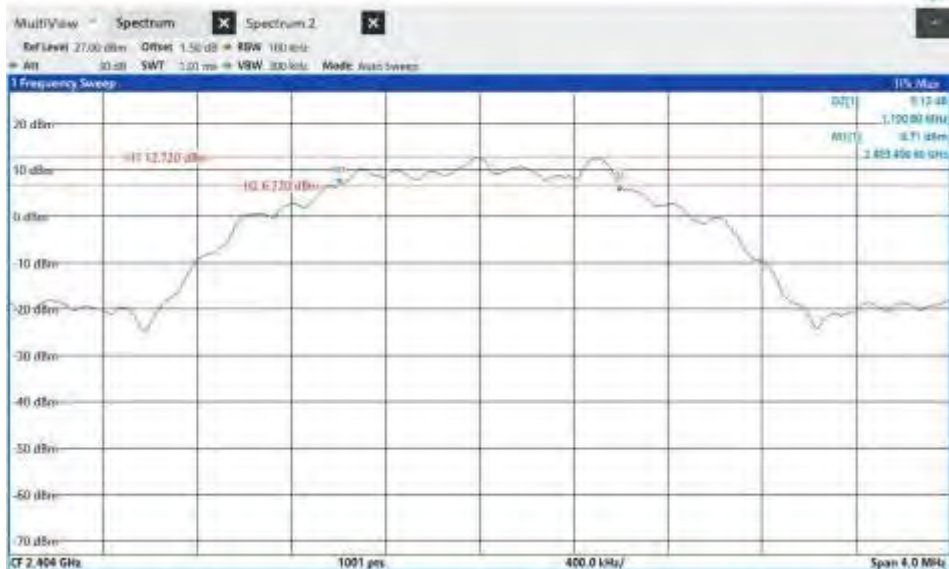




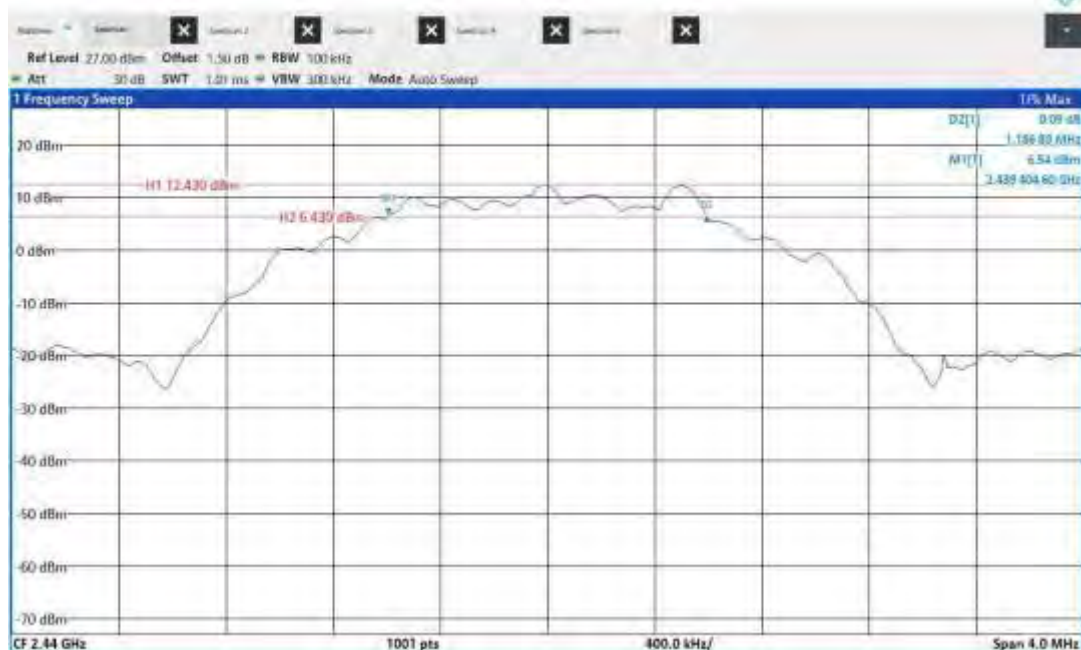
BUREAU
VERITAS

Test Report No.: PSU-QSU2306120115RF12





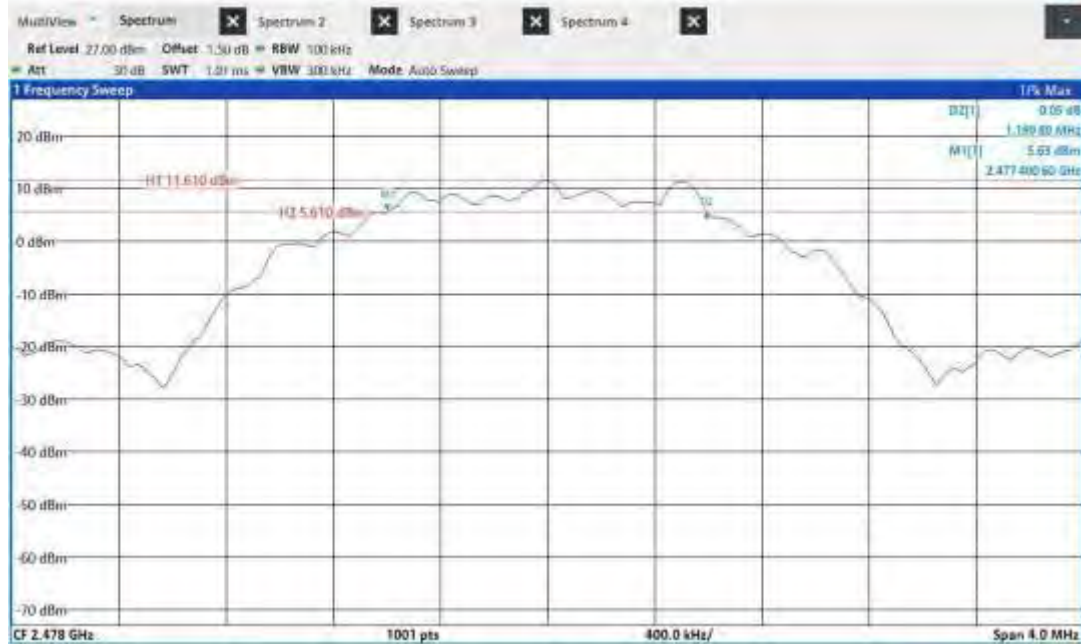
BLE_2M_Ant1_2404



BLE_2M_Ant1_2440



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BLE_2M_Ant1_2478



Test Report No.: PSU-QSU2306120115RF12

OCCUPIED CHANNEL BANDWIDTH

TEST RESULT

TestMode	Antenna	Channel	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant0	2402	1.02580	2401.48756	2,402.51336	---	PASS
		2440	1.02629	2439.48852	2,440.51481	---	PASS
		2480	1.02211	2479.48909	2,480.51120	---	PASS
BLE_2M	Ant0	2404	2.0355	2403.0037	2405.0392	---	PASS
		2440	2.0337	2439.0027	2441.0364	---	PASS
		2478	2.0363	2476.9977	2479.0340	---	PASS

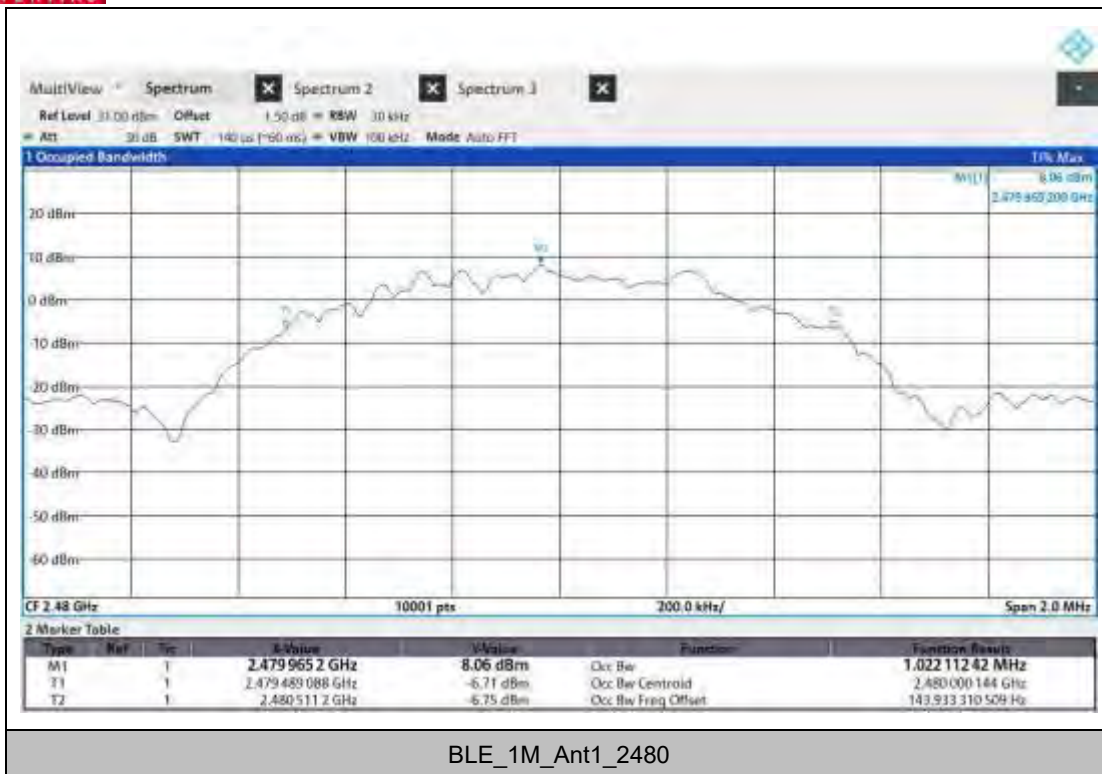
TEST GRAPHS



BLE_1M_Ant1_2402

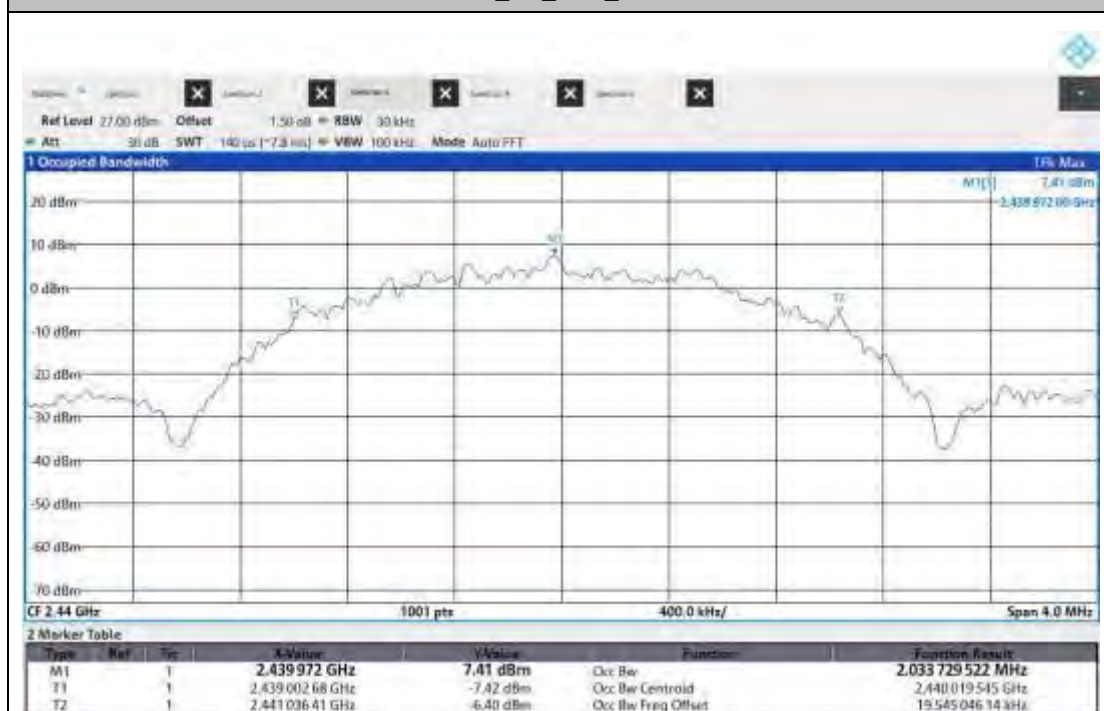


BLE_1M_Ant1_2440





BLE_2M_Ant1_2404

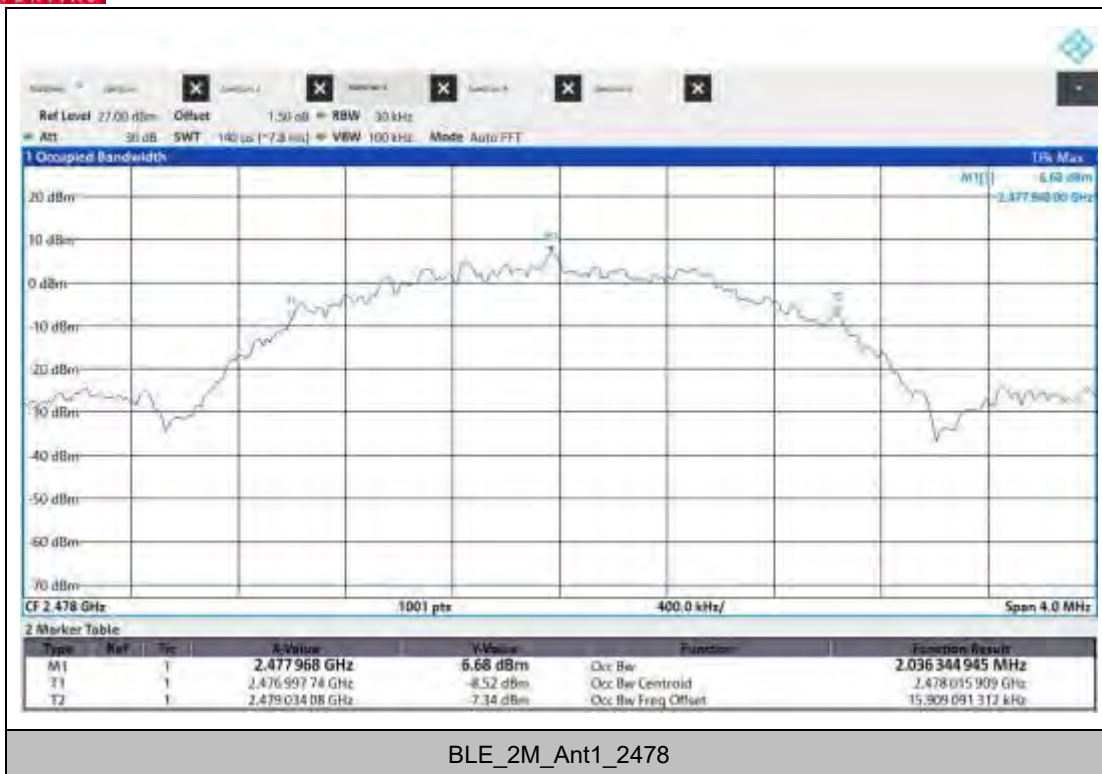


BLE_2M_Ant1_2440



BUREAU
VERITAS

Test Report No.: PSU-QSU2306120115RF12





Test Report No.: PSU-QSU2306120115RF12

MAXIMUM CONDUCTED OUTPUT POWER

TEST RESULT PEAK

TestMode	Antenna	Channel	Peak Power[dBm]	Peak Power[mw]	Conducted Limit[dBm]	Verdict	Power setting
1M	Ant0	2402	16.21	41.78	≤30	PASS	Default
		2440	15.83	38.28	≤30	PASS	Default
		2480	14.75	29.85	≤30	PASS	Default
2M	Ant0	2404	15.61	36.39	≤30	PASS	Default
		2440	15.22	33.27	≤30	PASS	Default
		2478	14.36	27.29	≤30	PASS	Default

TEST RESULT AVERAGE

TestMode	Antenna	Channel	Average Power	Conducted Limit[dBm]	Verdict	Power setting
1M	Ant0	2402	14.13	/	PASS	Default
		2440	13.90	/	PASS	Default
		2480	12.75	/	PASS	Default
2M	Ant0	2404	14.49	/	PASS	Default
		2440	14.10	/	PASS	Default
		2478	13.18	/	PASS	Default



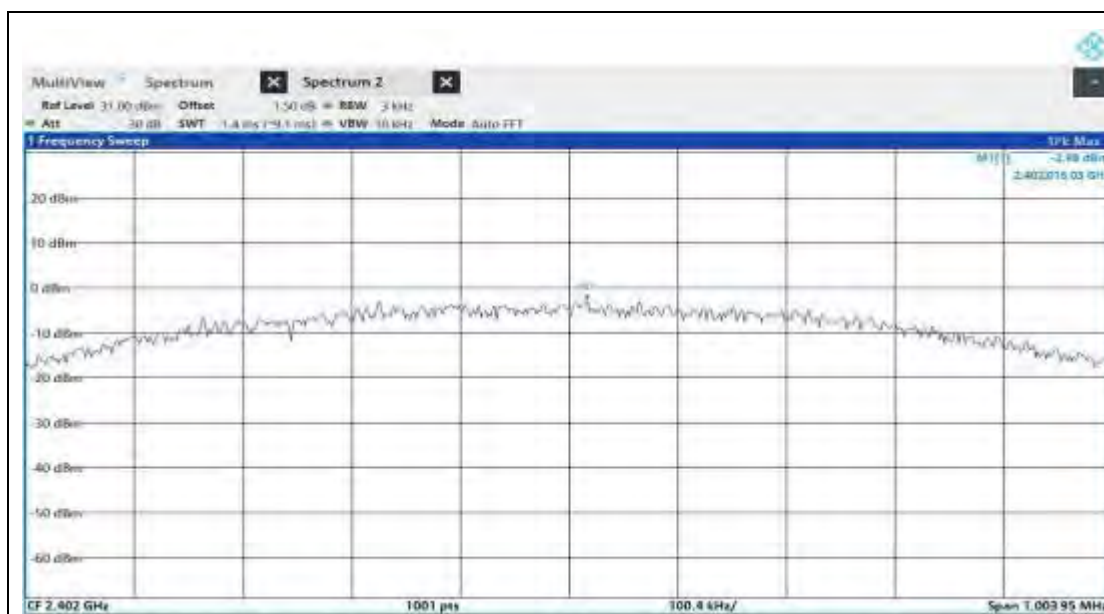
Test Report No.: PSU-QSU2306120115RF12

MAXIMUM POWER SPECTRAL DENSITY

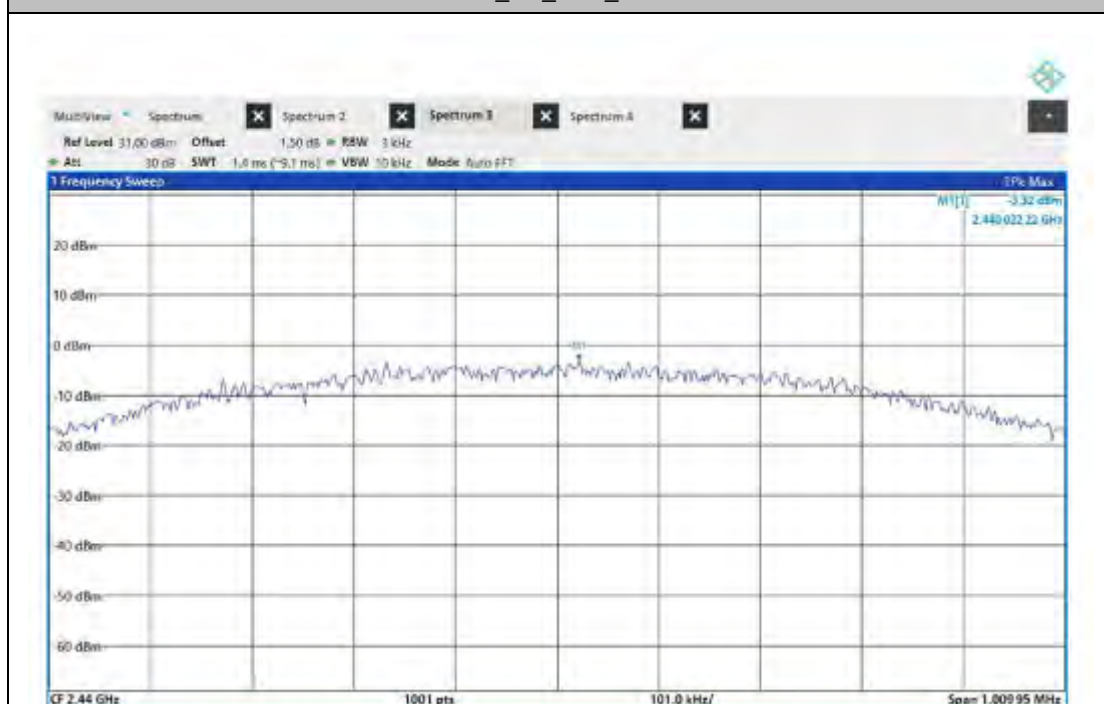
TEST RESULT

TestMode	Antenna	Channel	Result[dBm/3kHz]	Limit[dBm/3kHz]	Verdict
BLE_1M	Ant0	2402	-2.98	≤8	PASS
		2440	-3.32	≤8	PASS
		2480	-4.79	≤8	PASS
BLE_2M	Ant0	2404	-5.27	≤8	PASS
		2440	-5.36	≤8	PASS
		2478	-6.13	≤8	PASS

TEST GRAPHS



BLE_1M_Ant1_2402

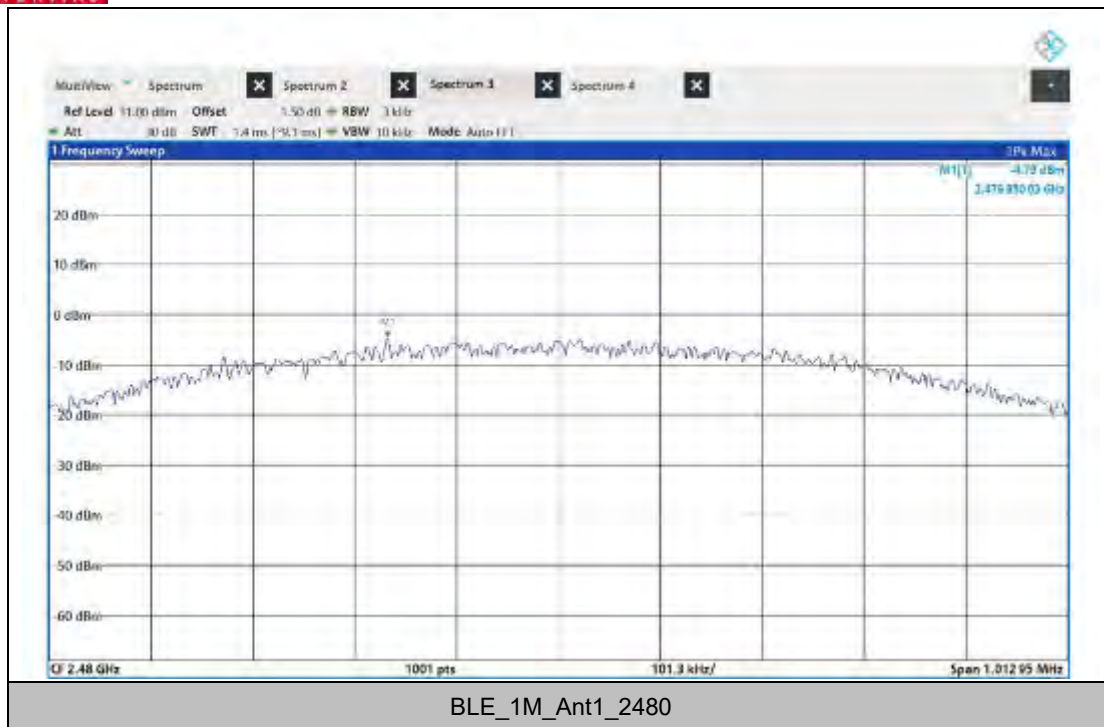


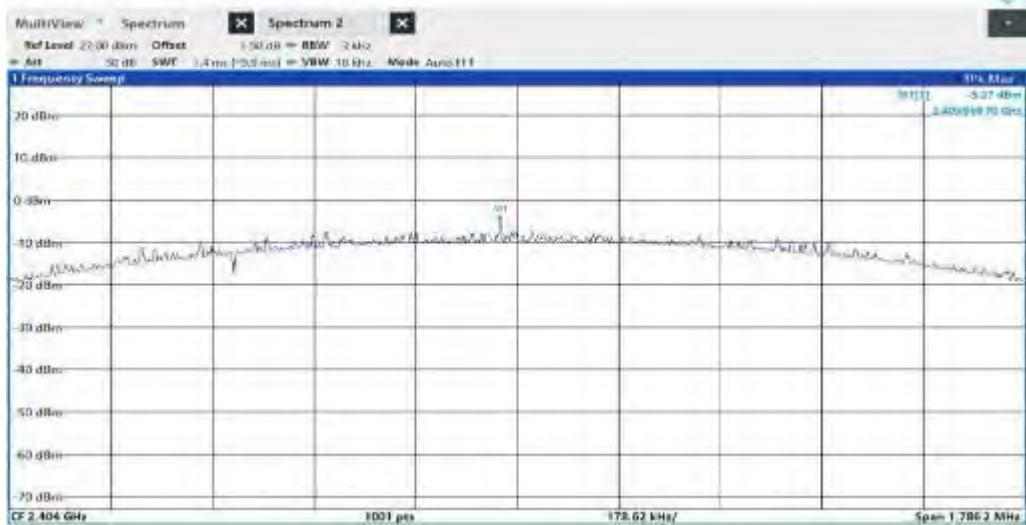
BLE_1M_Ant1_2440



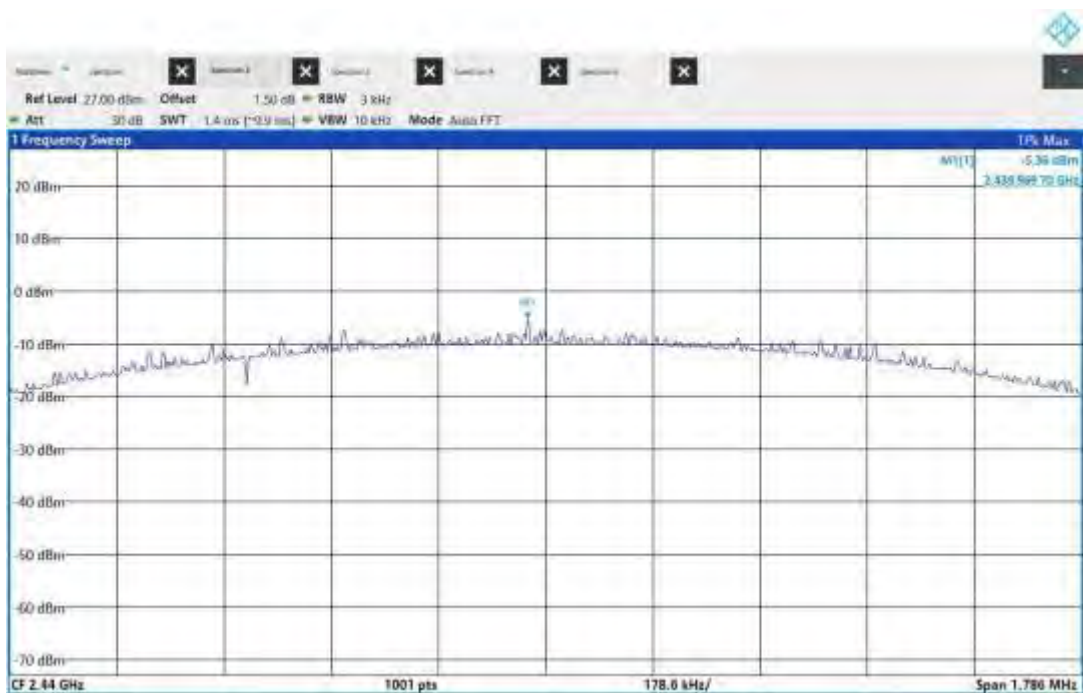
BUREAU
VERITAS

Test Report No.: PSU-QSU2306120115RF12





BLE_2M_Ant1_2404

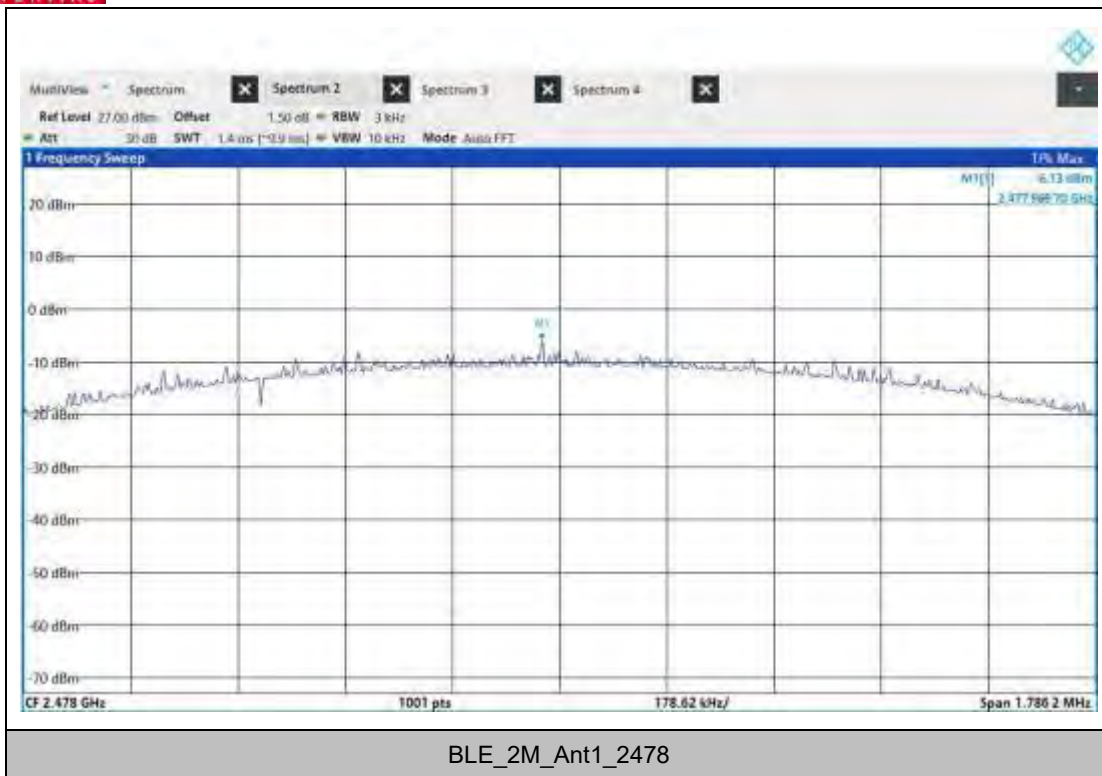


BLE_2M_Ant1_2440



BUREAU
VERITAS

Test Report No.: PSU-QSU2306120115RF12





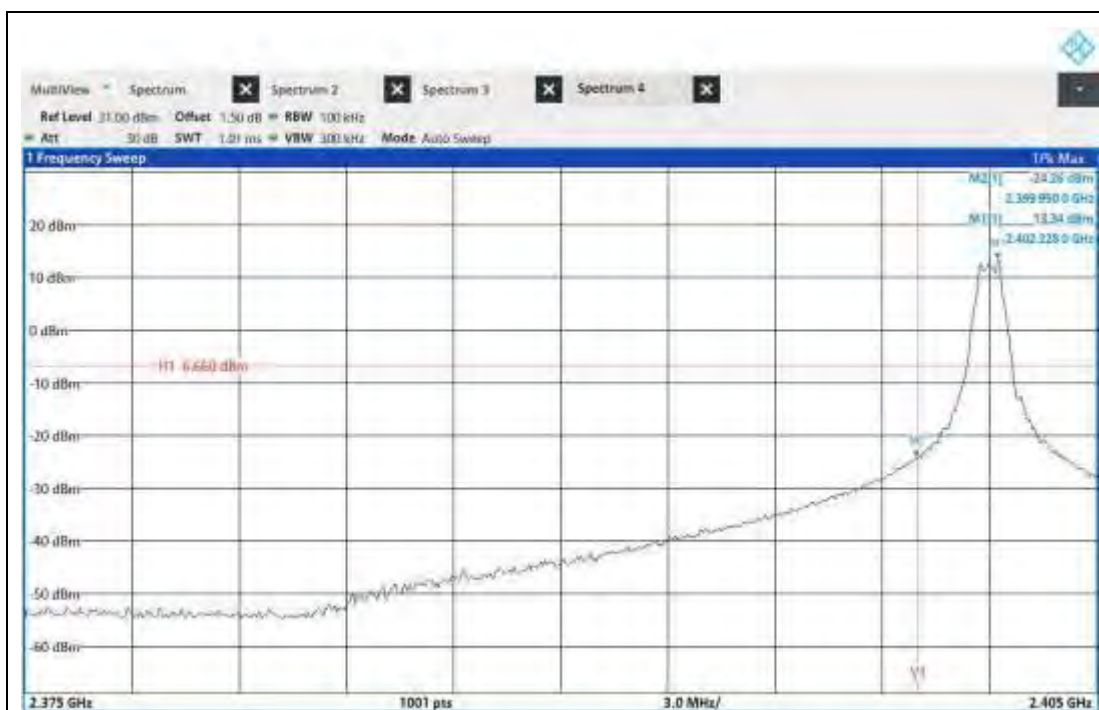
Test Report No.: PSU-QSU2306120115RF12

BAND EDGE MEASUREMENTS

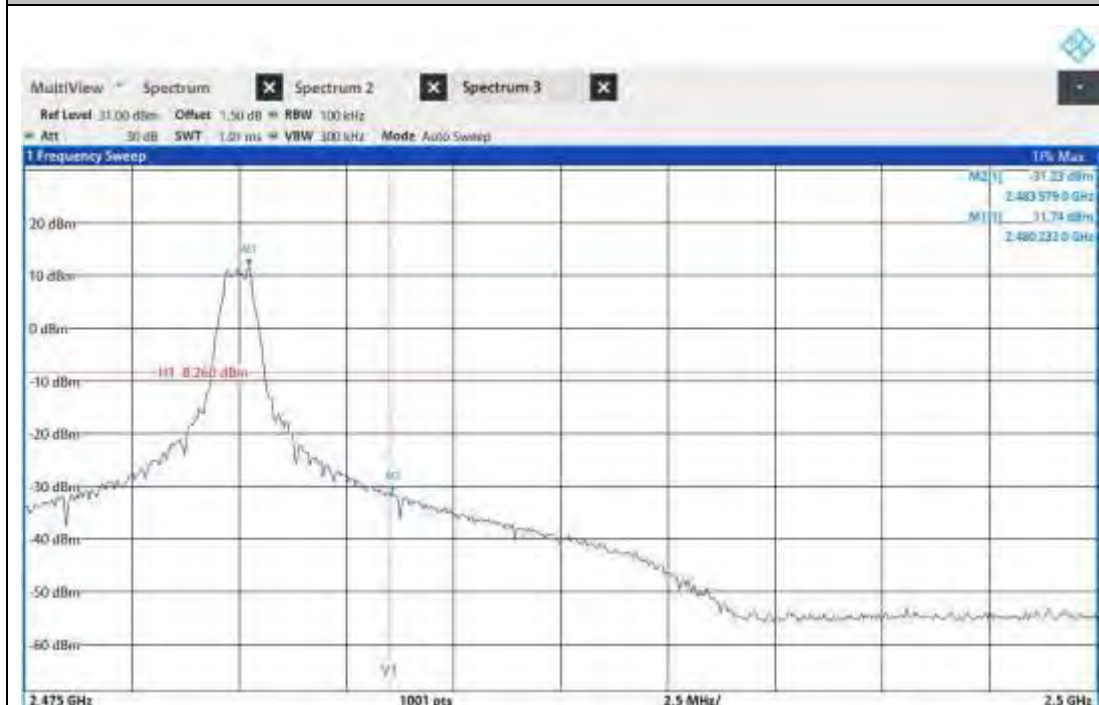
TEST RESULT

TestMode	Antenna	ChName	Channel	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant0	Low	2402	13.34	-24.26	-6.66	PASS
		High	2480	11.74	-31.23	-8.26	PASS
BLE_2M	Ant0	Low	2404	12.79	-52.42	-7.21	PASS
		High	2478	11.23	-55.43	-8.77	PASS

TEST GRAPHS



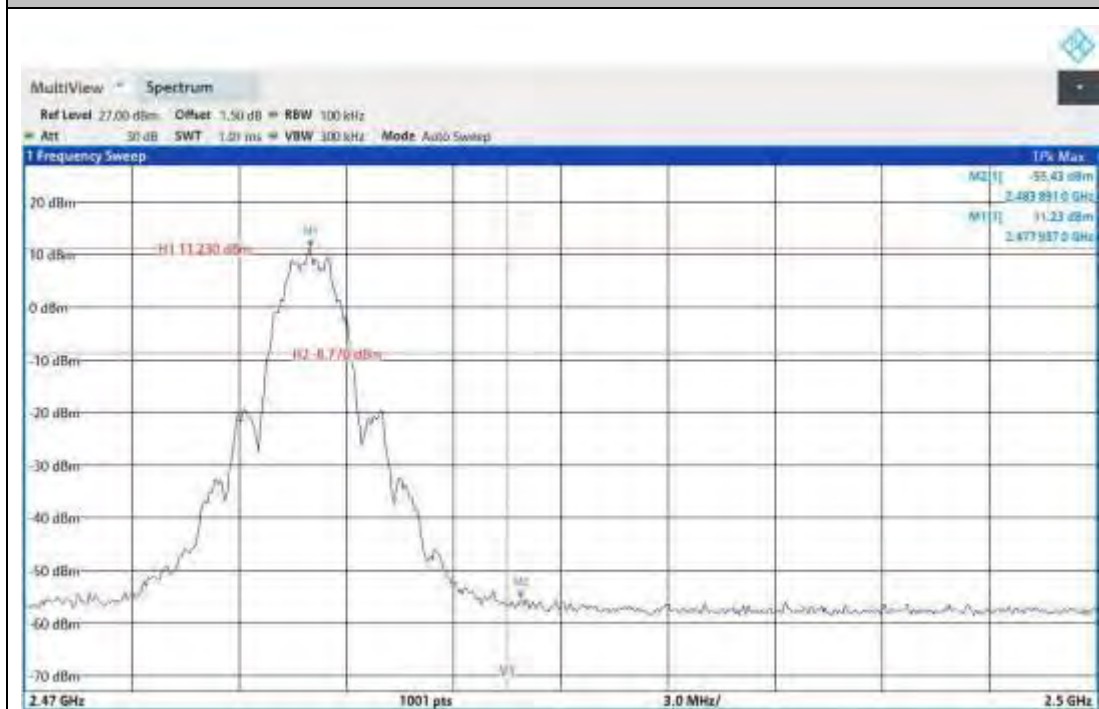
BLE_1M_Ant1_Low_2402



BLE_1M_Ant1_High_2480



BLE_2M_Ant1_Low_2404



BLE_2M_Ant1_High_2478

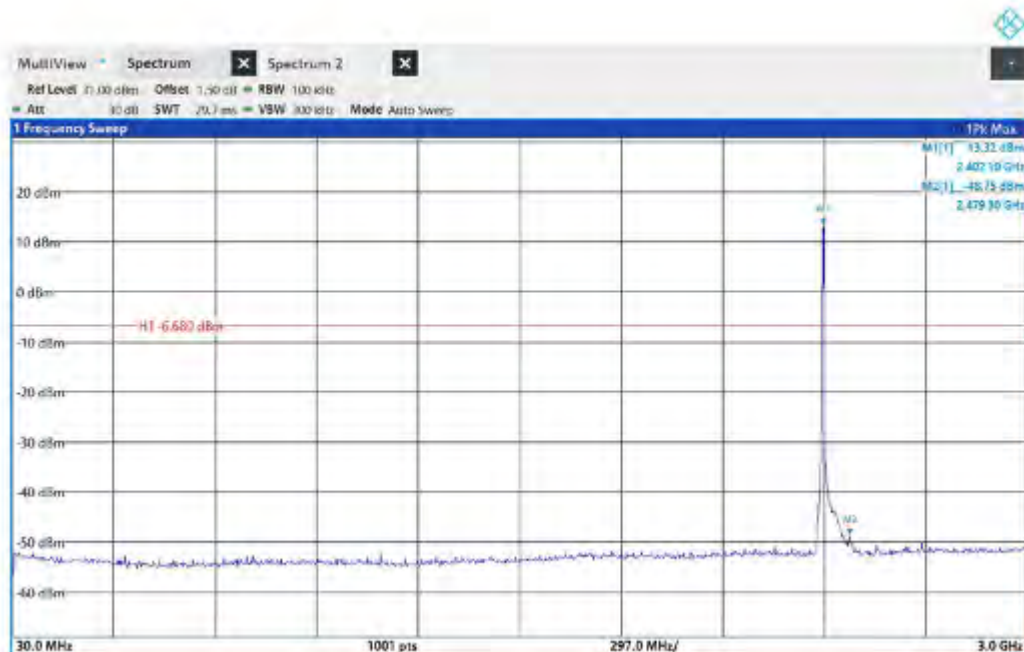


CONDUCTED SPURIOUS EMISSION

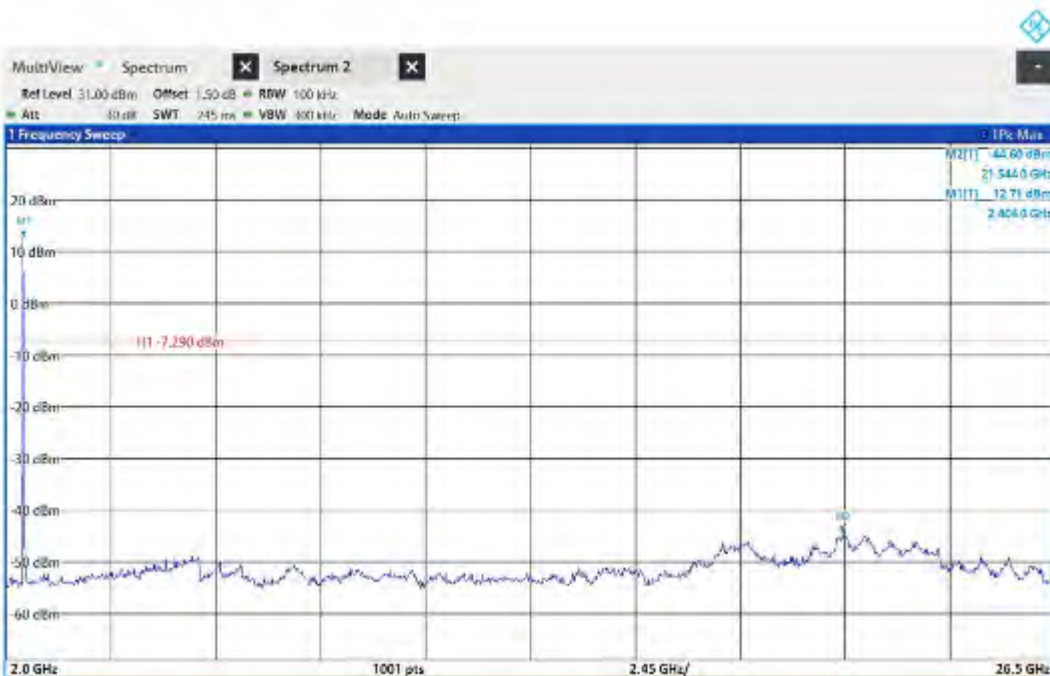
TEST RESULT

TestMode	Antenna	Channel	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant0	2402	30~3000	13.32	-48.75	-6.68	PASS
			2000~26500	12.71	-44.60	-7.29	PASS
		2440	30~3000	13.12	-50.97	-6.88	PASS
			2000~26500	13.14	-44.60	-6.86	PASS
		2480	30~3000	11.61	-43.60	-8.39	PASS
			2000~26500	11.70	-44.31	-8.30	PASS
BLE_2M	Ant0	2404	30~3000	12.55	-52.58	-7.45	PASS
			2000~26500	11.49	-48.00	-8.51	PASS
		2440	30~3000	12.17	-52.93	-7.83	PASS
			2000~26500	11.62	-47.86	-8.38	PASS
		2478	30~3000	11.23	-52.84	-8.77	PASS
			2000~26500	10.52	-47.48	-9.48	PASS

TEST GRAPHS



BLE_1M_Ant1_2402_30~3000

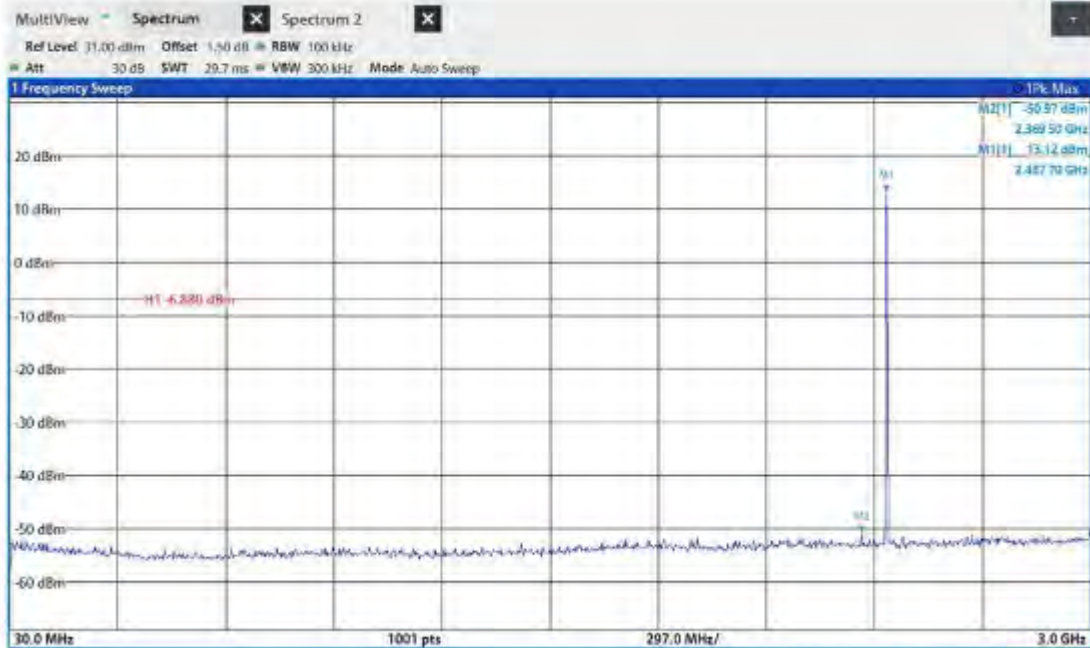


BLE_1M_Ant1_2402_2000~26500

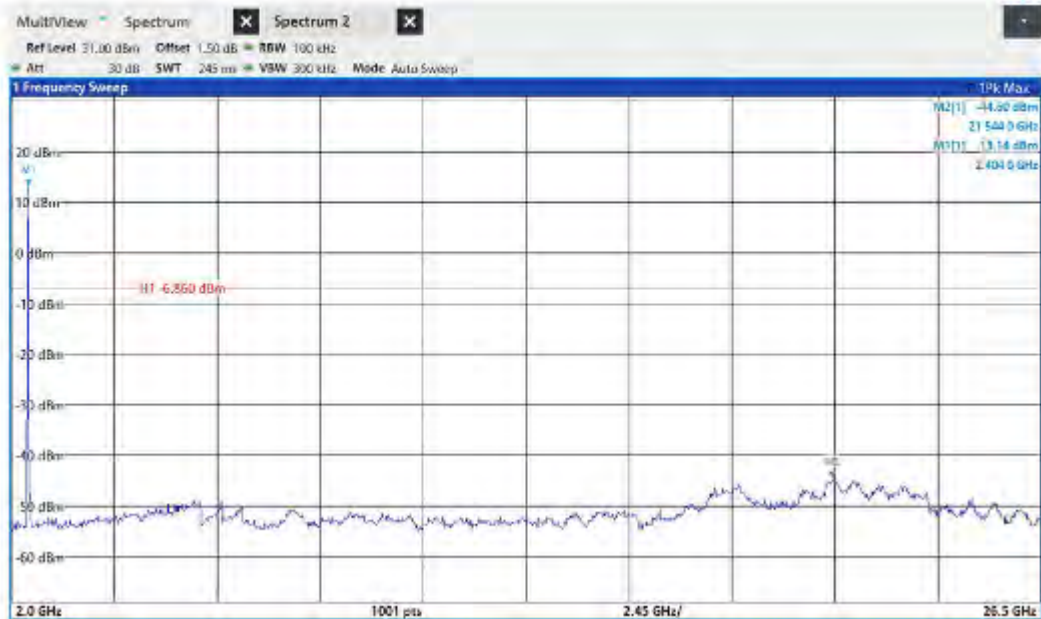


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VERITAS

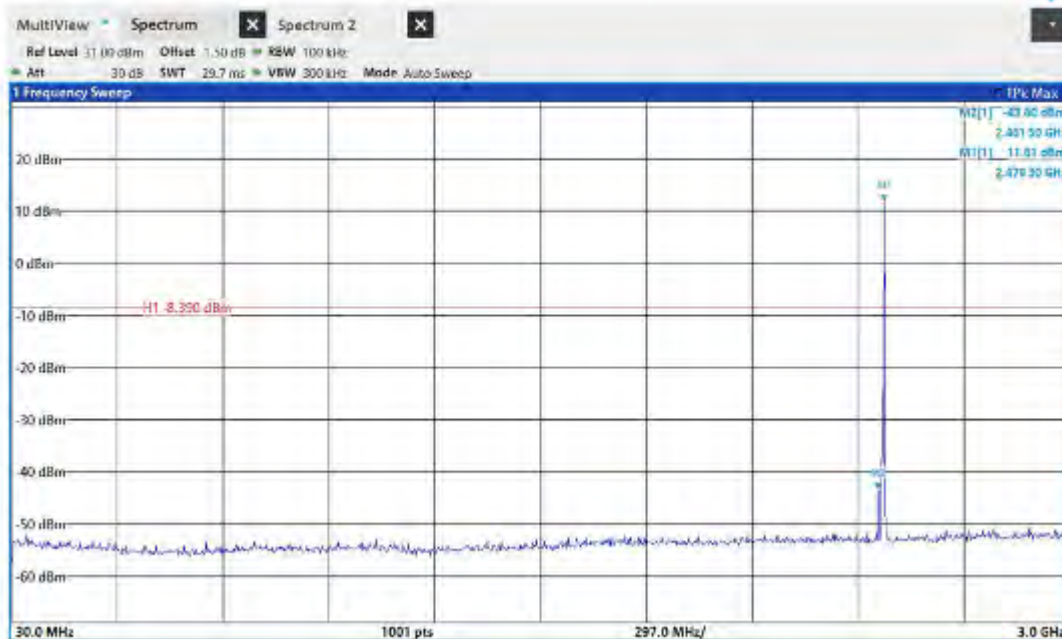
Test Report No.: PSU-QSU2306120115RF12



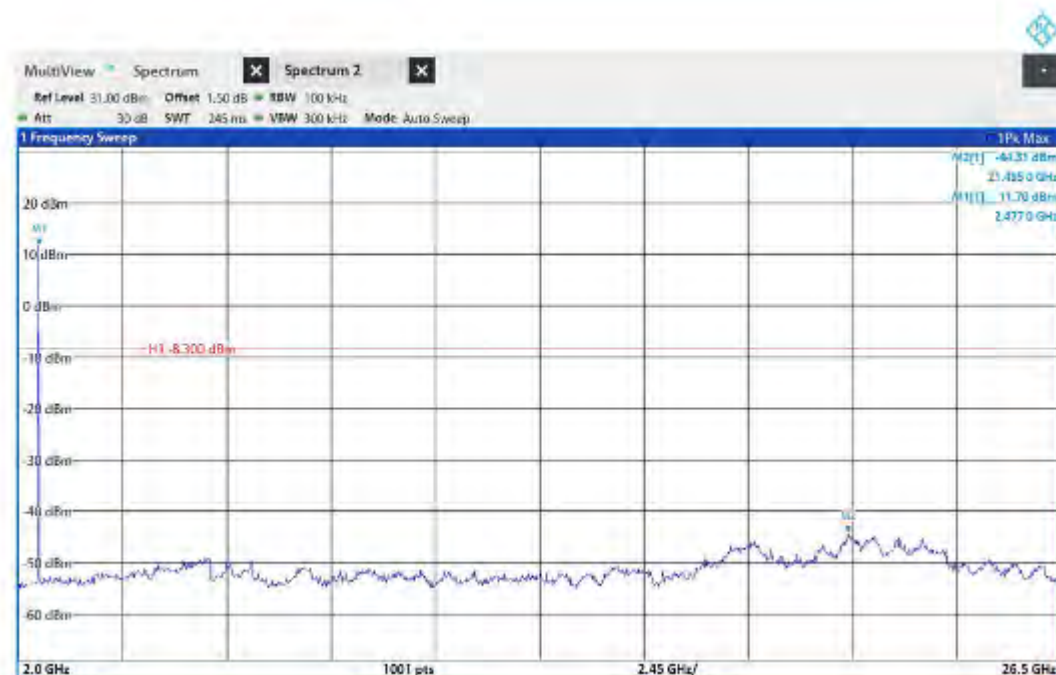
BLE_1M_Ant1_2440_30~3000



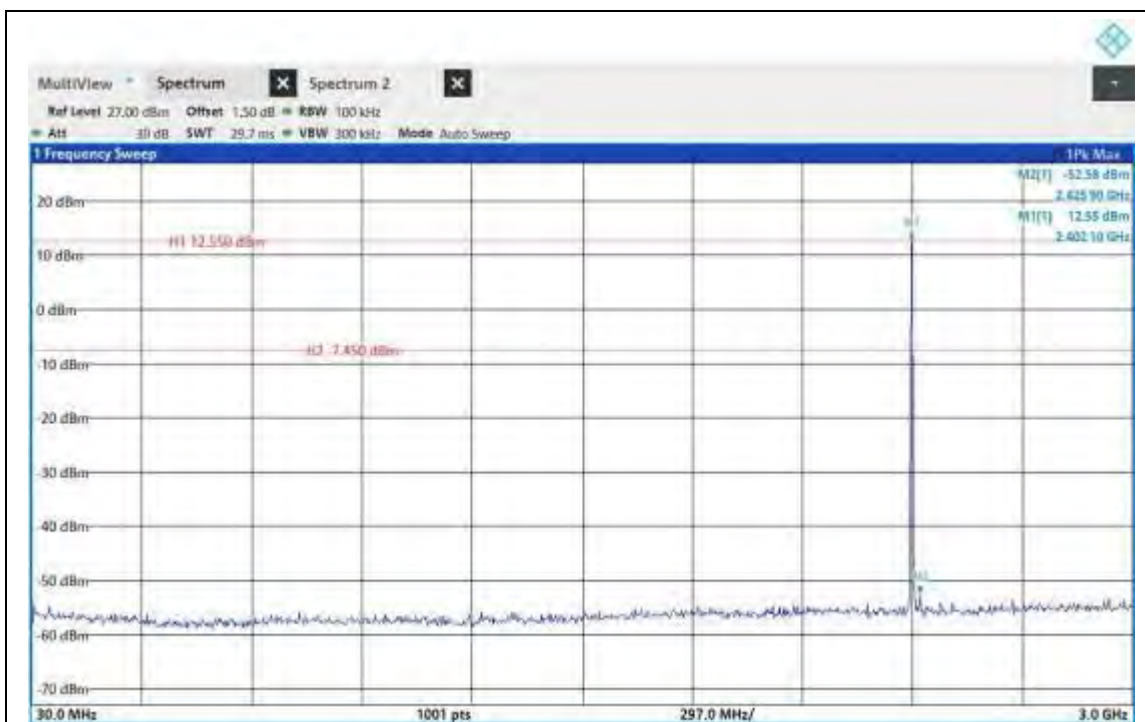
BLE_1M_Ant1_2440_2000~26500



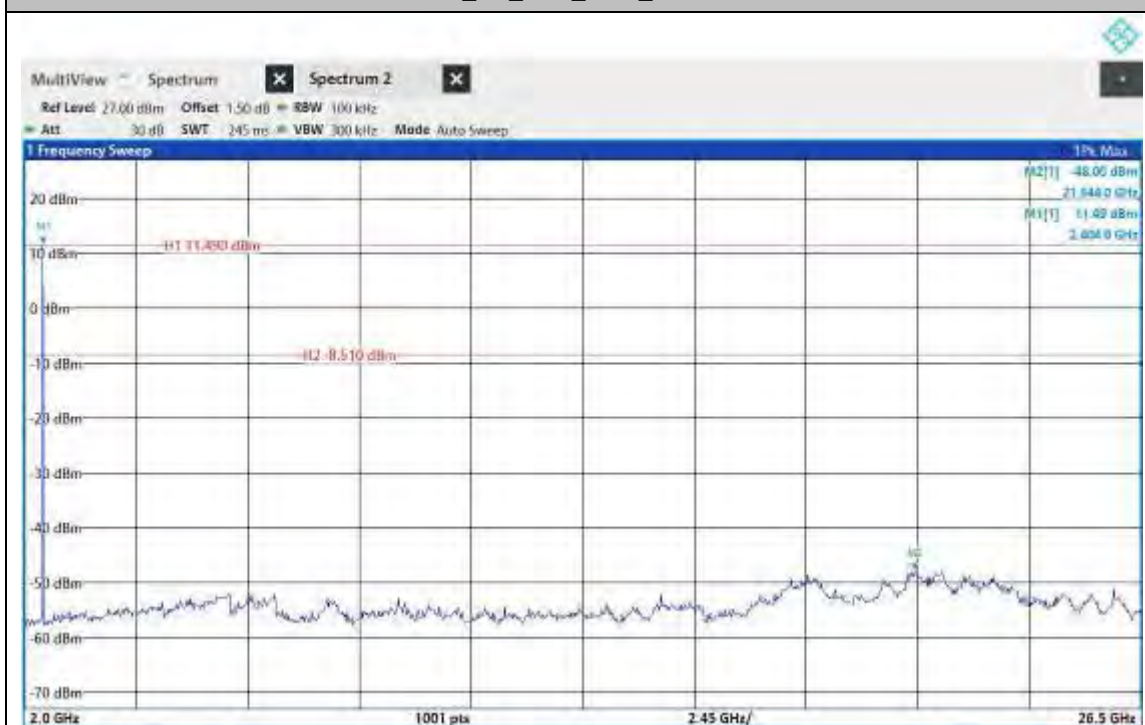
BLE_1M_Ant1_2480_30~3000



BLE_1M_Ant1_2480_2000~26500



BLE_2M_Ant1_2404_30~3000

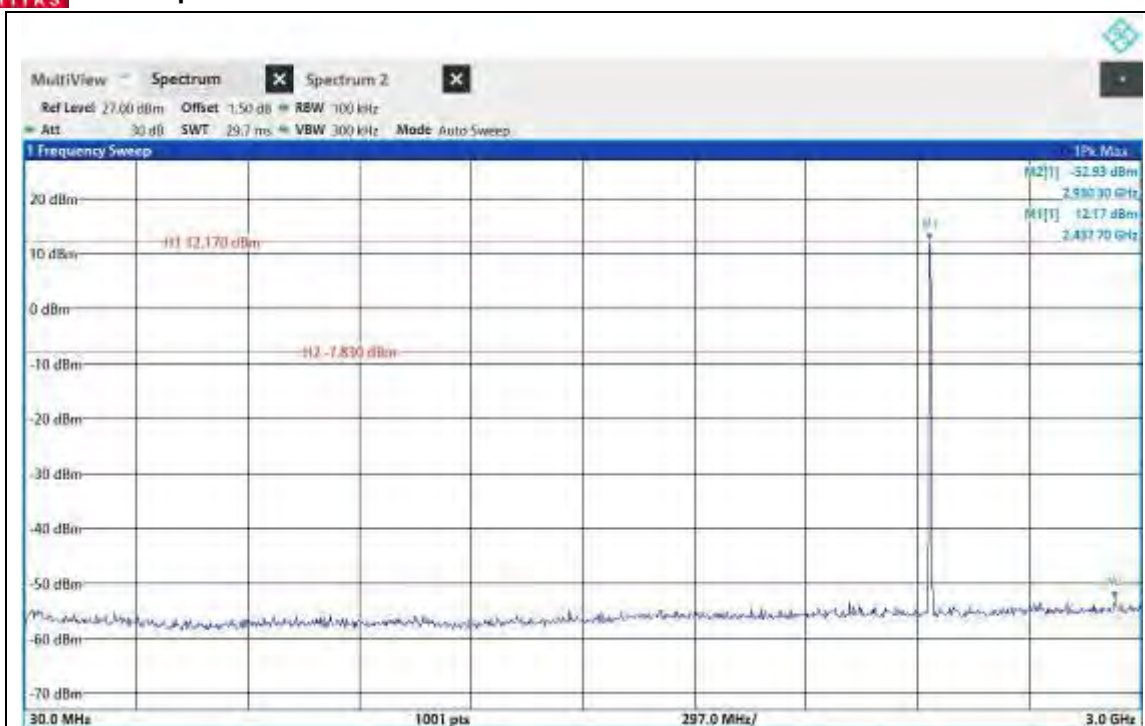


BLE_2M_Ant1_2404_2000~26500

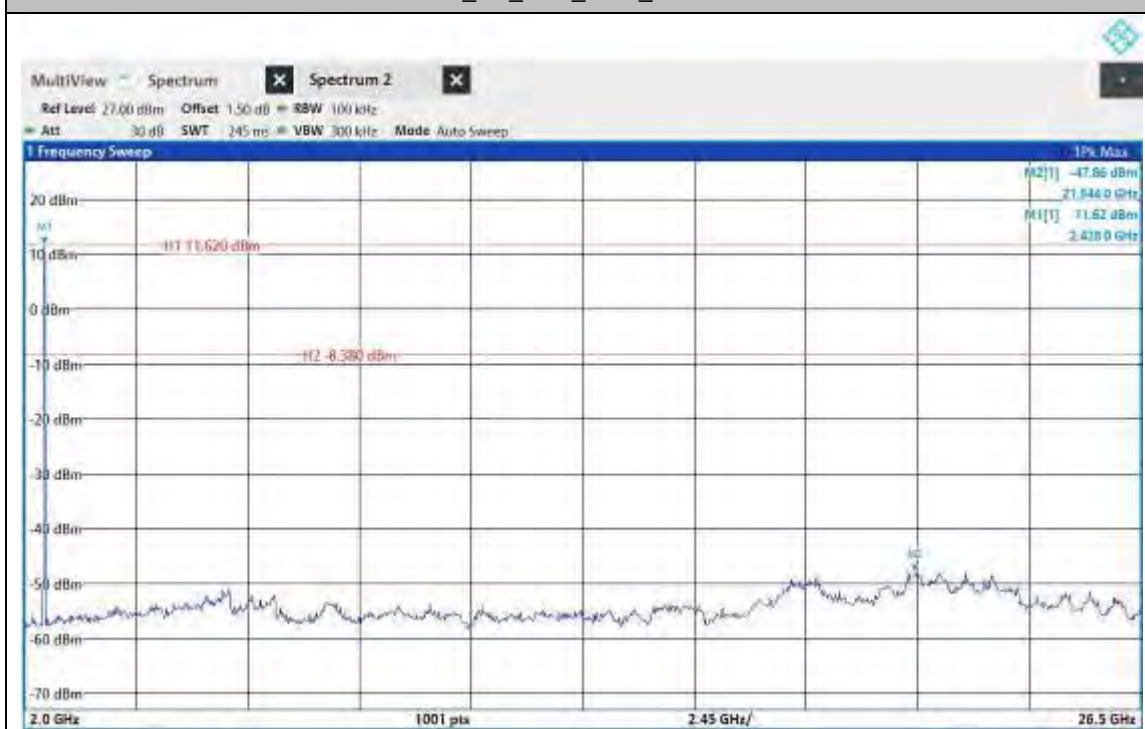


BUREAU
VERITAS

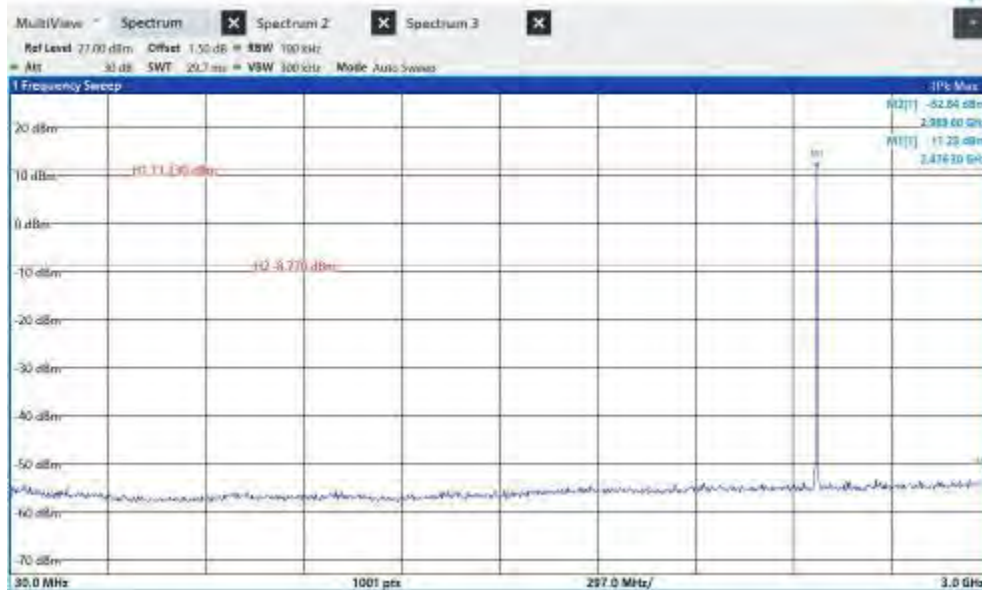
Test Report No.: PSU-QSU2306120115RF12



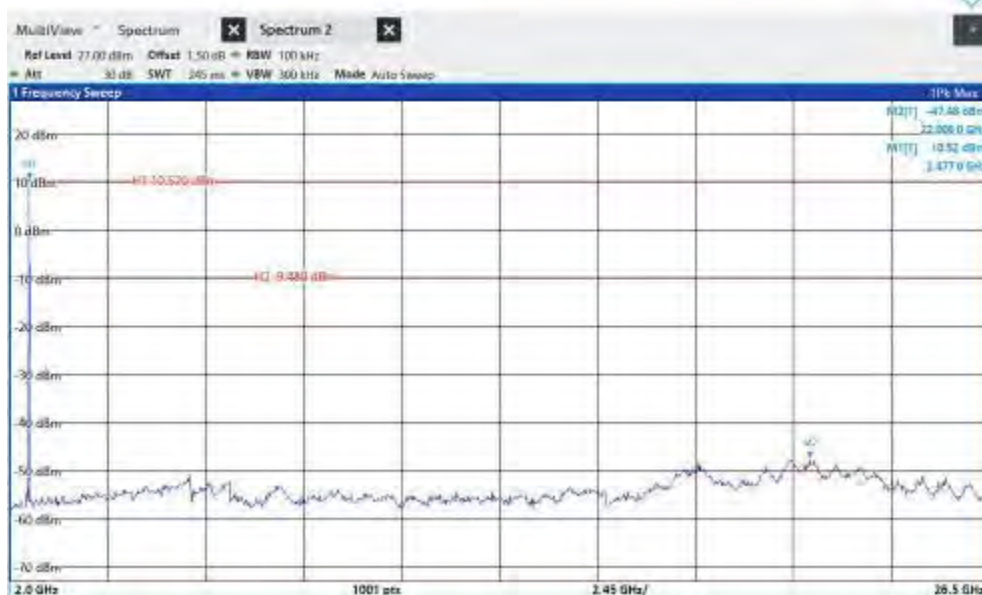
BLE_2M_Ant1_2440_30~3000



BLE_2M_Ant1_2440_2000~26500



BLE_2M_Ant1_2478_30~3000



BLE_2M_Ant1_2478_2000~26500

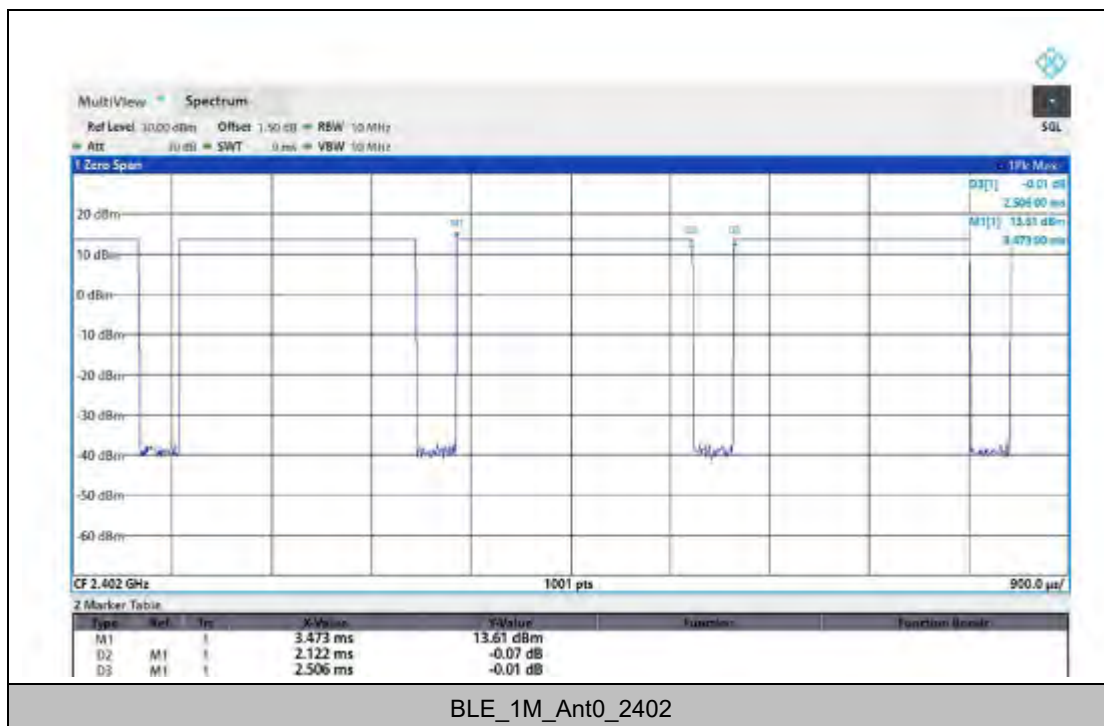


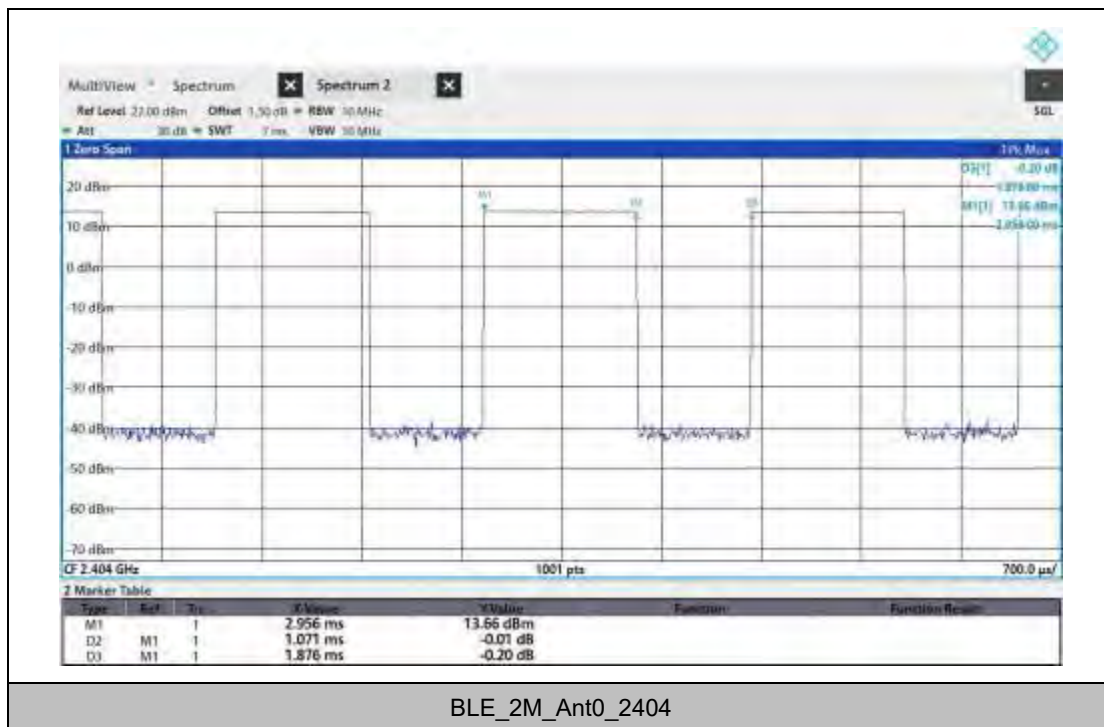
DUTY CYCLE

TEST RESULT

TestMode	Antenna	Channel	ON Time [ms]	Period [ms]	X	DC [%]	xFactor	Limit	Verdict
BLE_1M	Ant0	2440	2.122	2.506	0.8468	84.68	0.72	---	PASS
BLE_2M	Ant0	2404	1.071	1.876	0.5709	57.09	2.43	---	PASS

TEST GRAPHS





--END--