

LCS191205025AEB

Appendix B

RF Test Data for BT V5.0 (BDR/EDR) (Conducted Measurement)

Product Name: VIM3

Trade Mark: Khadas

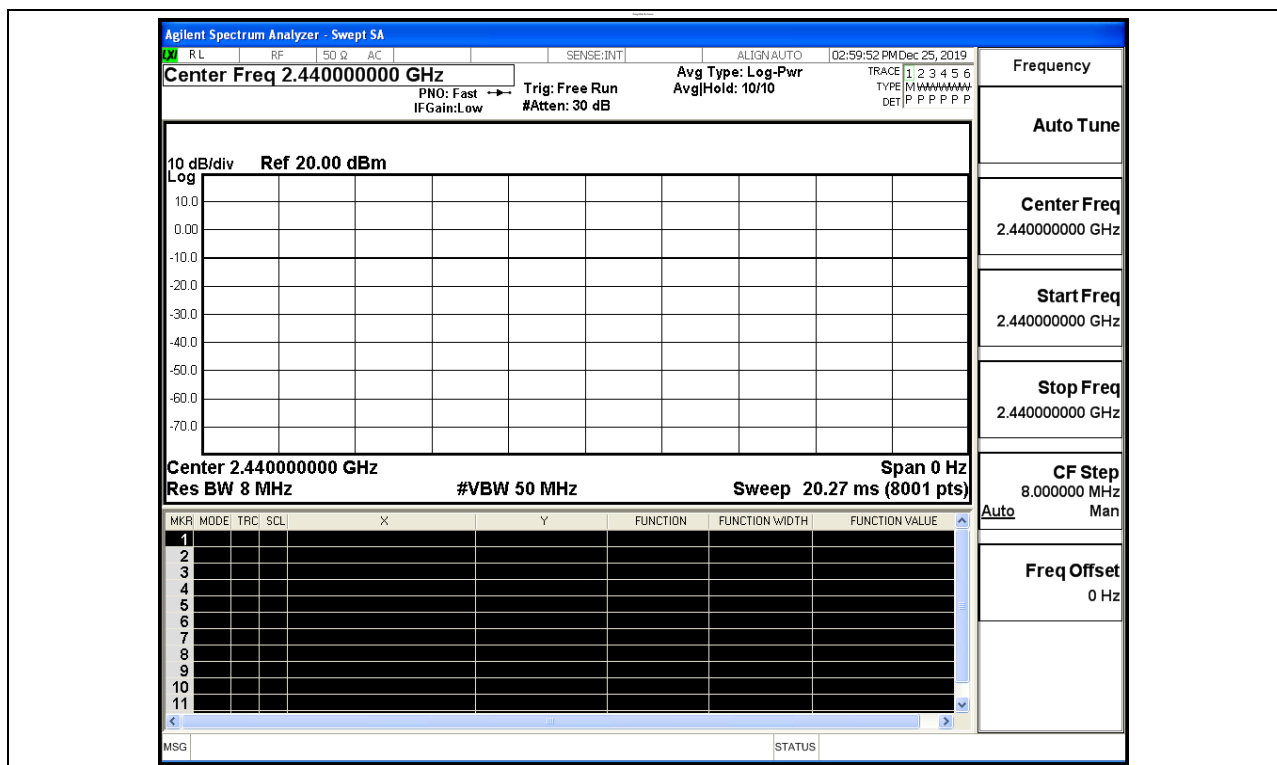
Test Model: VIM3 Pro

Environmental Conditions

Temperature:	23.8 °C
Relative Humidity:	53.1%
ATM Pressure:	100.0 kPa
Test Engineer:	Qu Xin
Supervised by:	Wang Chuang

B.1 Duty Cycle

Test Mode	Test Channel	Ant	Duty Cycle[%]	Verdict
BT LE	2440	Ant1	100	PASS



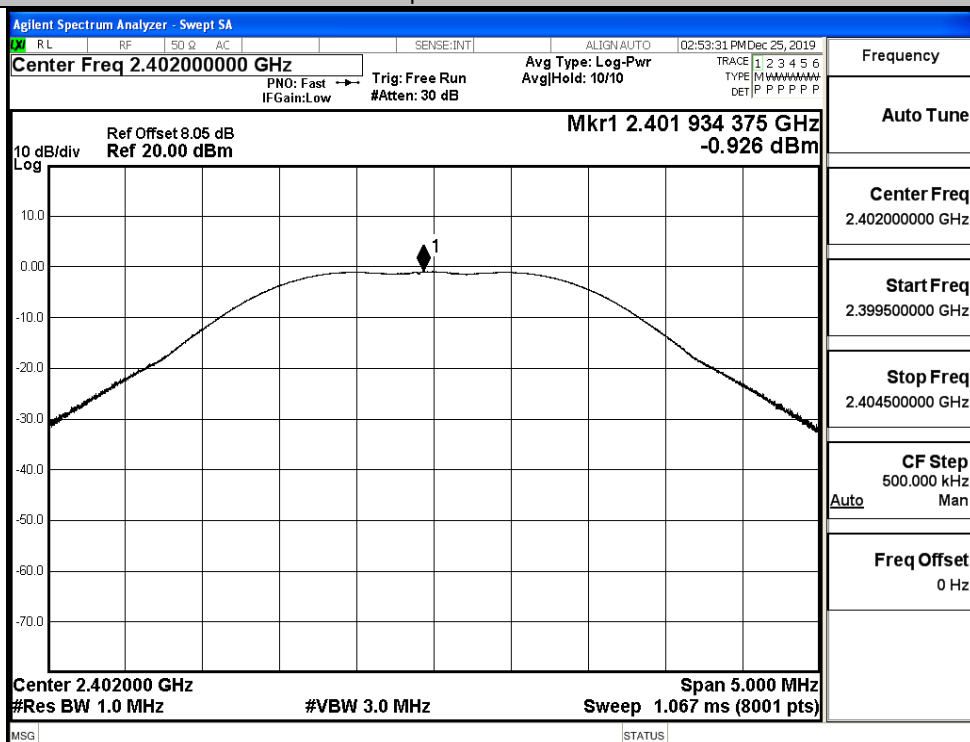
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B.2 Maximum Conducted Peak Output Power

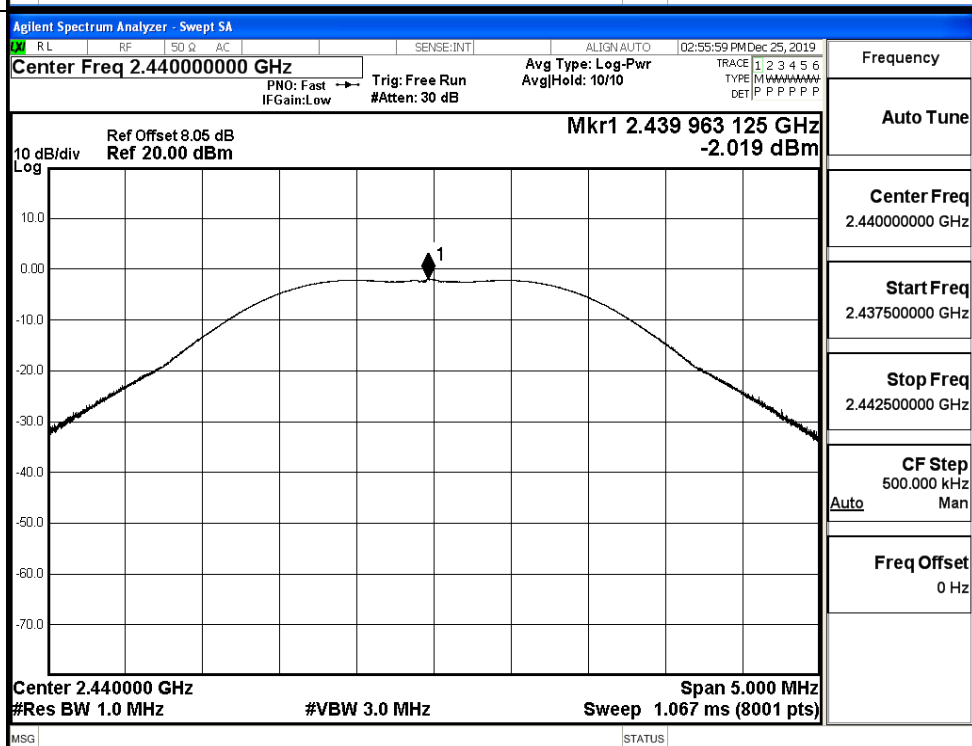
Mode	Channel	Conduct Peak Power[dBm]	Limit [dBm]	Verdict
BT LE	LCH	-0.926	30	PASS
BT LE	MCH	-2.019	30	PASS
BT LE	HCH	-3.604	30	PASS

Test Graphs

LCH

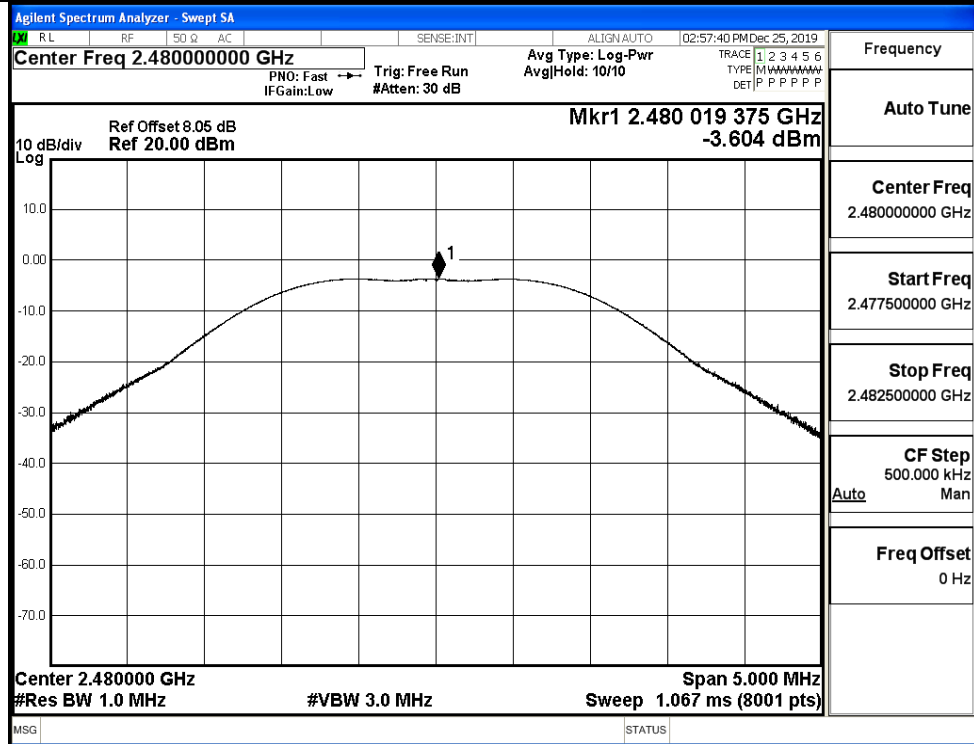


MCH



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HCH



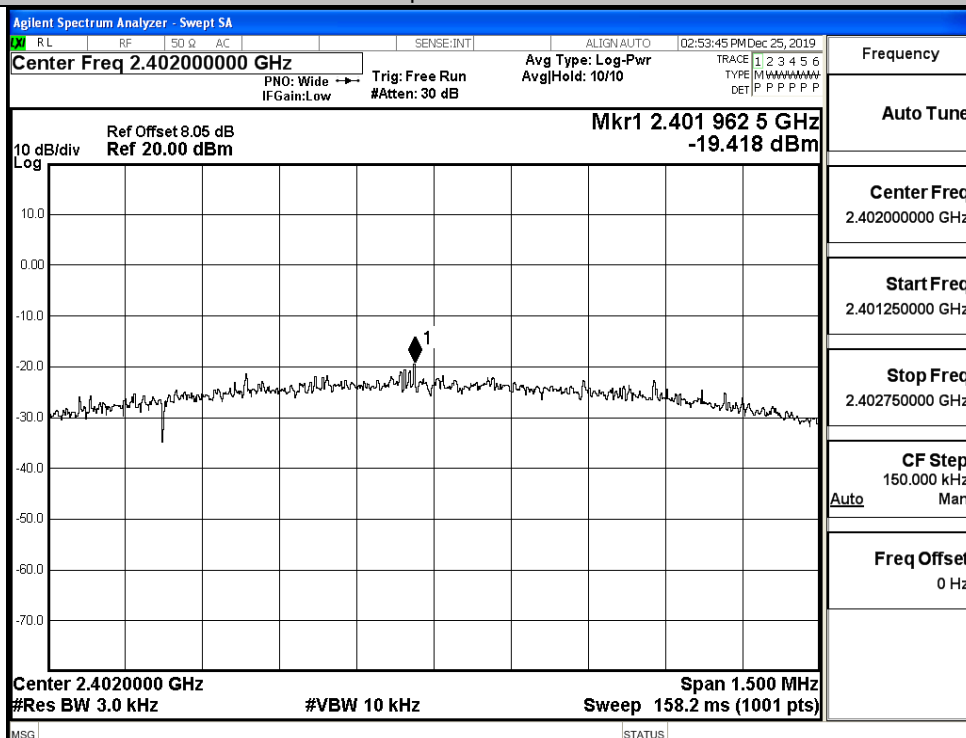
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B.3 Maximum Power Spectral Density

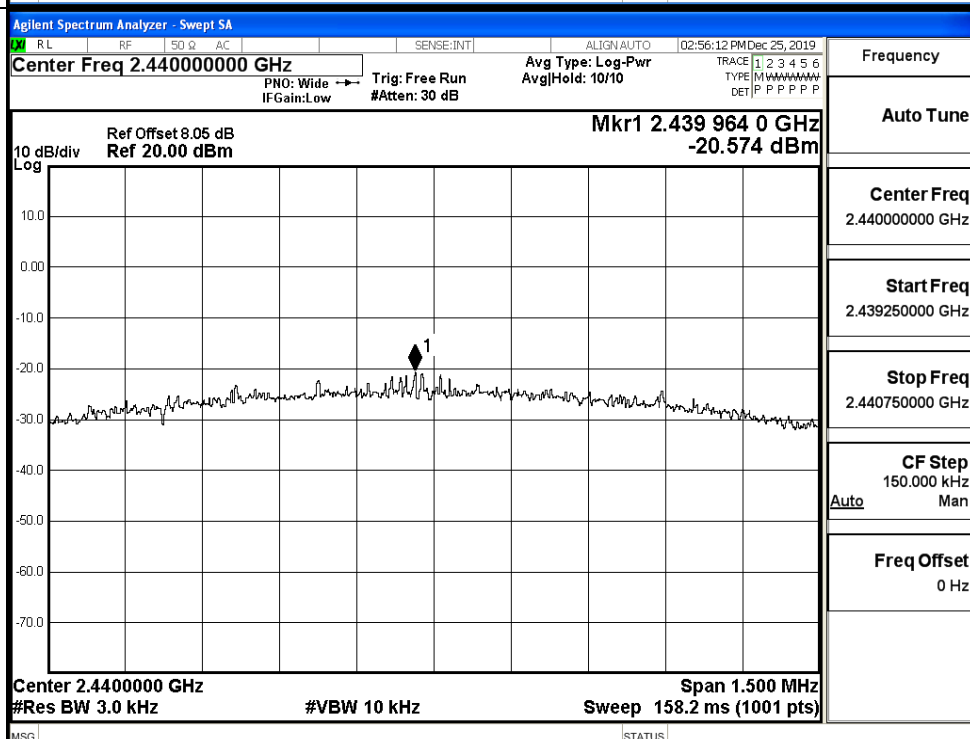
Mode	Channel	PSD [dBm/3KHz]	Limit [dBm/3KHz]	Verdict
BT LE	LCH	-19.418	8	PASS
BT LE	MCH	-20.574	8	PASS
BT LE	HCH	-21.662	8	PASS

Test Graphs

LCH

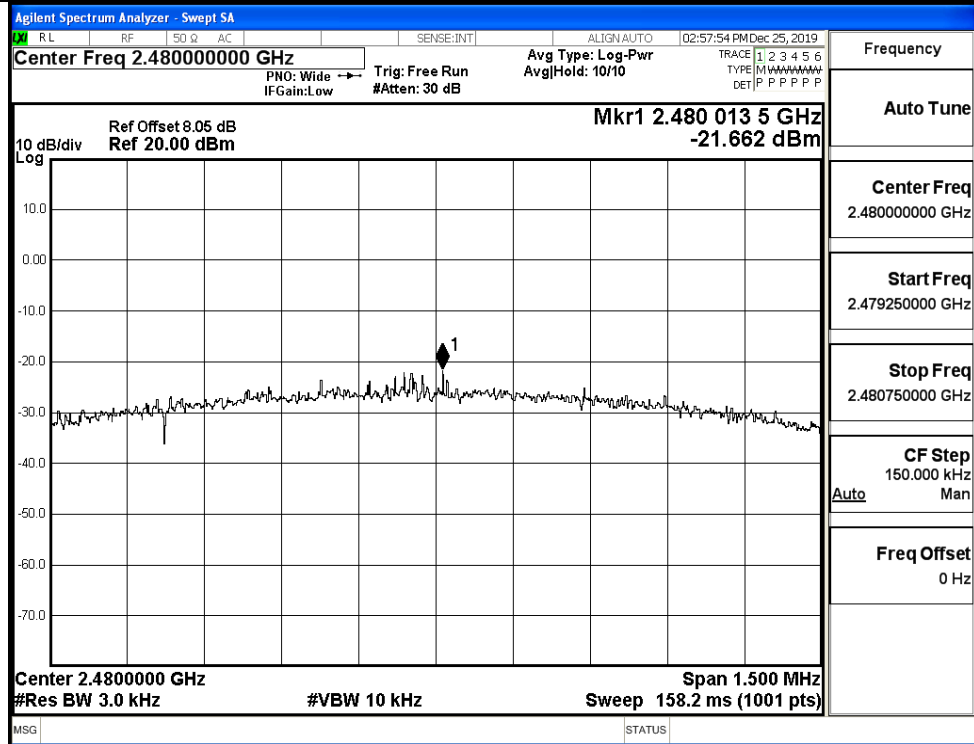


MCH



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HCH



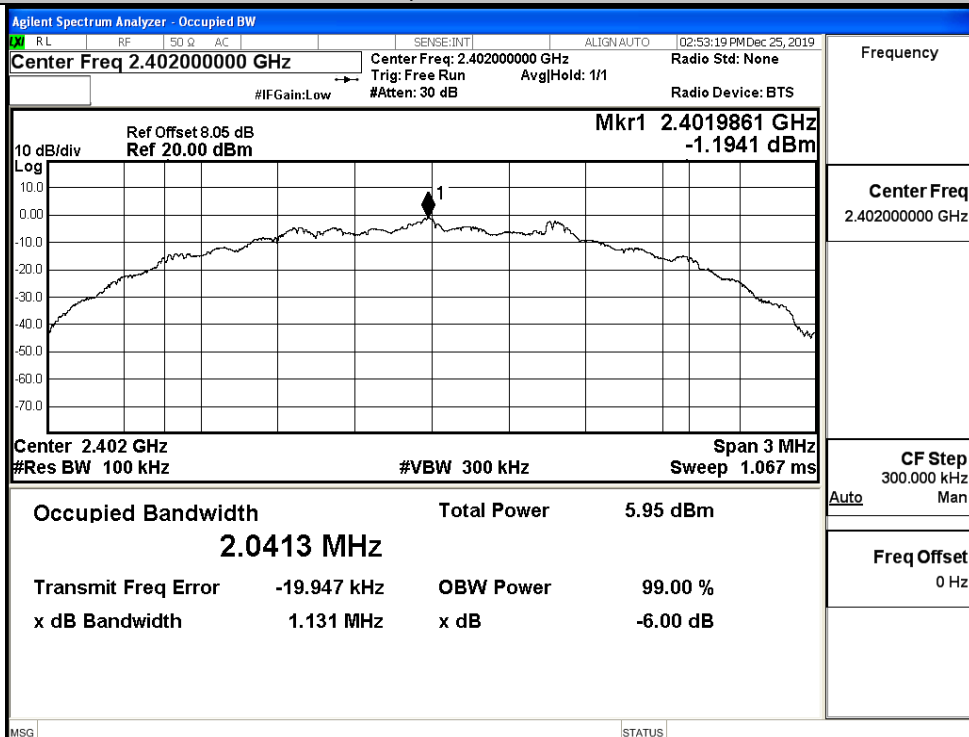
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B.4 6dB Bandwidth

Mode	Channel	6dB Bandwidth [MHz]	Limit [MHz]	Verdict
BT LE	LCH	1.131	≥ 0.5	PASS
BT LE	MCH	1.227	≥ 0.5	PASS
BT LE	HCH	1.133	≥ 0.5	PASS

Test Graphs

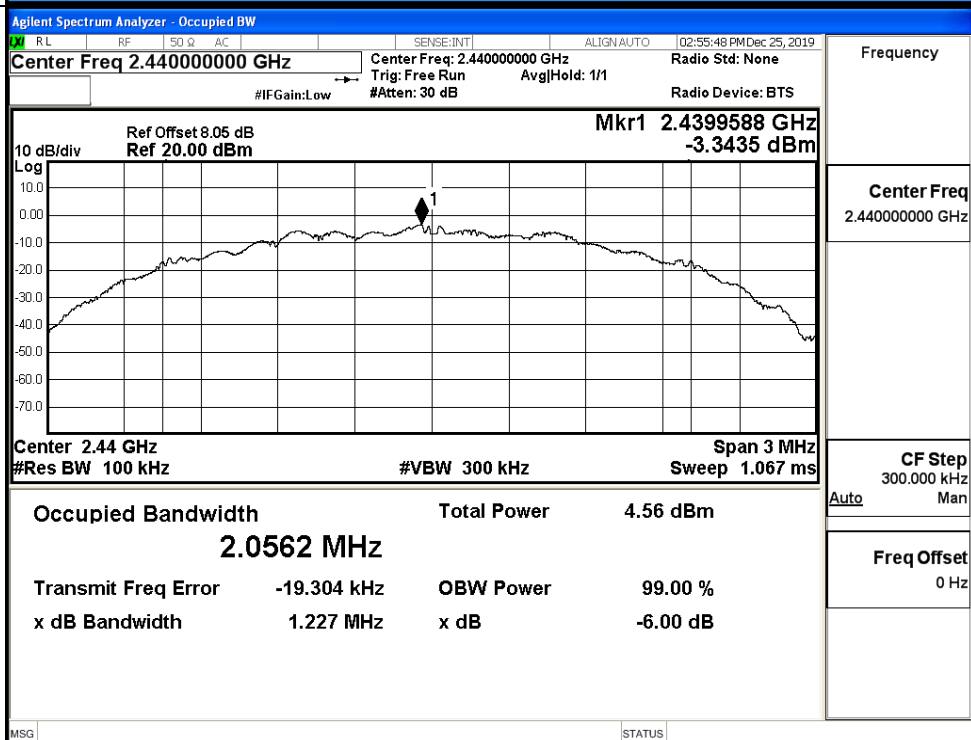
LCH



Frequency

Center Freq
2.402000000 GHzCF Step
300.000 kHz
Auto ManFreq Offset
0 Hz

MCH

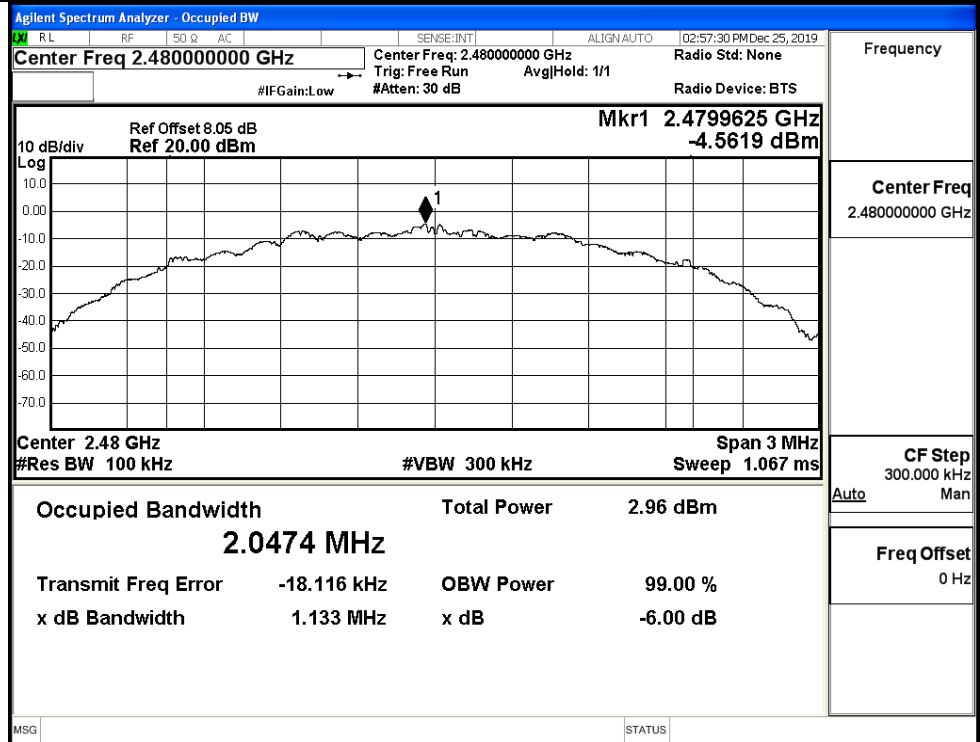


Frequency

Center Freq
2.440000000 GHzCF Step
300.000 kHz
Auto ManFreq Offset
0 Hz

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HCH

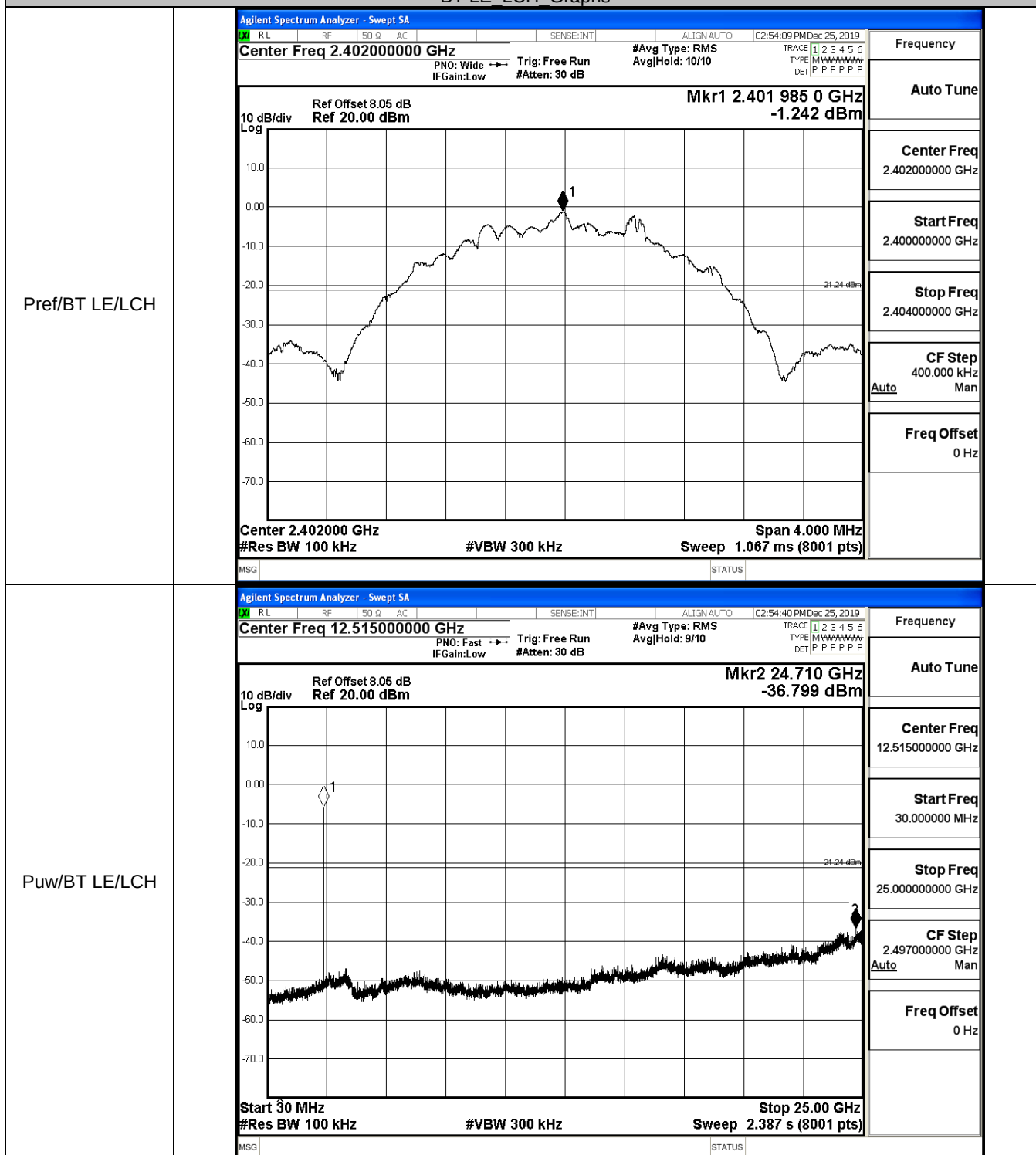


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B.5 RF Conducted Spurious Emissions

Mode	Channel	Pref [dBm]	Max. Level [dBm]	Limit [dBm]	Verdict
BT LE	LCH	-1.242	-36.799	-21.242	PASS
BT LE	MCH	-2.32	-36.502	-22.320	PASS
BT LE	HCH	-3.863	-36.417	-23.863	PASS

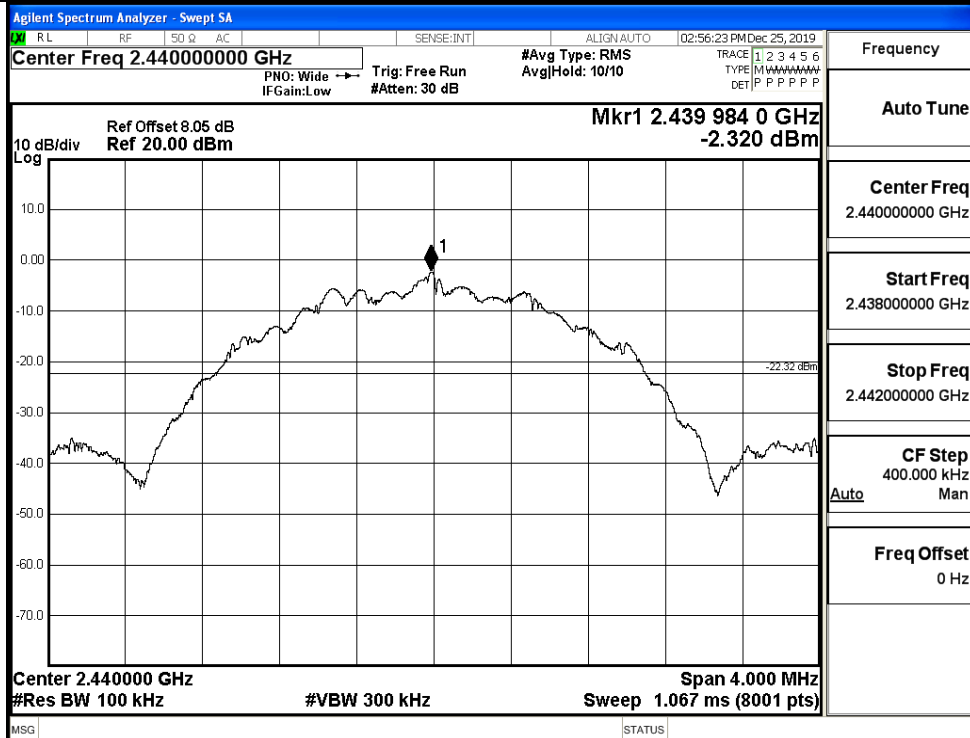
BT LE LCH Graphs



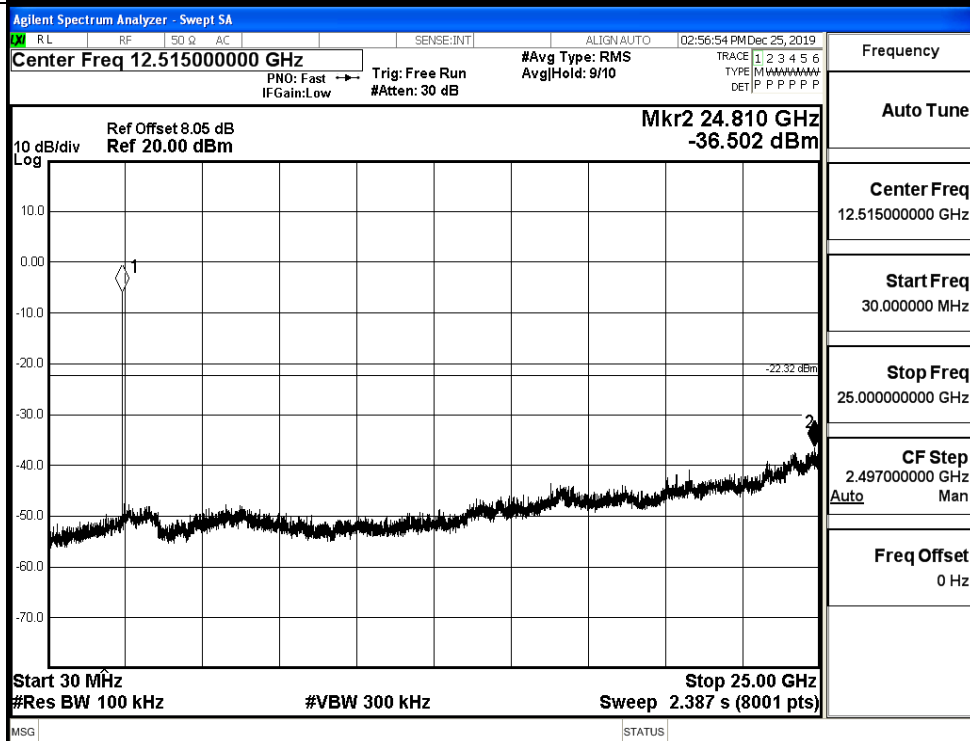
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BT LE MCH Graphs

Pref/BT LE/MCH



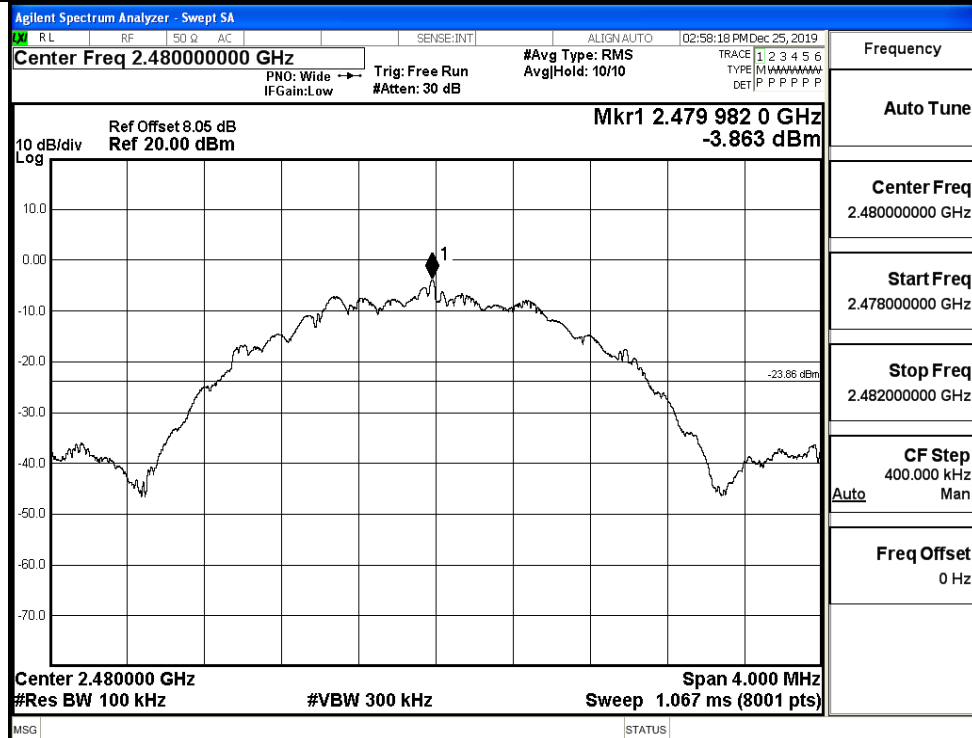
Puw/BT LE/MCH



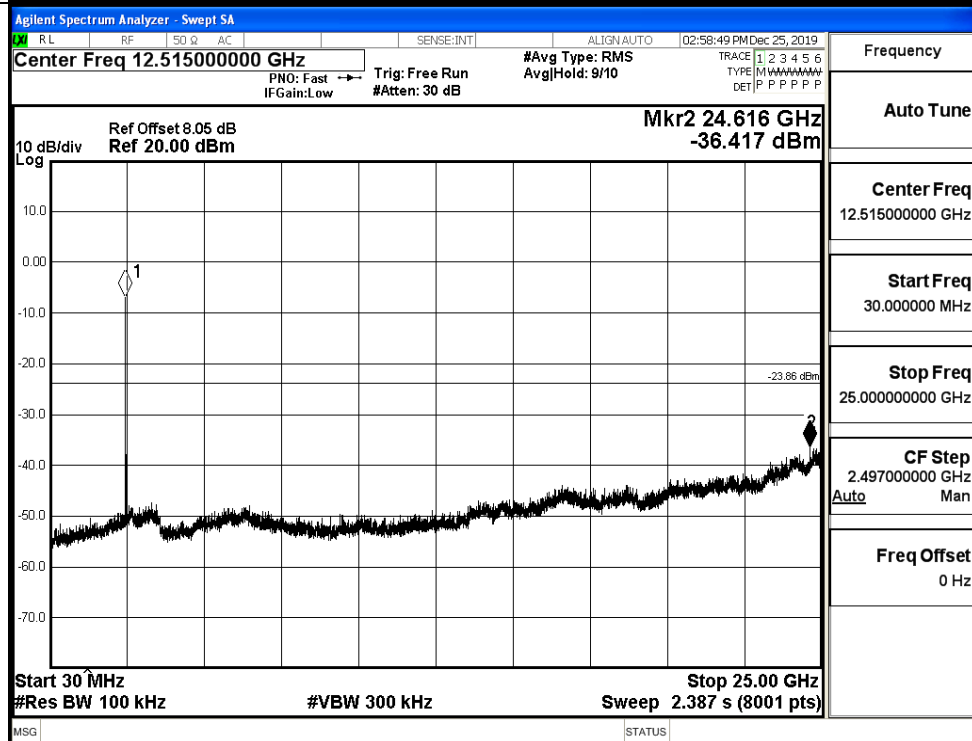
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BT LE HCH Graphs

Pref/BT LE/HCH



Puw/BT LE/HCH



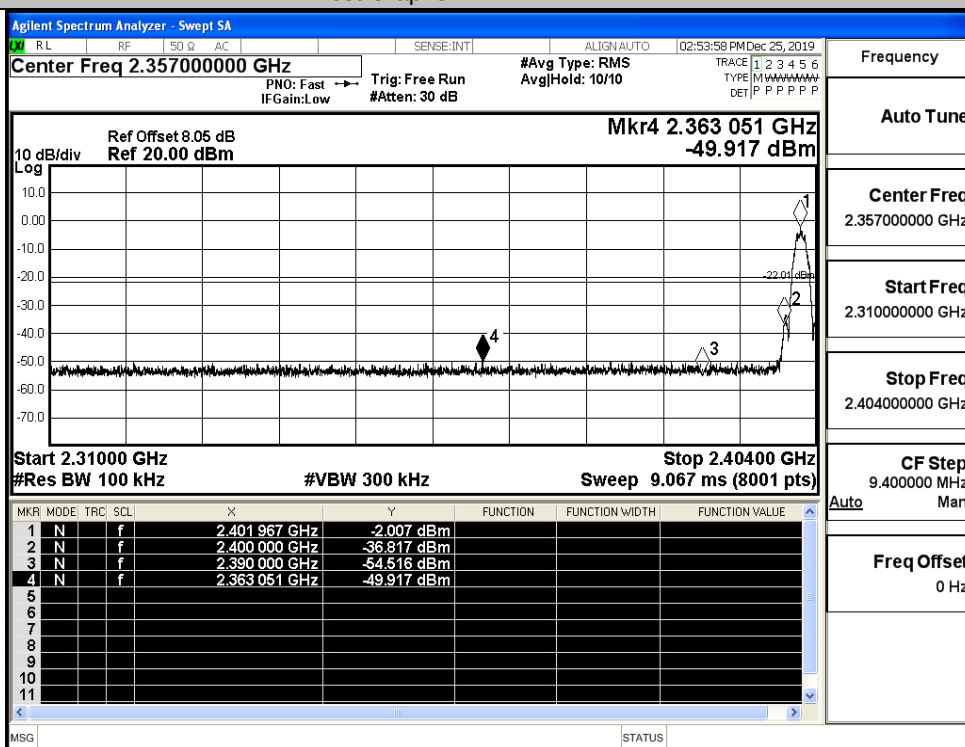
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B.6 Band-edge for RF Conducted Emissions

Mode	Channel	Carrier Power[dBm]	Max.Spurious Level [dBm]	Limit [dBm]	Verdict
BT LE	LCH	-2.007	-49.917	-22.01	PASS
BT LE	HCH	-3.825	-48.565	-23.83	PASS

Test Graphs

LCH

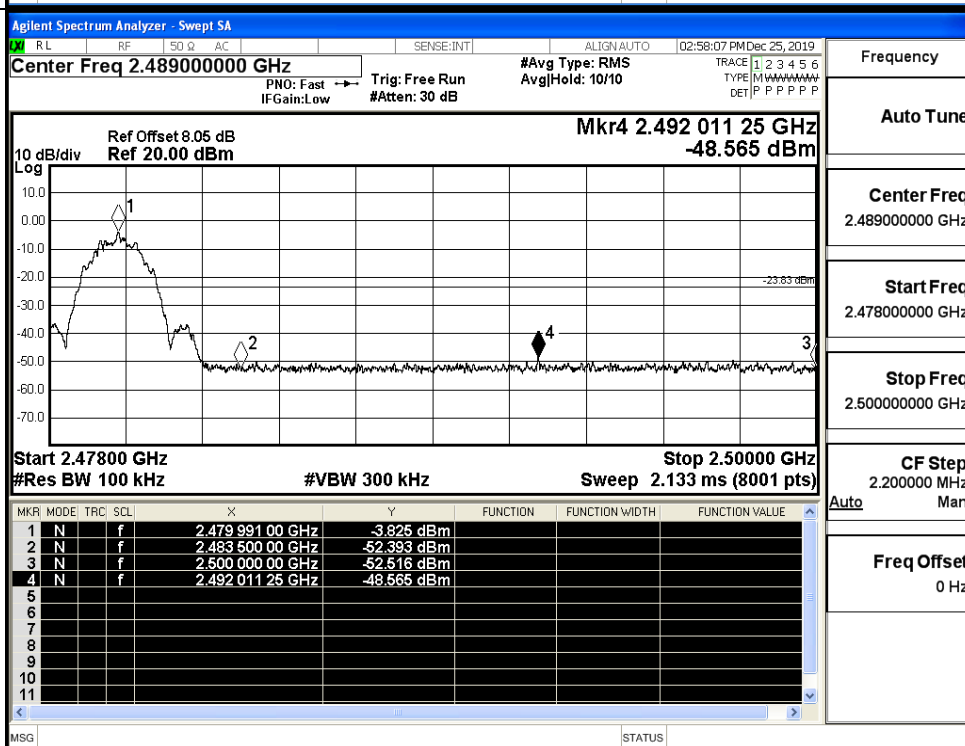


Frequency

Auto Tune

Center Freq
2.357000000 GHzStart Freq
2.310000000 GHzStop Freq
2.404000000 GHzCF Step
9.400000 MHz
Auto ManFreq Offset
0 Hz

HCH



Frequency

Auto Tune

Center Freq
2.489000000 GHzStart Freq
2.478000000 GHzStop Freq
2.500000000 GHzCF Step
2.200000 MHz
Auto ManFreq Offset
0 Hz

LCS191205025AEB**B.7 Restrict-band band-edge measurements**

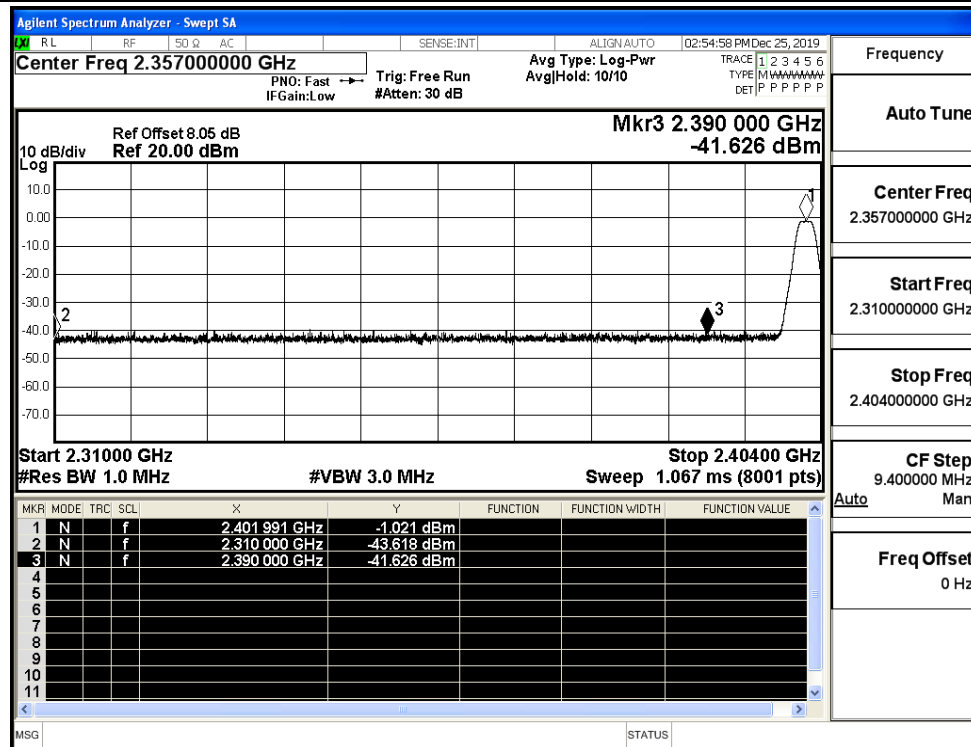
Test Mode	Test Channel	Ant	Freq.	Power [dBm]	Gain	Ground Factor	E [dBuV/m]	Detector	Limit [dBuV/m]	Verdi
BT LE	2402	Ant1	2310.0	-43.62	-3.7	0	53.64	PEAK	74	PASS
		Ant1	2310.0	-53.34	-3.7	0	43.92	AV	54	PASS
		Ant1	2390.0	-41.63	-3.7	0	55.63	PEAK	74	PASS
		Ant1	2390.0	-52.96	-3.7	0	44.30	AV	54	PASS
	2480	Ant1	2483.5	-41.03	-3.7	0	56.23	PEAK	74	PASS
		Ant1	2483.5	-52.14	-3.7	0	45.12	AV	54	PASS
		Ant1	2500.0	-42.89	-3.7	0	54.37	PEAK	74	PASS
		Ant1	2500.0	-52.35	-3.7	0	44.91	AV	54	PASS

$$E \text{ [dBuV/m]} = \text{Power [dBm]} + \text{Gain} + \text{Ground Factor} + 95.26$$

The upper bound on antenna gain for a device with a single RF output shall be selected as the maximum in-band gain of the antenna across all operating bands or 2 dBi, whichever is greater

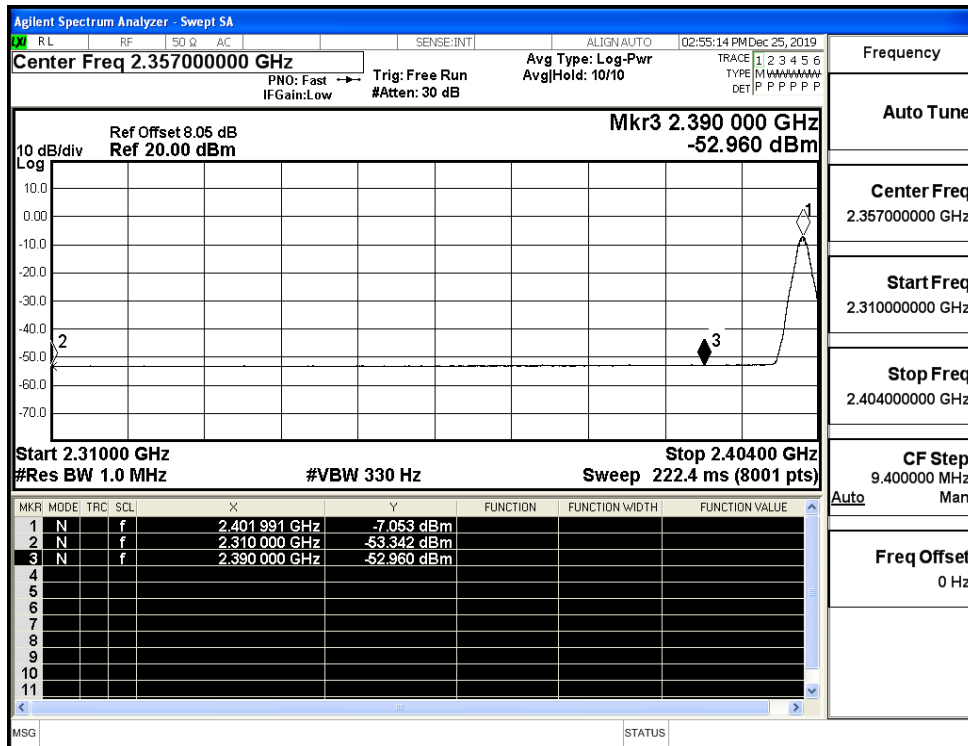
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Restrict-band band-edge measurements_BT LE_2402_Ant1_PEAK

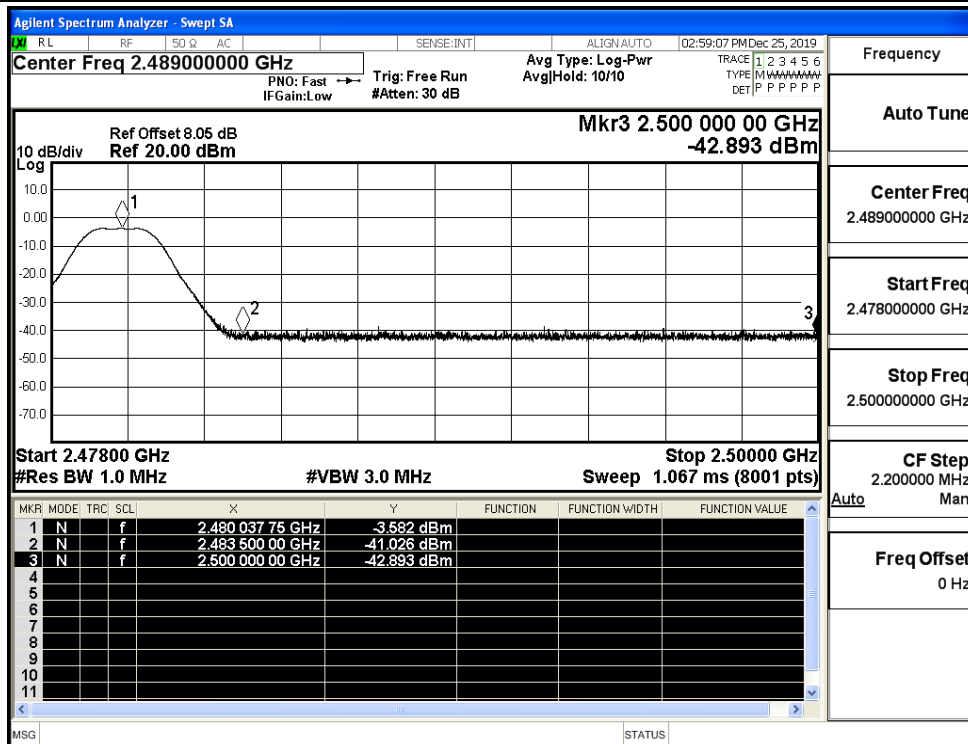


Restrict-band band-edge measurements_BT LE_2402_Ant1_AV

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Restrict-band band-edge measurements_BT LE_2480_Ant1_PEAK



Restrict-band band-edge measurements_BT LE_2480_Ant1_AV

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