

Appendix A

RF Test Data for BT V4.1(BDR/EDR) (Conducted Measurement)

Product Name: Siren Gateway

Trade Mark: Siren

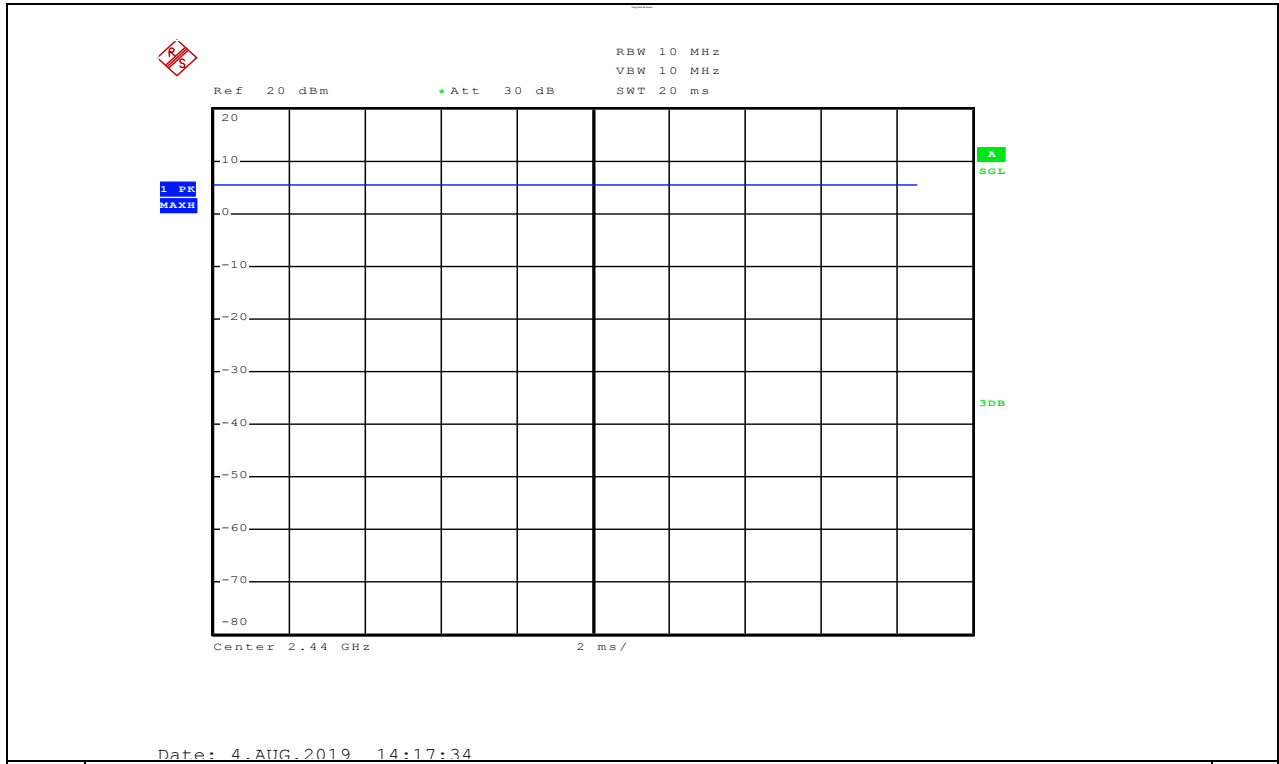
Test Model: GKU1001-2G

Environmental Conditions

Temperature:	24.3 ° C
Relative Humidity:	54.1 %
ATM Pressure:	100.0 kPa
Test Engineer:	Sent Hu
Supervised by:	Wang Chuang

A.1 Duty Cycle

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

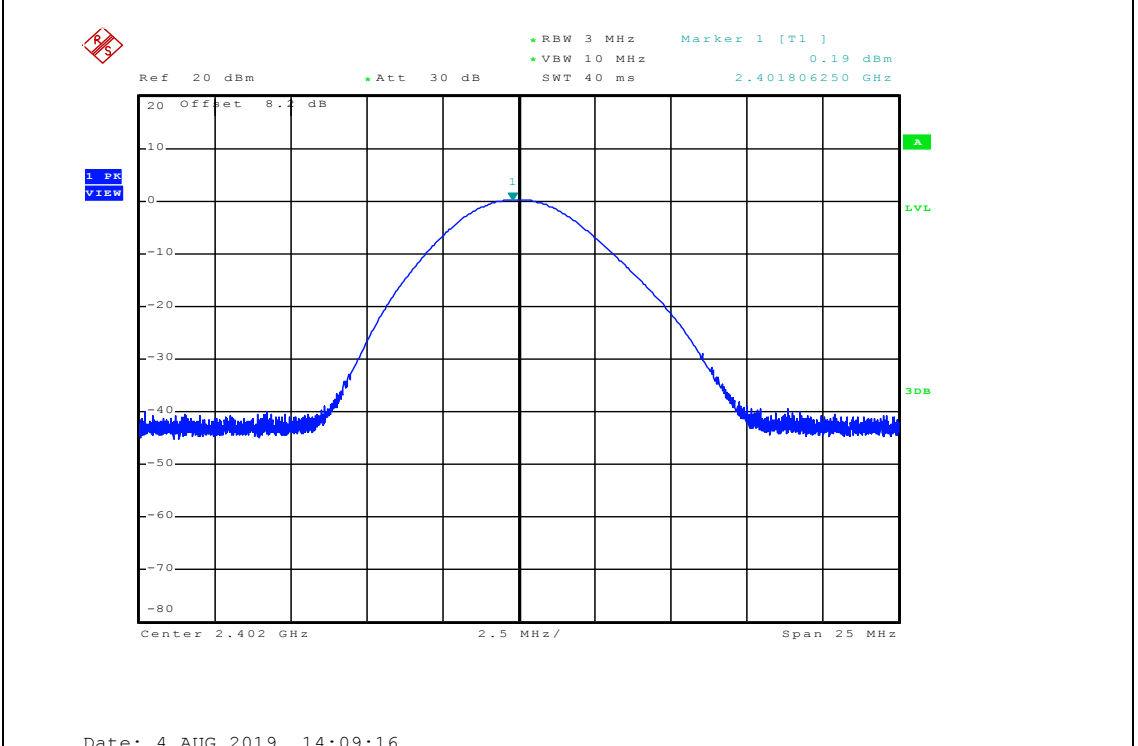


A.2 Maximum Conducted Peak Output Power

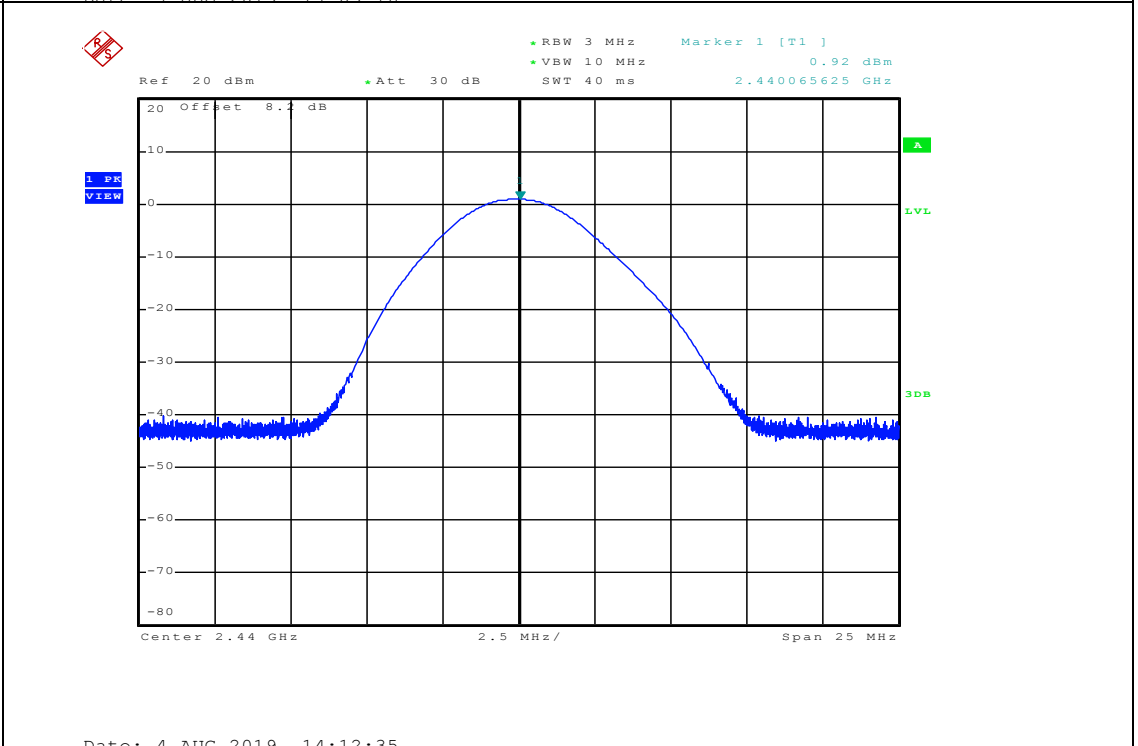
Mode	Channel	Conduct Peak Power[dBm]	Limit [dBm]	Verdict
BT LE	LCH	0.19	30	PASS
BT LE	MCH	0.92	30	PASS
BT LE	HCH	-0.45	30	PASS

Test Graphs

LCH



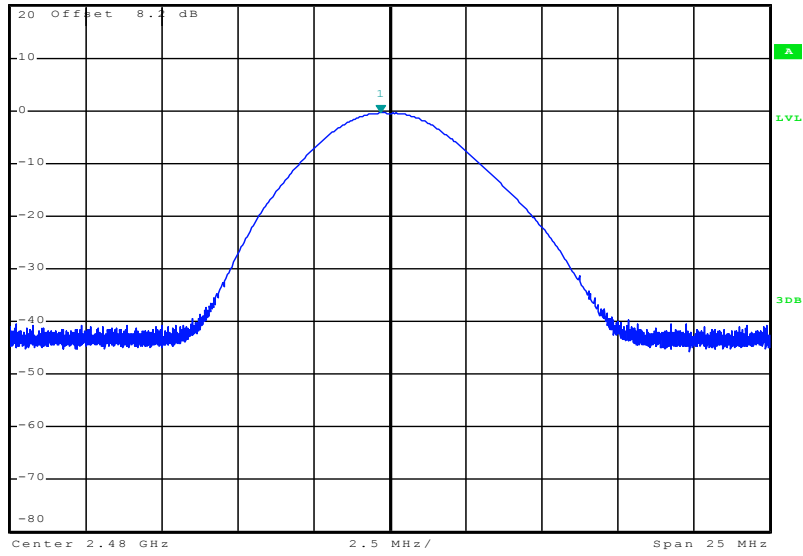
MCH



HCH



Ref 20 dBm • Att 30 dB • RBW 3 MHz Marker 1 [T1] -0.45 dBm
• VBW 10 MHz SWT 40 ms 2.479675000 GHz



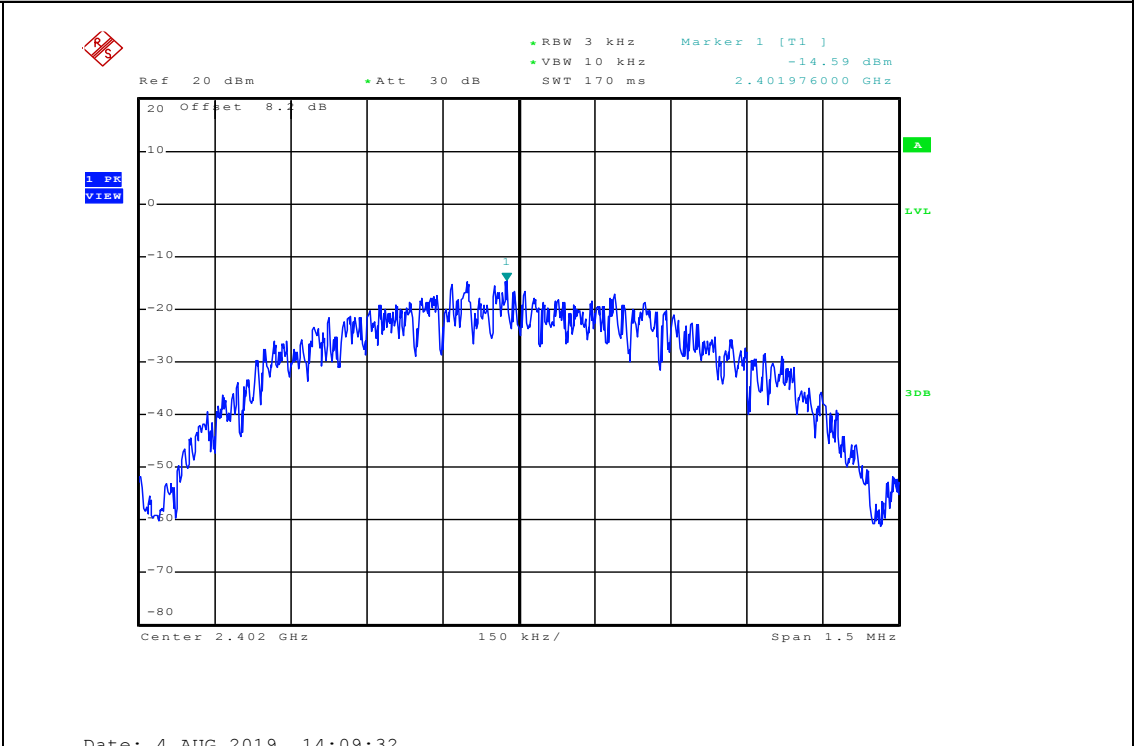
Date: 4 AUG 2019 14:14:32

A.3 Maximum Power Spectral Density

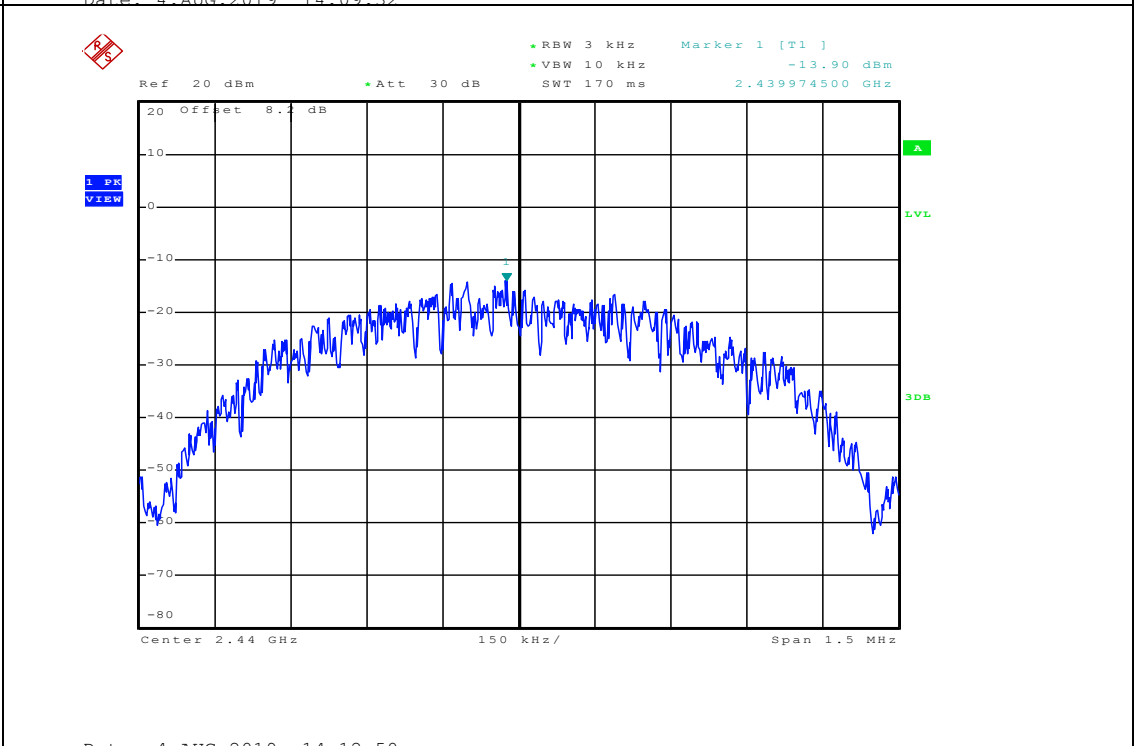
Mode	Channel	PSD [dBm/3KHz]	Limit [dBm/3KHz]	Verdict
BT LE	LCH	-14.590	8	PASS
BT LE	MCH	-13.900	8	PASS
BT LE	HCH	-15.240	8	PASS

Test Graphs

LCH



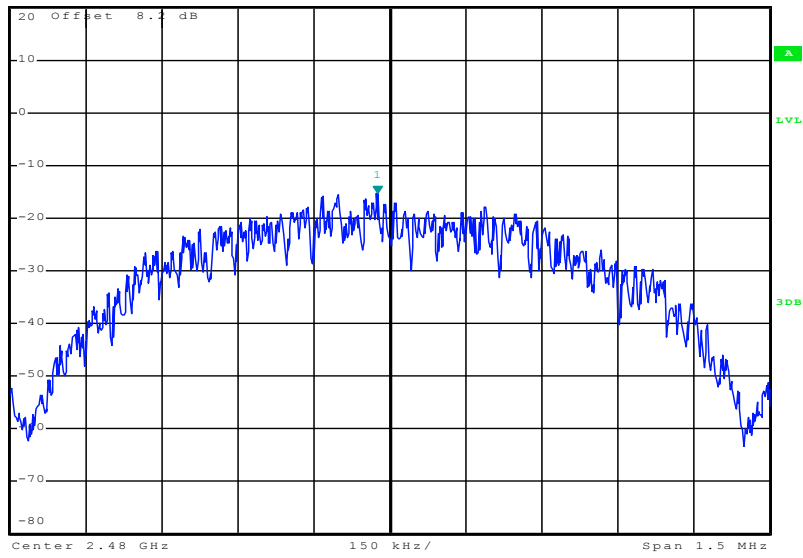
MCH



HCH



Ref 20 dBm Att 30 dB RBW 3 kHz Marker 1 [T1] -15.24 dBm
VSW 10 kHz SWT 170 ms 2.479974500 GHz



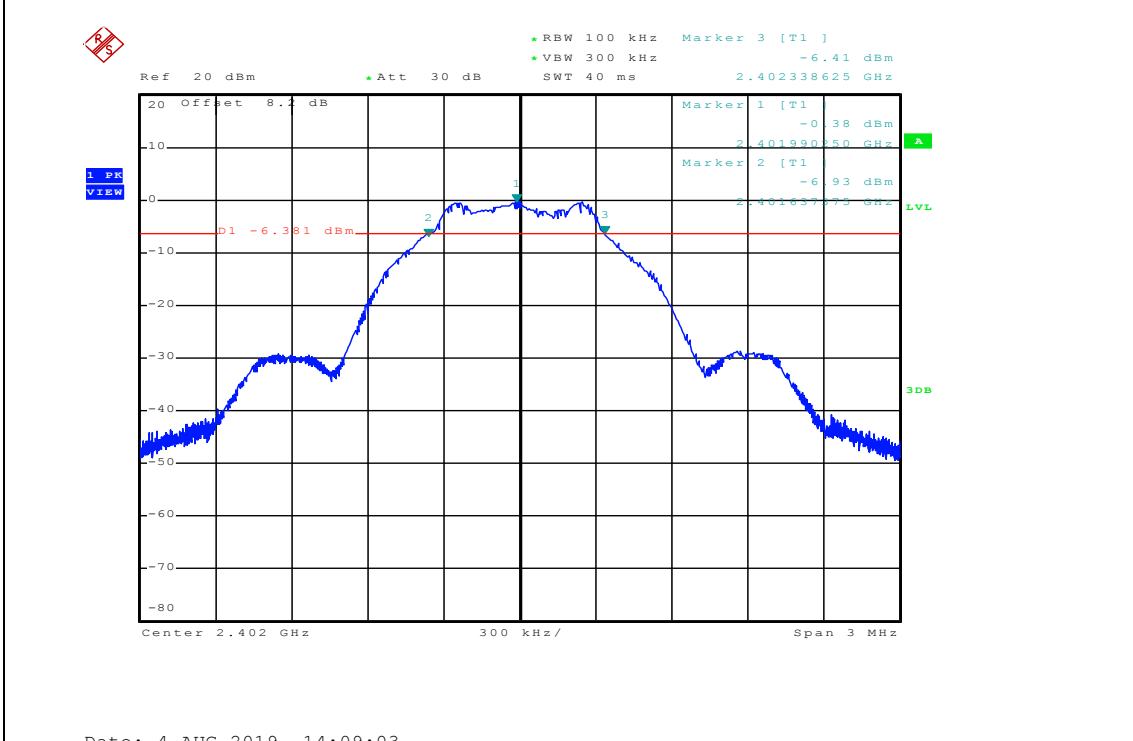
Date: 4 AUG 2019 14:14:47

A.4 6dB Bandwidth

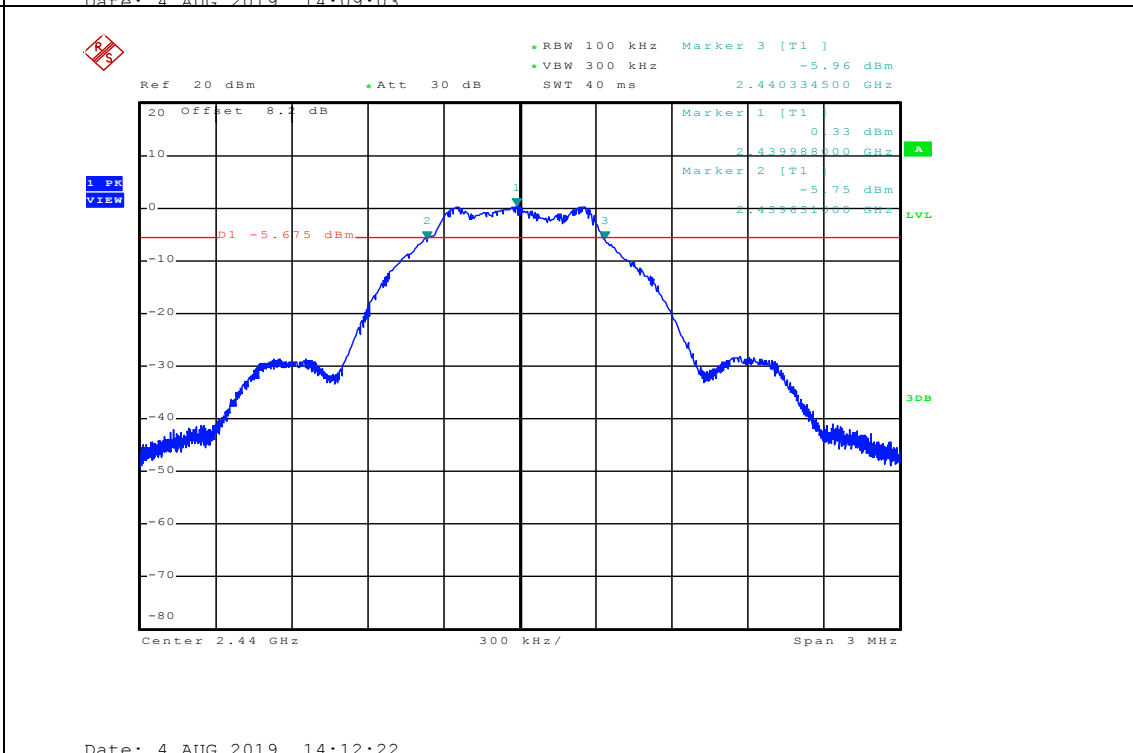
Mode	Channel	6dB Bandwidth [MHz]	Limit [MHz]	Verdict
BT LE	LCH	0.701	≥0.5	PASS
BT LE	MCH	0.704	≥0.5	PASS
BT LE	HCH	0.705	≥0.5	PASS

Test Graphs

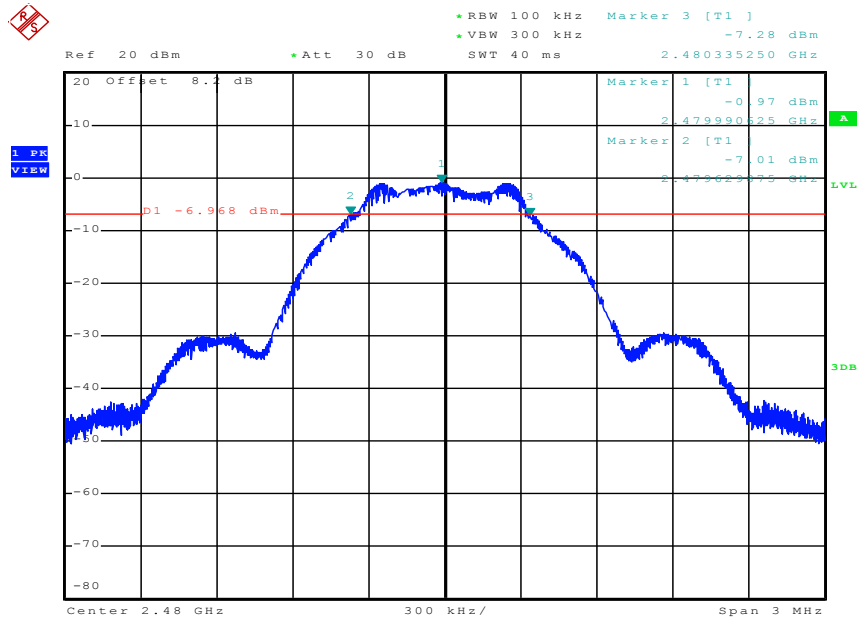
LCH



MCH



HCH

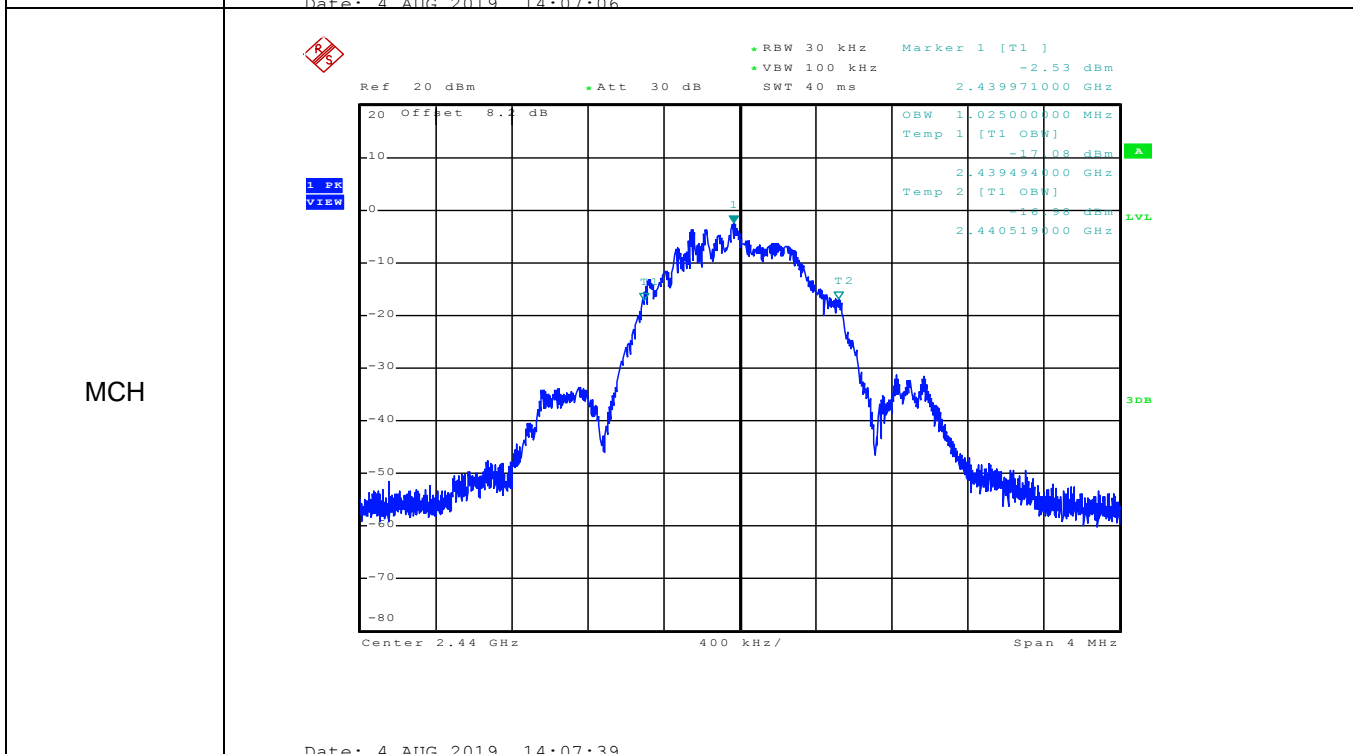
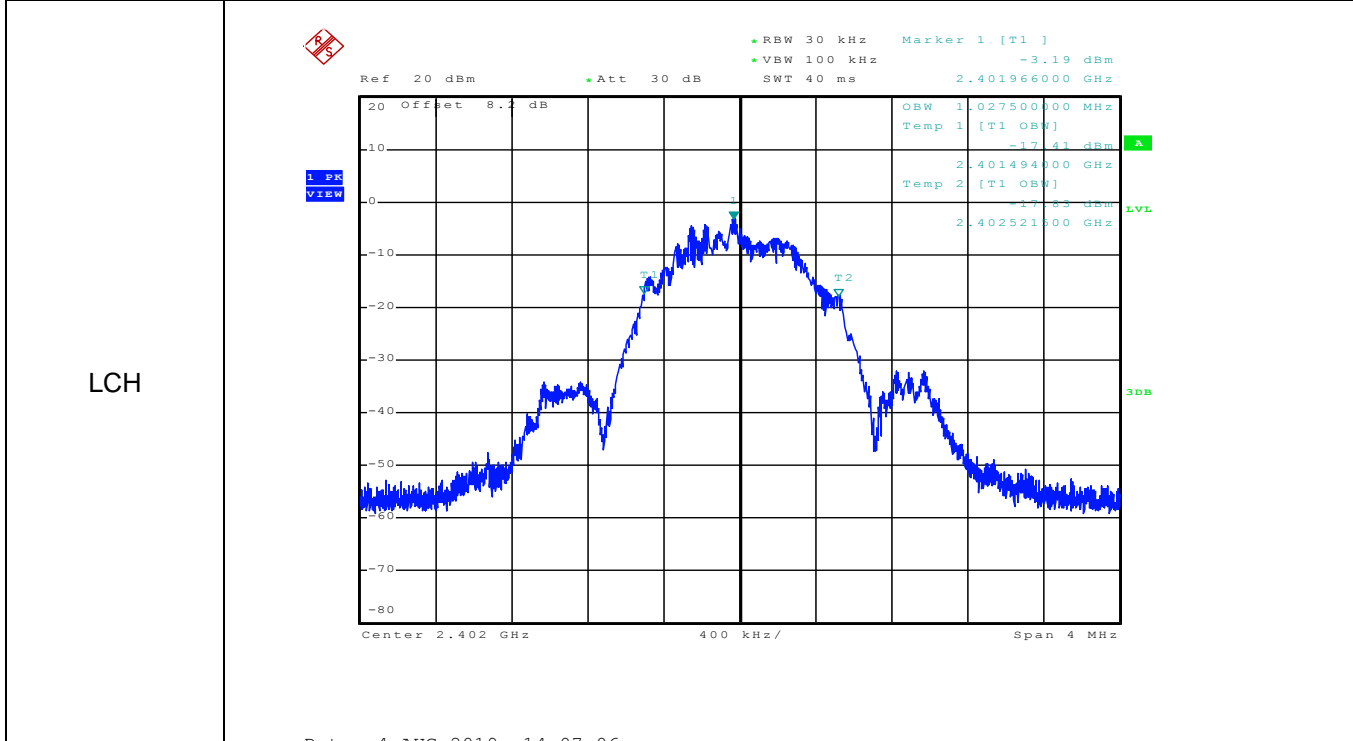


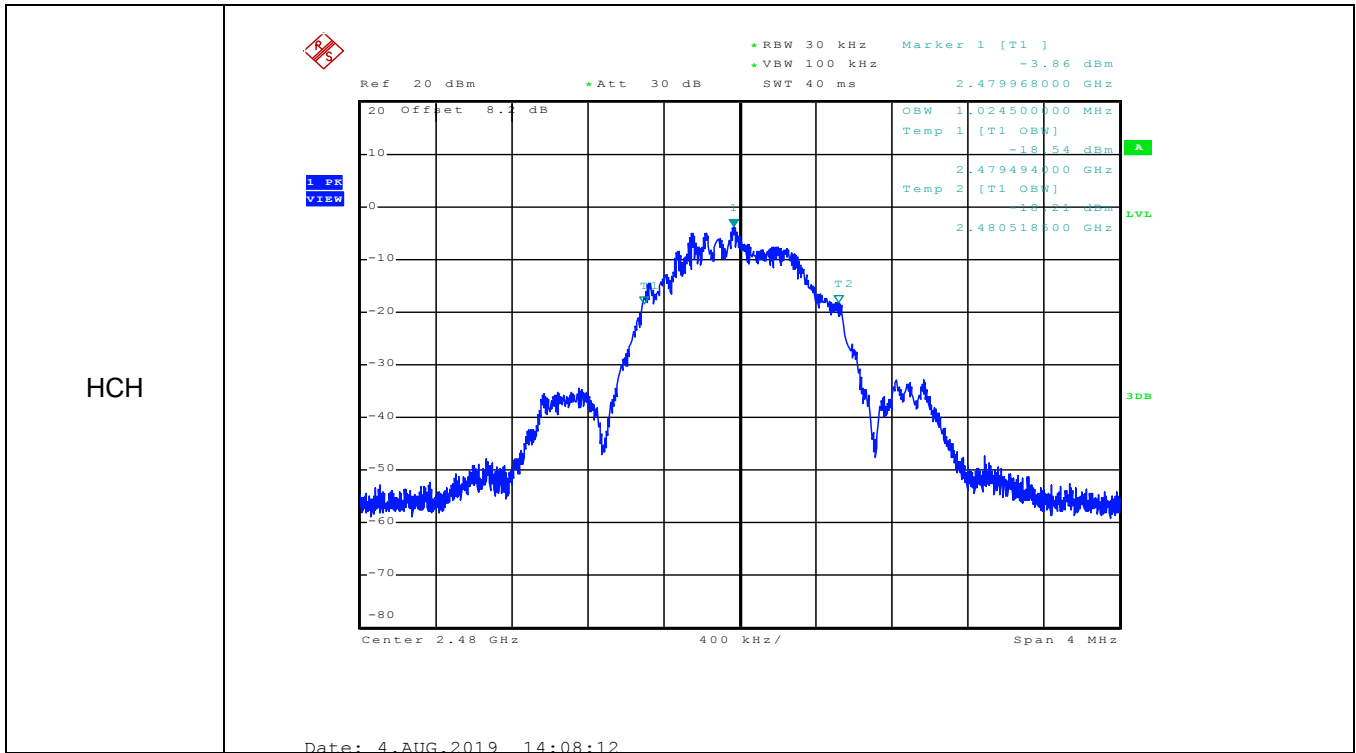
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A.5 Occupied Bandwidth

Mode	Channel	Occupied Bandwidth [MHz]	Limit [MHz]	Verdict
BT LE	LCH	1.028	≥0.5	PASS
BT LE	MCH	1.025	≥0.5	PASS
BT LE	HCH	1.025	≥0.5	PASS

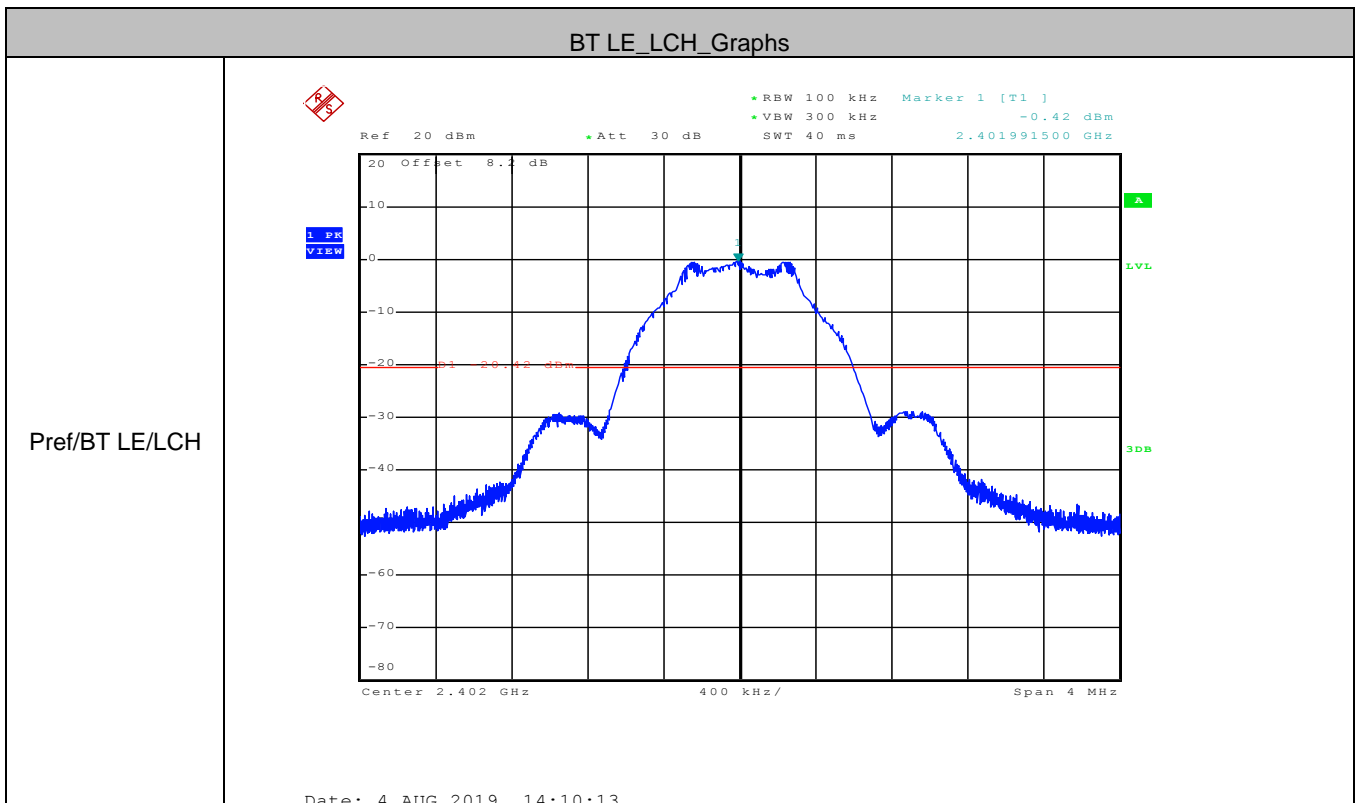
Test Graphs



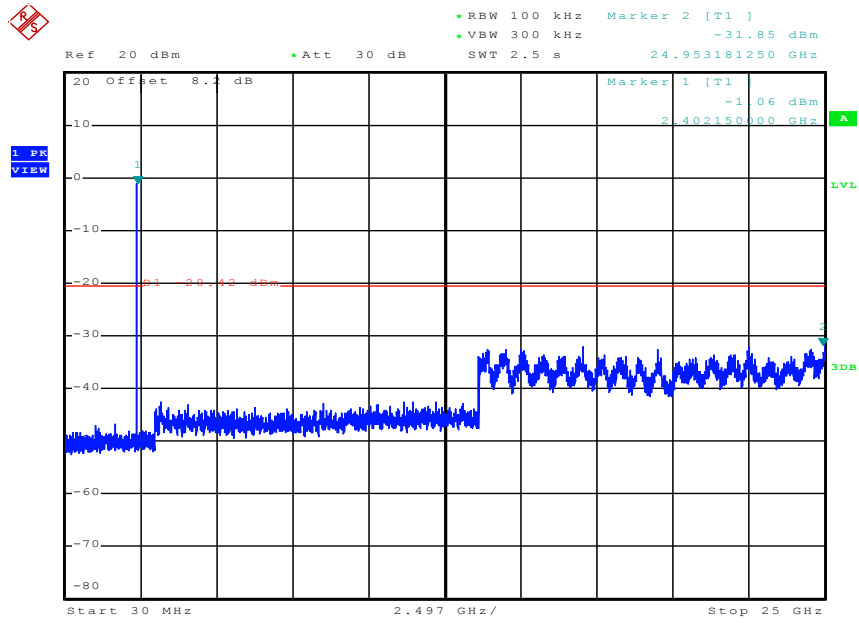


A.6 RF Conducted Spurious Emissions

Mode	Channel	Pref [dBm]	Max. Level [dBm]	Limit [dBm]	Verdict
BT LE	LCH	-0.42	-31.850	-20.420	PASS
BT LE	MCH	0.34	-31.750	-19.660	PASS
BT LE	HCH	-0.96	-31.360	-20.960	PASS



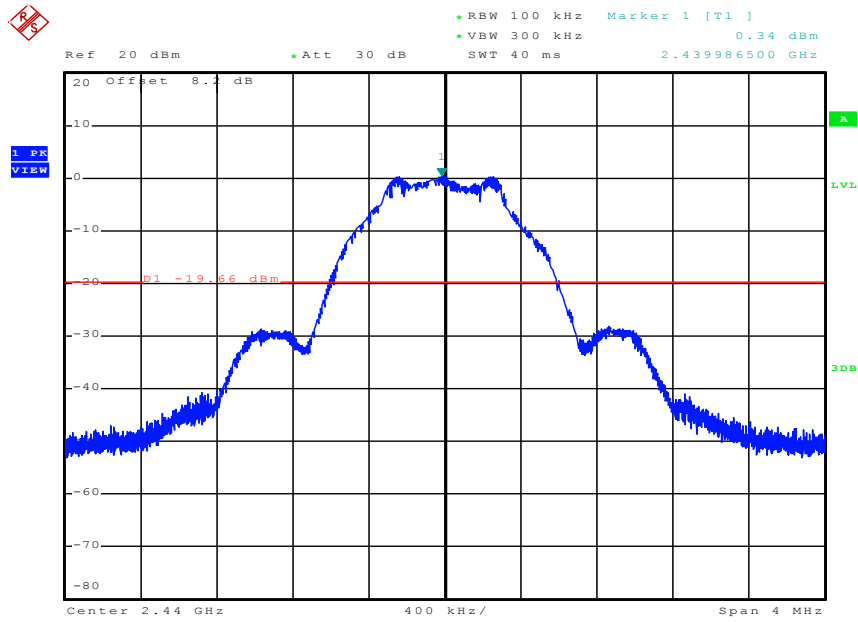
Puw/BT LE/LCH



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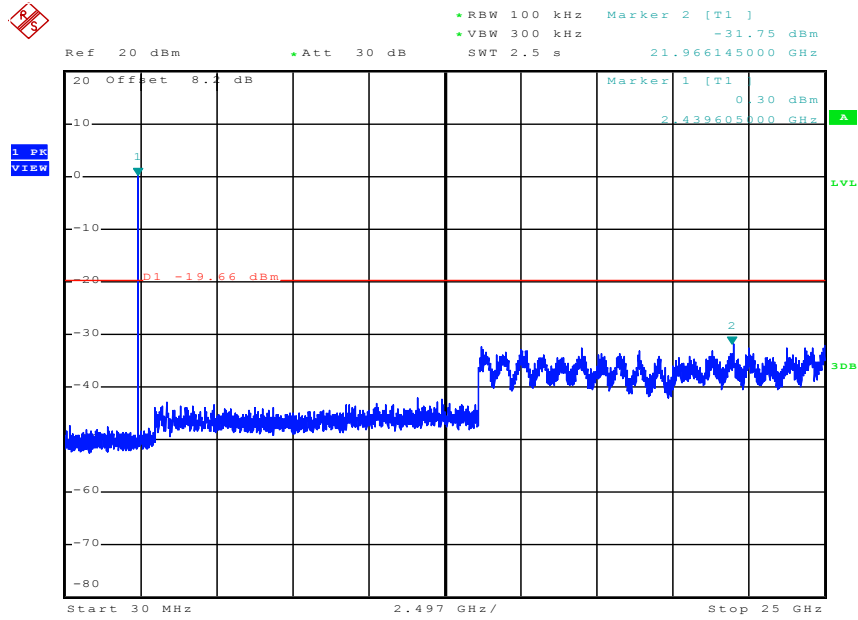
BT LE_MCH_Graphs

Pref/BT LE/MCH



Date: 4 AUG 2019 14:13:09

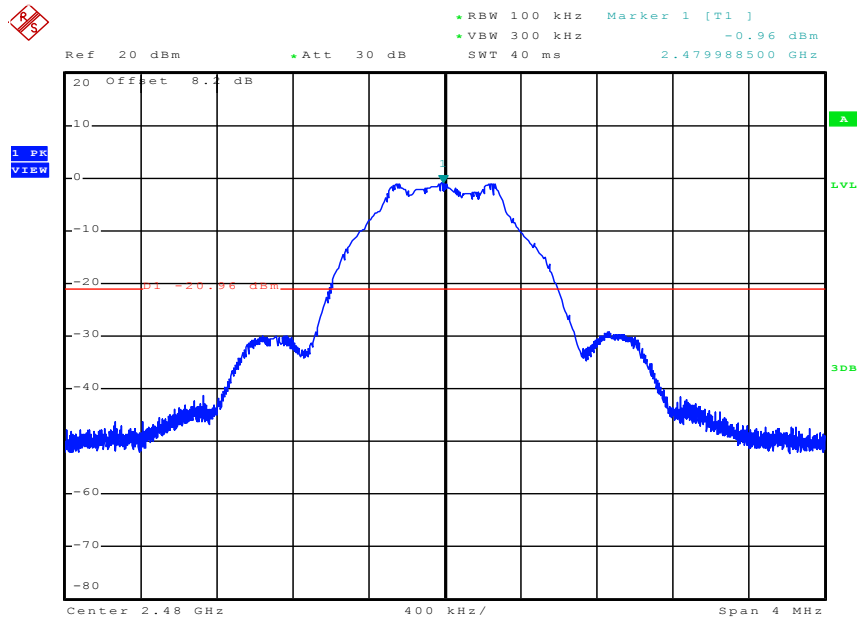
Puw/BT LE/MCH



Date: 4 AUG 2019 14:13:40

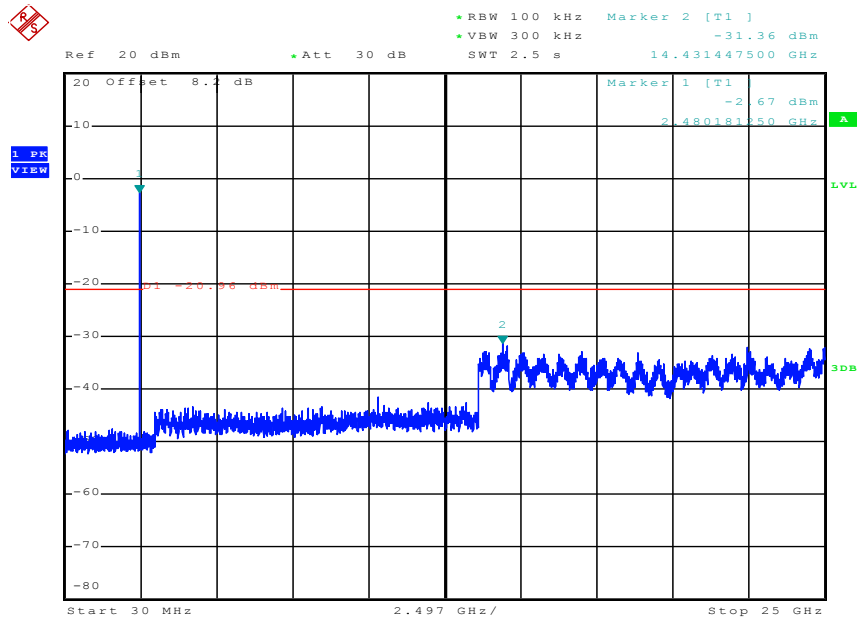
BT LE_HCH_Graphs

Pref/BT LE/HCH



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Puw/BT LE/HCH



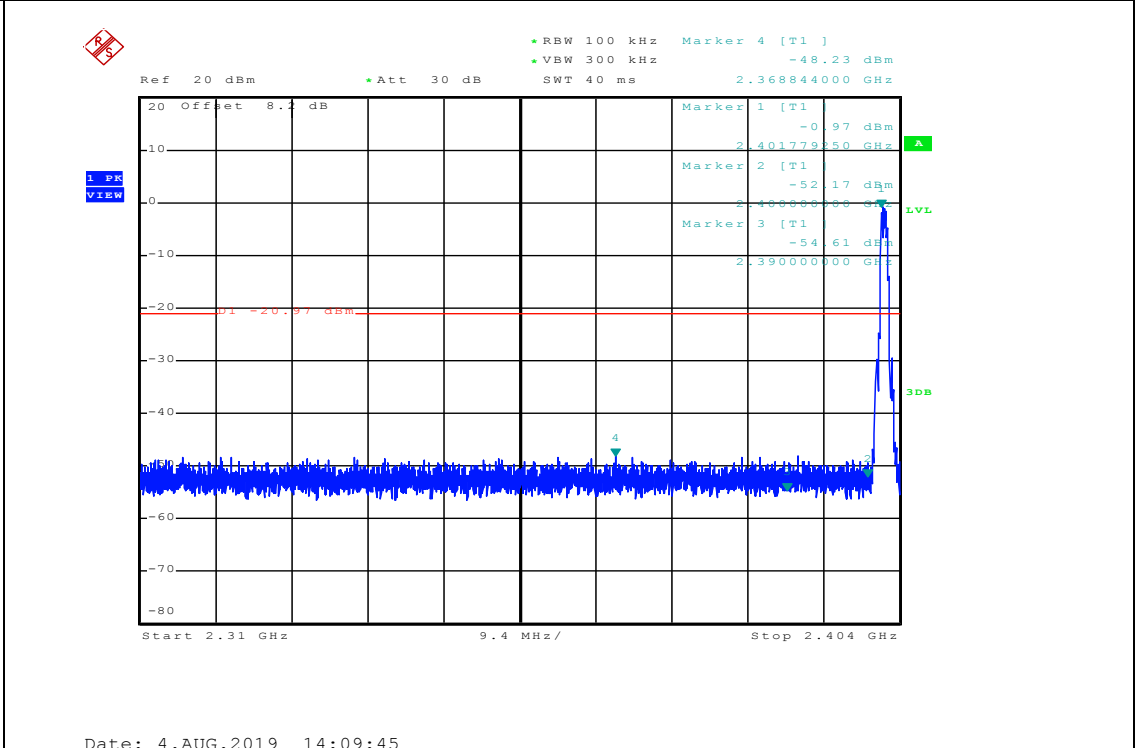
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A.7 Band-edge for RF Conducted Emissions

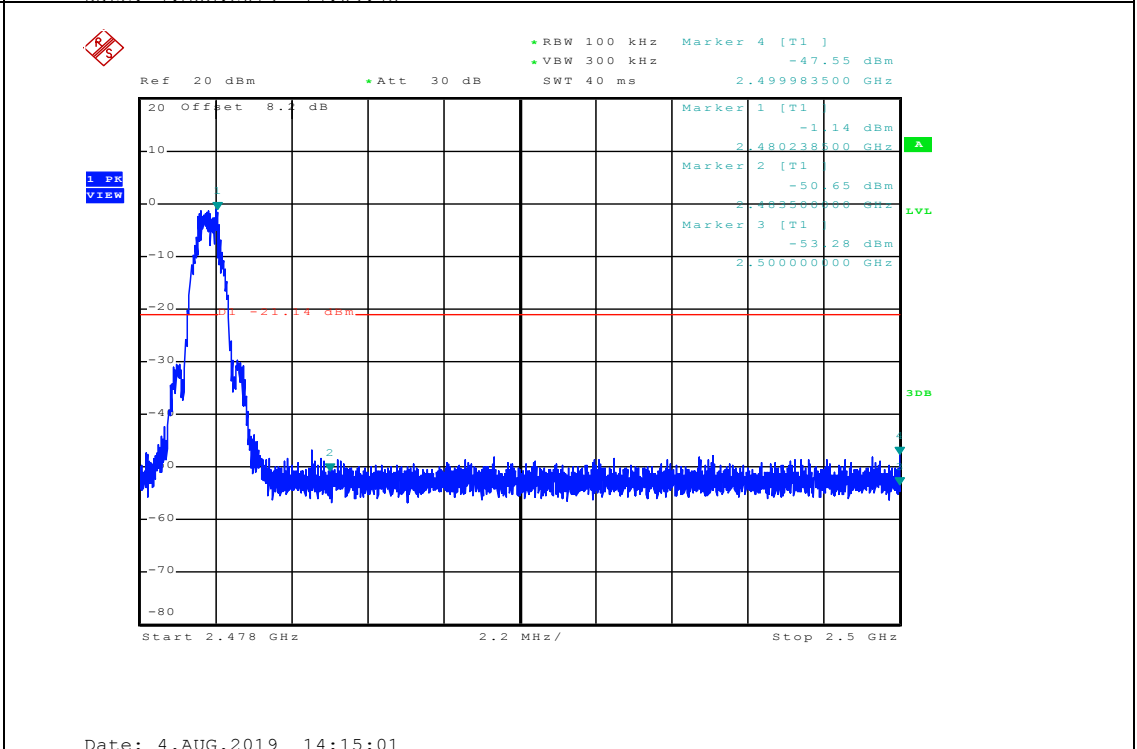
Mode	Channel	Carrier Power[dBm]	Max.Spurious Level [dBm]	Limit [dBm]	Verdict
BT LE	LCH	-0.970	-48.234	-20.97	PASS
BT LE	HCH	-1.140	-47.551	-21.14	PASS

Test Graphs

LCH



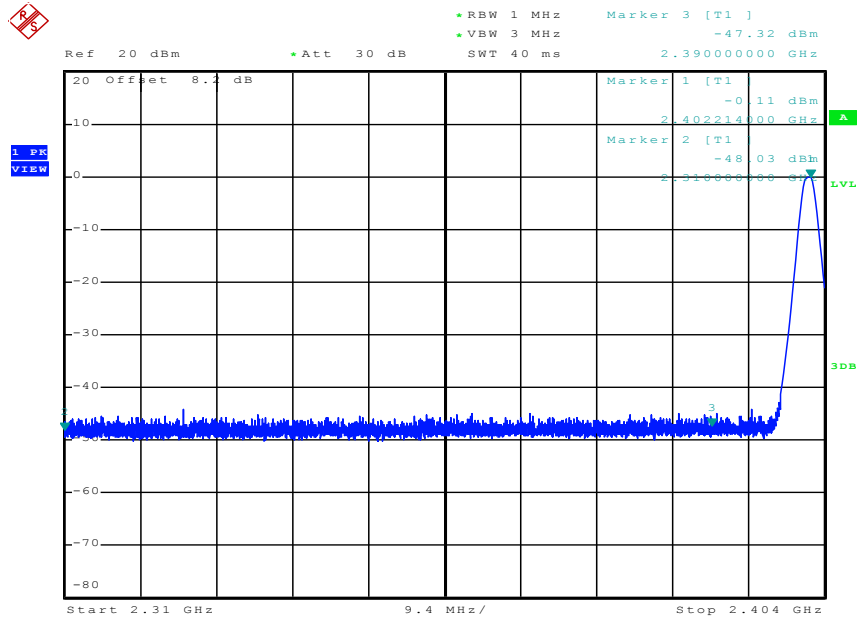
HCH



A.8 Restrict-band band-edge measurements

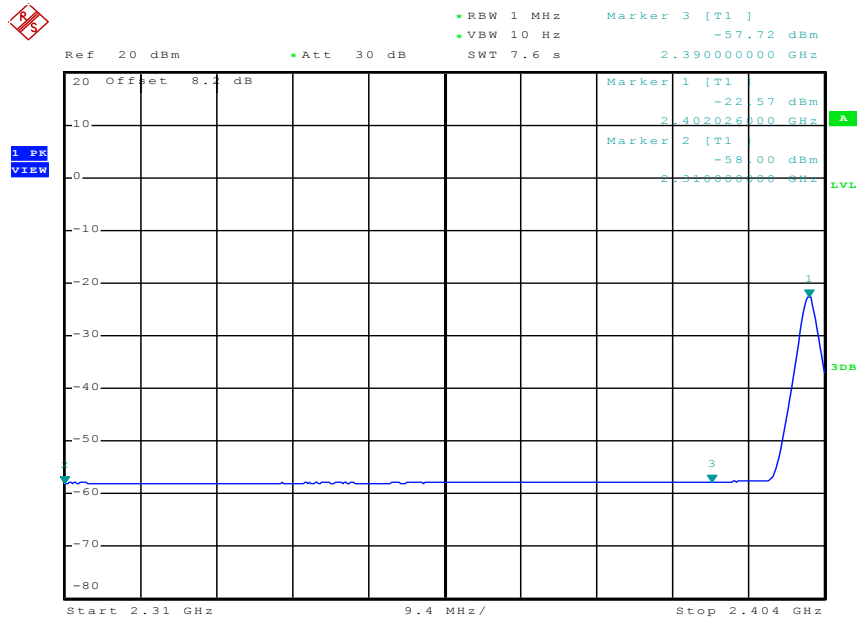
Test Mode	Test Channel	Ant	Freq.	Power [dBm]	Gain	Ground Factor	E [dBuV/m]	Detector	Limit [dBuV/m]	Verdi
BT LE	2402	Ant1	2310.0	-48.03	2.0	0	49.20	PEAK	74	PASS
		Ant1	2310.0	-58.00	2.0	0	39.23	AV	54	PASS
		Ant1	2390.0	-47.32	2.0	0	49.91	PEAK	74	PASS
		Ant1	2390.0	-57.72	2.0	0	39.51	AV	54	PASS
	2480	Ant1	2483.5	-38.80	2.0	0	58.43	PEAK	74	PASS
		Ant1	2483.5	-49.36	2.0	0	47.87	AV	54	PASS
		Ant1	2500.0	-47.66	2.0	0	49.57	PEAK	74	PASS
		Ant1	2500.0	-58.32	2.0	0	38.91	AV	54	PASS

Restrict-band band-edge measurements_BT LE_2402_Ant1_PEAK



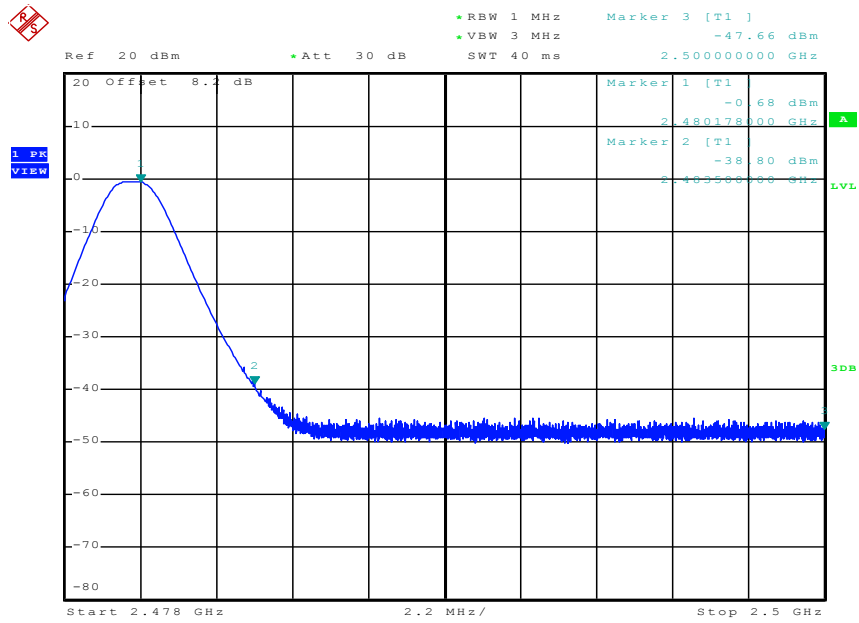
Date: 4.AUG.2019 14:11:16

Restrict-band band-edge measurements_BT LE_2402_Ant1_AV



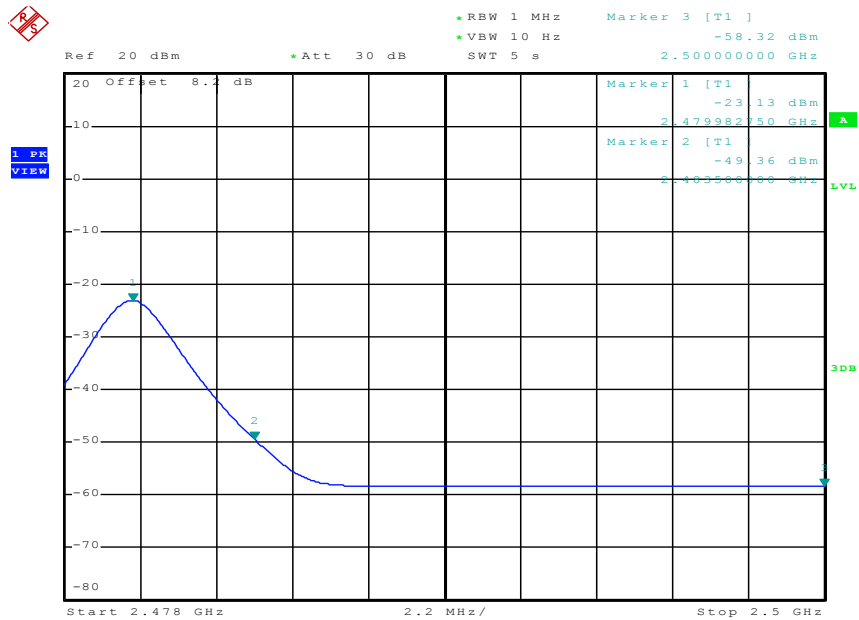
Date: 4.AUG.2019 14:11:32

Restrict-band band-edge measurements_BT LE_2480_Ant1_PEAK



Date: 4.AUG.2019 14:16:25

Restrict-band band-edge measurements_BT LE_2480_Ant1_AV



Date: 4.AUG.2019 14:16:40