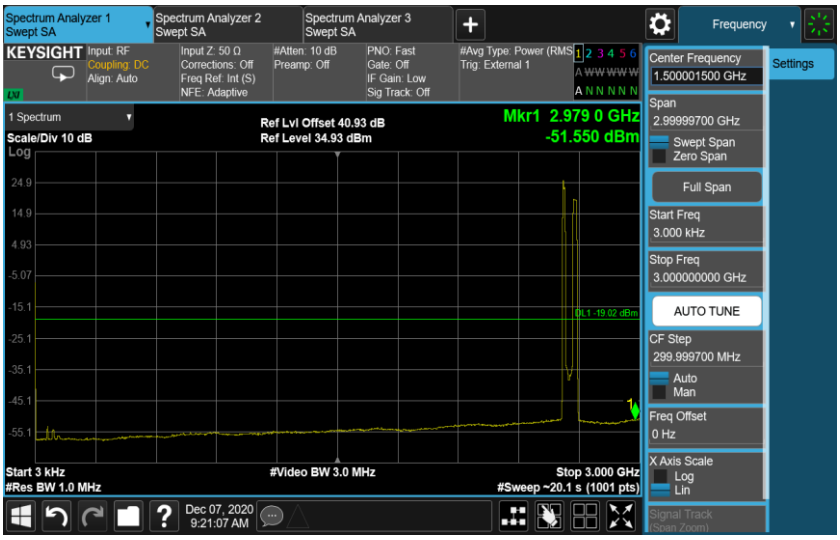
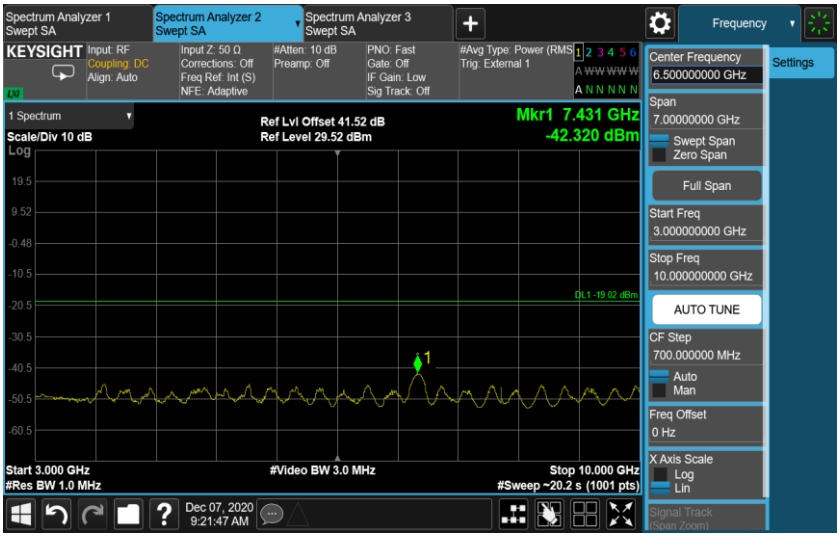
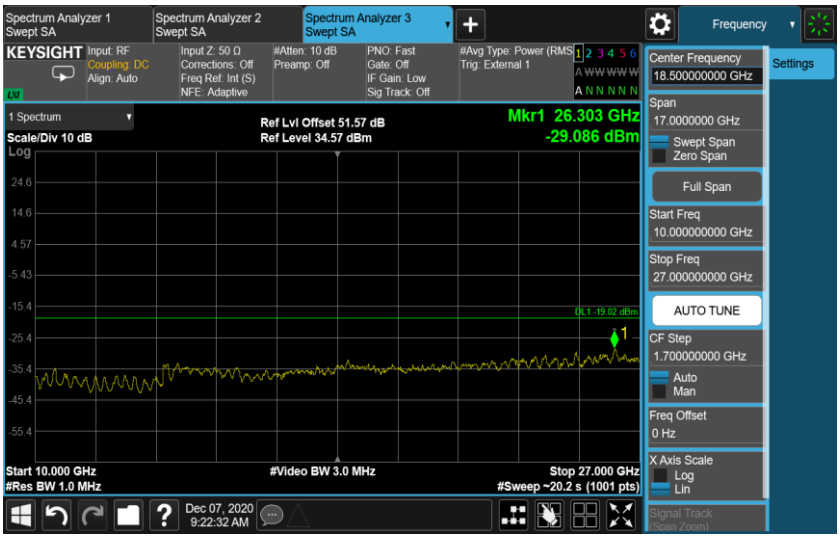
Port D, Channel Position M, WCDNA 5.0MHz, NR 20.0MHz



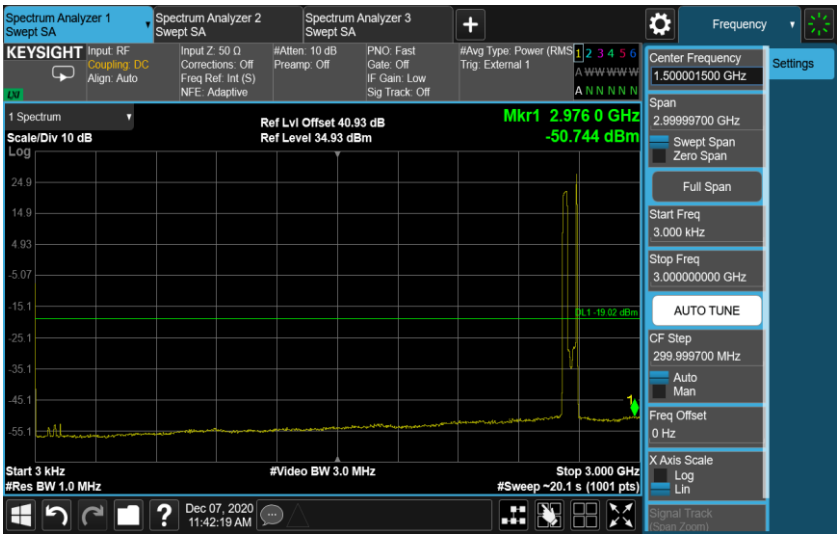


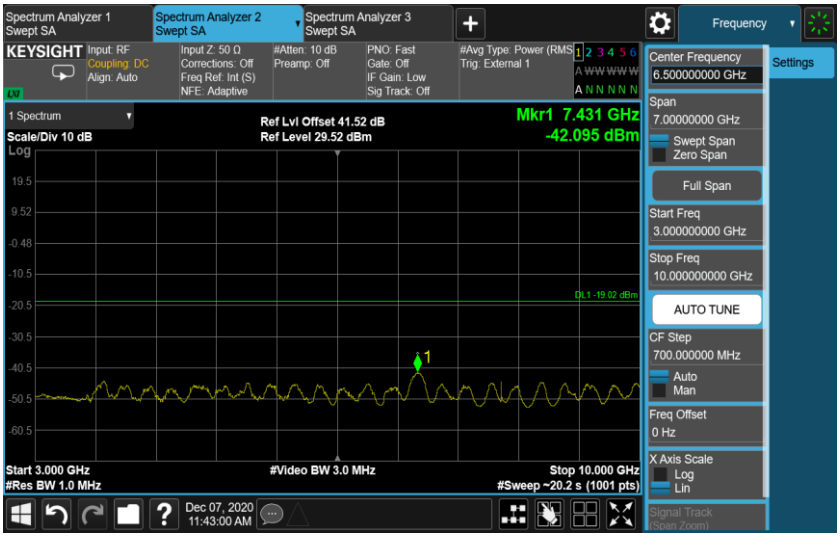


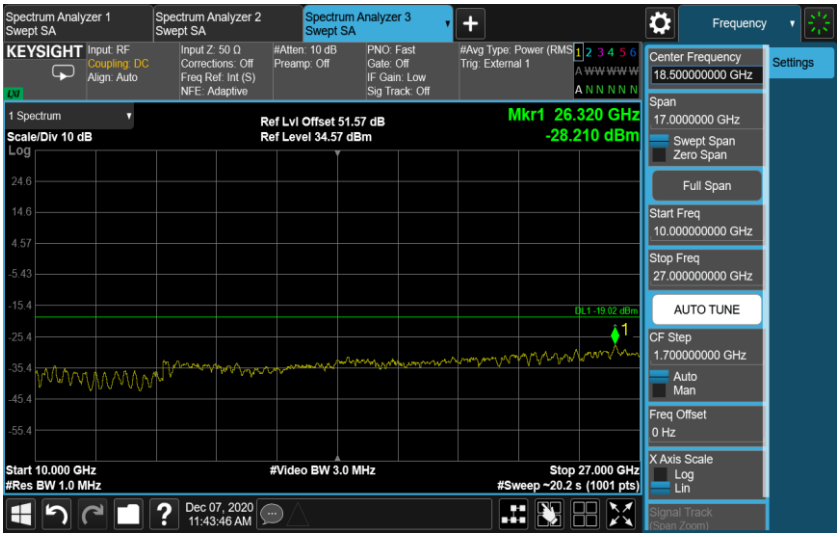
Configuration LTE+NR-MIMO-MC-1 (1LTE+1NR)

Channel Bandwidth	RBW (MHz)	Limit (dBm)
L: 5.0MHz NR: 20.0MHz	1.0	-19.02

Port D, Channel Position M, LTE 5.0MHz, NR 20.0MHz



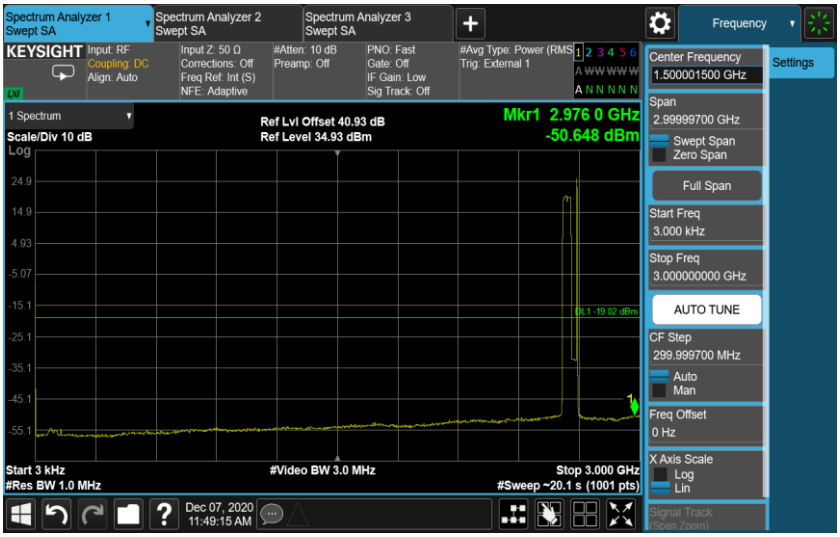


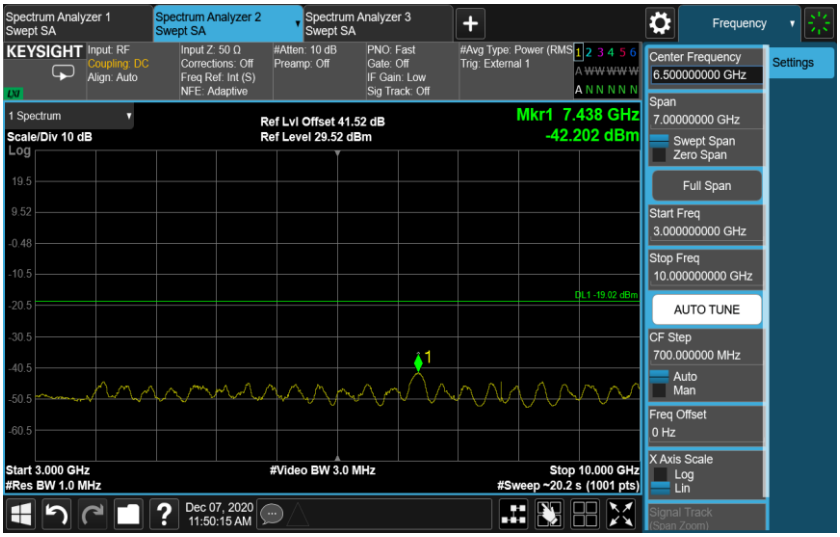


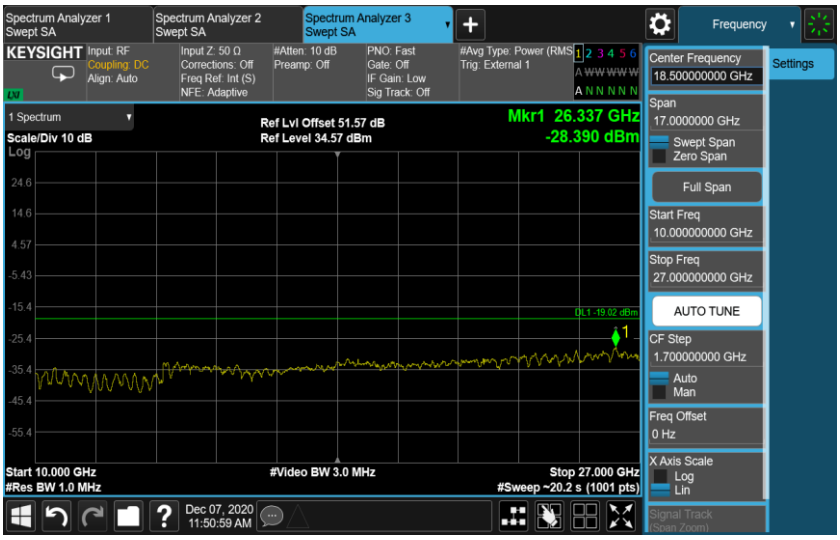
Configuration LTE+NR-MIMO-MC-2 (1LTE+2NR)

Channel Bandwidth	RBW (MHz)	Limit (dBm)
L: 1.4MHz NR: 20.0MHz	1.0	-19.02

Port D, Channel Position M, LTE 1.4MHz, NR 20.0MHz



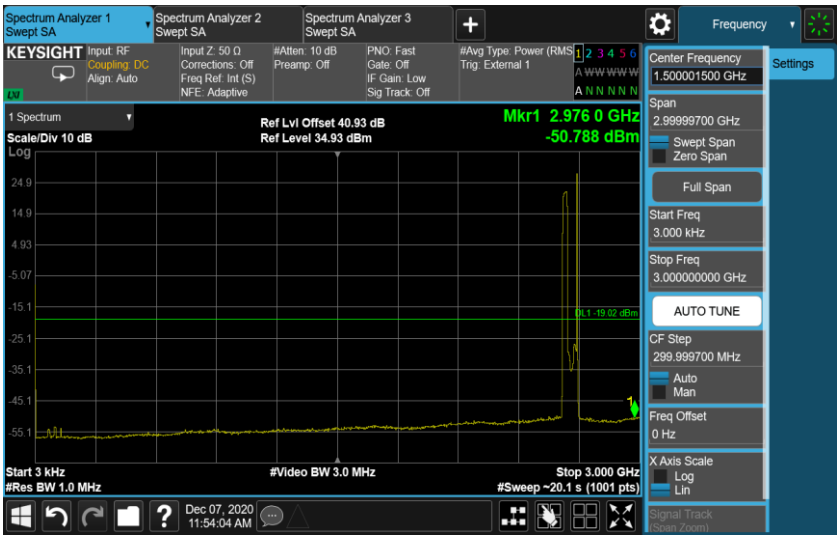


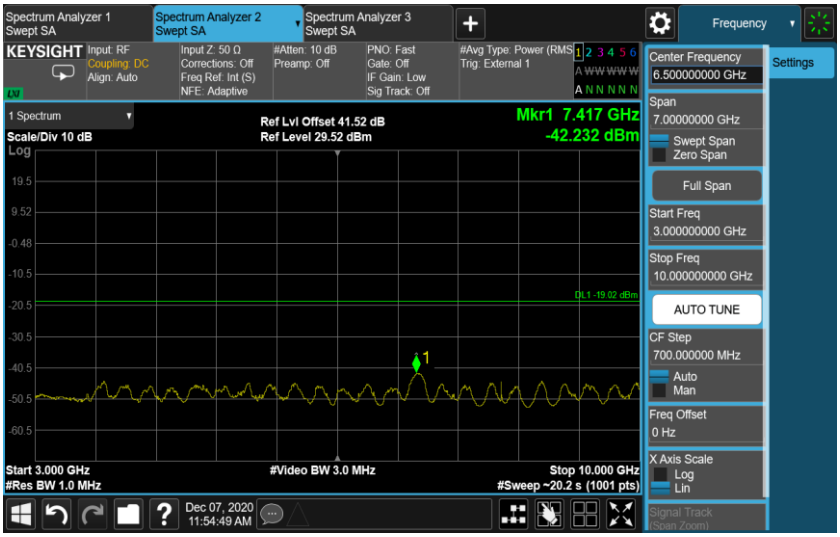


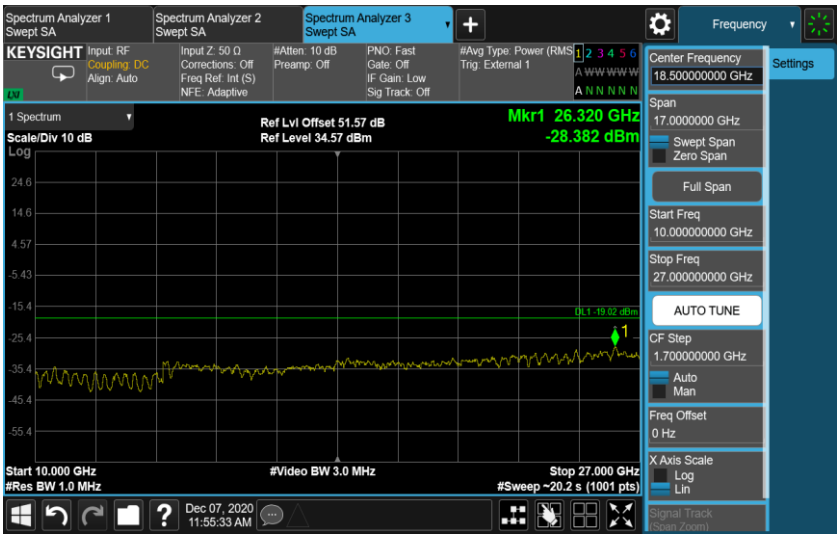
Configuration NB-IoT+NR-MC-1 (1NB+1NR)

Channel Bandwidth	RBW (MHz)	Limit (dBm)
NB: 250KHz NR: 20.0MHz	1.0	-19.02

Port D, Channel Position M, NB 250KHz, NR 20.0MHz



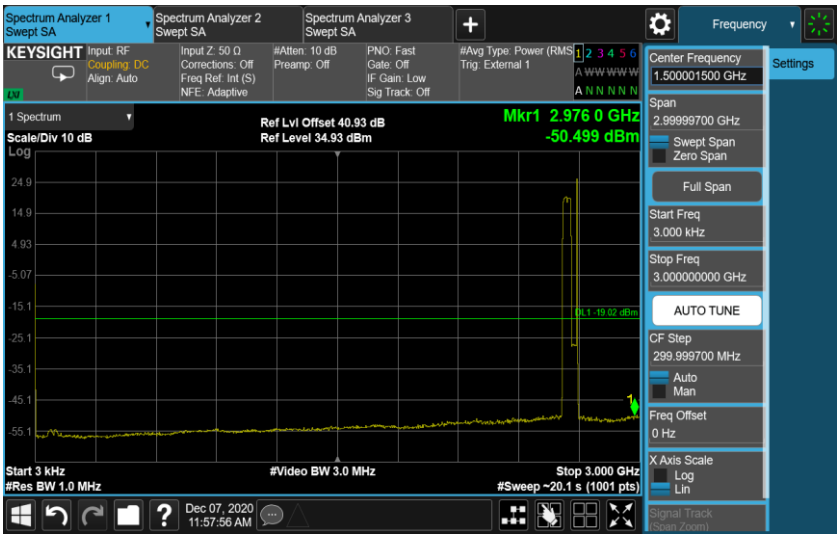


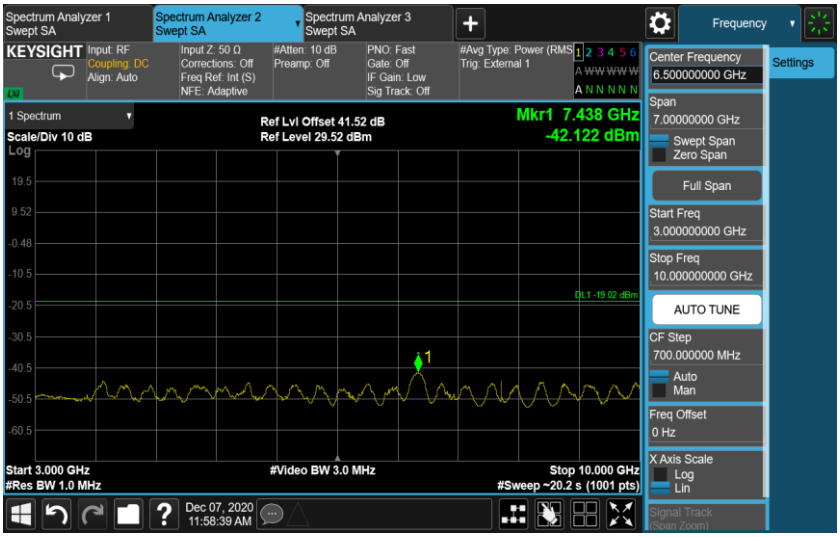


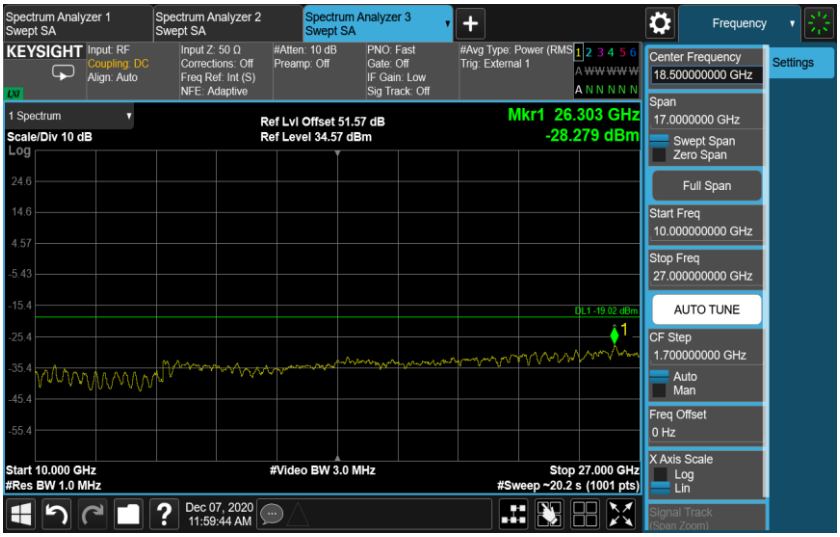
Configuration NB-IoT+NR-MC-2 (1NB+2NR)

Channel Bandwidth	RBW (MHz)	Limit (dBm)
NB: 250KHz NR: 20.0MHz	1.0	-19.02

Port D, Channel Position M, NB 250KHz, NR 20.0MHz



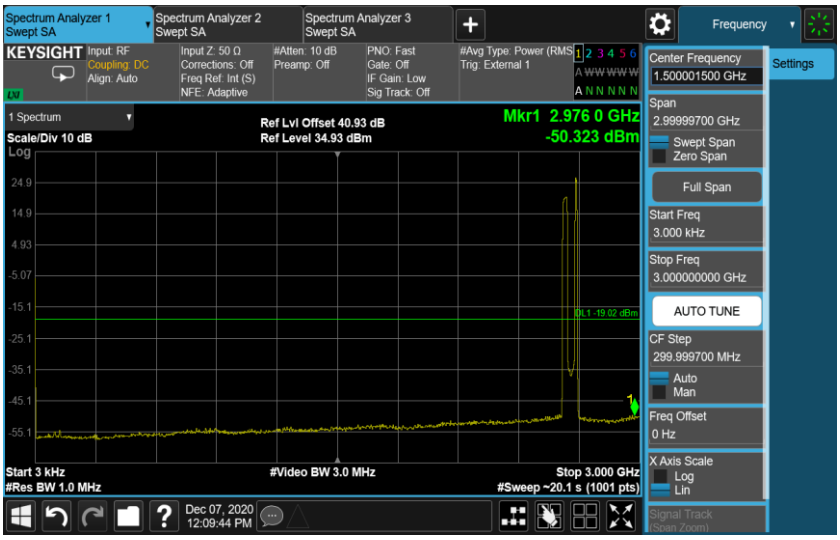


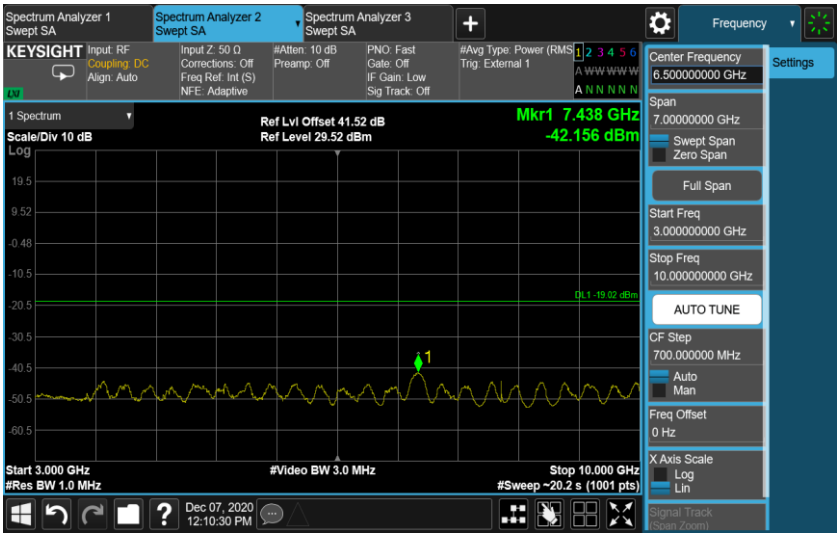


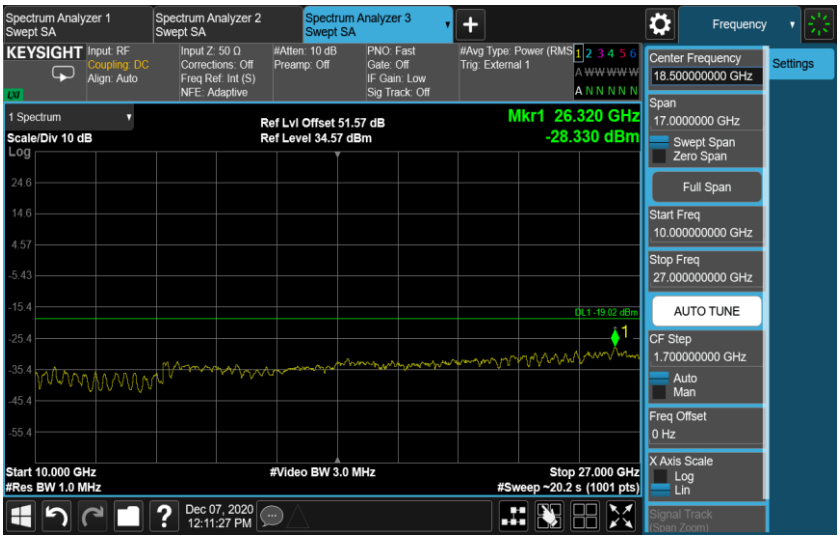
Configuration WCDMA+LTE+NR-MIMO-MC-1 (1W+1LTE+1NR)

Channel Bandwidth	RBW (MHz)	Limit (dBm)
W: 5.0MHz L: 5.0MHz NR: 20.0MHz	1.0	-19.02

Port D, Channel Position M, WCDMA 5.0MHz, LTE 5.0MHz, NR 20.0MHz



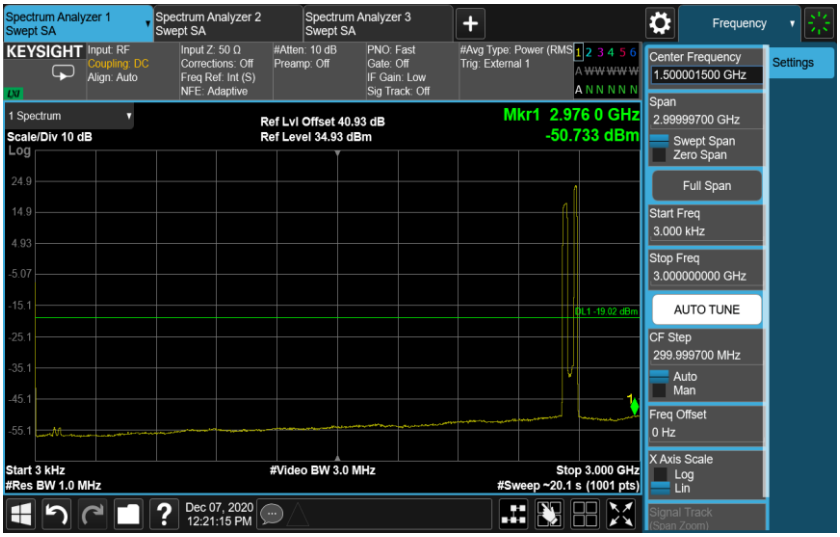


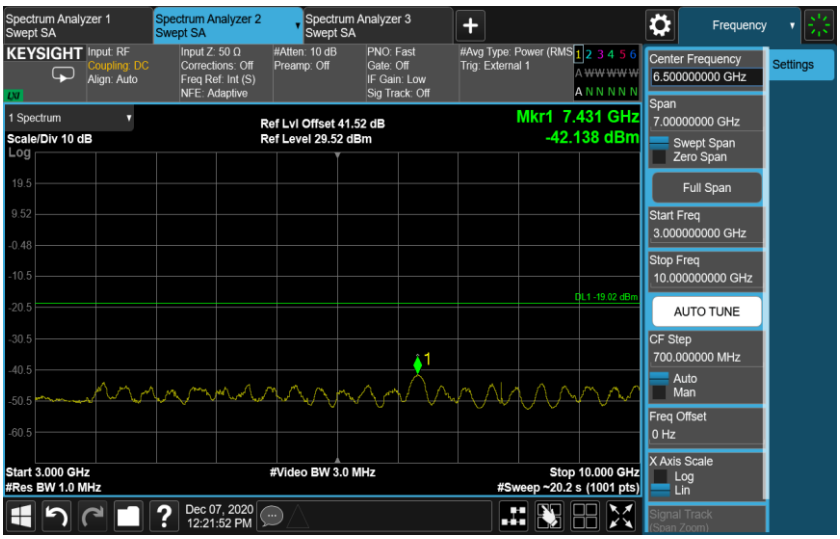


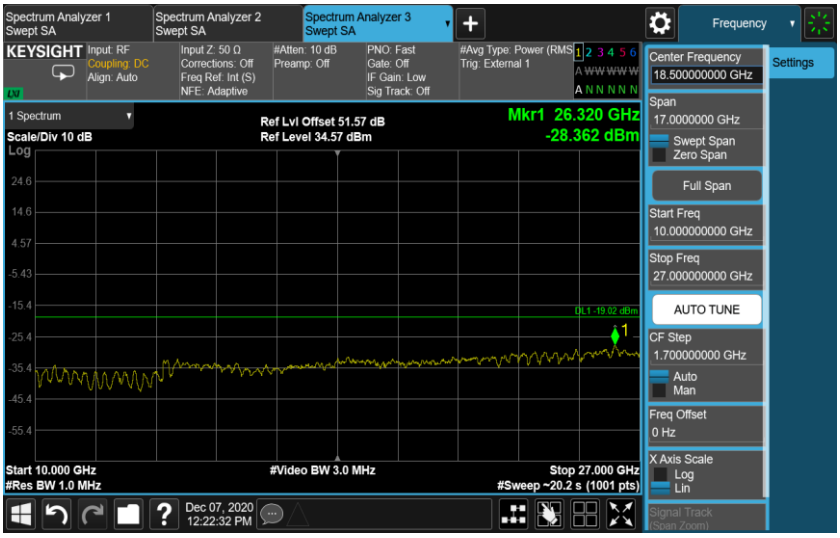
Configuration WCDMA+LTE+NR-MIMO-MC-2 (1W+2LTE+1NR)

Channel Bandwidth	RBW (MHz)	Limit (dBm)
W: 5.0MHz L: 5.0MHz NR: 20.0MHz	1.0	-19.02

Port D, Channel Position M, WCDMA 5.0MHz, LTE 5.0MHz, NR 20.0MHz



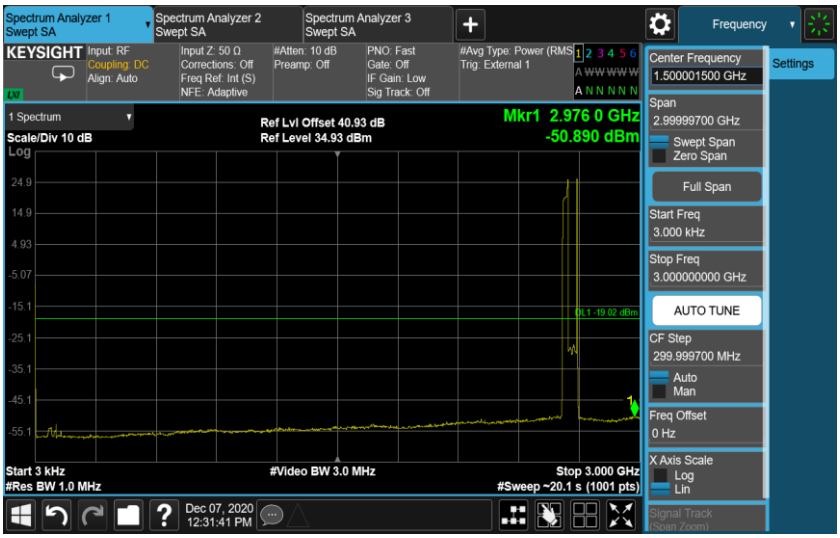


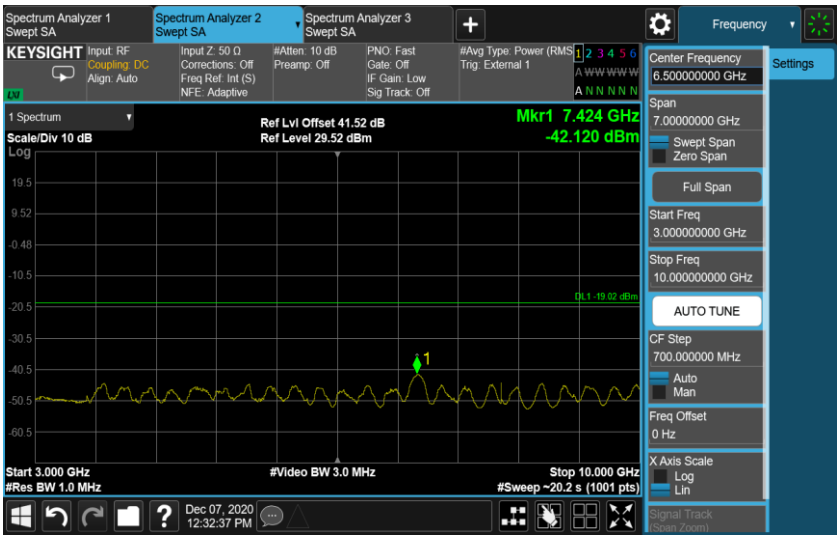


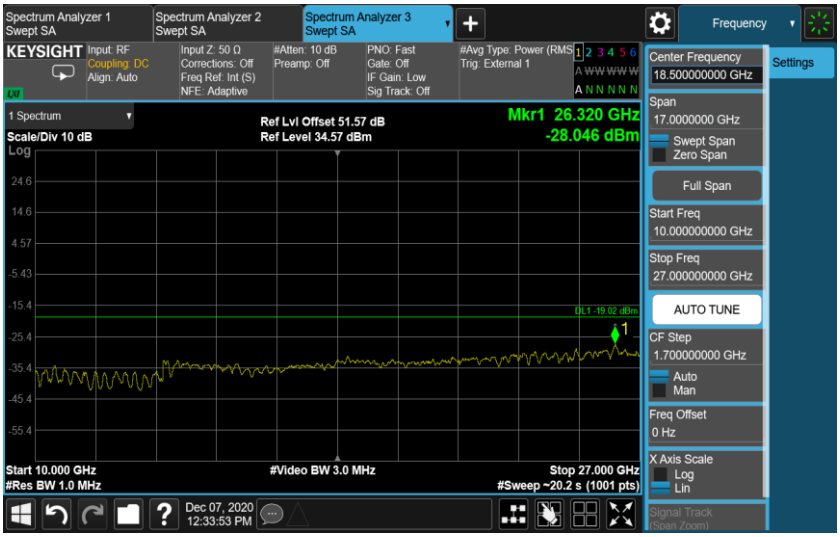
Configuration LTE+NB-IoT+NR-MC-1 (1L+1NB+1NR)

Channel Bandwidth	RBW (MHz)	Limit (dBm)
L: 5.0MHz NB: 250KHz NR: 20.0MHz	1.0	-19.02

Port D, Channel Position M, LTE 5.0MHz, NB 250KHz, NR 20.0MHz



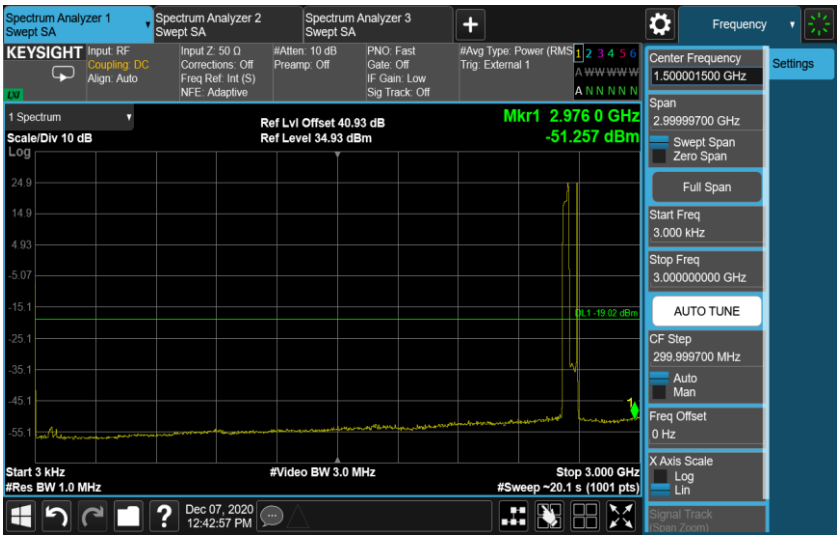


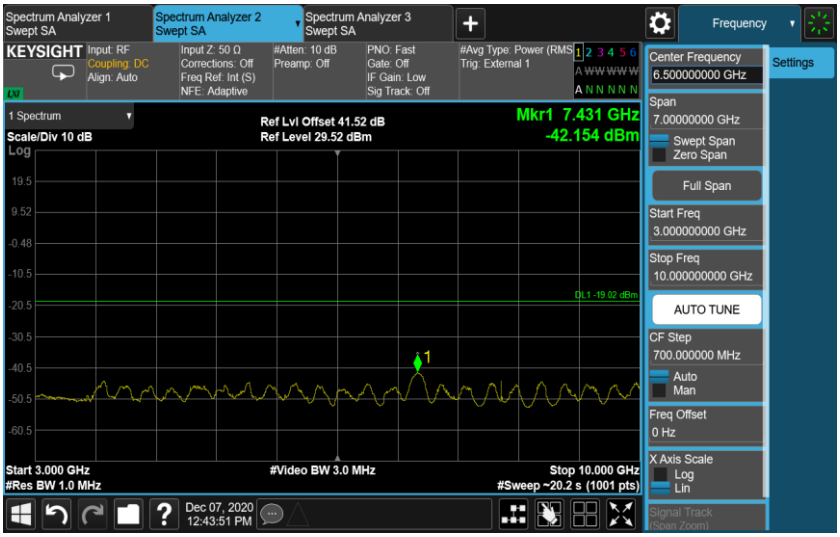


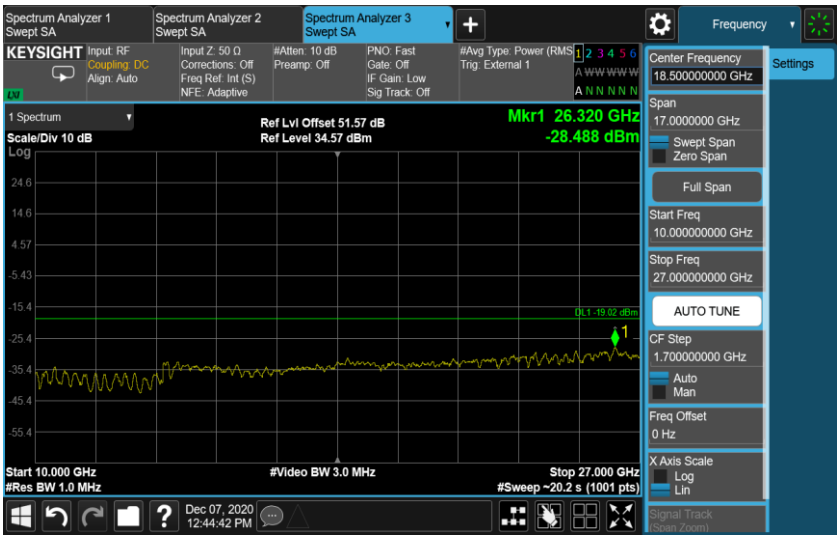
Configuration LTE+NB-IoT+NR-MC-2 (2L+1NB+1NR)

Channel Bandwidth	RBW (MHz)	Limit (dBm)
L: 5.0MHz NB: 250KHz NR: 20.0MHz	1.0	-19.02

Port D, Channel Position M, LTE 5.0MHz, NB 250KHz, NR 20.0MHz







A.5 Radiated Spurious Emission

A.5.1 Reference

FCC CFR 47 Part 2, Clause 2.1051
FCC CFR 47 Part 27, Clause 27.53(m)
RSS-199 Issue 3, Chapter 5.4

A.5.2 Method of measurement

The measurements procedures in TIA-603-E: 2016 are used. This measurement is carried out in semi-anechoic chamber.
A preliminary profile of the Spurious Radiated Emissions was obtained by operating the EUT on a remotely controlled turntable within the chamber. Measurements of emissions from the EUT were obtained with the measurement antenna in both horizontal and vertical polarizations.
The measurements in the frequency range 30 to 1000MHz was performed with a RBW of 100kHz.
The measurements in the frequency range 1 to 8GHz was performed with a RBW of 1MHz.
Emissions identified within the range 30MHz to 8GHz were then formally measured using a peak detector as the worst case.
The limits for outside a licensee's frequency band(s) of operation the power of the spurious emissions have been calculated, as shown below using the following formula:

Field Strength of Carrier - (43 + 10 log (P) dB) dB

Where:

Field Strength is measured in dBμV/m

P is measured Transmitter Power in Watts

The EUT was measured with the antenna height varied between 1 and 4 m with the turntable rotated between 0 and 360 degrees. The emission of any outside a licensee's frequencies within 20dB of the limit were measured with the substitution method used according to the standard.
The measurements were performed at a 3m distance unless otherwise stated.

A.5.3 Measurement limit

The field strength of the carrier has been calculated assuming that the power is to be fed to a half-wave tuned dipoles as per 2.1053 (a).

$E_{(v/m)}=(30 \times G_i \times P_o)^{0.5} / d$

Where

G_i is the antenna gain of ideal half-wave dipoles,

P_o is the power out of the transceiver in W,

d is the measurement distance in meter.

Therefore at 3m measurement distance the field strength using the lowest transceiver output power would be:

$E_{(v/m)}=(30 \times 1.64 \times 16.56)^{0.5} / 3 = 9.51V/m = 139.57 dBμV/m$

As per 90.669 For operations in the 854-869 MHz bands, the power of any emission outside the licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, in accordance with the following:
(1) On all frequencies between 854-869 MHz, by a factor not less than 43 + 10 log (P) dB.
this gives:
43 + 10log(16.56) = 55.19 dB

Therefore the limit at 3m measurement distance is:
139.57 – 55.19 = 83.81 dBμV/m

These limits have been used to determine Pass or Fail for the harmonics measured and detailed in the following results.

A.5.4 Measurement results

Configuration WCDMA-1C; QPSK;

Channel Position	Channel Frequencies(MHz)
Channel Position B	2622.4
Channel Position M	2655.0
Channel Position T	2687.6

Channel Position B

No emissions were detected within 20dB of the limit.

Channel Position M

No emissions were detected within 20dB of the limit.

Channel Position T

No emissions were detected within 20dB of the limit.

Configuration WCDMA-1C; 64QAM;

Channel Position	Channel Frequencies
Channel Position M	2655.0

Channel Position M

No emissions were detected within 20dB of the limit.

Configuration WCDMA-2C; 64QAM;

Channel Position	Channel Frequencies
Channel Position M	2622.4+2687.6

Channel Position M

No emissions were detected within 20dB of the limit.

Configuration WCDMA-6C; 16QAM;

Channel Position	Channel Frequencies
Channel Position M	2622.4+2627.4+2632.4+2682.6+2687.6

Channel Position M

No emissions were detected within 20dB of the limit.

Configuration LTE-MIMO-1C; QPSK 10M;

Channel Position	Channel Frequencies
Channel Position B	2625.0
Channel Position M	2655.0
Channel Position T	2685.0

Channel Position B

No emissions were detected within 20dB of the limit.

Channel Position M
No emissions were detected within 20dB of the limit.
Channel Position T
No emissions were detected within 20dB of the limit.

Configuration LTE-MIMO-2C; QPSK 3M;

Channel Position	Channel Frequencies
Channel Position B	2621.5+2638.5
Channel Position M	2646.5+2663.5
Channel Position T	2671.5+2688.5

Channel Position B
No emissions were detected within 20dB of the limit.
Channel Position M
No emissions were detected within 20dB of the limit.
Channel Position T
No emissions were detected within 20dB of the limit.

Configuration LTE-MIMO-2C; QPSK 10M;

Channel Position	Channel Frequencies
Channel Position M	2625+2685

Channel Position M
No emissions were detected within 20dB of the limit.

Configuration LTE-MIMO-6C; QPSK 1.4M;

Channel Position	Channel Frequencies
Channel Position B	2620.7+2622.1+2623.5+2636.5+2637.9+2639.3
Channel Position M	2645.7+2647.1+2648.5+2661.5+2662.9+2664.3
Channel Position T	2670.7+2672.1+2673.5+2686.5+2687.9+2689.3

Channel Position B
No emissions were detected within 20dB of the limit.
Channel Position M
No emissions were detected within 20dB of the limit.
Channel Position T
No emissions were detected within 20dB of the limit.

Configuration LTE-MIMO-6C; QPSK 10M;

Channel Position	Channel Frequencies
Channel Position M	2625+2635+2645+2665+2675+2685

Channel Position M
No emissions were detected within 20dB of the limit.

Configuration LTE-MIMO-4C; QPSK 15M;

Channel Position	Channel Frequencies

Channel Position M	2627.5+2642.5+2667.5+2682.5

Channel Position M

No emissions were detected within 20dB of the limit.

Configuration LTE-MIMO-3C; QPSK 20M;

Channel Position	Channel Frequencies
Channel Position M	2630+2650+2680

Channel Position M

No emissions were detected within 20dB of the limit.

Configuration NB-IoT-InBand-1C; QPSK 20M;

Channel Position	Channel Frequencies
Channel Position B	2630.0
Channel Position M	2655.0
Channel Position T	2680.0

Channel Position B

No emissions were detected within 20dB of the limit.

Channel Position M

No emissions were detected within 20dB of the limit.

Channel Position T

No emissions were detected within 20dB of the limit.

Configuration NB-IoT-GuardBand-1C; QPSK 15M;

Channel Position	Channel Frequencies
Channel Position B	2627.5
Channel Position M	2655.0
Channel Position T	2682.5

Channel Position B

No emissions were detected within 20dB of the limit.

Channel Position M

No emissions were detected within 20dB of the limit.

Channel Position T

No emissions were detected within 20dB of the limit.

Configuration WCDMA+LTE-MIMO-MC-1 (1WCDMA +1LTE); QPSK/QPSK 10;

Channel Position	Channel Frequencies
Channel Position M	(W)2622.4+(L)2685

Channel Position M

No emissions were detected within 20dB of the limit.

Configuration WCDMA+LTE-MIMO-MC-3 (3WCDMA +3LTE); QPSK/QPSK 3.0

Channel Position	Channel Frequencies
Channel Position M	(W)2622.4+2627.4+2632.4+(L)2682.5+2685.5+2688

	.5

Channel Position M

No emissions were detected within 20dB of the limit.

Configuration WCDMA+LTE-MIMO-MC-3 (2WCDMA +3LTE); QPSK/QPSK 20.0

Channel Position	Channel Frequencies
Channel Position M	(W)2622.4+2627.4+(L)2640+2660+2680

Channel Position M

No emissions were detected within 20dB of the limit.

Configuration WCDMA+NB-IoT-MC-2 (2WCDMA+1SA); QPSK /QPSK

Channel Position	Channel Frequencies
Channel Position M	(W)2622.4+2627.4+(NB)2689.8

Channel Position M

No emissions were detected within 20dB of the limit.

Configuration WCDMA+NB-IoT-MC-3 (5WCDMA+1SA); QPSK /QPSK

Channel Position	Channel Frequencies
Channel Position M	(W)2622.4+2627.4+2632.4+2637.4+2632.4+(NB)2689.8

Channel Position M

No emissions were detected within 20dB of the limit.

Configuration LTE+NB-IoT-MIMO-MC-1 (1LTE +1SA); QPSK 3.0/QPSK;

Channel Position	Channel Frequencies
Channel Position B	(L)2621.5+(NB)2639.8
Channel Position M	(L)2646.5+(NB)2664.8
Channel Position T	(L)2671.5+(NB)2689.8

Channel Position B

No emissions were detected within 20dB of the limit.

Channel Position M

No emissions were detected within 20dB of the limit.

Channel Position T

No emissions were detected within 20dB of the limit.

Configuration LTE+NB-IoT-MIMO-MC-2 (2LTE +1SA); QPSK 3.0/QPSK;

Channel Position	Channel Frequencies
Channel Position B	(L)2621.5+2624.5+(NB)2639.8
Channel Position M	(L)2646.5+2649.5+(NB)2664.8
Channel Position T	(L)2671.5+2674.5+(NB)2689.8

Channel Position B

No emissions were detected within 20dB of the limit.

Channel Position M

No emissions were detected within 20dB of the limit.
Channel Position T
No emissions were detected within 20dB of the limit.

Configuration LTE+NB-IoT-MIMO-MC-3 (5LTE +1SA); QPSK 3.0/QPSK;

Channel Position	Channel Frequencies
Channel Position B	(L)2621.5+2624.5+2627.5+2630.5+2633.5+(NB)2639.8
Channel Position M	(L)2646.5+2649.5+2652.5+2655.5+2658.5+(NB)2664.8
Channel Position T	(L)2671.5+2674.5+2677.5+2680.5+2683.5+(NB)2689.8

Channel Position B
No emissions were detected within 20dB of the limit.
Channel Position M
No emissions were detected within 20dB of the limit.
Channel Position T
No emissions were detected within 20dB of the limit.

Configuration LTE+NB-IoT-MIMO-MC-4 (4LTE +1SA); QPSK 15.0/QPSK

Channel Position	Channel Frequencies
Channel Position M	(L)2627.5+2642.5+2657.5+2672.5+(NB)2689.8

Channel Position M
No emissions were detected within 20dB of the limit.

Configuration LTE+NB-IoT-MIMO-MC-5 (3LTE +1SA); QPSK 20.0/QPSK

Channel Position	Channel Frequencies
Channel Position M	(L)2630+2650+2670+(NB)2689.8

Channel Position M
No emissions were detected within 20dB of the limit.

Configuration WCDMA+LTE+NB-IoT-MC-1 (1WCDMA+1LTE +1SA); QPSK/QPSK 3.0/QPSK;

Channel Position	Channel Frequencies
Channel Position B	(NB)2620.2+(W)2630+(L)2638.5
Channel Position M	(NB)2645.2+(W)2655+(L)2663.5
Channel Position T	(NB)2670.2+(W)2680+(L)2688.5

Channel Position B
No emissions were detected within 20dB of the limit.
Channel Position M
No emissions were detected within 20dB of the limit.
Channel Position T
No emissions were detected within 20dB of the limit.

Configuration WCDMA+LTE+NB-IoT-MC-2 (2WCDMA+1LTE +1SA); QPSK/QPSK 3.0/QPSK;

Channel Position	Channel Frequencies
Channel Position B	(NB)2620.2+(W)2627.4+2632.4+(L)2638.5
Channel Position M	(NB)2645.2+(W)2652.4+2657.4+(L)2663.5
Channel Position T	(NB)2670.2+(W)2677.4+2682.4+(L)2688.5

Channel Position B

No emissions were detected within 20dB of the limit.

Channel Position M

No emissions were detected within 20dB of the limit.

Channel Position T

No emissions were detected within 20dB of the limit.

Configuration WCDMA+LTE+NB-IoT-MC-3 (3WCDMA+2LTE +1SA); QPSK/QPSK 10.0/QPSK

Channel Position	Channel Frequencies
Channel Position M	(NB)2620.2+(W)2650+2655+2660+(L)2675+2685

Channel Position M

No emissions were detected within 20dB of the limit.

Configuration NR-MIMO-1C; QPSK/15.0;

Channel Position	Channel Frequencies
Channel Position B	2627.5
Channel Position M	2655.0
Channel Position T	2682.5

Channel Position B

No emissions were detected within 20dB of the limit.

Channel Position M

No emissions were detected within 20dB of the limit.

Channel Position T

No emissions were detected within 20dB of the limit.

Configuration NR-MIMO-1C; QPSK/20.0

Channel Position	Channel Frequencies
Channel Position M	2655.0

Channel Position M

No emissions were detected within 20dB of the limit.

Configuration NR-MIMO-2C; QPSK/5.0

Channel Position	Channel Frequencies
Channel Position M	2622.5+2687.5

Channel Position M

No emissions were detected within 20dB of the limit.

Configuration NR-MIMO-2C; QPSK/10.0

Channel Position	Channel Frequencies
Channel Position M	2625+2685

Channel Position M

No emissions were detected within 20dB of the limit.

Configuration NR-MIMO-2C; QPSK/15.0

Channel Position	Channel Frequencies
Channel Position M	2627.5+2682.5

Channel Position M

No emissions were detected within 20dB of the limit.

Configuration NR-MIMO-6C; QPSK/5.0

Channel Position	Channel Frequencies
Channel Position M	2622.5+2627.5+2632.5+2677.5+2682.5+2687.5

Channel Position M

No emissions were detected within 20dB of the limit.

Configuration NR-MIMO-6C; QPSK/10.0

Channel Position	Channel Frequencies
Channel Position M	2625+2635+2645+2665+2675+2685

Channel Position M

No emissions were detected within 20dB of the limit.

Configuration NR-MIMO-4C; 16QAM/15.0

Channel Position	Channel Frequencies
Channel Position M	2627.5+2642.5+2667.5+2682.5

Channel Position M

No emissions were detected within 20dB of the limit.

Configuration NR-MIMO-3C; 16QAM/20.0

Channel Position	Channel Frequencies
Channel Position M	2630+2650+2680

Channel Position M

No emissions were detected within 20dB of the limit.

Configuration WCDMA+NR-MIMO-MC-1 (1WCDMA+1NR); QPSK/QPSK 20.0

Channel Position	Channel Frequencies
Channel Position M	(W)2622.4+(NR)2680

Channel Position M

No emissions were detected within 20dB of the limit.

Configuration WCDMA+NR-MIMO-MC-2 (2WCDMA+1NR); QPSK/QPSK 20.0

Channel Position	Channel Frequencies

Channel Position M	(W)2622.4+2627.4+(NR)2680

Channel Position M

No emissions were detected within 20dB of the limit.

Configuration WCDMA+NR-MIMO-MC-3 (2WCDMA+3NR); QPSK/QPSK 20.0

Channel Position	Channel Frequencies
Channel Position M	(W)2622.4+2627.4+(NR)2640+2660+2680

Channel Position M

No emissions were detected within 20dB of the limit.

Configuration LTE+NR-MIMO-MC-1 (1LTE+1NR); QPSK 1.4/QPSK 20.0

Channel Position	Channel Frequencies
Channel Position M	(NR)2630+(L)2689.3

Channel Position M

No emissions were detected within 20dB of the limit.

Configuration LTE+NR-MIMO-MC-2 (1LTE+2NR); QPSK 1.4/QPSK 20.0

Channel Position	Channel Frequencies
Channel Position M	(NR)2630+2650+(L)2689.3

Channel Position M

No emissions were detected within 20dB of the limit.

Configuration LTE+NR-MIMO-MC-3 (3LTE+3NR); QPSK 3.0/QPSK 5.0

Channel Position	Channel Frequencies
Channel Position M	(NR)2622.5+2627.5+2632.5+(L)2682.5+2685.5+2688.5

Channel Position M

No emissions were detected within 20dB of the limit.

Configuration LTE+NR-MIMO-MC-4 (3LTE+3NR); QPSK 5.0/QPSK 15.0

Channel Position	Channel Frequencies
Channel Position M	(NR)2627.5+2642.5+2657.5+(L)2677.5+2682.5+2687.5

Channel Position M

No emissions were detected within 20dB of the limit.

Configuration LTE+NR-MIMO-MC-4 (2LTE+3NR); QPSK 5.0/QPSK 20.0

Channel Position	Channel Frequencies
Channel Position M	(NR)2630+2650+2670+(L)2682.5+2687.5

Channel Position M

No emissions were detected within 20dB of the limit.

Configuration NB-IoT+NR-MC-1 (1SA+1NR); QPSK 5.0/QPSK 20.0

Channel Position	Channel Frequencies
Channel Position M	(NR)2630+(NB)2689.8

Channel Position M

No emissions were detected within 20dB of the limit.

Configuration NB-IoT+NR-MC-2 (1SA+2NR); QPSK/QPSK 20.0

Channel Position	Channel Frequencies
Channel Position M	(NR)2630+2650+(NB)2689.8

Channel Position M

No emissions were detected within 20dB of the limit.

Configuration NB-IoT+NR-MC-3 (1SA+5NR); QPSK/QPSK 10.0

Channel Position	Channel Frequencies
Channel Position M	(NR)2625+2635+2645+2655+2665+(NB)2689.8

Channel Position M

No emissions were detected within 20dB of the limit.

Configuration NB-IoT+NR-MC-3 (1SA+4NR); QPSK/QPSK 15.0

Channel Position	Channel Frequencies
Channel Position M	(NR)2627.5+2642.5+2657.5+2672.5+(NB)2689.8

Channel Position M

No emissions were detected within 20dB of the limit.

Configuration NB-IoT+NR-MC-3 (1SA+3NR); QPSK/QPSK 20.0

Channel Position	Channel Frequencies
Channel Position M	(NR)2630+2650+2670+(NB)2689.8

Channel Position M

No emissions were detected within 20dB of the limit.

Configuration WCDMA+LTE+NR-MIMO-MC-1 (1WCDMA+1LTE+1NR); QPSK/QPSK 1.4/QPSK 20.0

Channel Position	Channel Frequencies
Channel Position M	(NR)2630+(W)2686.2+(L)2689.3

Channel Position M

No emissions were detected within 20dB of the limit.

Configuration WCDMA+LTE+NR-MIMO-MC-2 (1WCDMA+2LTE+1NR); QPSK/QPSK 1.4/QPSK 20.0

Channel Position	Channel Frequencies
Channel Position M	(NR)2630+(W)2684.8+(L)2687.9+2689.3

Channel Position M

No emissions were detected within 20dB of the limit.

Configuration LTE+NB-IoT+NR-MC-1 (1LTE+1SA+1NR); QPSK/QPSK 1.4/QPSK 20.0

Channel Position	Channel Frequencies
Channel Position M	(NR)2630+(L)2688.9+(NB)2689.8

Channel Position M

No emissions were detected within 20dB of the limit.

Configuration LTE+NB-IoT+NR-MC-2 (2LTE+1SA+1NR); QPSK/QPSK 5.0/QPSK 20.0

Channel Position	Channel Frequencies
Channel Position M	(NR)2630+(L)2642.5+2647.5+(NB)2689.8

Channel Position M

No emissions were detected within 20dB of the limit.

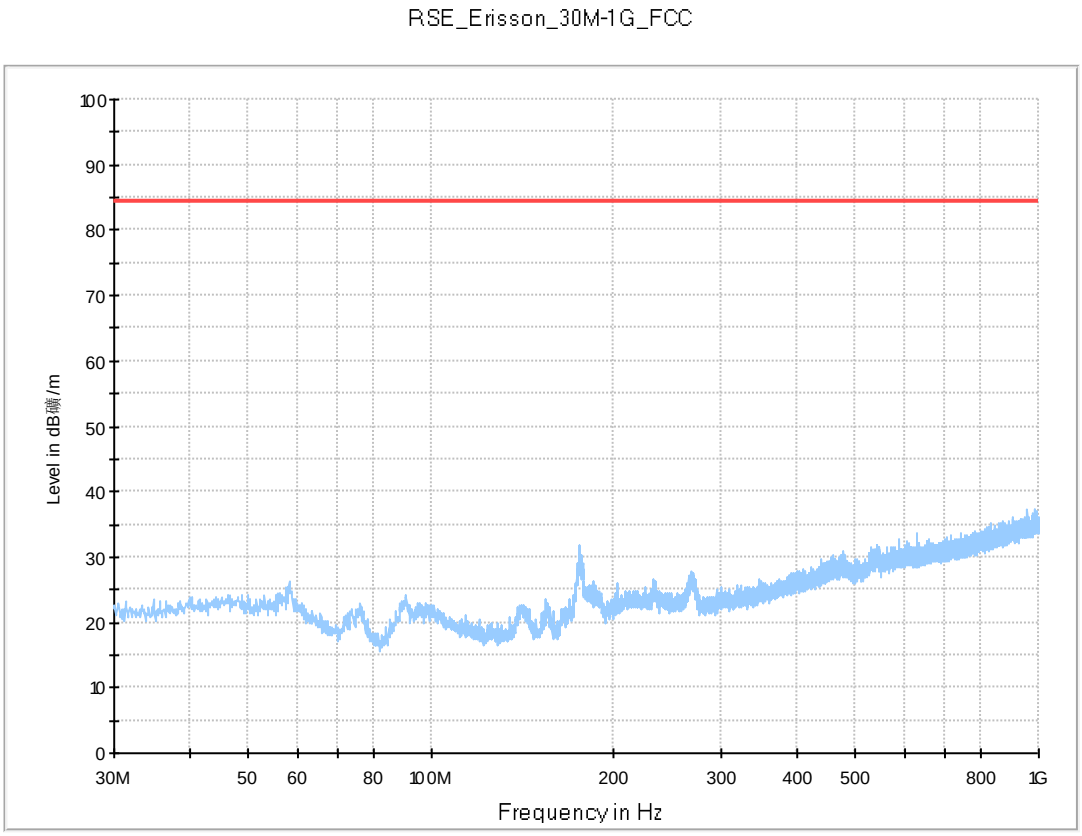
Configuration LTE+NB-IoT+NR-MC-3 (3LTE+1SA+2NR); QPSK/QPSK 1.4/QPSK 20.0

Channel Position	Channel Frequencies
Channel Position M	(NR)2630+2650+(L)2686.1+2687.5+2688.9+(NB)2689.8

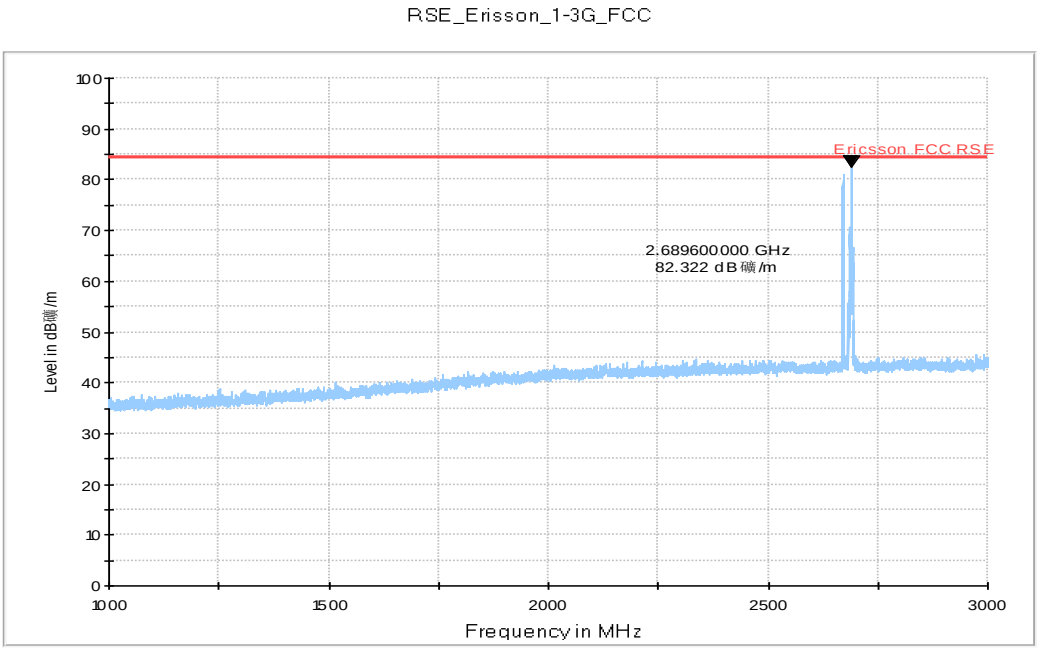
Channel Position M

No emissions were detected within 20dB of the limit.

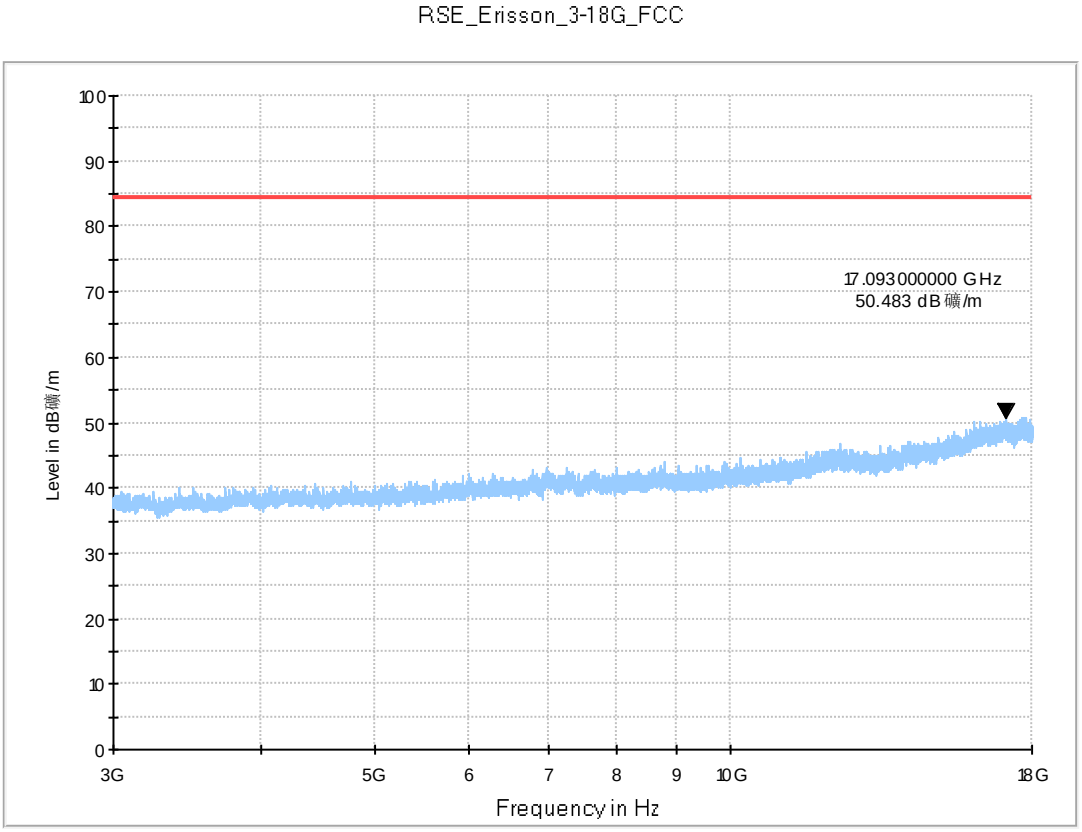
Configuration 1LTE+1SA_QPSK 3_QPSK(30MHz-1GHz)



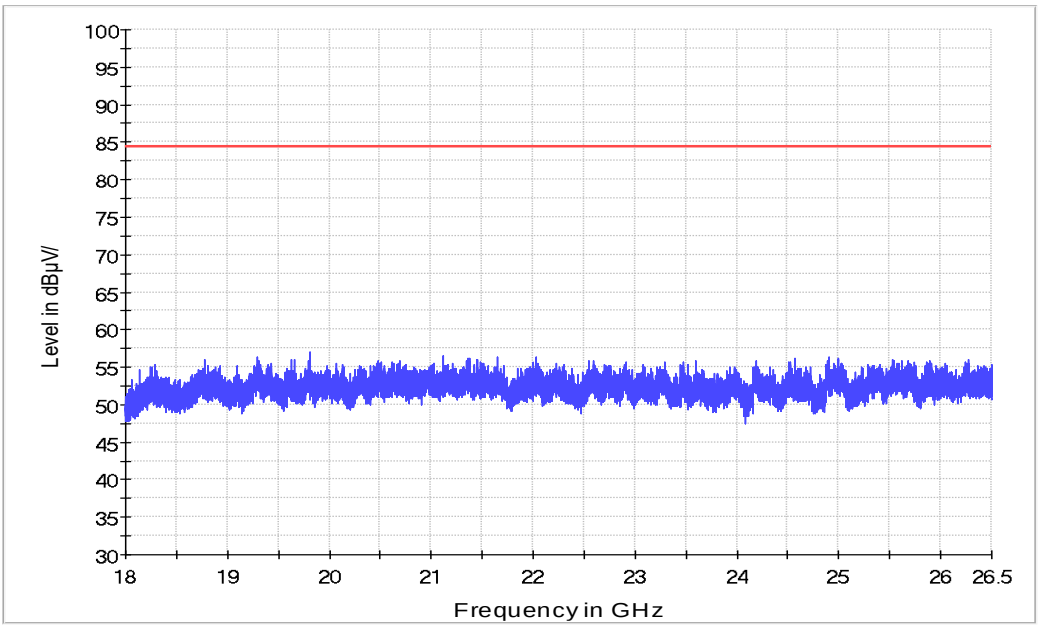
Configuration 1LTE+1SA_QPSK 3_QPSK(1GHz-3GHz)



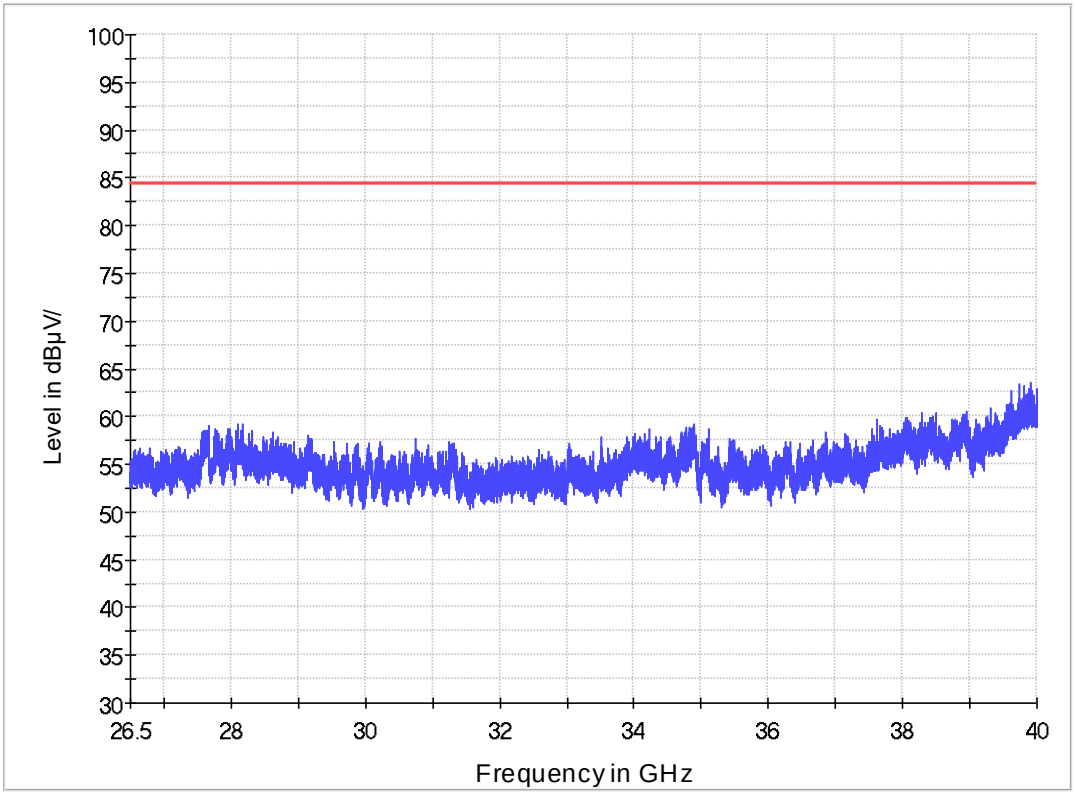
Configuration 1LTE+1SA_QPSK 3_QPSK(3GHz-18GHz)



Configuration 1LTE+1SA_QPSK 3_QPSK (18-26.5GHz)



Configuration 1LTE+1SA_QPSK 3_QPSK (26.5-40GHz)



A.6 Frequency Stability

A.6.1 Reference

FCC CFR 47 Part 2, Clause 2.1055
FCC CFR 47 Part 27, Clause 27.54
RSS-199, Clause 4.3

A.6.2 Method of measurement

Temperature Variation

The EUT was tested over the temperature range -30°C to +50°C in 10°C steps with -48 VDC Power Supply. At each temperature step, the Base Station was configured to transmit at maximum power with QPSK modulation on the bottom, middle and top channel of the operating band. After achieving thermal balance, the averages of 200 transmission bursts were measured and the result recorded.

Voltage Variation

The EUT was tested at the supplied voltages varied from 85 to 115 percent of the nominal values of -48 VDC. At +20°C, the Base Station was configured to transmit at maximum power with QPSK modulation on the bottom, middle and top channel of the operating band. The average of 200 transmission bursts was measured and the result recorded.

A.6.3 Measurement limit

The applicant shall ensure compliance with frequency stability requirements by showing that fL minus the frequency offset and fH plus the frequency offset is within the frequency range in which the equipment is designed to operate.

A.6.4 Measurement results

Frequency Error – Temperature Variation

Configuration WCDMA-1C,QPSK,Port D

Maximum Output Power 37.0dBm per port, Channel Bandwidth 5MHz

Supply Voltage DC(V)	Temperature	Frequency Stability (Hz)		
		Channel position B	Channel position M	Channel position T
48	-30	-0.75	0.41	-1.02
	-20	-0.64	-0.26	-0.71
	-10	-0.37	-0.42	0.22
	0	-0.19	0.29	-0.42
	10	-0.67	-0.35	0.12
	20	0.12	-0.18	-0.41
	30	-0.33	-0.34	0.33
	40	0.32	0.59	-0.28
	50	-0.72	-0.23	-0.45

Configuration LTE-MIMO-1C,QPSK,Port D

Maximum Output Power 37.0dBm per port, Channel Bandwidth 10MHz

Supply Voltage DC(V)	Temperature	Frequency Stability (Hz)		
		Channel position B	Channel position M	Channel position T
48	-30	-1.12	1.27	0.93
	-20	-0.98	-0.53	-0.69
	-10	-0.65	-0.30	-0.47
	0	-0.38	-0.24	-0.29
	10	-1.05	-0.43	-0.21
	20	-0.53	-0.11	-0.13
	30	-0.21	-0.16	-0.63
	40	-0.83	-0.38	-0.25
	50	-0.51	-0.42	-0.56

Configuration NB-IoT-Standalone-1C,QPSK,Port D

Maximum Output Power 33.0dBm per port, Channel Bandwidth 200KHz

Supply Voltage DC(V)	Temperature	Frequency Stability (Hz)		
		Channel position B	Channel position M	Channel position T
48	-30	-0.87	-1.01	-0.61
	-20	-0.74	-0.66	-0.21
	-10	-0.43	-0.37	-0.46
	0	-0.57	-0.35	-0.62
	10	-0.44	-0.21	-0.36
	20	-0.32	-0.19	-0.74
	30	-1.34	-0.21	-0.16
	40	-0.33	-1.20	-0.23
	50	-0.44	-0.28	-1.05

Configuration NR-MIMO-1C, QPSK, Port D

Maximum Output Power 37.0dBm per port, Channel Bandwidth 20MHz

Supply Voltage DC(V)	Temperature	Frequency Stability (Hz)		
		Channel position B	Channel position M	Channel position T
48	-30	0.59	0.27	0.44
	-20	-0.11	0.22	-0.19
	-10	-0.17	0.15	-0.27
	0	0.25	-0.13	-0.29
	10	0.23	0.22	0.03
	20	0.32	-0.16	0.14
	30	-0.14	-0.31	-0.25
	40	-0.17	0.11	0.38
	50	0.21	0.27	-0.07

Frequency Error – Voltage Variation

Configuration WCDMA-1C,QPSK,Port D

Maximum Output Power 37.0dBm per port, Channel Bandwidth 5MHz

Supply Voltage DC(V)	Temperature(°C)	Frequency Stability (Hz)		
		Channel position B	Channel position M	Channel position T
36	20	-0.32	-0.28	-0.46
58.5	20	-0.15	-0.22	-0.64

Configuration LTE-MIMO-1C,QPSK,Port D

Maximum Output Power 37.0dBm per port, Channel Bandwidth 10MHz

Supply Voltage DC(V)	Temperature(°C)	Frequency Stability (Hz)		
		Channel position B	Channel position M	Channel position T
36	20	-0.12	-0.26	-0.51
58.5	20	-0.13	-0.32	-0.15

Configuration NB-IoT-Standalone-1C,QPSK,Port D

Maximum Output Power 33.0dBm per port, Channel Bandwidth 200KHz

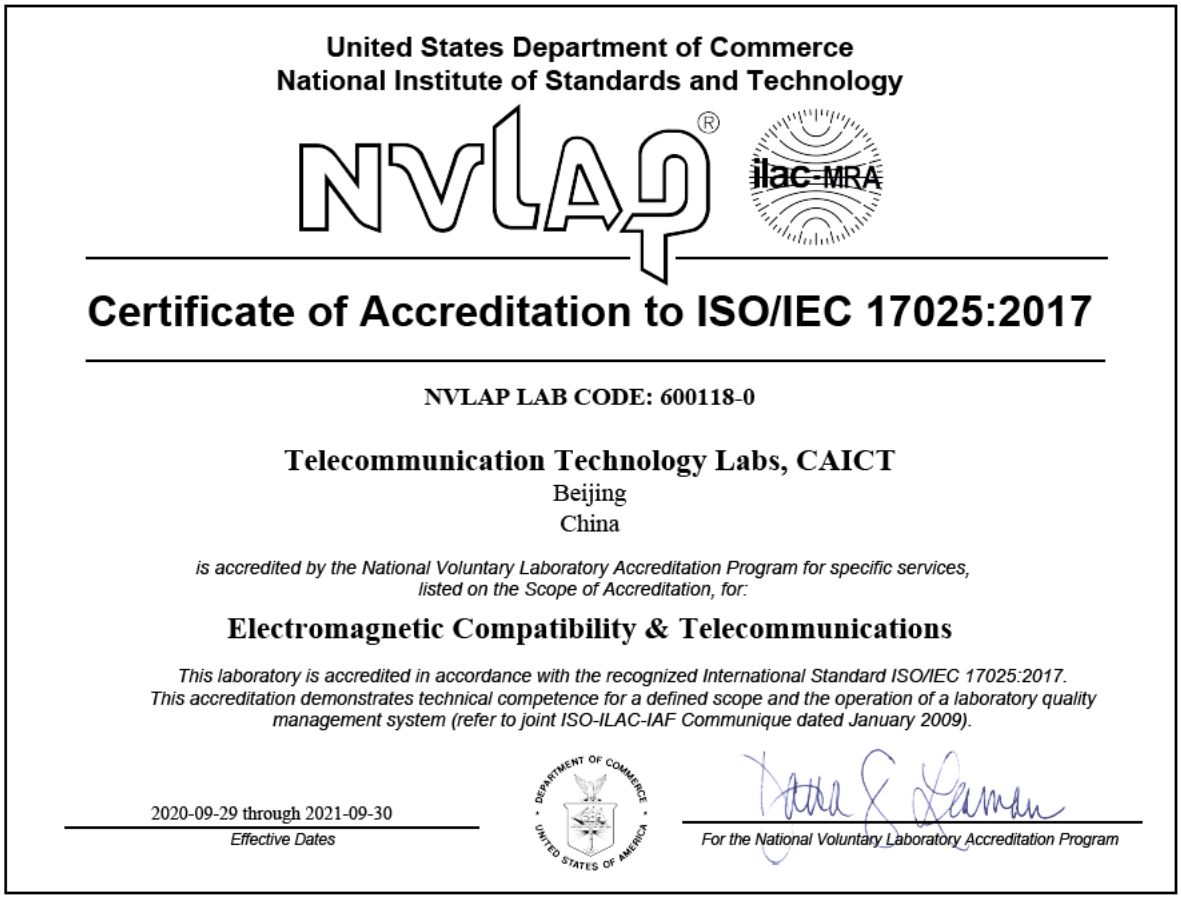
Supply Voltage DC(V)	Temperature(°C)	Frequency Stability (Hz)		
		Channel position B	Channel position M	Channel position T
36	20	-0.58	-0.15	-0.74
58.5	20	-0.72	-0.83	-0.68

Configuration NR-MIMO-1C, QPSK, Port D

Maximum Output Power 37.0dBm per port, Channel Bandwidth 20MHz

Supply Voltage DC(V)	Temperature(°C)	Frequency Stability (Hz)		
		Channel position B	Channel position M	Channel position T
36	20	-0.53	-0.37	-0.21
58.5	20	-0.31	-0.46	-0.22

ANNEX B: Accreditation Certificate



United States Department of Commerce
National Institute of Standards and Technology

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Certificate of Accreditation to ISO/IEC 17025:2017

NVLAP LAB CODE: 600118-0

Telecommunication Technology Labs, CAICT
Beijing
China

is accredited by the National Voluntary Laboratory Accreditation Program for specific services, listed on the Scope of Accreditation, for:

Electromagnetic Compatibility & Telecommunications

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer to joint ISO-ILAC-IAF Communique dated January 2009).

2020-09-29 through 2021-09-30
Effective Dates

DEPARTMENT OF COMMERCE · UNITED STATES OF AMERICA

For the National Voluntary Laboratory Accreditation Program

*****END OF REPORT*****