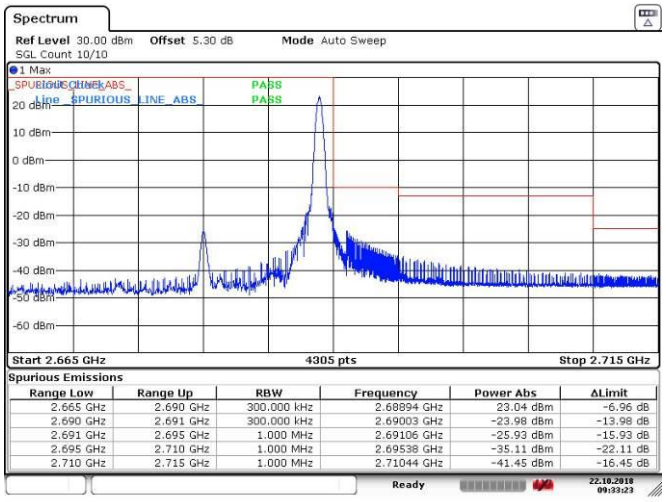
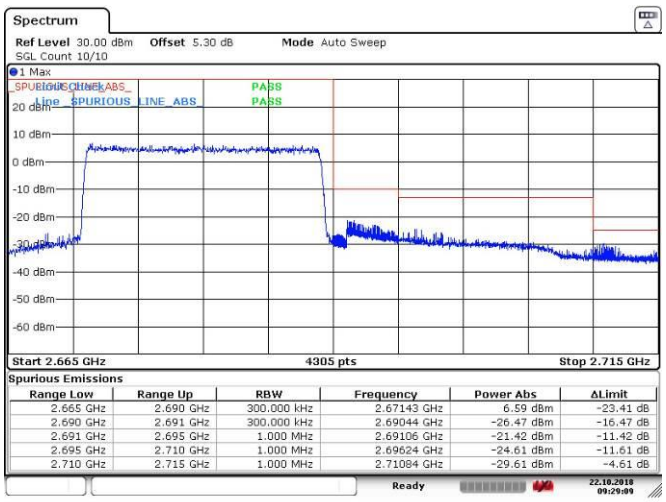
BAND 41_20MHz_QPSK_41490_1RB#99



Date: 22.OCT.2018 09:33:23

BAND 41_20MHz_QPSK_41490_100RB#0



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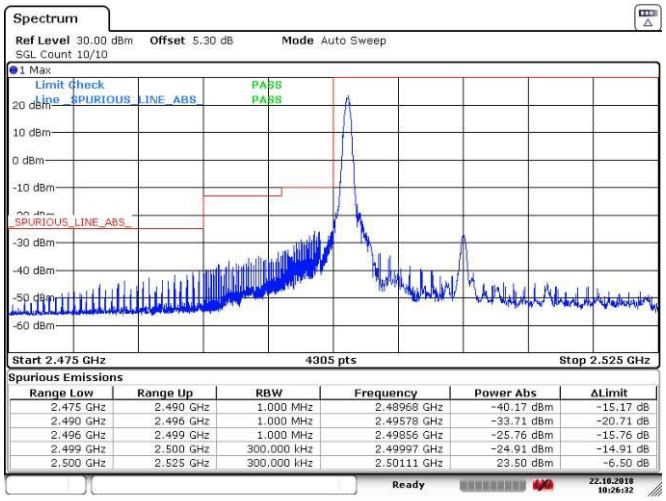
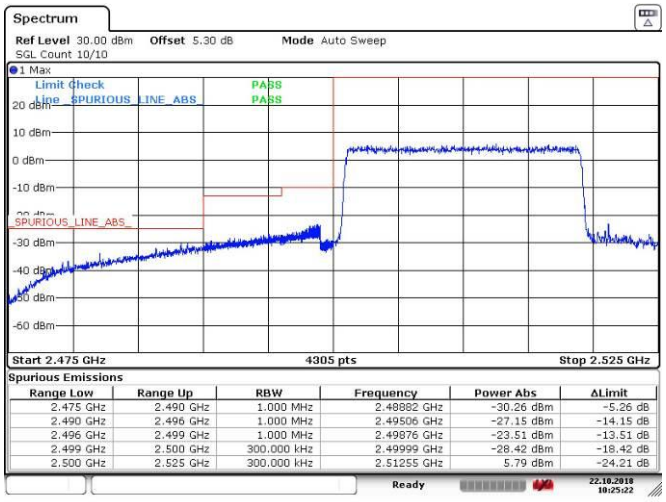


Date: 22.OCT.2018 10:26:32

BAND 41_20MHz_16QAM_39790_100RB#0



Date: 22.OCT.2018 10:25:22

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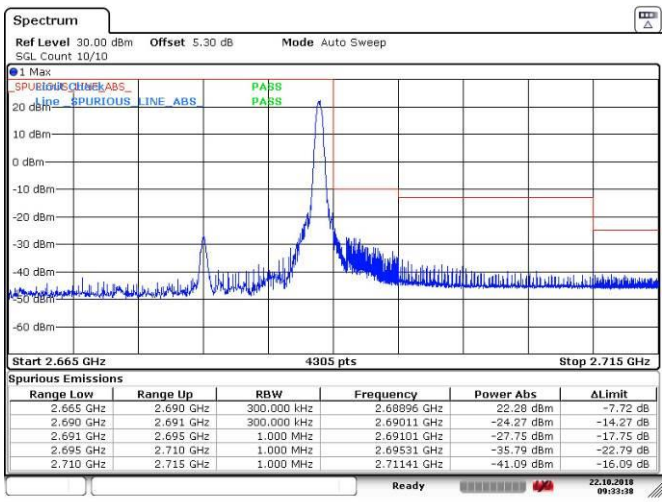

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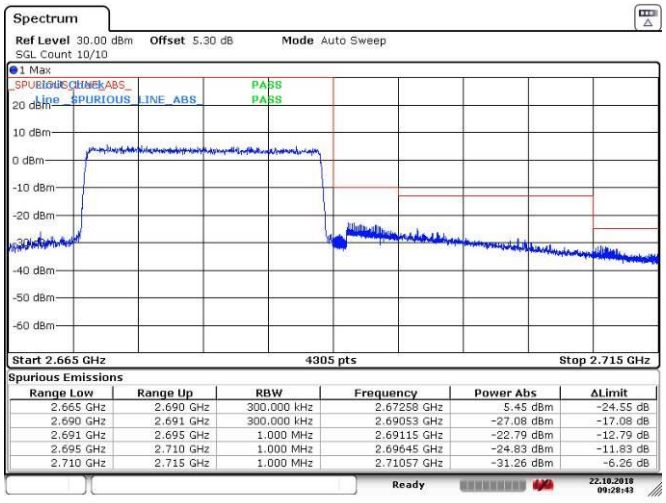
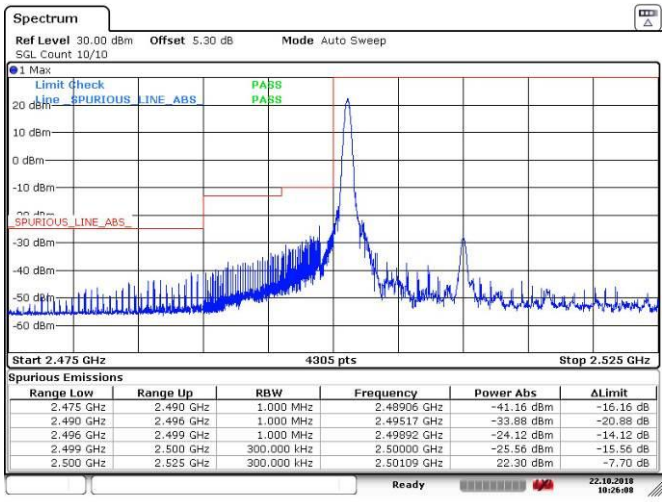
BAND 41_20MHz_16QAM_41490_100RB#0



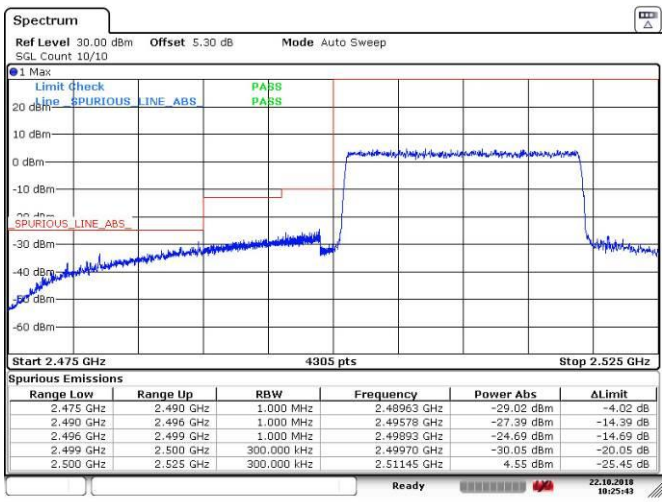
Date: 22.OCT.2018 09:28:43

BAND 41_20MHz_64QAM_39790_1RB#0



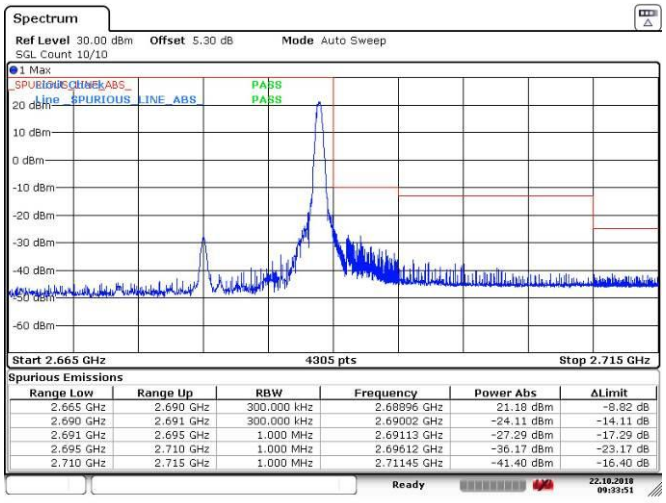
Date: 22.OCT.2018 10:26:09

BAND 41_20MHz_64QAM_39790_100RB#0



Date: 22.OCT.2018 10:25:43

BAND 41_20MHz_64QAM_41490_1RB#99



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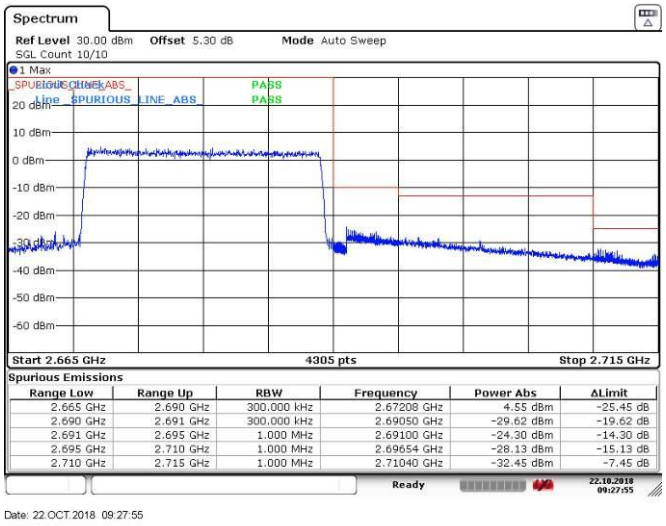


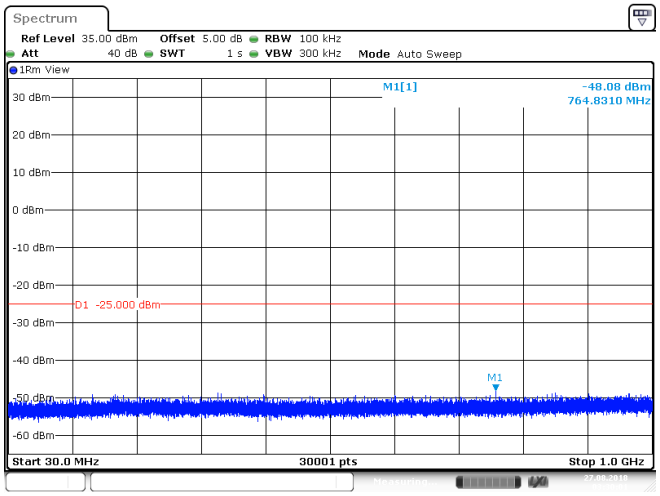
6. Spurious Emission at Antenna Terminal

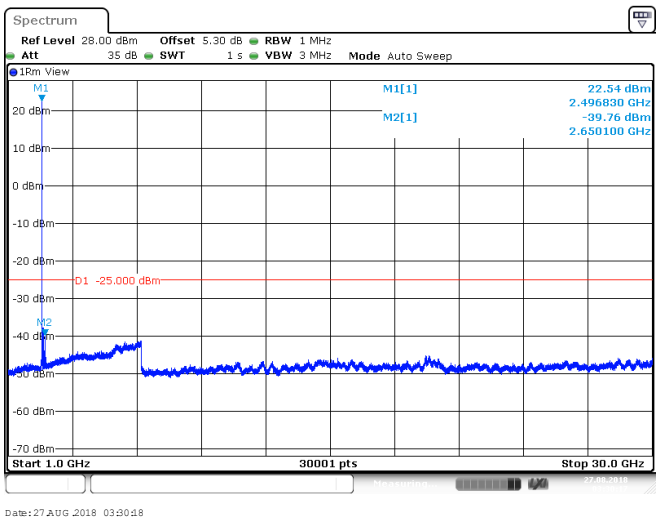
NOTE1: For the averaged unwanted emissions measurements, the measurement points in each sweep is greater than twice the Span/RBW in order to ensure bin-to-bin spacing of < RBW/2 so that narrowband signals are not lost between frequency bins. As to the present test item, the "Measurement Points = k * (Span / RBW)" with k between 4 and 5, which results in an acceptable level error of less than 0.5 dB.

NOTE2: only the worst case data displayed in this report.

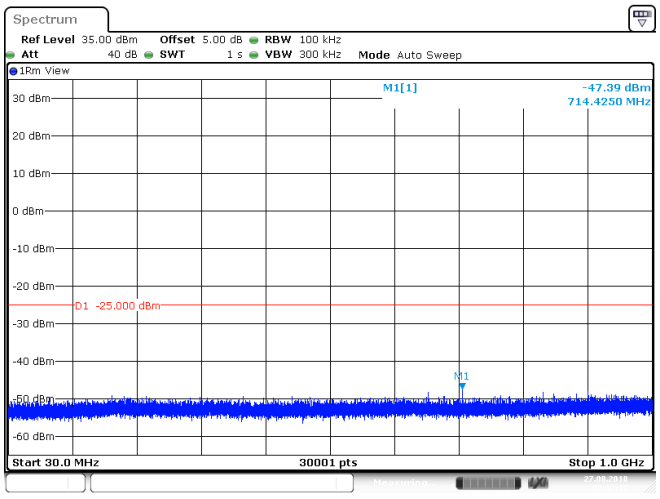
6.1. Test Plots

BAND 41_20MHz_QPSK_39790_1RB#0

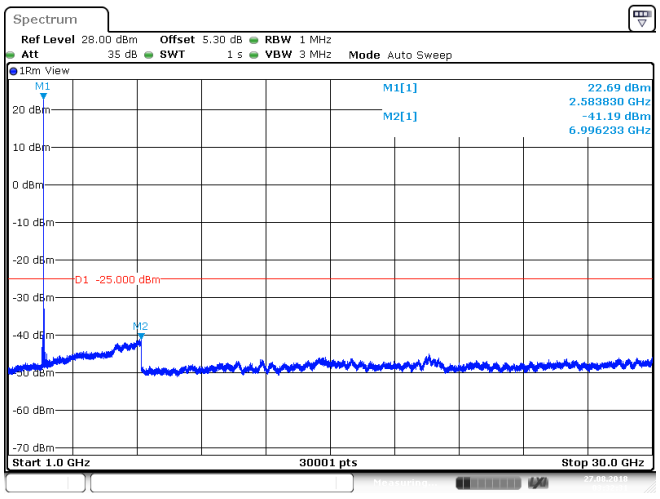




BAND 41_20MHz_QPSK_40640_1RB#0

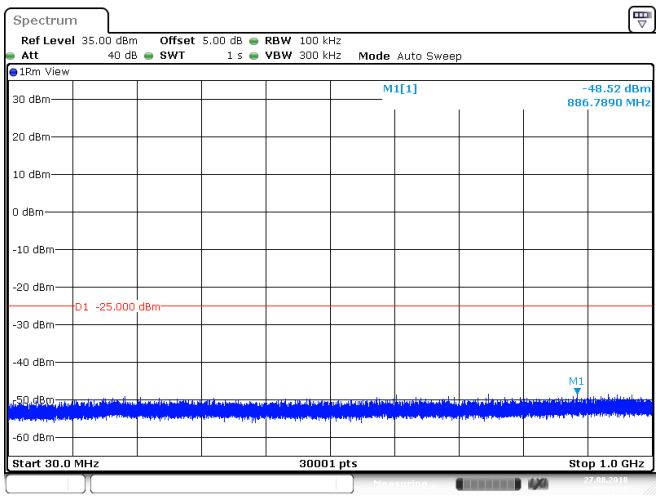


Date: 27.AUG.2018 03:32:16



Date: 27.AUG.2018 03:32:32

BAND 41_20MHz_QPSK_41490_1RB#0



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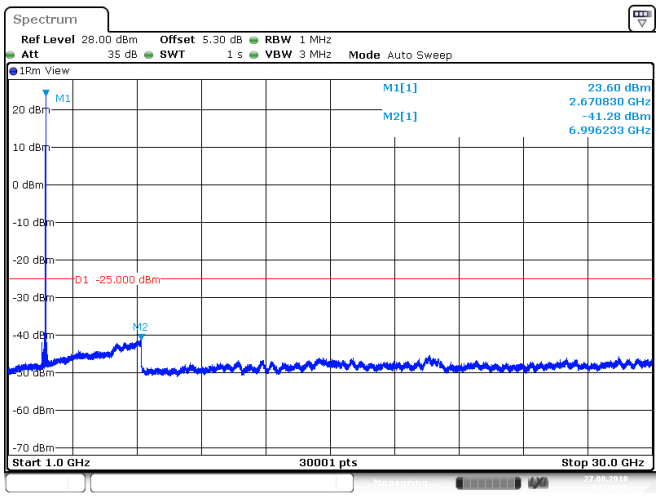
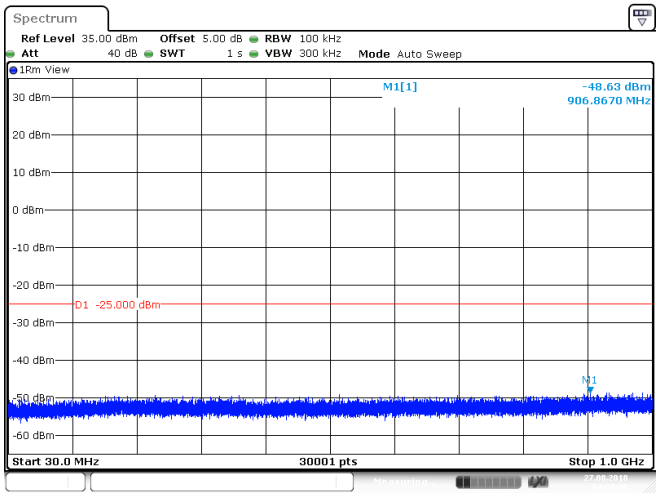
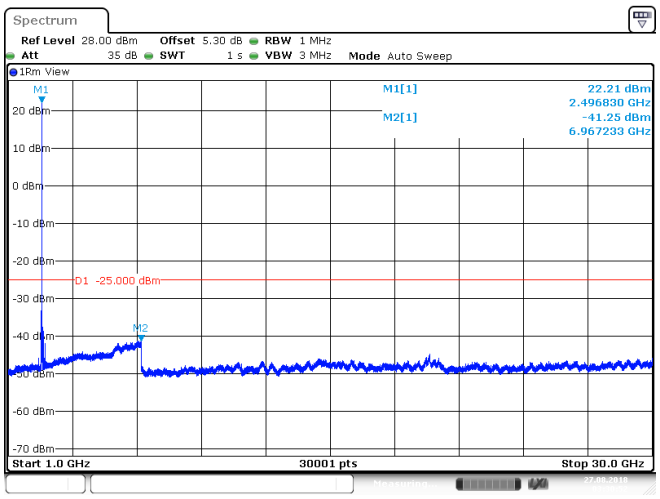
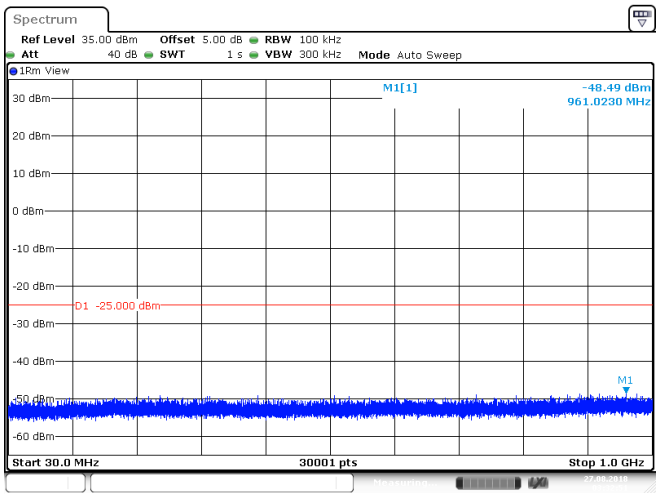


BAND 41_20MHz_16QAM_39790_1RB#0





BAND 41_20MHz_16QAM_40640_1RB#0



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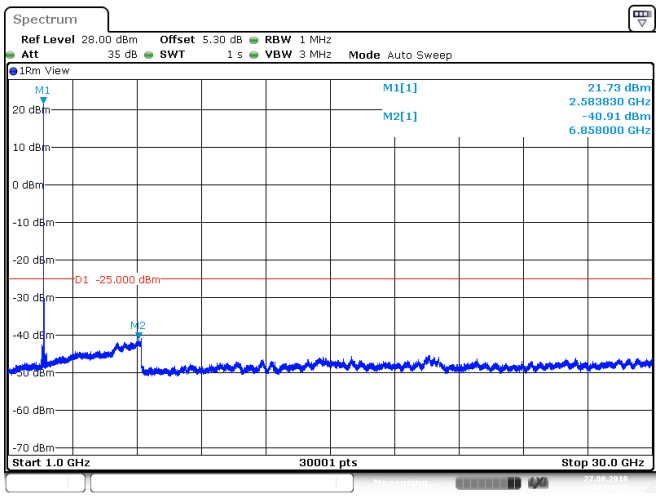

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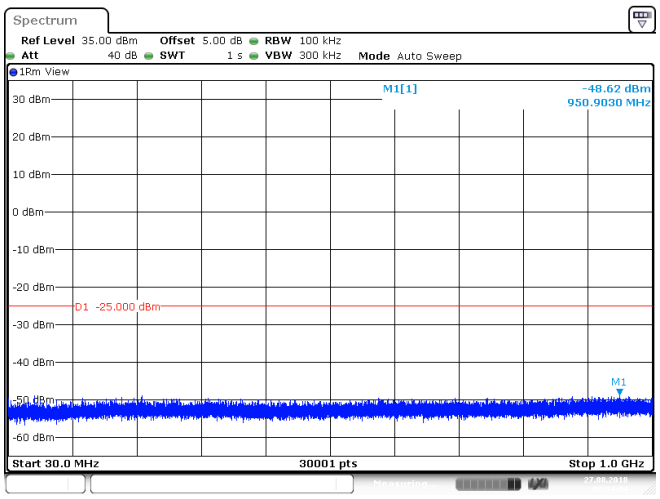
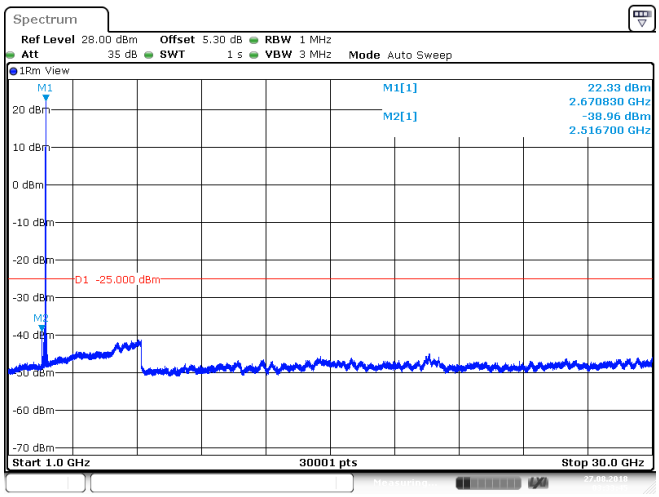
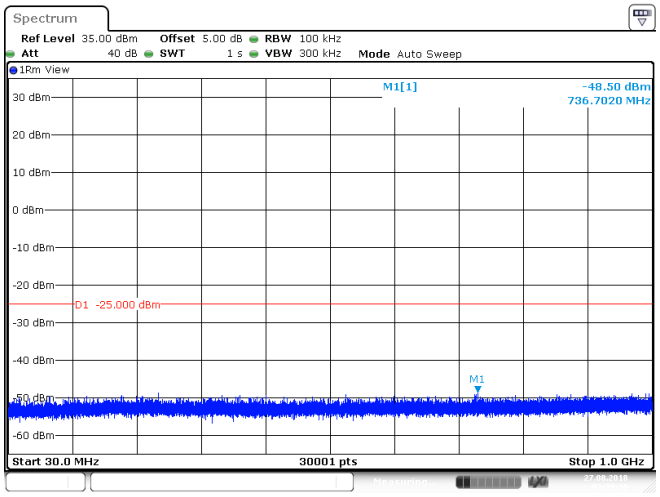


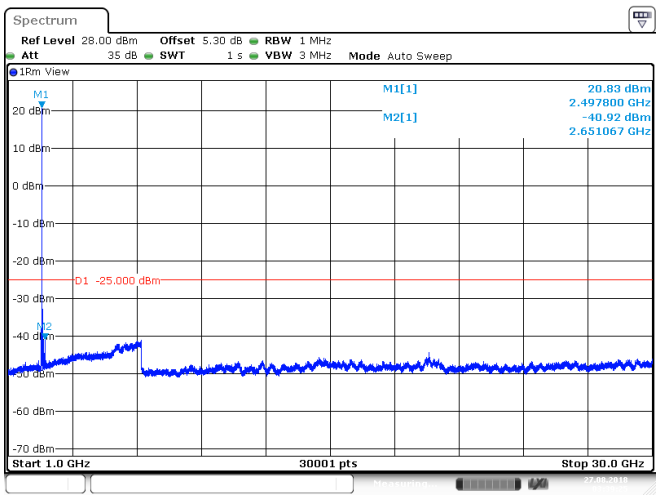
Date: 27.AUG.2018 03:34:04



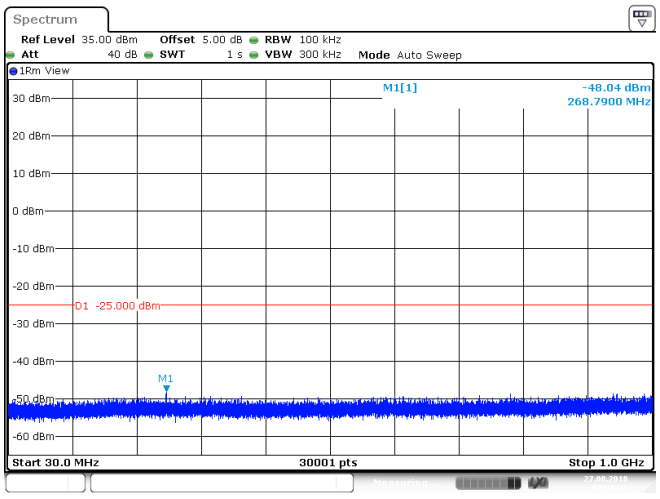
SSSSS

BAND 41_20MHz_64QAM_39790_1RB#0





BAND 41_20MHz_64QAM_40640_1RB#0



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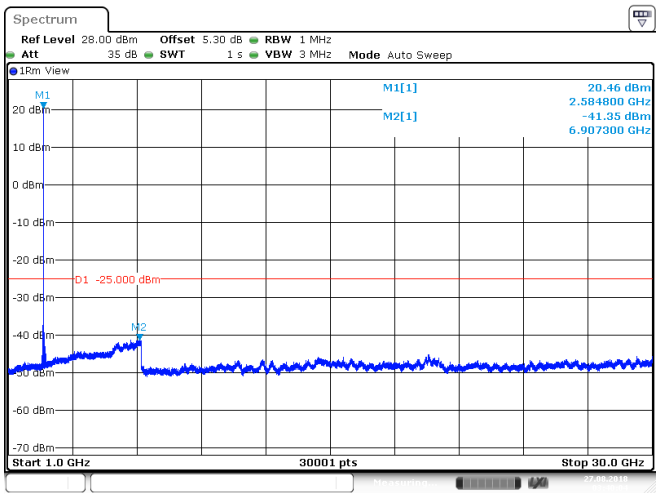

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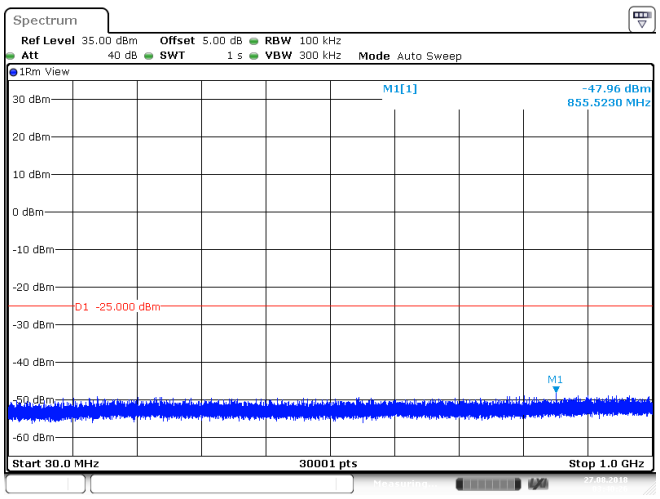
BAND 41_20MHz_64QAM_41490_1RB#0



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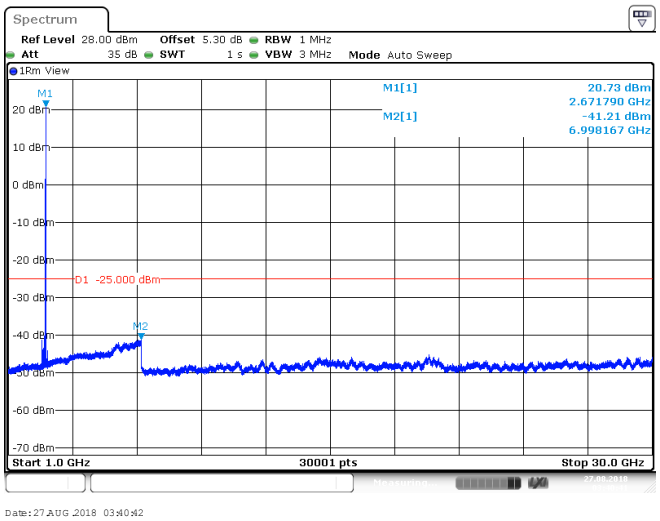

7. Field Strength of Spurious Radiation

7.1. Test BAND = LTE BAND 41

7.1.1. Test Mode =LTE/TM1 20MHz

7.1.1.1. Test Channel = LCH

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
65.000000	-81.97	-25.00	56.97	Vertical
104.250000	-85.03	-25.00	60.03	Vertical
359.750000	-85.80	-25.00	60.80	Vertical
4993.875000	-63.91	-25.00	38.91	Vertical
7490.850000	-64.38	-25.00	39.38	Vertical
9288.100000	-63.16	-25.00	38.16	Vertical
62.500000	-77.55	-25.00	52.55	Horizontal
104.300000	-89.24	-25.00	64.24	Horizontal
267.750000	-86.71	-25.00	61.71	Horizontal
5036.450000	-65.93	-25.00	40.93	Horizontal
7491.500000	-63.21	-25.00	38.21	Horizontal
11892.975000	-62.62	-25.00	37.62	Horizontal

7.1.1.2. Test Channel = MCH

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
64.800000	-81.42	-25.00	56.42	Vertical
125.000000	-87.43	-25.00	62.43	Vertical
334.400000	-86.44	-25.00	61.44	Vertical
5168.075000	-65.68	-25.00	40.68	Vertical
7066.075000	-64.27	-25.00	39.27	Vertical
10621.900000	-62.77	-25.00	37.77	Vertical
62.650000	-77.65	-25.00	52.65	Horizontal
104.300000	-88.37	-25.00	63.37	Horizontal
434.050000	-82.77	-25.00	57.77	Horizontal
4295.775000	-66.55	-25.00	41.55	Horizontal
6487.575000	-64.77	-25.00	39.77	Horizontal
9267.950000	-63.28	-25.00	38.28	Horizontal

7.1.1.3. Test Channel = HCH

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
63.500000	-82.01	-25.00	57.01	Vertical
125.000000	-86.82	-25.00	61.82	Vertical
339.200000	-86.31	-25.00	61.31	Vertical
5341.950000	-62.44	-25.00	37.44	Vertical
7866.225000	-63.66	-25.00	38.66	Vertical
10589.725000	-63.27	-25.00	38.27	Vertical
56.400000	-77.59	-25.00	52.59	Horizontal
104.300000	-89.37	-25.00	64.37	Horizontal
262.650000	-87.77	-25.00	62.77	Horizontal
5341.950000	-62.92	-25.00	37.92	Horizontal
7951.700000	-63.56	-25.00	38.56	Horizontal
10599.150000	-63.27	-25.00	38.27	Horizontal

NOTE:

1) All modes are tested, but the data presented above is the worst case.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.
2) We have tested all modulation and all Bandwidth, but only the worst case data presented in this report.

8. Frequency Stability

8.1. Frequency Vs Voltage

Voltage										
BAND	Bandwidth	Modulation	Channel	RB Configure	Voltage [Vdc]	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
BAND41	20MHz	QPSK	39790	100RB#0	VL	NT	0.20	0.000080	±2.5	PASS
BAND41	20MHz	QPSK	39790	100RB#0	VN	NT	-0.90	-0.000359	±2.5	PASS
BAND41	20MHz	QPSK	39790	100RB#0	VH	NT	-0.80	-0.000319	±2.5	PASS
BAND41	20MHz	QPSK	40640	100RB#0	VL	NT	1.40	0.000539	±2.5	PASS
BAND41	20MHz	QPSK	40640	100RB#0	VN	NT	-1.60	-0.000617	±2.5	PASS
BAND41	20MHz	QPSK	40640	100RB#0	VH	NT	1.00	0.000385	±2.5	PASS
BAND41	20MHz	QPSK	41490	100RB#0	VL	NT	0.50	0.000187	±2.5	PASS
BAND41	20MHz	QPSK	41490	100RB#0	VN	NT	-1.00	-0.000373	±2.5	PASS
BAND41	20MHz	QPSK	41490	100RB#0	VH	NT	-0.20	-0.000075	±2.5	PASS
BAND41	20MHz	64QAM	39790	100RB#0	VL	NT	0.60	0.000239	±2.5	PASS
BAND41	20MHz	64QAM	39790	100RB#0	VN	NT	-2.30	-0.000916	±2.5	PASS
BAND41	20MHz	64QAM	39790	100RB#0	VH	NT	0.20	0.000080	±2.5	PASS
BAND41	20MHz	64QAM	40640	100RB#0	VL	NT	-2.50	-0.000963	±2.5	PASS
BAND41	20MHz	64QAM	40640	100RB#0	VN	NT	-2.90	-0.001118	±2.5	PASS
BAND41	20MHz	64QAM	40640	100RB#0	VH	NT	-1.30	-0.000501	±2.5	PASS
BAND41	20MHz	64QAM	41490	100RB#0	VL	NT	1.30	0.000485	±2.5	PASS
BAND41	20MHz	64QAM	41490	100RB#0	VN	NT	0.90	0.000336	±2.5	PASS
BAND41	20MHz	64QAM	41490	100RB#0	VH	NT	-0.80	-0.000299	±2.5	PASS
BAND41	20MHz	16QAM	39790	100RB#0	VL	NT	0.80	0.000319	±2.5	PASS
BAND41	20MHz	16QAM	39790	100RB#0	VN	NT	-0.30	-0.000120	±2.5	PASS
BAND41	20MHz	16QAM	39790	100RB#0	VH	NT	-0.30	-0.000120	±2.5	PASS
BAND41	20MHz	16QAM	40640	100RB#0	VL	NT	-0.80	-0.000308	±2.5	PASS
BAND41	20MHz	16QAM	40640	100RB#0	VN	NT	-0.20	-0.000077	±2.5	PASS
BAND41	20MHz	16QAM	40640	100RB#0	VH	NT	-2.10	-0.000809	±2.5	PASS
BAND41	20MHz	16QAM	41490	100RB#0	VL	NT	0.10	0.000037	±2.5	PASS
BAND41	20MHz	16QAM	41490	100RB#0	VN	NT	0.40	0.000149	±2.5	PASS
BAND41	20MHz	16QAM	41490	100RB#0	VH	NT	1.40	0.000522	±2.5	PASS

8.2. Frequency Vs Temperature

Temperature										
BAND	Bandwidth	Modulation	Channel	RB Configure	Voltage [Vdc]	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
BAND41	20MHz	QPSK	39790	100RB#0	NV	-30	-1.10	-0.000438	±2.5	PASS
BAND41	20MHz	QPSK	39790	100RB#0	NV	-20	-0.60	-0.000239	±2.5	PASS
BAND41	20MHz	QPSK	39790	100RB#0	NV	0	0.20	0.000080	±2.5	PASS
BAND41	20MHz	QPSK	39790	100RB#0	NV	10	-2.50	-0.000996	±2.5	PASS
BAND41	20MHz	QPSK	39790	100RB#0	NV	20	-1.10	-0.000438	±2.5	PASS
BAND41	20MHz	QPSK	40640	100RB#0	NV	-30	1.50	0.000578	±2.5	PASS
BAND41	20MHz	QPSK	40640	100RB#0	NV	-20	-0.70	-0.000270	±2.5	PASS
BAND41	20MHz	QPSK	40640	100RB#0	NV	0	1.20	0.000462	±2.5	PASS
BAND41	20MHz	QPSK	40640	100RB#0	NV	10	-0.30	-0.000116	±2.5	PASS
BAND41	20MHz	QPSK	40640	100RB#0	NV	20	1.30	0.000501	±2.5	PASS
BAND41	20MHz	QPSK	41490	100RB#0	NV	-30	-0.40	-0.000149	±2.5	PASS
BAND41	20MHz	QPSK	41490	100RB#0	NV	-20	1.90	0.000709	±2.5	PASS
BAND41	20MHz	QPSK	41490	100RB#0	NV	0	0.30	0.000112	±2.5	PASS
BAND41	20MHz	QPSK	41490	100RB#0	NV	10	0.80	0.000299	±2.5	PASS
BAND41	20MHz	QPSK	41490	100RB#0	NV	20	0.30	0.000112	±2.5	PASS
BAND41	20MHz	64QAM	39790	100RB#0	NV	-30	0.10	0.000040	±2.5	PASS
BAND41	20MHz	64QAM	39790	100RB#0	NV	-20	-2.20	-0.000876	±2.5	PASS
BAND41	20MHz	64QAM	39790	100RB#0	NV	0	-1.30	-0.000518	±2.5	PASS
BAND41	20MHz	64QAM	39790	100RB#0	NV	10	-2.50	-0.000996	±2.5	PASS
BAND41	20MHz	64QAM	39790	100RB#0	NV	20	-1.50	-0.000598	±2.5	PASS
BAND41	20MHz	64QAM	40640	100RB#0	NV	-30	1.10	0.000424	±2.5	PASS
BAND41	20MHz	64QAM	40640	100RB#0	NV	-20	0.10	0.000039	±2.5	PASS
BAND41	20MHz	64QAM	40640	100RB#0	NV	0	-3.10	-0.001195	±2.5	PASS
BAND41	20MHz	64QAM	40640	100RB#0	NV	10	-2.60	-0.001002	±2.5	PASS
BAND41	20MHz	64QAM	40640	100RB#0	NV	20	0.70	0.000270	±2.5	PASS
BAND41	20MHz	64QAM	41490	100RB#0	NV	-30	-1.40	-0.000522	±2.5	PASS
BAND41	20MHz	64QAM	41490	100RB#0	NV	-20	-0.60	-0.000224	±2.5	PASS
BAND41	20MHz	64QAM	41490	100RB#0	NV	0	-1.40	-0.000522	±2.5	PASS
BAND41	20MHz	64QAM	41490	100RB#0	NV	10	-0.20	-0.000075	±2.5	PASS
BAND41	20MHz	64QAM	41490	100RB#0	NV	20	-2.40	-0.000896	±2.5	PASS
BAND41	20MHz	16QAM	39790	100RB#0	NV	-30	1.00	0.000398	±2.5	PASS
BAND41	20MHz	16QAM	39790	100RB#0	NV	-20	2.00	0.000797	±2.5	PASS
BAND41	20MHz	16QAM	39790	100RB#0	NV	0	-2.60	-0.001036	±2.5	PASS
BAND41	20MHz	16QAM	39790	100RB#0	NV	10	-1.90	-0.000757	±2.5	PASS
BAND41	20MHz	16QAM	39790	100RB#0	NV	20	0.00	0.000000	±2.5	PASS
BAND41	20MHz	16QAM	40640	100RB#0	NV	-30	-2.90	-0.001118	±2.5	PASS
BAND41	20MHz	16QAM	40640	100RB#0	NV	-20	-1.20	-0.000462	±2.5	PASS
BAND41	20MHz	16QAM	40640	100RB#0	NV	0	-1.70	-0.000655	±2.5	PASS
BAND41	20MHz	16QAM	40640	100RB#0	NV	10	2.40	0.000925	±2.5	PASS
BAND41	20MHz	16QAM	40640	100RB#0	NV	20	-2.50	-0.000963	±2.5	PASS
BAND41	20MHz	16QAM	41490	100RB#0	NV	-30	1.60	0.000597	±2.5	PASS
BAND41	20MHz	16QAM	41490	100RB#0	NV	-20	0.50	0.000187	±2.5	PASS
BAND41	20MHz	16QAM	41490	100RB#0	NV	0	-0.10	-0.000037	±2.5	PASS

BAND41	20MHz	16QAM	41490	100RB#0	NV	10	0.40	0.000149	±2.5	PASS
BAND41	20MHz	16QAM	41490	100RB#0	NV	20	2.00	0.000746	±2.5	PASS

The End