BAND2_5MHz_16QAM_18625_25RB#0

BAND2_5MHz_16QAM_19175_1RB#24

BAND2_5MHz_16QAM_19175_25RB#0

BAND2_10MHz_QPSK_18650_1RB#0

BAND2_10MHz_QPSK_18650_50RB#0

BAND2_10MHz_QPSK_19150_1RB#49

BAND2_10MHz_QPSK_19150_50RB#0

BAND2_10MHz_64QAM_18650_1RB#0

BAND2_10MHz_64QAM_18650_50RB#0

BAND2_10MHz_64QAM_19150_1RB#49

BAND2_10MHz_64QAM_19150_50RB#0

BAND2_10MHz_16QAM_18650_1RB#0

BAND2_10MHz_16QAM_18650_50RB#0

BAND2_10MHz_16QAM_19150_1RB#49

BAND2_10MHz_16QAM_19150_50RB#0

BAND2_15MHz_QPSK_18675_1RB#0

BAND2_15MHz_QPSK_18675_75RB#0

BAND2_15MHz_QPSK_19125_1RB#74

BAND2_15MHz_QPSK_19125_75RB#0

BAND2_15MHz_64QAM_18675_1RB#0

BAND2_15MHz_64QAM_18675_75RB#0

BAND2_15MHz_64QAM_19125_1RB#74

BAND2_15MHz_64QAM_19125_75RB#0

BAND2_15MHz_16QAM_18675_1RB#0

BAND2_15MHz_16QAM_18675_75RB#0

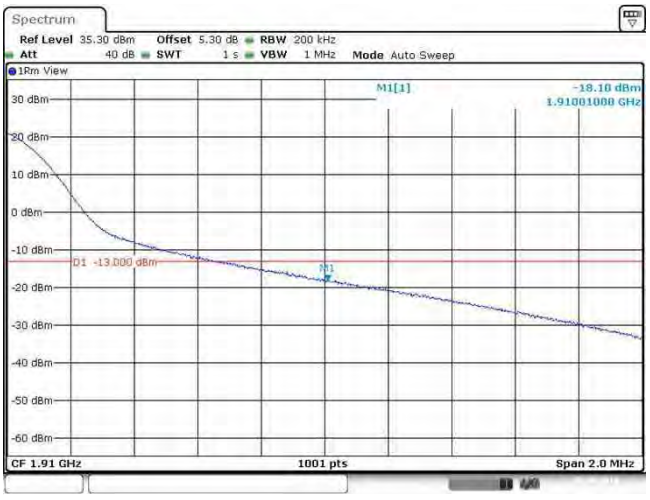
BAND2_15MHz_16QAM_19125_1RB#74

BAND2_15MHz_16QAM_19125_75RB#0

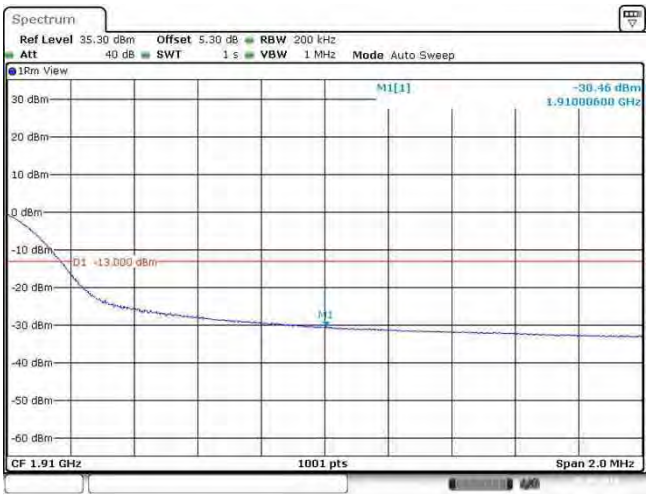
BAND2_20MHz_QPSK_18700_1RB#0

BAND2_20MHz_QPSK_18700_100RB#0

BAND2_20MHz_QPSK_19100_1RB#99



BAND2_20MHz_QPSK_19100_100RB#0



BAND2_20MHz_64QAM_18700_1RB#0

BAND2_20MHz_64QAM_18700_100RB#0

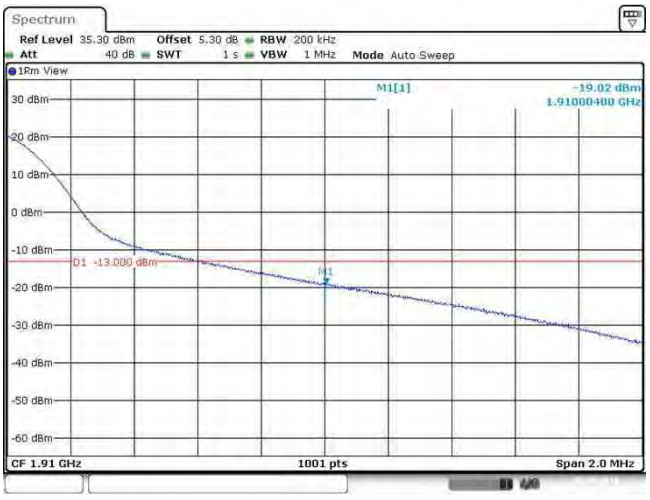
BAND2_20MHz_64QAM_19100_1RB#99

BAND2_20MHz_64QAM_19100_100RB#0

BAND2_20MHz_16QAM_18700_1RB#0

BAND2_20MHz_16QAM_18700_100RB#0

BAND2_20MHz_16QAM_19100_1RB#99



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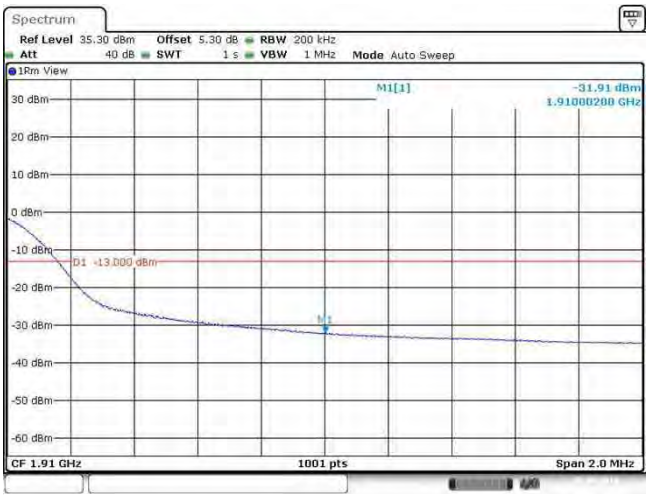
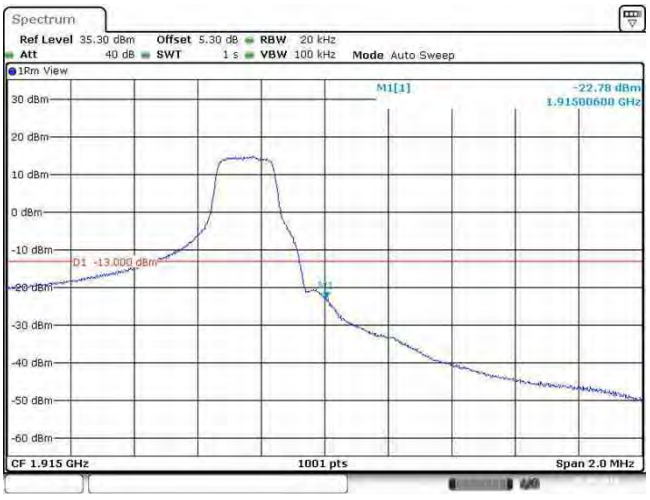


BAND25_1.4MHz_QPSK_26047_1RB#0

BAND25_1.4MHz_QPSK_26047_6RB#0

BAND25_1.4MHz_QPSK_26683_1RB#5



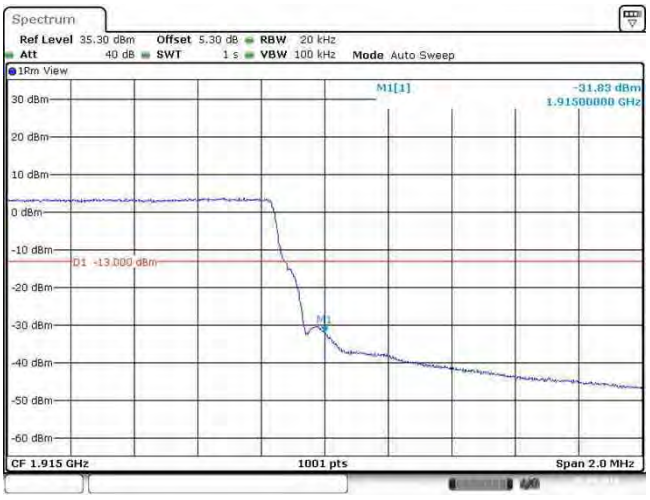
BAND25_1.4MHz_QPSK_26683_6RB#0

BAND25_1.4MHz_64QAM_26047_1RB#0

BAND25_1.4MHz_64QAM_26047_6RB#0

BAND25_1.4MHz_64QAM_26683_1RB#5

BAND25_1.4MHz_64QAM_26683_6RB#0



BAND25_1.4MHz_16QAM_26047_1RB#0

BAND25_1.4MHz_16QAM_26047_6RB#0

BAND25_1.4MHz_16QAM_26683_1RB#5

BAND25_1.4MHz_16QAM_26683_6RB#0

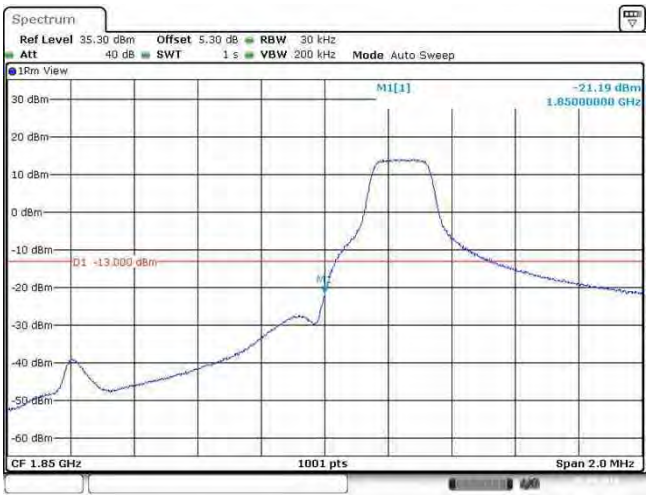
BAND25_3MHz_QPSK_26055_1RB#0

BAND25_3MHz_QPSK_26055_15RB#0

BAND25_3MHz_QPSK_26675_1RB#14

BAND25_3MHz_QPSK_26675_15RB#0

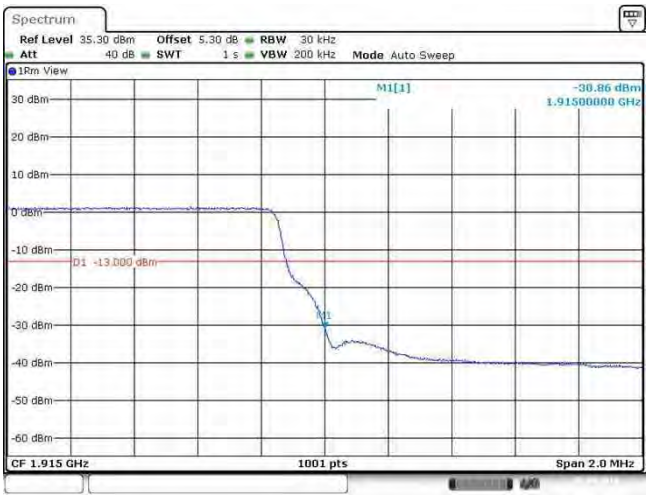
BAND25_3MHz_64QAM_26055_1RB#0



BAND25_3MHz_64QAM_26055_15RB#0

BAND25_3MHz_64QAM_26675_1RB#14

BAND25_3MHz_64QAM_26675_15RB#0



BAND25_3MHz_16QAM_26055_1RB#0

BAND25_3MHz_16QAM_26055_15RB#0

BAND25_3MHz_16QAM_26675_1RB#14

BAND25_3MHz_16QAM_26675_15RB#0

BAND25_5MHz_QPSK_26065_1RB#0

BAND25_5MHz_QPSK_26065_25RB#0

BAND25_5MHz_QPSK_26665_1RB#24

BAND25_5MHz_QPSK_26665_25RB#0

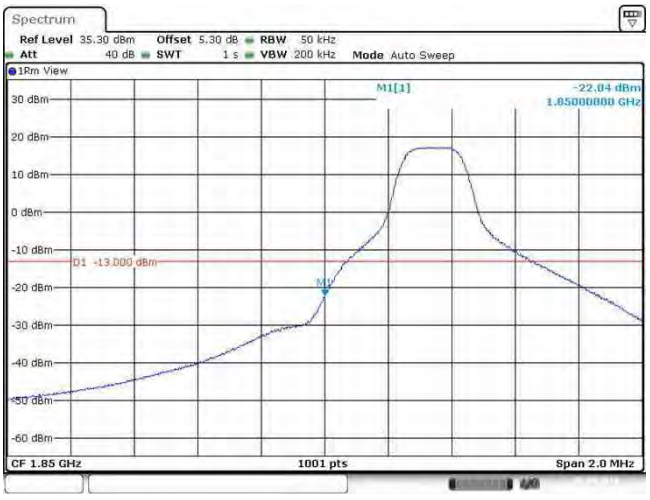
BAND25_5MHz_64QAM_26065_1RB#0

BAND25_5MHz_64QAM_26065_25RB#0

BAND25_5MHz_64QAM_26665_1RB#24

BAND25_5MHz_64QAM_26665_25RB#0

BAND25_5MHz_16QAM_26065_1RB#0



BAND25_5MHz_16QAM_26065_25RB#0

BAND25_5MHz_16QAM_26665_1RB#24

BAND25_5MHz_16QAM_26665_25RB#0

BAND25_10MHz_QPSK_26090_1RB#0

BAND25_10MHz_QPSK_26090_50RB#0

BAND25_10MHz_QPSK_26640_1RB#49

BAND25_10MHz_QPSK_26640_50RB#0

BAND25_10MHz_64QAM_26090_1RB#0

BAND25_10MHz_64QAM_26090_50RB#0

BAND25_10MHz_64QAM_26640_1RB#49

BAND25_10MHz_64QAM_26640_50RB#0

BAND25_10MHz_16QAM_26090_1RB#0

BAND25_10MHz_16QAM_26090_50RB#0

BAND25_10MHz_16QAM_26640_1RB#49

BAND25_10MHz_16QAM_26640_50RB#0

BAND25_15MHz_QPSK_26115_1RB#0

BAND25_15MHz_QPSK_26115_75RB#0

BAND25_15MHz_QPSK_26615_1RB#74

BAND25_15MHz_QPSK_26615_75RB#0

BAND25_15MHz_64QAM_26115_1RB#0

BAND25_15MHz_64QAM_26115_75RB#0

BAND25_15MHz_64QAM_26615_1RB#74

BAND25_15MHz_64QAM_26615_75RB#0

BAND25_15MHz_16QAM_26115_1RB#0

BAND25_15MHz_16QAM_26115_75RB#0

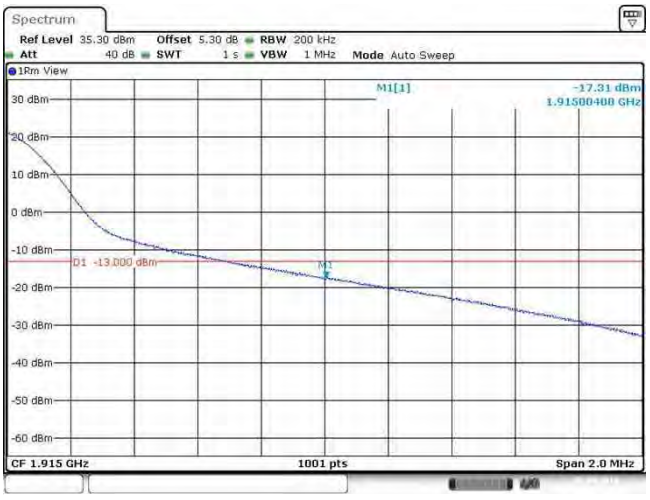
BAND25_15MHz_16QAM_26615_1RB#74

BAND25_15MHz_16QAM_26615_75RB#0

BAND25_20MHz_QPSK_26140_1RB#0

BAND25_20MHz_QPSK_26140_100RB#0

BAND25_20MHz_QPSK_26590_1RB#99



BAND25_20MHz_QPSK_26590_100RB#0

BAND25_20MHz_64QAM_26140_1RB#0

BAND25_20MHz_64QAM_26140_100RB#0

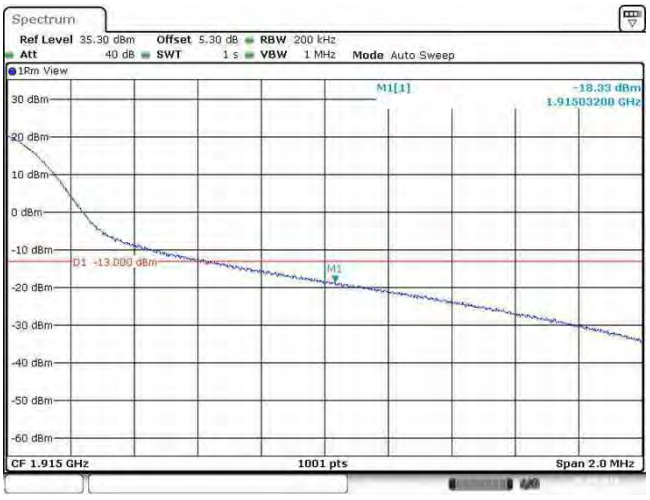
BAND25_20MHz_64QAM_26590_1RB#99

BAND25_20MHz_64QAM_26590_100RB#0

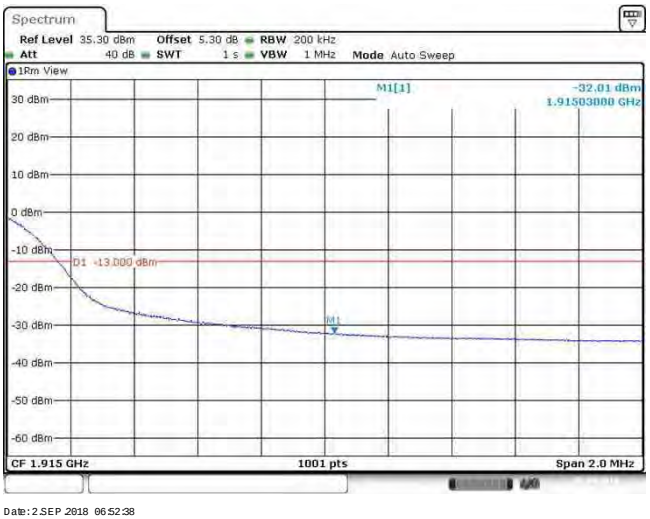
BAND25_20MHz_16QAM_26140_1RB#0

BAND25_20MHz_16QAM_26140_100RB#0

BAND25_20MHz_16QAM_26590_1RB#99



BAND25_20MHz_16QAM_26590_100RB#0



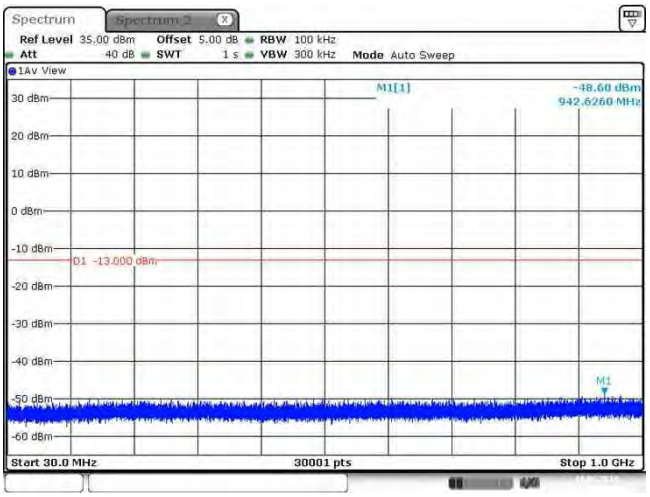
6. Spurious Emission at Antenna Terminal

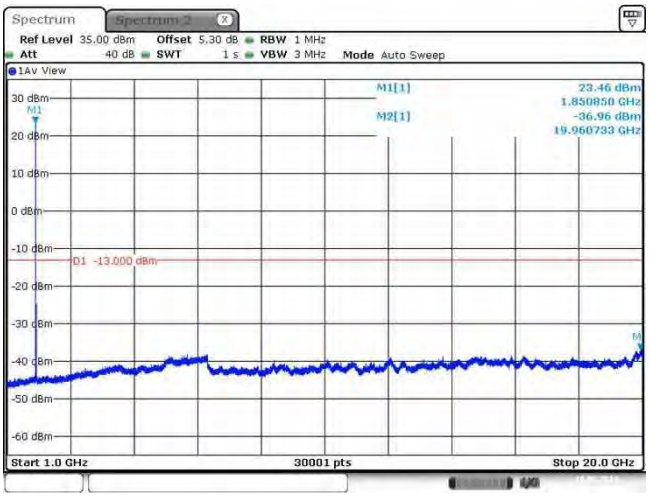
NOTE1: For the averaged unwanted emissions measurements, the measurement points in each sweep is greater than twice the Span/RBW in order to ensure bin-to-bin spacing of < RBW/2 so that narrowband signals are not lost between frequency bins. As to the present test item, the "Measurement Points = k * (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.

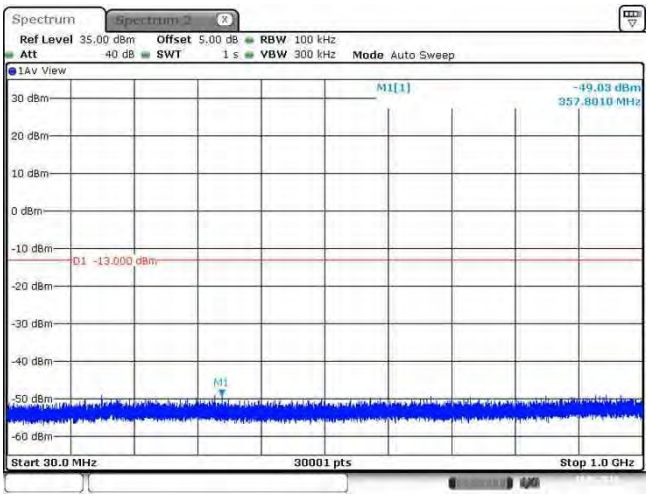
5.1. Test Plots

BAND 2_20MHz_QPSK_18700_1RB#0

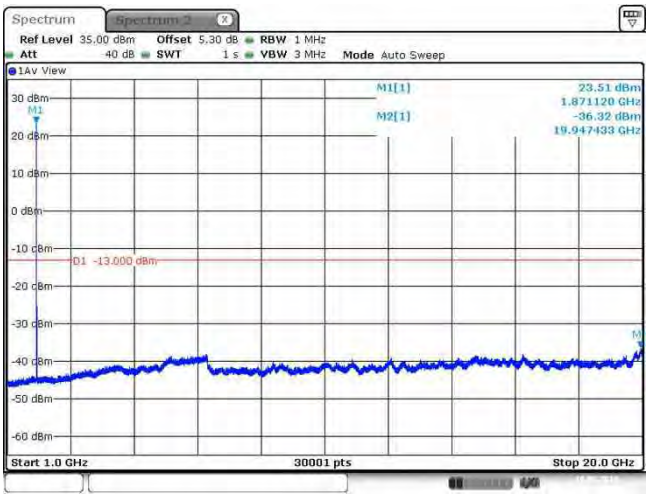




BAND 2_20MHz_QPSK_18900_1RB#0

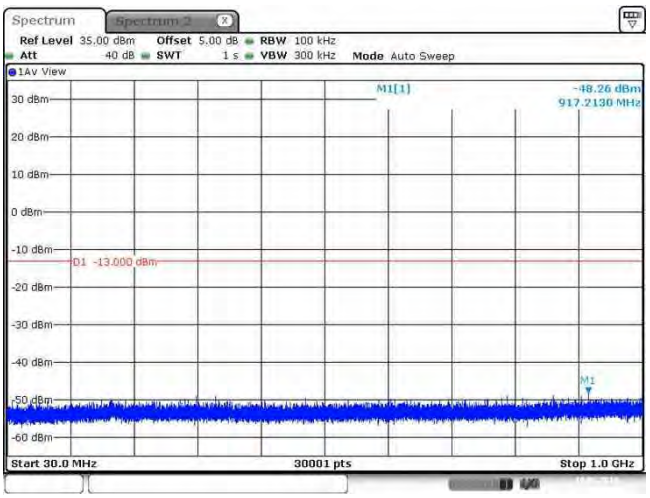


Date: 10.AUG.2018 06:96:11

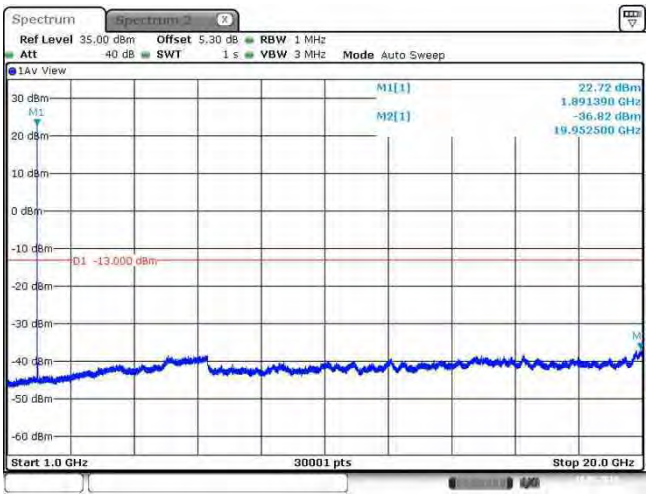


Date: 10.AUG.2018 06:96:27

BAND 2_20MHz_QPSK_19100_1RB#0

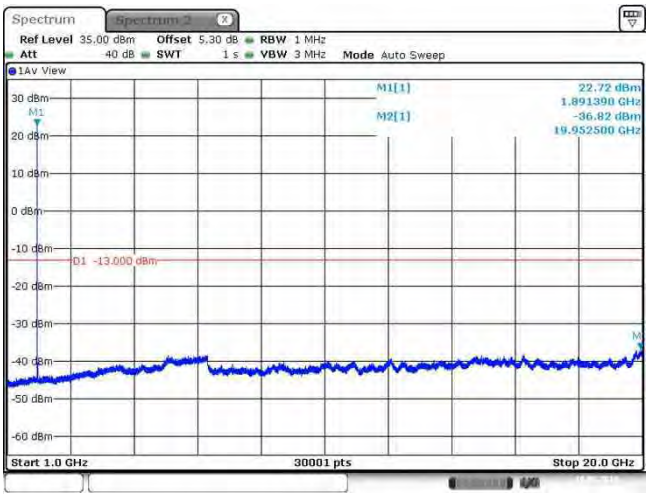


Date: 10.AUG.2018 06:97:56

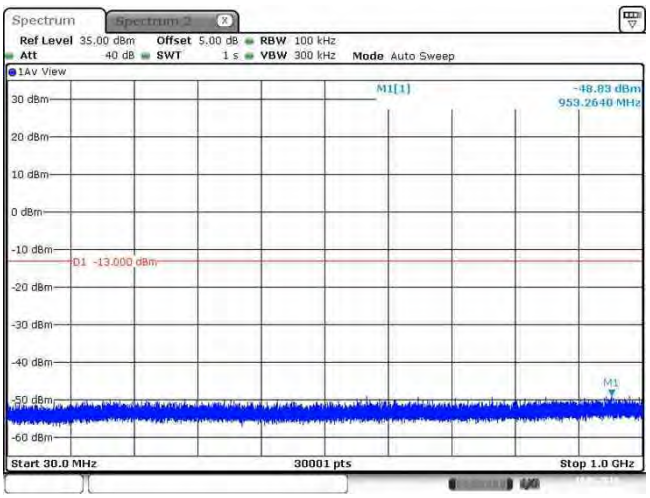


Date:10.AUG.2018 06:08:12

BAND 2_20MHz_16QAM_18700_1RB#0



Date:10.AUG.2018 06:08:12



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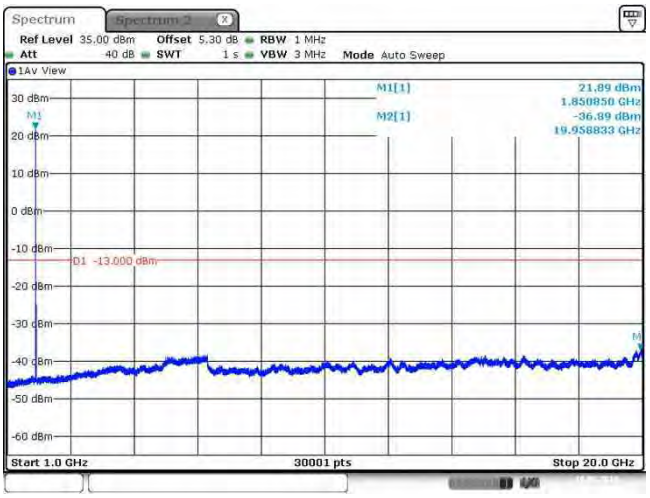
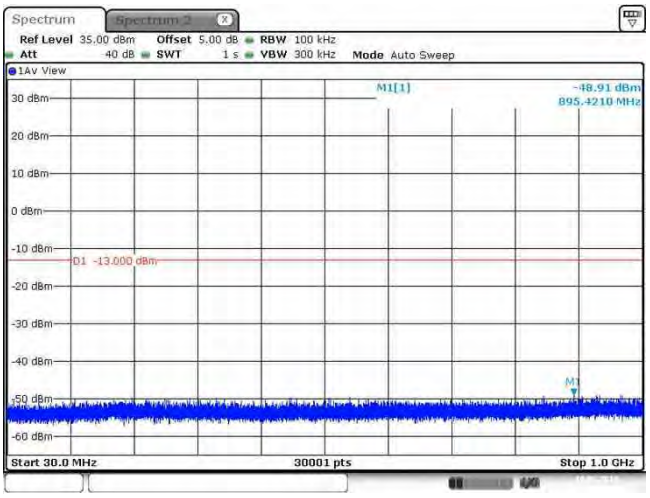
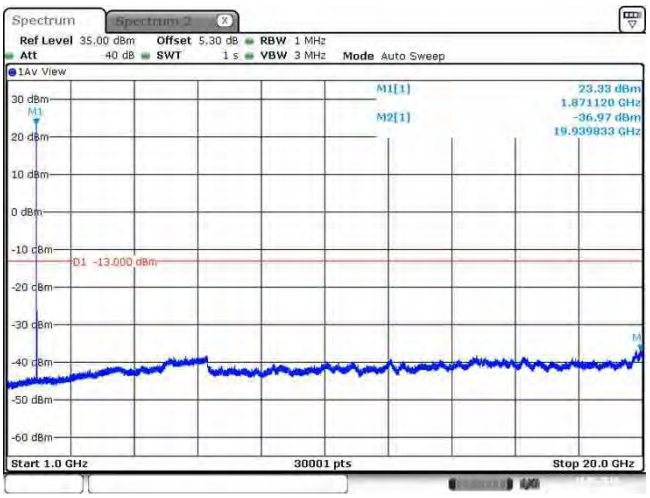
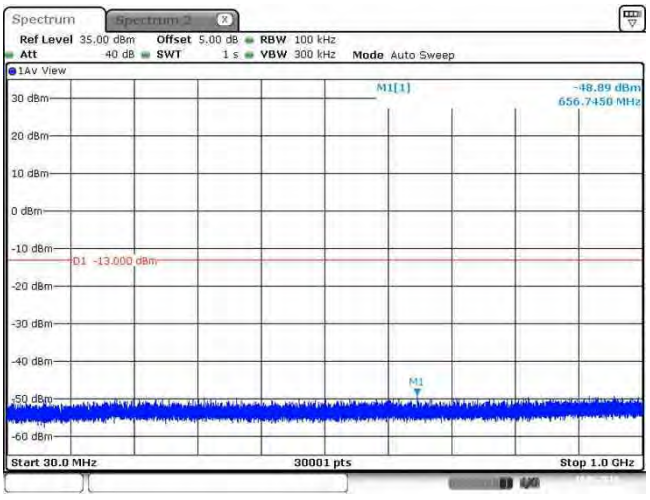


BAND 2_20MHz_16QAM_18900_1RB#0

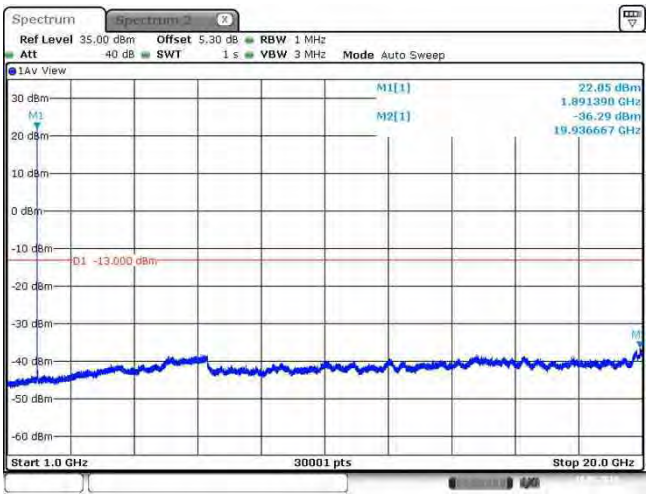




BAND 2_20MHz_16QAM_19100_1RB#0

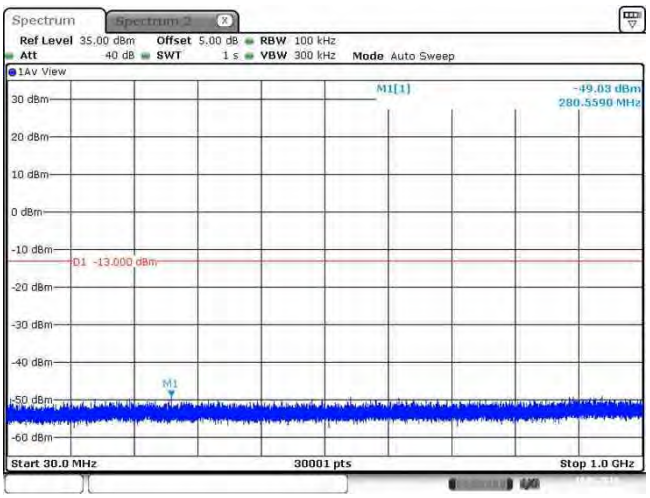


Date: 10.AUG.2018 06:09:06

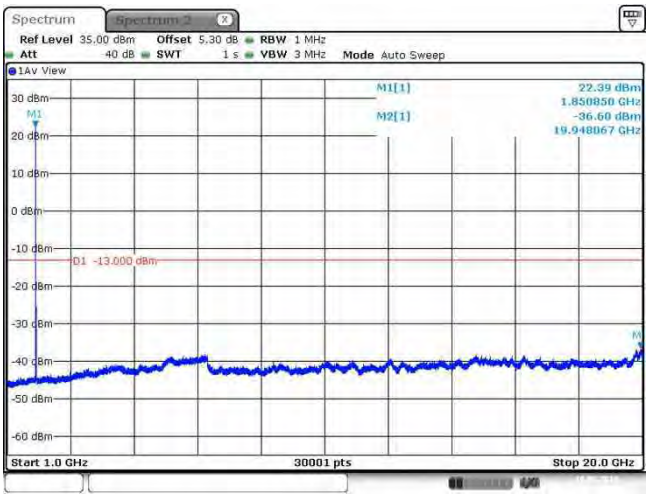


Date: 10.AUG.2018 06:09:22

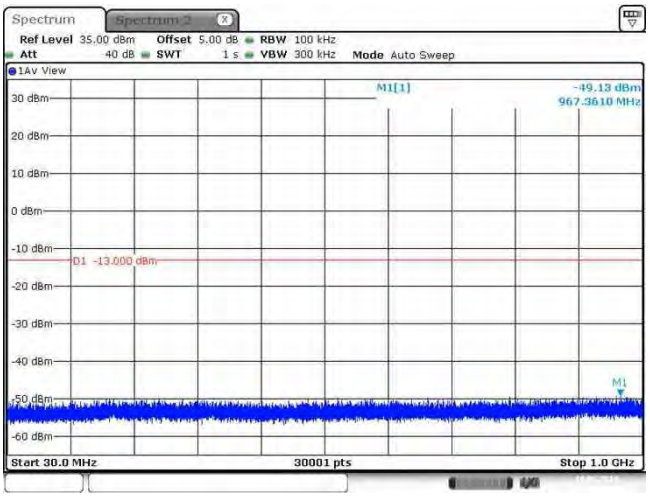
BAND 2_20MHz_64QAM_18700_1RB#0

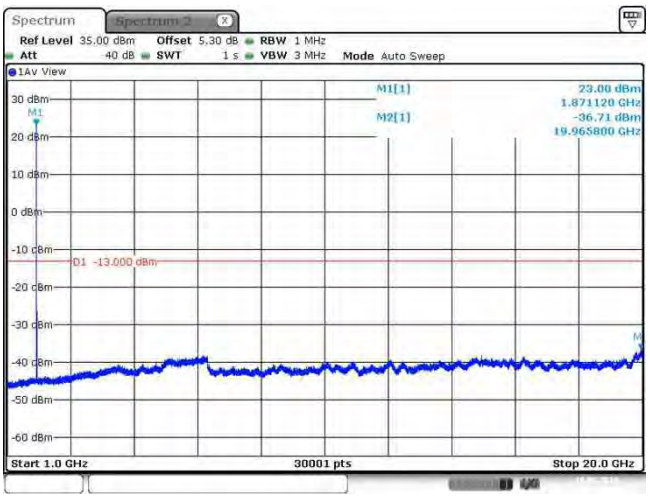


Date: 10.AUG.2018 06:05:01

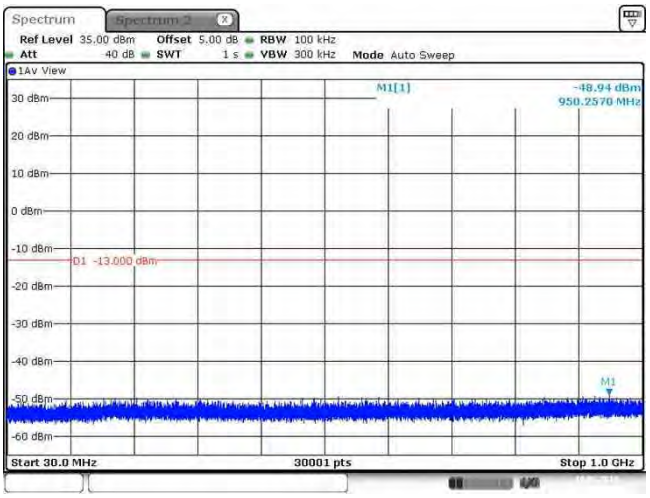


BAND 2_20MHz_64QAM_18900_1RB#0

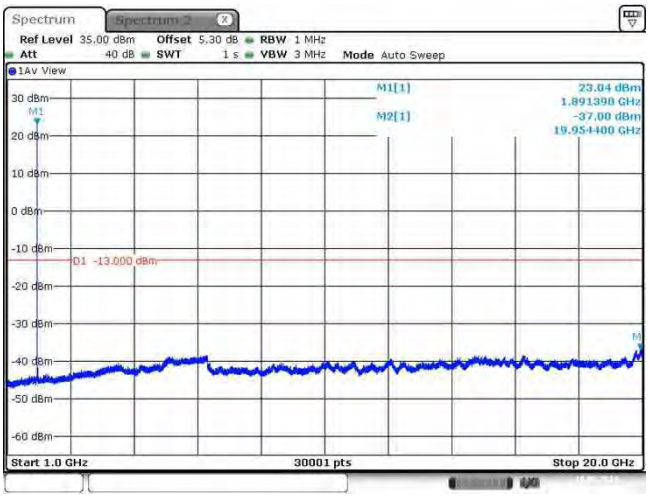




BAND 2_20MHz_64QAM_19100_1RB#0



Date: 10.AUG.2018 06:58:31



Date: 10.AUG.2018 06:58:47

7. Field Strength of Spurious Radiation

6.1. Test BAND = LTE BAND 2

6.1.1. Test Mode =LTE/TM1 20MHz

6.1.1.1. Test Channel = LCH

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
64.100000	-81.77	-13.00	68.77	Vertical
104.300000	-65.29	-13.00	52.29	Vertical
1259.500000	-66.52	-13.00	53.52	Vertical
2815.000000	-57.83	-13.00	44.83	Vertical
5552.875000	-64.25	-13.00	51.25	Vertical
8605.925000	-63.78	-13.00	50.78	Vertical
61.850000	-78.53	-13.00	65.53	Horizontal
104.250000	-81.48	-13.00	68.48	Horizontal
1231.500000	-62.52	-13.00	49.52	Horizontal
3702.000000	-66.99	-13.00	53.99	Horizontal
5813.200000	-66.42	-13.00	53.42	Horizontal
9255.275000	-58.96	-13.00	45.96	Horizontal

6.1.1.2. Test Channel = MCH

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
64.300000	-81.30	-13.00	68.30	Vertical
104.300000	-65.00	-13.00	52.00	Vertical
2880.500000	-57.50	-13.00	44.50	Vertical
3650.650000	-68.48	-13.00	55.48	Vertical
5613.000000	-63.23	-13.00	50.23	Vertical
9233.500000	-63.88	-13.00	50.88	Vertical
62.250000	-77.97	-13.00	64.97	Horizontal
104.250000	-81.52	-13.00	68.52	Horizontal
1441.000000	-61.74	-13.00	48.74	Horizontal
3741.650000	-68.10	-13.00	55.10	Horizontal
5613.000000	-65.59	-13.00	52.59	Horizontal
9355.375000	-60.85	-13.00	47.85	Horizontal

6.1.1.3. Test Channel = HCH

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
64.050000	-81.97	-13.00	68.97	Vertical
104.250000	-65.34	-13.00	52.34	Vertical
2456.000000	-58.94	-13.00	45.94	Vertical
3805.675000	-68.17	-13.00	55.17	Vertical
5673.125000	-63.71	-13.00	50.71	Vertical
8605.925000	-63.79	-13.00	50.79	Vertical
62.750000	-77.65	-13.00	64.65	Horizontal
104.300000	-80.79	-13.00	67.79	Horizontal
1259.500000	-62.49	-13.00	49.49	Horizontal
4294.800000	-66.66	-13.00	53.66	Horizontal
5673.125000	-65.06	-13.00	52.06	Horizontal
7947.150000	-63.69	-13.00	50.69	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

7.1. Frequency Vs Voltage

Voltage										
BAND	Bandwidth	Modulation	Channel	RB Configure	Voltage [Vdc]	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
BAND 2	20MHz	QPSK	18700	100RB#0	VH	NT	0.80	0.000430	±2.5	PASS
				100RB#0	VL	NT	1.80	0.000968	±2.5	PASS
				100RB#0	VN	NT	-0.50	-0.000269	±2.5	PASS
			18900	100RB#0	VH	NT	0.00	0.000000	±2.5	PASS
				100RB#0	VL	NT	-0.80	-0.000426	±2.5	PASS
				100RB#0	VN	NT	0.10	0.000053	±2.5	PASS
			19100	100RB#0	VH	NT	-1.10	-0.000579	±2.5	PASS
				100RB#0	VL	NT	-0.60	-0.000316	±2.5	PASS
				100RB#0	VN	NT	-0.70	-0.000368	±2.5	PASS
		16QAM	18700	100RB#0	VH	NT	2.20	0.001183	±2.5	PASS
				100RB#0	VL	NT	1.20	0.000645	±2.5	PASS
				100RB#0	VN	NT	0.50	0.000269	±2.5	PASS
			18900	100RB#0	VH	NT	-0.60	-0.000319	±2.5	PASS
				100RB#0	VL	NT	-0.20	-0.000106	±2.5	PASS
				100RB#0	VN	NT	0.40	0.000213	±2.5	PASS
			19100	100RB#0	VH	NT	1.30	0.000684	±2.5	PASS
				100RB#0	VL	NT	0.00	0.000000	±2.5	PASS
				100RB#0	VN	NT	0.00	0.000000	±2.5	PASS
		64QAM	18700	100RB#0	VH	NT	0.30	0.000161	±2.5	PASS
				100RB#0	VL	NT	-0.90	-0.000484	±2.5	PASS
				100RB#0	VN	NT	-0.20	-0.000108	±2.5	PASS
			18900	100RB#0	VH	NT	0.00	0.000000	±2.5	PASS
				100RB#0	VL	NT	-0.50	-0.000266	±2.5	PASS
				100RB#0	VN	NT	0.40	0.000213	±2.5	PASS
			19100	100RB#0	VH	NT	-0.10	-0.000053	±2.5	PASS
				100RB#0	VL	NT	1.00	0.000526	±2.5	PASS
				100RB#0	VN	NT	1.60	0.000842	±2.5	PASS

7.2. Frequency Vs Temperature

Temperature										
BAND	Bandwidth	Modulation	Channel	RB Configure	Voltage [Vdc]	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
BAND 2	20MHz	QPSK	18700	100RB#0	NV	0	0.30	0.000161	±2.5	PASS
				100RB#0	NV	10	1.50	0.000806	±2.5	PASS
				100RB#0	NV	20	0.30	0.000161	±2.5	PASS
				100RB#0	NV	-20	2.80	0.001505	±2.5	PASS
				100RB#0	NV	-30	1.80	0.000968	±2.5	PASS
			18900	100RB#0	NV	0	0.50	0.000266	±2.5	PASS
				100RB#0	NV	10	1.00	0.000532	±2.5	PASS
				100RB#0	NV	20	-1.40	-0.000745	±2.5	PASS
				100RB#0	NV	-20	2.00	0.001064	±2.5	PASS
				100RB#0	NV	-30	0.10	0.000053	±2.5	PASS
			19100	100RB#0	NV	0	-0.30	-0.000158	±2.5	PASS
				100RB#0	NV	10	-0.20	-0.000105	±2.5	PASS
				100RB#0	NV	20	-0.20	-0.000105	±2.5	PASS
				100RB#0	NV	-20	-0.50	-0.000263	±2.5	PASS
				100RB#0	NV	-30	-1.40	-0.000737	±2.5	PASS
		16QAM	18700	100RB#0	NV	0	2.40	0.001290	±2.5	PASS
				100RB#0	NV	10	0.40	0.000215	±2.5	PASS
				100RB#0	NV	20	0.20	0.000108	±2.5	PASS
				100RB#0	NV	-20	0.70	0.000376	±2.5	PASS
				100RB#0	NV	-30	0.70	0.000376	±2.5	PASS
			18900	100RB#0	NV	0	2.00	0.001064	±2.5	PASS
				100RB#0	NV	10	-0.40	-0.000213	±2.5	PASS
				100RB#0	NV	20	-2.00	-0.001064	±2.5	PASS
				100RB#0	NV	-20	-1.60	-0.000851	±2.5	PASS
				100RB#0	NV	-30	0.10	0.000053	±2.5	PASS
			19100	100RB#0	NV	0	1.10	0.000579	±2.5	PASS
				100RB#0	NV	10	1.90	0.001000	±2.5	PASS
				100RB#0	NV	20	0.90	0.000474	±2.5	PASS
				100RB#0	NV	-20	0.90	0.000474	±2.5	PASS
				100RB#0	NV	-30	0.10	0.000053	±2.5	PASS
		64QAM	18700	100RB#0	NV	0	1.60	0.000851	±2.5	PASS
				100RB#0	NV	10	0.50	0.000269	±2.5	PASS
				100RB#0	NV	20	-0.30	-0.000158	±2.5	PASS
				100RB#0	NV	-20	4.10	0.001633	±2.5	PASS
				100RB#0	NV	-30	1.80	0.000968	±2.5	PASS

			18900	100RB#0	NV	0	0.40	0.000213	±2.5	PASS
				100RB#0	NV	10	1.20	0.000638	±2.5	PASS
				100RB#0	NV	20	1.00	0.000532	±2.5	PASS
				100RB#0	NV	-20	1.60	0.000851	±2.5	PASS
				100RB#0	NV	-30	0.90	0.000479	±2.5	PASS
			19100	100RB#0	NV	0	0.00	0.000000	±2.5	PASS
				100RB#0	NV	10	0.10	0.000053	±2.5	PASS
				100RB#0	NV	20	1.40	0.000737	±2.5	PASS
				100RB#0	NV	-20	0.90	0.000474	±2.5	PASS
				100RB#0	NV	-30	-1.30	-0.000684	±2.5	PASS

The End