

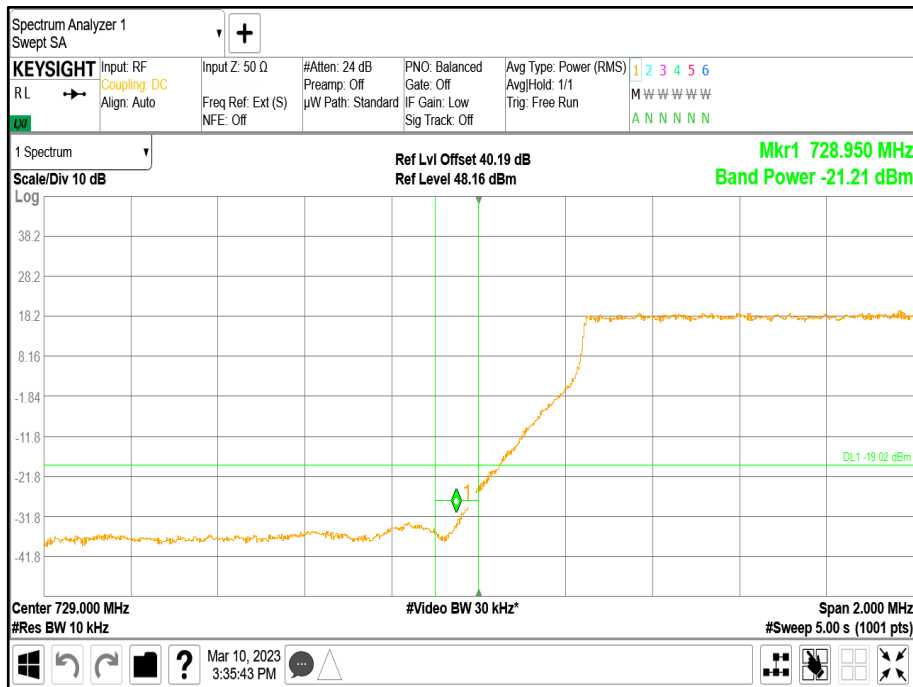


Configuration 2

Maximum Output Power 47.80 dBm

Antenna	LTE Modulation	LTE Carrier Bandwidth	Band Edge (MHz)	
			Channel Position B	Channel Position T
2	64QAM	5.0 MHz	731.5+736.5	742.5+737.5

Antenna 2 - LTE Modulation 64QAM - LTE Carrier Bandwidth 5.0 MHz - Channel Position B





Antenna 2 - LTE Modulation 64QAM - LTE Carrier Bandwidth 5.0 MHz - Channel Position T



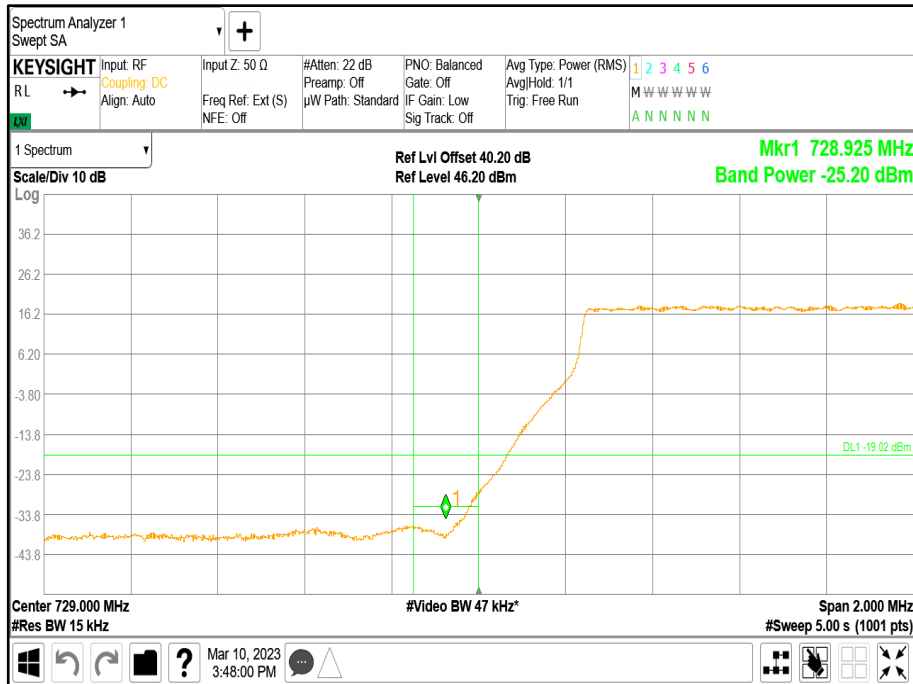
Configuration 3

Maximum Output Power 47.80 dBm

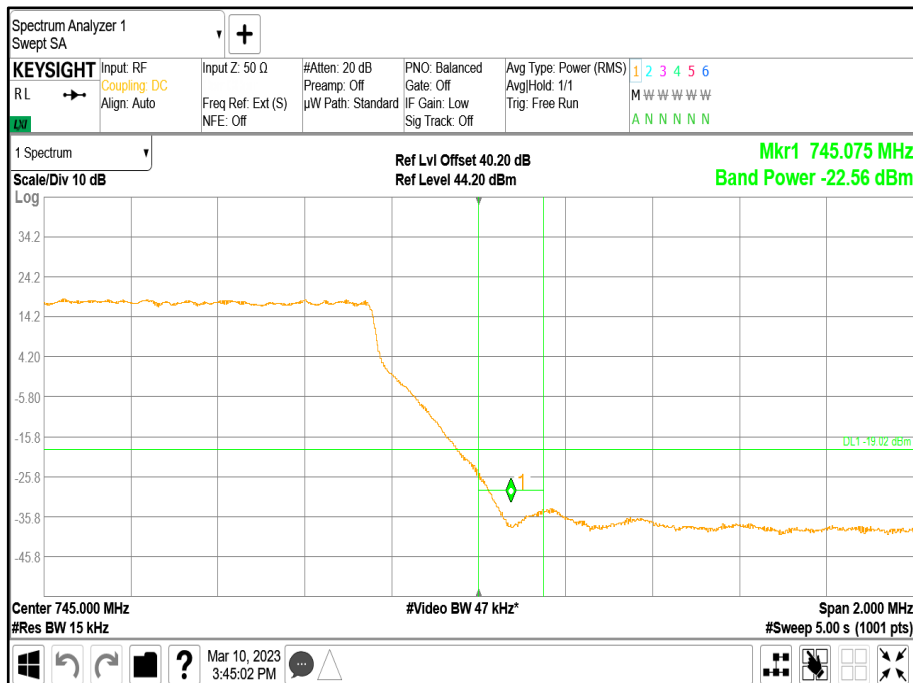
Antenna	LTE Modulation	LTE Carrier Bandwidth	Band Edge (MHz)	
			Channel Position B	Channel Position T
2	64QAM	5.0 MHz	731.5+736.5+741.5	742.5+737.5+732.5



Antenna 2 - LTE Modulation 64QAM - LTE Carrier Bandwidth 5.0 MHz - Channel Position B



Antenna 2 - LTE Modulation 64QAM - LTE Carrier Bandwidth 5.0 MHz - Channel Position T



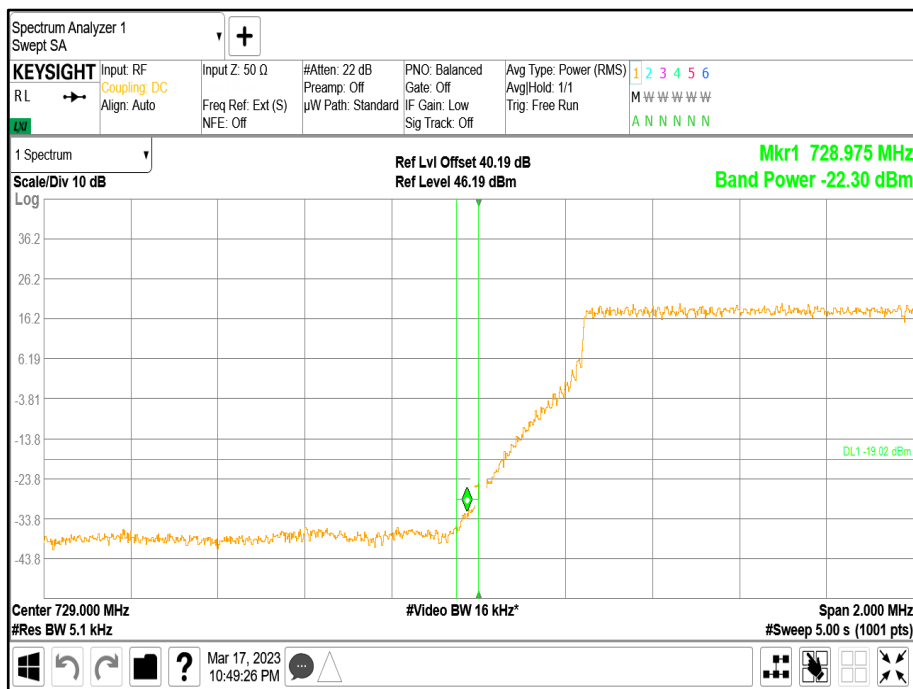


Configuration 4

Maximum Output Power 47.80 dBm

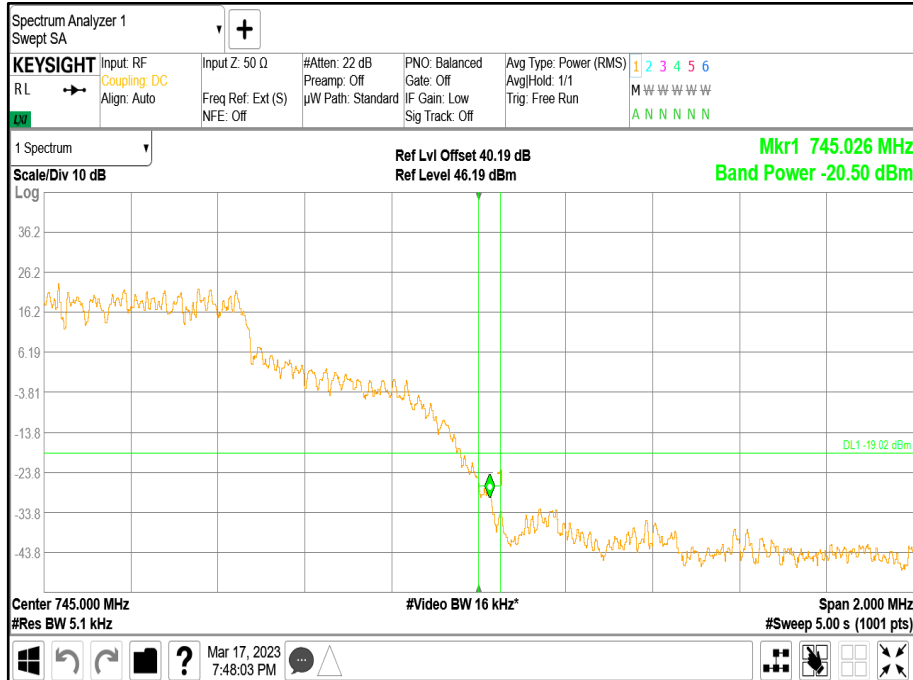
Antenna	NR Modulation	NR Carrier Bandwidth	Band Edge (MHz)	
			Channel Position B	Channel Position T
2	QPSK	5.0 MHz 15 kHz SCS	731.5	742.5
2	QPSK	10.0 MHz 30 kHz SCS	734.0	740.0
2	QPSK	15.0 MHz 30 kHz SCS	736.5	737.5

Antenna 2 - NR Modulation QPSK - NR Carrier Bandwidth 5.0 MHz 15 kHz SCS - Channel Position B

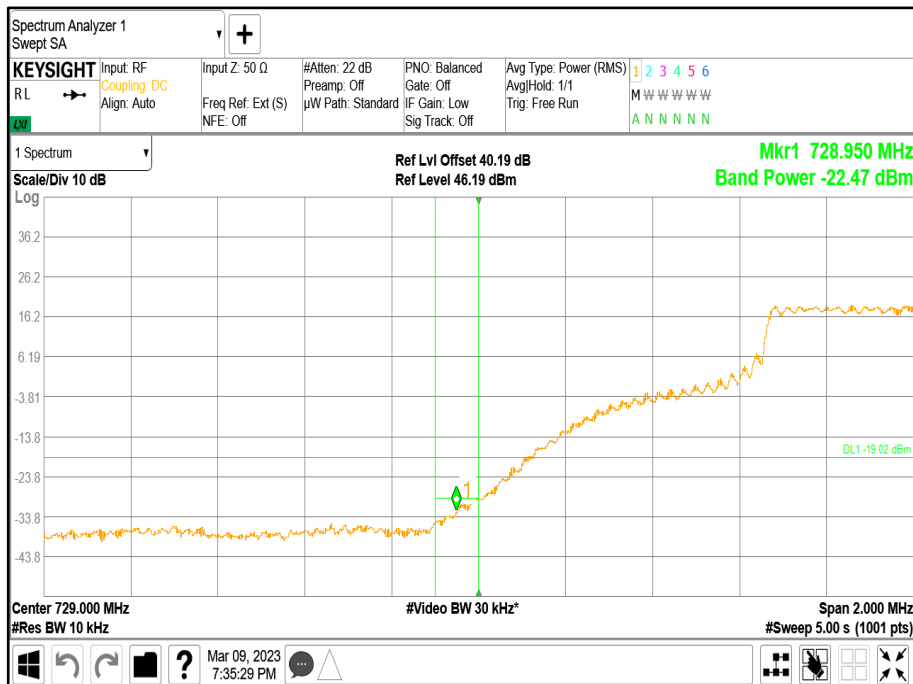




Antenna 2 - NR Modulation QPSK - NR Carrier Bandwidth 5.0 MHz 15 kHz SCS - Channel Position T

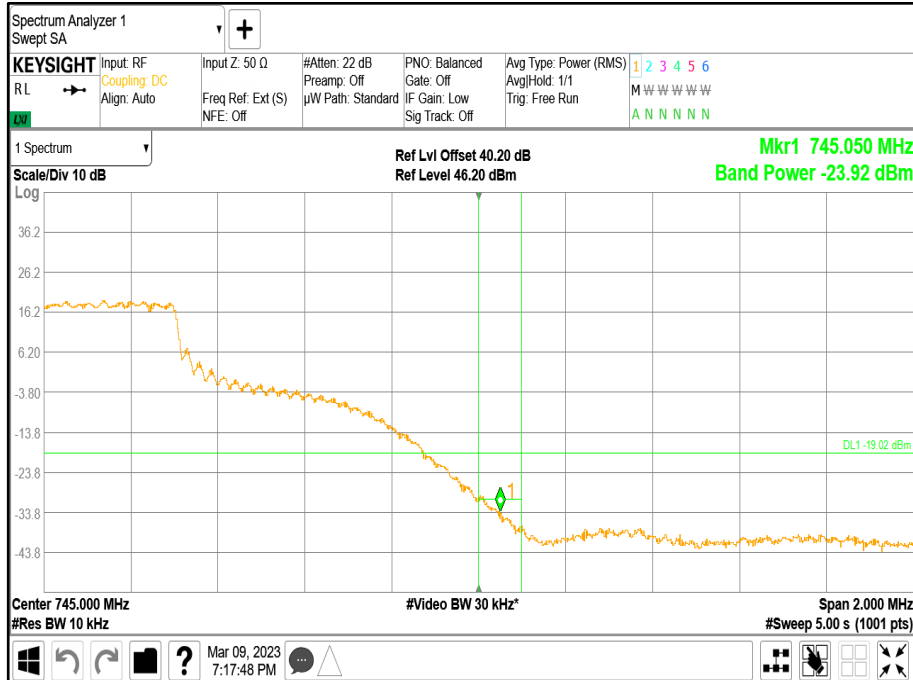


Antenna 2 - NR Modulation QPSK - NR Carrier Bandwidth 10.0 MHz 30 kHz SCS - Channel Position B

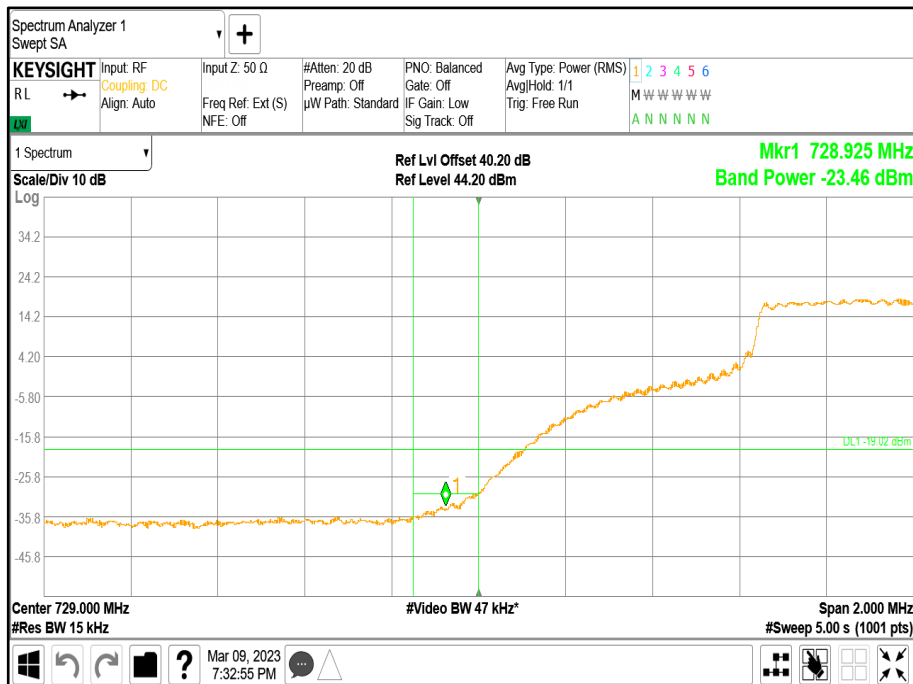




Antenna 2 - NR Modulation QPSK - NR Carrier Bandwidth 10.0 MHz 30 kHz SCS - Channel Position T



Antenna 2 - NR Modulation QPSK - NR Carrier Bandwidth 15.0 MHz 30 kHz SCS - Channel Position B





Antenna 2 - NR Modulation QPSK - NR Carrier Bandwidth 15.0 MHz 30 kHz SCS - Channel Position T



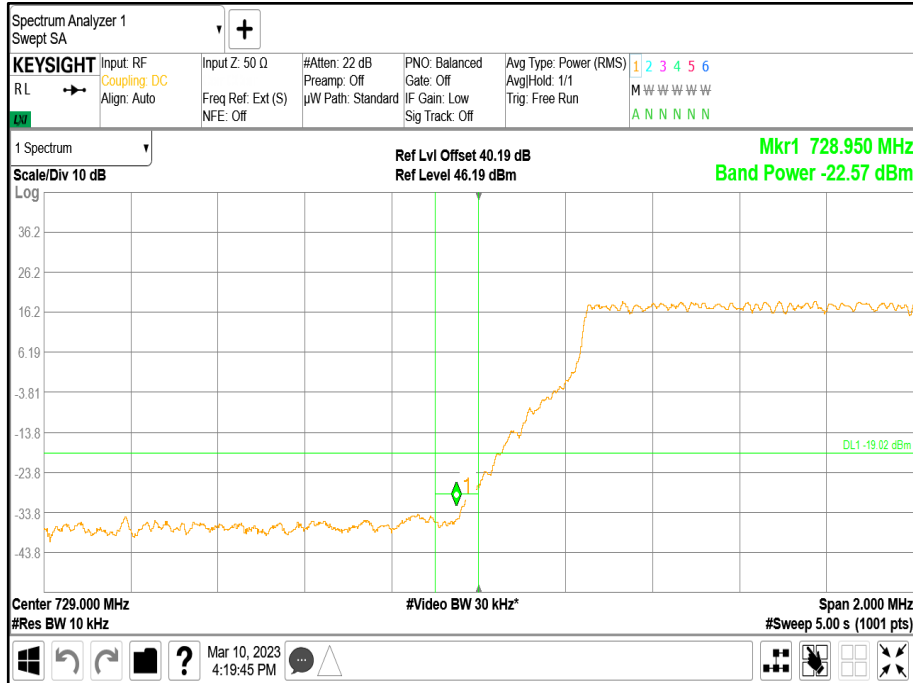
Configuration 5

Maximum Output Power 47.80 dBm

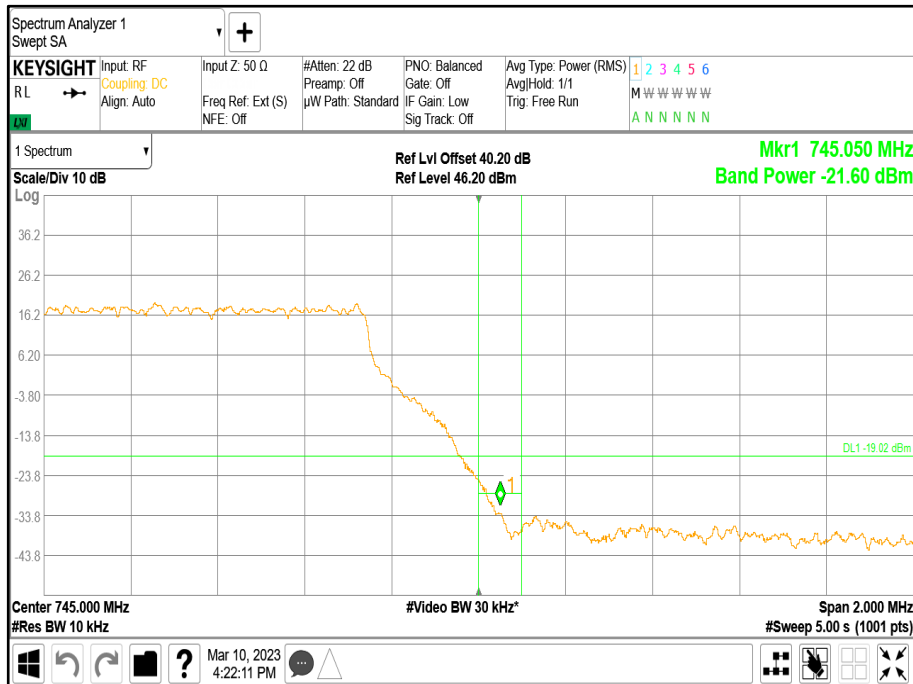
Antenna	NR Modulation	NR Carrier Bandwidth	Band Edge (MHz)	
			Channel Position B	Channel Position T
2	QPSK	5.0 MHz 15 kHz SCS	731.5+736.5	742.5+737.5



Antenna 2 - NR Modulation QPSK - NR Carrier Bandwidth 5.0 MHz 15 kHz SCS - Channel Position B



Antenna 2 - NR Modulation QPSK - NR Carrier Bandwidth 5.0 MHz 15 kHz SCS - Channel Position T



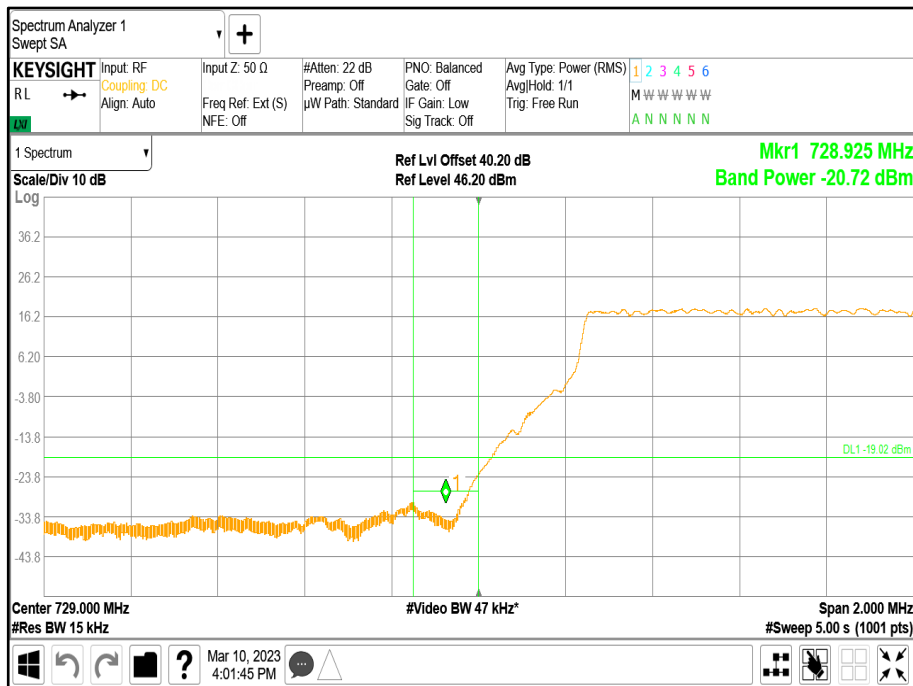


Configuration 6

Maximum Output Power 47.80 dBm

Antenna	NR Modulation	NR Carrier Bandwidth	Band Edge (MHz)	
			Channel Position B	Channel Position T
2	QPSK	5.0 MHz 15 kHz SCS	731.5+736.5+741.5	742.5+737.5+732.5

Antenna 2 - NR Modulation QPSK - NR Carrier Bandwidth 5.0 MHz 15 kHz SCS - Channel Position B





Antenna 2 - NR Modulation QPSK - NR Carrier Bandwidth 5.0 MHz 15 kHz SCS - Channel Position T



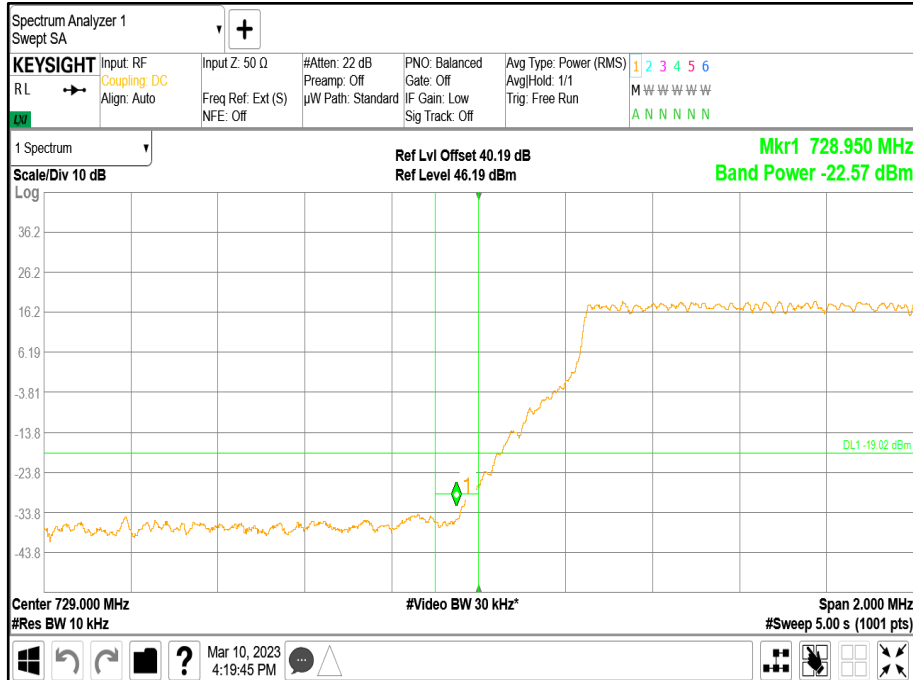
Configuration 7

Maximum Output Power 47.80 dBm

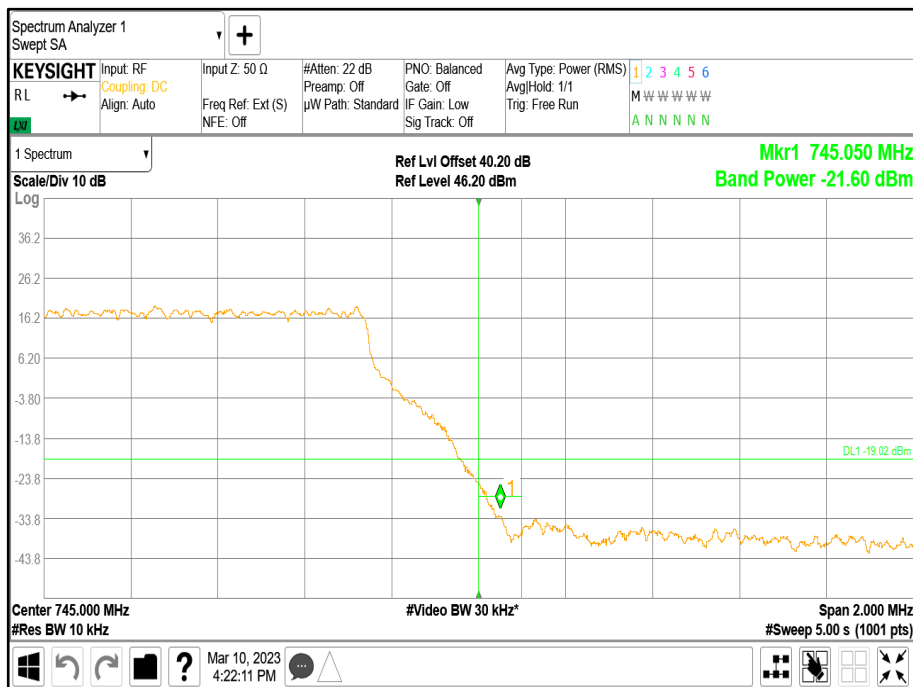
Antenna	LTE / NR Modulation	LTE / NR Carrier Bandwidth	Band Edge (MHz)	
			Channel Position B _{RFBW}	Channel Position T _{RFBW}
2.00	64QAM /QPSK	L 5.0 MHz 15 kHz SCS: N 10.0 MHz 30 kHz SCS	734+741.5	734+741.5



Antenna 2.00 - LTE / NR Modulation 64QAM /QPSK - LTE / NR Carrier Bandwidth L 5.0 MHz
15 kHz SCS: N 10.0 MHz 30 kHz SCS - Channel Position B<<SS>>RFBW<<SS>>



Antenna 2.00 - LTE / NR Modulation 64QAM /QPSK - LTE / NR Carrier Bandwidth L 5.0 MHz
15 kHz SCS: N 10.0 MHz 30 kHz SCS - Channel Position T<<SS>>RFBW<<SS>>



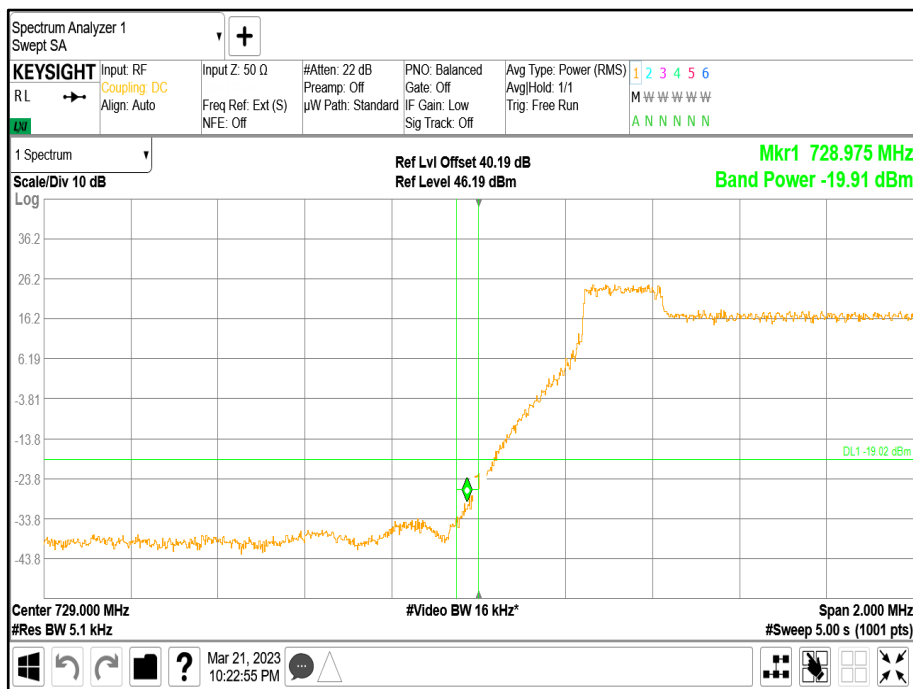


Configuration 8

Maximum Output Power 47.80 dBm

Antenna	NB-IoT IB / NR Modulation	NB-IoT IB / NR Carrier Bandwidth	Band Edge (MHz)	
			Channel Position B	Channel Position T
2	QPSK	5.00 MHz	731.5	742.5
2	QPSK	10.00 MHz	734.0	740.0
2	QPSK	15.00 MHz	736.5	737.5

Antenna 2 - NB-IoT IB / NR Modulation QPSK - NB-IoT IB / NR Carrier Bandwidth 5.00 MHz - Channel Position B

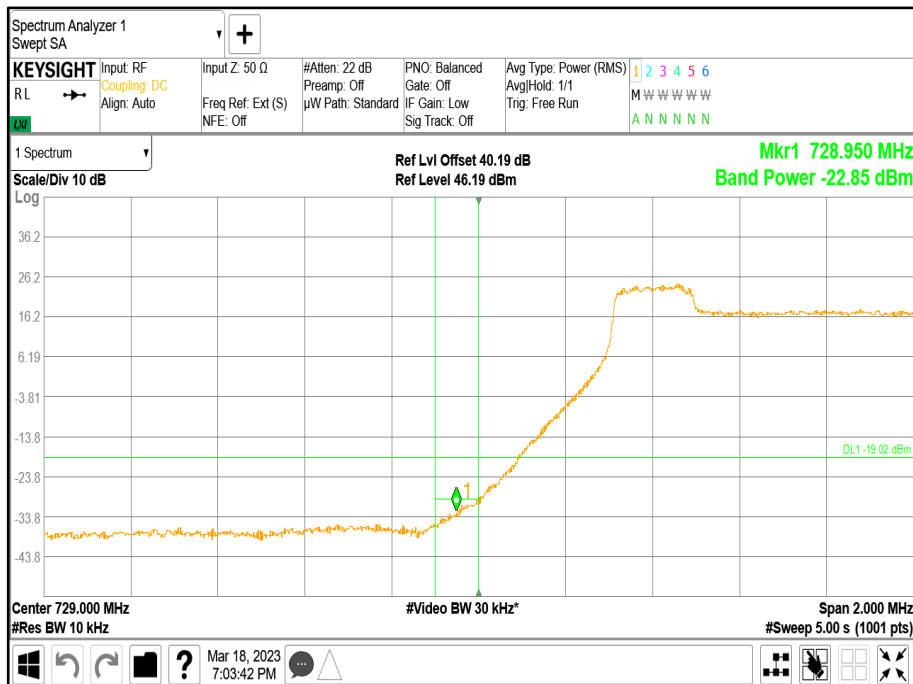




Antenna 2 - NB-IoT IB / NR Modulation QPSK - NB-IoT IB / NR Carrier Bandwidth 5.00 MHz - Channel Position T

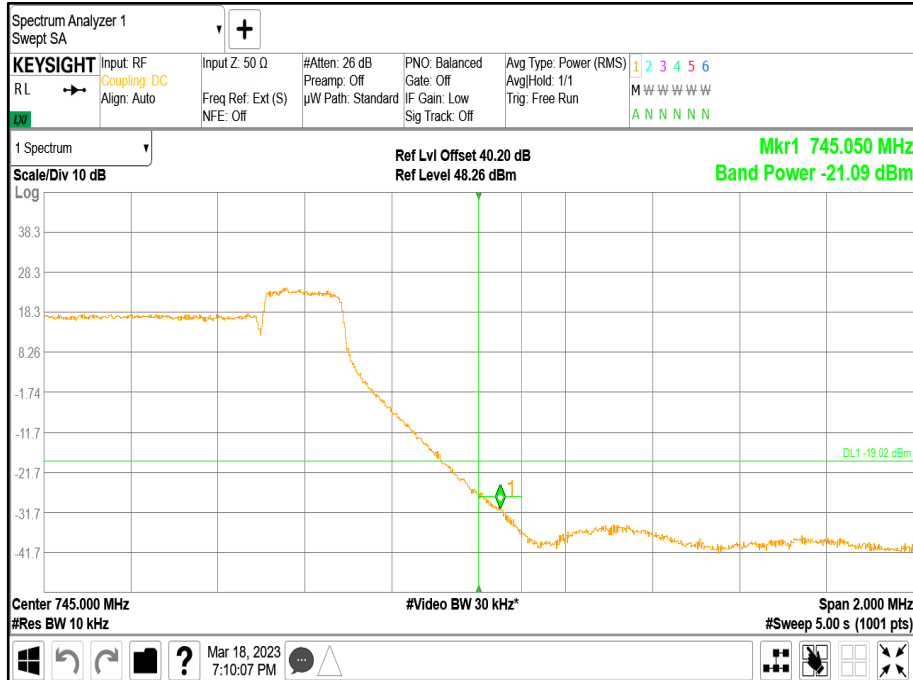


Antenna 2 - NB-IoT IB / NR Modulation QPSK - NB-IoT IB / NR Carrier Bandwidth 10.00 MHz - Channel Position B

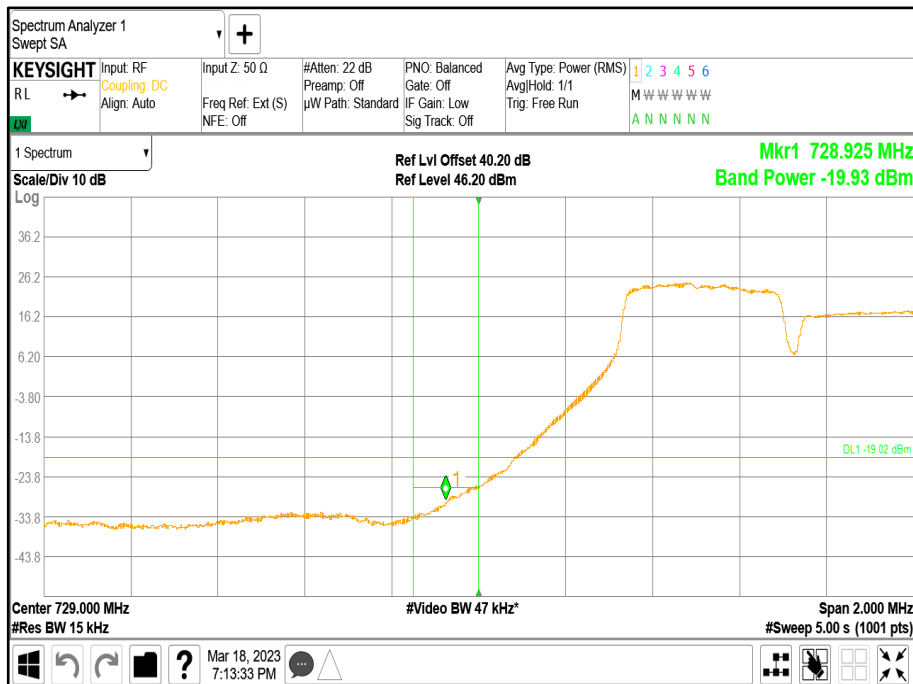




Antenna 2 - NB-IoT IB / NR Modulation QPSK - NB-IoT IB / NR Carrier Bandwidth 10.00 MHz - Channel Position T



Antenna 2 - NB-IoT IB / NR Modulation QPSK - NB-IoT IB / NR Carrier Bandwidth 15.00 MHz - Channel Position B





Antenna 2 - NB-IoT IB / NR Modulation QPSK - NB-IoT IB / NR Carrier Bandwidth 15.00 MHz - Channel Position T



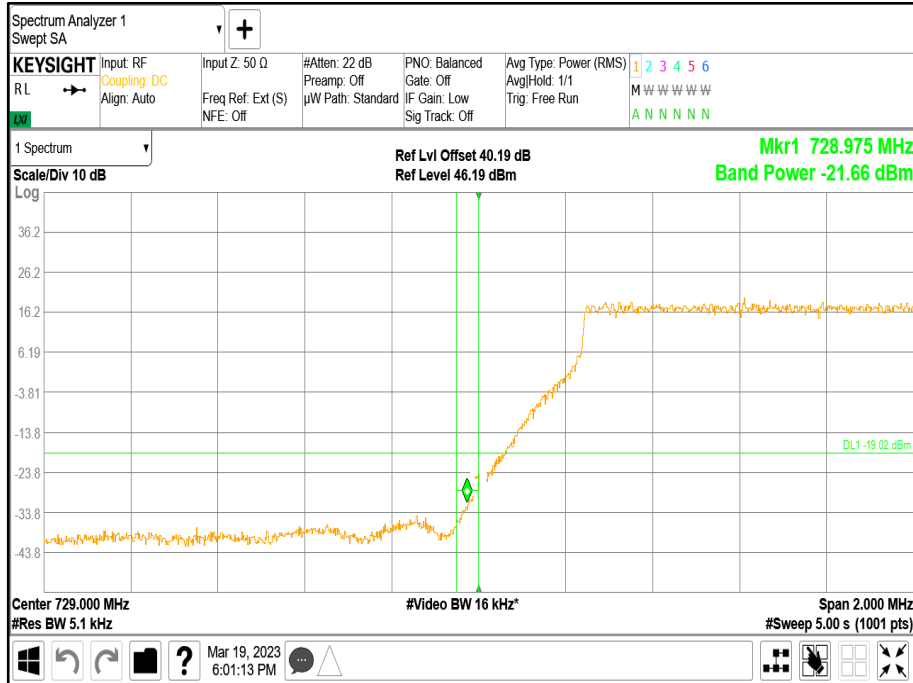
Configuration 9

Maximum Output Power 47.80 dBm

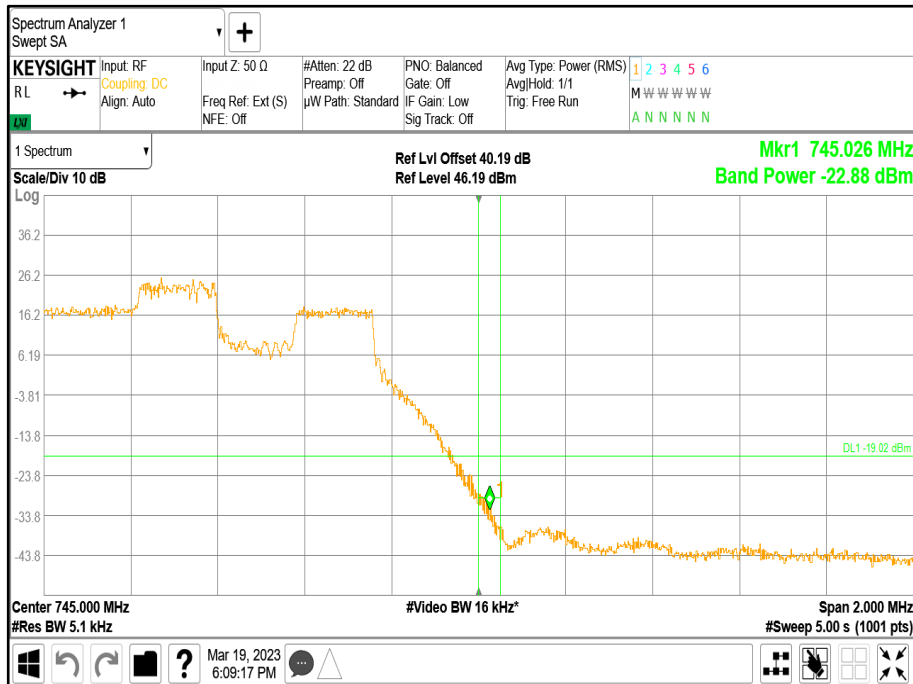
Antenna	LTE / NB-IoT IB Modulation	LTE / NB-IoT IB Carrier Bandwidth	Band Edge (MHz)	
			Channel Position B	Channel Position T
2	QPSK	5.0 MHz	731.5	742.5



Antenna 2 - LTE / NB-IoT IB Modulation QPSK - LTE / NB-IoT IB Carrier Bandwidth 5.0 MHz - Channel Position B



Antenna 2 - LTE / NB-IoT IB Modulation QPSK - LTE / NB-IoT IB Carrier Bandwidth 5.0 MHz - Channel Position T



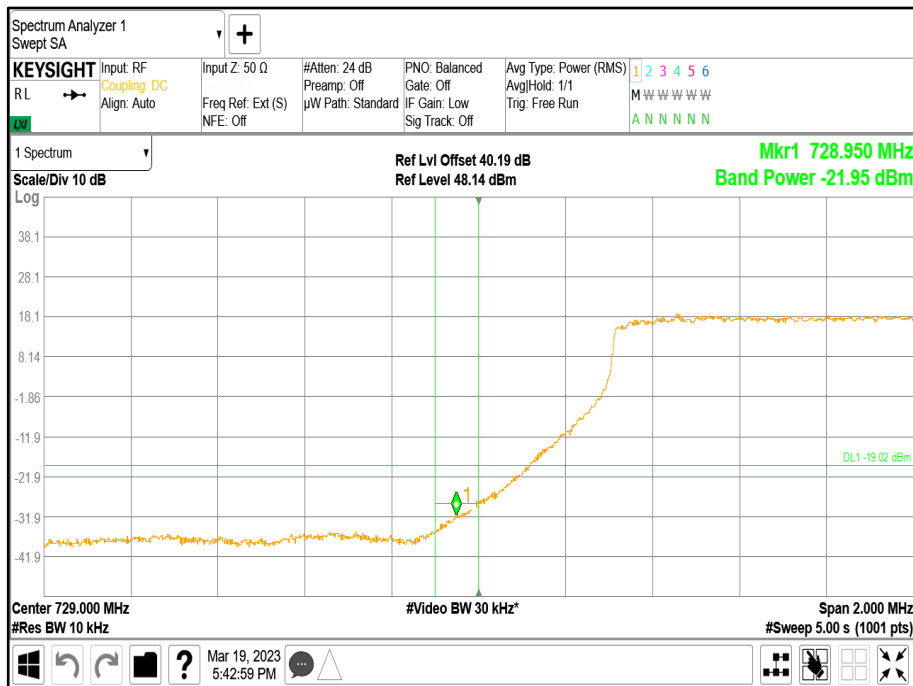


Configuration 10

Maximum Output Power 47.80 dBm

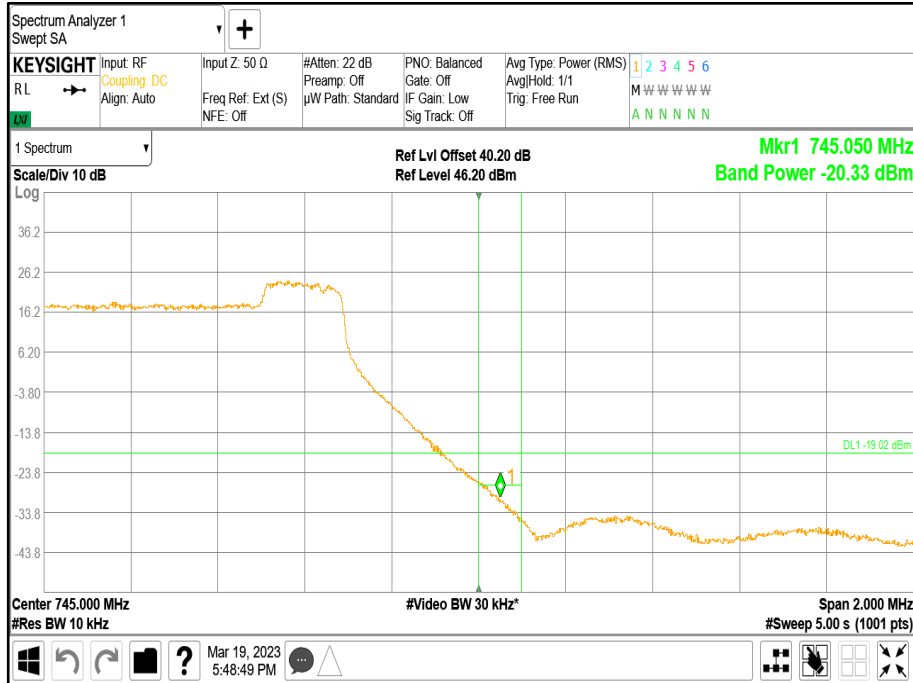
Antenna	LTE / NB-IoT GB Modulation	LTE / NB-IoT GB Carrier Bandwidth	Band Edge (MHz)	
			Channel Position B	Channel Position T
2	QPSK	10.00 MHz	734.0	740.0

Antenna 2 - LTE / NB-IoT GB Modulation QPSK - LTE / NB-IoT GB Carrier Bandwidth 10.00 MHz - Channel Position B





Antenna 2 - LTE / NB-IoT GB Modulation QPSK - LTE / NB-IoT GB Carrier Bandwidth 10.00 MHz - Channel Position T



Limit	-19 dBm
-------	---------



2.4 TRANSMITTER SPURIOUS EMISSIONS

2.4.1 Specification Reference

FCC CFR 47 Part 27, Clause 27.53
ISED RSS-130, Clause 4.7
FCC CFR 47 Part 2, Clause 2.1051

2.4.2 Date of Test and Modification State

13, 14, 15, 16, 19 and 22-March-2023 - Modification State 0

2.4.3 Test Equipment Used

The major items of test equipment used for the above tests are identified in Section 3.1.

2.4.4 Environmental Conditions

Ambient Temperature	22.0 - 22.6°C
Relative Humidity	37.8 - 39.5%

2.4.5 Test Method

All measurements were made in accordance with FCC KDB 971168 D01, Clause 6.1.

Each antenna port has been declared as being equivalent, therefore measurements were made on one antenna port only. To account for this, the limit was tightened by $10 * \text{Log}(N)$, where N is equal to the number of MIMO antenna ports.

For the number of ports, the limit was calculated as being $-13 \text{ dBm} - 10 * \text{Log}(4) = -19 \text{ dBm}$.

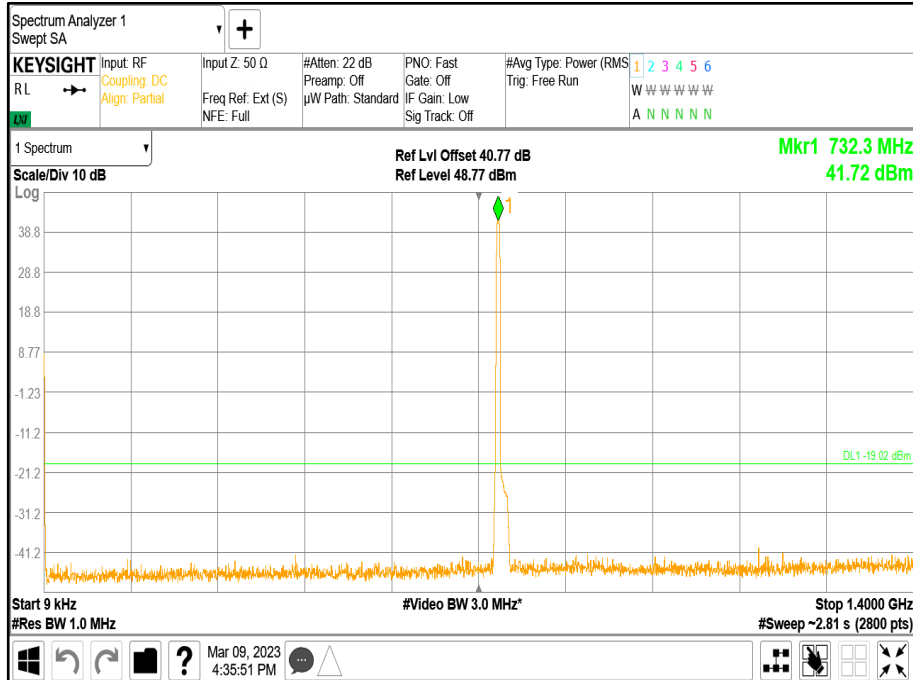
2.4.6 Test Results

Configuration 1

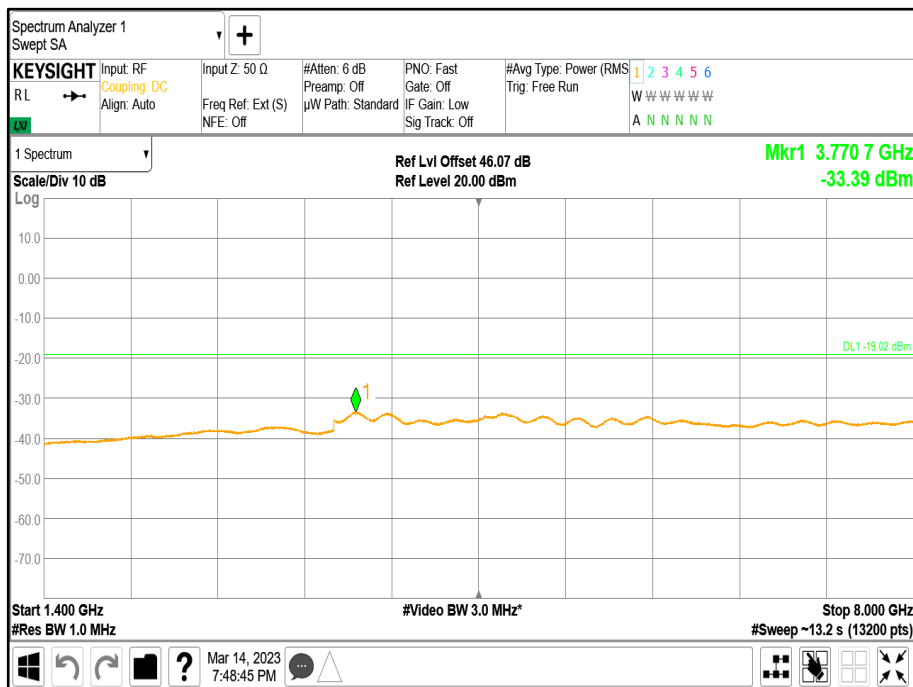
Maximum Output Power 47.80 dBm



Antenna 2 - LTE Modulation 64QAM - LTE Carrier Bandwidth 5.0 MHz - Channel Position B - Band 1 - Range 0.009 to 1400 MHz

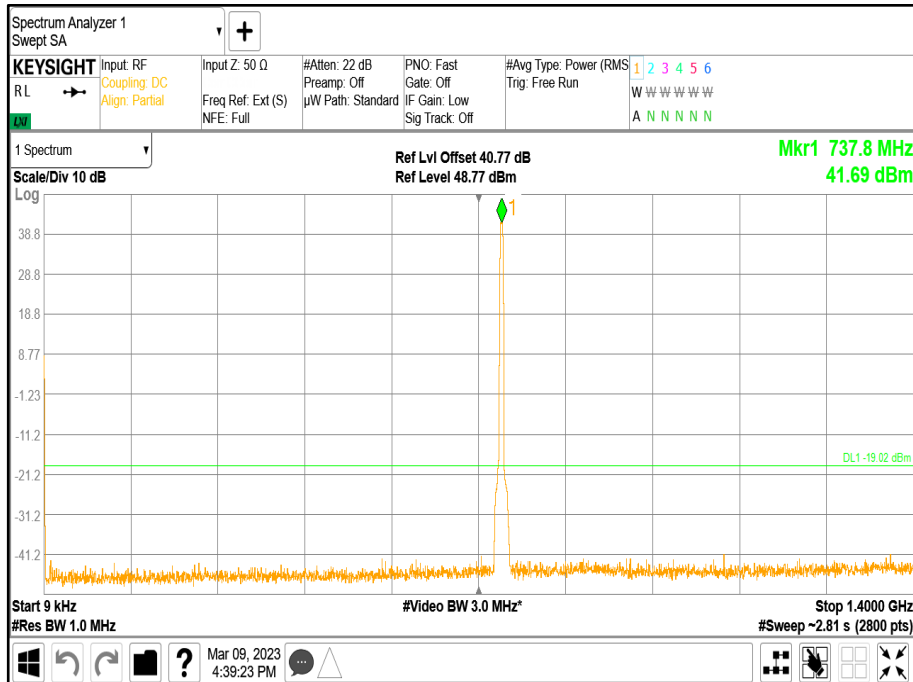


Antenna 2 - LTE Modulation 64QAM - LTE Carrier Bandwidth 5.0 MHz - Channel Position B - Band 2 - Range 1400 to 8000 MHz

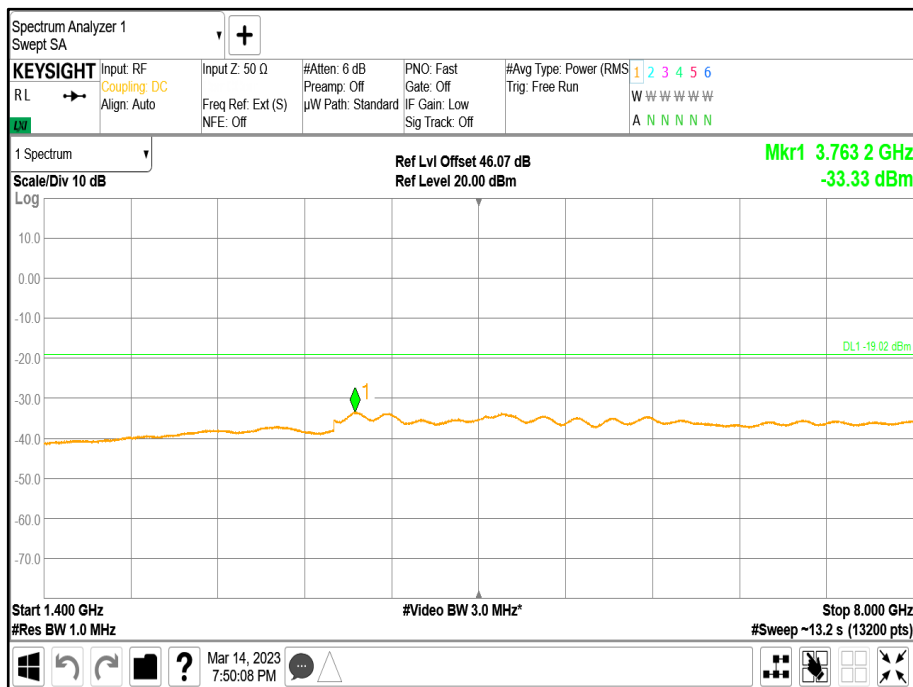




Antenna 2 - LTE Modulation 64QAM - LTE Carrier Bandwidth 5.0 MHz - Channel Position M - Band 1 - Range 0.009 to 1400 MHz

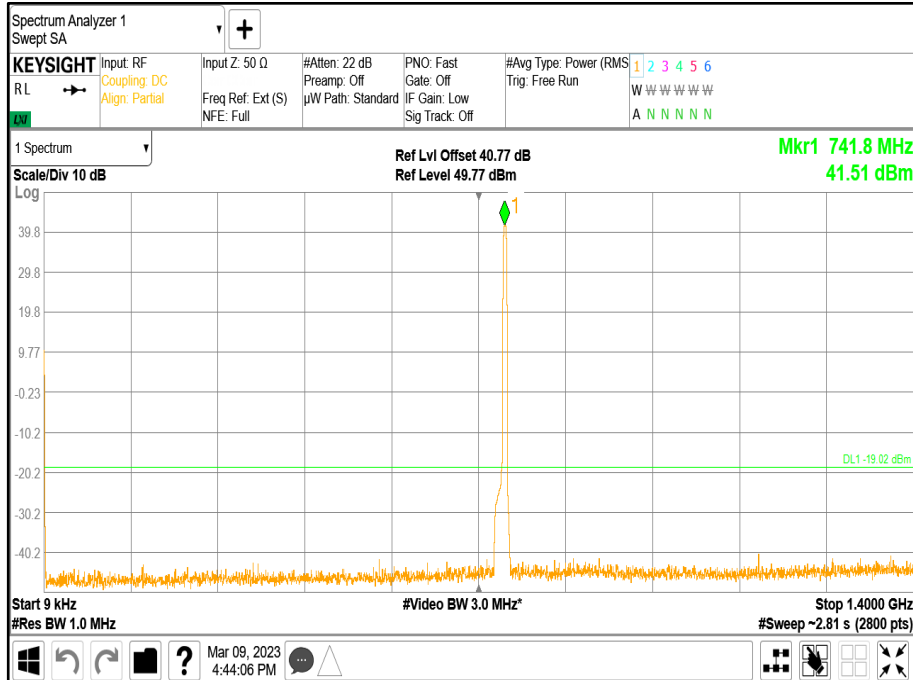


Antenna 2 - LTE Modulation 64QAM - LTE Carrier Bandwidth 5.0 MHz - Channel Position M - Band 2 - Range 1400 to 8000 MHz

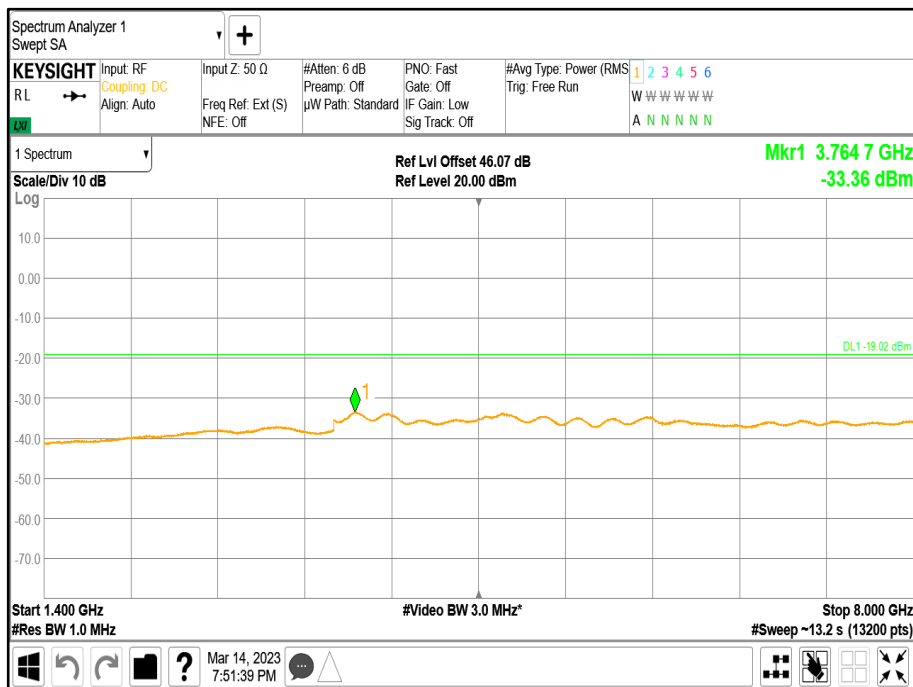




Antenna 2 - LTE Modulation 64QAM - LTE Carrier Bandwidth 5.0 MHz - Channel Position T - Band 1 - Range 0.009 to 1400 MHz

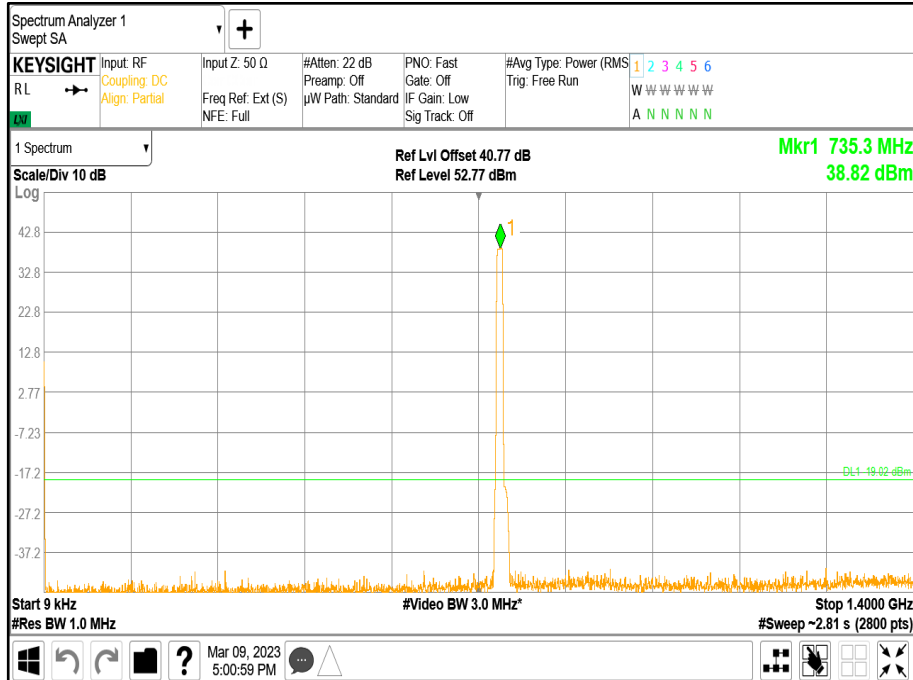


Antenna 2 - LTE Modulation 64QAM - LTE Carrier Bandwidth 5.0 MHz - Channel Position T - Band 2 - Range 1400 to 8000 MHz

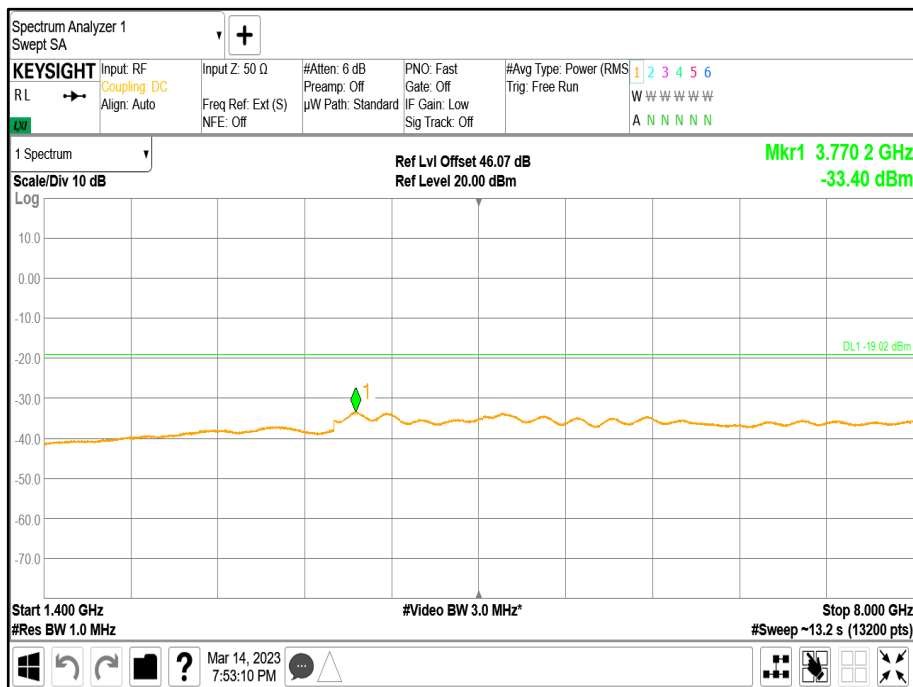




Antenna 2 - LTE Modulation 64QAM - LTE Carrier Bandwidth 10.0 MHz - Channel Position B - Band 1 - Range 0.009 to 1400 MHz

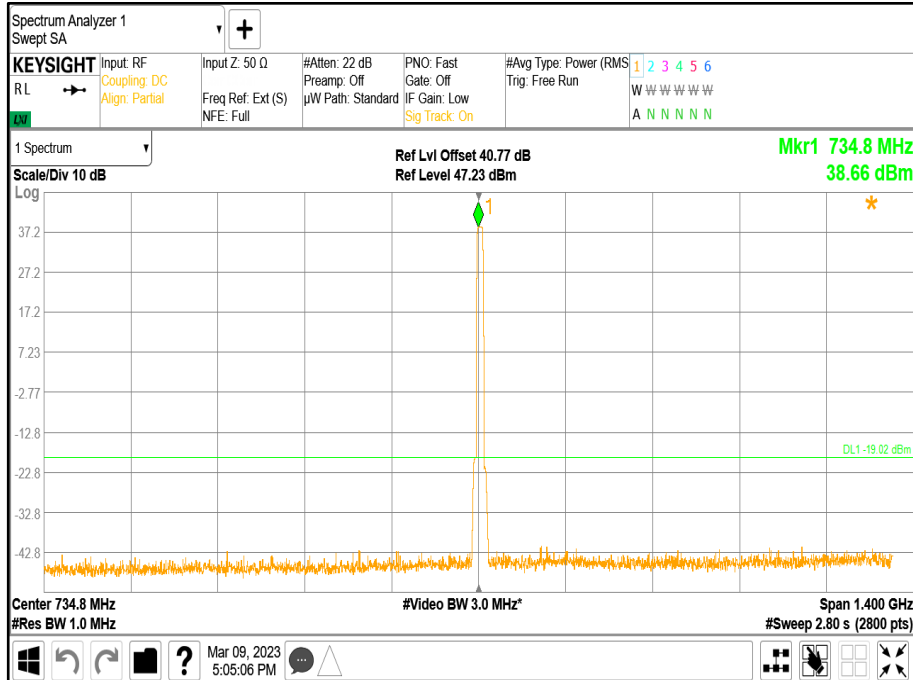


Antenna 2 - LTE Modulation 64QAM - LTE Carrier Bandwidth 10.0 MHz - Channel Position B - Band 2 - Range 1400 to 8000 MHz

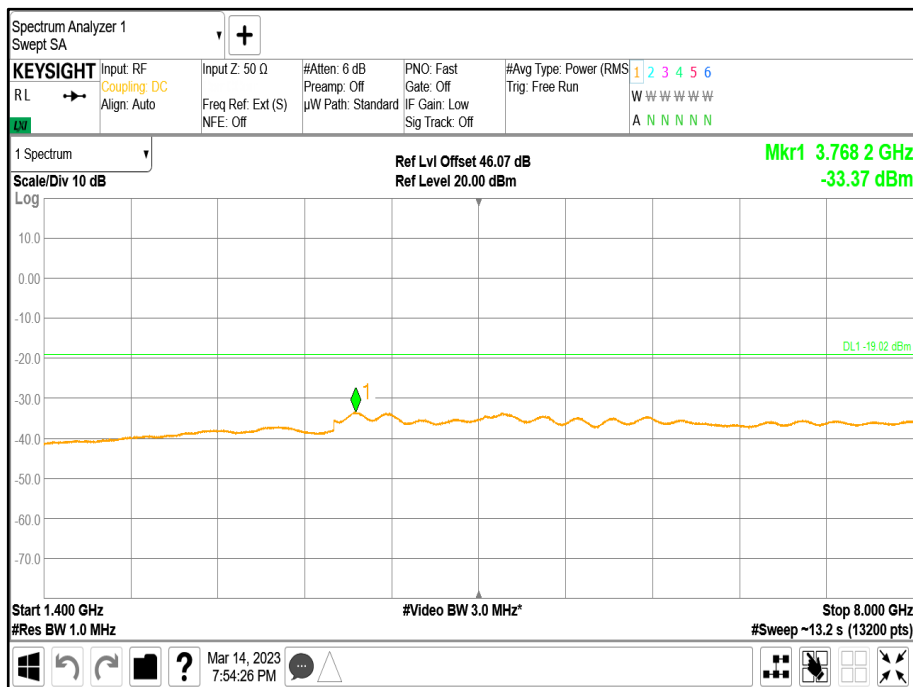




Antenna 2 - LTE Modulation 64QAM - LTE Carrier Bandwidth 10.0 MHz - Channel Position M - Band 1 - Range 0.009 to 1400 MHz

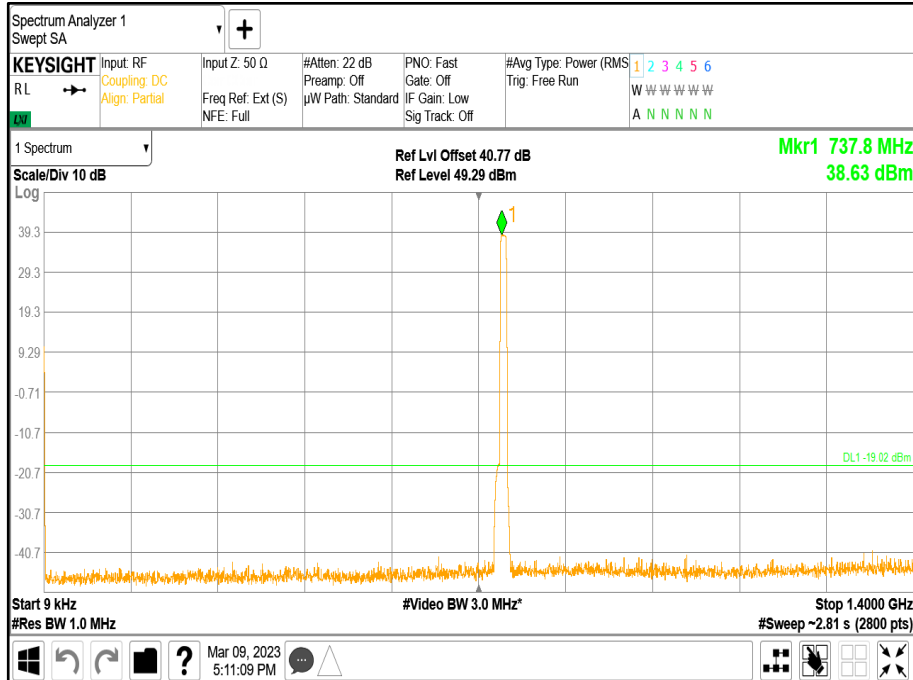


Antenna 2 - LTE Modulation 64QAM - LTE Carrier Bandwidth 10.0 MHz - Channel Position M - Band 2 - Range 1400 to 8000 MHz

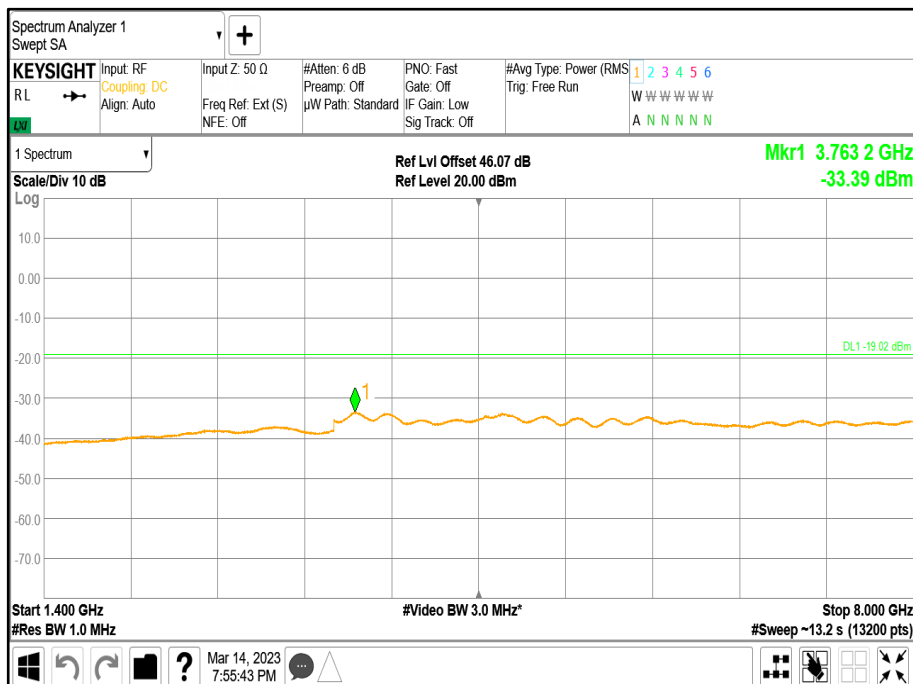




Antenna 2 - LTE Modulation 64QAM - LTE Carrier Bandwidth 10.0 MHz - Channel Position T - Band 1 - Range 0.009 to 1400 MHz



Antenna 2 - LTE Modulation 64QAM - LTE Carrier Bandwidth 10.0 MHz - Channel Position T - Band 2 - Range 1400 to 8000 MHz

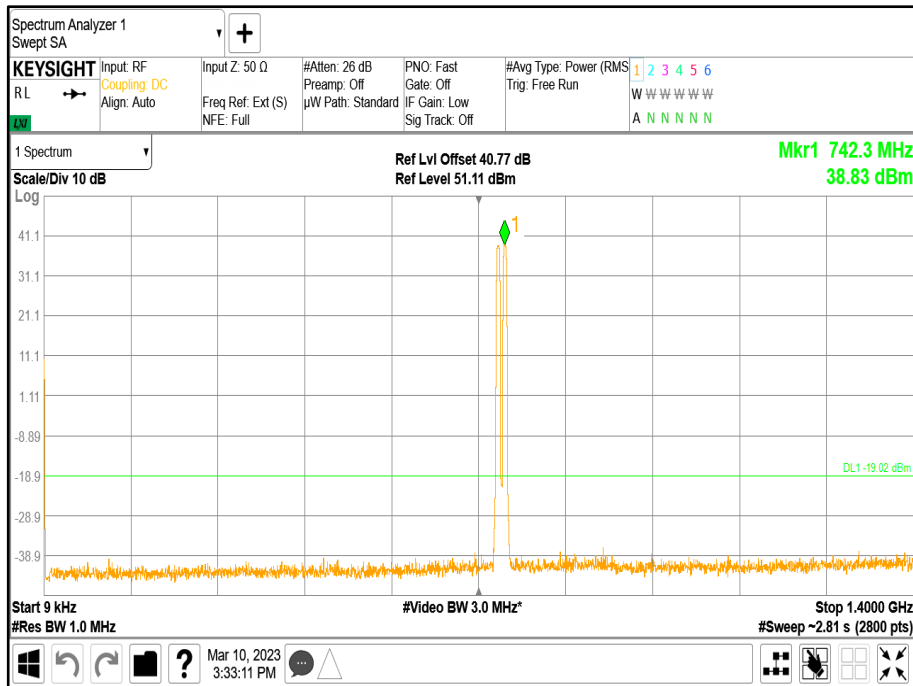




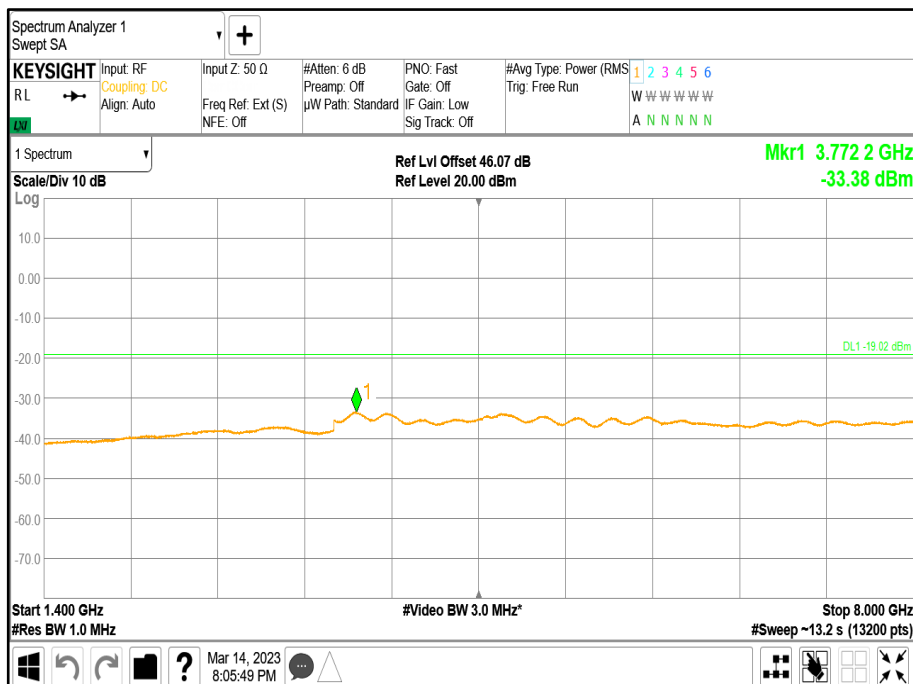
Configuration 2

Maximum Output Power 47.80 dBm

Antenna 2 - LTE Modulation 64QAM - LTE Carrier Bandwidth 5.0 MHz - Channel Position M - Band 1 - Range 0.009 to 1400 MHz



Antenna 2 - LTE Modulation 64QAM - LTE Carrier Bandwidth 5.0 MHz - Channel Position M - Band 2 - Range 1400 to 8000 MHz

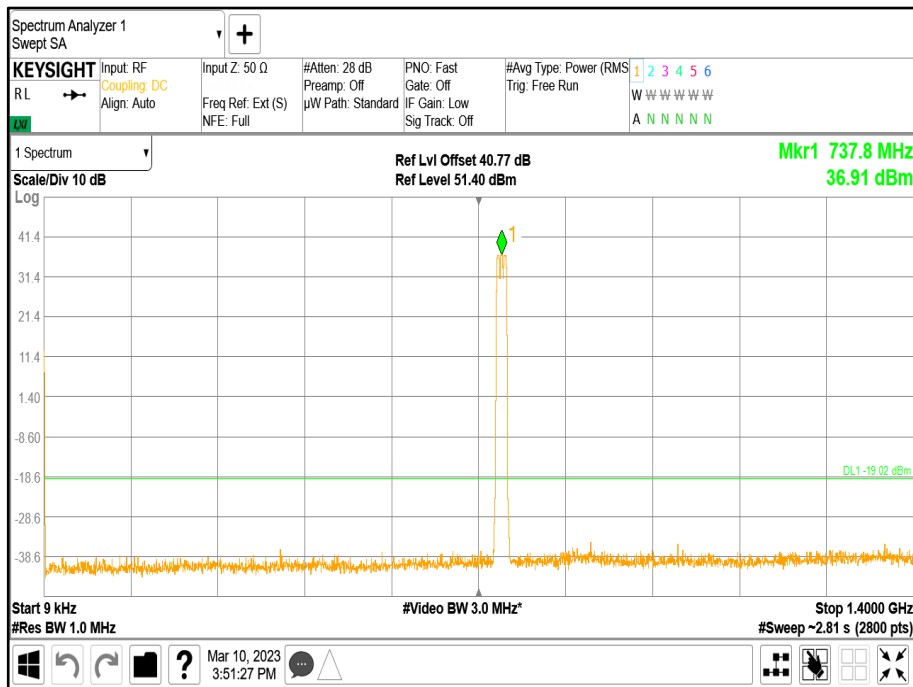




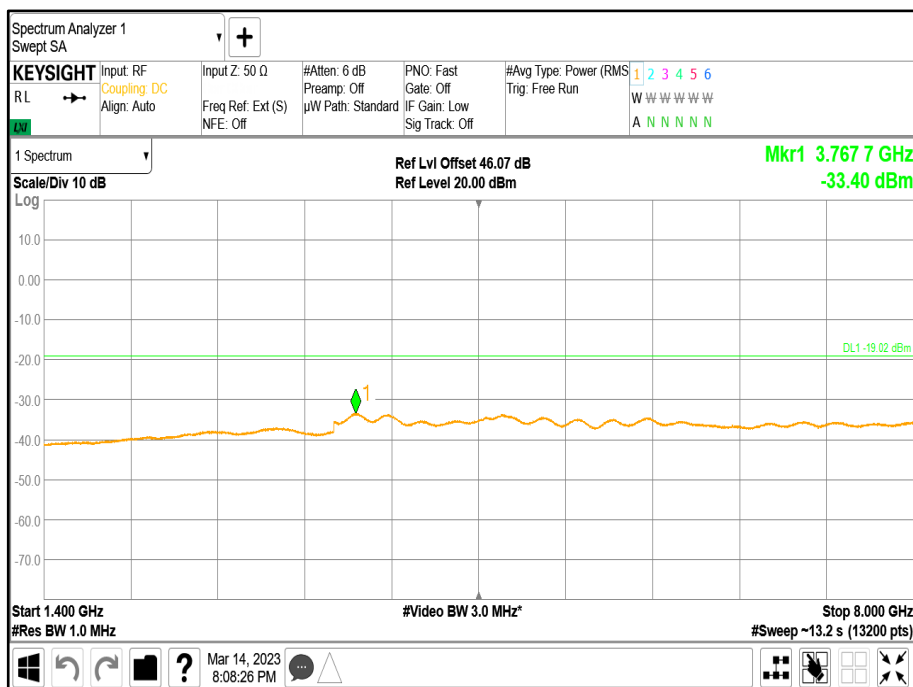
Configuration 3

Maximum Output Power 47.80 dBm

Antenna 2 - LTE Modulation 64QAM - LTE Carrier Bandwidth 5.0 MHz - Channel Position M - Band 1 - Range 0.009 to 1400 MHz



Antenna 2 - LTE Modulation 64QAM - LTE Carrier Bandwidth 5.0 MHz - Channel Position M - Band 2 - Range 1400 to 8000 MHz

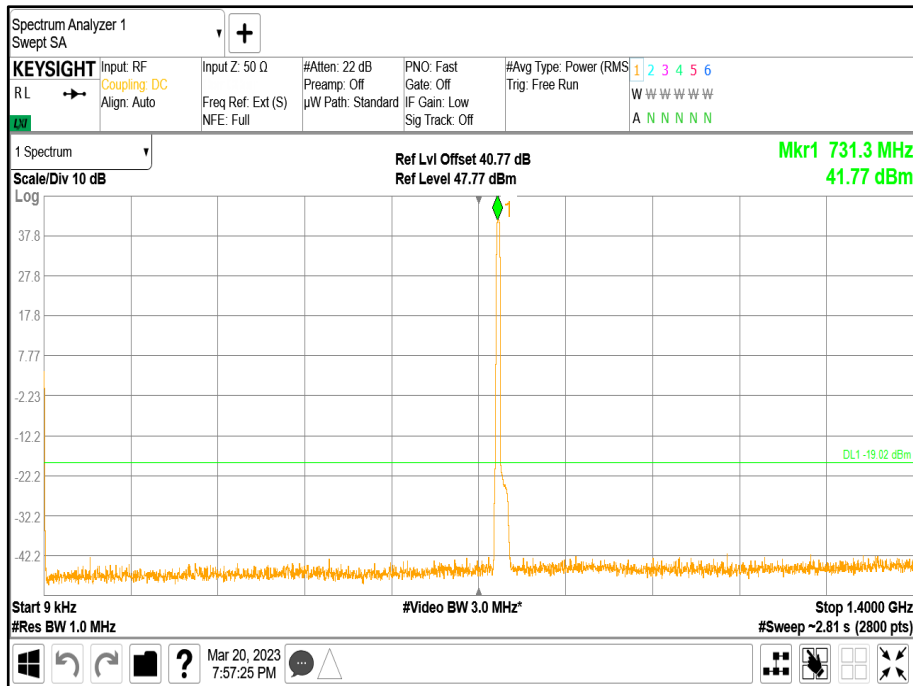




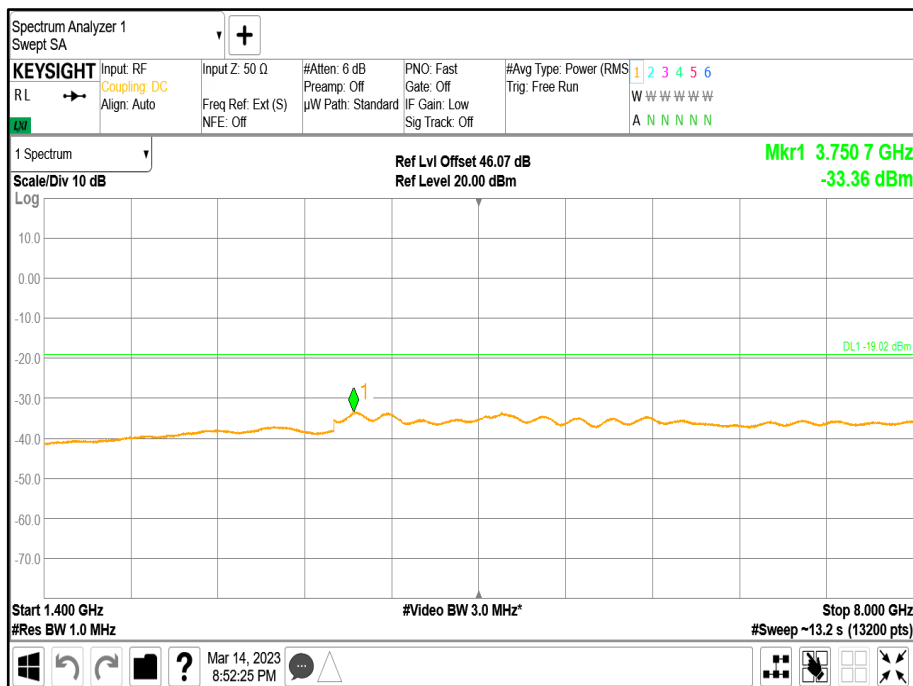
Configuration 4

Maximum Output Power 47.80 dBm

Antenna 2 - NR Modulation QPSK - NR Carrier Bandwidth 5.0 MHz 15 kHz SCS - Channel Position B - Band 1 - Range 0.009 to 1400 MHz

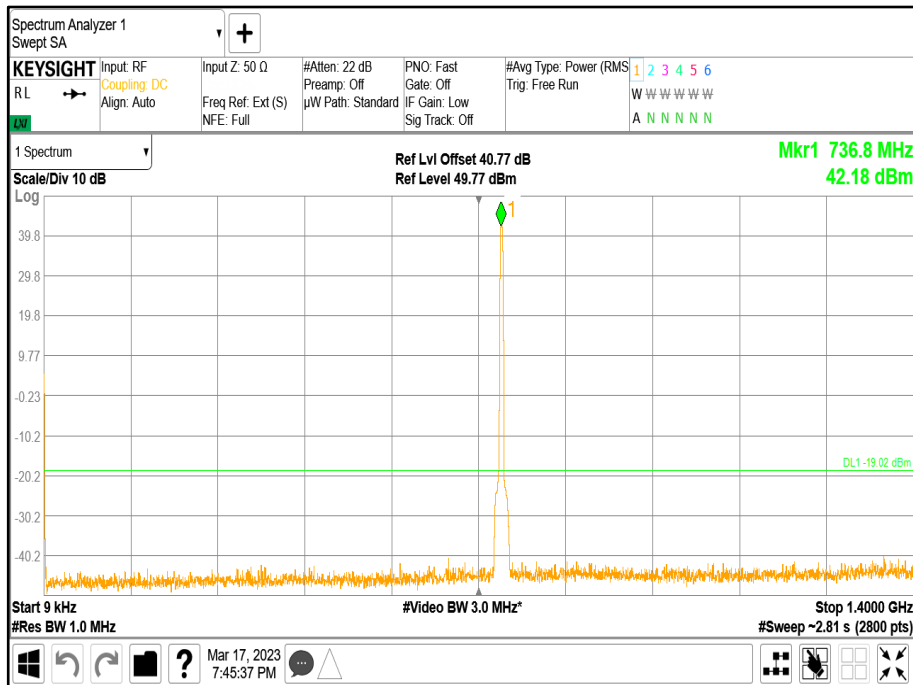


Antenna 2 - NR Modulation QPSK - NR Carrier Bandwidth 5.0 MHz 15 kHz SCS - Channel Position B - Band 2 - Range 1400 to 8000 MHz

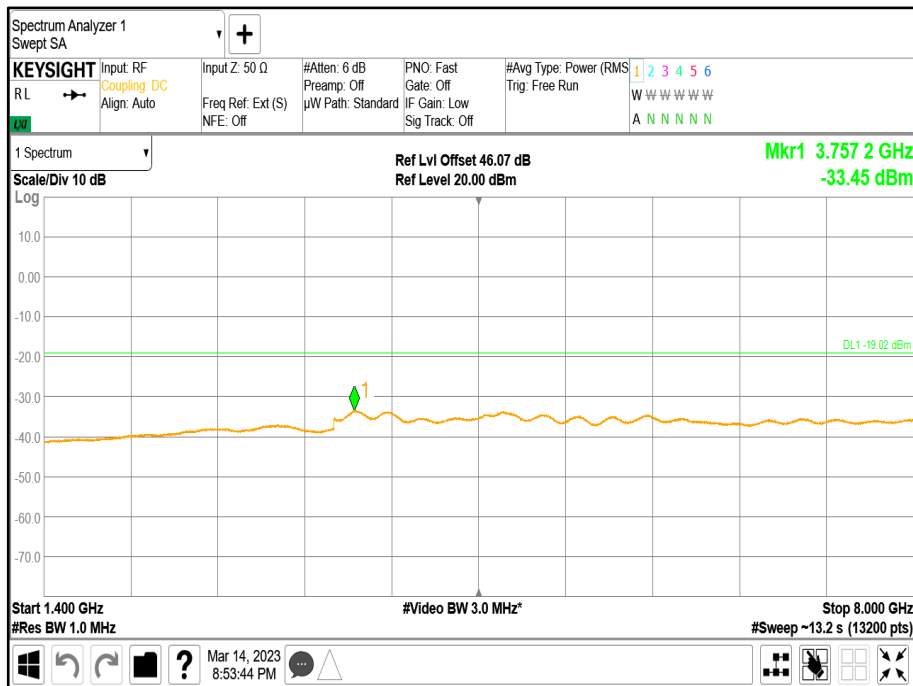




Antenna 2 - NR Modulation QPSK - NR Carrier Bandwidth 5.0 MHz 15 kHz SCS - Channel Position M - Band 1 - Range 0.009 to 1400 MHz

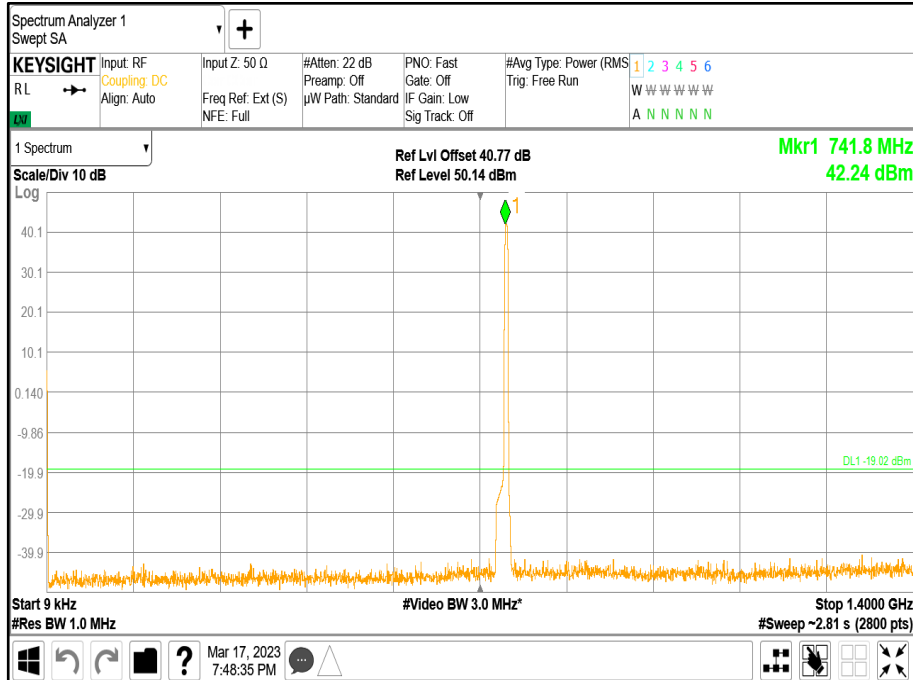


Antenna 2 - NR Modulation QPSK - NR Carrier Bandwidth 5.0 MHz 15 kHz SCS - Channel Position M - Band 2 - Range 1400 to 8000 MHz

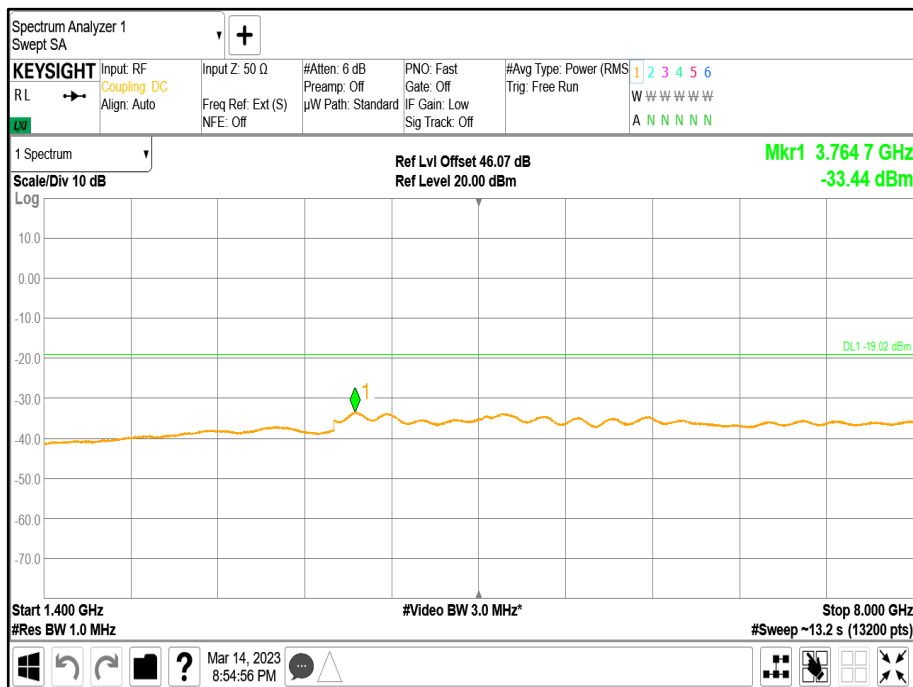




Antenna 2 - NR Modulation QPSK - NR Carrier Bandwidth 5.0 MHz 15 kHz SCS - Channel Position T - Band 1 - Range 0.009 to 1400 MHz

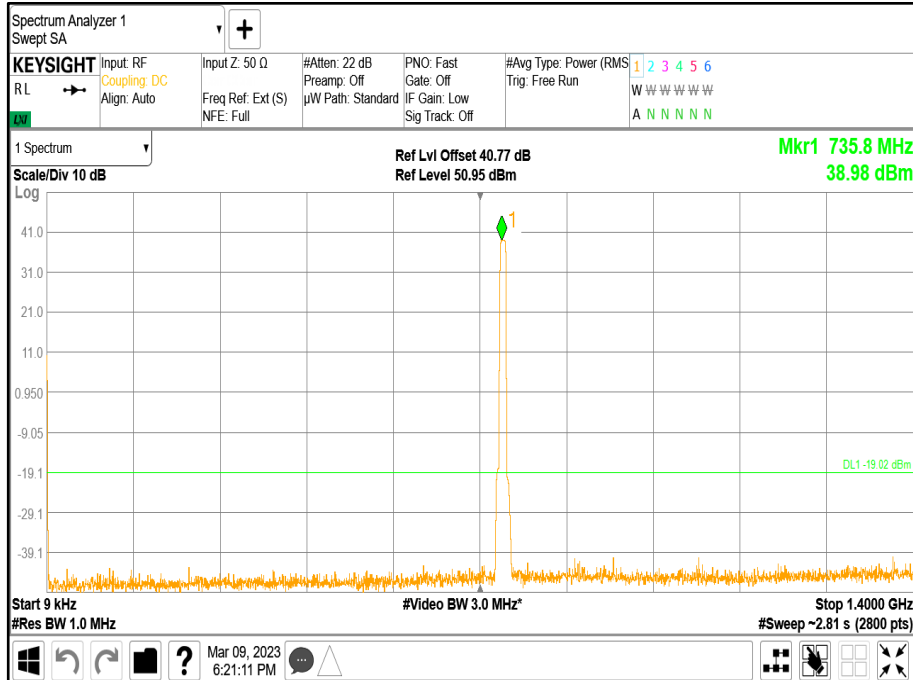


Antenna 2 - NR Modulation QPSK - NR Carrier Bandwidth 5.0 MHz 15 kHz SCS - Channel Position T - Band 2 - Range 1400 to 8000 MHz

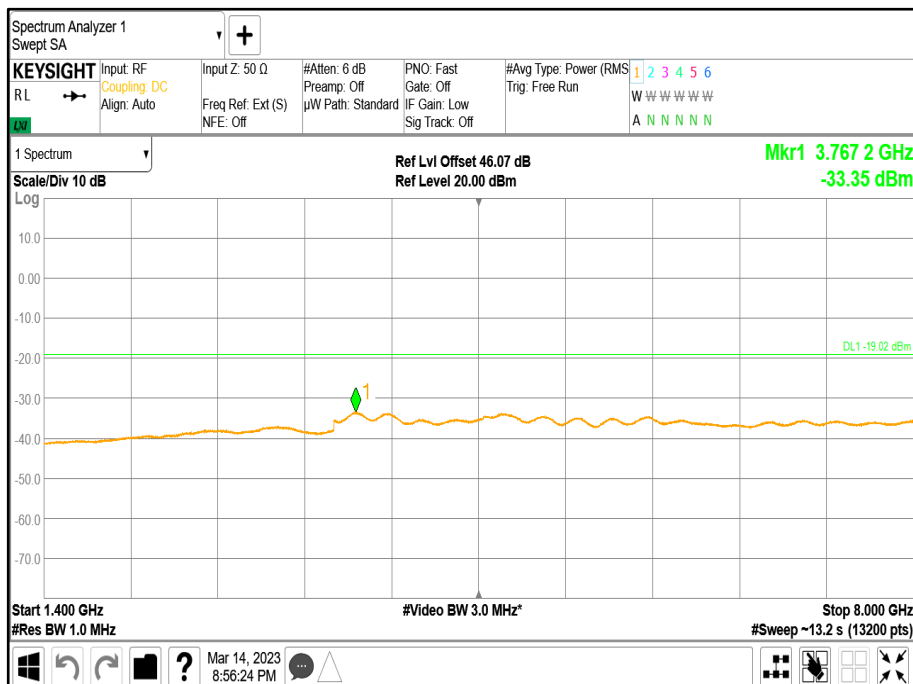




Antenna 2 - NR Modulation QPSK - NR Carrier Bandwidth 10.0 MHz 30 kHz SCS - Channel Position B - Band 1 - Range 0.009 to 1400 MHz

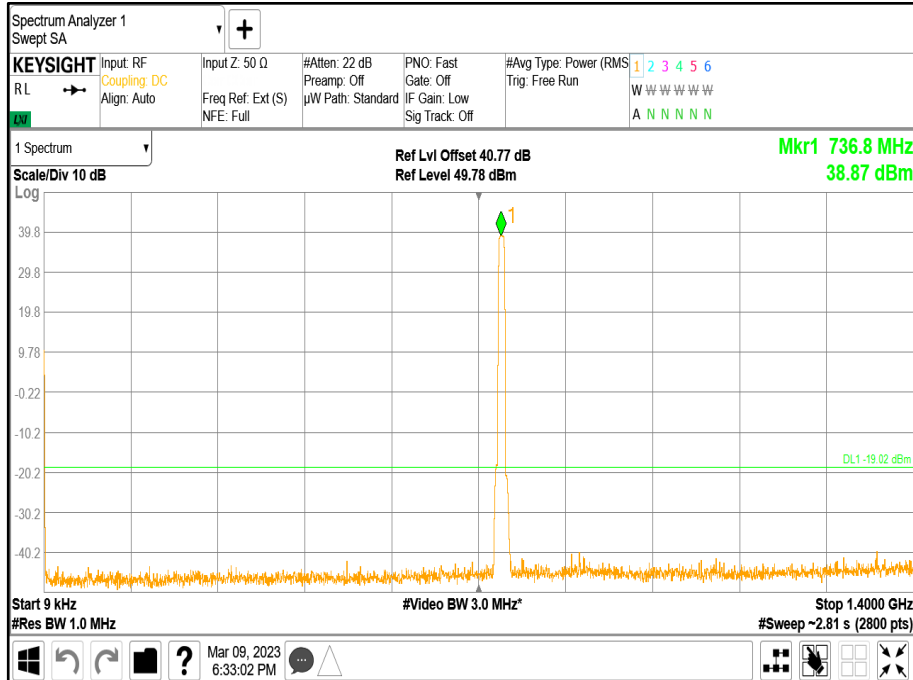


Antenna 2 - NR Modulation QPSK - NR Carrier Bandwidth 10.0 MHz 30 kHz SCS - Channel Position B - Band 2 - Range 1400 to 8000 MHz

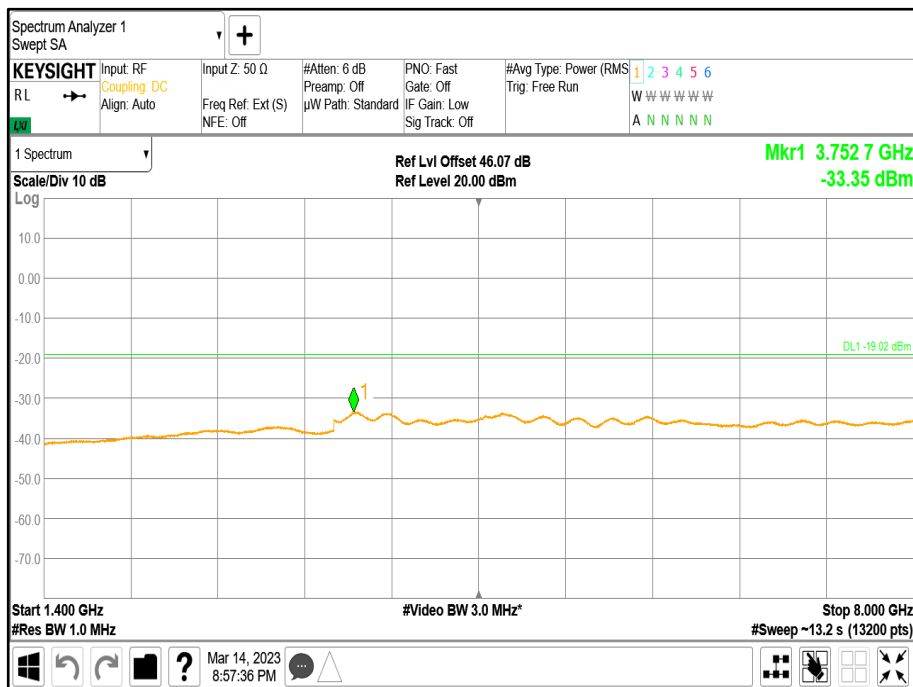




Antenna 2 - NR Modulation QPSK - NR Carrier Bandwidth 10.0 MHz 30 kHz SCS - Channel Position M - Band 1 - Range 0.009 to 1400 MHz

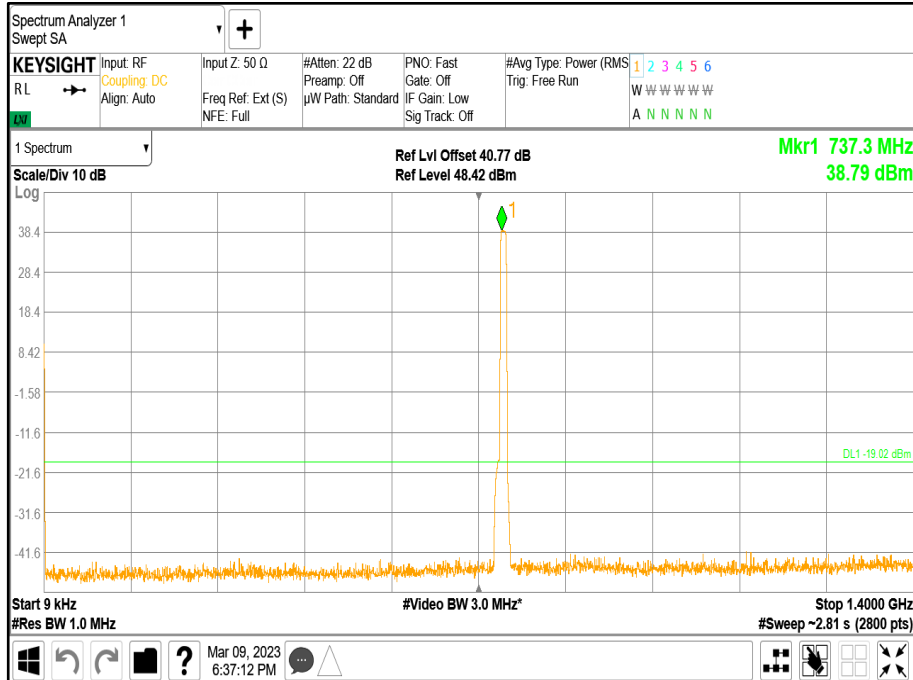


Antenna 2 - NR Modulation QPSK - NR Carrier Bandwidth 10.0 MHz 30 kHz SCS - Channel Position M - Band 2 - Range 1400 to 8000 MHz

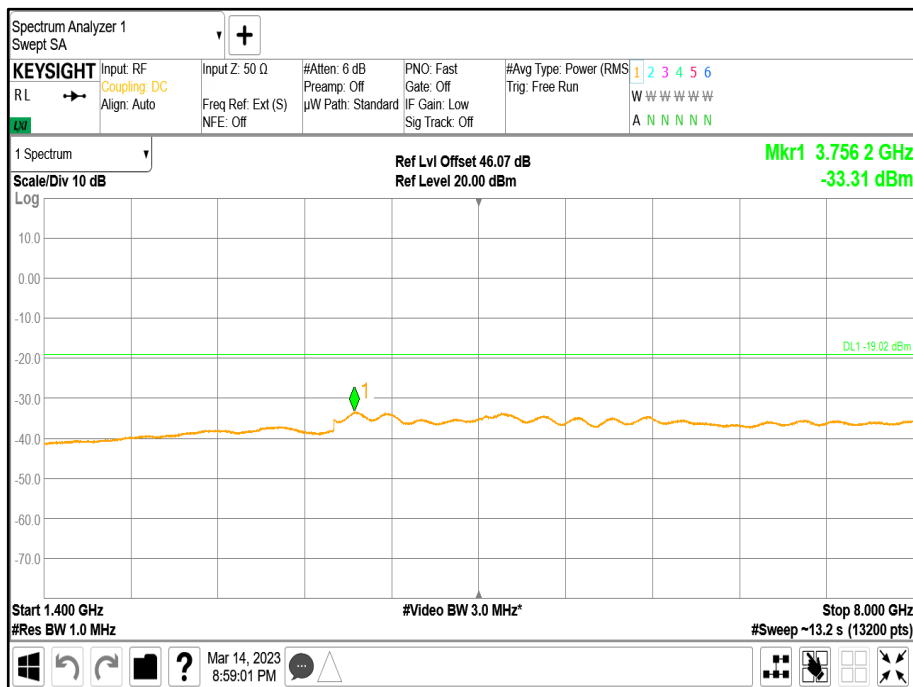




Antenna 2 - NR Modulation QPSK - NR Carrier Bandwidth 10.0 MHz 30 kHz SCS - Channel Position T - Band 1 - Range 0.009 to 1400 MHz

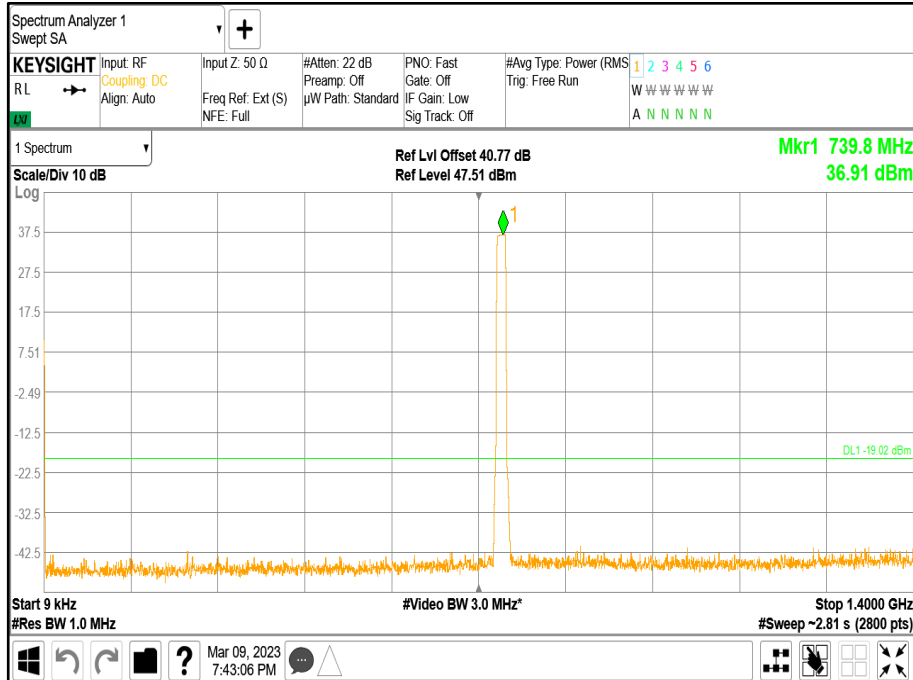


Antenna 2 - NR Modulation QPSK - NR Carrier Bandwidth 10.0 MHz 30 kHz SCS - Channel Position T - Band 2 - Range 1400 to 8000 MHz

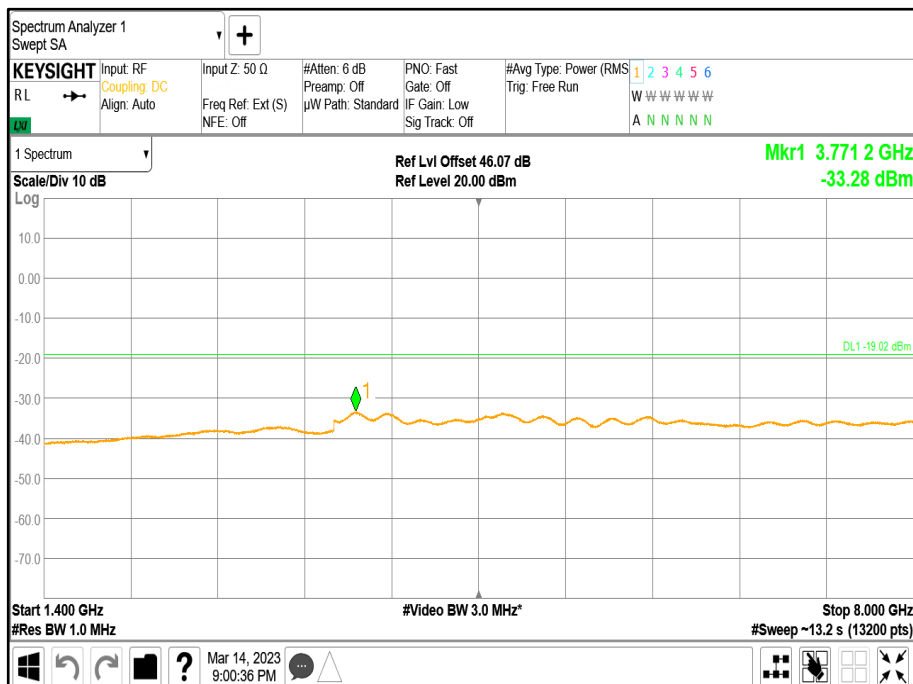




Antenna 2 - NR Modulation QPSK - NR Carrier Bandwidth 15.0 MHz 30 kHz SCS - Channel Position B - Band 1 - Range 0.009 to 1400 MHz

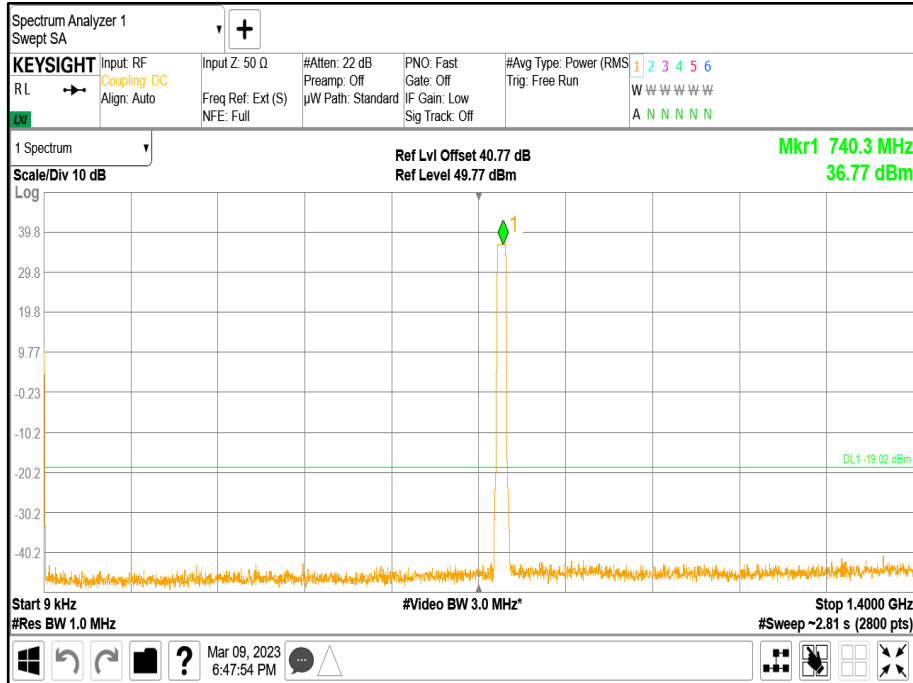


Antenna 2 - NR Modulation QPSK - NR Carrier Bandwidth 15.0 MHz 30 kHz SCS - Channel Position B - Band 2 - Range 1400 to 8000 MHz

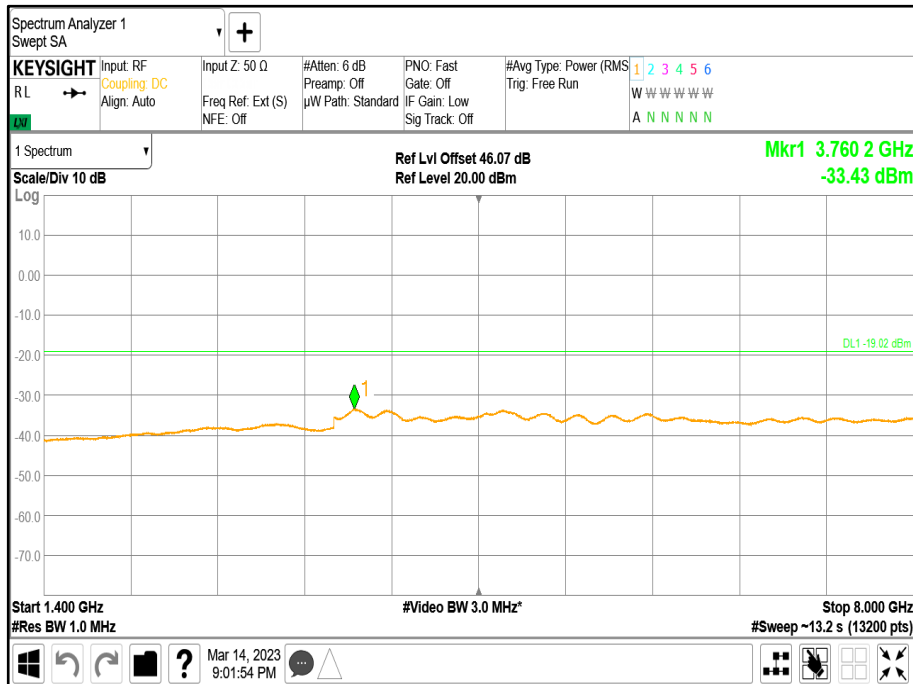




Antenna 2 - NR Modulation QPSK - NR Carrier Bandwidth 15.0 MHz 30 kHz SCS - Channel Position M - Band 1 - Range 0.009 to 1400 MHz

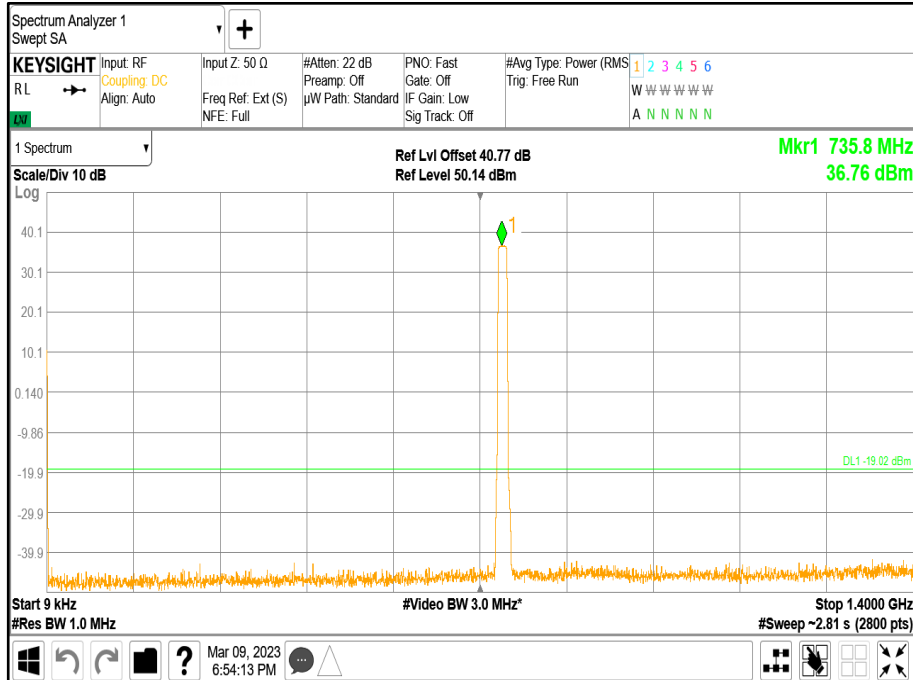


Antenna 2 - NR Modulation QPSK - NR Carrier Bandwidth 15.0 MHz 30 kHz SCS - Channel Position M - Band 2 - Range 1400 to 8000 MHz

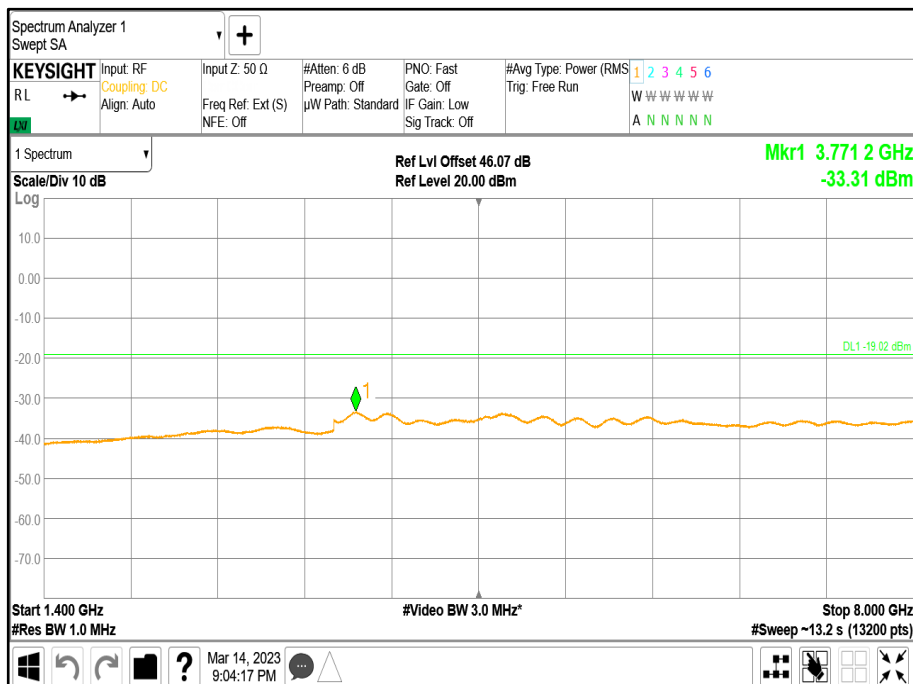




Antenna 2 - NR Modulation QPSK - NR Carrier Bandwidth 15.0 MHz 30 kHz SCS - Channel Position T - Band 1 - Range 0.009 to 1400 MHz



Antenna 2 - NR Modulation QPSK - NR Carrier Bandwidth 15.0 MHz 30 kHz SCS - Channel Position T - Band 2 - Range 1400 to 8000 MHz

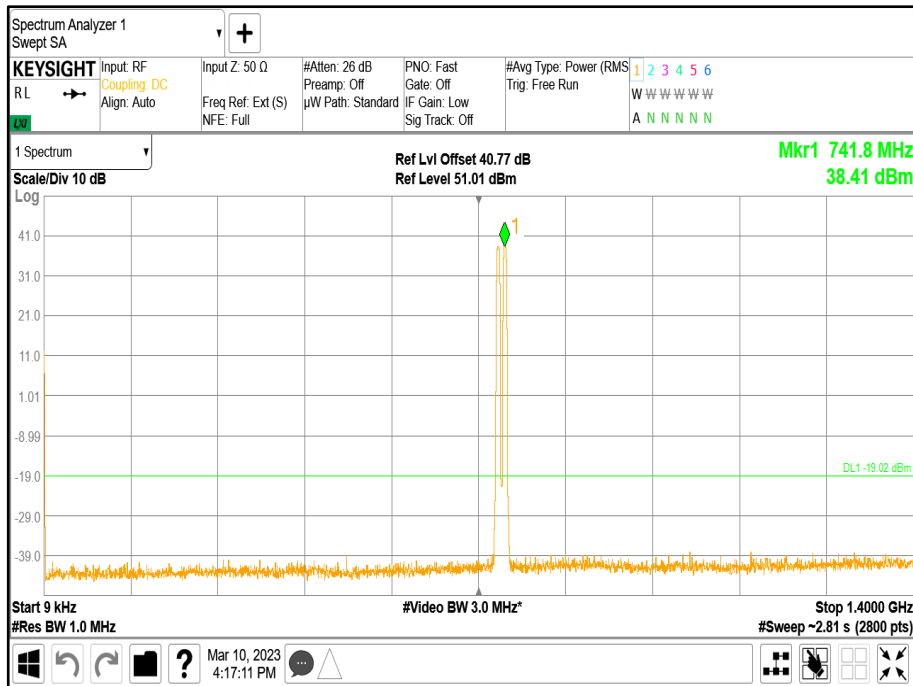




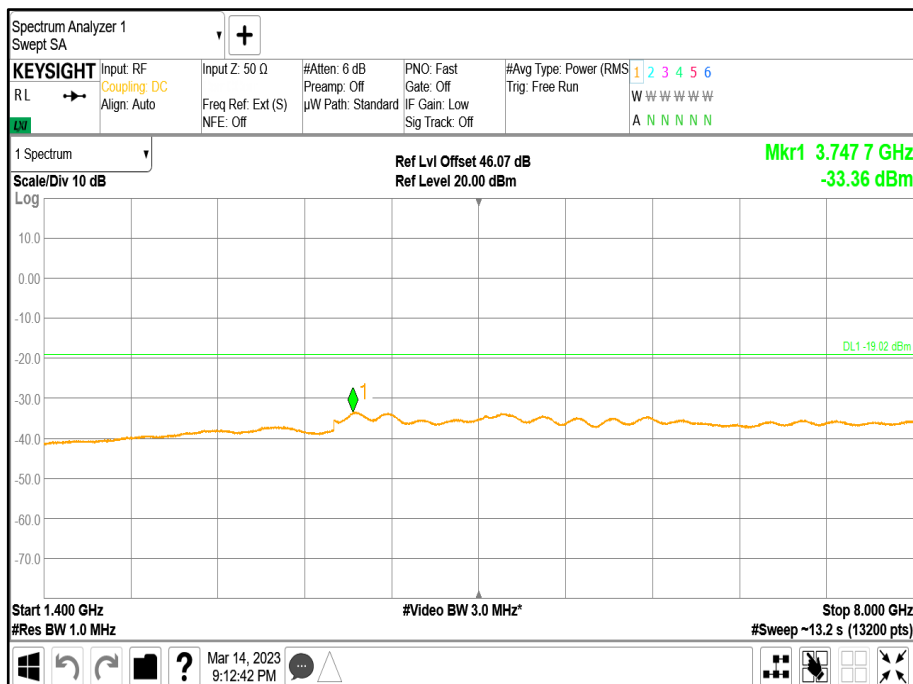
Configuration 5

Maximum Output Power 47.80 dBm

Antenna 2 - NR Modulation QPSK - NR Carrier Bandwidth 5.0 MHz 15 kHz SCS - Channel Position M - Band 1 - Range 0.009 to 1400 MHz



Antenna 2 - NR Modulation QPSK - NR Carrier Bandwidth 5.0 MHz 15 kHz SCS - Channel Position M - Band 2 - Range 1400 to 8000 MHz

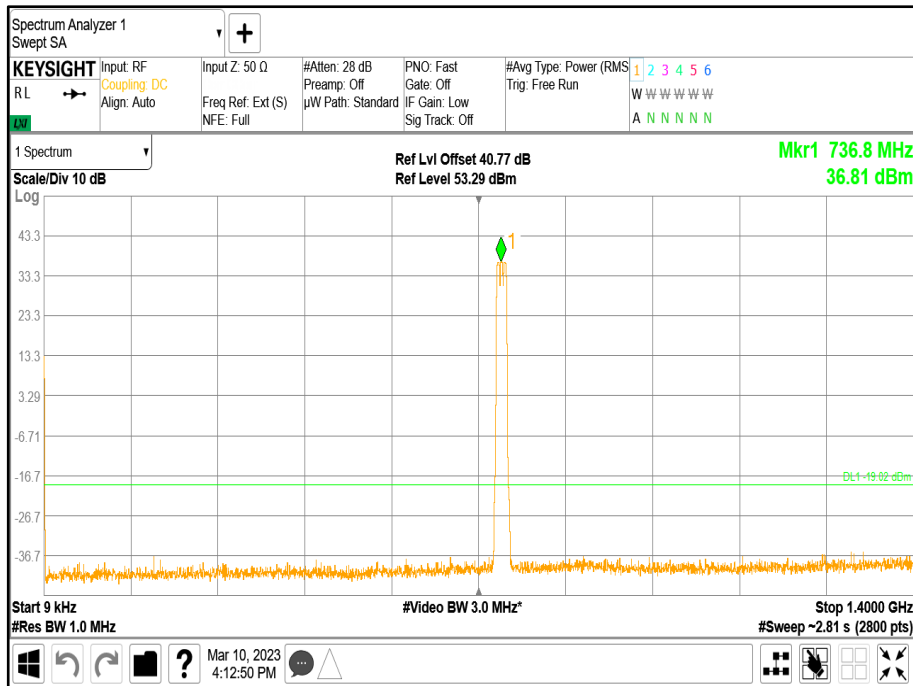




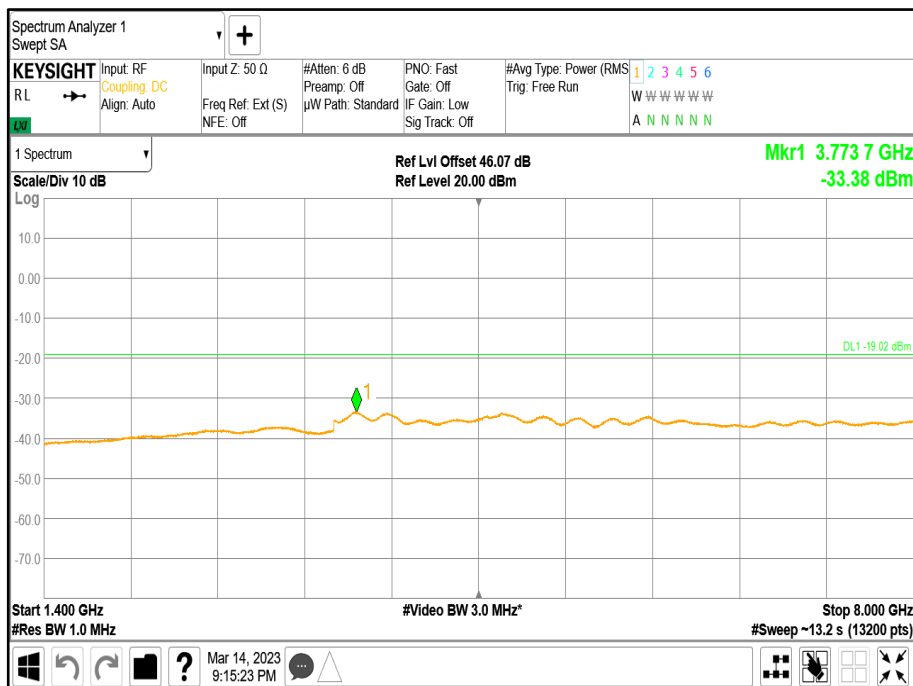
Configuration 6

Maximum Output Power 47.80 dBm

Antenna 2 - NR Modulation QPSK - NR Carrier Bandwidth 5.0 MHz 15 kHz SCS - Channel Position M - Band 1 - Range 0.009 to 1400 MHz



Antenna 2 - NR Modulation QPSK - NR Carrier Bandwidth 5.0 MHz 15 kHz SCS - Channel Position M - Band 2 - Range 1400 to 8000 MHz

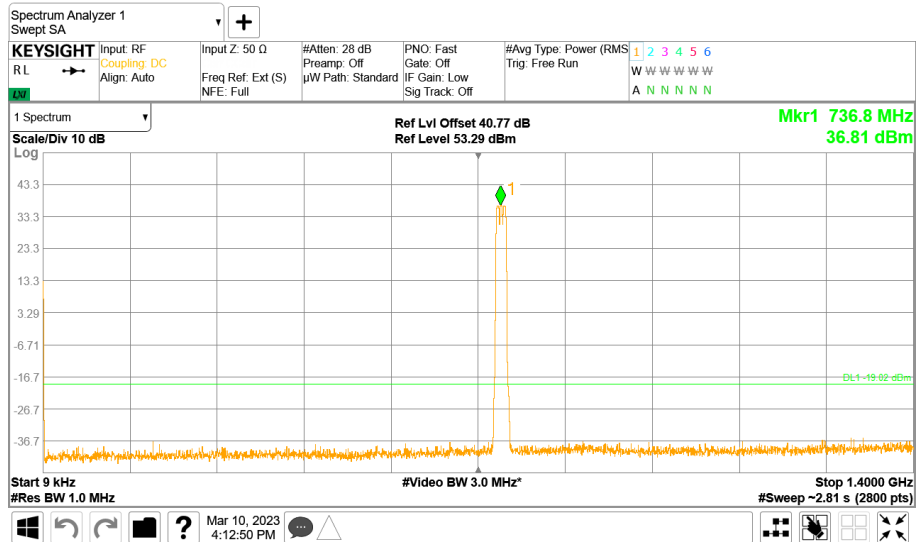




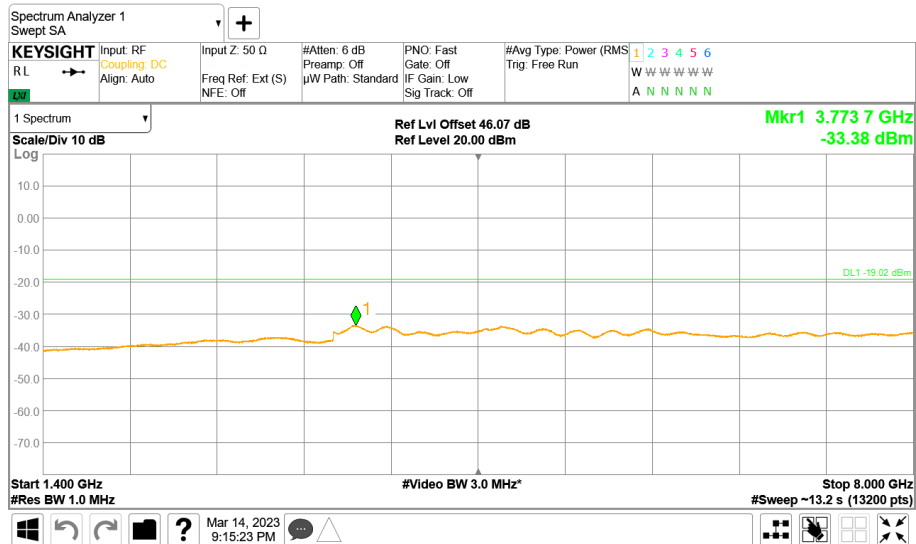
Configuration 7

Maximum Output Power 47.80 dBm

Antenna 2 - LTE / NR Modulation 64QAM /QPSK - LTE / NR Carrier Bandwidth L 5.0 MHz 15 kHz SCS: N 10.0 MHz 30 kHz SCS - Channel Position M - Band 1 - Range 0.009 to 1400 MHz



Antenna 2 - LTE / NR Modulation 64QAM /QPSK - LTE / NR Carrier Bandwidth L 5.0 MHz 15 kHz SCS: N 10.0 MHz 30 kHz SCS - Channel Position M - Band 2 - Range 1400 to 9000 MHz

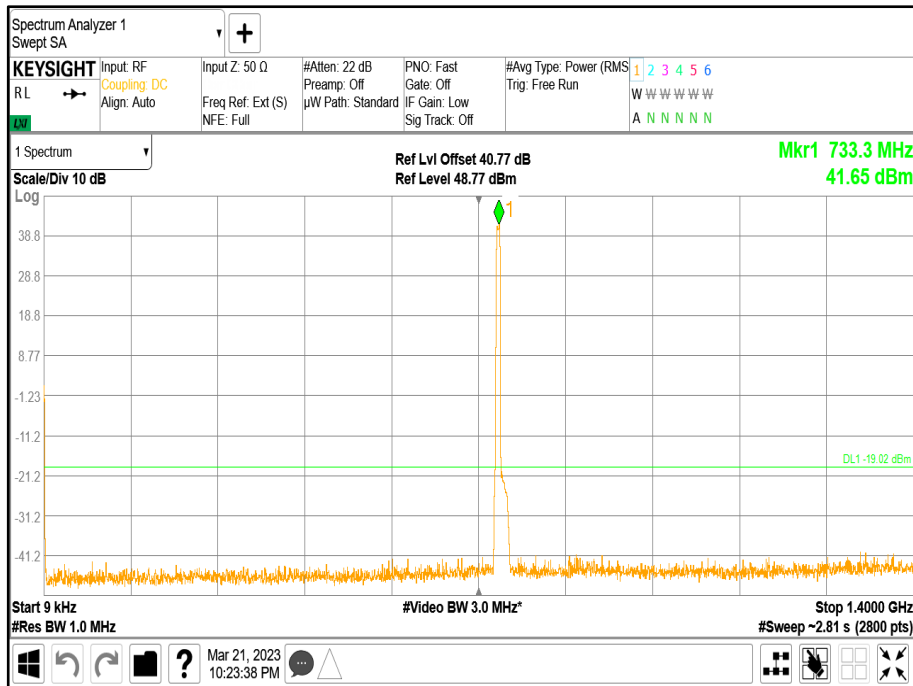




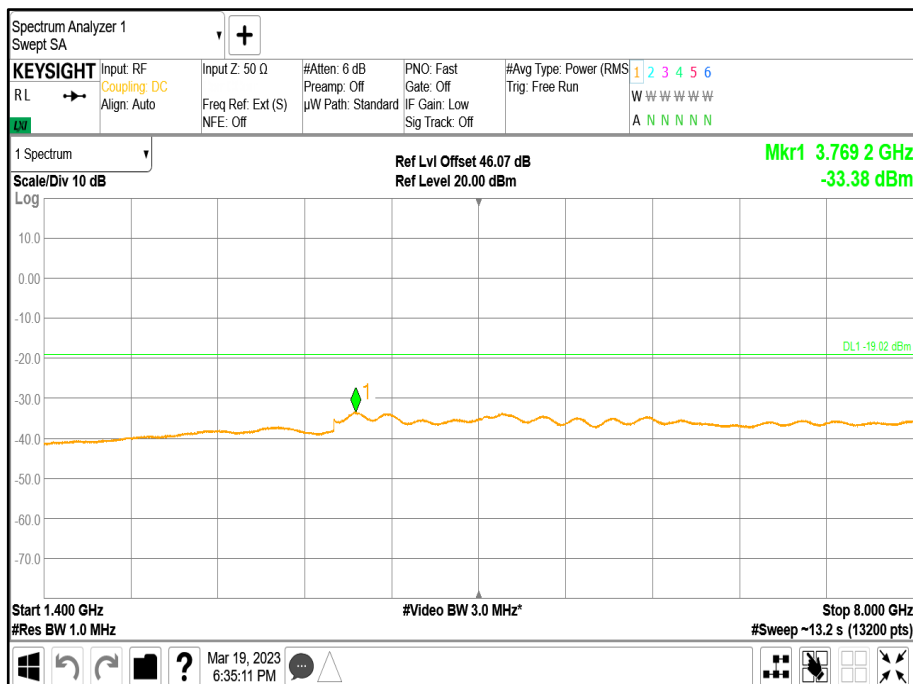
Configuration 8

Maximum Output Power 47.80 dBm

Antenna 2 - NB-IoT IB / NR Modulation QPSK - NB-IoT IB / NR Carrier Bandwidth 5.00 MHz - Channel Position B - Band 1 - Range 0.009 to 1400 MHz

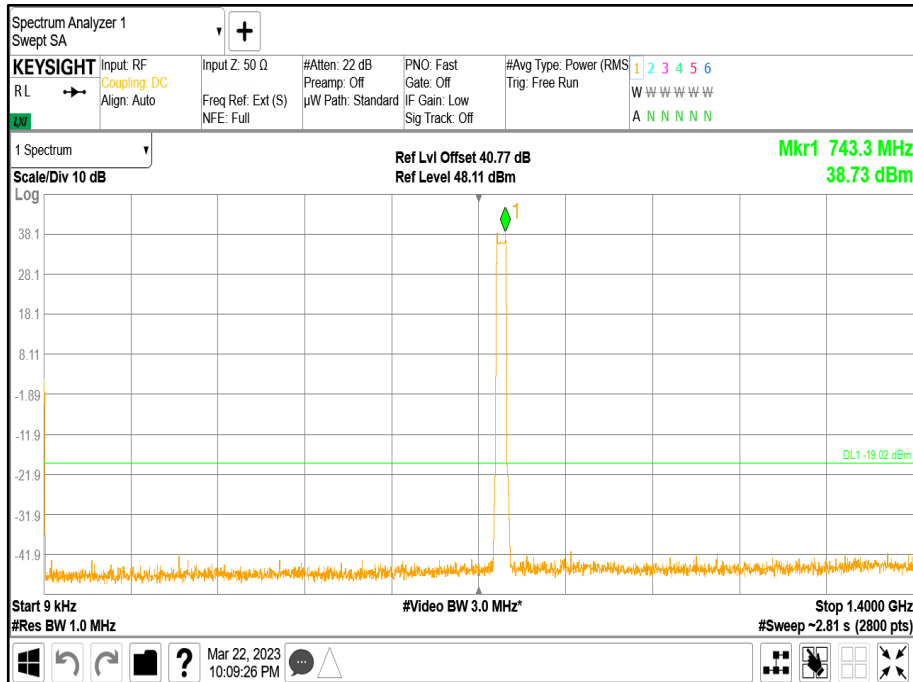


Antenna 2 - NB-IoT IB / NR Modulation QPSK - NB-IoT IB / NR Carrier Bandwidth 10.00 MHz - Channel Position B - Band 2 - Range 1400 to 8000 MHz

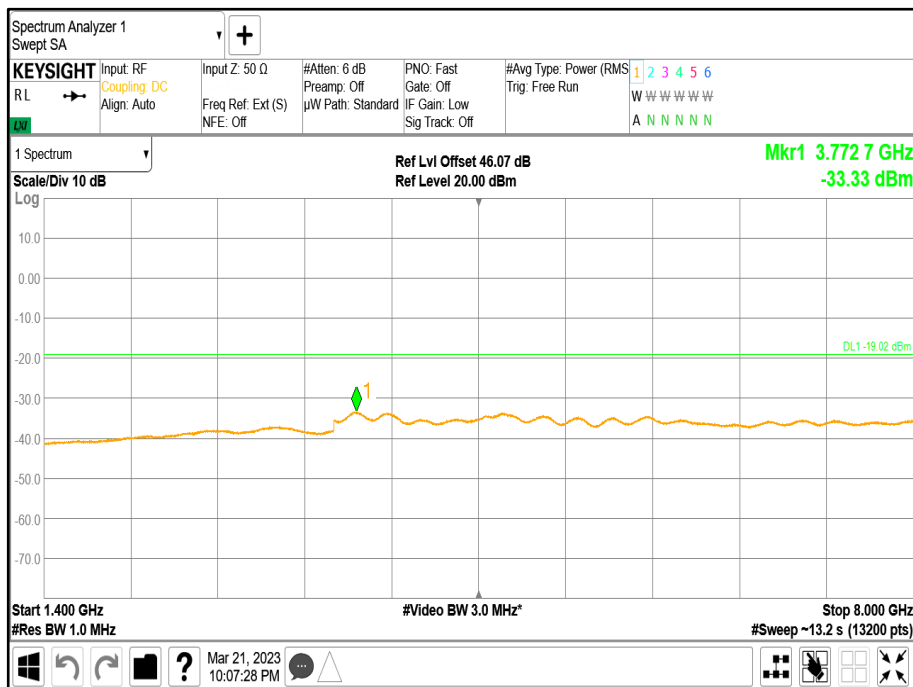




Antenna 2 - NB-IoT IB / NR Modulation QPSK - NB-IoT IB / NR Carrier Bandwidth 15.00 MHz - Channel Position M - Band 1 - Range 0.009 to 1400 MHz

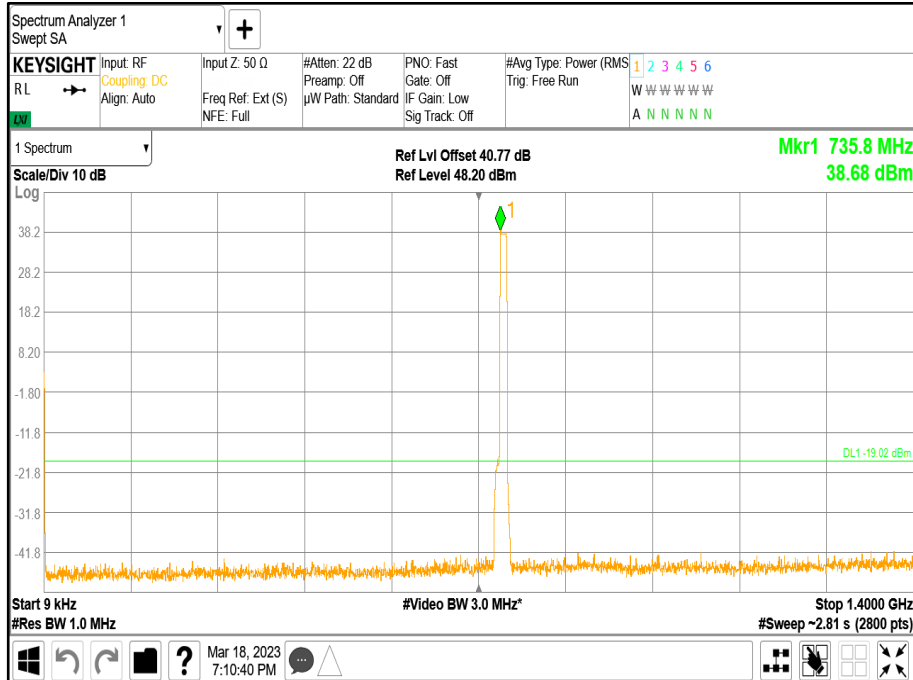


Antenna 2 - NB-IoT IB / NR Modulation QPSK - NB-IoT IB / NR Carrier Bandwidth 5.00 MHz - Channel Position M - Band 2 - Range 1400 to 8000 MHz

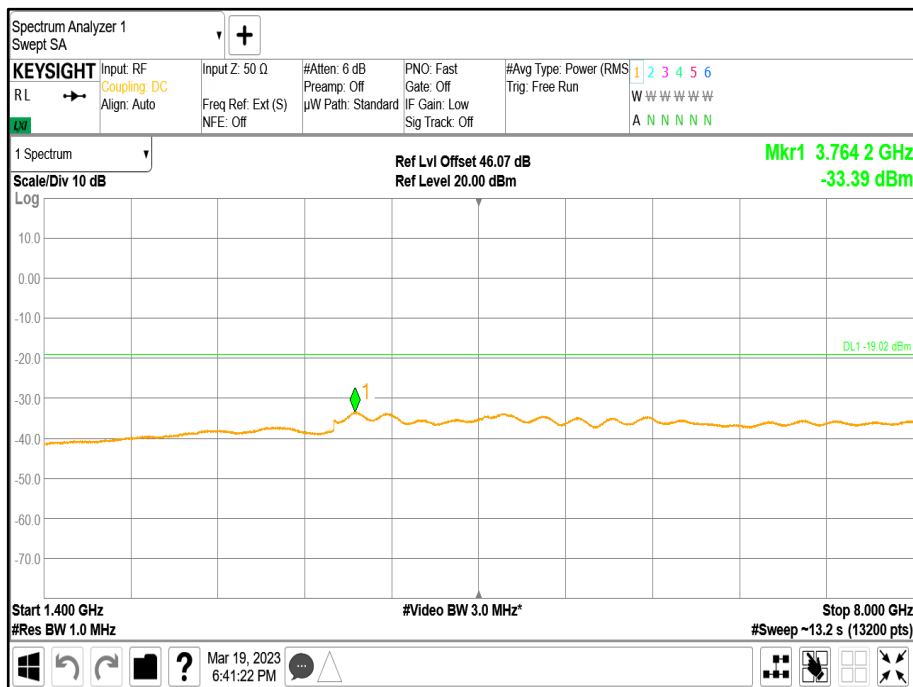




Antenna 2 - NB-IoT IB / NR Modulation QPSK - NB-IoT IB / NR Carrier Bandwidth 10.00 MHz - Channel Position T - Band 1 - Range 0.009 to 1400 MHz



Antenna 2 - NB-IoT IB / NR Modulation QPSK - NB-IoT IB / NR Carrier Bandwidth 15.00 MHz - Channel Position T - Band 2 - Range 1400 to 8000 MHz

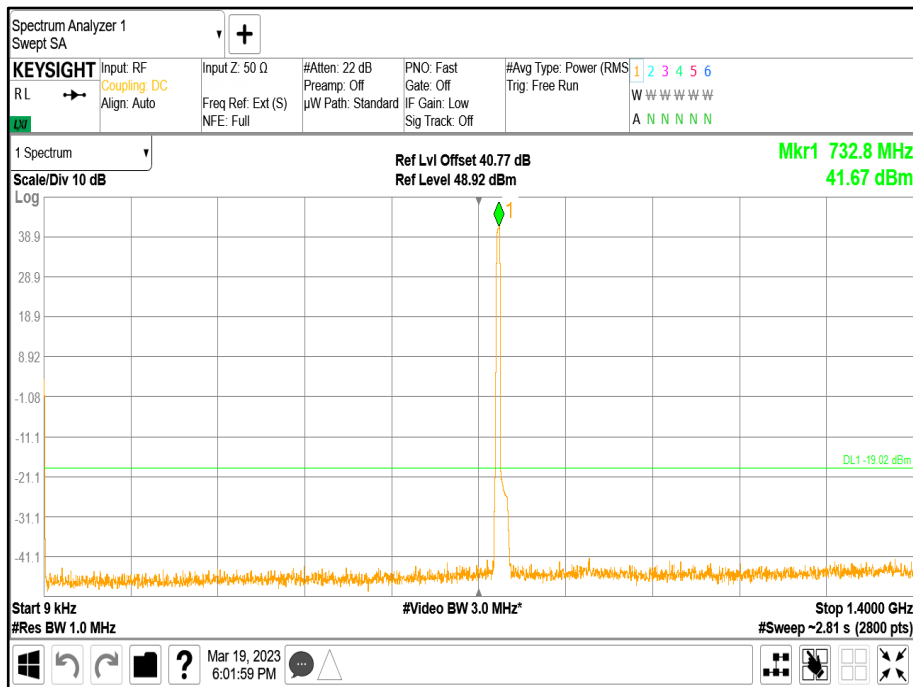




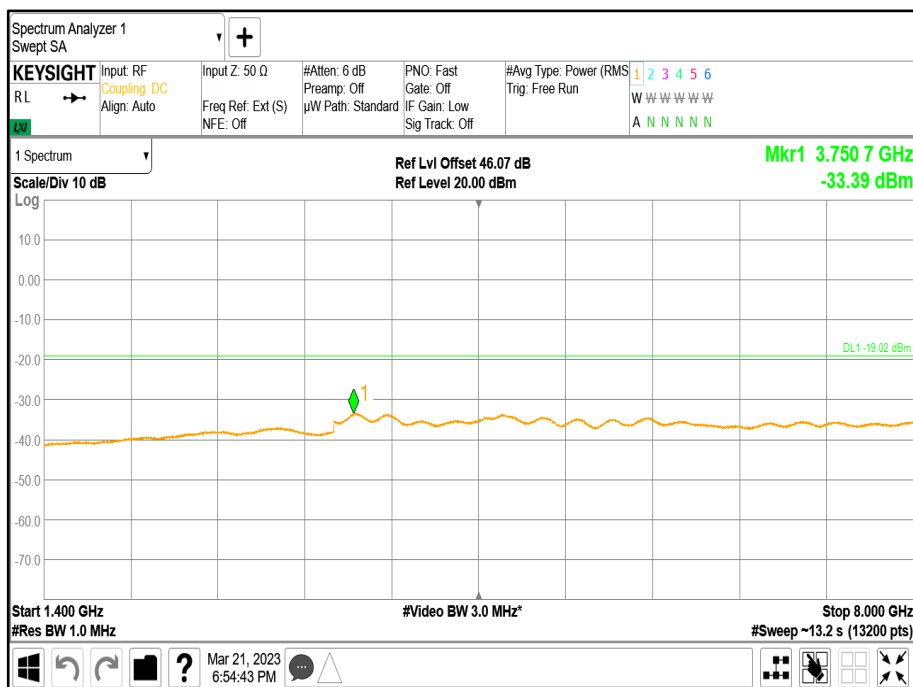
Configuration 9

Maximum Output Power 47.80 dBm

Antenna 2 - LTE / NB-IoT IB Modulation QPSK - LTE / NB-IoT IB Carrier Bandwidth 5.00 MHz - Channel Position B - Band 1 - Range 0.009 to 1400 MHz

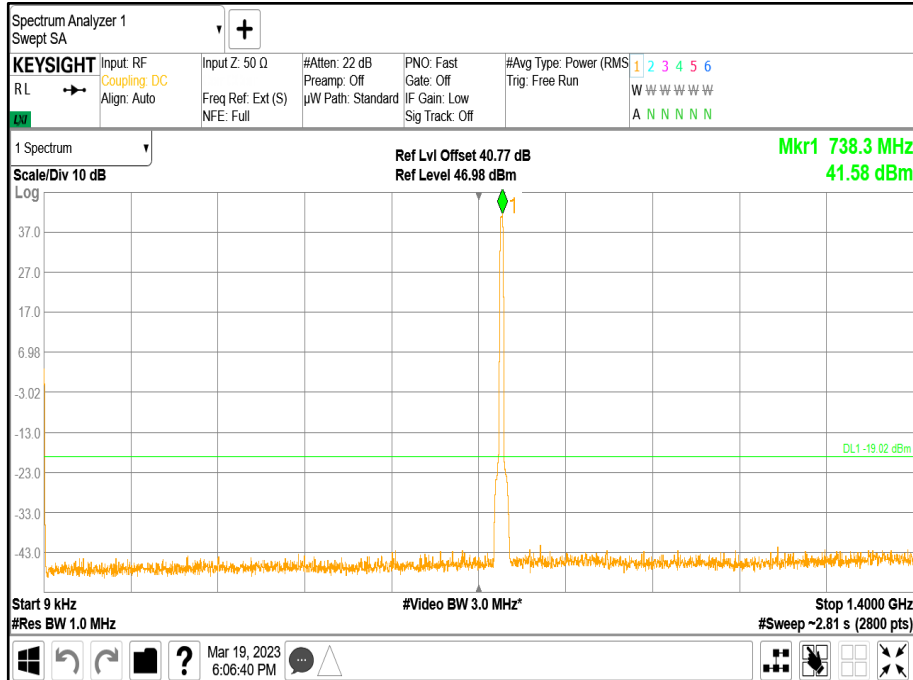


Antenna 2 - LTE / NB-IoT IB Modulation QPSK - LTE / NB-IoT IB Carrier Bandwidth 5.00 MHz - Channel Position B - Band 2 - Range 1400 to 8000 MHz

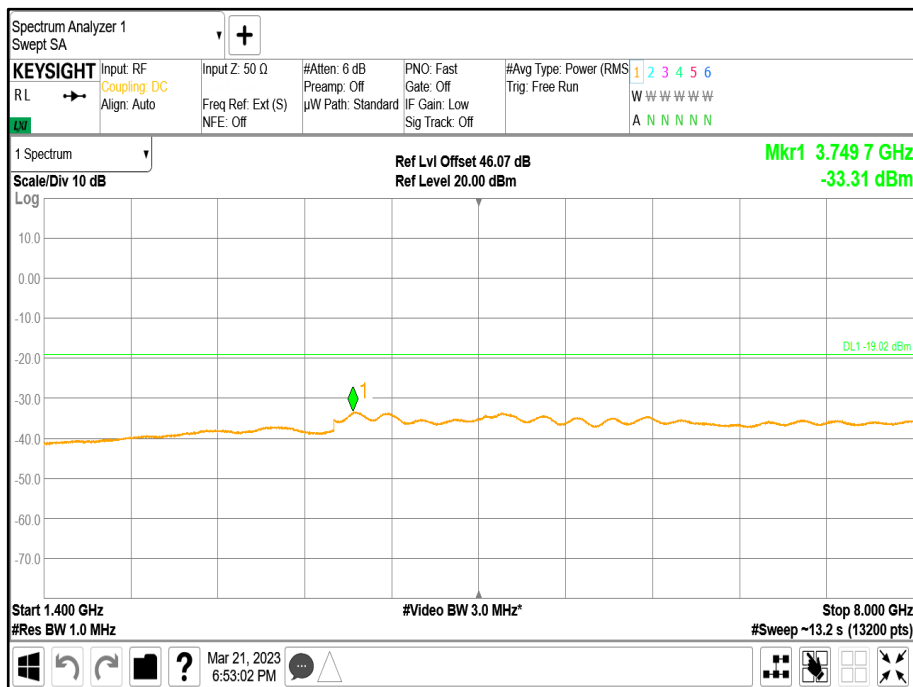




Antenna 2 - LTE / NB-IoT IB Modulation QPSK - LTE / NB-IoT IB Carrier Bandwidth 5.00 MHz - Channel Position M - Band 1 - Range 0.009 to 1400 MHz

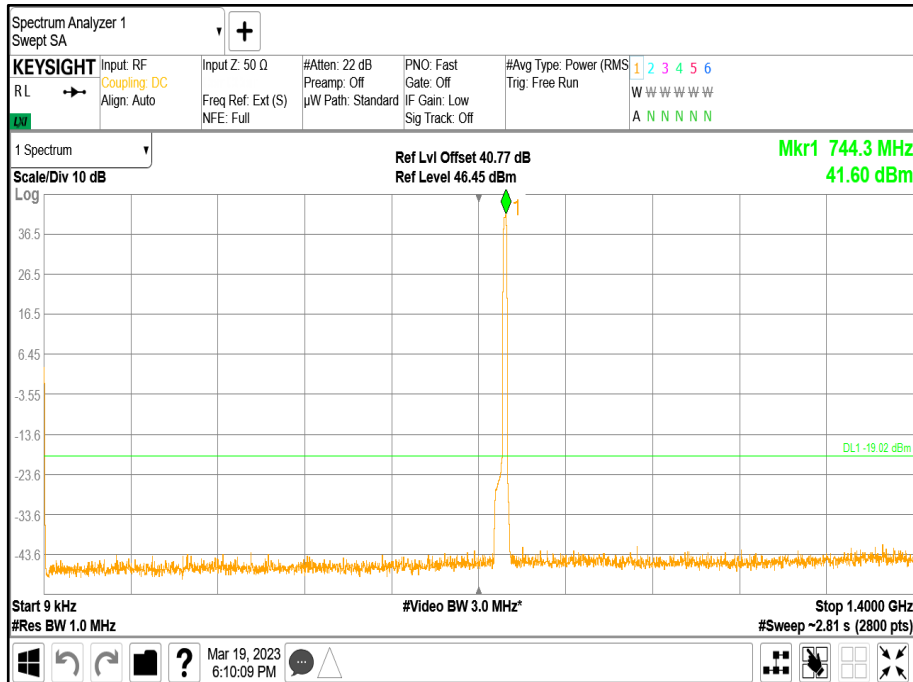


Antenna 2 - LTE / NB-IoT IB Modulation QPSK - LTE / NB-IoT IB Carrier Bandwidth 5.00 MHz - Channel Position M - Band 2 - Range 1400 to 8000 MHz

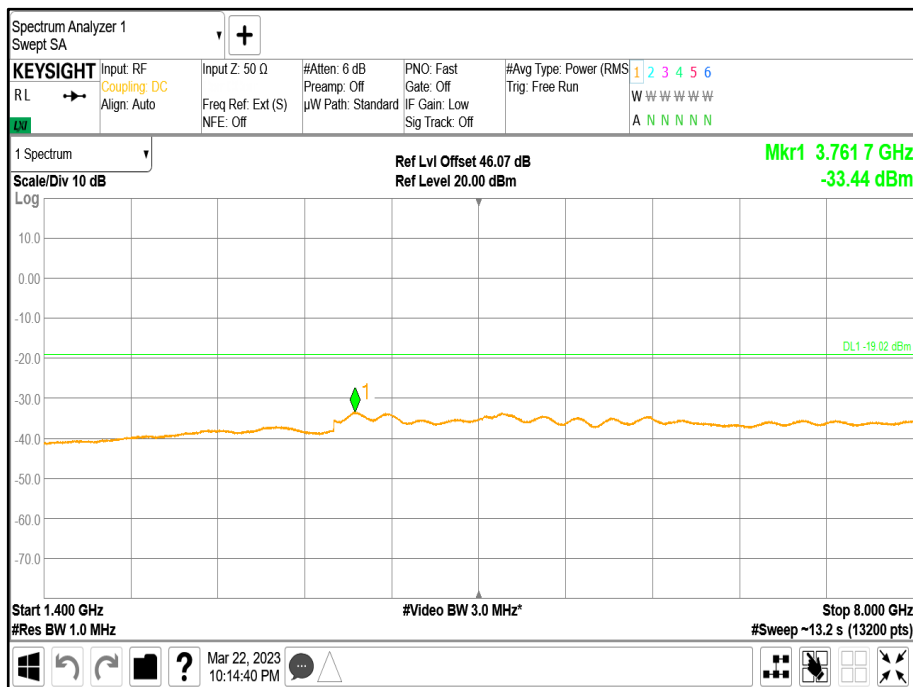




Antenna 2 - LTE / NB-IoT IB Modulation QPSK - LTE / NB-IoT IB Carrier Bandwidth 5.00 MHz - Channel Position T - Band 1 - Range 0.009 to 1400 MHz



Antenna 2 - LTE / NB-IoT IB Modulation QPSK - LTE / NB-IoT IB Carrier Bandwidth 5.00 MHz - Channel Position T - Band 2 - Range 1400 to 8000 MHz

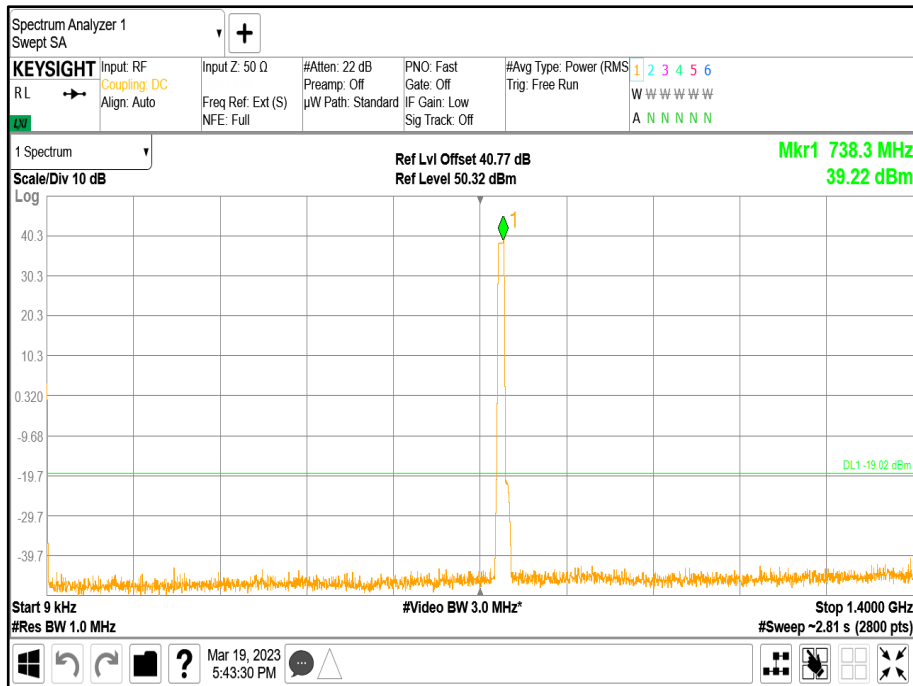




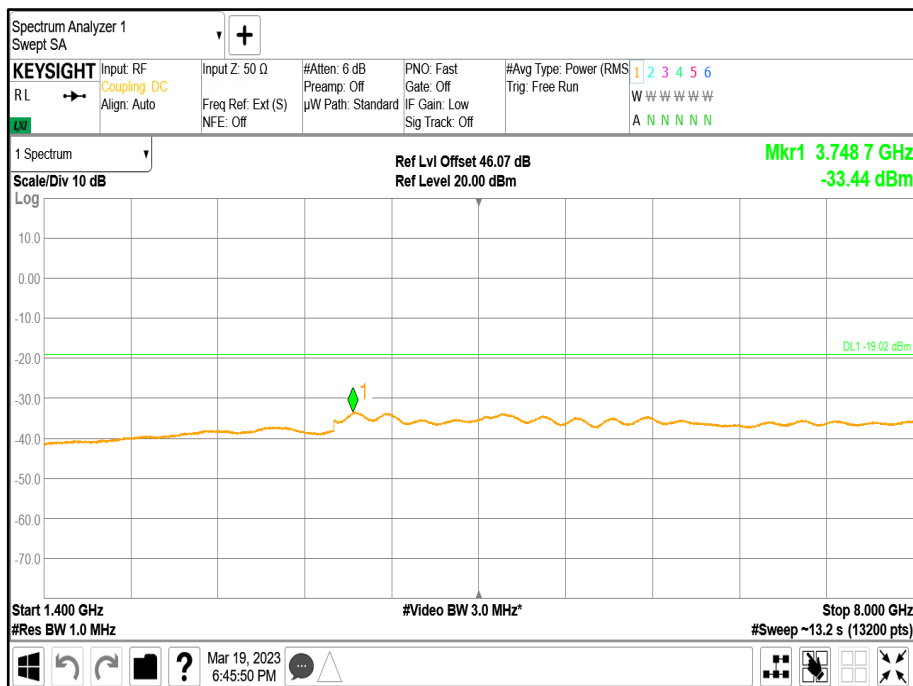
Configuration 10

Maximum Output Power 47.80 dBm

Antenna 2 - LTE / NB-IoT GB Modulation QPSK - LTE / NB-IoT GB Carrier Bandwidth 10.000 MHz - Channel Position B - Band 1 - Range 0.009 to 1400 MHz

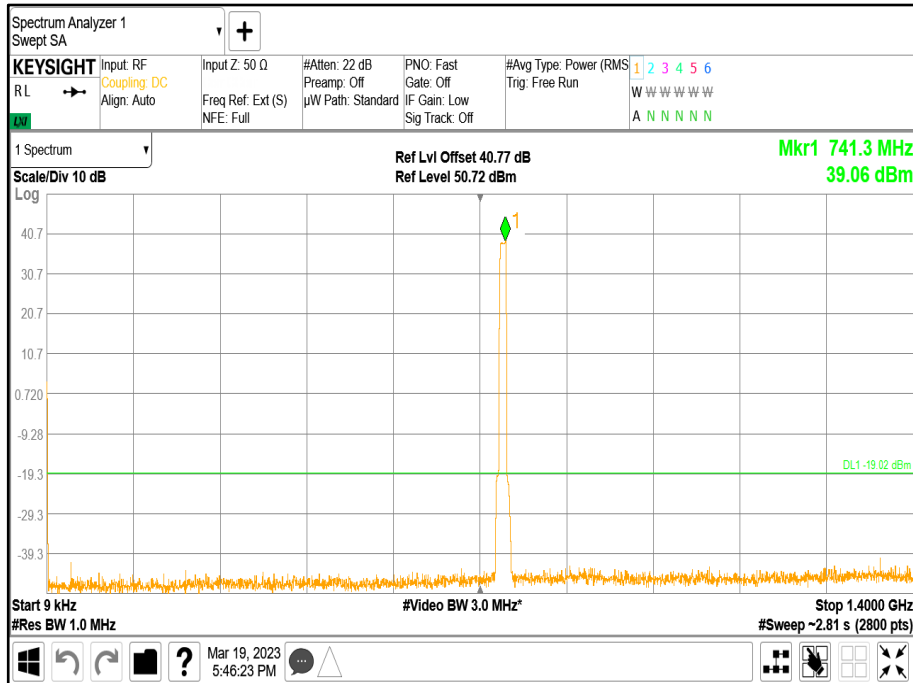


Antenna 2 - LTE / NB-IoT GB Modulation QPSK - LTE / NB-IoT GB Carrier Bandwidth 10.000 MHz - Channel Position B - Band 2 - Range 1400 to 8000 MHz

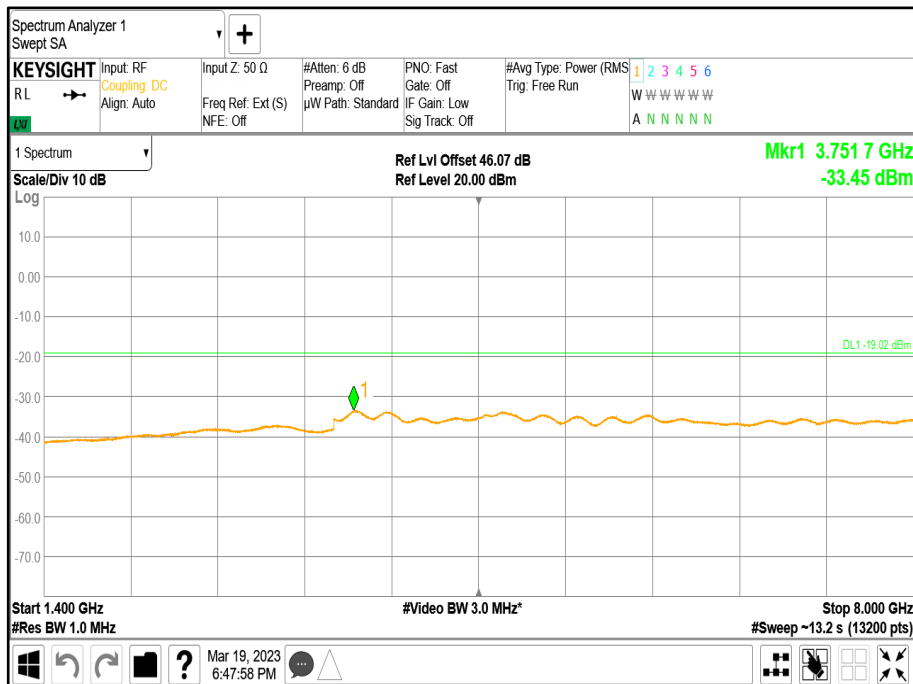




Antenna 2 - LTE / NB-IoT GB Modulation QPSK - LTE / NB-IoT GB Carrier Bandwidth 10.000 MHz - Channel Position M - Band 1 - Range 0.009 to 1400 MHz

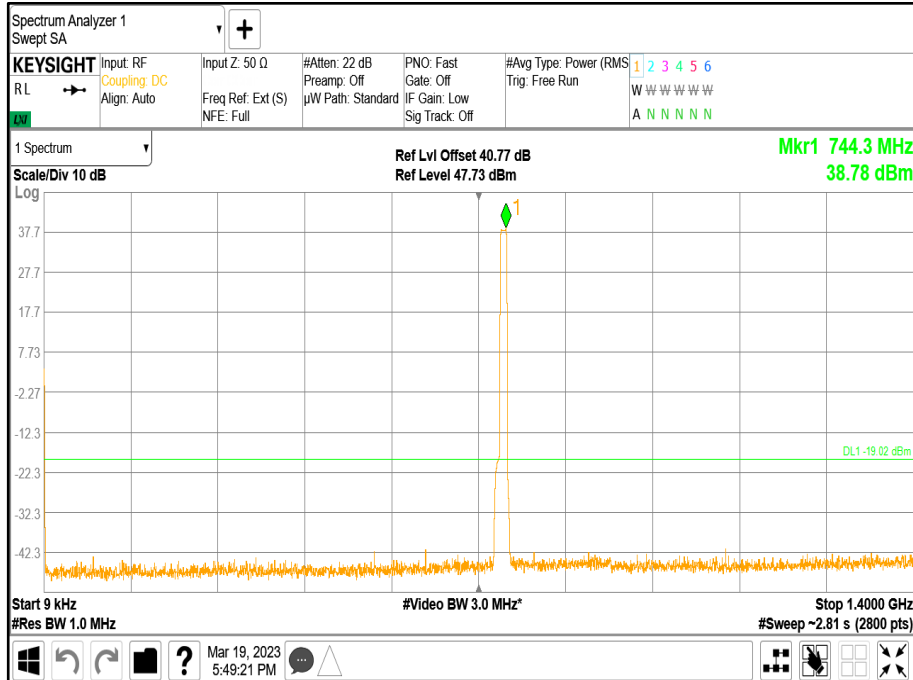


Antenna 2 - LTE / NB-IoT GB Modulation QPSK - LTE / NB-IoT GB Carrier Bandwidth 10.000 MHz - Channel Position M - Band 2 - Range 1400 to 8000 MHz

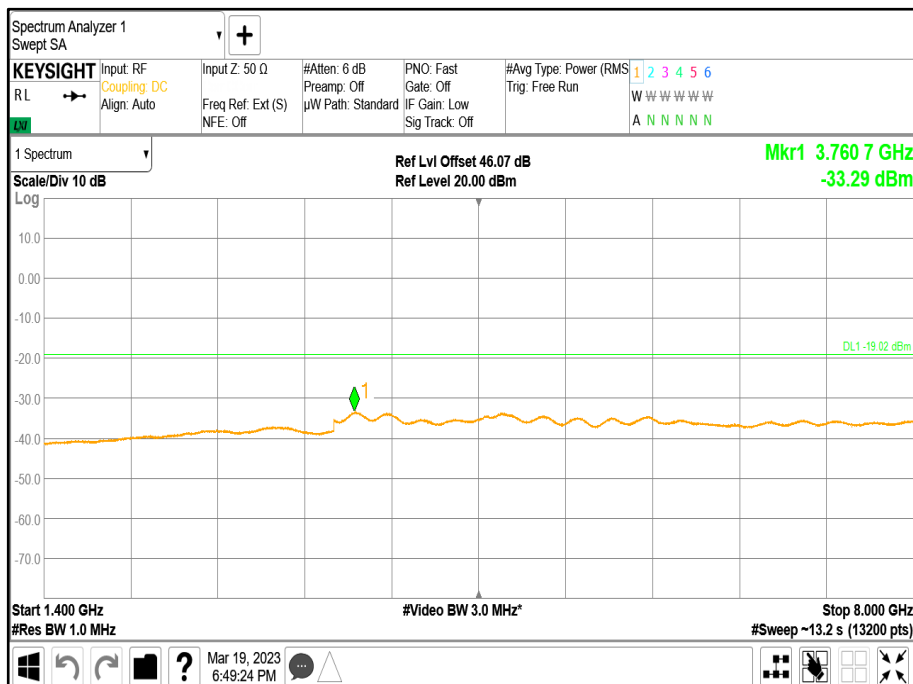




Antenna 2 - LTE / NB-IoT GB Modulation QPSK - LTE / NB-IoT GB Carrier Bandwidth 10.000 MHz - Channel Position T - Band 1 - Range 0.009 to 1400 MHz



Antenna 2 - LTE / NB-IoT GB Modulation QPSK - LTE / NB-IoT GB Carrier Bandwidth 10.000 MHz - Channel Position T - Band 2 - Range 1400 to 8000 MHz

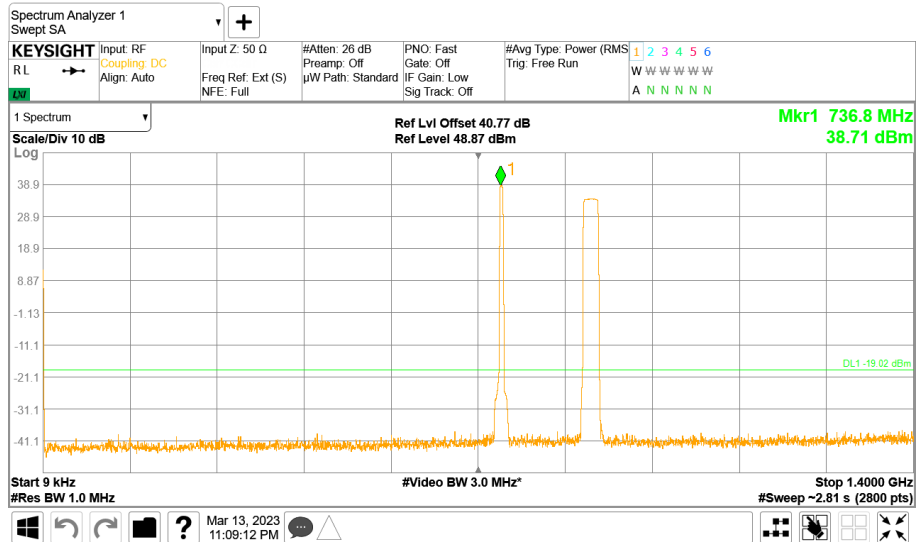




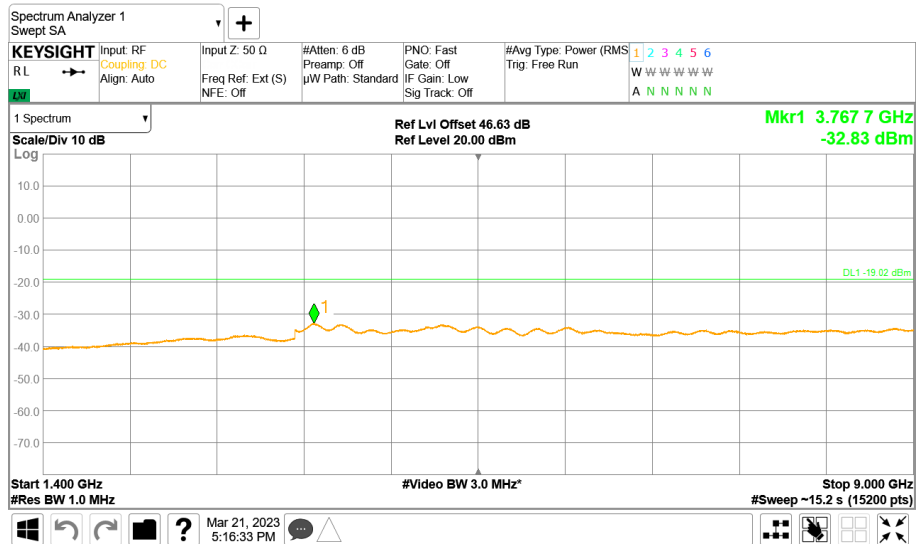
Configuration 11

Maximum Output Power 50.80 dBm

Antenna 2 - LTE / NR Modulation N:QPSK / 64QAM - LTE / NR Carrier Bandwidth N 10.0 MHz / 5.0 MHz - Channel Position M - Band 1 - Range 0.009 to 1400 MHz



Antenna 2 - LTE / NR Modulation N:QPSK / 64QAM - LTE / NR Carrier Bandwidth N 10.0 MHz / 5.0 MHz - Channel Position M - Band 2 - Range 4000 to 9000 MHz

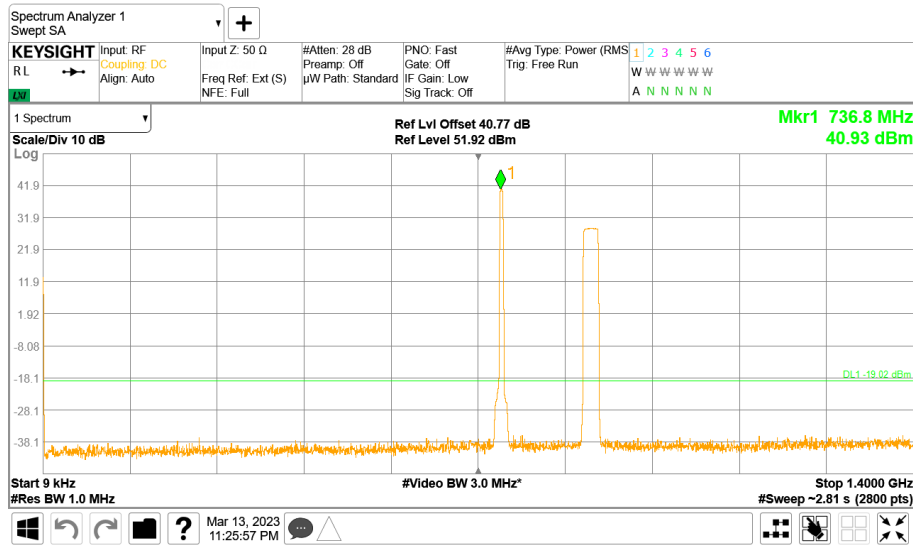




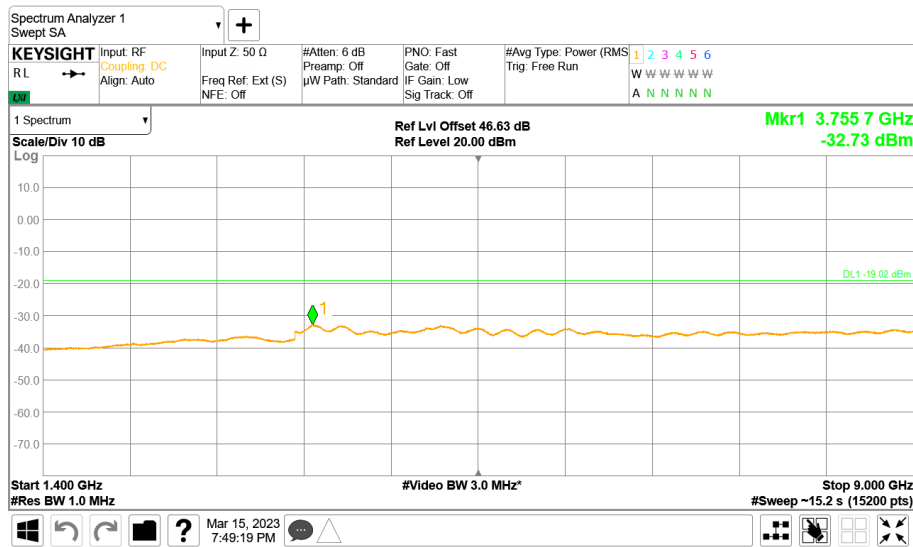
Configuration 12

Maximum Output Power 50.80 dBm

Antenna 2 - LTE / NR Modulation N:QPSK / 64QAM - LTE / NR Carrier Bandwidth N 25.0 MHz / 5.0 MHz - Channel Position M<<SS>>RFBW<<SS>> - Band 1 - Range 0.009 to 1400 MHz



Antenna 2 - LTE / NR Modulation N:QPSK / 64QAM - LTE / NR Carrier Bandwidth N 25.0 MHz / 5.0 MHz - Channel Position M<<SS>>RFBW<<SS>> - Band 2 - Range 1400 to 9000 MHz





Limit 4.7.1

Limit	The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10 \log(P)$ db.
-------	--

Limit 4.7.2

Limits	The power of any unwanted emissions in any 6.25 kHz bandwidth for all frequencies between 763-775 MHz and 793-806 MHz shall be attenuated below the transmitter power, P (dBW), by at least: $76 + 10 \log_{10} p$ (watts), dB, for base and fixed equipment
	The e.i.r.p. in the band 1559-1610 MHz shall not exceed -70 dBW/MHz for wideband signal and -80 dBW for discrete emission with bandwidth less than 700 Hz



2.5 FREQUENCY STABILITY

2.5.1 Specification Reference

FCC CFR 47 Part 27, Clause 27.54
ISED RSS-GEN, Clause 6.11
ISED RSS-130, Clause 4.5
FCC CFR 47 Part 2, Clause 2.1055

2.5.2 Date of Test and Modification State

29-March-2023 - Modification State 0

2.5.3 Test Equipment Used

The major items of test equipment used for the above tests are identified in Section 3.1.

2.5.4 Environmental Conditions

Ambient Temperature 20.8°C
Relative Humidity 38.6%

2.5.5 Test Method

All measurements were made in accordance with FCC KDB 971168 D01, Clause 9 and ANSI C63.26 Clause 5.6

2.5.6 Test Results

Configuration 1

Maximum Output Power 47.80 dBm

Temperature	Voltage	Frequency Error (Hz) Channel Position M
-30°C	-48.0 V DC	4.87
-20°C	-48.0 V DC	3.60
-10°C	-48.0 V DC	2.98
0°C	-48.0 V DC	2.94
+10°C	-48.0 V DC	5.83
+20°C	-40.8 V DC	3.02
+20°C	-48.0 V DC	3.20
+20°C	-55.2 V DC	3.12
+30°C	-48.0 V DC	3.42
+40°C	-48.0 V DC	3.51
+50°C	-48.0 V DC	3.63



Configuration 4

Maximum Output Power 47.80 dBm

Temperature	Voltage	Frequency Error (Hz) Channel Position M
-30°C	-48.0 V DC	0.70
-20°C	-48.0 V DC	0.72
-10°C	-48.0 V DC	0.69
0°C	-48.0 V DC	0.93
+10°C	-48.0 V DC	0.90
+20°C	-40.8 V DC	0.76
+20°C	-48.0 V DC	0.83
+20°C	-55.2 V DC	0.89
+30°C	-48.0 V DC	0.91
+40°C	-48.0 V DC	0.80
+50°C	-48.0 V DC	0.85

Limit	The frequency stability shall be sufficient to ensure that the fundamental emissions stay within the authorized bands of operation.
-------	---



SECTION 3

TEST EQUIPMENT USED



3.1 TEST EQUIPMENT USED

List of absolute measuring and other principal items of test equipment.

Instrument	Manufacturer	Type No.	TE No.	Calibration Period (months)	Calibration Due
Maximum Peak Output Power and Peak to Average Ratio - Conducted					
ENA Network Analyzer	Keysight	E5080B	BAMS 1056688789	12	13-Nov-2023
Ecal Module	Keysight	N4693D	BAMS-1056688790	12	07-Nov-2023
Thermo Hygrobarometer	Rotronic Hygropalm	HP21	4410	12	30-Aug-2023
Power Supply	Keysight	N8738A	BAMS 1001643633	N/A	O/P Mon
Multimeter	FLUKE	79 SERIES II	3057	12	22-Aug-2023
Attenuator 10dB	Weinschel Associates	WA49-10-1001	A4246	N/A	O/P Mon
Attenuator 10dB	Weinschel Associates	WA49-10-1001	A4248	N/A	O/P Mon
Attenuator 10dB	Weinschel Associates	WA49-10-1001	A4249	N/A	O/P Mon
Attenuator 10dB	Weinschel Associates	WA49-10-1001	A4251	N/A	O/P Mon
PXA Signal Analyzer (2Hz-44GHz)	Keysight	N9030B	BAMS-1002016870	12	24-May-2023
Spectrum Sysyem	TUV SUD	N/A	5991	N/A	O/P Mon
Occupied Bandwidth					
ENA Network Analyzer	Keysight	E5080B	BAMS 1056688789	12	13-Nov-2023
Ecal Module	Keysight	N4693D	BAMS-1056688790	12	07-Nov-2023
Thermo Hygrobarometer	Rotronic Hygropalm	HP21	4410	12	30-Aug-2023
Power Supply	Keysight	N8738A	BAMS 1001643633	N/A	O/P Mon
Attenuator 40dB	Weinschel Associates	WA49-40-33	A1562	N/A	O/P Mon
Multimeter	FLUKE	79 SERIES II	3057	12	22-Aug-2023
PXA Signal Analyzer (2Hz-44GHz)	Keysight	N9030B	BAMS-1002016870	12	24-May-2023
Band Edge					
ENA Network Analyzer	Keysight	E5080B	BAMS 1056688789	12	13-Nov-2023
Ecal Module	Keysight	N4693D	BAMS-1056688790	12	07-Nov-2023
Thermo Hygrobarometer	Rotronic Hygropalm	HP21	4410	12	30-Aug-2023
Power Supply	Keysight	N8738A	BAMS 1001643633	N/A	O/P Mon
Attenuator 40dB	Weinschel Associates	WA49-40-33	A1562	N/A	O/P Mon
Multimeter	FLUKE	79 SERIES II	3057	12	22-Aug-2023
PXA Signal Analyzer (2Hz-44GHz)	Keysight	N9030B	BAMS-1002016870	12	24-May-2023
Transmitter Spurious Emissions					
Thermo Hygrobarometer	Rotronic Hygropalm	HP21	4410	12	30-Aug-2023
Power Supply	Keysight	N8738A	BAMS 1001643633	N/A	O/P Mon
Multimeter	FLUKE	79 SERIES II	3057	12	22-Aug-2023
Attenuator 40dB	API Weinschel Inc	49-40-33	SX813	N/A	O/P Mon
High Pass Filter (1.4GHz-15GHz)	WHK	WHK1.4/15G-10SS	SN7	N/A	O/P Mon



Instrument	Manufacturer	Type No.	TE No.	Calibration Period (months)	Calibration Due
PXA Signal Analyzer (2Hz-44GHz)	Keysight	N9030B	BAMS-1002016870	12	24-May-2023
ENA Network Analyzer	Keysight	E5080B	BAMS 1056688789	12	13-Nov-2023
Ecal Module	Keysight	N4693D	BAMS-1056688790	12	07-Nov-2023
Frequency Stability					
Signal & Spectrum Analyzer	R&S	FSW	BAMS-1001985308	12	26-Feb-2024
Thermo Hygro Barometer	RS PRO	1160	5824	12	19-Jul-2023
Thermometer	Fluke	51 II	3173	12	09-Dec-2023
Climatic Chamber	Vötschtechnik	VK112	BAMS-1002107718	N/A	O/P Mon
DC Power Supply	Agilent Technologies	N8738A	BAMS 1001478471	N/A	O/P Mon
Digital Multimeter	Fluke	79 SERIES II	3057	12	22-Aug-2023

TU – Traceability Unscheduled

N/A – Not Applicable

O/P Mon – Output Monitored with Calibrated Equipment



3.2 MEASUREMENT UNCERTAINTY

For a 95% confidence level, the measurement uncertainties for defined systems are:-

Test Discipline	Frequency / Parameter	MU	MU Unit	
Conducted Maximum Peak Output Power- HP-VEE Software	729 MHz to 894 MHz	± 1.76	dB	
Conducted Emissions- HP-VEE Software	9 kHz to 9GHz	± 1.81	dB	
Frequency Stability - HP-VEE Software	729 MHz to 894 MHz	±26.276	Hz	
Occupied Bandwidth - HP-VEE Software	Up to 15 MHz Bandwidth (LTE)	5 MHz Bandwidth	±62556	Hz
		10 MHz Bandwidth	±67172	Hz
		15 MHz Bandwidth	±353783	Hz
	Up to 25 MHz Bandwidth (NR)	5 MHz Bandwidth	±62376	Hz
		10 MHz Bandwidth	±65818	Hz
		15 MHz Bandwidth	±67427	Hz
		20 MHz Bandwidth	±131634	Hz
		25 MHz Bandwidth	±163834	Hz
Band Edge- HP-VEE Software	729 MHz to 894 MHz	± 1.76	dB	

Measurement Uncertainty Decision Rule

Determination of conformity with the specification limits is based on the results of the compliance measurement and does not take into account measurement instrumentation uncertainty as defined in ANSI C63.26:2015 Clause 1.3.

Risk: The uncertainty of measurement about the measured result is negligible with regard to the final pass/fail decision. The measurement result can be directly compared with the test limit to determine conformance with the requirement (compare IEC Guide 115). The level of risk to falsely accept and falsely reject items is further described in ILAC-G8



3.3 MEASUREMENT SOFTWARE USED

List of measurement software versions used for testing.

Instrument	Manufacturer	Type No.	TE No.	Software Version
PXA Signal Analyser	Keysight	N9030B	BAMS-1002016870	A32.02
HP-VEE Software	TUV SUD	HP_VEE	N/A	A31.22



SECTION 5

ACCREDITATION, DISCLAIMERS AND COPYRIGHT



4.1 ACCREDITATION, DISCLAIMERS AND COPYRIGHT



Accred. no. 10363
Testing
ISO/IEC 17025

This report relates only to the actual item/items tested.

Our Swedac Accreditation does not cover opinions and interpretations and any expressed are outside the scope of our Swedac Accreditation.

Results of tests not covered by our Swedac Accreditation Schedule are marked NSA (Not Swedac Accredited).

© 2023 TÜV SÜD
TÜV SÜD Sverige

Postal Address: Adelgatan 2, 211 22 Malmö, Sweden



ANNEX A

MODULE LIST



Configurations 1-12			
Product	Product No	R-State	Serial No
Radio 4490HP B5 B12A	KRC 161 981/3	R1B	E23E439818
CT-DU25	LPC102500/1	R3B	T01G522082
Software Version:	CXP2021113/1	Revision:	R16A470