



# Appendix B

## E-UTRA Band 7



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# 1 Effective (Isotropic) Radiated Power Output Data

Effective Isotropic Radiated Power of Transmitter (EIRP) for LTE BAND 7

Main Supply:

Test Band(LTE)	Test Mode	Test Bandwidth	Test channel	Test RB	Measured (dBm)	EIRP (dBm)	limit (dBm)	Verdict
BAND7	LTE/TM1	5M	LCH	RB1#0	20.22	20.12	33.00	PASS
				RB1#13	20.31	20.18	33.00	PASS
				RB1#24	20.30	20.15	33.00	PASS
				RB12#0	19.28	19.14	33.00	PASS
				RB12#6	19.29	19.16	33.00	PASS
				RB12#13	19.33	19.19	33.00	PASS
				RB25#0	19.25	19.11	33.00	PASS
			MCH	RB1#0	20.29	20.18	33.00	PASS
				RB1#13	20.30	20.15	33.00	PASS
				RB1#24	20.25	20.11	33.00	PASS
				RB12#0	19.31	19.17	33.00	PASS
				RB12#6	19.32	19.19	33.00	PASS
				RB12#13	19.30	19.16	33.00	PASS
				RB25#0	19.26	19.15	33.00	PASS
			HCH	RB1#0	20.44	20.30	33.00	PASS
				RB1#13	20.54	20.40	33.00	PASS
				RB1#24	20.56	20.41	33.00	PASS
				RB12#0	19.53	19.39	33.00	PASS
				RB12#6	19.56	19.45	33.00	PASS
				RB12#13	19.61	19.48	33.00	PASS
				RB25#0	19.51	19.37	33.00	PASS



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Test Band(LTE)	Test Mode	Test Bandwidth	Test channel	Test RB	Measured (dBm)	EIRP (dBm)	limit (dBm)	Verdict
BAND7	LTE/TM2	5M	LCH	RB1#0	19.40	19.26	33.00	PASS
				RB1#13	19.52	19.39	33.00	PASS
				RB1#24	19.54	19.42	33.00	PASS
				RB12#0	18.34	18.22	33.00	PASS
				RB12#6	18.36	18.24	33.00	PASS
				RB12#13	18.39	18.26	33.00	PASS
				RB25#0	18.31	18.17	33.00	PASS
			MCH	RB1#0	19.54	19.40	33.00	PASS
				RB1#13	19.55	19.41	33.00	PASS
				RB1#24	19.51	19.41	33.00	PASS
				RB12#0	18.36	18.24	33.00	PASS
				RB12#6	18.36	18.22	33.00	PASS
				RB12#13	18.35	18.22	33.00	PASS
				RB25#0	18.30	18.19	33.00	PASS
			HCH	RB1#0	19.69	19.57	33.00	PASS
				RB1#13	19.77	19.66	33.00	PASS
				RB1#24	19.84	19.70	33.00	PASS
				RB12#0	18.58	18.46	33.00	PASS
				RB12#6	18.62	18.50	33.00	PASS
				RB12#13	18.67	18.53	33.00	PASS
				RB25#0	18.56	18.44	33.00	PASS



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Test Band(LTE)	Test Mode	Test Bandwidth	Test channel	Test RB	Measured (dBm)	EIRP (dBm)	limit (dBm)	Verdict
BAND7	LTE/TM1	10M	LCH	RB1#0	20.23	20.09	33.00	PASS
				RB1#25	20.34	20.19	33.00	PASS
				RB1#49	20.53	20.39	33.00	PASS
				RB25#0	19.26	19.16	33.00	PASS
				RB25#13	19.34	19.22	33.00	PASS
				RB25#25	19.40	19.25	33.00	PASS
				RB50#0	19.35	19.23	33.00	PASS
			MCH	RB1#0	20.30	20.19	33.00	PASS
				RB1#25	20.28	20.13	33.00	PASS
				RB1#49	20.32	20.20	33.00	PASS
				RB25#0	19.25	19.11	33.00	PASS
				RB25#13	19.27	19.13	33.00	PASS
				RB25#25	19.26	19.11	33.00	PASS
				RB50#0	19.27	19.14	33.00	PASS
			HCH	RB1#0	20.41	20.31	33.00	PASS
				RB1#25	20.46	20.36	33.00	PASS
				RB1#49	20.61	20.50	33.00	PASS
				RB25#0	19.38	19.26	33.00	PASS
				RB25#13	19.44	19.32	33.00	PASS
				RB25#25	19.52	19.37	33.00	PASS
				RB50#0	19.48	19.35	33.00	PASS



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BAND7	LTE/TM2	10M	LCH	RB1#0	19.42	19.32	33.00	PASS
				RB1#25	19.57	19.44	33.00	PASS
				RB1#49	19.75	19.63	33.00	PASS
				RB25#0	18.31	18.18	33.00	PASS
				RB25#13	18.40	18.26	33.00	PASS
				RB25#25	18.45	18.32	33.00	PASS
				RB50#0	18.39	18.28	33.00	PASS
			MCH	RB1#0	19.56	19.45	33.00	PASS
				RB1#25	19.54	19.43	33.00	PASS
				RB1#49	19.54	19.42	33.00	PASS
				RB25#0	18.31	18.20	33.00	PASS
				RB25#13	18.32	18.21	33.00	PASS
				RB25#25	18.32	18.21	33.00	PASS
				RB50#0	18.31	18.19	33.00	PASS
			HCH	RB1#0	19.67	19.56	33.00	PASS
				RB1#25	19.68	19.57	33.00	PASS
				RB1#49	19.85	19.75	33.00	PASS
				RB25#0	18.43	18.30	33.00	PASS
				RB25#13	18.50	18.37	33.00	PASS
				RB25#25	18.58	18.47	33.00	PASS
				RB50#0	18.52	18.42	33.00	PASS



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Test Band(LTE)	Test Mode	Test Bandwidth	Test channel	Test RB	Measured (dBm)	EIRP (dBm)	limit (dBm)	Verdict
BAND7	LTE/TM1	15M	LCH	RB1#0	20.43	20.33	33.00	PASS
				RB1#38	20.61	20.50	33.00	PASS
				RB1#74	20.89	20.75	33.00	PASS
				RB36#0	19.49	19.38	33.00	PASS
				RB36#18	19.62	19.48	33.00	PASS
				RB36#39	19.89	19.75	33.00	PASS
				RB75#0	19.63	19.48	33.00	PASS
			MCH	RB1#0	20.22	20.10	33.00	PASS
				RB1#38	20.21	20.09	33.00	PASS
				RB1#74	20.30	20.17	33.00	PASS
				RB36#0	19.21	19.07	33.00	PASS
				RB36#18	19.24	19.13	33.00	PASS
				RB36#39	19.24	19.13	33.00	PASS
				RB75#0	19.22	19.08	33.00	PASS
			HCH	RB1#0	20.17	20.03	33.00	PASS
				RB1#38	20.02	19.90	33.00	PASS
				RB1#74	20.29	20.15	33.00	PASS
				RB36#0	19.07	18.94	33.00	PASS
				RB36#18	19.07	18.96	33.00	PASS
				RB36#39	19.16	19.01	33.00	PASS
				RB75#0	19.11	18.99	33.00	PASS



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Test Band(LTE)	Test Mode	Test Bandwidth	Test channel	Test RB	Measured (dBm)	EIRP (dBm)	limit (dBm)	Verdict
BAND7	LTE/TM2	15M	LCH	RB1#0	19.65	19.67	33.00	PASS
				RB1#38	20.00	19.86	33.00	PASS
				RB1#74	20.21	20.10	33.00	PASS
				RB36#0	18.59	18.47	33.00	PASS
				RB36#18	18.71	18.56	33.00	PASS
				RB36#39	18.87	18.72	33.00	PASS
				RB75#0	18.73	18.62	33.00	PASS
			MCH	RB1#0	19.50	19.40	33.00	PASS
				RB1#38	19.51	19.38	33.00	PASS
				RB1#74	19.58	19.44	33.00	PASS
				RB36#0	18.31	18.18	33.00	PASS
				RB36#18	18.34	18.23	33.00	PASS
				RB36#39	18.35	18.25	33.00	PASS
				RB75#0	18.32	18.21	33.00	PASS
			HCH	RB1#0	19.44	19.30	33.00	PASS
				RB1#38	19.31	19.21	33.00	PASS
				RB1#74	19.57	19.44	33.00	PASS
				RB36#0	18.16	18.06	33.00	PASS
				RB36#18	18.14	18.02	33.00	PASS
				RB36#39	18.24	18.09	33.00	PASS
				RB75#0	18.17	18.02	33.00	PASS



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Test Band(LTE)	Test Mode	Test Bandwidth	Test channel	Test RB	Measured (dBm)	EIRP (dBm)	limit (dBm)	Verdict
BAND7	LTE/TM1	20M	LCH	RB1#0	20.71	20.59	33.00	PASS
				RB1#50	20.85	20.71	33.00	PASS
				RB1#99	20.88	20.76	33.00	PASS
				RB50#0	19.77	19.67	33.00	PASS
				RB50#25	19.91	19.80	33.00	PASS
				RB50#50	19.93	19.81	33.00	PASS
				RB100#0	19.89	19.74	33.00	PASS
			MCH	RB1#0	20.38	20.27	33.00	PASS
				RB1#50	20.49	20.38	33.00	PASS
				RB1#99	20.69	20.55	33.00	PASS
				RB50#0	19.44	19.33	33.00	PASS
				RB50#25	19.47	19.34	33.00	PASS
				RB50#50	19.52	19.38	33.00	PASS
				RB100#0	19.48	19.34	33.00	PASS
			HCH	RB1#0	20.64	20.52	33.00	PASS
				RB1#50	20.35	20.24	33.00	PASS
				RB1#99	20.68	20.56	33.00	PASS
				RB50#0	19.43	19.29	33.00	PASS
				RB50#25	19.31	19.18	33.00	PASS
				RB50#50	19.39	19.28	33.00	PASS
				RB100#0	19.38	19.26	33.00	PASS



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Test Band(LTE)	Test Mode	Test Bandwidth	Test channel	Test RB	Measured (dBm)	EIRP (dBm)	limit (dBm)	Verdict
BAND7	LTE/TM2	20M	LCH	RB1#0	19.88	19.78	33.00	PASS
				RB1#50	19.96	19.86	33.00	PASS
				RB1#99	19.98	19.85	33.00	PASS
				RB50#0	18.81	18.69	33.00	PASS
				RB50#25	18.97	18.86	33.00	PASS
				RB50#50	18.95	18.80	33.00	PASS
				RB100#0	18.89	18.78	33.00	PASS
			MCH	RB1#0	19.54	19.41	33.00	PASS
				RB1#50	19.71	19.60	33.00	PASS
				RB1#99	19.85	19.74	33.00	PASS
				RB50#0	18.46	18.36	33.00	PASS
				RB50#25	18.49	18.38	33.00	PASS
				RB50#50	18.53	18.40	33.00	PASS
				RB100#0	18.48	18.33	33.00	PASS
			HCH	RB1#0	19.82	19.70	33.00	PASS
				RB1#50	19.54	19.42	33.00	PASS
				RB1#99	19.83	19.70	33.00	PASS
				RB50#0	18.44	18.32	33.00	PASS
				RB50#25	18.33	18.21	33.00	PASS
				RB50#50	18.42	18.30	33.00	PASS
				RB100#0	18.40	18.27	33.00	PASS



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**Secondary Supply:**

Test Band(LTE)	Test Mode	Test Bandwidth	Test channel	Test RB	Measured (dBm)	EIRP (dBm)	limit (dBm)	Verdict
BAND7	LTE/TM1	5M	LCH	RB1#0	20.33	18.59	33.00	PASS
				RB1#13	20.27	18.54	33.00	PASS
				RB1#24	20.13	18.40	33.00	PASS
				RB12#0	19.38	17.66	33.00	PASS
				RB12#6	19.33	17.63	33.00	PASS
				RB12#13	19.29	17.57	33.00	PASS
				RB25#0	19.30	17.59	33.00	PASS
			MCH	RB1#0	20.08	18.33	33.00	PASS
				RB1#13	20.08	18.37	33.00	PASS
				RB1#24	19.98	18.27	33.00	PASS
				RB12#0	19.15	17.42	33.00	PASS
				RB12#6	19.17	17.45	33.00	PASS
				RB12#13	19.13	17.39	33.00	PASS
				RB25#0	19.10	17.36	33.00	PASS
			HCH	RB1#0	20.20	18.48	33.00	PASS
				RB1#13	20.12	18.40	33.00	PASS
				RB1#24	19.98	18.26	33.00	PASS
				RB12#0	19.24	17.50	33.00	PASS
				RB12#6	19.18	17.48	33.00	PASS
				RB12#13	19.14	17.44	33.00	PASS
				RB25#0	19.15	17.44	33.00	PASS



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Test Band(LTE)	Test Mode	Test Bandwidth	Test channel	Test RB	Measured (dBm)	EIRP (dBm)	limit (dBm)	Verdict
BAND7	LTE/TM2	5M	LCH	RB1#0	19.60	17.86	33.00	PASS
				RB1#13	19.52	17.81	33.00	PASS
				RB1#24	19.42	17.71	33.00	PASS
				RB12#0	18.39	16.67	33.00	PASS
				RB12#6	18.33	16.62	33.00	PASS
				RB12#13	18.29	16.58	33.00	PASS
				RB25#0	18.29	16.54	33.00	PASS
			MCH	RB1#0	19.33	17.61	33.00	PASS
				RB1#13	19.34	17.59	33.00	PASS
				RB1#24	19.27	17.53	33.00	PASS
				RB12#0	18.16	16.46	33.00	PASS
				RB12#6	18.17	16.43	33.00	PASS
				RB12#13	18.15	16.44	33.00	PASS
				RB25#0	18.10	16.39	33.00	PASS
			HCH	RB1#0	19.48	17.77	33.00	PASS
				RB1#13	19.42	17.70	33.00	PASS
				RB1#24	19.29	17.57	33.00	PASS
				RB12#0	18.24	16.52	33.00	PASS
				RB12#6	18.19	16.44	33.00	PASS
				RB12#13	18.13	16.38	33.00	PASS
				RB25#0	18.15	16.45	33.00	PASS



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Test Band(LTE)	Test Mode	Test Bandwidth	Test channel	Test RB	Measured (dBm)	EIRP (dBm)	limit (dBm)	Verdict
BAND7	LTE/TM1	10M	LCH	RB1#0	20.37	18.62	33.00	PASS
				RB1#25	20.25	18.51	33.00	PASS
				RB1#49	20.09	18.38	33.00	PASS
				RB25#0	19.35	17.63	33.00	PASS
				RB25#13	19.26	17.55	33.00	PASS
				RB25#25	19.20	17.49	33.00	PASS
				RB50#0	19.30	17.56	33.00	PASS
			MCH	RB1#0	20.09	18.38	33.00	PASS
				RB1#25	20.13	18.40	33.00	PASS
				RB1#49	20.06	18.33	33.00	PASS
				RB25#0	19.16	17.46	33.00	PASS
				RB25#13	19.18	17.45	33.00	PASS
				RB25#25	19.13	17.40	33.00	PASS
				RB50#0	19.19	17.46	33.00	PASS
			HCH	RB1#0	20.34	18.60	33.00	PASS
				RB1#25	20.27	18.56	33.00	PASS
				RB1#49	20.11	18.38	33.00	PASS
				RB25#0	19.39	17.67	33.00	PASS
				RB25#13	19.35	17.61	33.00	PASS
				RB25#25	19.23	17.52	33.00	PASS
				RB50#0	19.36	17.66	33.00	PASS



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Test Band(LTE)	Test Mode	Test Bandwidth	Test channel	Test RB	Measured (dBm)	EIRP (dBm)	limit (dBm)	Verdict
BAND7	LTE/TM2	10M	LCH	RB1#0	19.58	17.84	33.00	PASS
				RB1#25	19.45	17.72	33.00	PASS
				RB1#49	19.28	17.56	33.00	PASS
				RB25#0	18.29	16.57	33.00	PASS
				RB25#13	18.22	16.50	33.00	PASS
				RB25#25	18.15	16.41	33.00	PASS
				RB50#0	18.24	16.52	33.00	PASS
			MCH	RB1#0	19.38	17.67	33.00	PASS
				RB1#25	19.38	17.64	33.00	PASS
				RB1#49	19.28	17.54	33.00	PASS
				RB25#0	18.11	16.36	33.00	PASS
				RB25#13	18.12	16.41	33.00	PASS
				RB25#25	18.08	16.36	33.00	PASS
				RB50#0	18.13	16.38	33.00	PASS
			HCH	RB1#0	19.56	17.83	33.00	PASS
				RB1#25	19.47	17.76	33.00	PASS
				RB1#49	19.32	17.58	33.00	PASS
				RB25#0	18.34	16.61	33.00	PASS
				RB25#13	18.30	16.59	33.00	PASS
				RB25#25	18.19	16.47	33.00	PASS
				RB50#0	18.28	16.57	33.00	PASS



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Test Band(LTE)	Test Mode	Test Bandwidth	Test channel	Test RB	Measured (dBm)	EIRP (dBm)	limit (dBm)	Verdict
BAND7	LTE/TM1	15M	LCH	RB1#0	20.64	18.90	33.00	PASS
				RB1#38	20.39	18.66	33.00	PASS
				RB1#74	20.24	18.52	33.00	PASS
				RB36#0	19.56	17.84	33.00	PASS
				RB36#18	19.49	17.74	33.00	PASS
				RB36#39	19.35	17.60	33.00	PASS
				RB75#0	19.47	17.76	33.00	PASS
			MCH	RB1#0	20.13	18.43	33.00	PASS
				RB1#38	20.16	18.46	33.00	PASS
				RB1#74	20.06	18.33	33.00	PASS
				RB36#0	19.14	17.41	33.00	PASS
				RB36#18	19.19	17.46	33.00	PASS
				RB36#39	19.14	17.43	33.00	PASS
				RB75#0	19.17	17.42	33.00	PASS
			HCH	RB1#0	20.03	18.30	33.00	PASS
				RB1#38	20.07	18.32	33.00	PASS
				RB1#74	19.82	18.09	33.00	PASS
				RB36#0	19.06	17.32	33.00	PASS
				RB36#18	19.11	17.38	33.00	PASS
				RB36#39	19.00	17.29	33.00	PASS
				RB75#0	19.04	17.33	33.00	PASS



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Test Band(LTE)	Test Mode	Test Bandwidth	Test channel	Test RB	Measured (dBm)	EIRP (dBm)	limit (dBm)	Verdict
BAND7	LTE/TM2	15M	LCH	RB1#0	19.84	c	33.00	PASS
				RB1#38	19.65	17.93	33.00	PASS
				RB1#74	19.50	17.76	33.00	PASS
				RB36#0	18.57	16.85	33.00	PASS
				RB36#18	18.50	16.78	33.00	PASS
				RB36#39	18.34	16.61	33.00	PASS
				RB75#0	18.47	16.73	33.00	PASS
			MCH	RB1#0	19.36	17.63	33.00	PASS
				RB1#38	19.45	17.73	33.00	PASS
				RB1#74	19.31	17.58	33.00	PASS
				RB36#0	18.19	16.45	33.00	PASS
				RB36#18	18.20	16.49	33.00	PASS
				RB36#39	18.15	16.45	33.00	PASS
				RB75#0	18.17	16.44	33.00	PASS
			HCH	RB1#0	19.24	17.53	33.00	PASS
				RB1#38	19.34	17.61	33.00	PASS
				RB1#74	19.11	17.39	33.00	PASS
				RB36#0	18.04	16.32	33.00	PASS
				RB36#18	18.11	16.38	33.00	PASS
				RB36#39	18.00	16.29	33.00	PASS
				RB75#0	18.02	16.30	33.00	PASS



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Test Band(LTE)	Test Mode	Test Bandwidth	Test channel	Test RB	Measured (dBm)	EIRP (dBm)	limit (dBm)	Verdict
BAND7	LTE/TM1	20M	LCH	RB1#0	20.59	18.85	33.00	PASS
				RB1#50	20.26	18.53	33.00	PASS
				RB1#99	20.34	18.62	33.00	PASS
				RB50#0	19.48	17.78	33.00	PASS
				RB50#25	19.32	17.59	33.00	PASS
				RB50#50	19.29	17.54	33.00	PASS
				RB100#0	19.35	17.64	33.00	PASS
			MCH	RB1#0	20.16	18.44	33.00	PASS
				RB1#50	20.11	18.37	33.00	PASS
				RB1#99	19.89	18.15	33.00	PASS
				RB50#0	19.10	17.37	33.00	PASS
				RB50#25	19.16	17.46	33.00	PASS
				RB50#50	19.06	17.35	33.00	PASS
				RB100#0	19.08	17.36	33.00	PASS
			HCH	RB1#0	20.04	18.30	33.00	PASS
				RB1#50	20.02	18.31	33.00	PASS
				RB1#99	19.82	18.07	33.00	PASS
				RB50#0	19.12	17.40	33.00	PASS
				RB50#25	19.05	17.34	33.00	PASS
				RB50#50	19.03	17.29	33.00	PASS
				RB100#0	18.98	17.23	33.00	PASS



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Test Band(LTE)	Test Mode	Test Bandwidth	Test channel	Test RB	Measured (dBm)	EIRP (dBm)	limit (dBm)	Verdict
BAND7	LTE/TM2	20M	LCH	RB1#0	19.83	18.10	33.00	PASS
				RB1#50	19.55	17.82	33.00	PASS
				RB1#99	19.59	17.88	33.00	PASS
				RB50#0	18.51	16.77	33.00	PASS
				RB50#25	18.36	16.66	33.00	PASS
				RB50#50	18.32	16.61	33.00	PASS
				RB100#0	18.38	16.64	33.00	PASS
			MCH	RB1#0	19.24	17.49	33.00	PASS
				RB1#50	19.42	17.70	33.00	PASS
				RB1#99	19.23	17.52	33.00	PASS
				RB50#0	18.13	16.40	33.00	PASS
				RB50#25	18.18	16.47	33.00	PASS
				RB50#50	18.08	16.33	33.00	PASS
				RB100#0	18.09	16.34	33.00	PASS
			HCH	RB1#0	19.09	17.34	33.00	PASS
				RB1#50	19.29	17.57	33.00	PASS
				RB1#99	19.10	17.39	33.00	PASS
				RB50#0	17.99	16.25	33.00	PASS
				RB50#25	18.07	16.34	33.00	PASS
				RB50#50	18.04	16.33	33.00	PASS
				RB100#0	17.98	16.28	33.00	PASS

Note:

a: For getting the EIRP (Efficient Isotropic Radiated Power) in substitution method, the following formula should be taken to calculate it,

$$\text{EIRP [dBm]} = \text{SGP [dBm]} - \text{Cable Loss [dB]} + \text{Gain [dBi]}$$

b: SGP=Signal Generator Level

c: RBW > emission bandwidth, VBW > 3 x RBW.

Detector: RMS

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## 2 Peak-to-Average Ratio

### Part I - Test Results

Test Band	Test Mode	Test Channel	Measured[dB]	Limit [dB]	Verdict
Band 7	TM1/20M	LCH	4.84	13	PASS
		MCH	4.99	13	PASS
		HCH	4.90	13	PASS
	TM2/20M	LCH	5.83	13	PASS
		MCH	5.97	13	PASS
		HCH	5.80	13	PASS



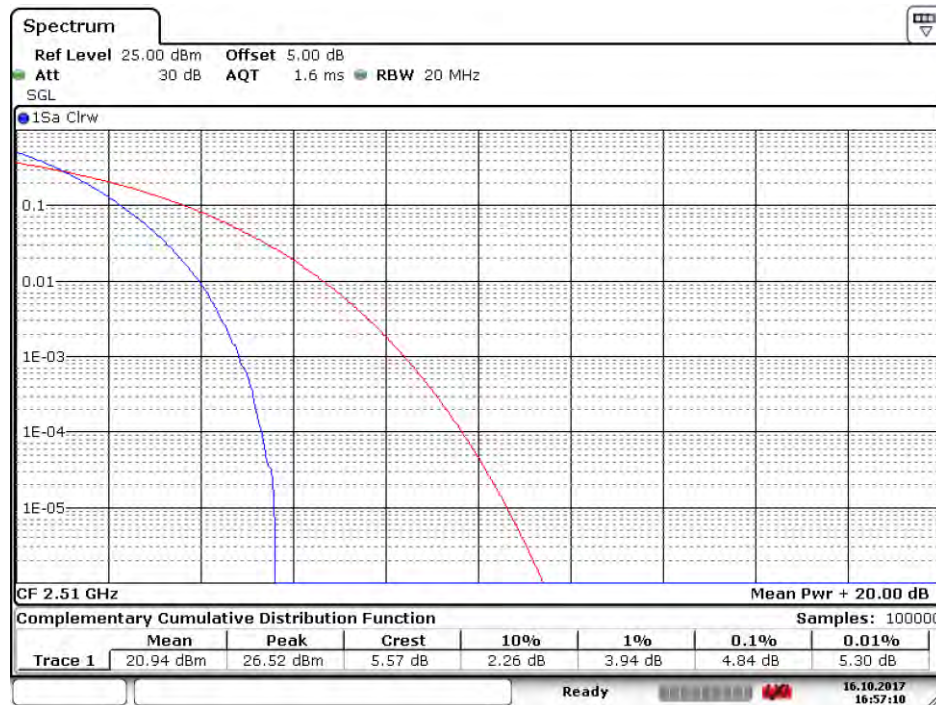
## Part II - Test Plots

### 2.1 For LTE

#### 2.1.1 Test Band = LTE band7

##### 2.1.1.1 Test Mode = LTE/TM1.Bandwidth=20MHz

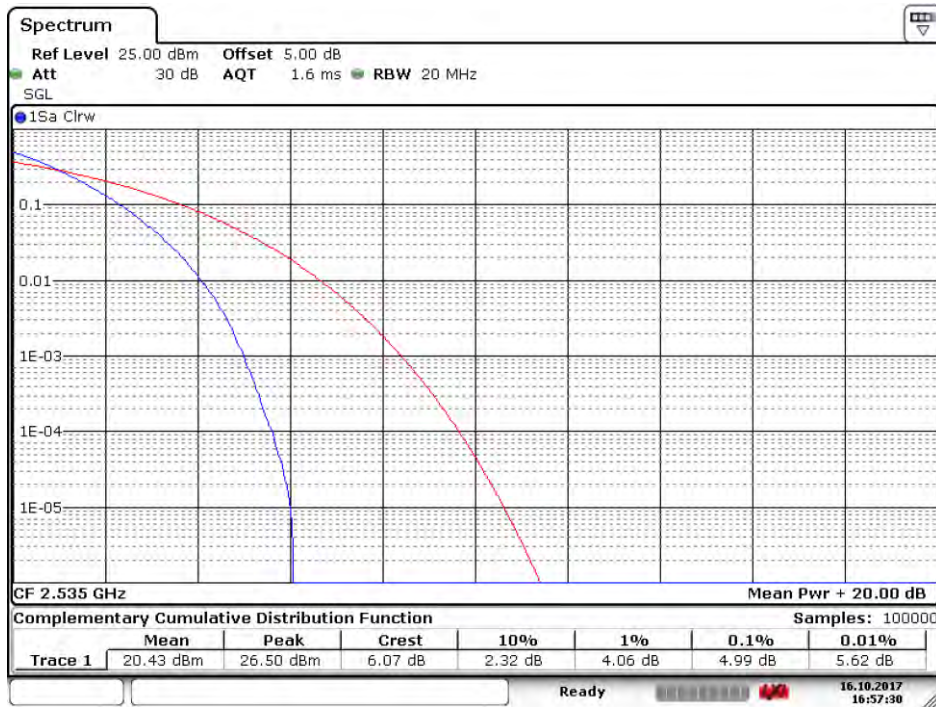
##### 2.1.1.1.1 Test Channel = LCH



Date: 16.OCT.2017 16:57:10

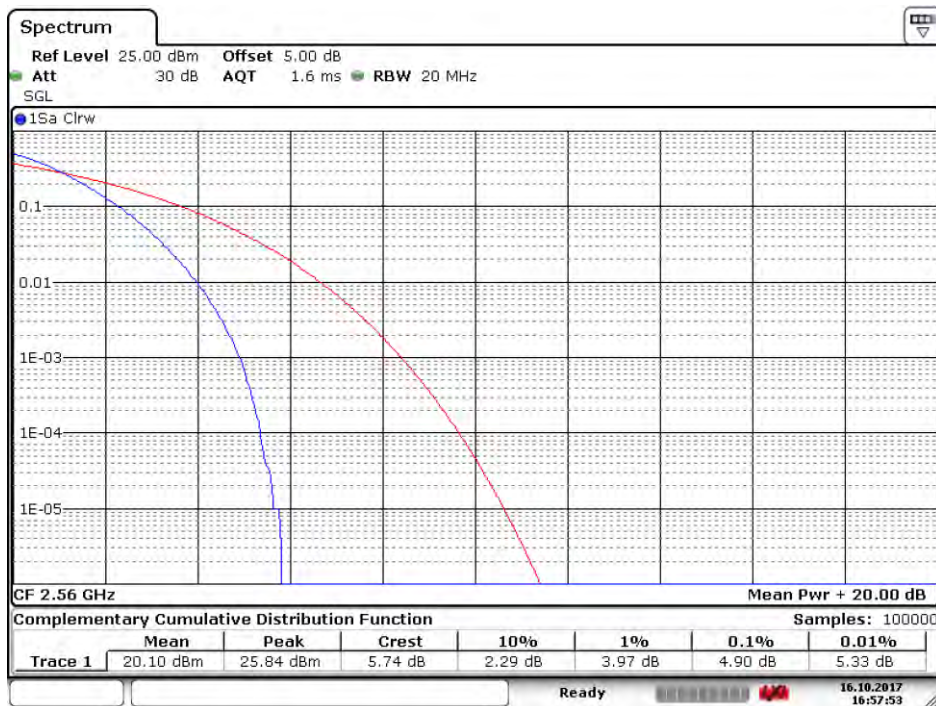


### 2.1.1.1.2 Test Channel = MCH



Date: 16.OCT.2017 16:57:31

### 2.1.1.1.3 Test Channel = HCH



Date: 16.OCT.2017 16:57:53



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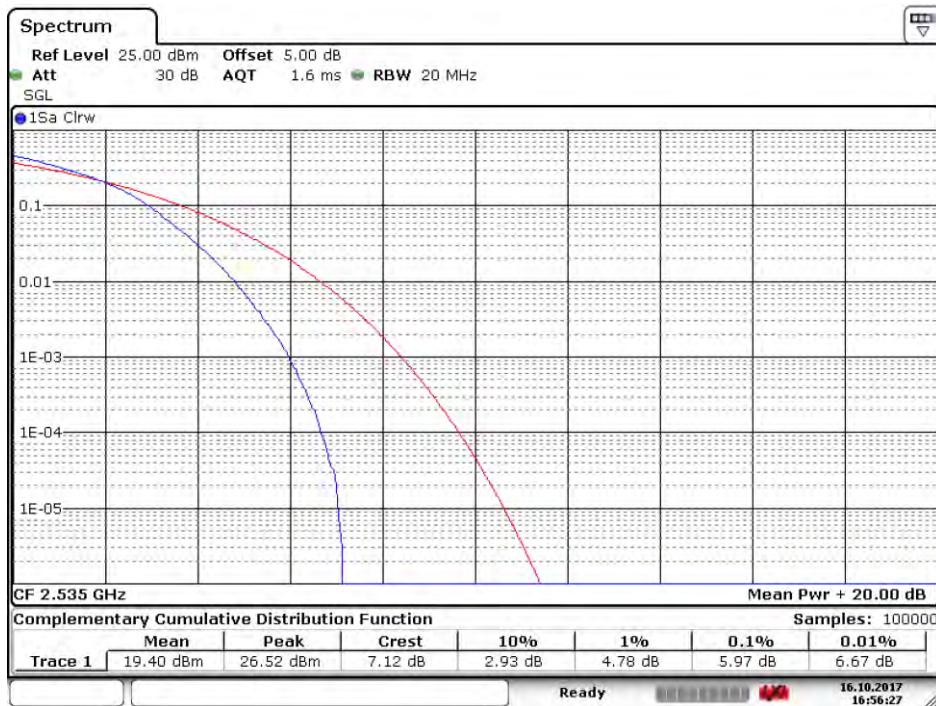
## 2.1.1.2 Test Mode = LTE/TM2.Bandwidth=20MHz

### 2.1.1.2.1 Test Channel = LCH



Date: 16.OCT.2017 16:56:54

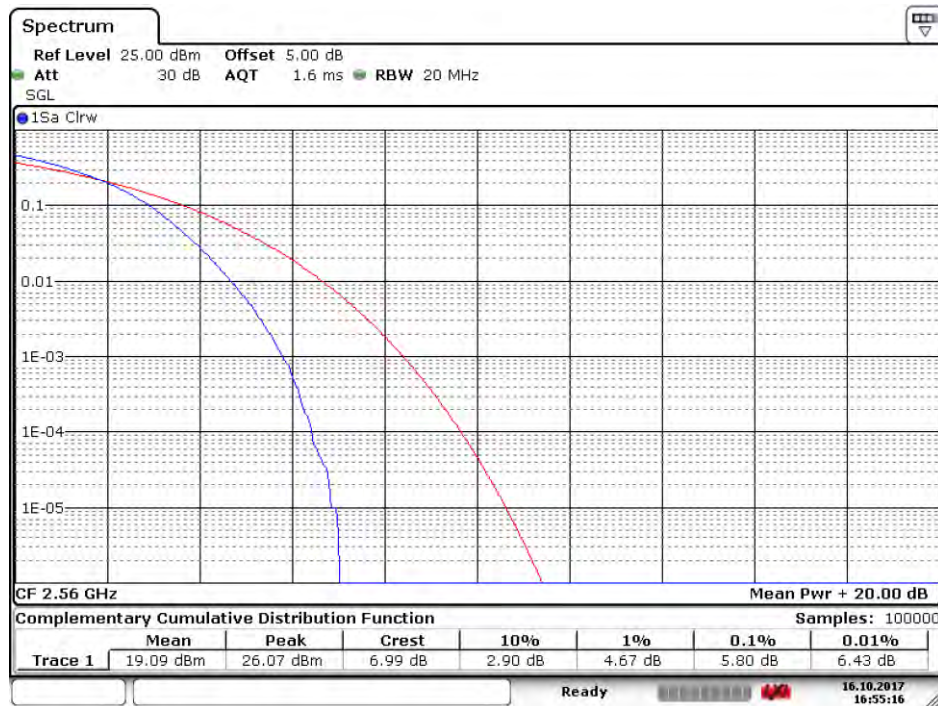
### 2.1.1.2.2 Test Channel = MCH



Date: 16.OCT.2017 16:56:28



2.1.1.2.3 Test Channel = HCH



Date: 16.OCT.2017 16:55:17



### 3 Modulation Characteristics

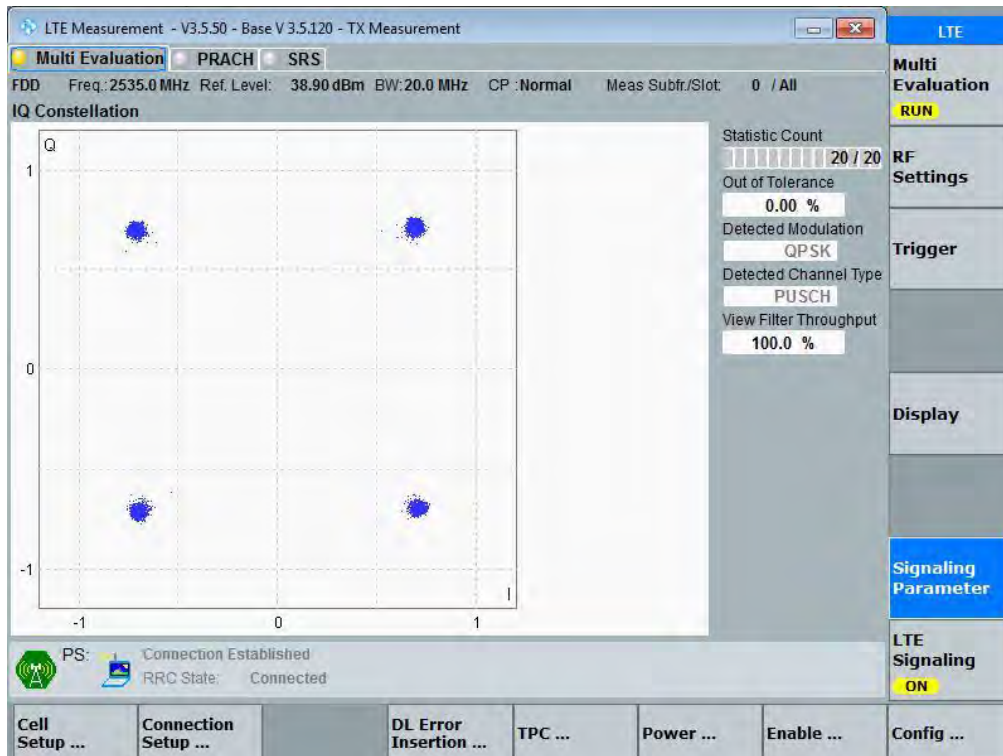
#### Part I - Test Plots

#### 3.1 For LTE

##### 3.1.1 Test Band = LTE band7

##### 3.1.1.1 Test Mode = LTE /TM1 20MHz

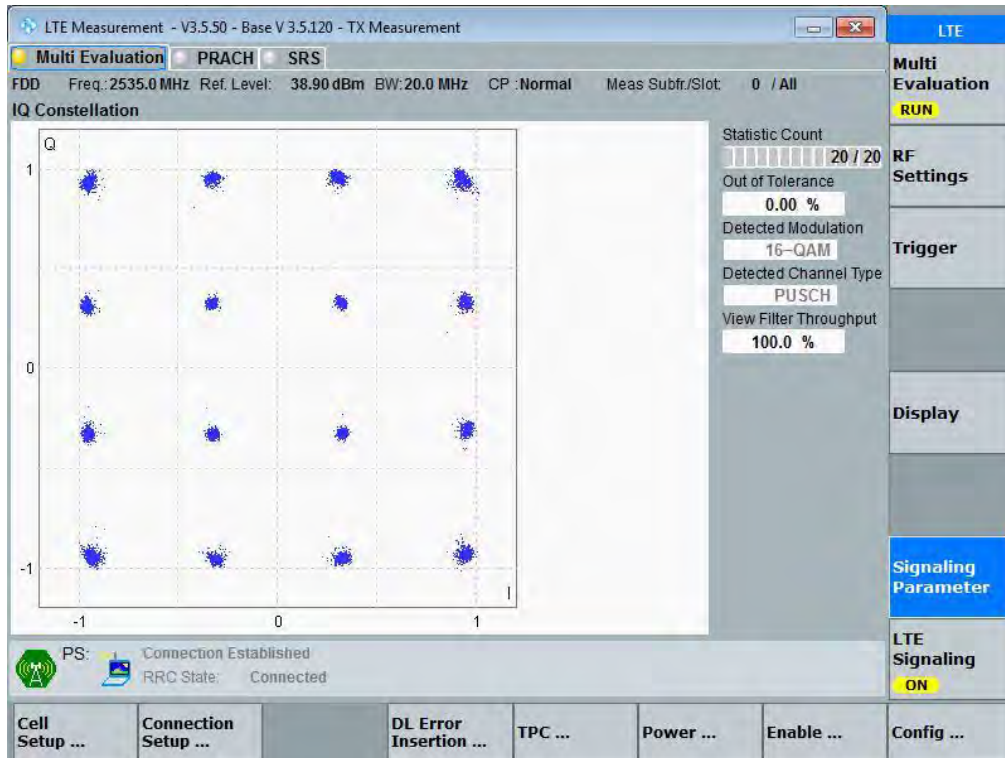
##### 3.1.1.1.1 Test Channel = MCH





3.1.1.2 Test Mode = LTE /TM2 20MHz

3.1.1.2.1 Test Channel = MCH





## 4 Bandwidth

### Part I - Test Results

Test Band	Test Mode	Test Channel	Occupied Bandwidth [MHz]	Emission Bandwidth [MHz]	Verdict
Band 7	TM1/ 5MHz	LCH	4.50	4.95	PASS
		MCH	4.48	4.96	PASS
		HCH	4.50	4.98	PASS
	TM2/ 5MHz	LCH	4.50	4.96	PASS
		MCH	4.49	5.00	PASS
		HCH	4.49	4.95	PASS
	TM1/10MHz	LCH	8.93	9.71	PASS
		MCH	8.95	9.81	PASS
		HCH	8.93	9.69	PASS
	TM2/ 10MHz	LCH	8.95	9.71	PASS
		MCH	8.93	9.67	PASS
		HCH	8.93	9.69	PASS
	TM1/ 15MHz	LCH	13.46	15.02	PASS
		MCH	13.49	14.93	PASS
		HCH	13.46	14.84	PASS
	TM2/ 15MHz	LCH	13.52	14.87	PASS
		MCH	13.52	14.84	PASS
		HCH	13.49	14.90	PASS
	TM1/ 20MHz	LCH	17.90	19.42	PASS
		MCH	17.94	19.70	PASS
		HCH	17.86	19.38	PASS
	TM2/ 20MHz	LCH	17.90	19.50	PASS
		MCH	17.90	19.54	PASS
		HCH	17.90	19.38	PASS

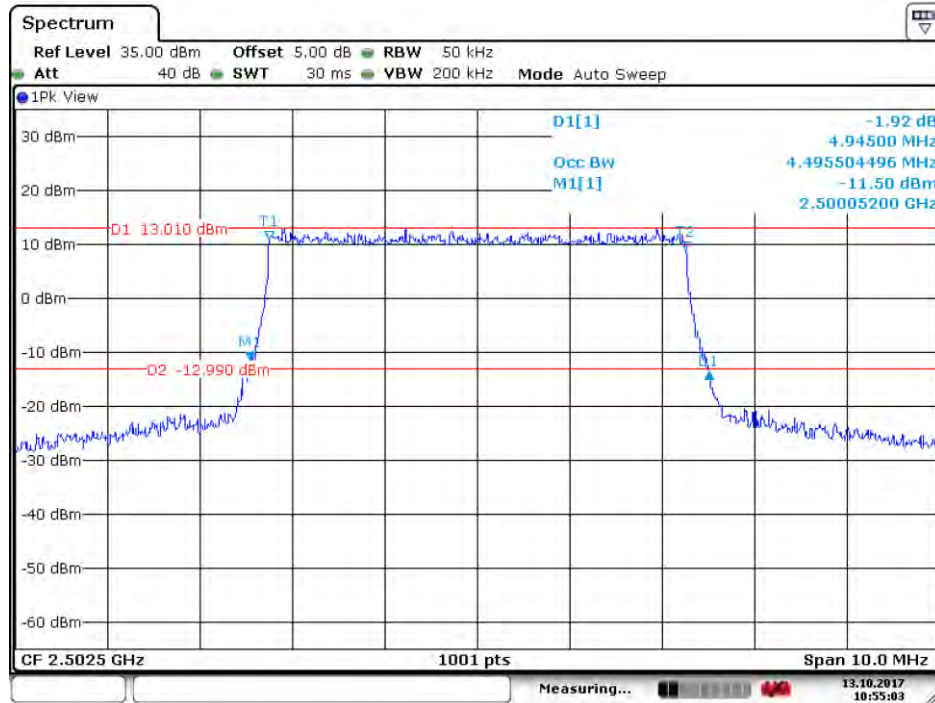


## 4.1 For LTE

### 4.1.1 Test Band = LTE band7

#### 4.1.1.1 Test Mode = LTE/TM1 5MHz

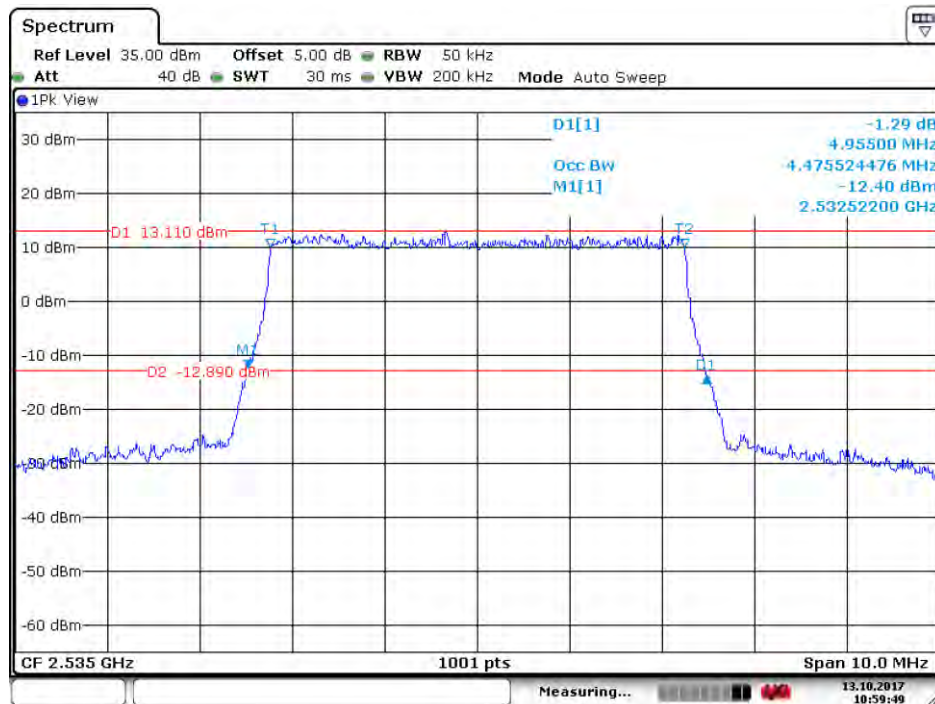
##### 4.1.1.1.1 Test Channel = LCH



Date: 13.OCT.2017 10:55:03

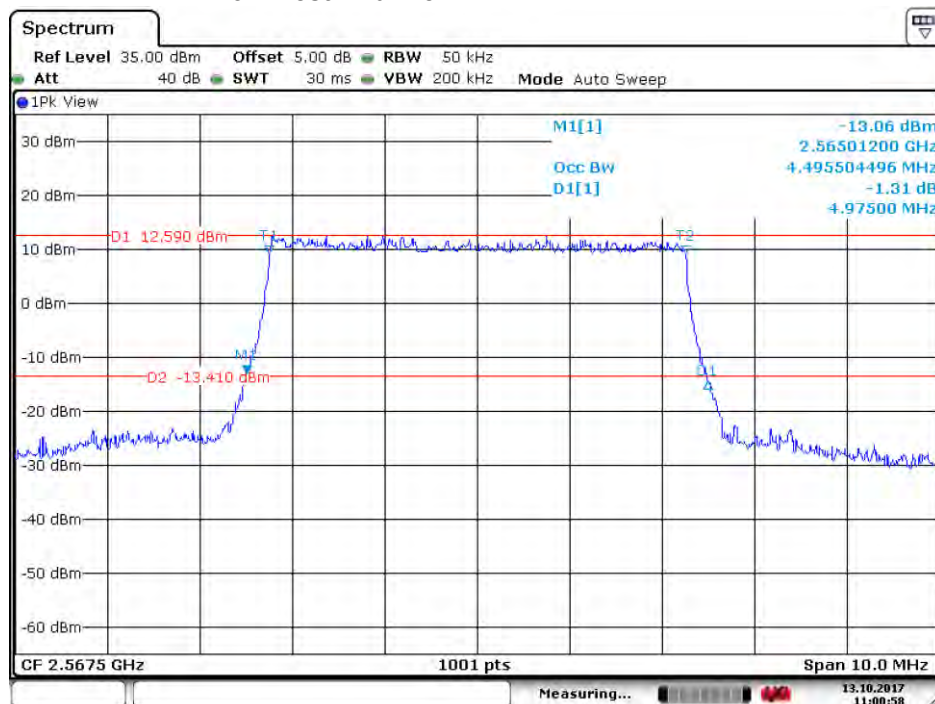


4.1.1.1.2 Test Channel = MCH



Date: 13.OCT.2017 10:59:49

4.1.1.1.3 Test Channel = HCH

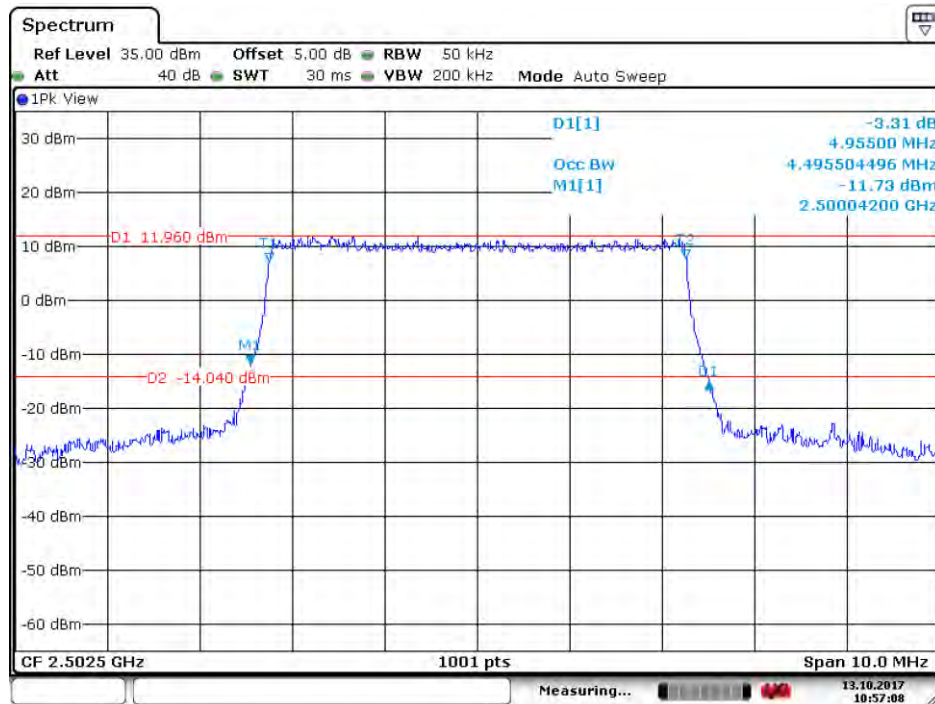


Date: 13.OCT.2017 11:00:58



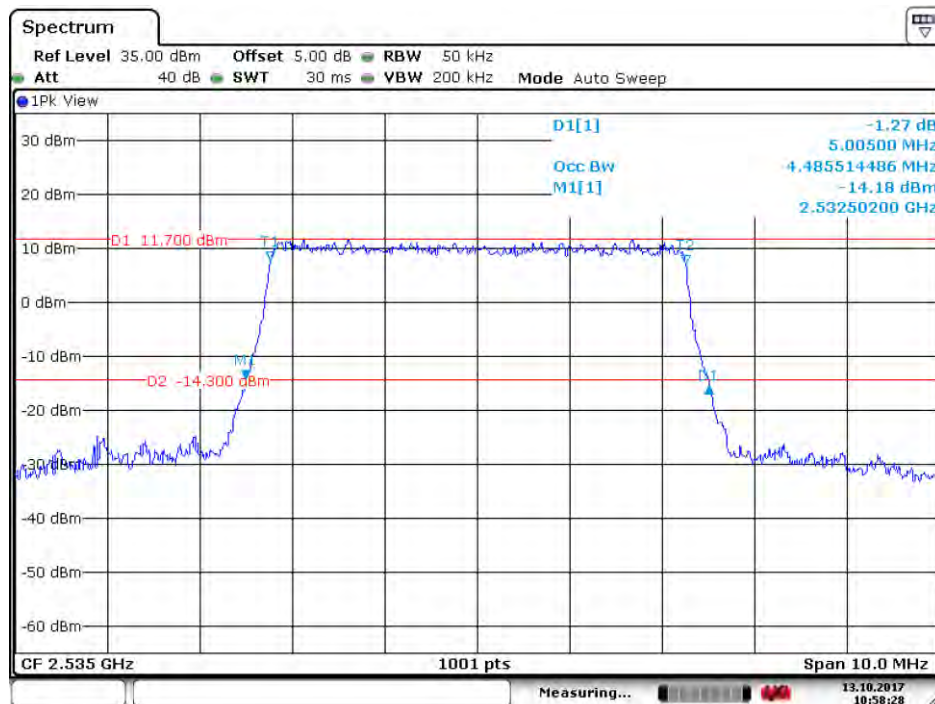
#### 4.1.1.2 Test Mode = LTE/TM2 5MHz

##### 4.1.1.2.1 Test Channel = LCH



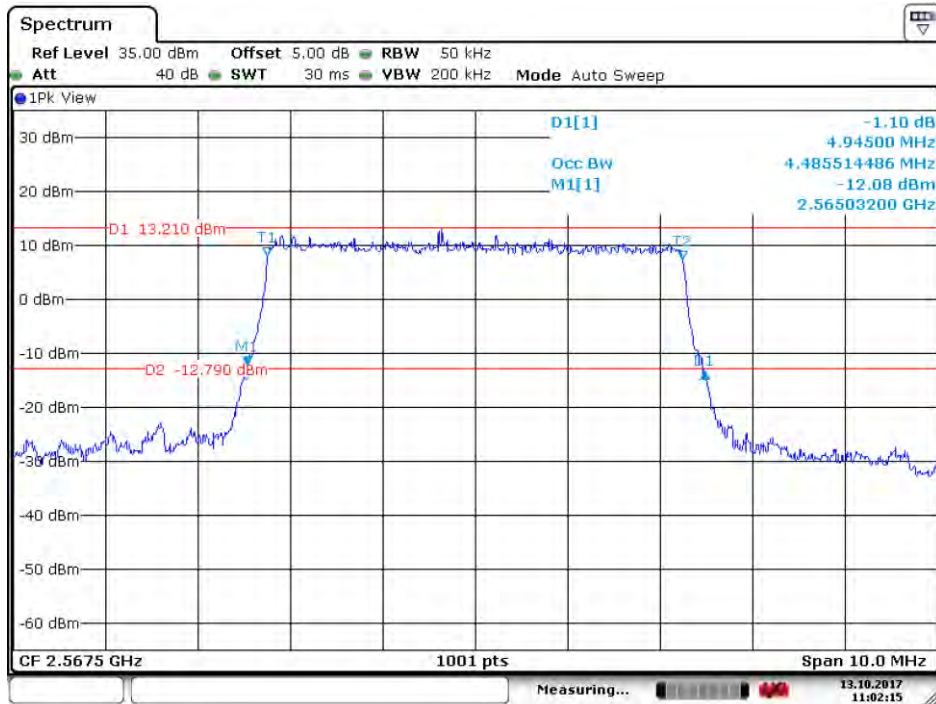
Date: 13.OCT.2017 10:57:09

##### 4.1.1.2.2 Test Channel = MCH



Date: 13.OCT.2017 10:58:28

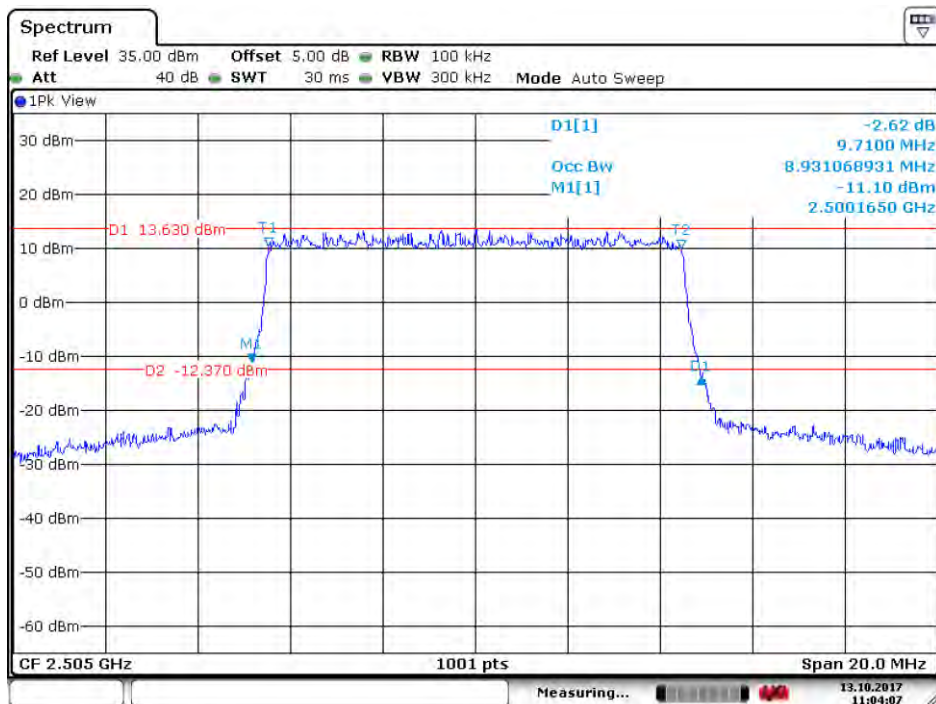
#### 4.1.1.2.3 Test Channel = HCH



Date: 13.OCT.2017 11:02:15

#### 4.1.1.3 Test Mode = LTE/TM1 10MHz

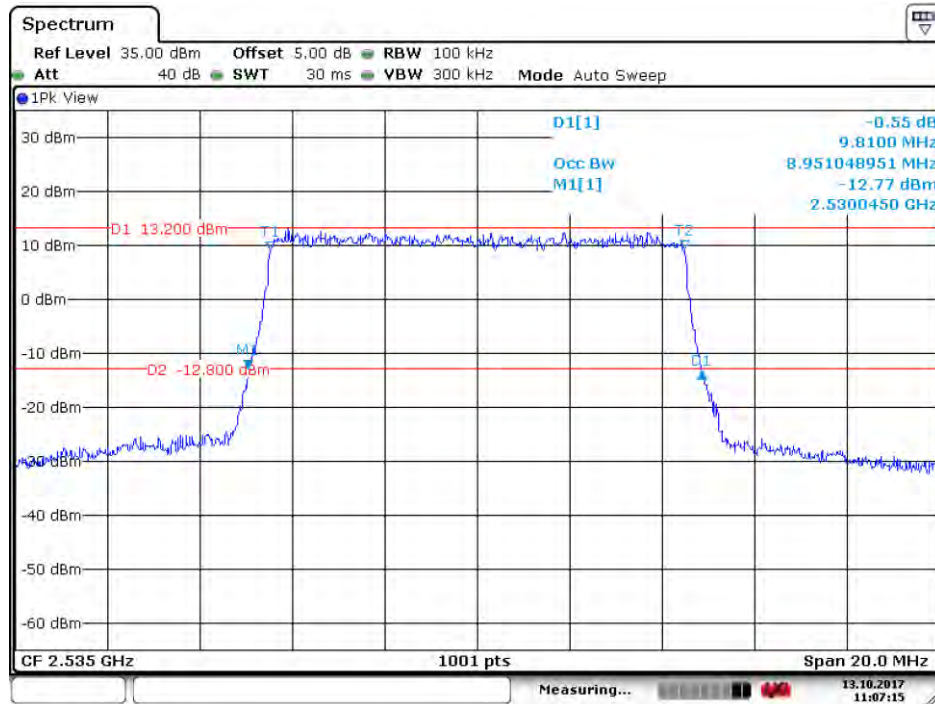
#### 4.1.1.3.1 Test Channel = LCH



Date: 13.OCT.2017 11:04:08

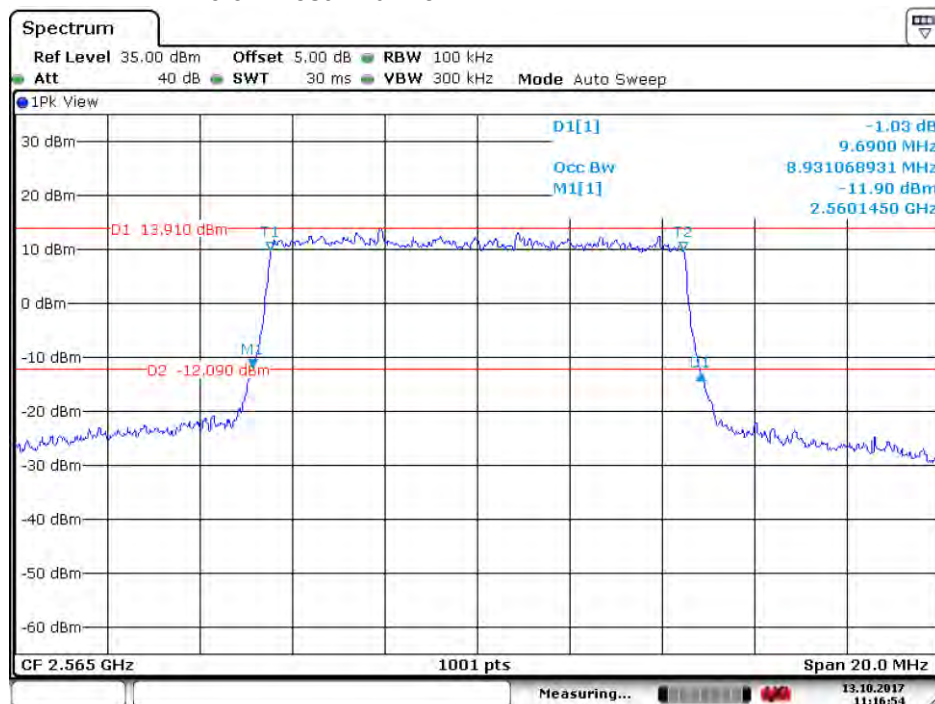


#### 4.1.1.3.2 Test Channel = MCH



Date: 13.OCT.2017 11:07:15

#### 4.1.1.3.3 Test Channel = HCH

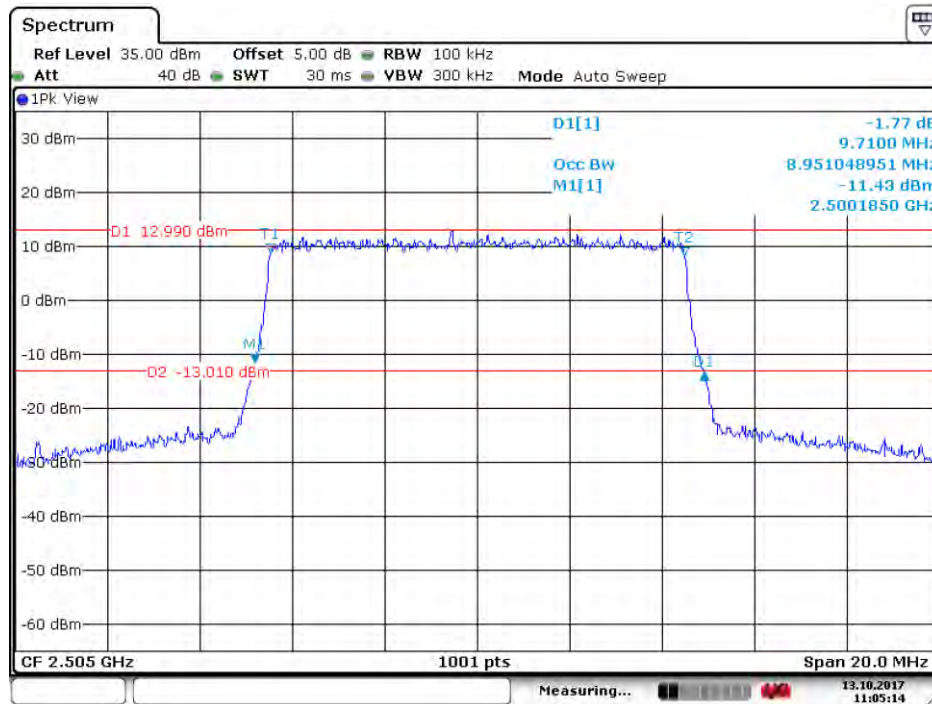


Date: 13.OCT.2017 11:16:34



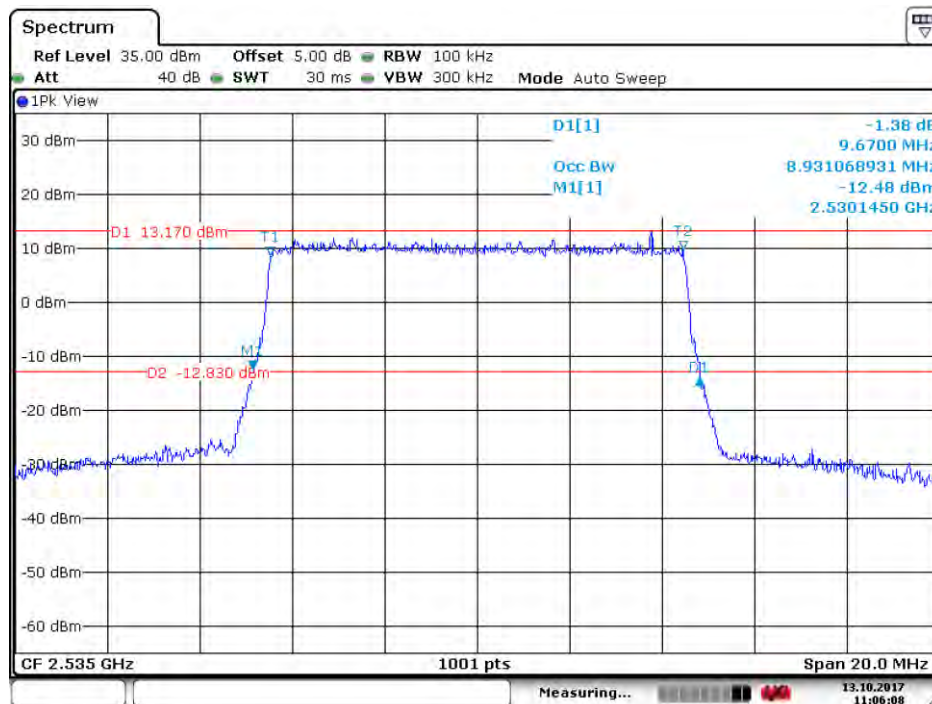
#### 4.1.1.4 Test Mode = LTE/TM2 10MHz

##### 4.1.1.4.1 Test Channel = LCH



Date: 13.OCT.2017 11:05:15

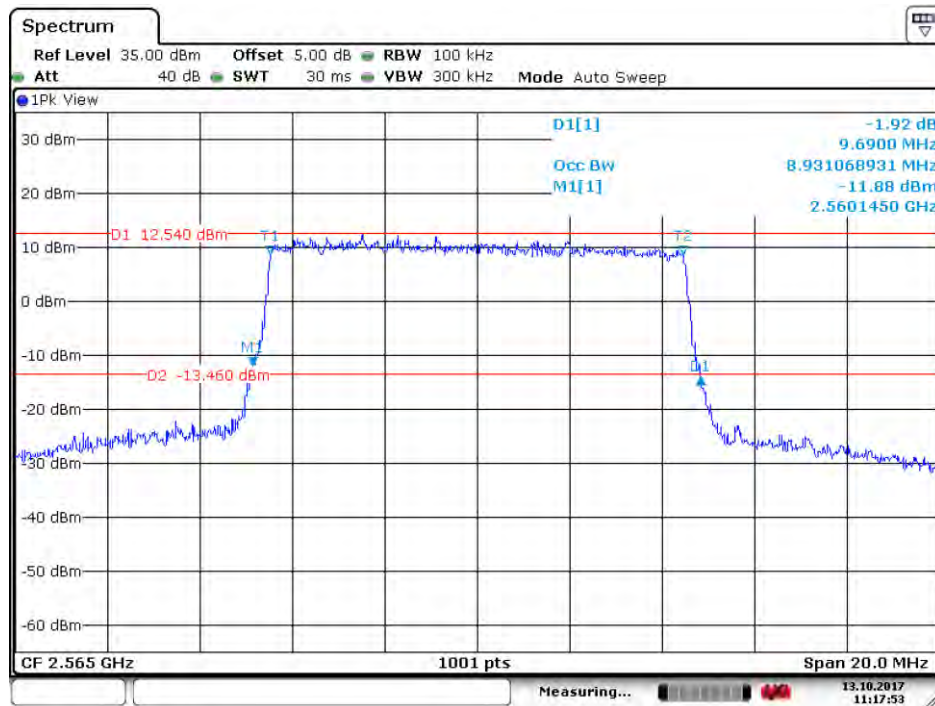
##### 4.1.1.4.2 Test Channel = MCH



Date: 13.OCT.2017 11:06:09



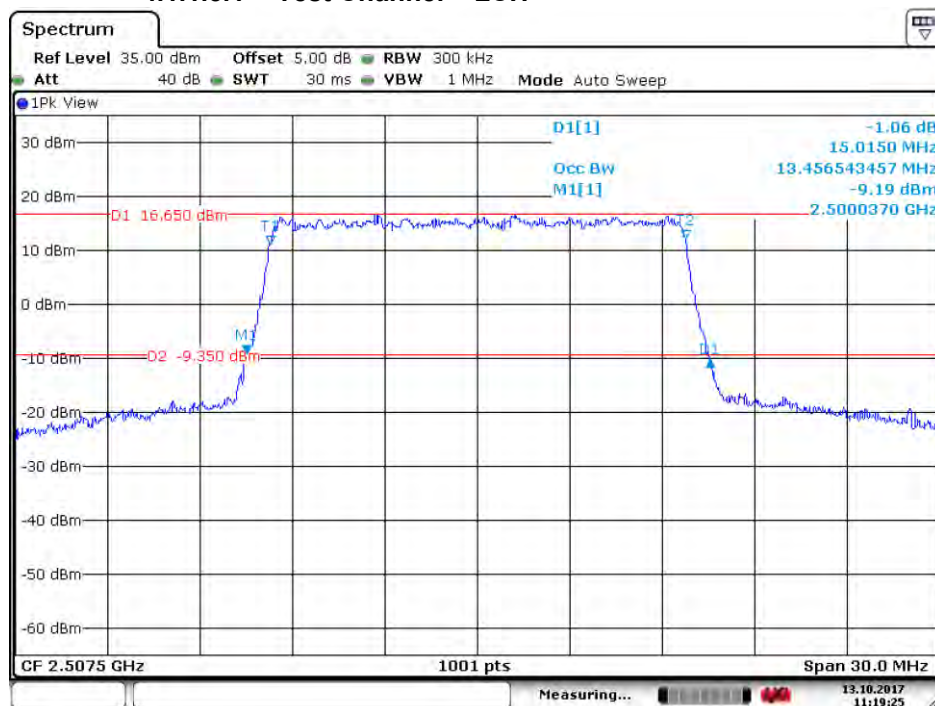
#### 4.1.1.4.3 Test Channel = HCH



Date: 13.OCT.2017 11:17:53

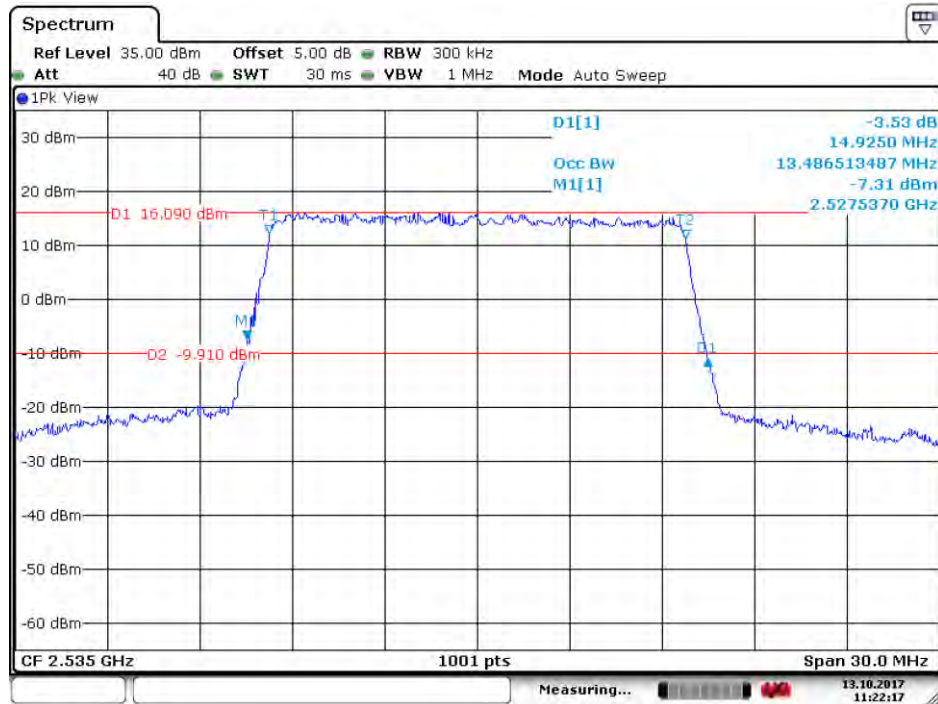
#### 4.1.1.5 Test Mode = LTE/TM1 15MHz

##### 4.1.1.5.1 Test Channel = LCH



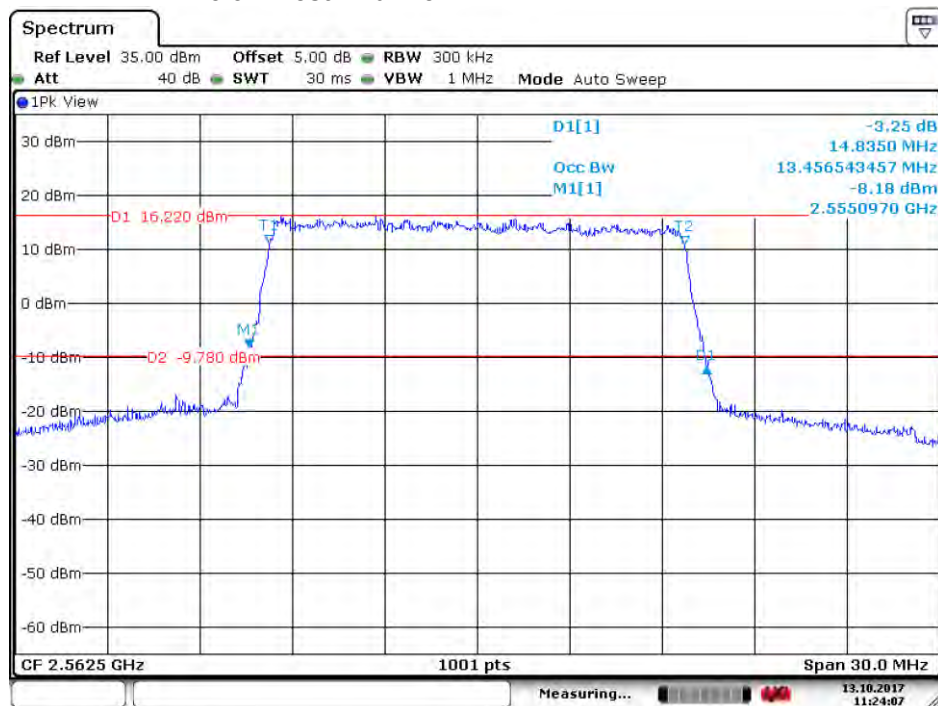
Date: 13.OCT.2017 11:19:25

#### 4.1.1.5.2 Test Channel = MCH



Date: 13.OCT.2017 11:22:17

#### 4.1.1.5.3 Test Channel = HCH

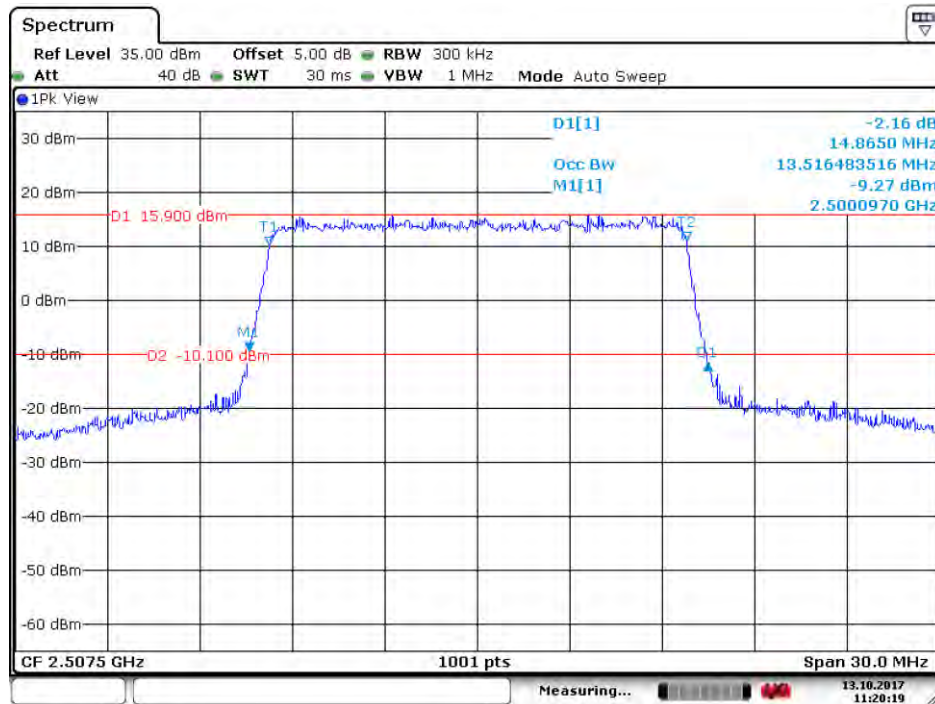


Date: 13.OCT.2017 11:24:07



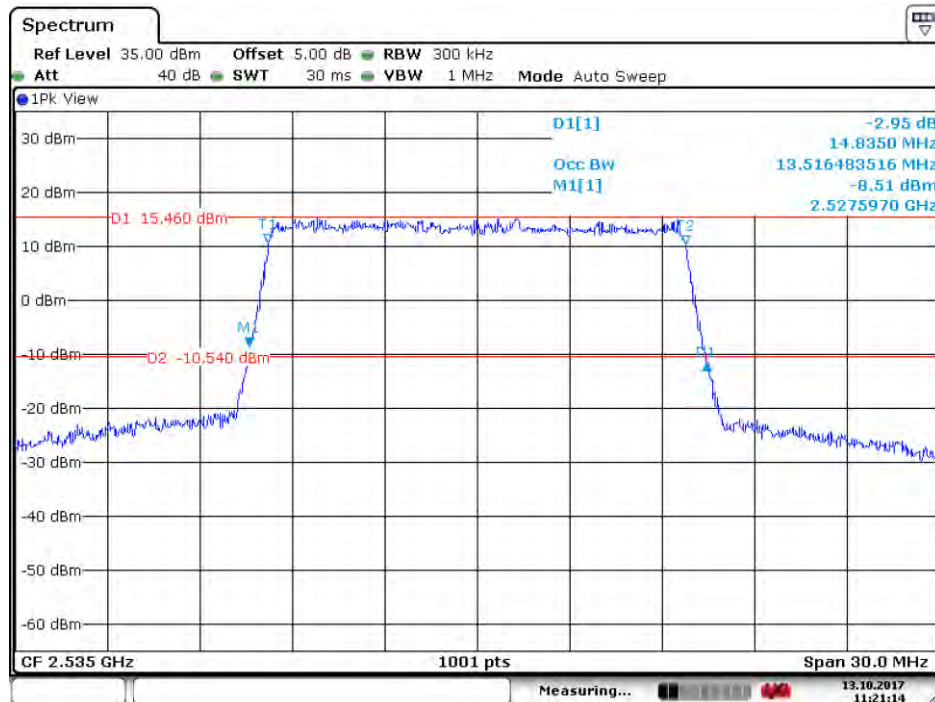
#### 4.1.1.6 Test Mode = LTE/TM2 15MHz

##### 4.1.1.6.1 Test Channel = LCH



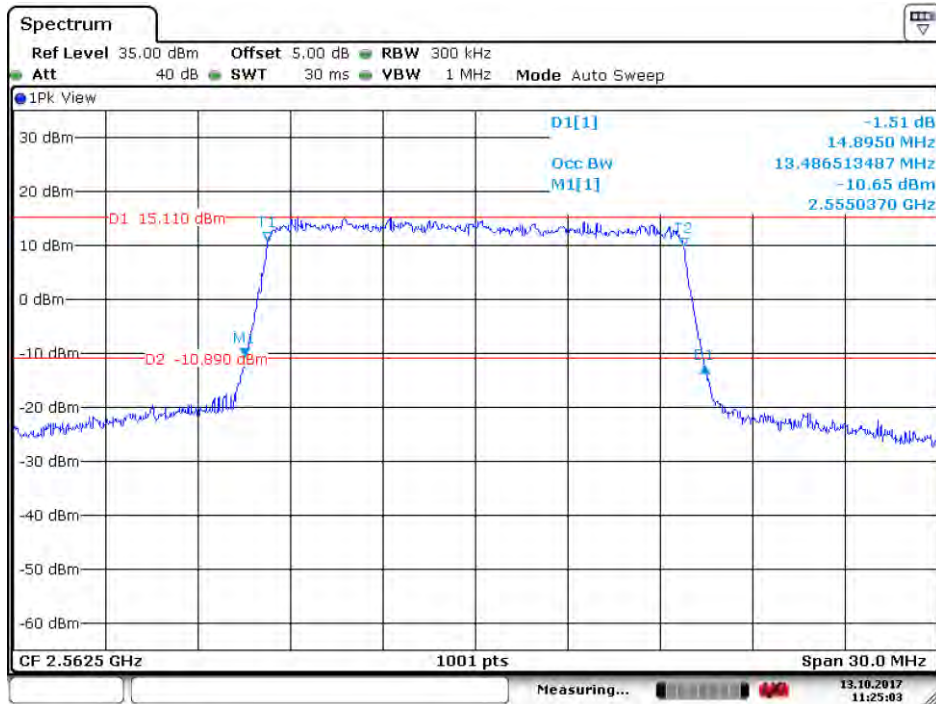
Date: 13.OCT.2017 11:20:19

##### 4.1.1.6.2 Test Channel = MCH



Date: 13.OCT.2017 11:21:14

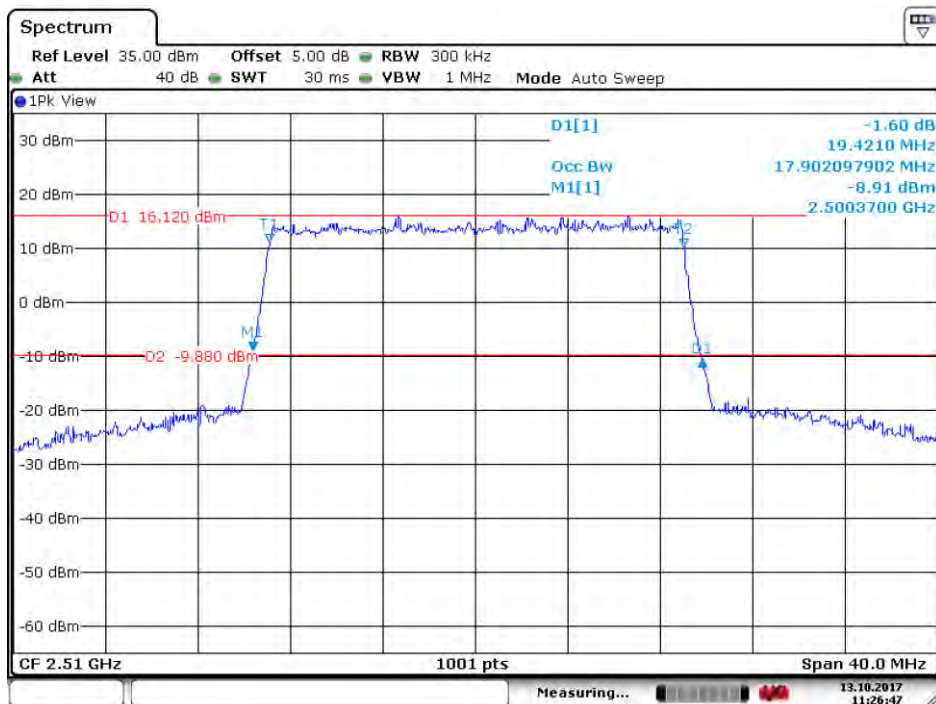
#### 4.1.1.6.3 Test Channel = HCH



Date: 13.OCT.2017 11:25:03

#### 4.1.1.7 Test Mode = LTE/TM1 20MHz

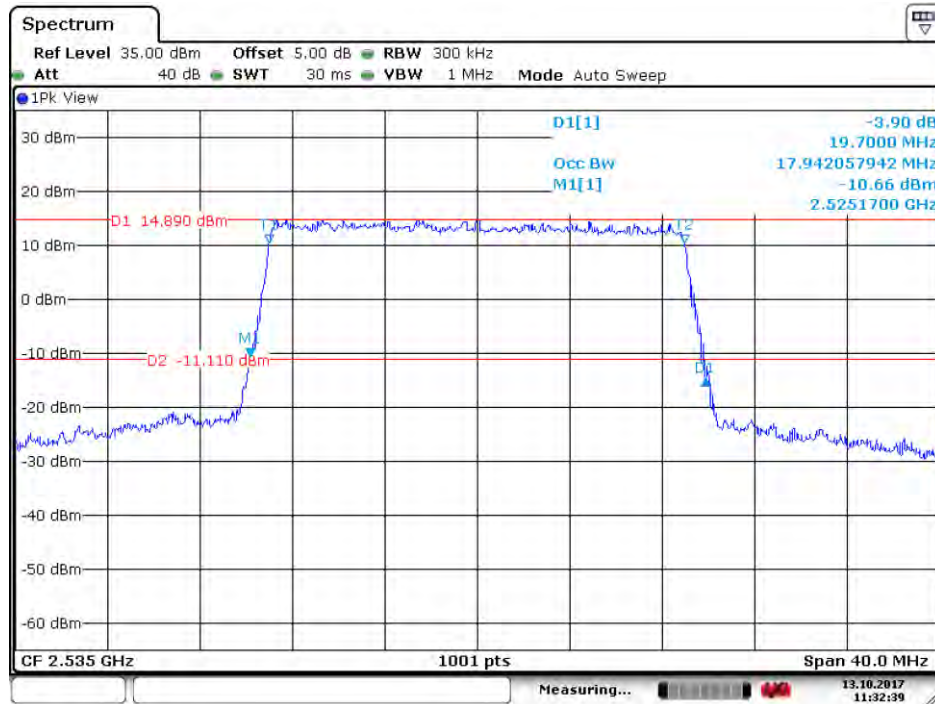
#### 4.1.1.7.1 Test Channel = LCH



Date: 13.OCT.2017 11:26:47

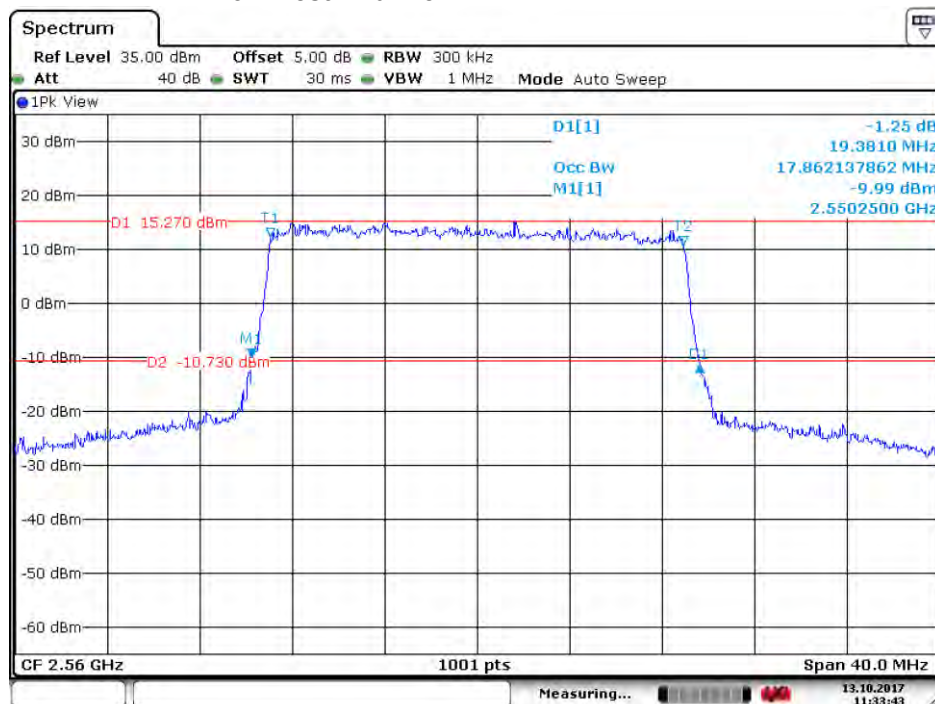


#### 4.1.1.7.2 Test Channel = MCH



Date: 13.OCT.2017 11:32:39

#### 4.1.1.7.3 Test Channel = HCH

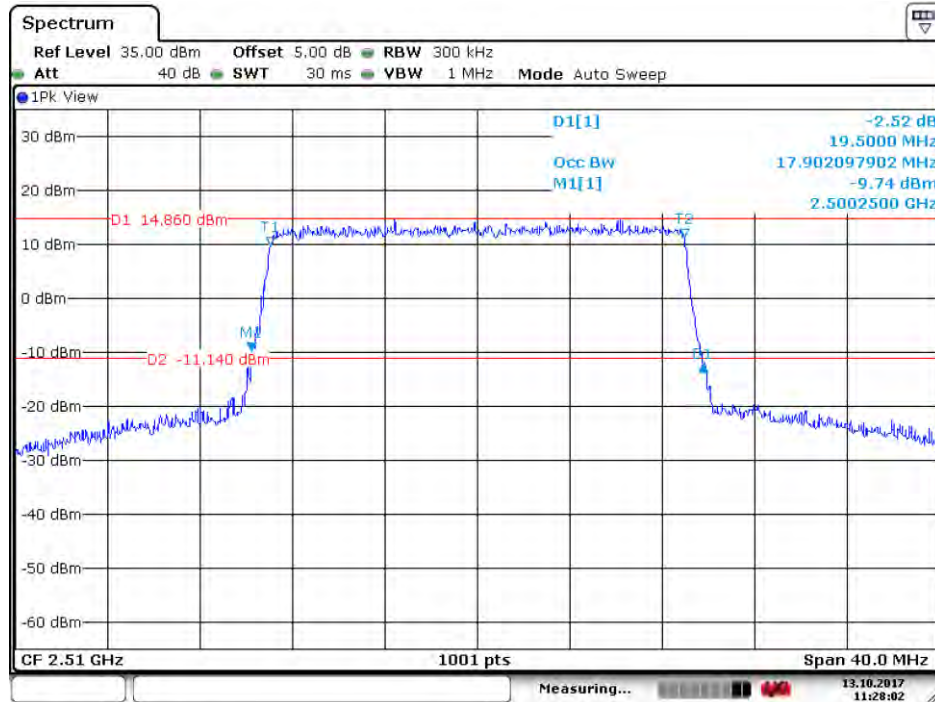


Date: 13.OCT.2017 11:33:43



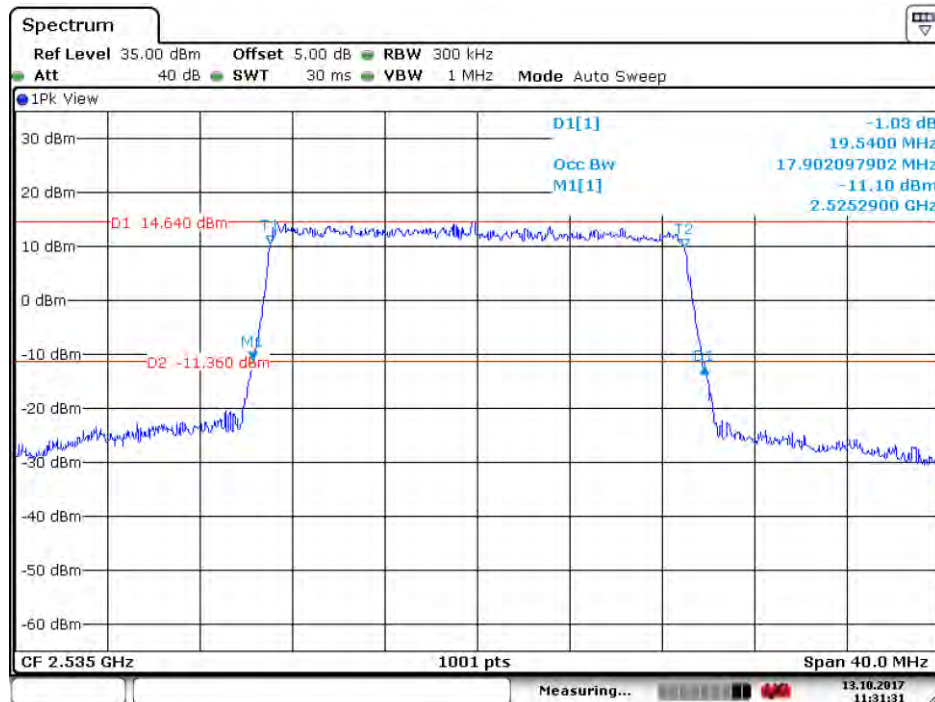
#### 4.1.1.8 Test Mode = LTE/TM2 20MHz

##### 4.1.1.8.1 Test Channel = LCH



Date: 13.OCT.2017 11:28:02

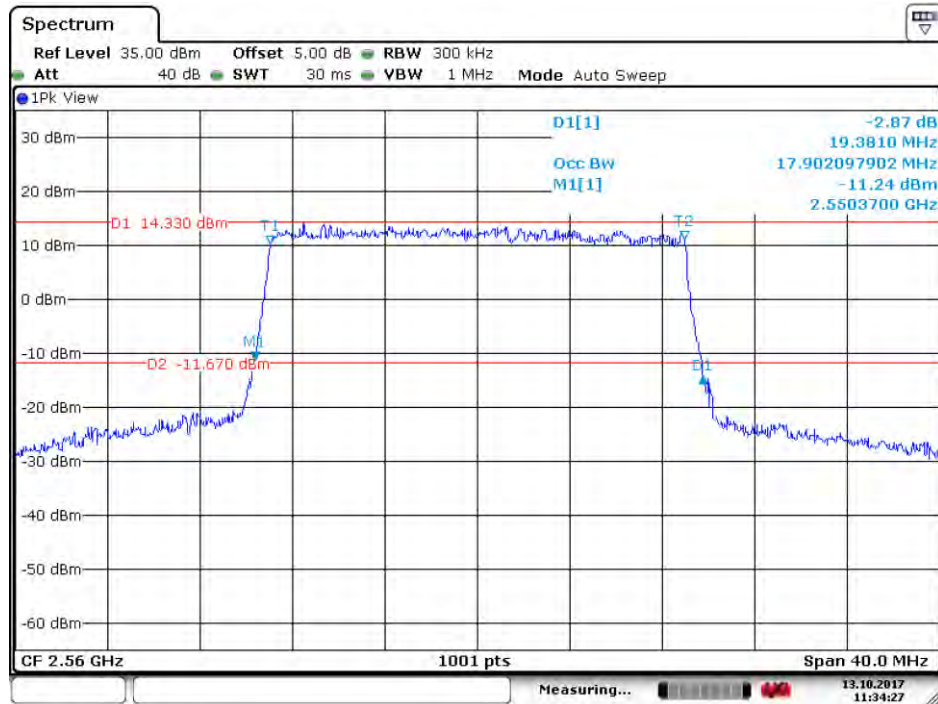
##### 4.1.1.8.2 Test Channel = MCH



Date: 13.OCT.2017 11:31:31



4.1.1.8.3 Test Channel = HCH



Date: 13.OCT.2017 11:34:28



## 5 Band Edges Compliance

Part I –

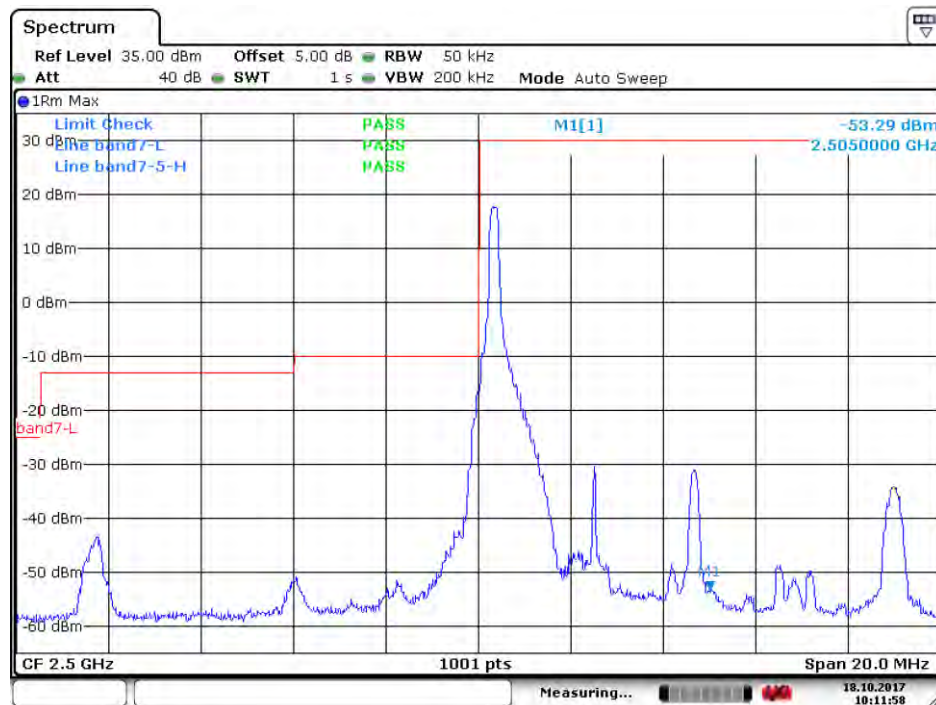
### 5.1 For LTE

#### 5.1.1 Test Band = LTE band7

##### 5.1.1.1 Test Mode = LTE/TM1 5MHz

##### 5.1.1.1.1 Test Channel = LCH

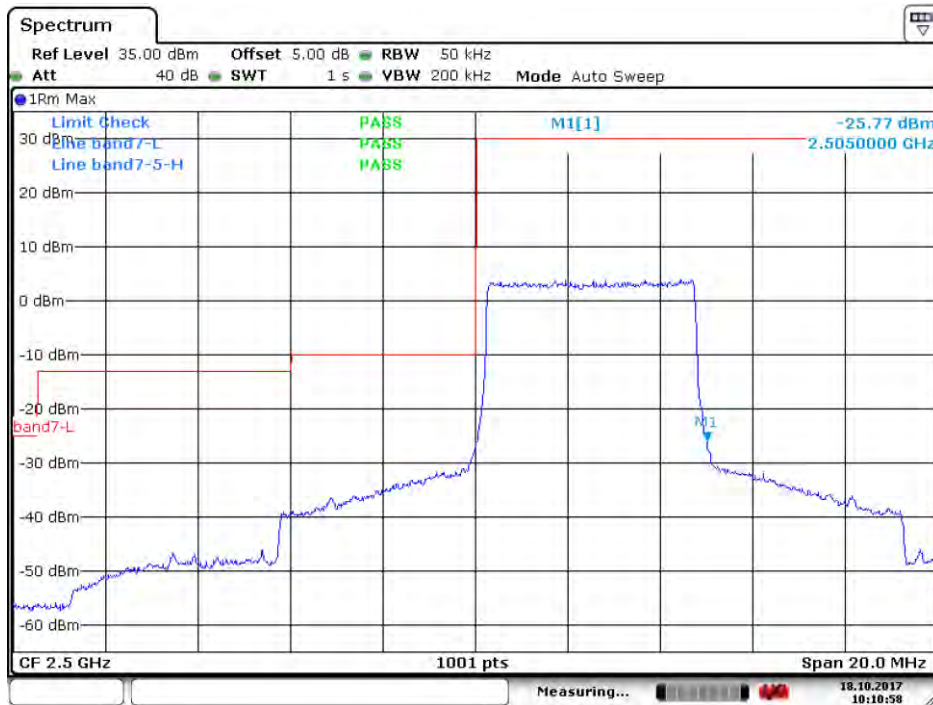
##### 5.1.1.1.1.1 Test RB=1RB



Date: 18.OCT.2017 10:11:58



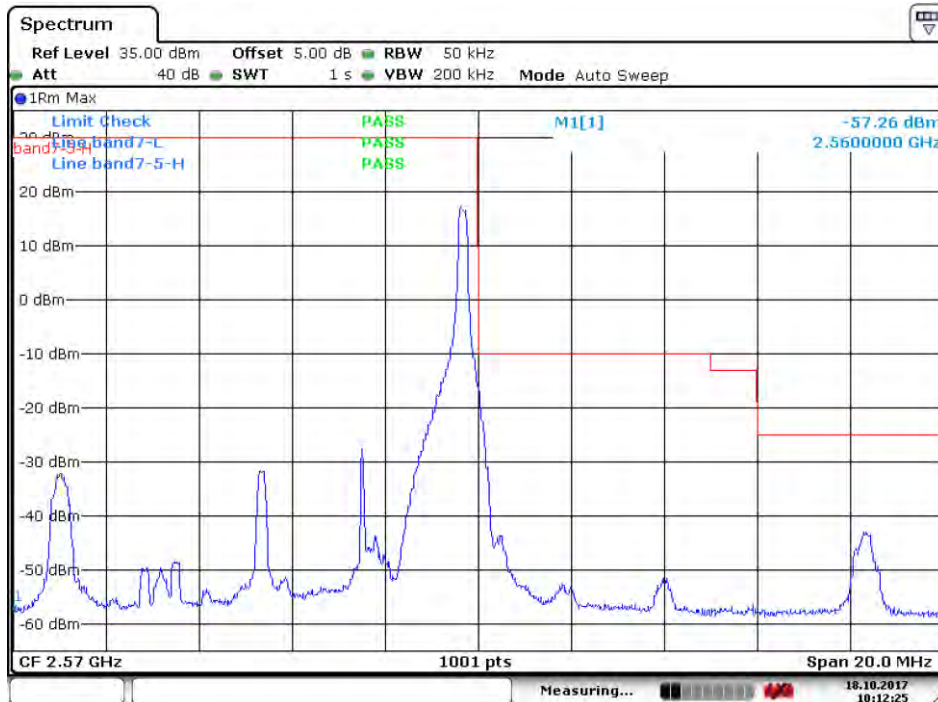
#### 5.1.1.1.2 Test RB=25RB



Date: 18.OCT.2017 10:10:59

#### 5.1.1.1.2 Test Channel = HCH

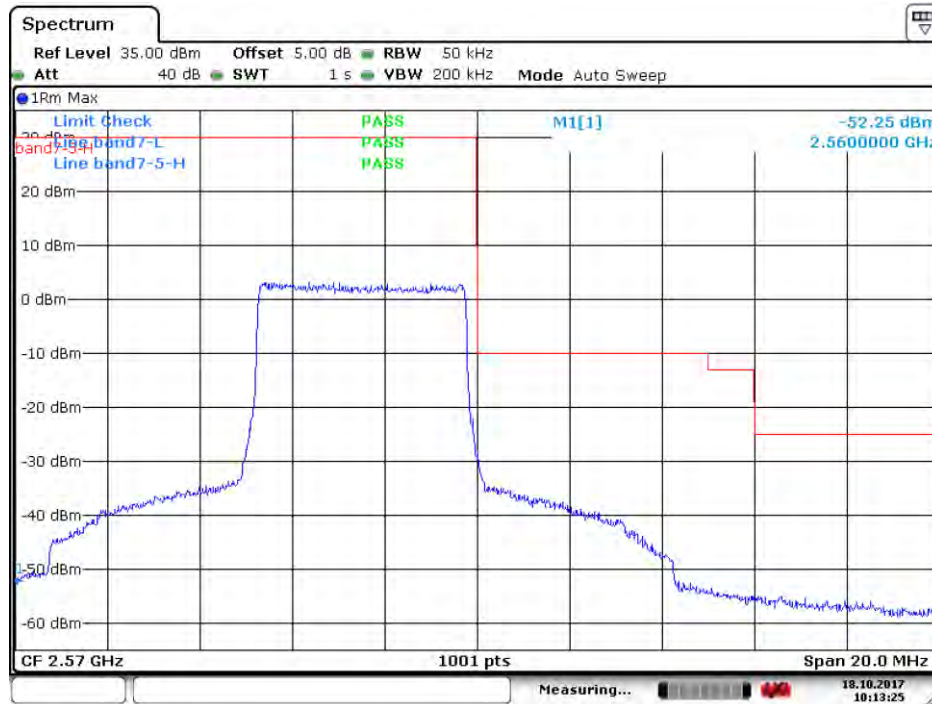
##### 5.1.1.1.2.1 Test RB=1RB



Date: 18.OCT.2017 10:12:26



#### 5.1.1.1.2.2 Test RB=25RB

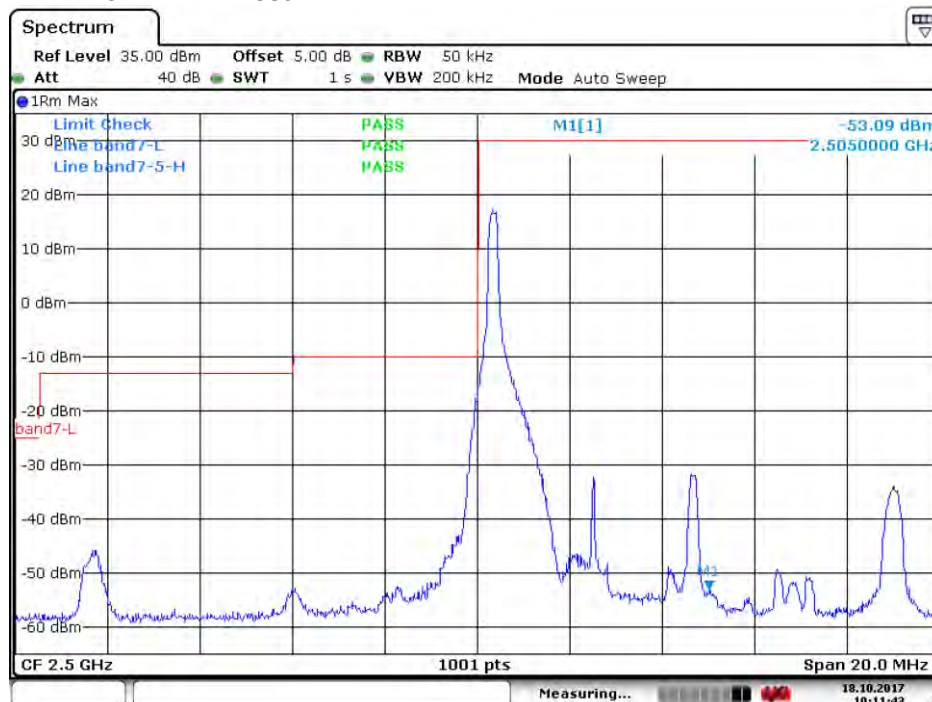


Date: 18.OCT.2017 10:13:25

#### 5.1.1.2 Test Mode = LTE/TM2 5MHz

##### 5.1.1.2.1 Test Channel = LCH

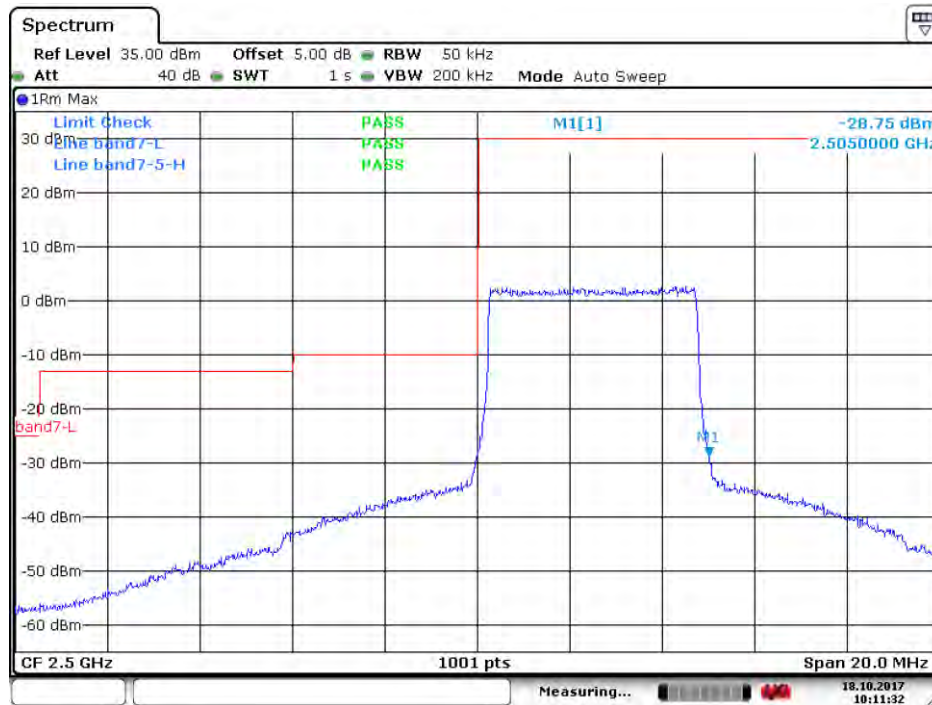
##### 5.1.1.2.1.1 Test RB=1RB



Date: 18.OCT.2017 10:11:43



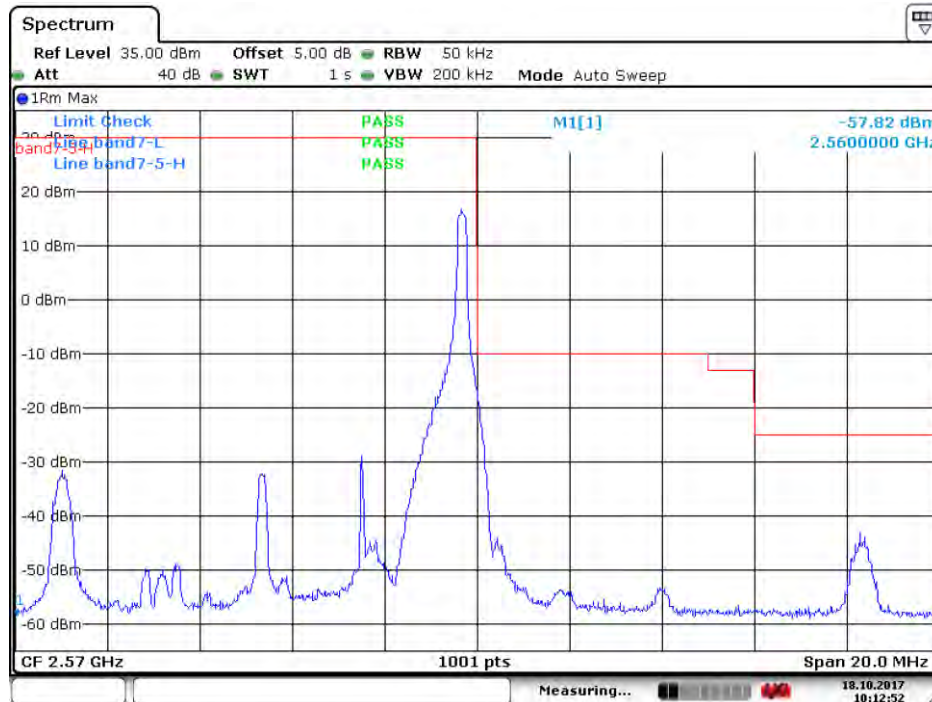
#### 5.1.1.2.1.2 Test RB=25RB



Date: 18.OCT.2017 10:11:32

#### 5.1.1.2.2 Test Channel = HCH

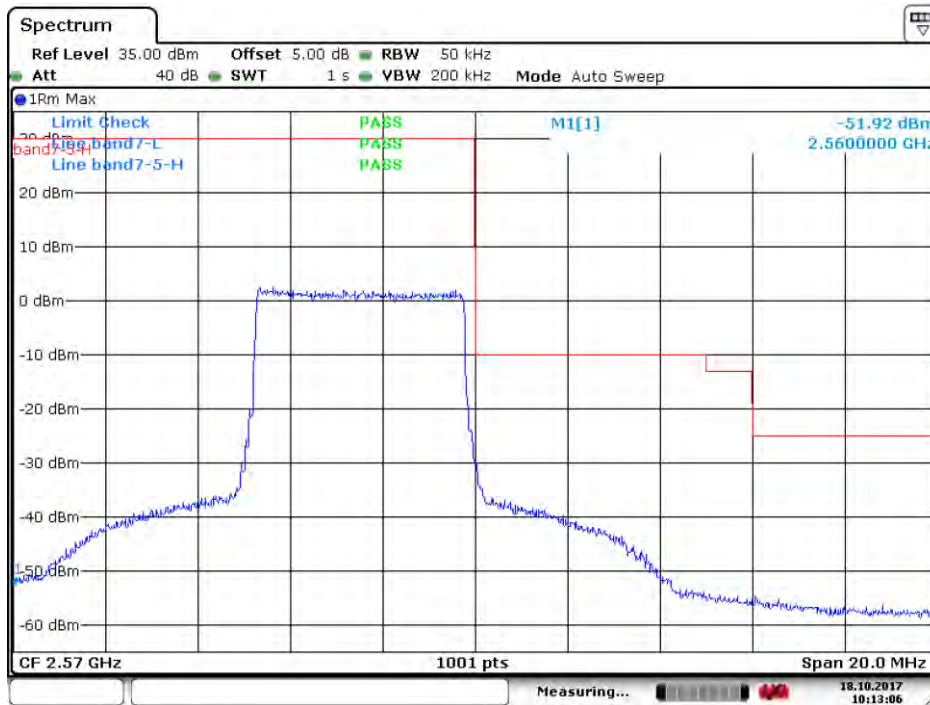
##### 5.1.1.2.2.1 Test RB=1RB



Date: 18.OCT.2017 10:12:52



#### 5.1.1.2.2 Test RB=25RB

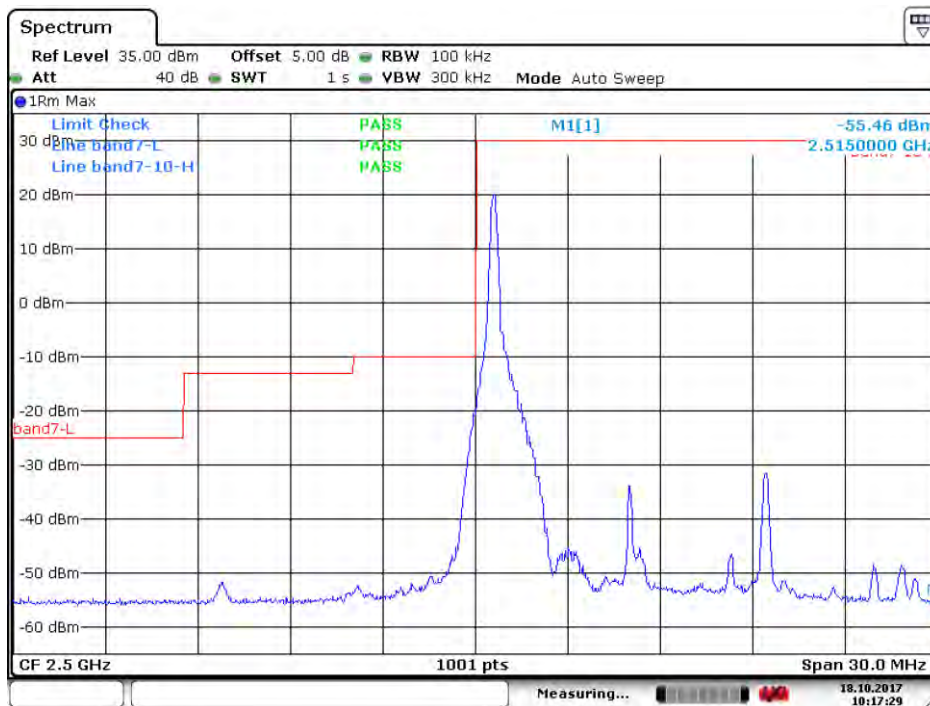


Date: 18.OCT.2017 10:13:07

#### 5.1.1.3 Test Mode = LTE/TM1 10MHz

##### 5.1.1.3.1 Test Channel = LCH

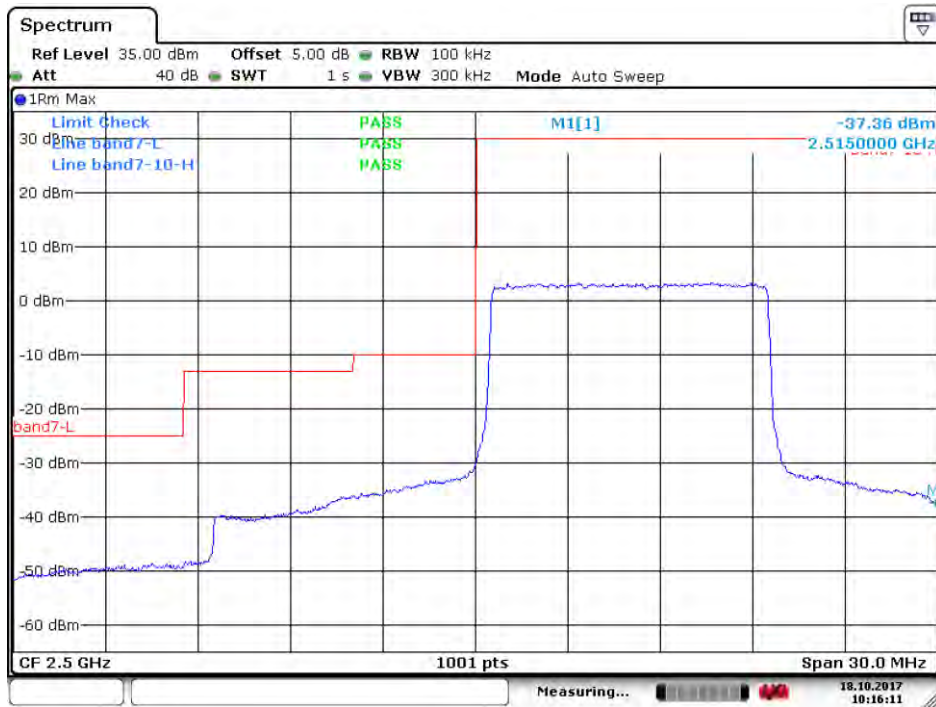
##### 5.1.1.3.1.1 Test RB=1RB



Date: 18.OCT.2017 10:17:29



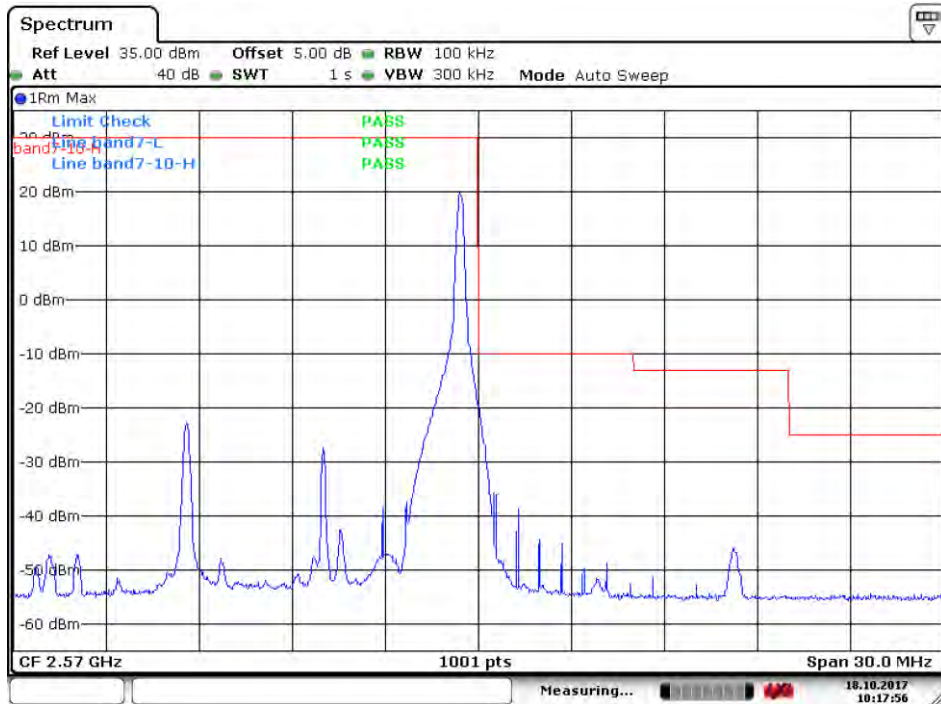
#### 5.1.1.3.1.2 Test RB=50RB



Date: 18.OCT.2017 10:16:11

#### 5.1.1.3.2 Test Channel = HCH

##### 5.1.1.3.2.1 Test RB=1RB



Date: 18.OCT.2017 10:17:56



#### 5.1.1.3.2.2 Test RB=50RB

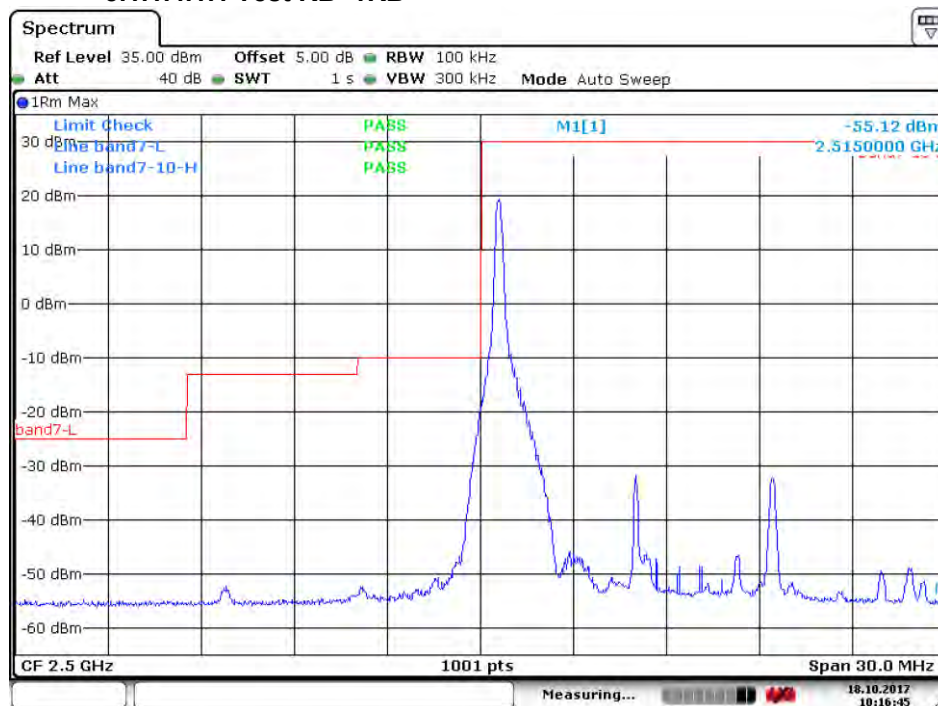


Date: 18.OCT.2017 10:18:47

#### 5.1.1.4 Test Mode = LTE/TM2 10MHz

##### 5.1.1.4.1 Test Channel = LCH

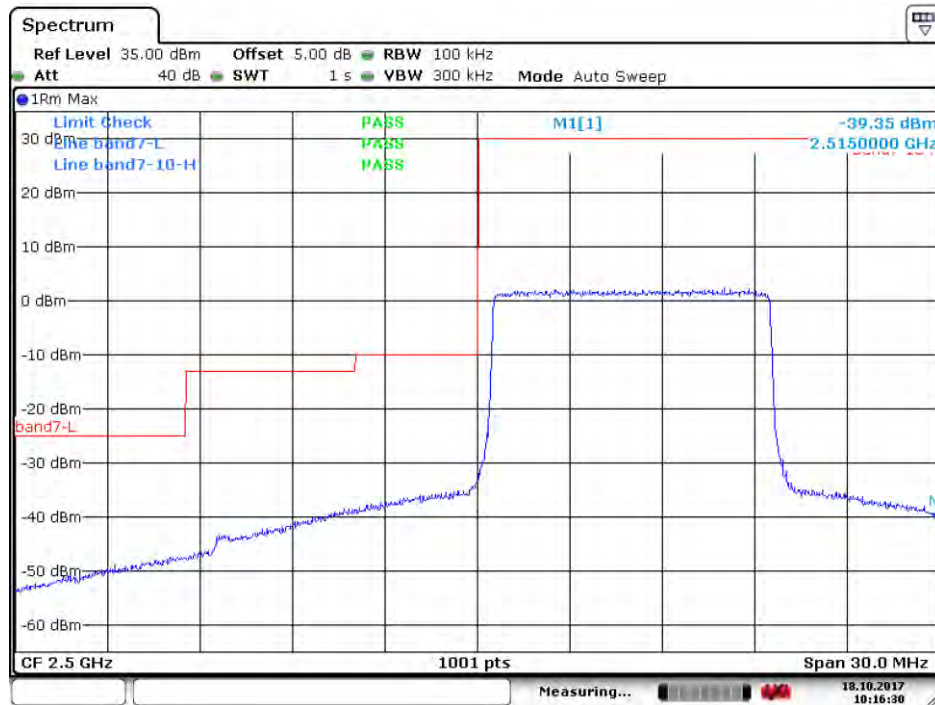
##### 5.1.1.4.1.1 Test RB=1RB



Date: 18.OCT.2017 10:16:45



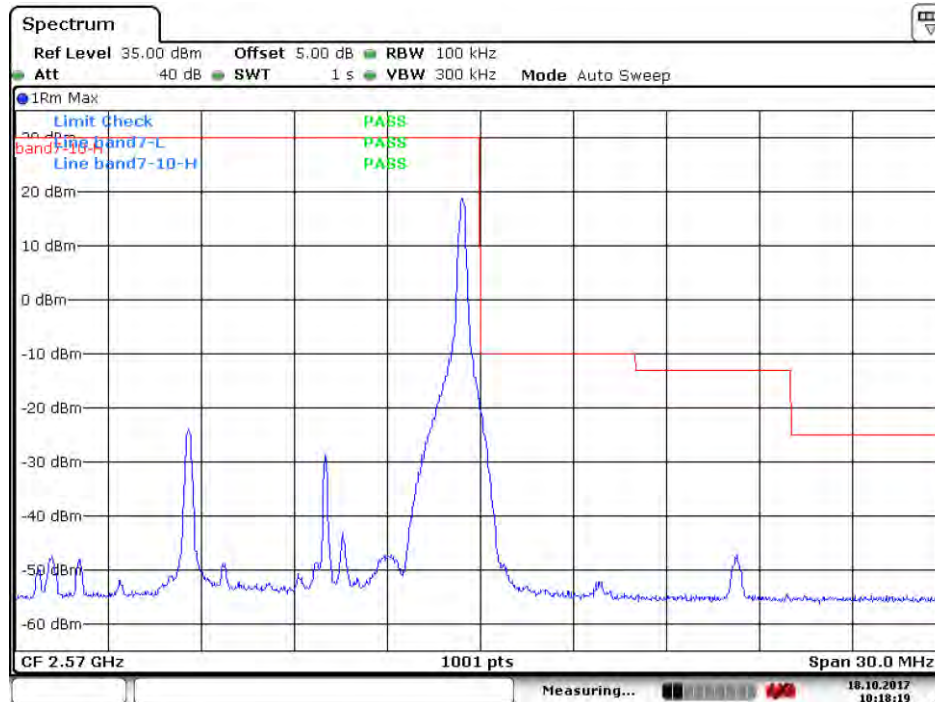
#### 5.1.1.4.1.2 Test RB=50RB



Date: 18.OCT.2017 10:16:30

#### 5.1.1.4.2 Test Channel = HCH

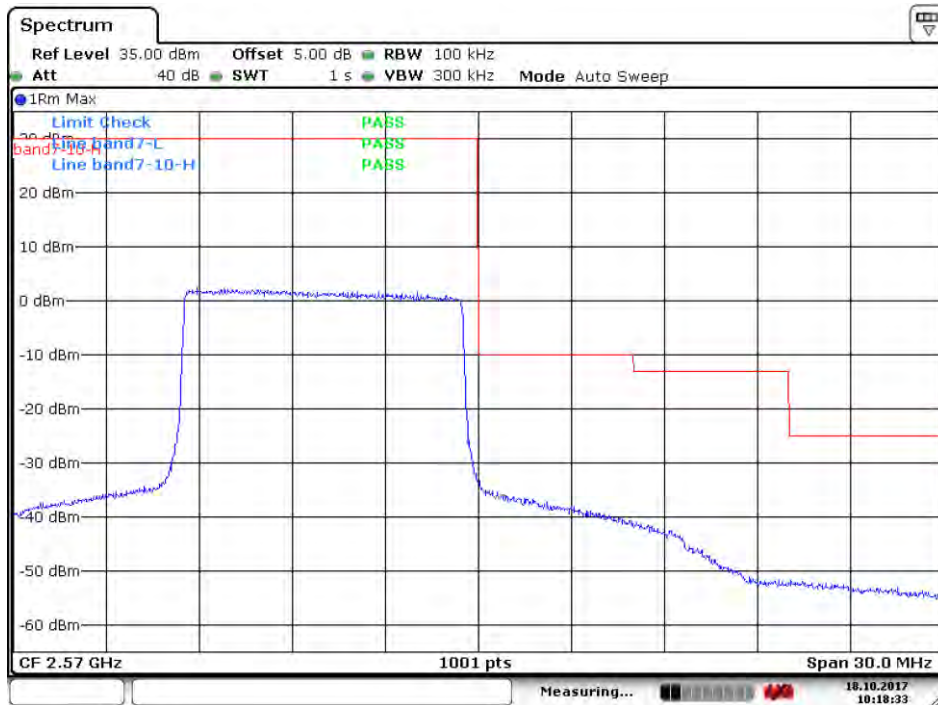
##### 5.1.1.4.2.1 Test RB=1RB



Date: 18.OCT.2017 10:18:20



#### 5.1.1.4.2.2 Test RB=50RB

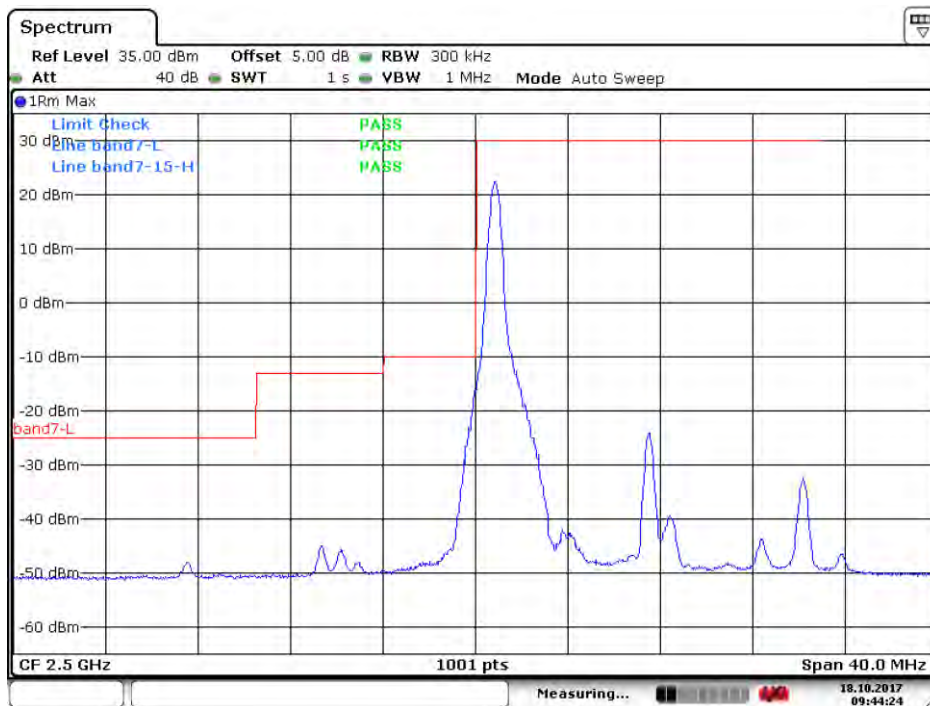


Date: 18.OCT.2017 10:18:34

#### 5.1.1.5 Test Mode = LTE/TM1 15MHz

##### 5.1.1.5.1 Test Channel = LCH

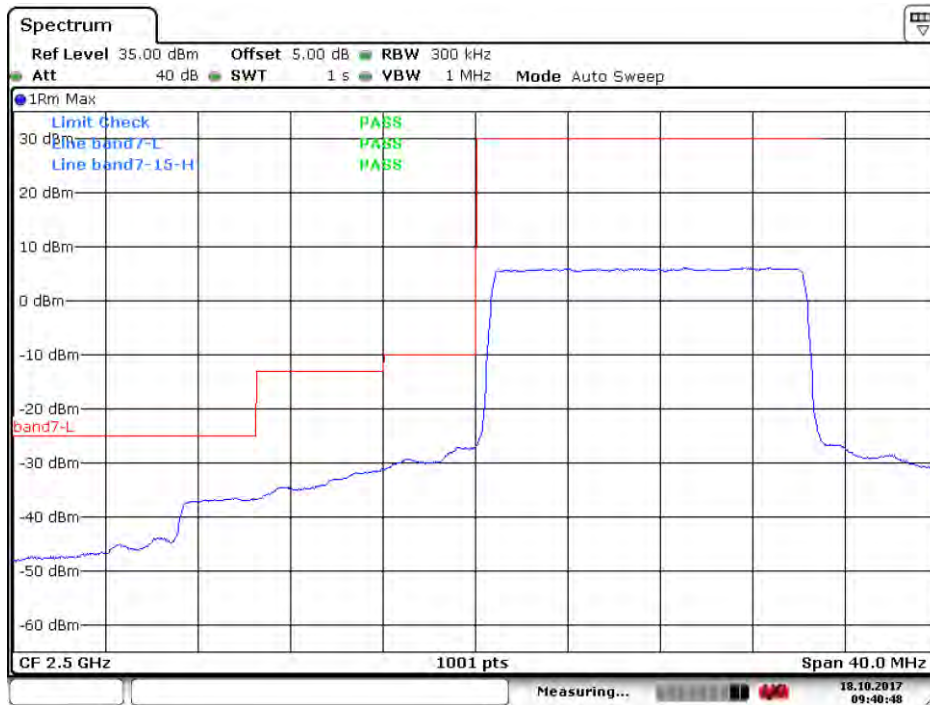
##### 5.1.1.5.1.1 Test RB=1RB



Date: 18.OCT.2017 09:44:24



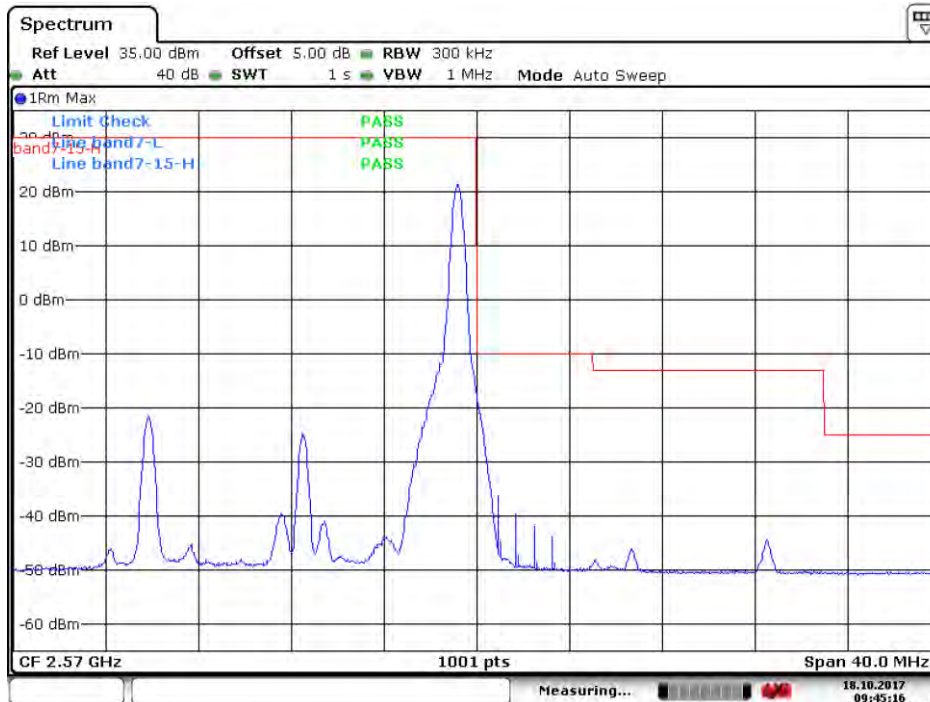
#### 5.1.1.5.1.2 Test RB=75RB



Date: 18.OCT.2017 09:40:48

#### 5.1.1.5.2 Test Channel = HCH

##### 5.1.1.5.2.1 Test RB=1RB



Date: 18.OCT.2017 09:45:17



#### 5.1.1.5.2.2 Test RB=75RB

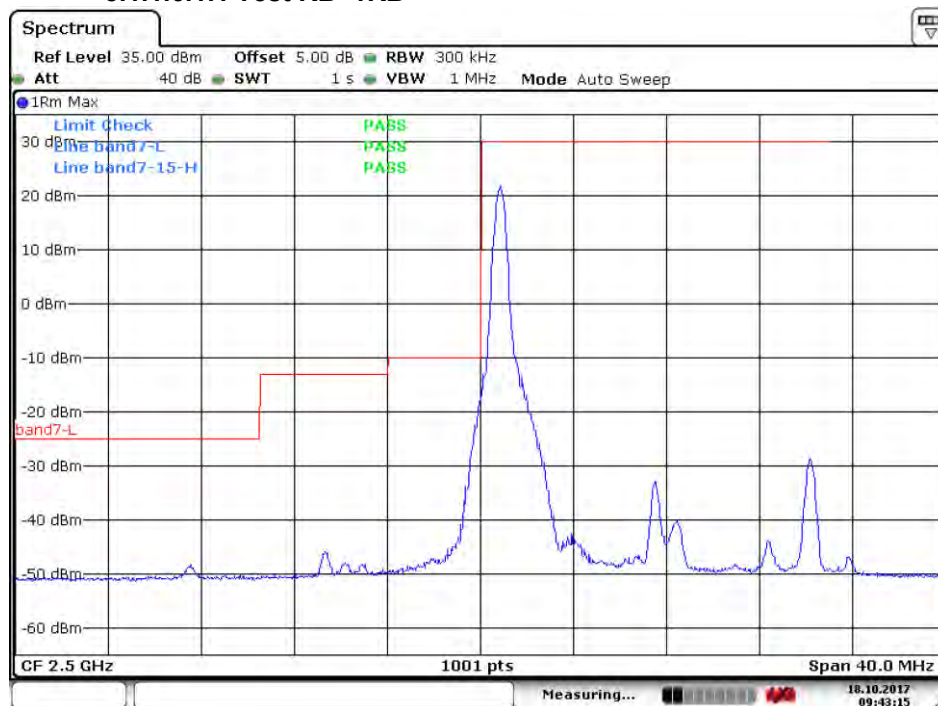


Date: 18.OCT.2017 09:45:50

#### 5.1.1.6 Test Mode = LTE/TM2 15MHz

##### 5.1.1.6.1 Test Channel = LCH

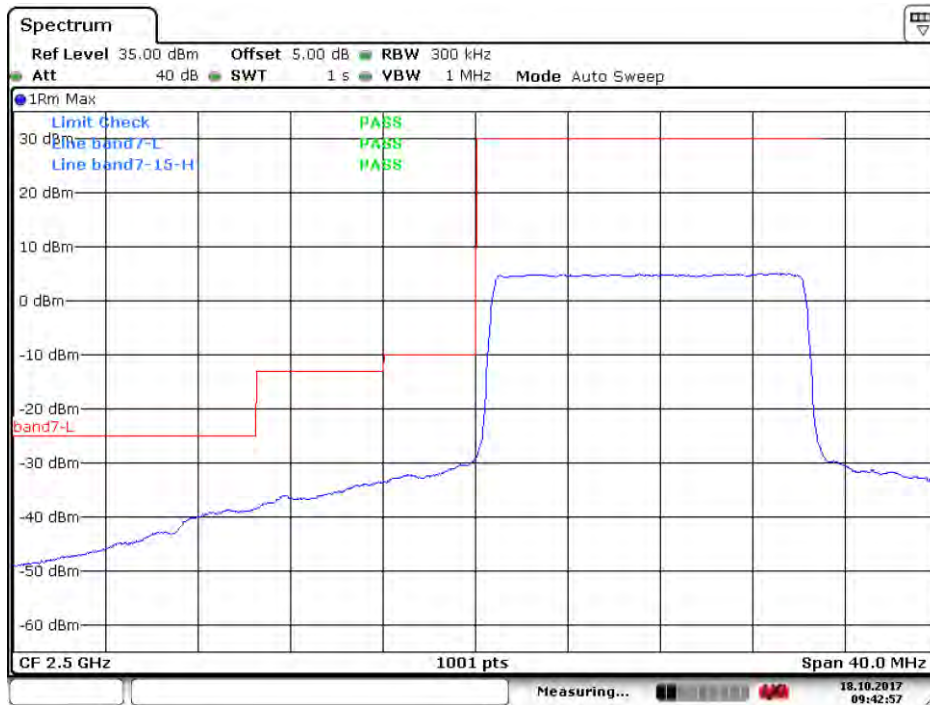
##### 5.1.1.6.1.1 Test RB=1RB



Date: 18.OCT.2017 09:43:15



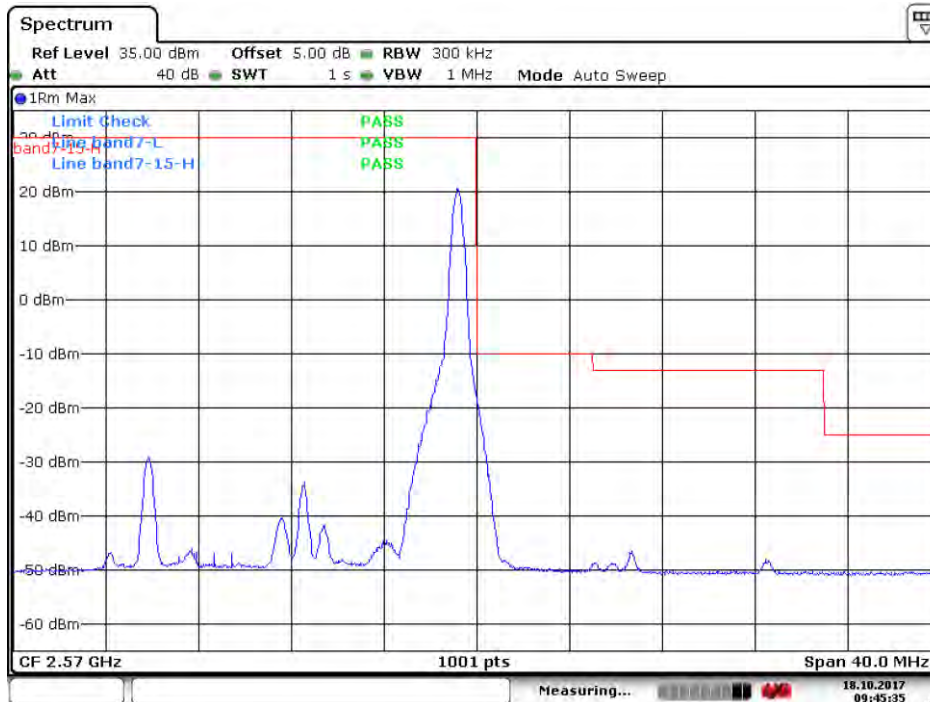
#### 5.1.1.6.1.2 Test RB=75RB



Date: 18.OCT.2017 09:42:57

#### 5.1.1.6.2 Test Channel = HCH

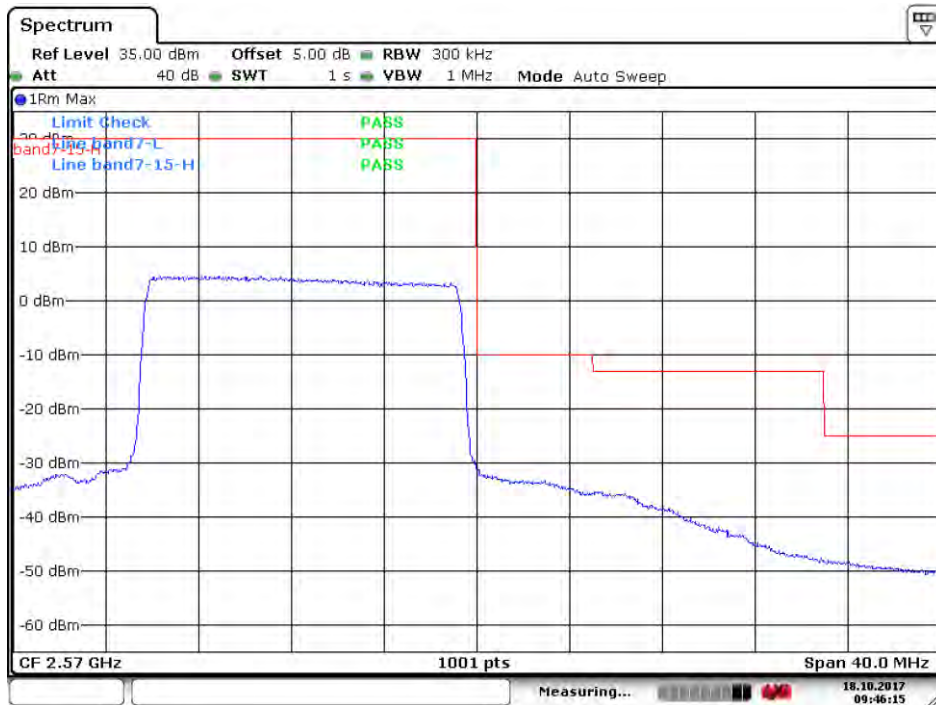
##### 5.1.1.6.2.1 Test RB=1RB



Date: 18.OCT.2017 09:45:35



#### 5.1.1.6.2.2 Test RB=75RB

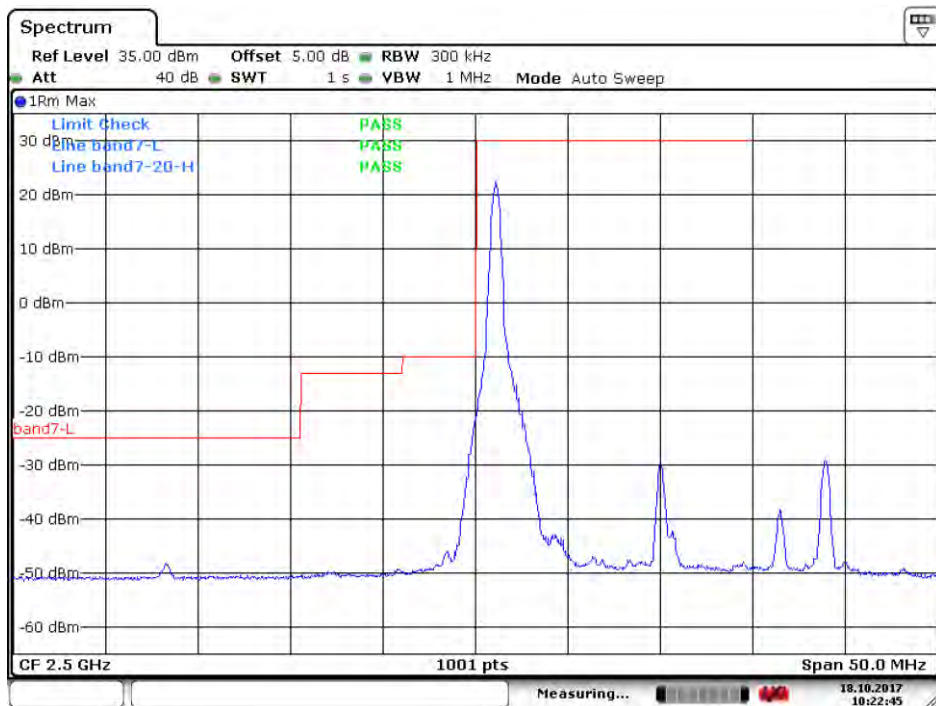


Date: 18.OCT.2017 09:46:15

#### 5.1.1.7 Test Mode = LTE/TM1 20MHz

##### 5.1.1.7.1 Test Channel = LCH

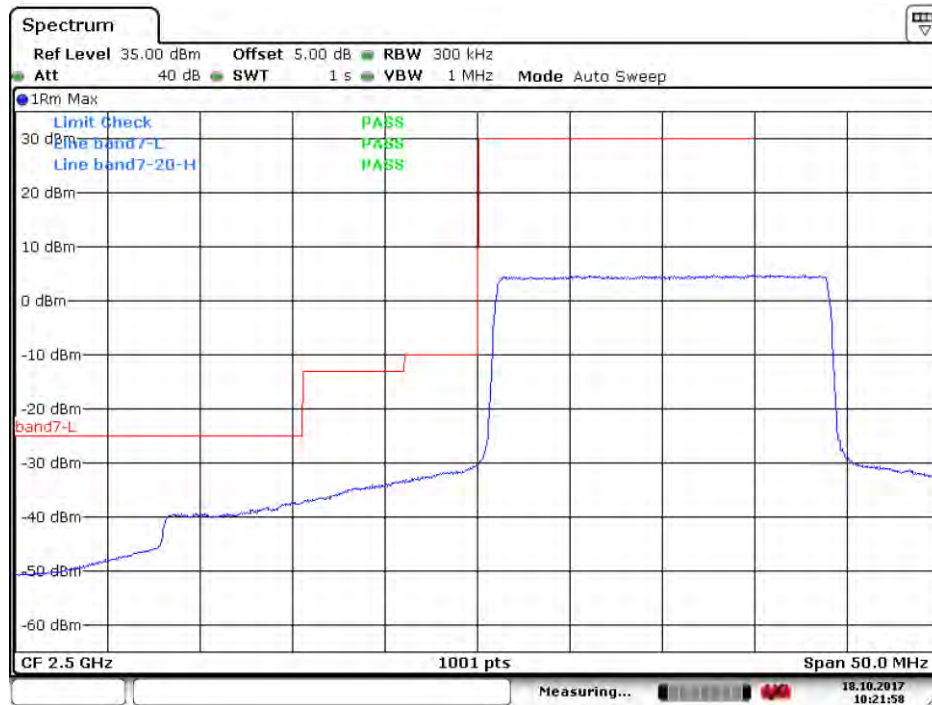
#### 5.1.1.7.1.1 Test RB=1RB



Date: 18.OCT.2017 10:22:45



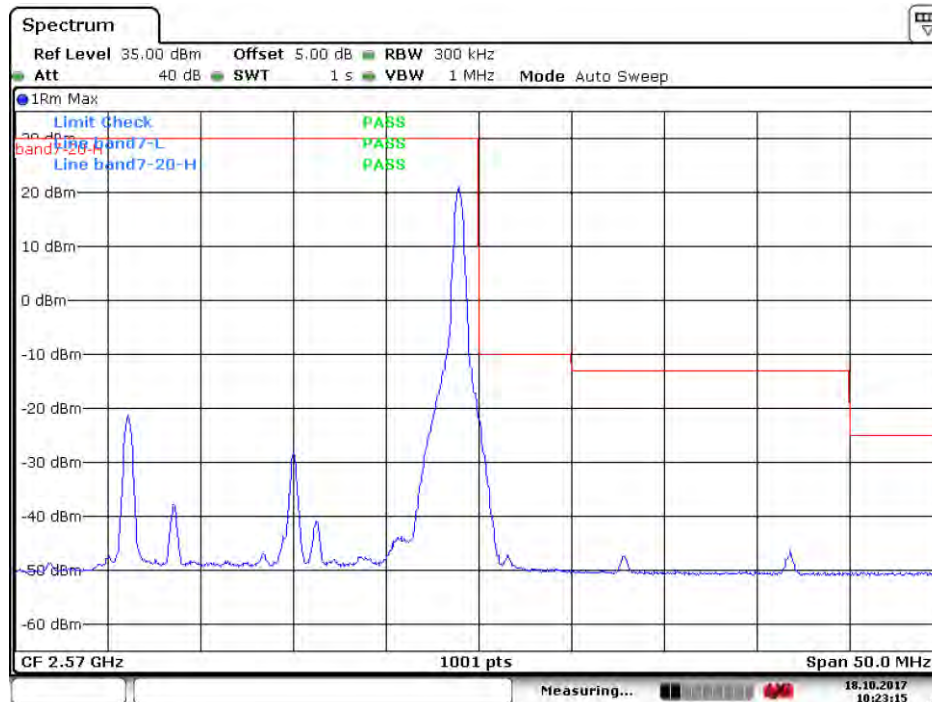
5.1.1.7.1.2 Test RB=100RB



Date: 18.OCT.2017 10:21:58

5.1.1.7.2 Test Channel = HCH

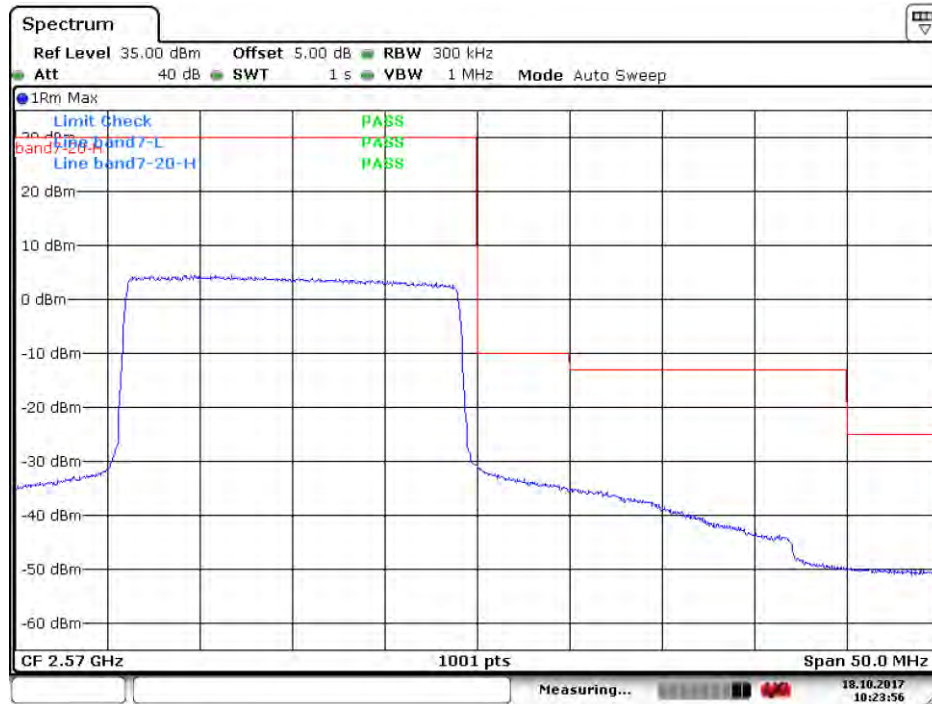
5.1.1.7.2.1 Test RB=1RB



Date: 18.OCT.2017 10:23:15



#### 5.1.1.7.2.2 Test RB=100RB

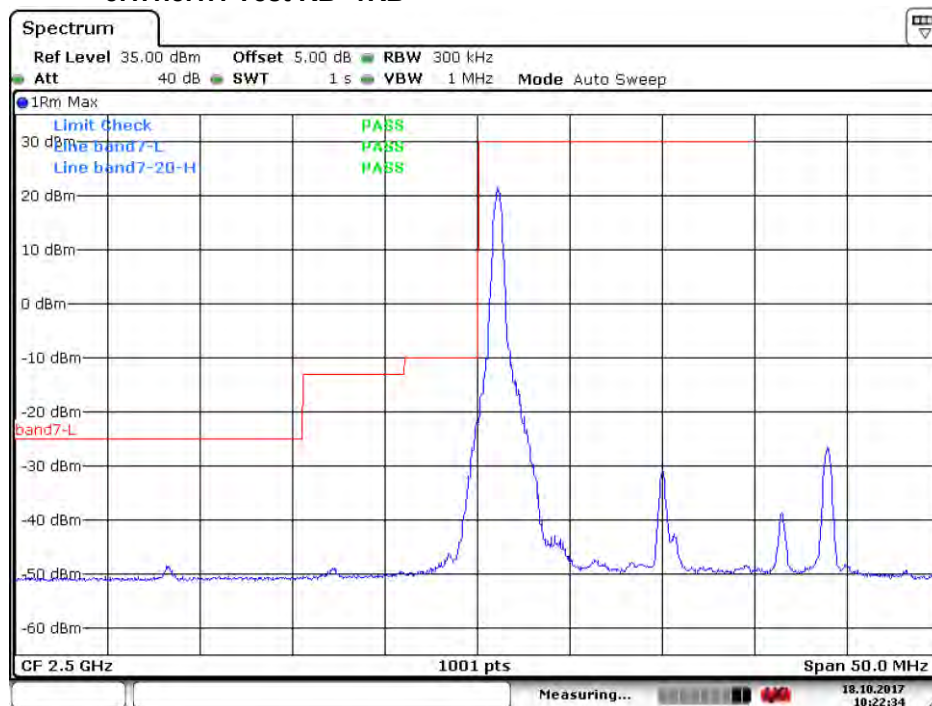


Date: 18.OCT.2017 10:23:56

#### 5.1.1.8 Test Mode = LTE/TM2 20MHz

##### 5.1.1.8.1 Test Channel = LCH

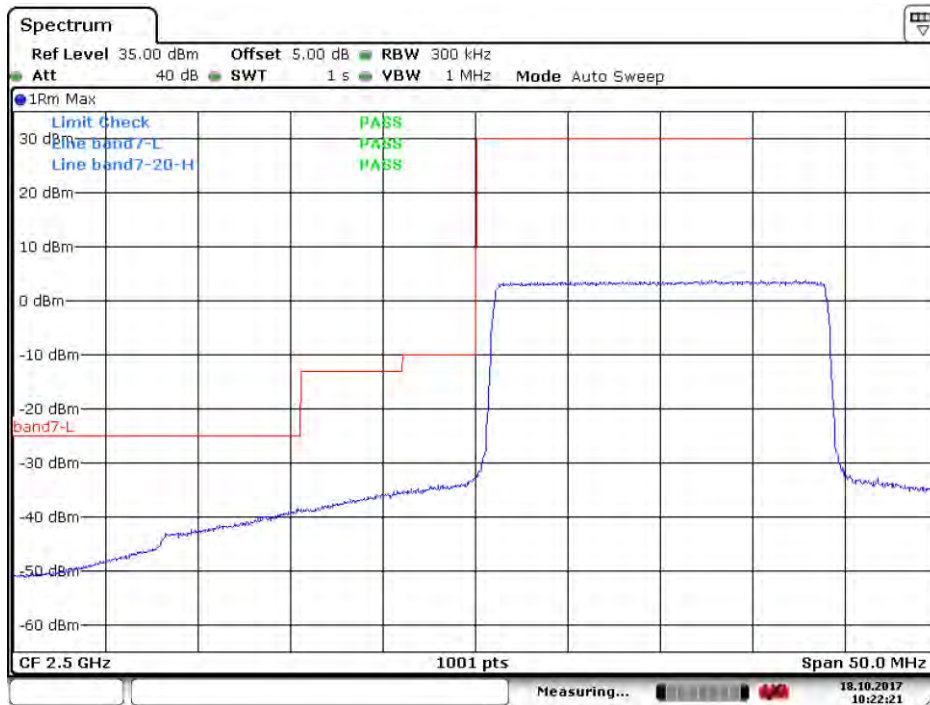
##### 5.1.1.8.1.1 Test RB=1RB



Date: 18.OCT.2017 10:22:34



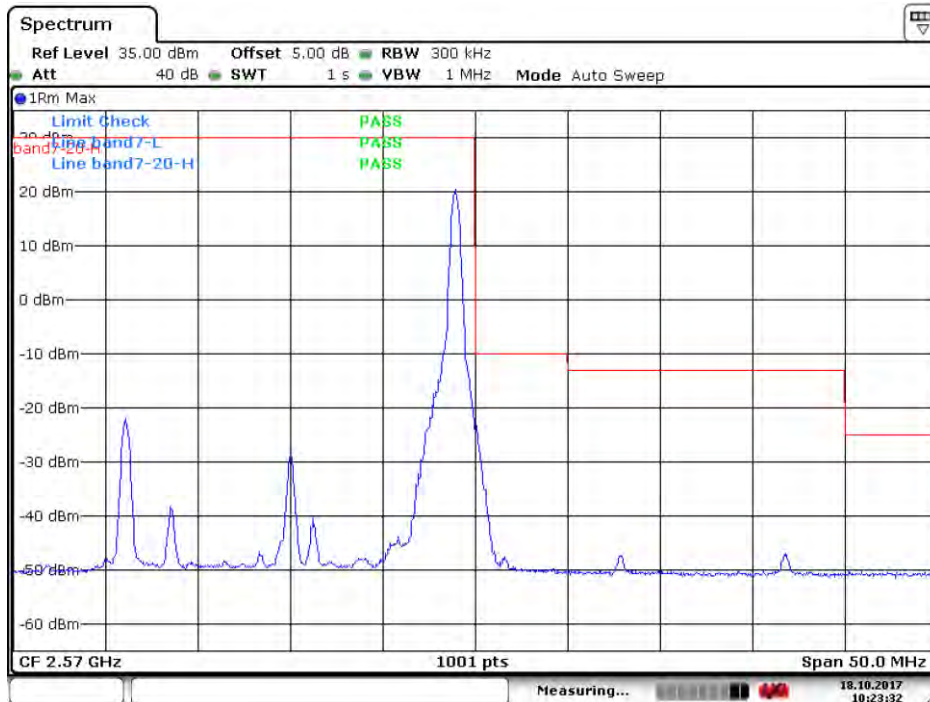
#### 5.1.1.8.1.2 Test RB=100RB



Date: 18.OCT.2017 10:22:21

#### 5.1.1.8.2 Test Channel = HCH

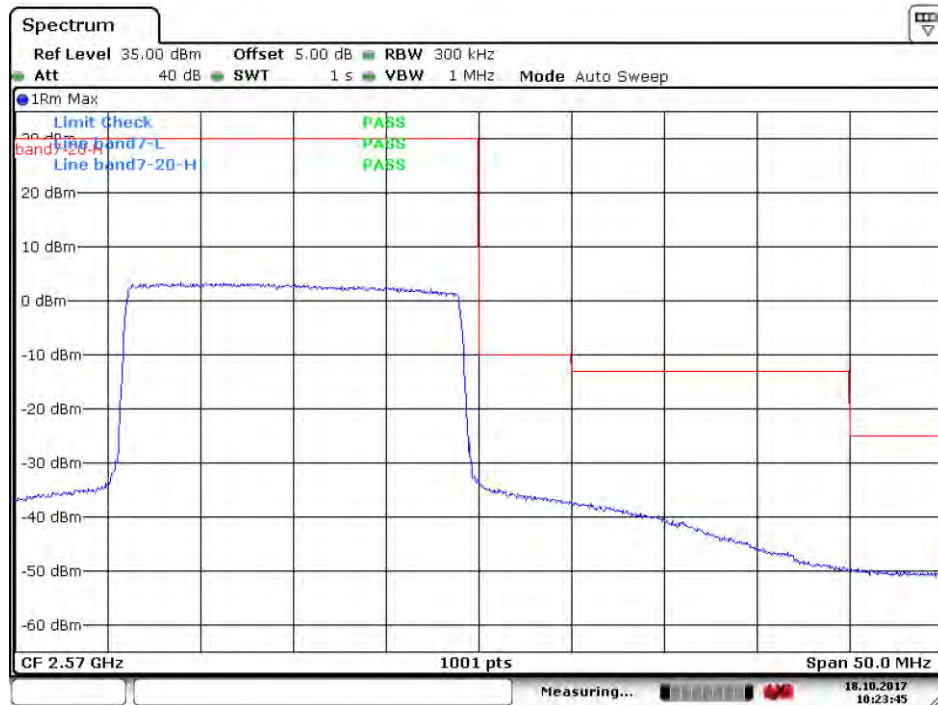
##### 5.1.1.8.2.1 Test RB=1RB



Date: 18.OCT.2017 10:23:32



5.1.1.8.2.2 Test RB=100RB



Date: 18.OCT.2017 10:23:45



## 6 Spurious Emission at Antenna Terminal

NOTE: For the averaged unwanted emissions measurements, the measurement points in each sweep is greater than twice the Span/RBW in order to ensure bin-to-bin spacing of  $< RBW/2$  so that narrowband signals are not lost between frequency bins. As to the present test item, the "Measurement Points =  $k * (Span / RBW)$ " with  $k$  between 4 and 5, which results in an acceptable level error of less than 0.5 dB.

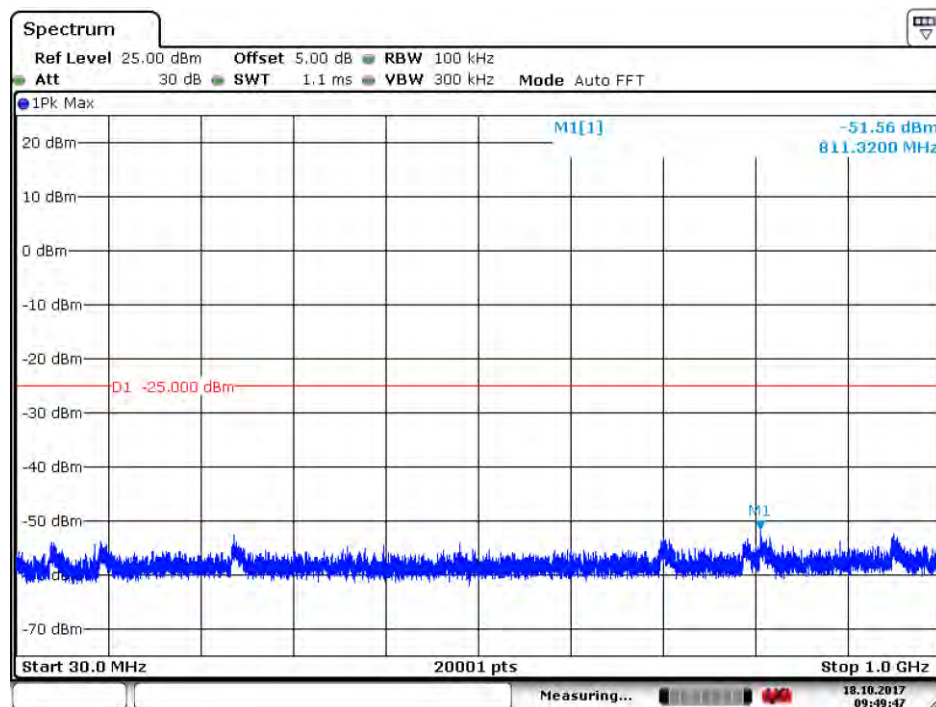
Part I - Test Plots

### 6.1 For LTE

#### 6.1.1 Test Band = LTE band7

##### 6.1.1.1 Test Mode = LTE / TM1 20MHz RB1#0

##### 6.1.1.1.1 Test Channel = LCH



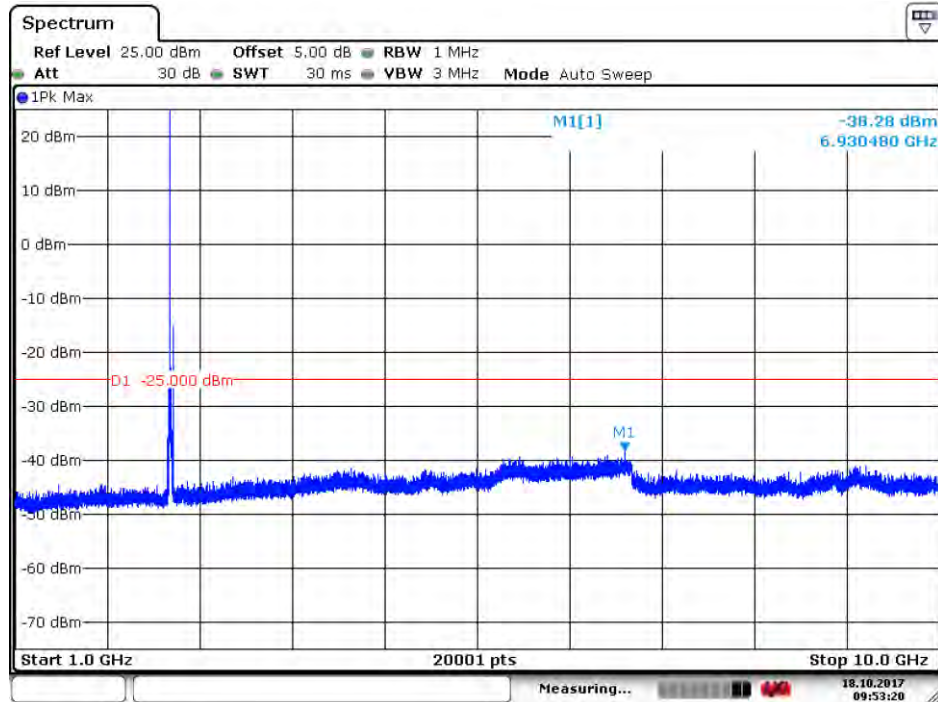
Date: 18.OCT.2017 09:49:47



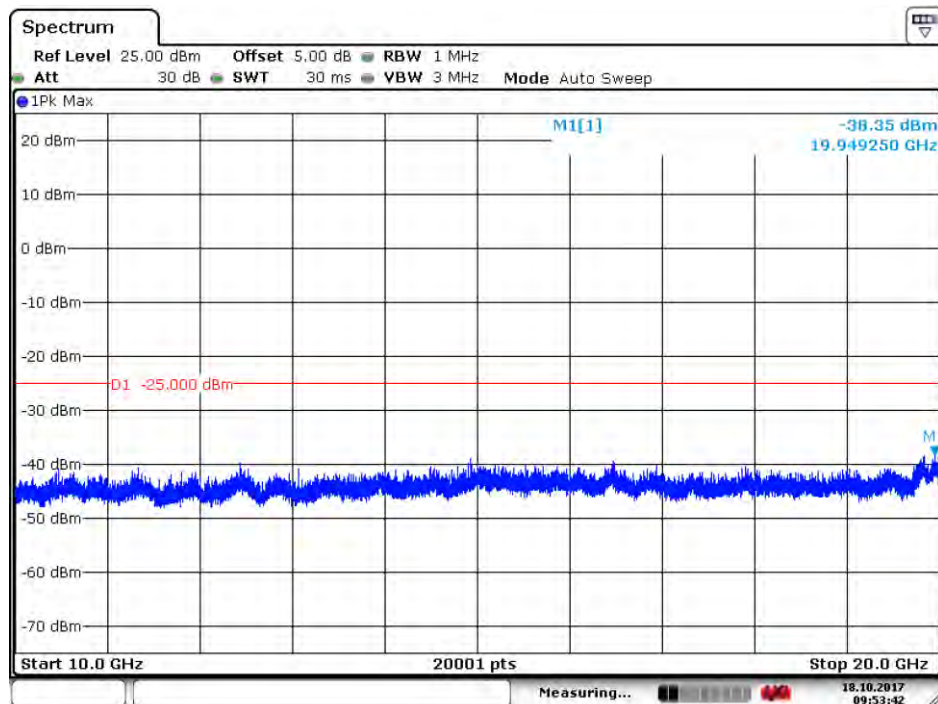
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Date: 18.OCT.2017 09:53:20



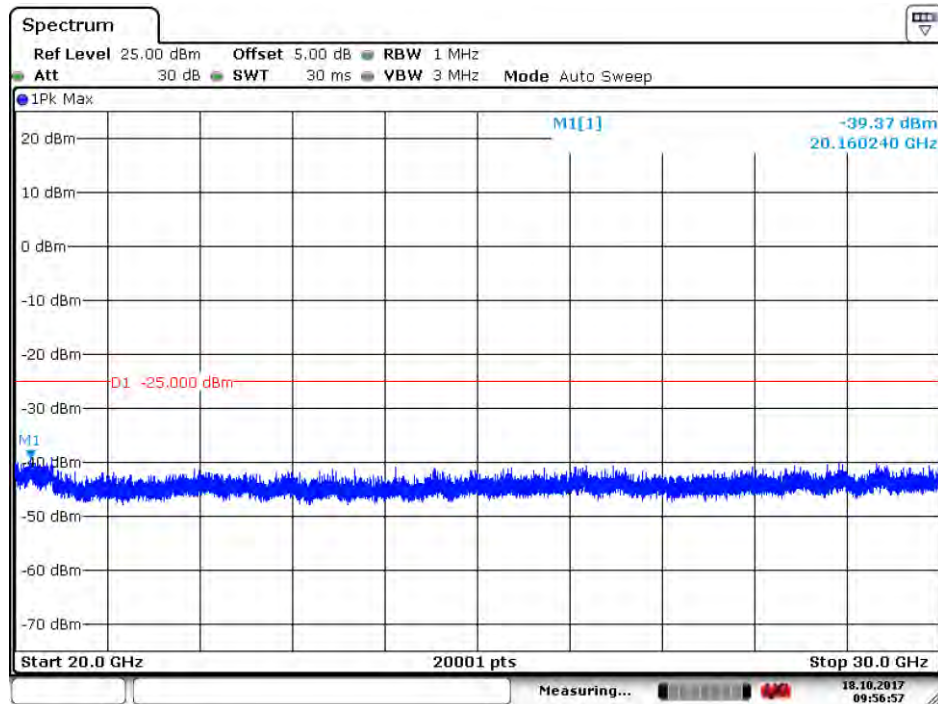
Date: 18.OCT.2017 09:53:43



# SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch

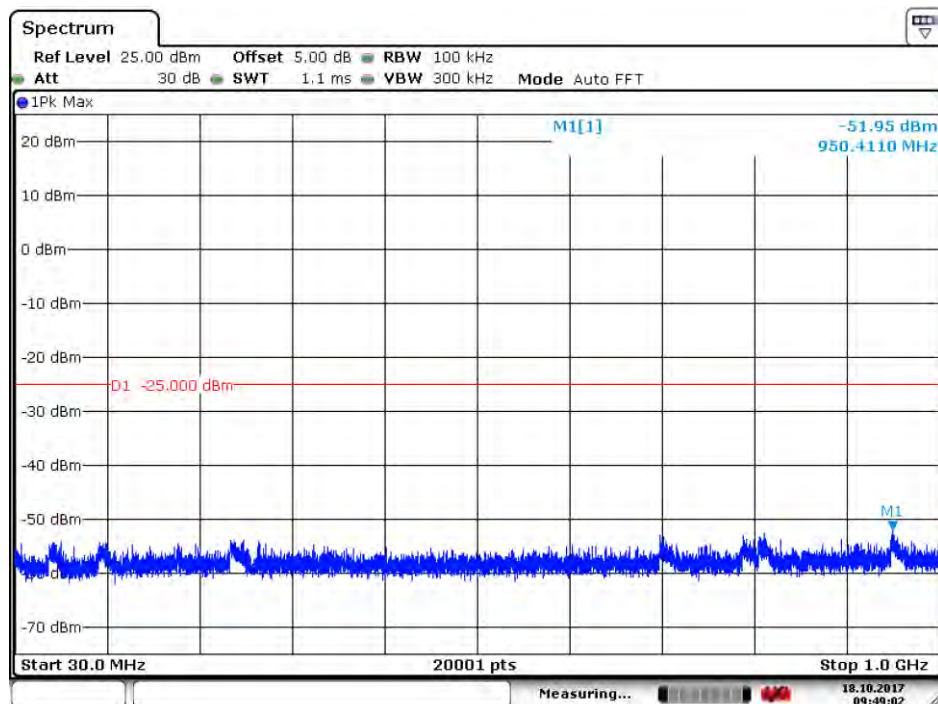
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Date: 18.OCT.2017 09:56:58

## 6.1.1.1.2 Test Channel = MCH



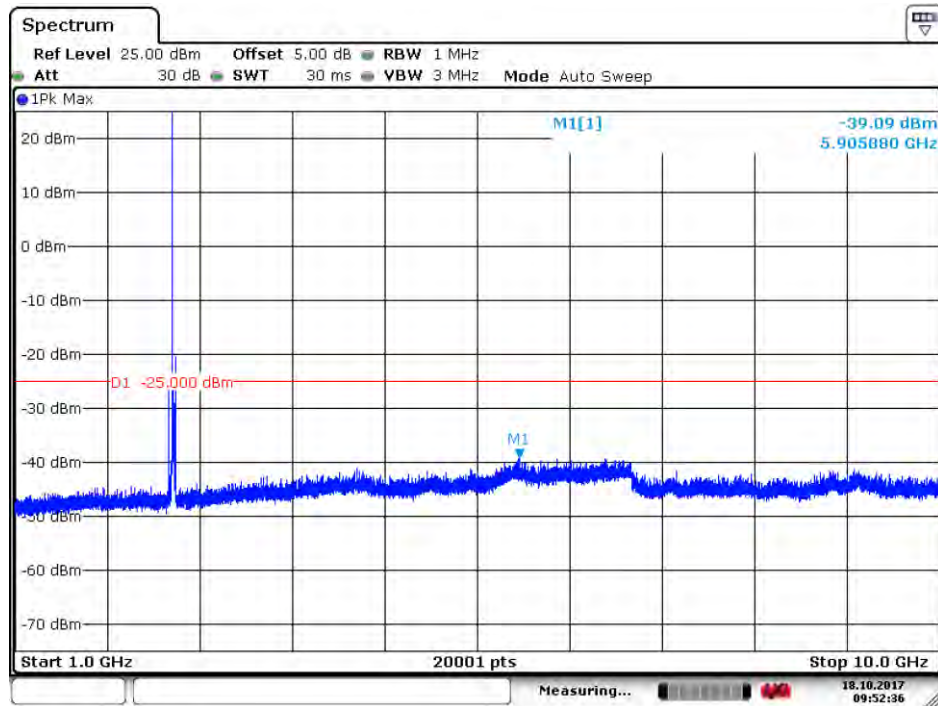
Date: 18.OCT.2017 09:49:03



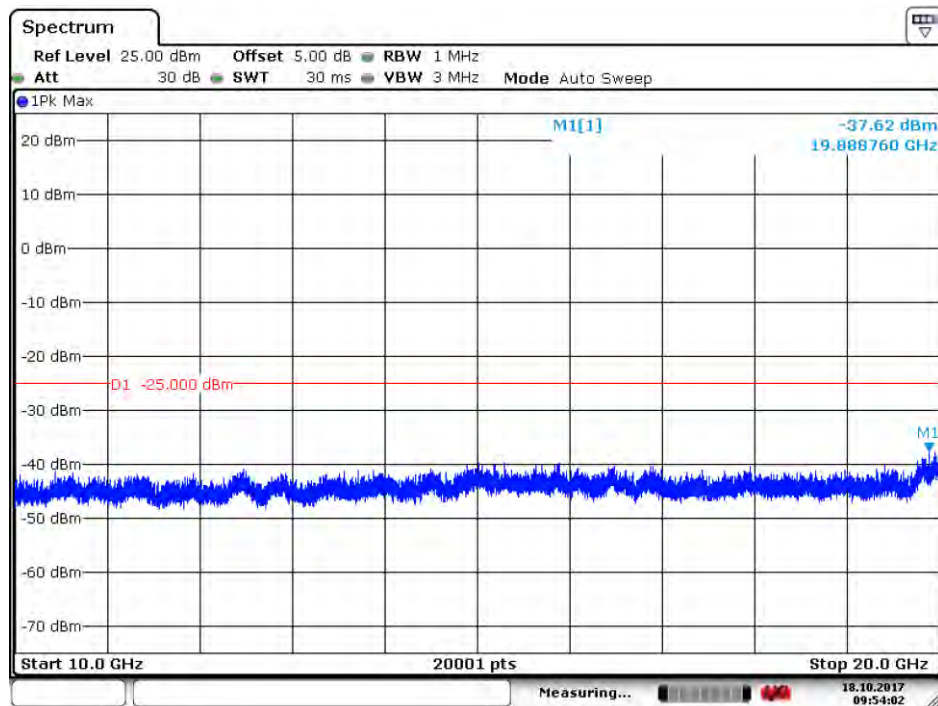
# SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch

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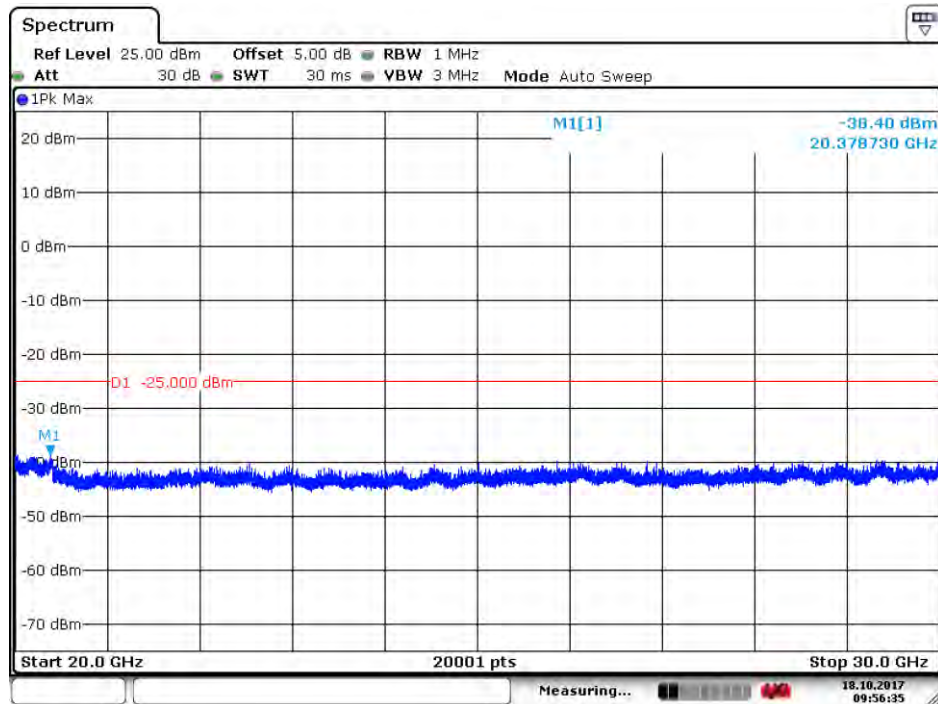
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Date: 18.OCT.2017 09:52:36

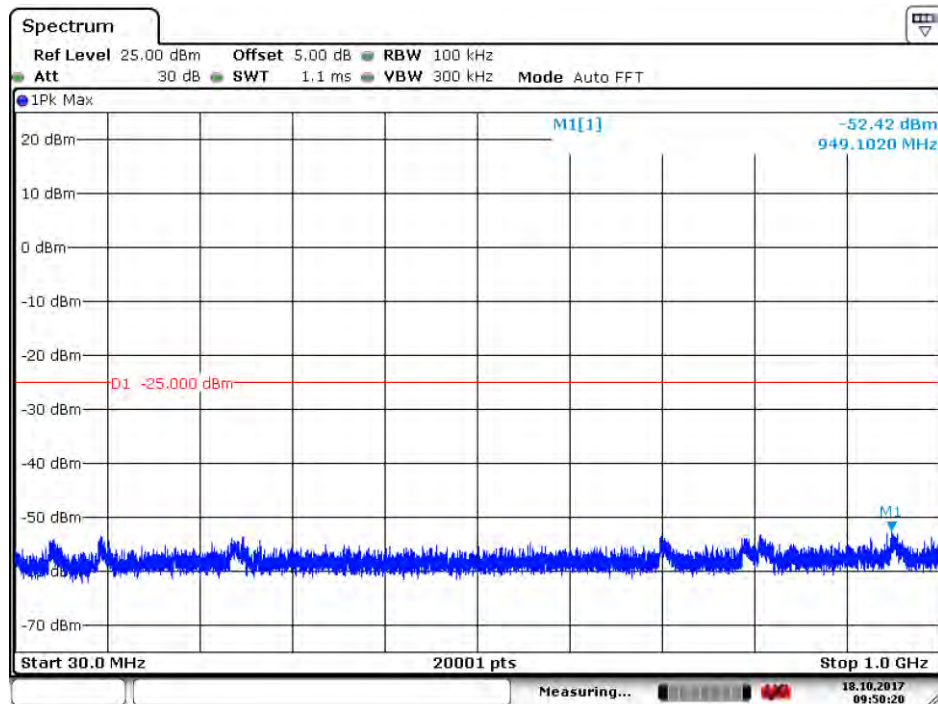


Date: 18.OCT.2017 09:54:02



Date: 18.OCT.2017 09:56:35

#### 6.1.1.1.3 Test Channel = HCH



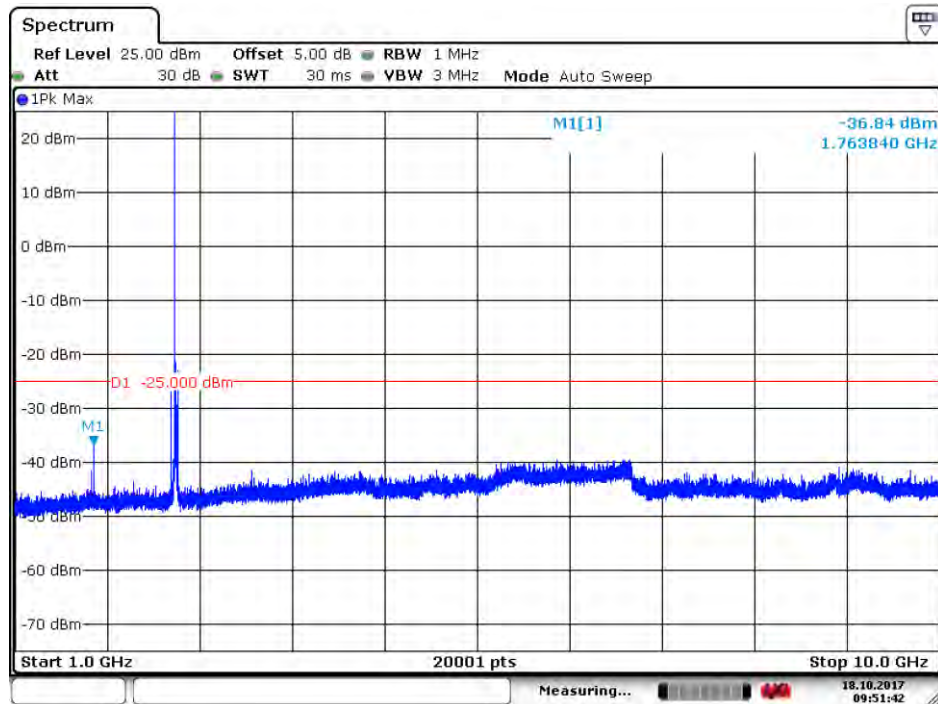
Date: 18.OCT.2017 09:50:19



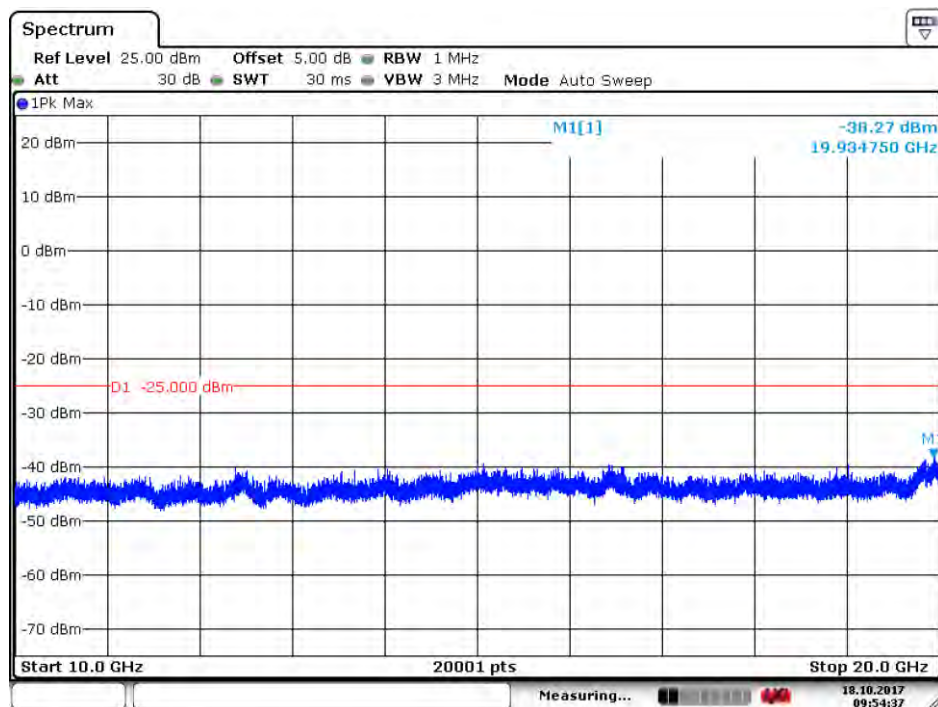
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Date: 18.OCT.2017 09:51:42



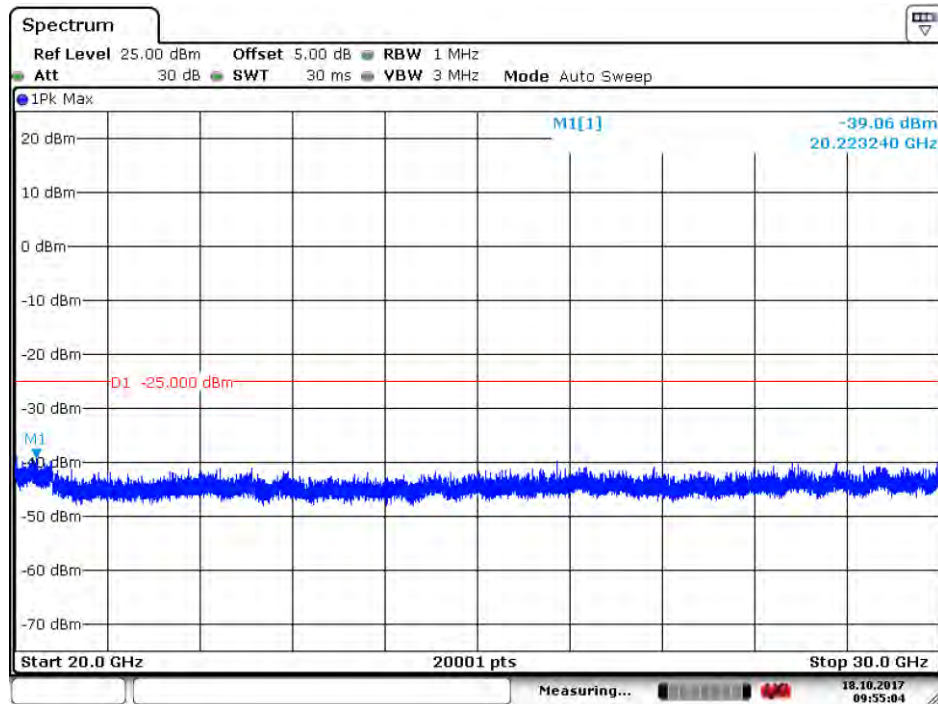
Date: 18.OCT.2017 09:54:37



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## 7 Field Strength of Spurious Radiation

### 7.1 For LTE

Main Supply:

7.1.1 Test Band = LTE band7

7.1.1.1 Test Mode =LTE/TM1 20MHz RB1#0

#### 7.1.1.1.1 Test Channel = LCH

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Over Limit (dB)	Polarization
1111.000	-66.18	-25.00	-41.18	Vertical
4365.000	-67.05	-25.00	-42.05	Vertical
7192.500	-64.32	-25.00	-39.32	Vertical
1320.000	-67.01	-25.00	-42.01	Horizontal
4657.500	-66.10	-25.00	-41.10	Horizontal
7777.500	-63.10	-25.00	-38.10	Horizontal

#### 7.1.1.1.2 Test Channel = MCH

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Over Limit (dB)	Polarization
1243.000	-66.08	-25.00	-41.08	Vertical
4950.000	-66.27	-25.00	-41.27	Vertical
8070.000	-64.52	-25.00	-39.52	Vertical
1243.000	-67.07	-25.00	-42.07	Horizontal
2680.000	-57.35	-25.00	-32.35	Horizontal
4170.000	-67.30	-25.00	-42.30	Horizontal

#### 7.1.1.1.3 Test Channel = HCH

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Over Limit (dB)	Polarization
1100.000	-66.27	-25.00	-41.27	Vertical
1804.000	-63.31	-25.00	-38.31	Vertical
2664.000	-57.34	-25.00	-32.34	Vertical
1122.000	-66.97	-25.00	-41.97	Horizontal
1694.000	-64.35	-25.00	-39.35	Horizontal
2880.000	-56.57	-25.00	-31.57	Horizontal



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**Secondary Supply:**

**7.1.2 Test Band = LTE band7**

**7.1.2.1 Test Mode =LTE/TM1 20MHz RB1#0**

**7.1.2.1.1 Test Channel = MCH**

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Over Limit (dB)	Polarization
4267.500	-66.47	-25.00	-41.47	Vertical
6900.000	-64.12	-25.00	-39.12	Vertical
10507.500	-62.51	-25.00	-37.51	Vertical
4365.000	-66.79	-25.00	-41.79	Horizontal
6900.000	-64.31	-25.00	-39.31	Horizontal
10507.500	-62.87	-25.00	-37.87	Horizontal

**NOTE:**

- 1) The disturbance above 13GHz and below 30MHz was very low, and the above harmonics were the highest point could be found when testing, so only the above harmonics had been displayed.



## 8 Frequency Stability

### 8.1 Frequency Error VS. Voltage

Test Band	Test Mode	Test Channel	Test Temp.	Test Volt.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
LTEband7	LTE/TM1 20MHz	LCH	TN	VL	-4.03	-0.00161	PASS
				VN	2.46	0.00098	PASS
				VH	-7.53	-0.00300	PASS
		MCH	TN	VL	1.49	0.00059	PASS
				VN	-2.84	-0.00112	PASS
				VH	2.62	0.00103	PASS
		HCH	TN	VL	-6.56	-0.00256	PASS
				VN	-5.17	-0.00202	PASS
				VH	-1.75	-0.00068	PASS
	LTE/TM2 20MHz	LCH	TN	VL	-4.18	-0.00167	PASS
				VN	-2.95	-0.00118	PASS
				VH	-5.16	-0.00206	PASS
		MCH	TN	VL	1.56	0.00062	PASS
				VN	-4.80	-0.00189	PASS
				VH	2.59	0.00102	PASS
		HCH	TN	VL	-3.22	-0.00126	PASS
				VN	-7.54	-0.00295	PASS
				VH	2.42	0.00095	PASS



## 8.2 Frequency Error VS. Temperature

Test Band	Test Mode	Test Channel	Test Volt.	Test Temp.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
LTEband7	LTE/TM1 20MHz	LCH	VN	-30	-2.42	-0.00096	PASS
				-20	-1.34	-0.00053	PASS
				-10	2.38	0.00095	PASS
				0	3.75	0.00149	PASS
				10	1.65	0.00066	PASS
				20	5.11	0.00204	PASS
				30	-0.31	-0.00012	PASS
				40	-6.14	-0.00245	PASS
				50	3.59	0.00143	PASS
		MCH	VN	-30	-7.80	-0.00308	PASS
				-20	-2.95	-0.00116	PASS
				-10	-7.49	-0.00295	PASS
				0	-5.62	-0.00222	PASS
				10	-4.32	-0.00170	PASS
				20	-9.94	-0.00392	PASS
				30	-2.42	-0.00095	PASS
				40	-4.55	-0.00179	PASS
				50	-6.90	-0.00272	PASS
		HCH	VN	-30	4.54	0.00177	PASS
				-20	-3.76	-0.00147	PASS
				-10	1.50	0.00059	PASS
				0	-5.83	-0.00228	PASS
				10	2.60	0.00102	PASS
				20	-0.55	-0.00021	PASS
				30	-2.66	-0.00104	PASS
				40	-5.43	-0.00212	PASS
				50	-8.90	-0.00348	PASS



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Test Band	Test Mode	Test Channel	Test Volt.	Test Temp.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
LTEband7	LTE/TM2 20MHz	LCH	VN	-30	-3.50	-0.00139	PASS
				-20	-2.45	-0.00098	PASS
				-10	3.38	0.00135	PASS
				0	2.64	0.00105	PASS
				10	1.60	0.00064	PASS
				20	-3.23	-0.00129	PASS
				30	-0.44	-0.00018	PASS
				40	5.34	0.00213	PASS
				50	4.79	0.00191	PASS
		MCH	VN	-30	-2.80	-0.00110	PASS
				-20	-5.38	-0.00212	PASS
				-10	-7.29	-0.00288	PASS
				0	-4.32	-0.00170	PASS
				10	-1.88	-0.00074	PASS
				20	1.74	0.00069	PASS
				30	-3.60	-0.00142	PASS
				40	-2.62	-0.00103	PASS
				50	-1.91	-0.00075	PASS
		HCH	VN	-30	1.34	0.00052	PASS
				-20	-2.88	-0.00113	PASS
				-10	1.59	0.00062	PASS
				0	-4.73	-0.00185	PASS
				10	2.80	0.00109	PASS
				20	-1.47	-0.00057	PASS
				30	-2.59	-0.00101	PASS
				40	-4.13	-0.00161	PASS
				50	-7.60	-0.00297	PASS

The End