

SPURIOUS EMISSIONS AT THE ANTENNA TERMINALS, 3dBi



Testing was performed using the mode(s) of operation and configuration(s) noted within the report. The individuals and/or the organization requesting the test provided the modes, configurations and settings used to complete the evaluation. The actual test parameters are specified in the test data, this includes items such as investigated frequency range (scanned) and test levels. The testing methods and performance specifications, as well as the test site used for the evaluation are indicated in the test data.

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
Cable	UtiFlex Micro-Coax	UFD1150A-1-0720-200200	TXK	2021-09-13	2022-09-13
Analyzer - Spectrum Analyzer	Keysight	N9010A	AFN	2022-01-19	2023-01-19
Block - DC	Fairview Microwave	SD3235-2148	ANF	2022-05-27	2023-05-27
Generator - Signal	Agilent	N5173B	TIW	2020-07-17	2023-07-17

TEST DESCRIPTION

The measurement was made using a direct connection between the RF output of the EUT and a spectrum analyzer.

The antenna port spurious emissions were measured at the RF output terminal of the EUT with 30dB of external attenuation on the RF input of the spectrum analyzer. Analyzer plots reference a 1MHz resolution bandwidth and 3MHz video bandwidth made for each modulation type from 9 kHz to 16 GHz. The rms average conducted power of spurious emissions, up to the 10th harmonic of the transmit frequency, were investigated to ensure they were less than or equal to -13 dBm.

Per the guidance provided in ANSI C63.26-2015 section 4.2.3 and 5.7.2 the limit for the 9kHz to 150kHz frequency range was adjusted to -46dBm to correct for a spectrum analyzer RBW of 1kHz versus required RBW of 1MHz [i.e.: -46dBm = -16dBm - 10log(1MHz/1kHz)]. The limit for the 150kHz to 20MHz frequency range was adjusted to -36dBm to correct for a spectrum analyzer RBW of 10kHz versus required RBW of 1MHz [i.e.: -36dBm = -16dBm - 10log(1MHz/10kHz)]. The required limit of -16dBm with a RBW of > 1MHz was used for all other frequency ranges.

The limit is adjusted to -16 dBm [-13 dBm -10 log (2)] per FCC KDB 662911D01 v02r01, ANSI C63.26-2015 section 6.4.6.3 b)2) and KDB 662911 D02v01 page 3 example (2) since the transmitter outputs to each antenna are 90 degree-phase shifted relative to each other (cross-polarized radiators).

The reference level offset for screen capture(s) uses an internal transducer factor on the analyzer to correct the displayed trace based on the cable loss over frequency. The reference level offset for the additional screen capture(s) is then based on the expected attenuator value and any other losses.

Screen capture(s) Offset = "Internal" cable loss factor not shown on screen capture + Ref Lvl Offset showing expected attenuator value and any other losses

RF conducted emissions testing was performed only on one port. The Remote Radio Head (RRH) antenna ports are essentially electrically identical (the RF power variation between antenna ports is small as shown during output power testing) and antenna port 3 was selected to perform the testing under this effort as allowed by ANSI C63.26-2015 paragraphs 5.2.5.3, 5.7.2i, and 6.4.

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TWTx 2022.05.02.0 XMt 2022.02.07.0

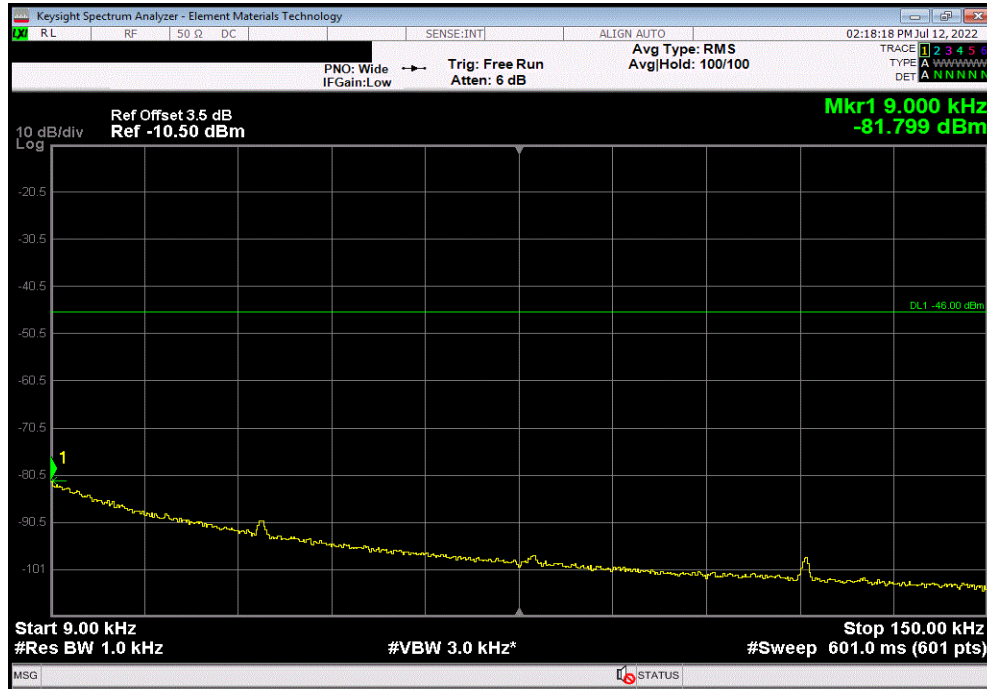
EUT: TR44KA Base Station		Work Order: MASY0006				
Serial Number: SV2146TR44KA000001		Date: 9-Aug-22				
Customer: Mavenir Systems, Inc		Temperature: 20.8 °C				
Attendees: None		Humidity: 56.1% RH				
Project: None		Barometric Pres.: 1021 mbar				
Tested by: Brandon Hobbs		Power: 48 VDC				
Job Site: TX09						
TEST SPECIFICATIONS		Test Method				
FCC 25:2022		ANSI C63.10:2013				
COMMENTS						
All conducted path losses were accounted for: cables, attenuators, adapters, DC block and notch filter. The PA gain was adjusted for a 3dBi antenna (Final software value of 42). The limit was adjusted to -16 dBm [-13 dBm -10 log (2)] per FCC KDB 662911D01 v02r01, ANSI C63.26-2015 section 6.4.6.3 b)2) and KDB 662911 D02v01 page 3 example (2) since the transmitter outputs to each antenna are 90 degree-phase shifted relative to each other (cross-polarized radiators). Single worst case Resource Block / Offset configuration was used for each bandwidth.						
DEVIATIONS FROM TEST STANDARD						
None						
Configuration #	1,2	Signature 				
		Frequency Range	Measured Freq (MHz)	Max Value (dBm)	Limit (dBm)	Result
5G NR, Band n24, SCS 15kHz						
5 MHz Bandwidth						
QPSK Modulation						
Low Channel 1528.5 MHz						
25 RB/0 Offset		9 kHz - 150 kHz	0.01	-81.8	-46	Pass
25 RB/0 Offset		150 kHz - 30 MHz	0.15	-46.6	-36	Pass
25 RB/0 Offset		30 MHz - 1 GHz	1961.58	-42.6	-16	Pass
25 RB/0 Offset		1 GHz - 16 GHz	3814.56	-34.6	-16	Pass
High Channel 1533.5 MHz						
25 RB/0 Offset		9 kHz - 150 kHz	0.01	-81.9	-46	Pass
25 RB/0 Offset		150 kHz - 30 MHz	0.15	-46.3	-36	Pass
25 RB/0 Offset		30 MHz - 1 GHz	1977.34	-42.5	-16	Pass
25 RB/0 Offset		1 GHz - 16 GHz	3811.56	-34.7	-16	Pass
16-QAM Modulation						
Low Channel 1528.5 MHz						
25 RB/0 Offset		9 kHz - 150 kHz	0.01	-81.9	-46	Pass
25 RB/0 Offset		150 kHz - 30 MHz	0.15	-46.3	-36	Pass
25 RB/0 Offset		30 MHz - 1 GHz	1961.58	-42.6	-16	Pass
25 RB/0 Offset		1 GHz - 16 GHz	3833.57	-34.6	-16	Pass
High Channel 1533.5 MHz						
25 RB/0 Offset		9 kHz - 150 kHz	0.01	-81.0	-46	Pass
25 RB/0 Offset		150 kHz - 30 MHz	0.15	-46.2	-36	Pass
25 RB/0 Offset		30 MHz - 1 GHz	1974.38	-42.6	-16	Pass
25 RB/0 Offset		1 GHz - 16 GHz	3822.57	-34.5	-16	Pass
64-QAM Modulation						
Low Channel 1528.5 MHz						
25 RB/0 Offset		9 kHz - 150 kHz	0.01	-82.1	-46	Pass
25 RB/0 Offset		150 kHz - 30 MHz	0.16	-46.2	-36	Pass
25 RB/0 Offset		30 MHz - 1 GHz	1975.37	-42.6	-16	Pass
25 RB/0 Offset		1 GHz - 16 GHz	3832.07	-34.6	-16	Pass
High Channel 1533.5 MHz						
25 RB/0 Offset		9 kHz - 150 kHz	0.01	-81.7	-46	Pass
25 RB/0 Offset		150 kHz - 30 MHz	0.15	-46.9	-36	Pass
25 RB/0 Offset		30 MHz - 1 GHz	1983.25	-42.5	-16	Pass
25 RB/0 Offset		1 GHz - 16 GHz	3835.07	-34.7	-16	Pass
256-QAM Modulation						
Low Channel 1528.5 MHz						
25 RB/0 Offset		9 kHz - 150 kHz	0.01	-82.0	-46	Pass
25 RB/0 Offset		150 kHz - 30 MHz	0.15	-45.9	-36	Pass
25 RB/0 Offset		30 MHz - 1 GHz	1979.8	-42.5	-16	Pass
25 RB/0 Offset		1 GHz - 16 GHz	3824.07	-34.5	-16	Pass
High Channel 1533.5 MHz						
25 RB/0 Offset		9 kHz - 150 kHz	0.01	-81.6	-46	Pass
25 RB/0 Offset		150 kHz - 30 MHz	0.15	-46.6	-36	Pass
25 RB/0 Offset		30 MHz - 1 GHz	1981.28	-42.5	-16	Pass
25 RB/0 Offset		1 GHz - 16 GHz	3837.07	-34.6	-16	Pass
10 MHz Bandwidth						
QPSK Modulation						
Mid Channel 1531 MHz						
52 RB/0 Offset		9 kHz - 150 kHz	0.01	-81.7	-46	Pass
52 RB/0 Offset		150 kHz - 30 MHz	0.16	-46.5	-36	Pass
52 RB/0 Offset		30 MHz - 1 GHz	1983.25	-42.5	-16	Pass
52 RB/0 Offset		1 GHz - 16 GHz	3829.07	-34.7	-16	Pass
16-QAM Modulation						
Mid Channel 1531 MHz						
52 RB/0 Offset		9 kHz - 150 kHz	0.01	-81.8	-46	Pass
52 RB/0 Offset		150 kHz - 30 MHz	0.15	-46.5	-36	Pass
52 RB/0 Offset		30 MHz - 1 GHz	1983.25	-42.5	-16	Pass
52 RB/0 Offset		1 GHz - 16 GHz	3813.06	-34.8	-16	Pass
64-QAM Modulation						
Mid Channel 1531 MHz						
52 RB/0 Offset		9 kHz - 150 kHz	0.01	-81.8	-46	Pass
52 RB/0 Offset		150 kHz - 30 MHz	0.16	-46.3	-36	Pass
52 RB/0 Offset		30 MHz - 1 GHz	1983.74	-42.5	-16	Pass
52 RB/0 Offset		1 GHz - 16 GHz	3813.06	-34.7	-16	Pass
256-QAM Modulation						
Mid Channel 1531 MHz						
52 RB/0 Offset		9 kHz - 150 kHz	0.01	-81.9	-46	Pass
52 RB/0 Offset		150 kHz - 30 MHz	0.16	-46.6	-36	Pass
52 RB/0 Offset		30 MHz - 1 GHz	1988.67	-42.4	-16	Pass
52 RB/0 Offset		1 GHz - 16 GHz	3823.07	-34.7	-16	Pass

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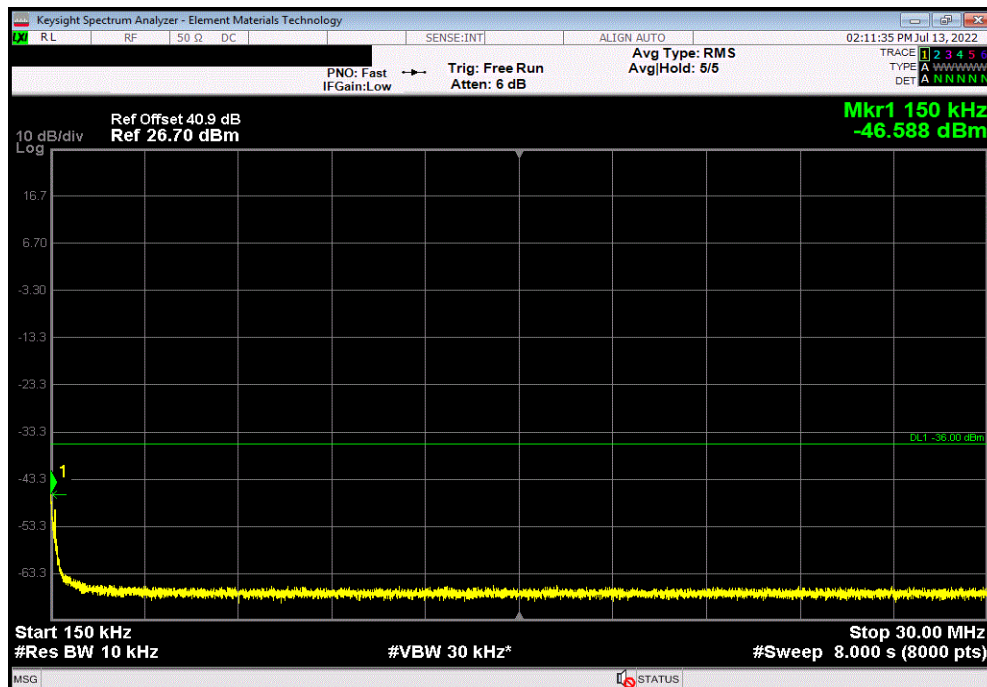


TbTx 2022.05.02.0 XMt 2022.02.07.0

5G NR, Band n24, SCS 15kHz, 5 MHz Bandwidth, QPSK Modulation, Low Channel 1528.5 MHz, 25 RB/0 Offset					
Frequency Range	Measured Freq (MHz)	Max Value (dBm)	Limit (dBm)	Result	
9 kHz - 150 kHz	0.01	-81.8	-46	Pass	



5G NR, Band n24, SCS 15kHz, 5 MHz Bandwidth, QPSK Modulation, Low Channel 1528.5 MHz, 25 RB/0 Offset					
Frequency Range	Measured Freq (MHz)	Max Value (dBm)	Limit (dBm)	Result	
150 kHz - 30 MHz	0.15	-46.59	-36	Pass	

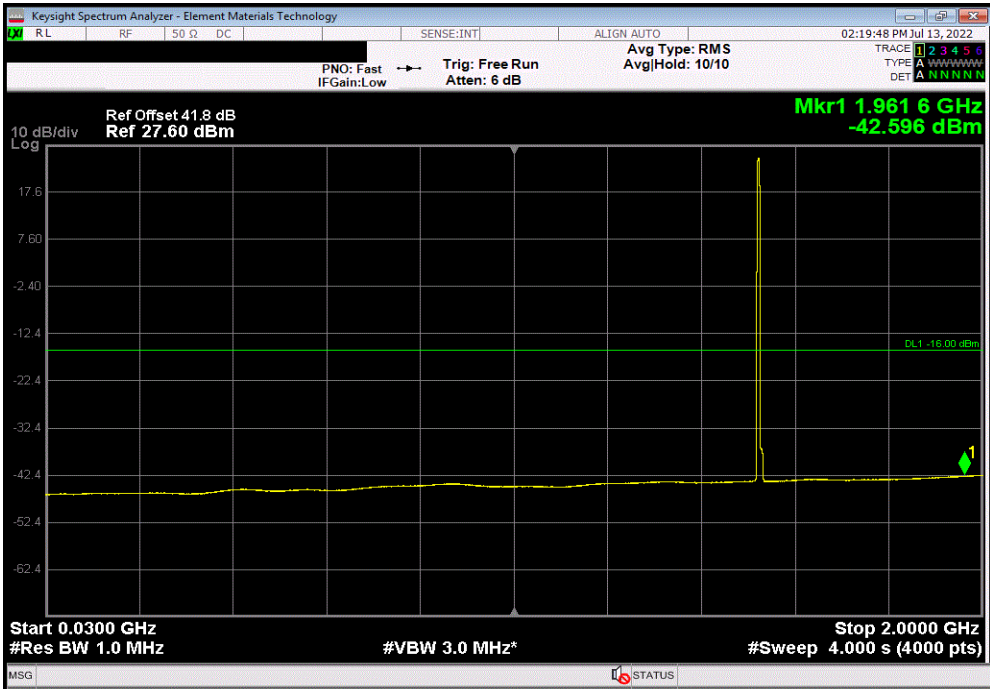


SPURIOUS EMISSIONS AT THE ANTENNA TERMINALS, 3dBi

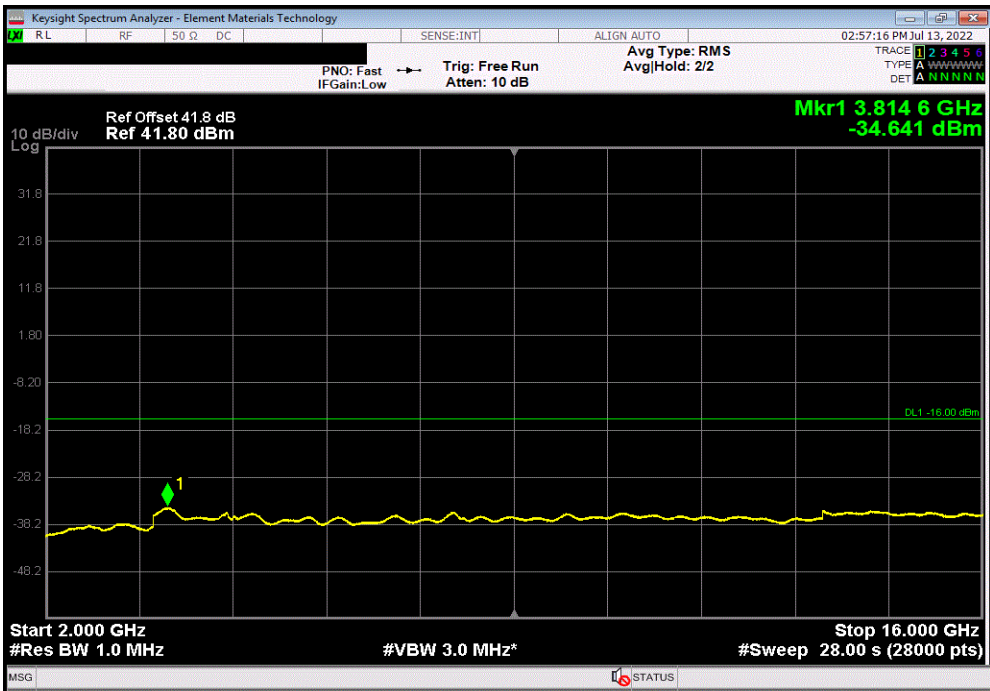


TbTtx 2022.05.02.0 XMt 2022.02.07.0

5G NR, Band n24, SCS 15kHz, 5 MHz Bandwidth, QPSK Modulation, Low Channel 1528.5 MHz, 25 RB/0 Offset					
Frequency Range	Measured Freq (MHz)	Max Value (dBm)	Limit (dBm)	Result	
30 MHz - 1 GHz	1961.58	-42.6	-16	Pass	



5G NR, Band n24, SCS 15kHz, 5 MHz Bandwidth, QPSK Modulation, Low Channel 1528.5 MHz, 25 RB/0 Offset					
Frequency Range	Measured Freq (MHz)	Max Value (dBm)	Limit (dBm)	Result	
1 GHz - 16 GHz	3814.56	-34.64	-16	Pass	

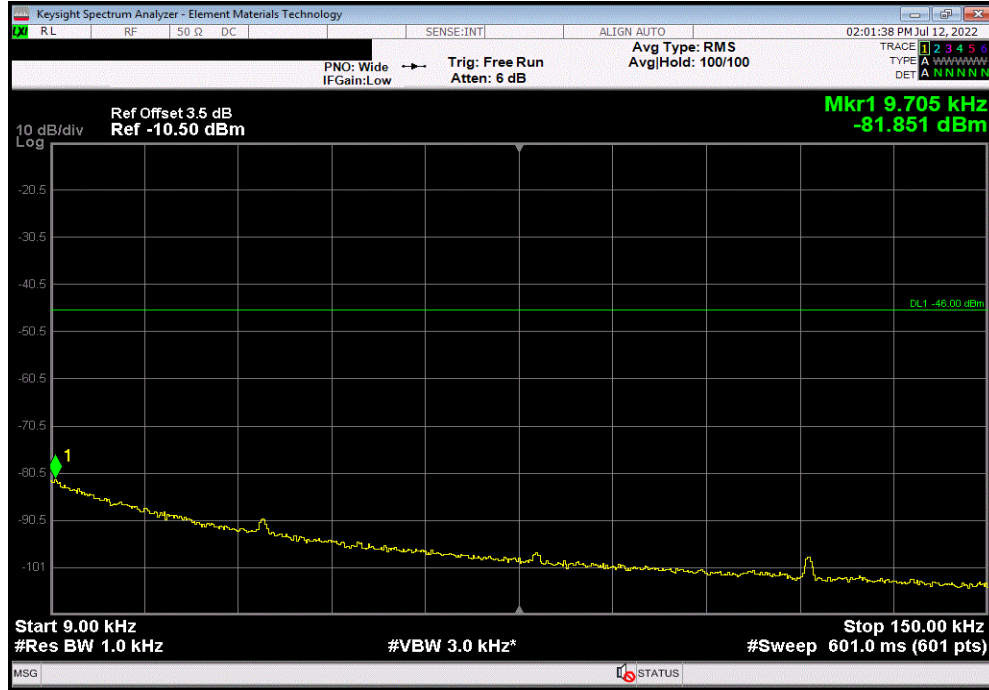


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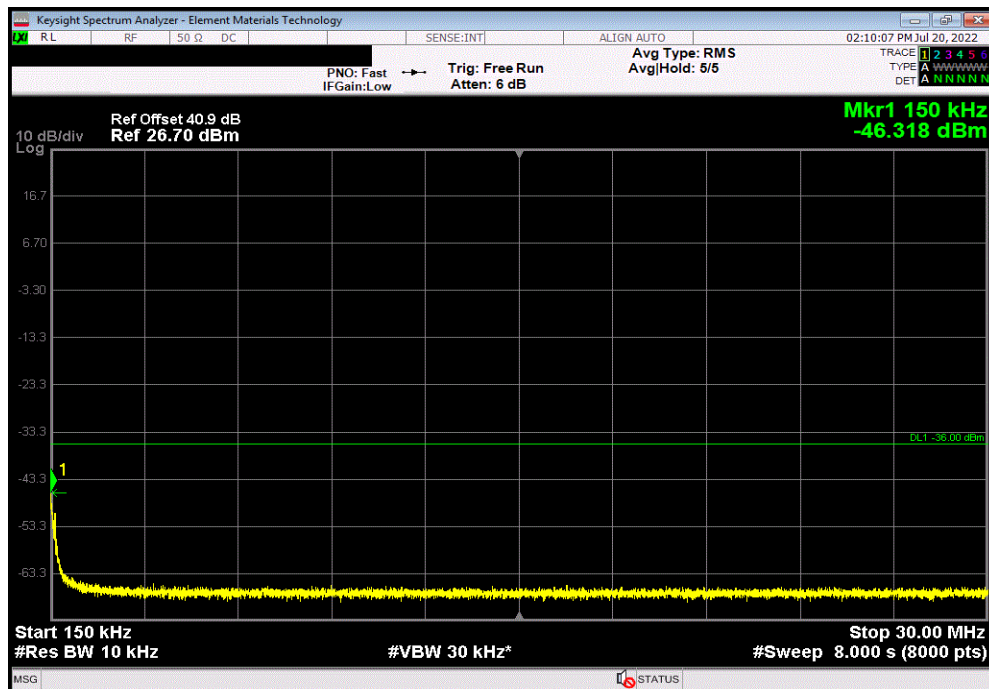


TbTtx 2022.05.02.0 XMt 2022.02.07.0

5G NR, Band n24, SCS 15kHz, 5 MHz Bandwidth, QPSK Modulation, High Channel 1533.5 MHz, 25 RB/0 Offset					
Frequency Range	Measured Freq (MHz)	Max Value (dBm)	Limit (dBm)	Result	
9 kHz - 150 kHz	0.01	-81.85	-46	Pass	



5G NR, Band n24, SCS 15kHz, 5 MHz Bandwidth, QPSK Modulation, High Channel 1533.5 MHz, 25 RB/0 Offset					
Frequency Range	Measured Freq (MHz)	Max Value (dBm)	Limit (dBm)	Result	
150 kHz - 30 MHz	0.15	-46.32	-36	Pass	

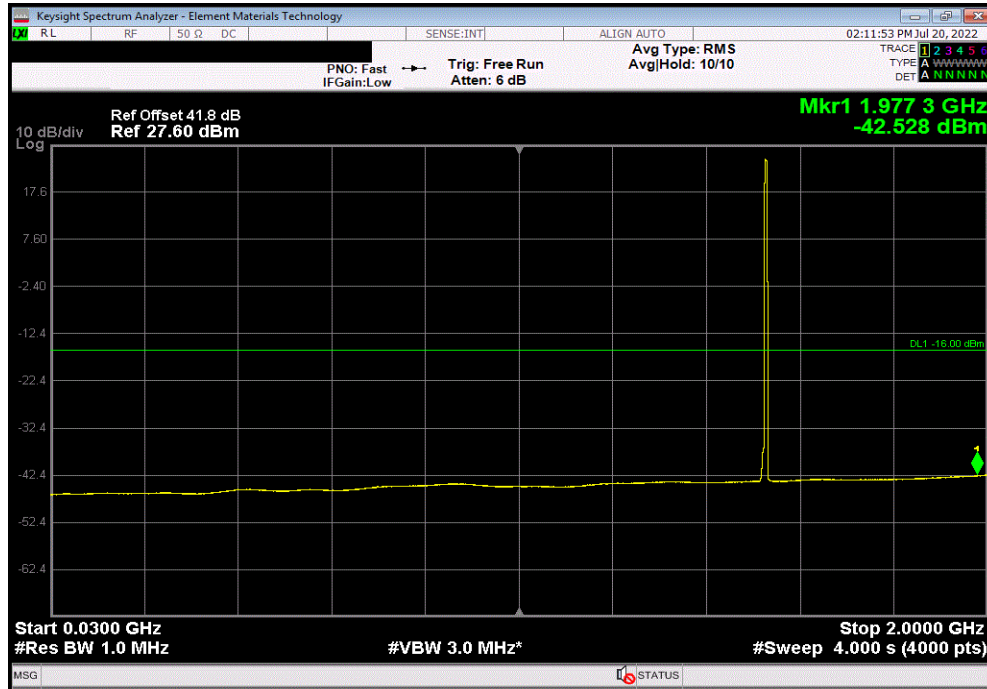


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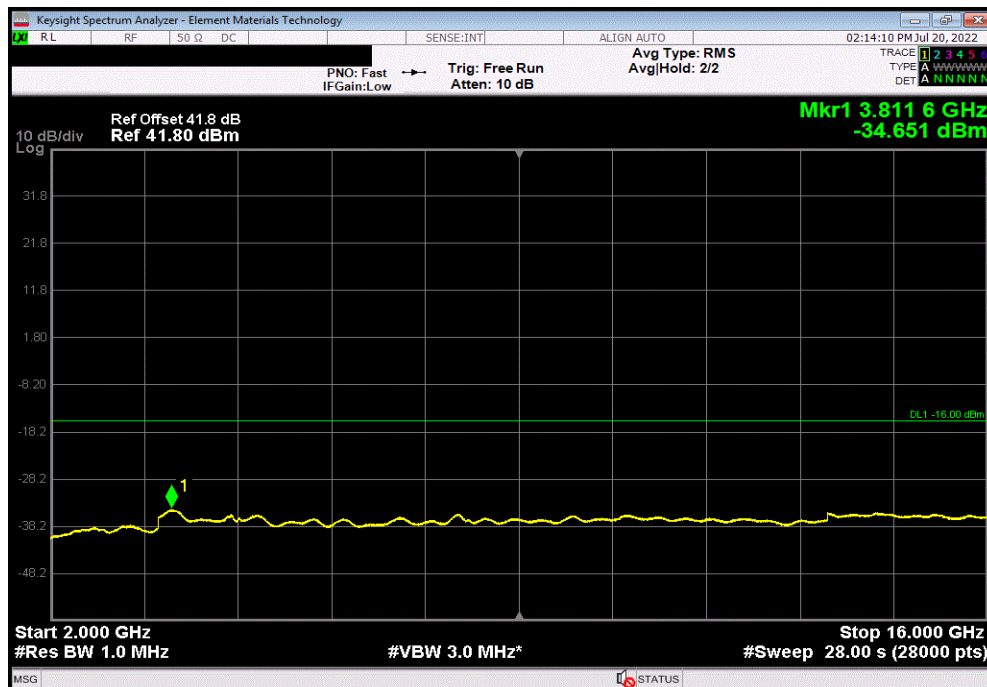


TbTtx 2022.05.02.0 XMt 2022.02.07.0

5G NR, Band n24, SCS 15kHz, 5 MHz Bandwidth, QPSK Modulation, High Channel 1533.5 MHz, 25 RB/0 Offset					
Frequency Range	Measured Freq (MHz)	Max Value (dBm)	Limit (dBm)	Result	
30 MHz - 1 GHz	1977.34	-42.53	-16	Pass	



5G NR, Band n24, SCS 15kHz, 5 MHz Bandwidth, QPSK Modulation, High Channel 1533.5 MHz, 25 RB/0 Offset					
Frequency Range	Measured Freq (MHz)	Max Value (dBm)	Limit (dBm)	Result	
1 GHz - 16 GHz	3811.56	-34.65	-16	Pass	

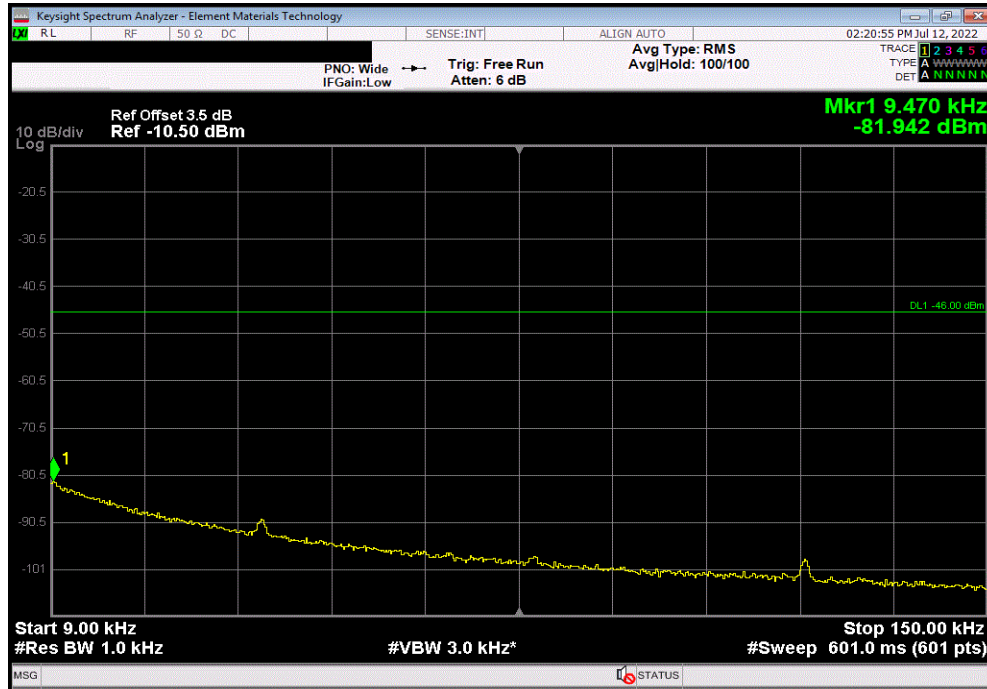


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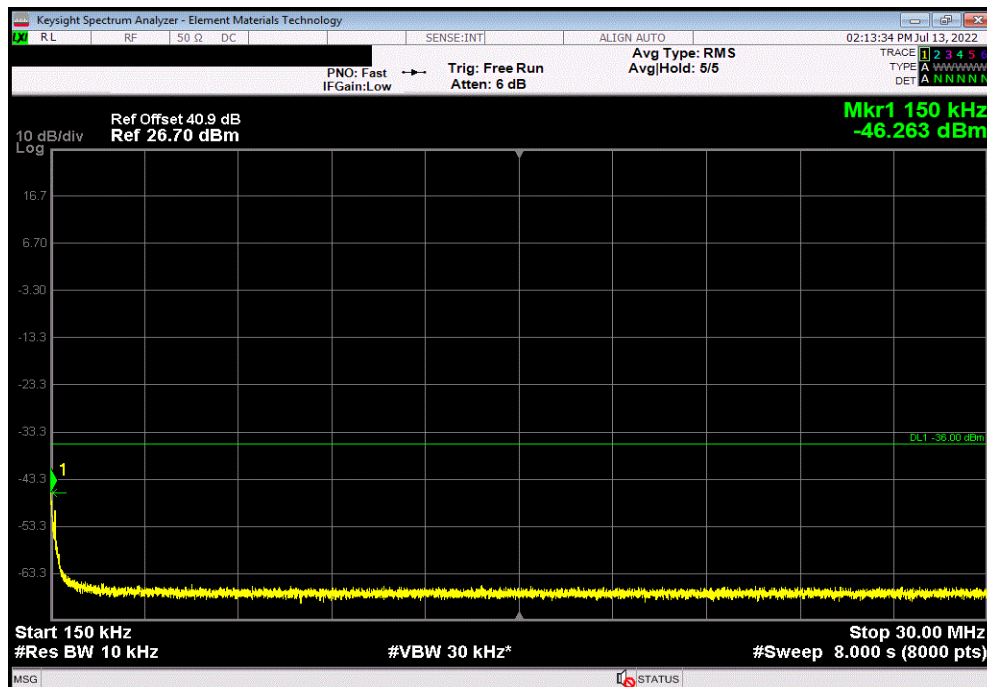


TbTtx 2022.05.02.0 XMt 2022.02.07.0

5G NR, Band n24, SCS 15kHz, 5 MHz Bandwidth, 16-QAM Modulation, Low Channel 1528.5 MHz, 25 RB/0 Offset					
Frequency Range	Measured Freq (MHz)	Max Value (dBm)	Limit (dBm)	Result	
9 kHz - 150 kHz	0.01	-81.94	-46	Pass	



5G NR, Band n24, SCS 15kHz, 5 MHz Bandwidth, 16-QAM Modulation, Low Channel 1528.5 MHz, 25 RB/0 Offset					
Frequency Range	Measured Freq (MHz)	Max Value (dBm)	Limit (dBm)	Result	
150 kHz - 30 MHz	0.15	-46.26	-36	Pass	

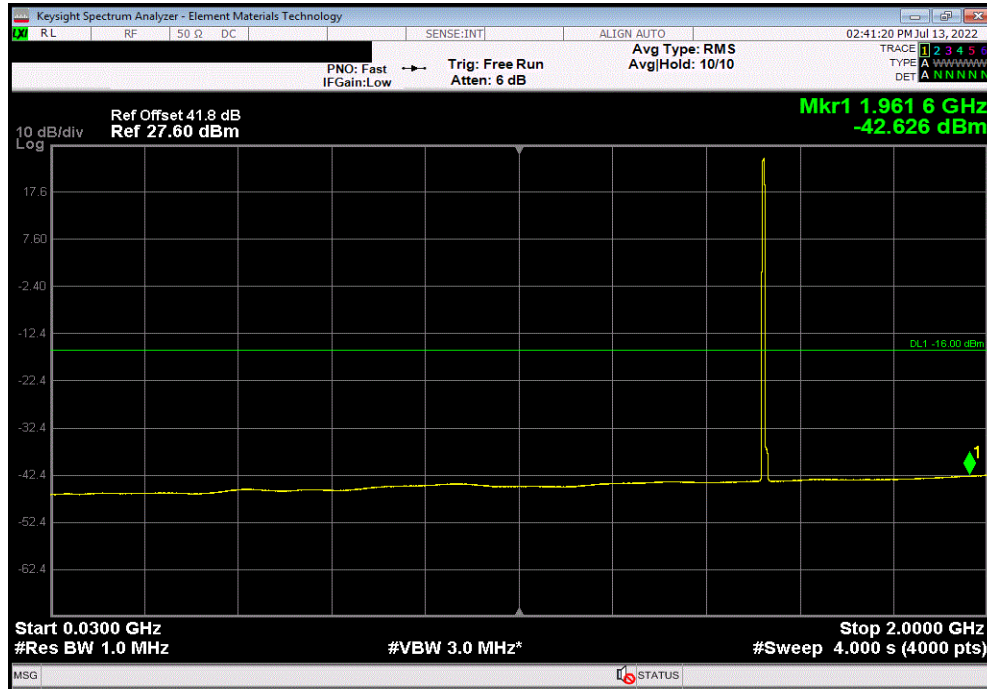


SPURIOUS EMISSIONS AT THE ANTENNA TERMINALS, 3dBi

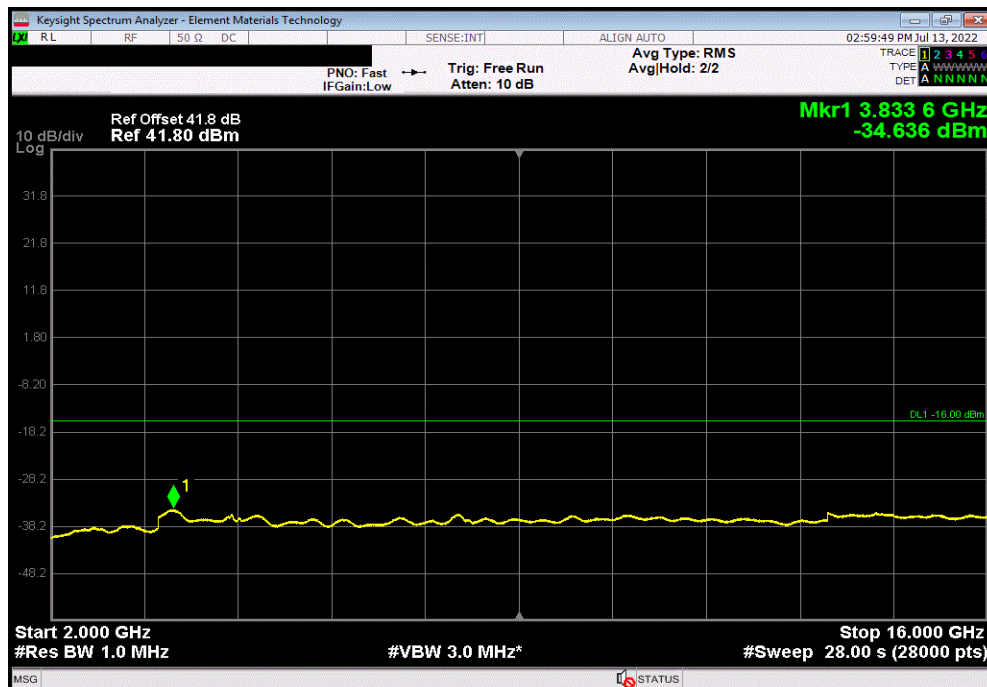


TbTtx 2022.05.02.0 XMt 2022.02.07.0

5G NR, Band n24, SCS 15kHz, 5 MHz Bandwidth, 16-QAM Modulation, Low Channel 1528.5 MHz, 25 RB/0 Offset					
Frequency Range	Measured Freq (MHz)	Max Value (dBm)	Limit (dBm)	Result	
30 MHz - 1 GHz	1961.58	-42.63	-16	Pass	



5G NR, Band n24, SCS 15kHz, 5 MHz Bandwidth, 16-QAM Modulation, Low Channel 1528.5 MHz, 25 RB/0 Offset					
Frequency Range	Measured Freq (MHz)	Max Value (dBm)	Limit (dBm)	Result	
1 GHz - 16 GHz	3833.57	-34.64	-16	Pass	

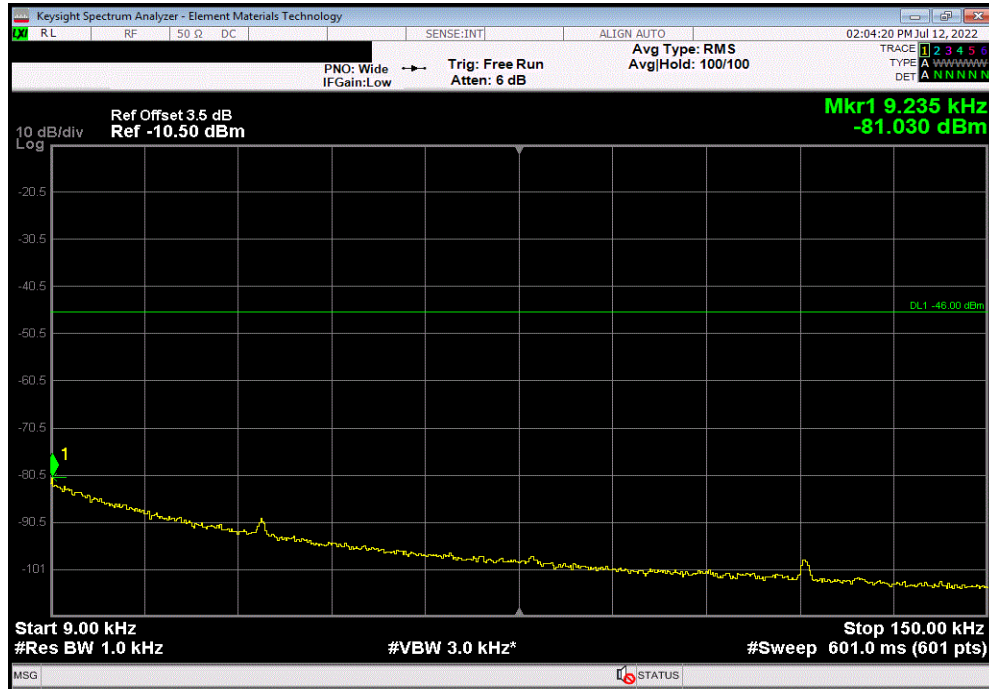


SPURIOUS EMISSIONS AT THE ANTENNA TERMINALS, 3dBi

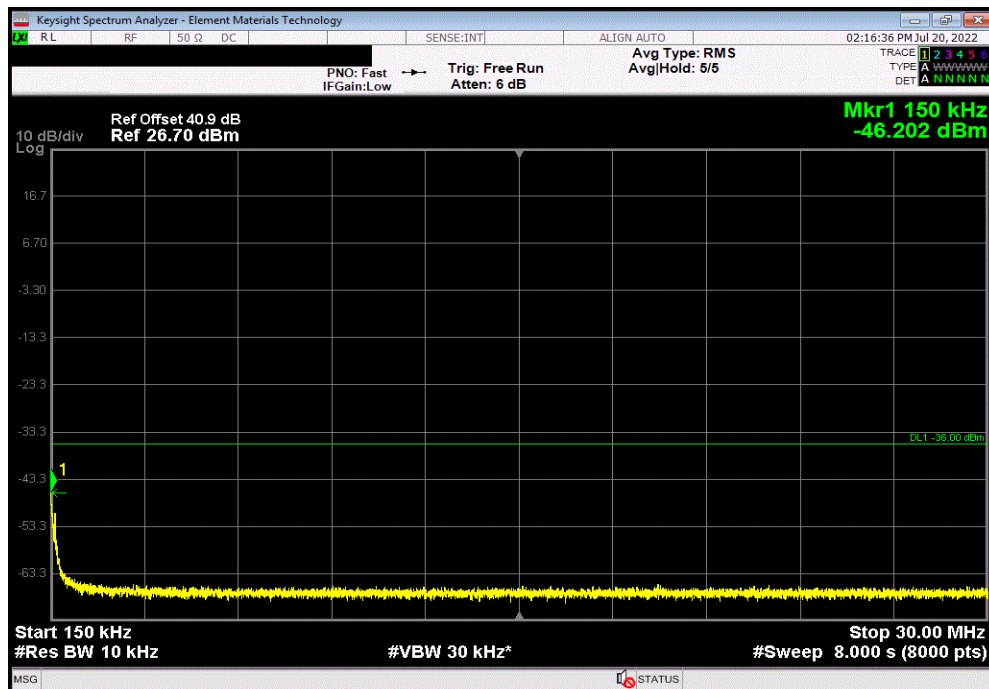


TbTx 2022.05.02.0 XMt 2022.02.07.0

5G NR, Band n24, SCS 15kHz, 5 MHz Bandwidth, 16-QAM Modulation, High Channel 1533.5 MHz, 25 RB/0 Offset					
Frequency Range	Measured Freq (MHz)	Max Value (dBm)	Limit (dBm)	Result	
9 kHz - 150 kHz	0.01	-81.03	-46	Pass	



5G NR, Band n24, SCS 15kHz, 5 MHz Bandwidth, 16-QAM Modulation, High Channel 1533.5 MHz, 25 RB/0 Offset					
Frequency Range	Measured Freq (MHz)	Max Value (dBm)	Limit (dBm)	Result	
150 kHz - 30 MHz	0.15	-46.2	-36	Pass	

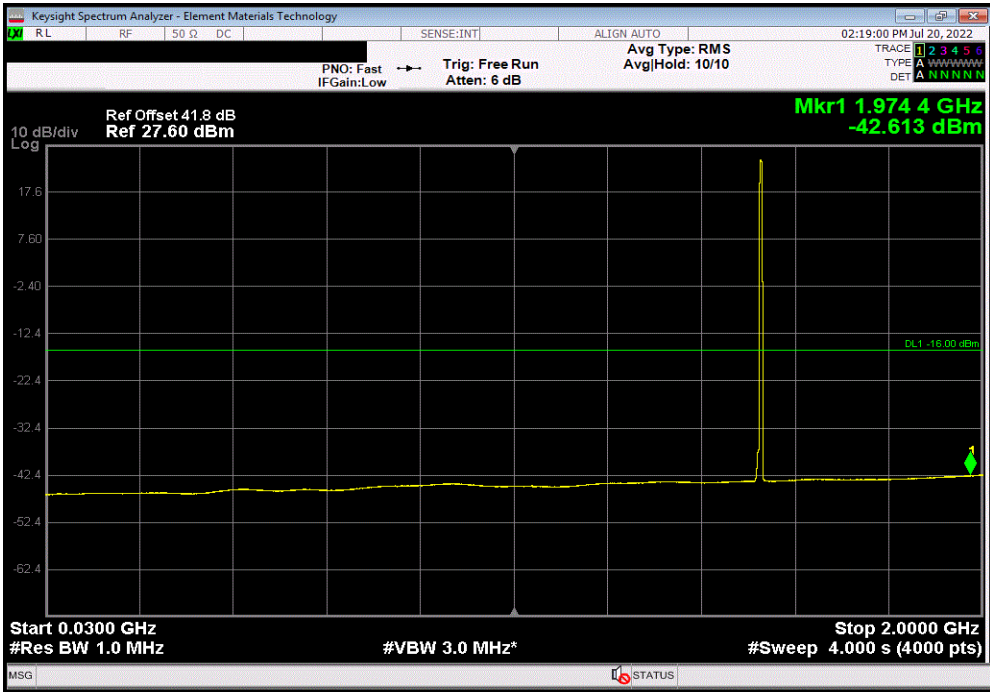


SPURIOUS EMISSIONS AT THE ANTENNA TERMINALS,
3dBi

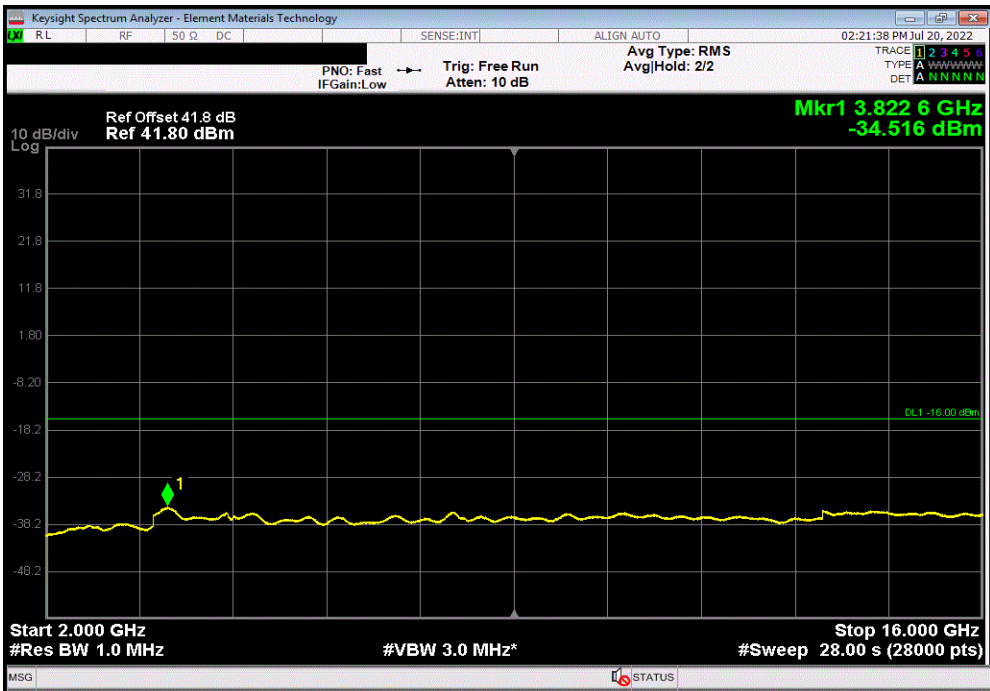


TbTtx 2022.05.02.0 XMt 2022.02.07.0

5G NR, Band n24, SCS 15kHz, 5 MHz Bandwidth, 16-QAM Modulation, High Channel 1533.5 MHz, 25 RB/0 Offset					
Frequency Range	Measured Freq (MHz)	Max Value (dBm)	Limit (dBm)	Result	
30 MHz - 1 GHz	1974.38	-42.61	-16	Pass	



5G NR, Band n24, SCS 15kHz, 5 MHz Bandwidth, 16-QAM Modulation, High Channel 1533.5 MHz, 25 RB/0 Offset					
Frequency Range	Measured Freq (MHz)	Max Value (dBm)	Limit (dBm)	Result	
1 GHz - 16 GHz	3822.57	-34.52	-16	Pass	

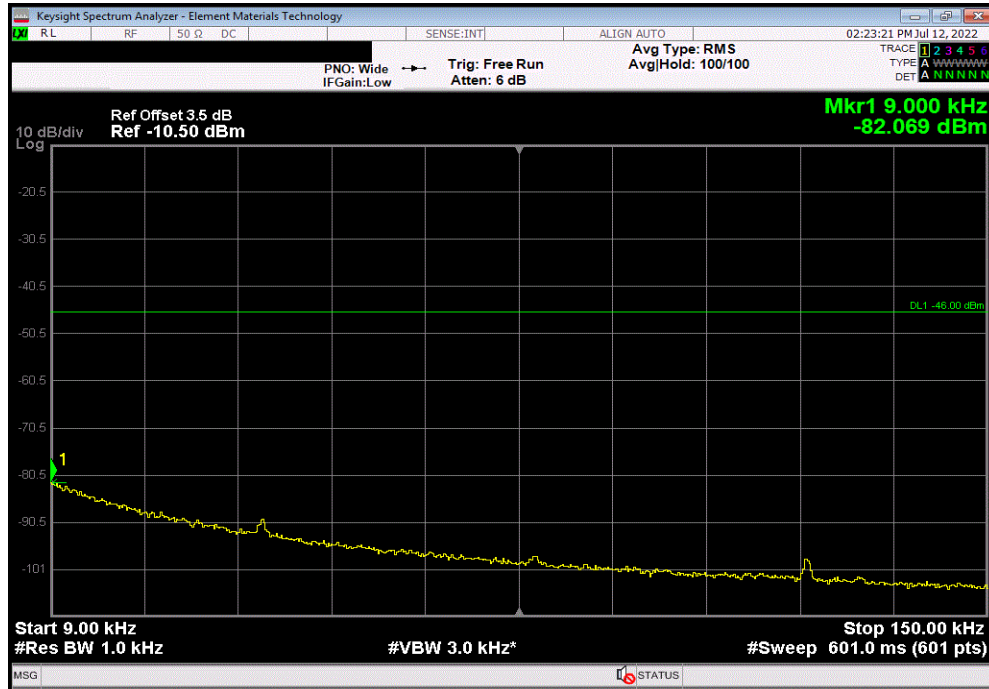


SPURIOUS EMISSIONS AT THE ANTENNA TERMINALS, 3dBi

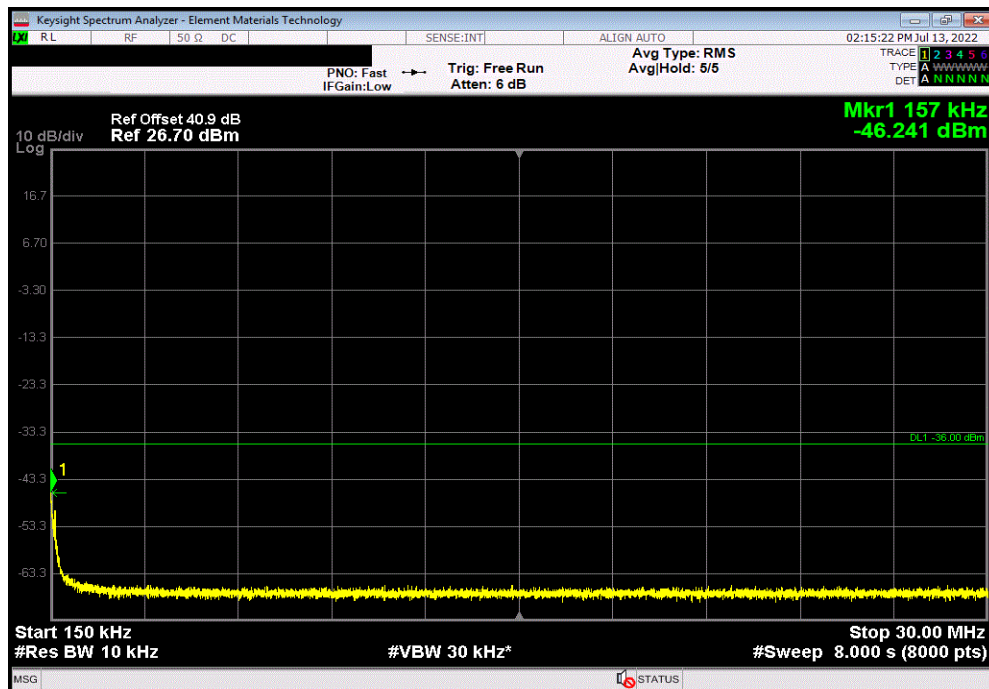


TbTx 2022.05.02.0 XMt 2022.02.07.0

5G NR, Band n24, SCS 15kHz, 5 MHz Bandwidth, 64-QAM Modulation, Low Channel 1528.5 MHz, 25 RB/0 Offset					
Frequency Range	Measured Freq (MHz)	Max Value (dBm)	Limit (dBm)	Result	
9 kHz - 150 kHz	0.01	-82.07	-46	Pass	



5G NR, Band n24, SCS 15kHz, 5 MHz Bandwidth, 64-QAM Modulation, Low Channel 1528.5 MHz, 25 RB/0 Offset					
Frequency Range	Measured Freq (MHz)	Max Value (dBm)	Limit (dBm)	Result	
150 kHz - 30 MHz	0.16	-46.24	-36	Pass	

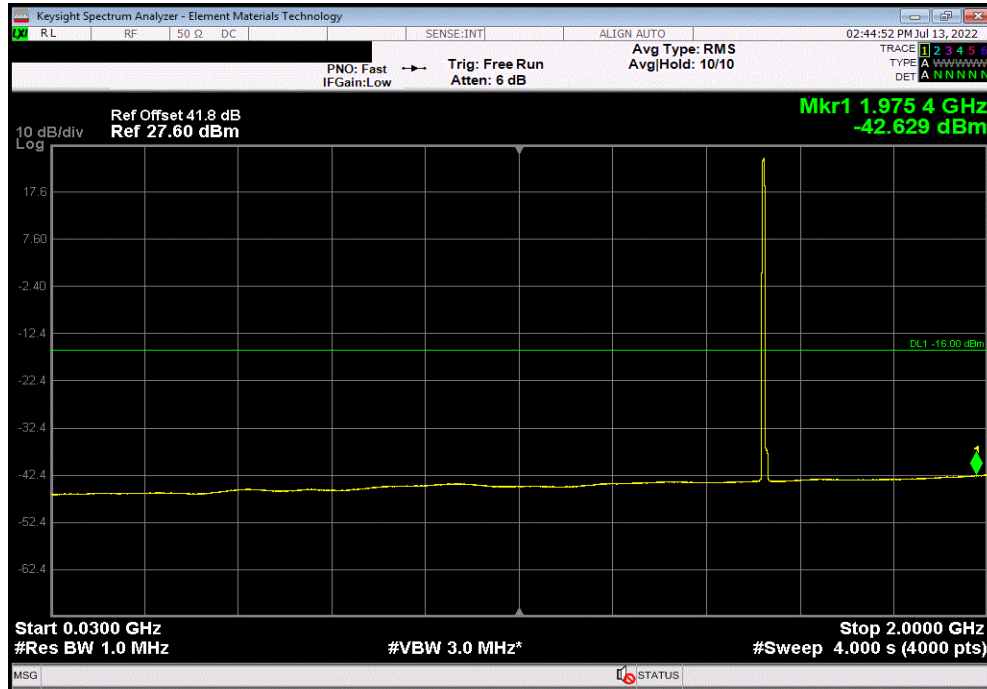


SPURIOUS EMISSIONS AT THE ANTENNA TERMINALS, 3dBi

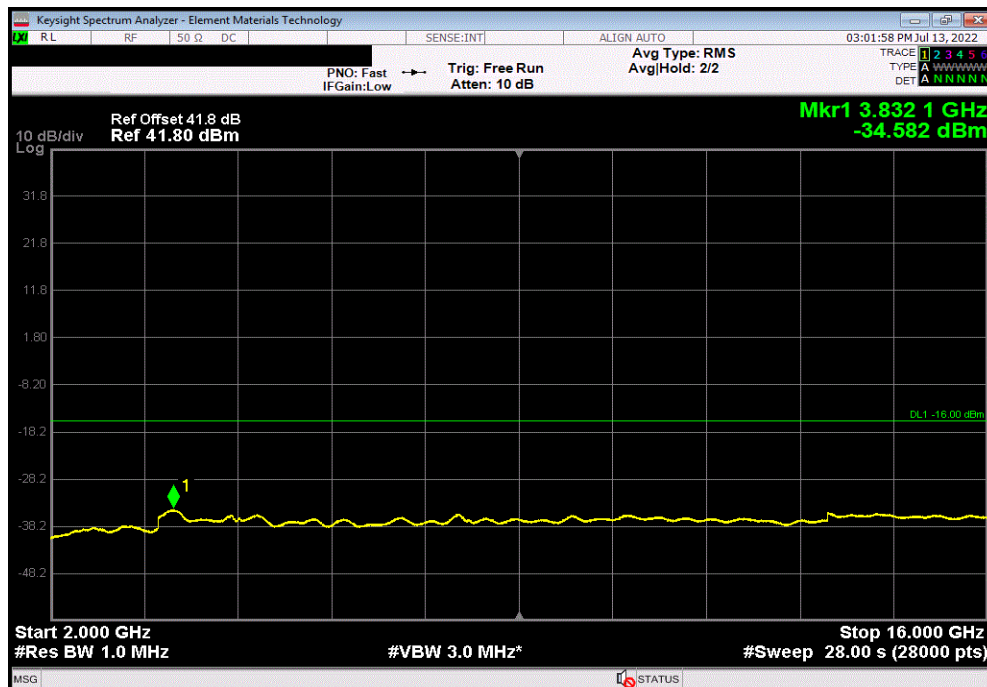


TbTtx 2022.05.02.0 XMt 2022.02.07.0

5G NR, Band n24, SCS 15kHz, 5 MHz Bandwidth, 64-QAM Modulation, Low Channel 1528.5 MHz, 25 RB/0 Offset					
Frequency Range	Measured Freq (MHz)	Max Value (dBm)	Limit (dBm)	Result	
30 MHz - 1 GHz	1975.37	-42.63	-16	Pass	



5G NR, Band n24, SCS 15kHz, 5 MHz Bandwidth, 64-QAM Modulation, Low Channel 1528.5 MHz, 25 RB/0 Offset					
Frequency Range	Measured Freq (MHz)	Max Value (dBm)	Limit (dBm)	Result	
1 GHz - 16 GHz	3832.07	-34.58	-16	Pass	

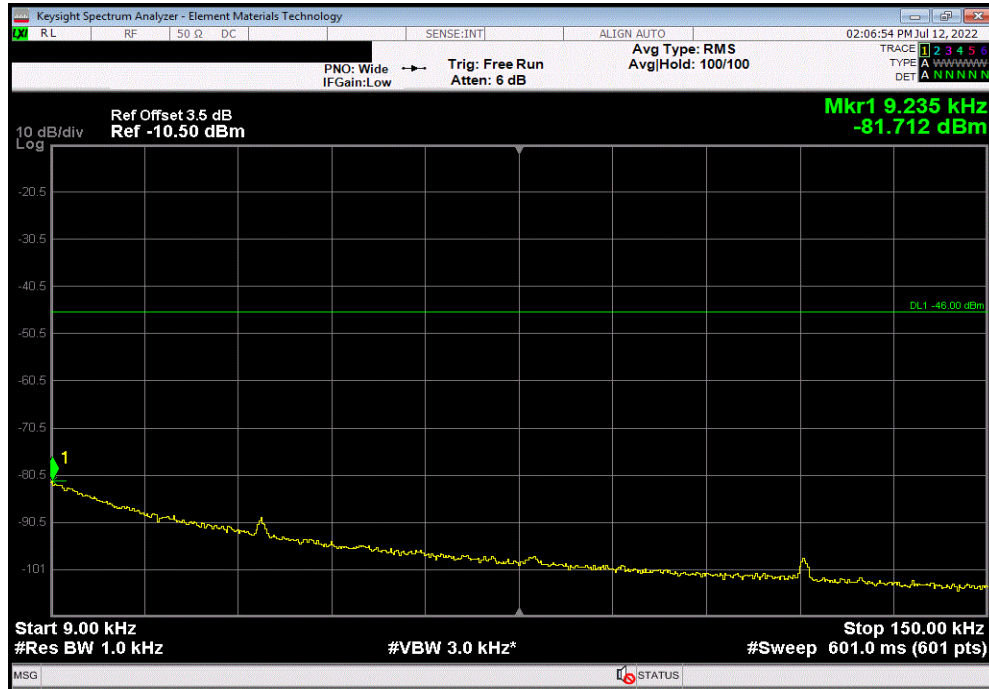


SPURIOUS EMISSIONS AT THE ANTENNA TERMINALS, 3dBi

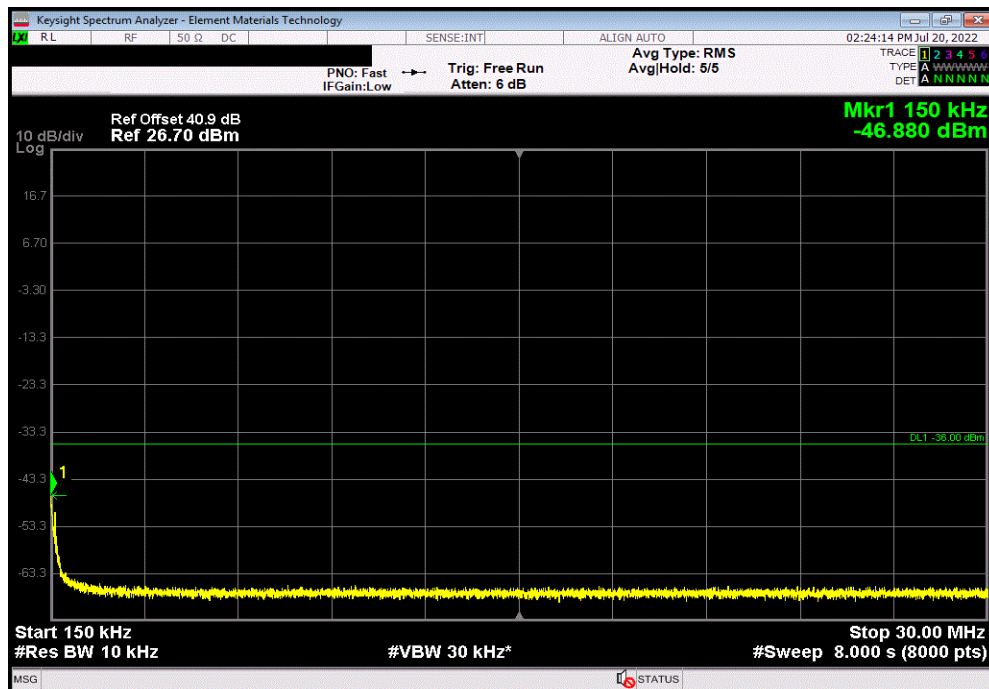


TbTx 2022.05.02.0 XMt 2022.02.07.0

5G NR, Band n24, SCS 15kHz, 5 MHz Bandwidth, 64-QAM Modulation, High Channel 1533.5 MHz, 25 RB/0 Offset					
Frequency Range	Measured Freq (MHz)	Max Value (dBm)	Limit (dBm)	Result	
9 kHz - 150 kHz	0.01	-81.71	-46	Pass	



5G NR, Band n24, SCS 15kHz, 5 MHz Bandwidth, 64-QAM Modulation, High Channel 1533.5 MHz, 25 RB/0 Offset					
Frequency Range	Measured Freq (MHz)	Max Value (dBm)	Limit (dBm)	Result	
150 kHz - 30 MHz	0.15	-46.88	-36	Pass	

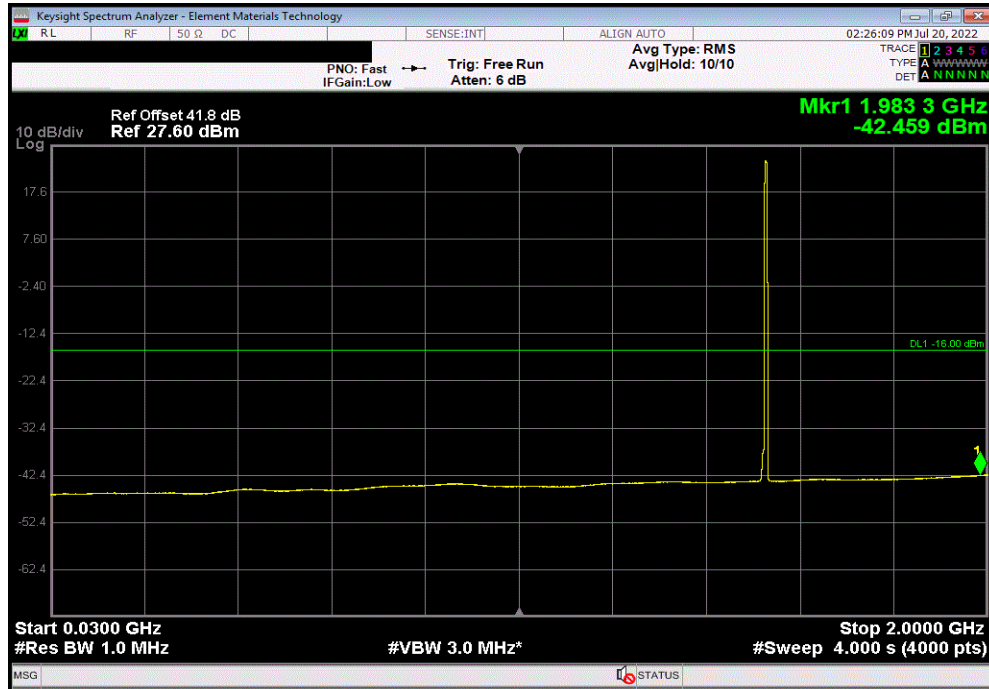


SPURIOUS EMISSIONS AT THE ANTENNA TERMINALS, 3dBi

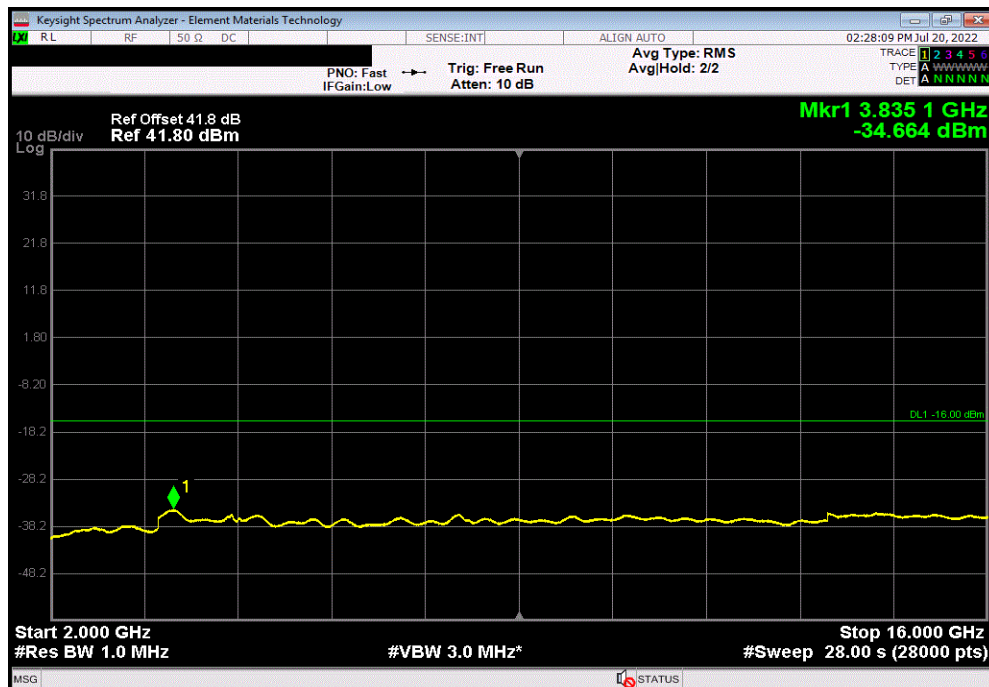


TbTtx 2022.05.02.0 XMt 2022.02.07.0

5G NR, Band n24, SCS 15kHz, 5 MHz Bandwidth, 64-QAM Modulation, High Channel 1533.5 MHz, 25 RB/0 Offset					
Frequency Range	Measured Freq (MHz)	Max Value (dBm)	Limit (dBm)	Result	
30 MHz - 1 GHz	1983.25	-42.46	-16	Pass	



5G NR, Band n24, SCS 15kHz, 5 MHz Bandwidth, 64-QAM Modulation, High Channel 1533.5 MHz, 25 RB/0 Offset					
Frequency Range	Measured Freq (MHz)	Max Value (dBm)	Limit (dBm)	Result	
1 GHz - 16 GHz	3835.07	-34.66	-16	Pass	

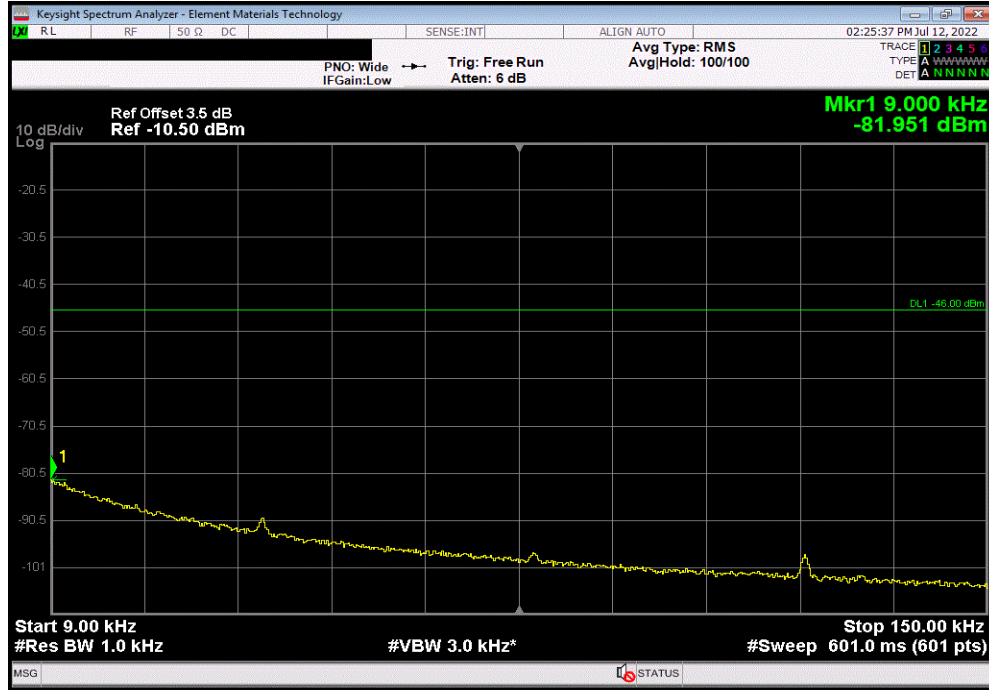


SPURIOUS EMISSIONS AT THE ANTENNA TERMINALS, 3dBi

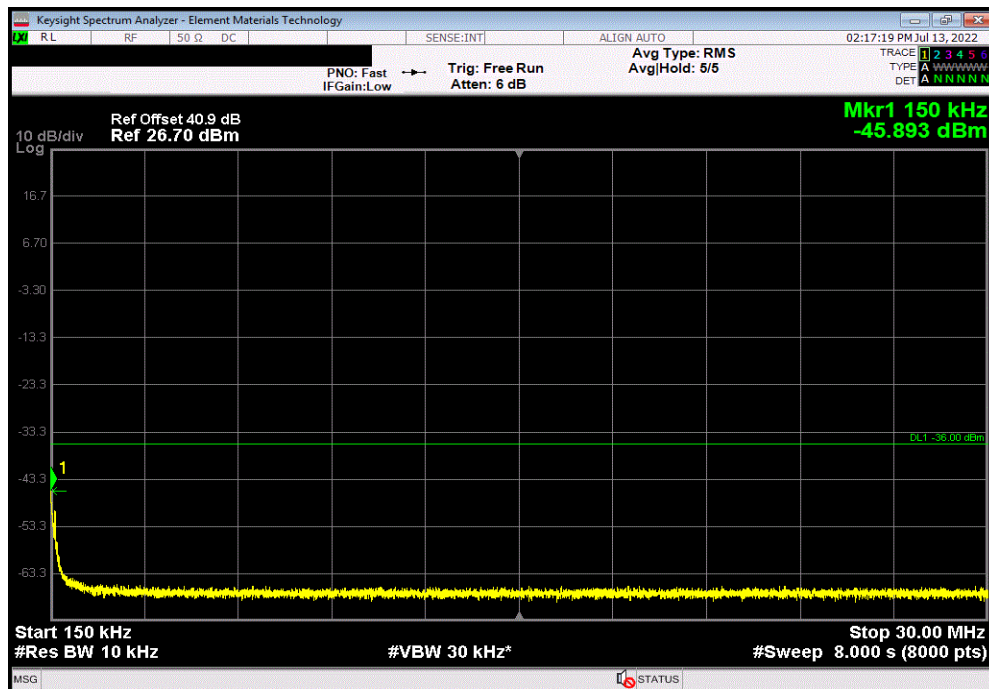


TbTx 2022.05.02.0 XMt 2022.02.07.0

5G NR, Band n24, SCS 15kHz, 5 MHz Bandwidth, 256-QAM Modulation, Low Channel 1528.5 MHz, 25 RB/0 Offset					
Frequency Range	Measured Freq (MHz)	Max Value (dBm)	Limit (dBm)	Result	
9 kHz - 150 kHz	0.01	-81.95	-46	Pass	



5G NR, Band n24, SCS 15kHz, 5 MHz Bandwidth, 256-QAM Modulation, Low Channel 1528.5 MHz, 25 RB/0 Offset					
Frequency Range	Measured Freq (MHz)	Max Value (dBm)	Limit (dBm)	Result	
150 kHz - 30 MHz	0.15	-45.89	-36	Pass	

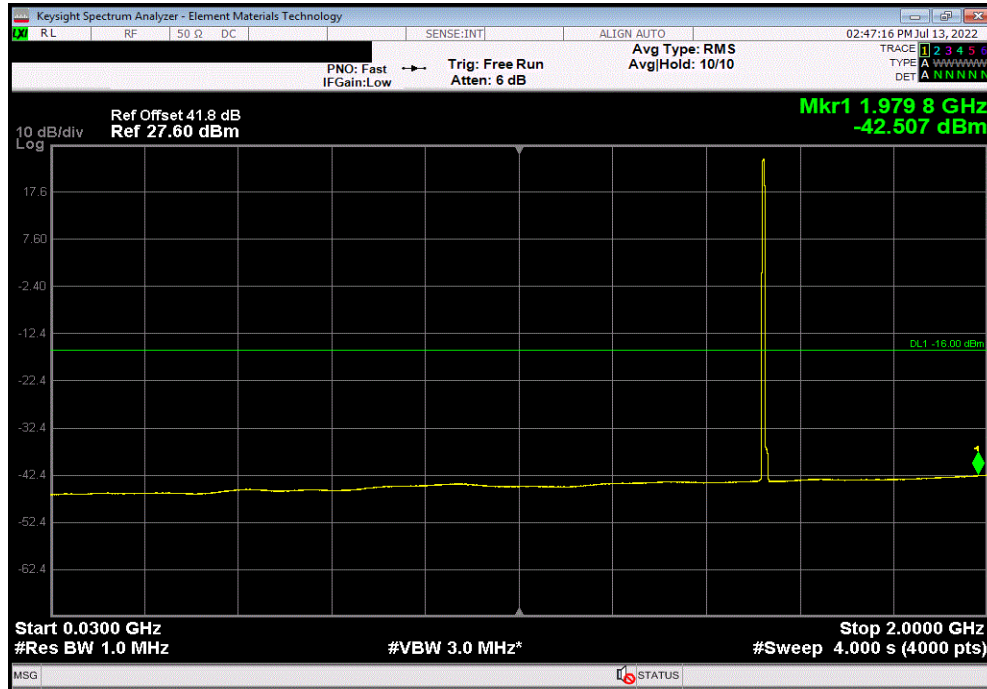


SPURIOUS EMISSIONS AT THE ANTENNA TERMINALS, 3dBi

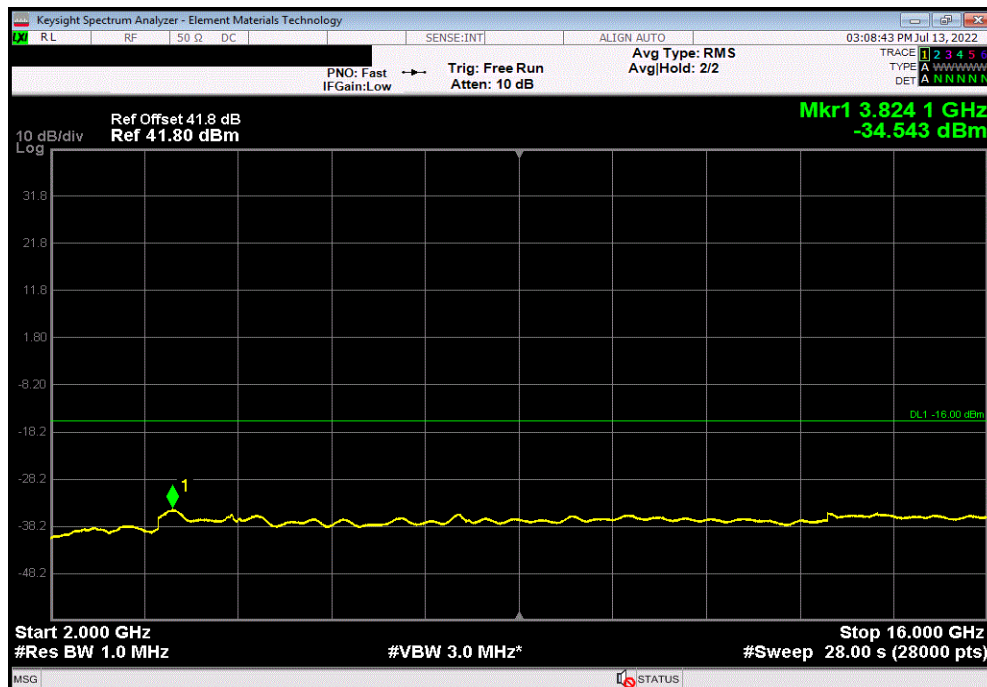


TbTtx 2022.05.02.0 XMt 2022.02.07.0

5G NR, Band n24, SCS 15kHz, 5 MHz Bandwidth, 256-QAM Modulation, Low Channel 1528.5 MHz, 25 RB/0 Offset					
Frequency Range	Measured Freq (MHz)	Max Value (dBm)	Limit (dBm)	Result	
30 MHz - 1 GHz	1979.8	-42.51	-16	Pass	



5G NR, Band n24, SCS 15kHz, 5 MHz Bandwidth, 256-QAM Modulation, Low Channel 1528.5 MHz, 25 RB/0 Offset					
Frequency Range	Measured Freq (MHz)	Max Value (dBm)	Limit (dBm)	Result	
1 GHz - 16 GHz	3824.07	-34.54	-16	Pass	

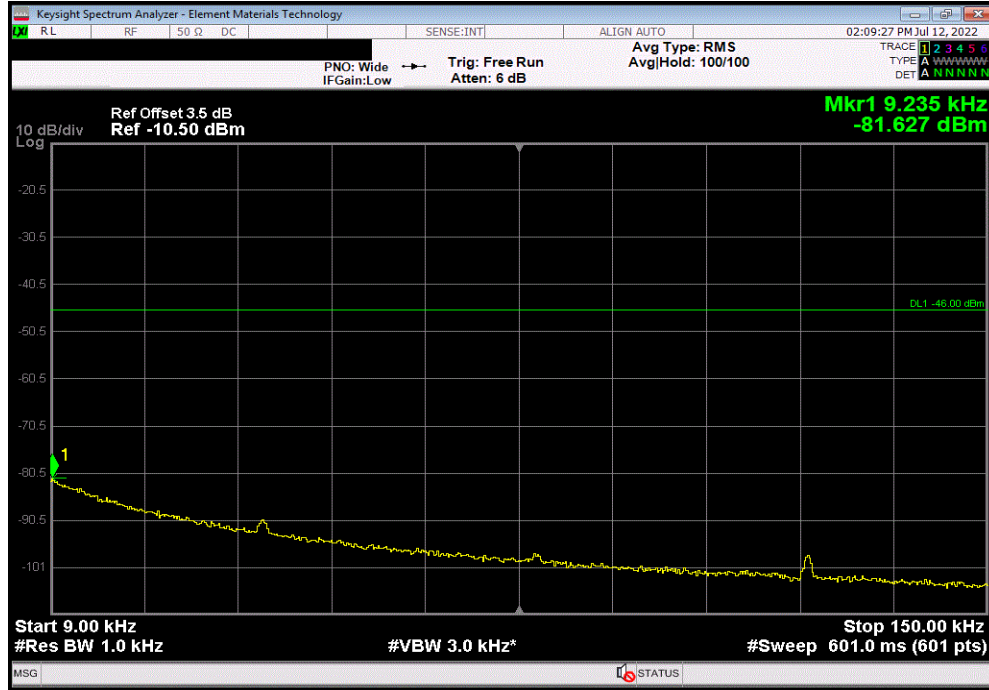


SPURIOUS EMISSIONS AT THE ANTENNA TERMINALS, 3dBi

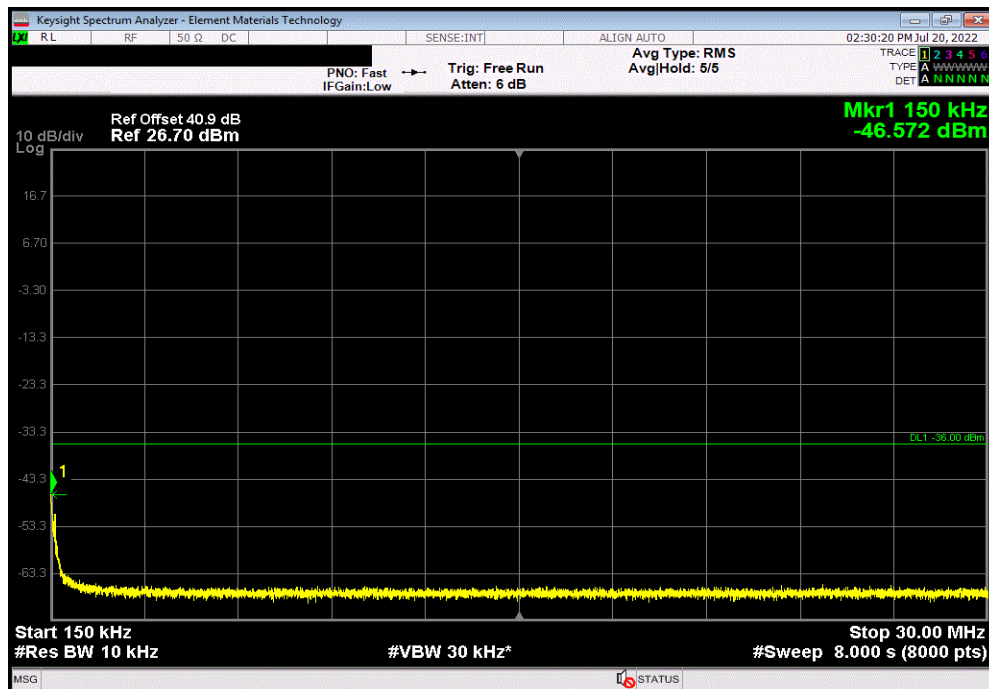


TbTx 2022.05.02.0 XMt 2022.02.07.0

5G NR, Band n24, SCS 15kHz, 5 MHz Bandwidth, 256-QAM Modulation, High Channel 1533.5 MHz, 25 RB/0 Offset					
Frequency Range	Measured Freq (MHz)	Max Value (dBm)	Limit (dBm)	Result	
9 kHz - 150 kHz	0.01	-81.63	-46	Pass	



5G NR, Band n24, SCS 15kHz, 5 MHz Bandwidth, 256-QAM Modulation, High Channel 1533.5 MHz, 25 RB/0 Offset					
Frequency Range	Measured Freq (MHz)	Max Value (dBm)	Limit (dBm)	Result	
150 kHz - 30 MHz	0.15	-46.57	-36	Pass	

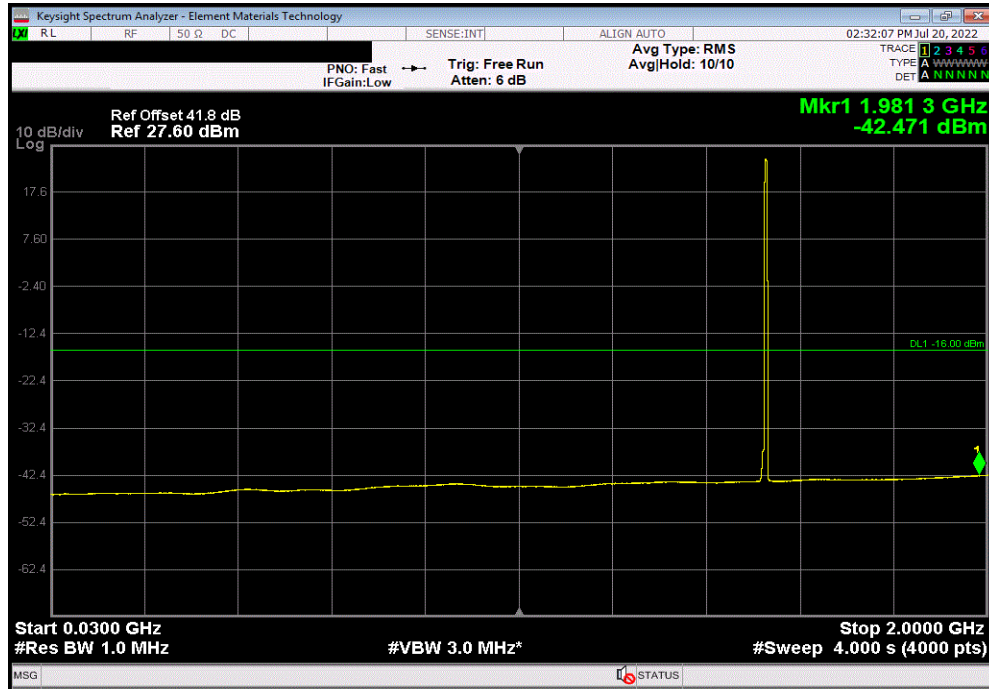


SPURIOUS EMISSIONS AT THE ANTENNA TERMINALS, 3dBi

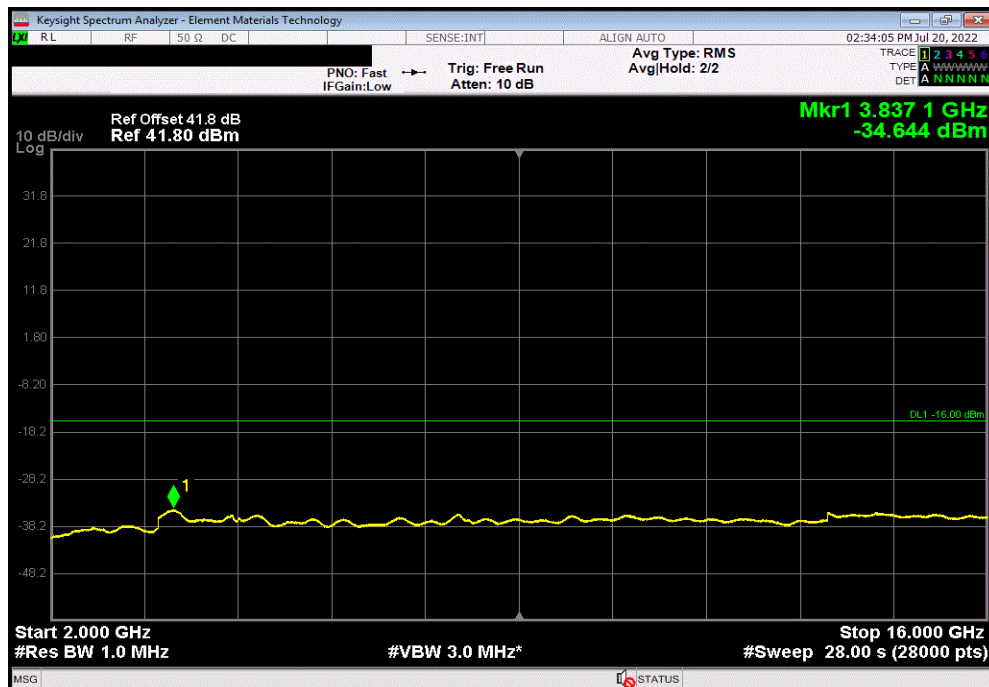


TbTtx 2022.05.02.0 XMt 2022.02.07.0

5G NR, Band n24, SCS 15kHz, 5 MHz Bandwidth, 256-QAM Modulation, High Channel 1533.5 MHz, 25 RB/0 Offset					
Frequency Range	Measured Freq (MHz)	Max Value (dBm)	Limit (dBm)	Result	
30 MHz - 1 GHz	1981.28	-42.47	-16	Pass	



5G NR, Band n24, SCS 15kHz, 5 MHz Bandwidth, 256-QAM Modulation, High Channel 1533.5 MHz, 25 RB/0 Offset					
Frequency Range	Measured Freq (MHz)	Max Value (dBm)	Limit (dBm)	Result	
1 GHz - 16 GHz	3837.07	-34.64	-16	Pass	

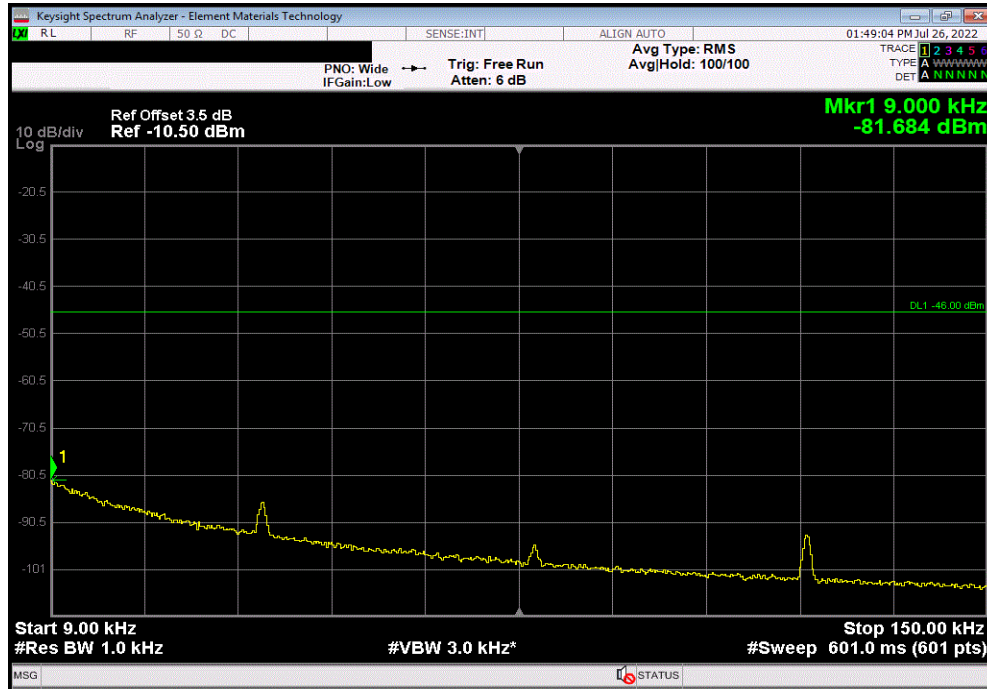


SPURIOUS EMISSIONS AT THE ANTENNA TERMINALS, 3dBi

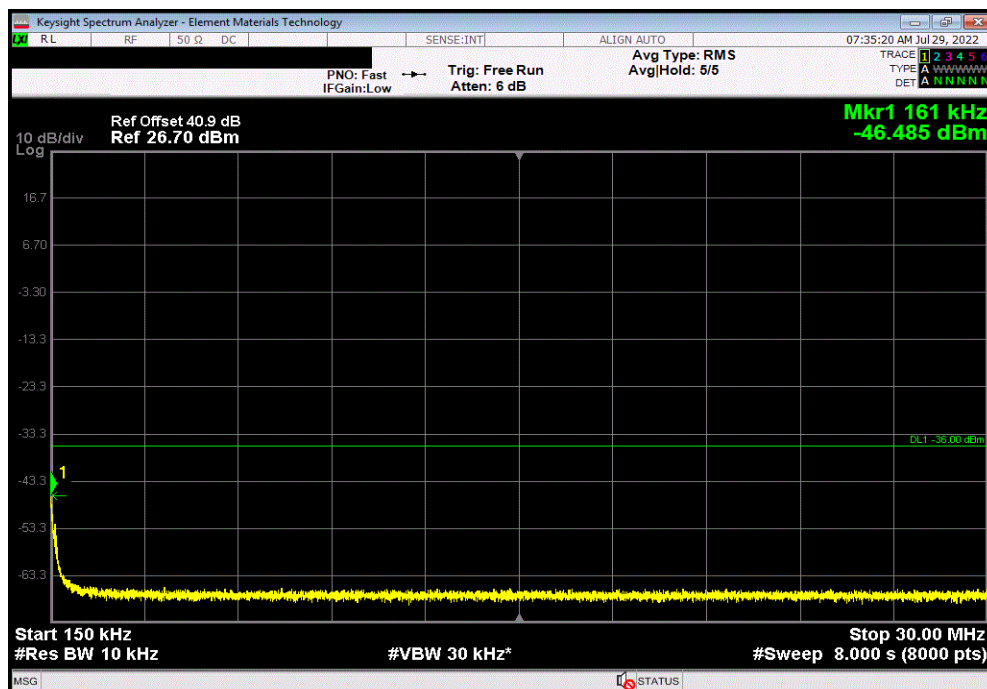


TbTtx 2022.05.02.0 XMt 2022.02.07.0

5G NR, Band n24, SCS 15kHz, 10 MHz Bandwidth, QPSK Modulation, Mid Channel 1531 MHz, 52 RB/0 Offset					
Frequency Range	Measured Freq (MHz)	Max Value (dBm)	Limit (dBm)	Result	
9 kHz - 150 kHz	0.01	-81.68	-46	Pass	



5G NR, Band n24, SCS 15kHz, 10 MHz Bandwidth, QPSK Modulation, Mid Channel 1531 MHz, 52 RB/0 Offset					
Frequency Range	Measured Freq (MHz)	Max Value (dBm)	Limit (dBm)	Result	
150 kHz - 30 MHz	0.16	-46.49	-36	Pass	

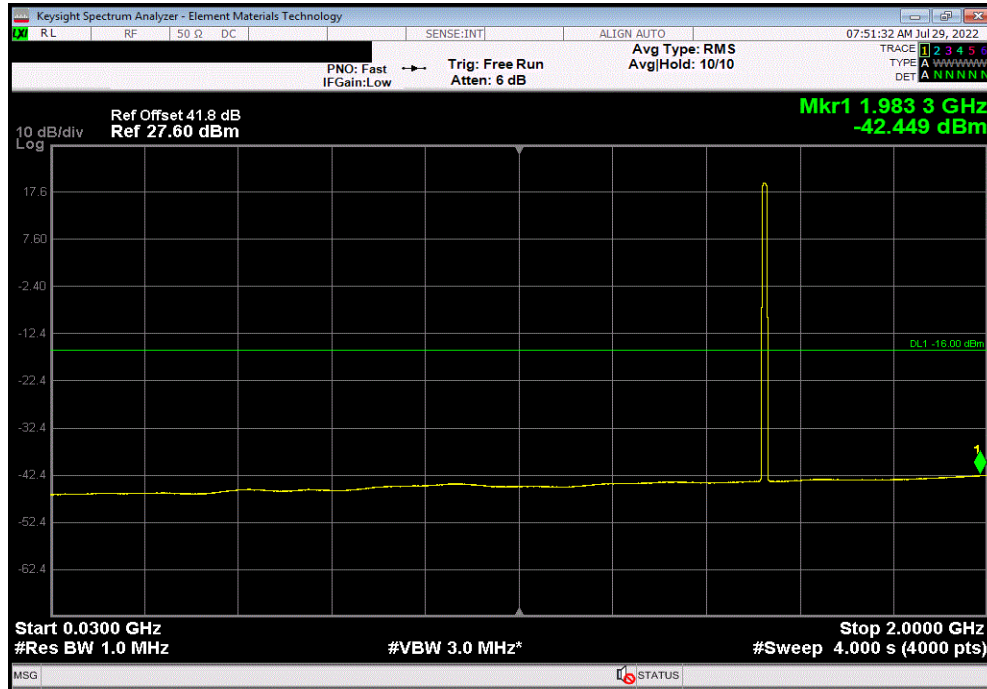


SPURIOUS EMISSIONS AT THE ANTENNA TERMINALS, 3dBi

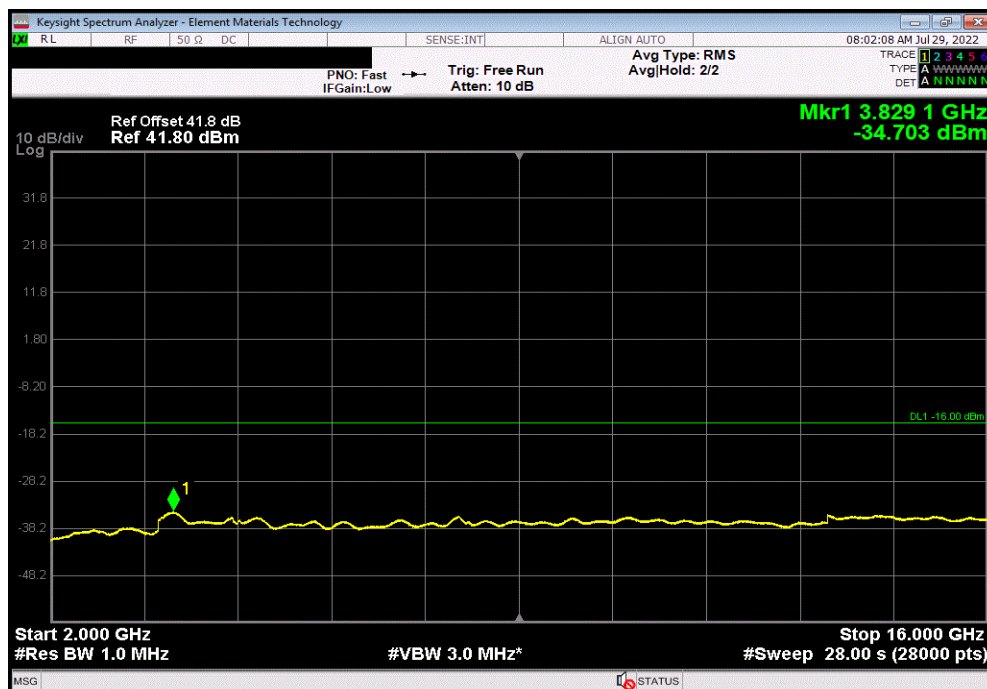


TbTtx 2022.05.02.0 XMt 2022.02.07.0

5G NR, Band n24, SCS 15kHz, 10 MHz Bandwidth, QPSK Modulation, Mid Channel 1531 MHz, 52 RB/0 Offset					
Frequency Range	Measured Freq (MHz)	Max Value (dBm)	Limit (dBm)	Result	
30 MHz - 1 GHz	1983.25	-42.45	-16	Pass	



5G NR, Band n24, SCS 15kHz, 10 MHz Bandwidth, QPSK Modulation, Mid Channel 1531 MHz, 52 RB/0 Offset					
Frequency Range	Measured Freq (MHz)	Max Value (dBm)	Limit (dBm)	Result	
1 GHz - 16 GHz	3829.07	-34.7	-16	Pass	

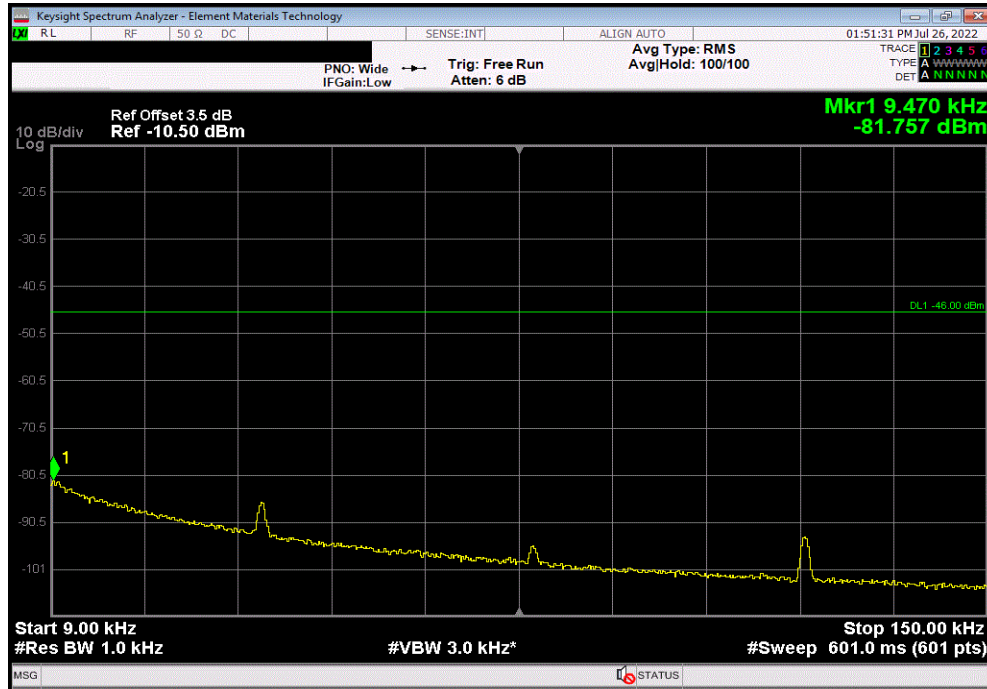


SPURIOUS EMISSIONS AT THE ANTENNA TERMINALS, 3dBi

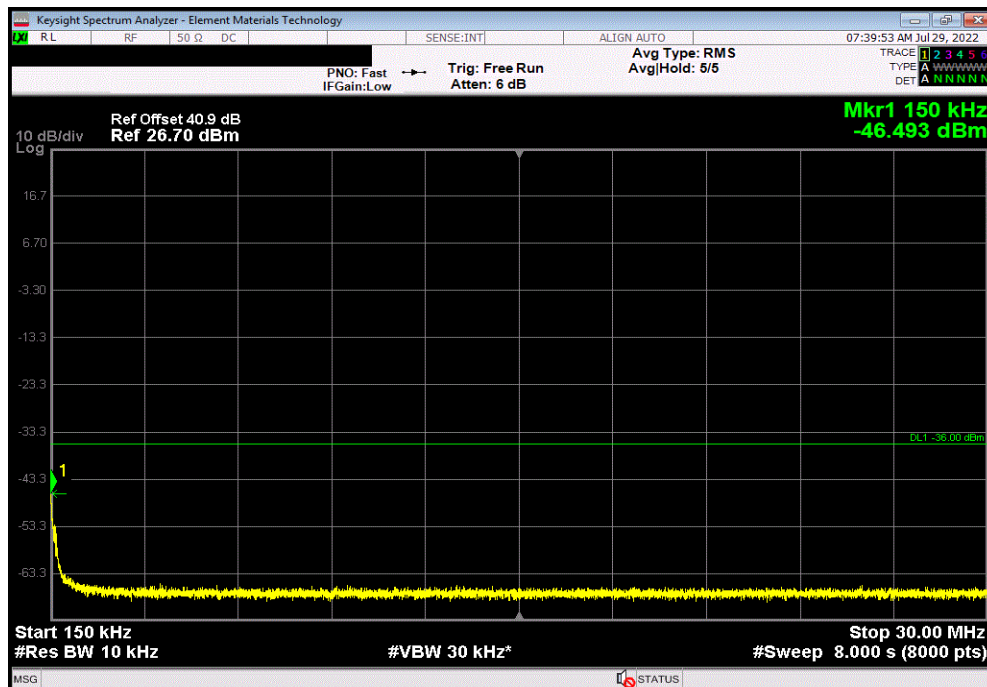


TbTx 2022.05.02.0 XMt 2022.02.07.0

5G NR, Band n24, SCS 15kHz, 10 MHz Bandwidth, 16-QAM Modulation, Mid Channel 1531 MHz, 52 RB/0 Offset					
Frequency Range	Measured Freq (MHz)	Max Value (dBm)	Limit (dBm)	Result	
9 kHz - 150 kHz	0.01	-81.76	-46	Pass	



5G NR, Band n24, SCS 15kHz, 10 MHz Bandwidth, 16-QAM Modulation, Mid Channel 1531 MHz, 52 RB/0 Offset					
Frequency Range	Measured Freq (MHz)	Max Value (dBm)	Limit (dBm)	Result	
150 kHz - 30 MHz	0.15	-46.49	-36	Pass	

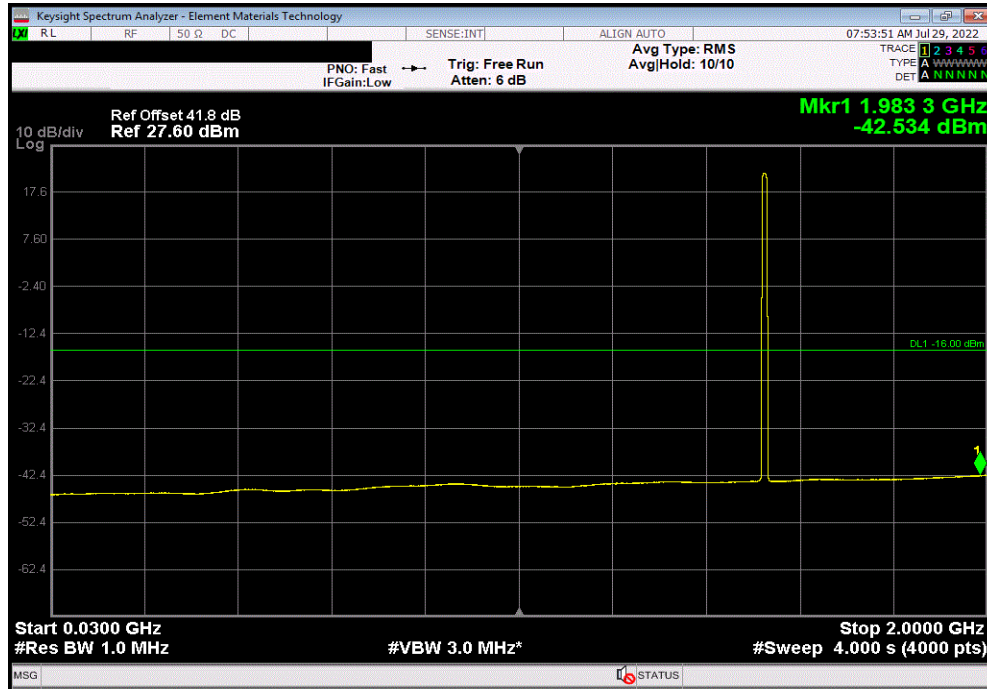


SPURIOUS EMISSIONS AT THE ANTENNA TERMINALS, 3dBi

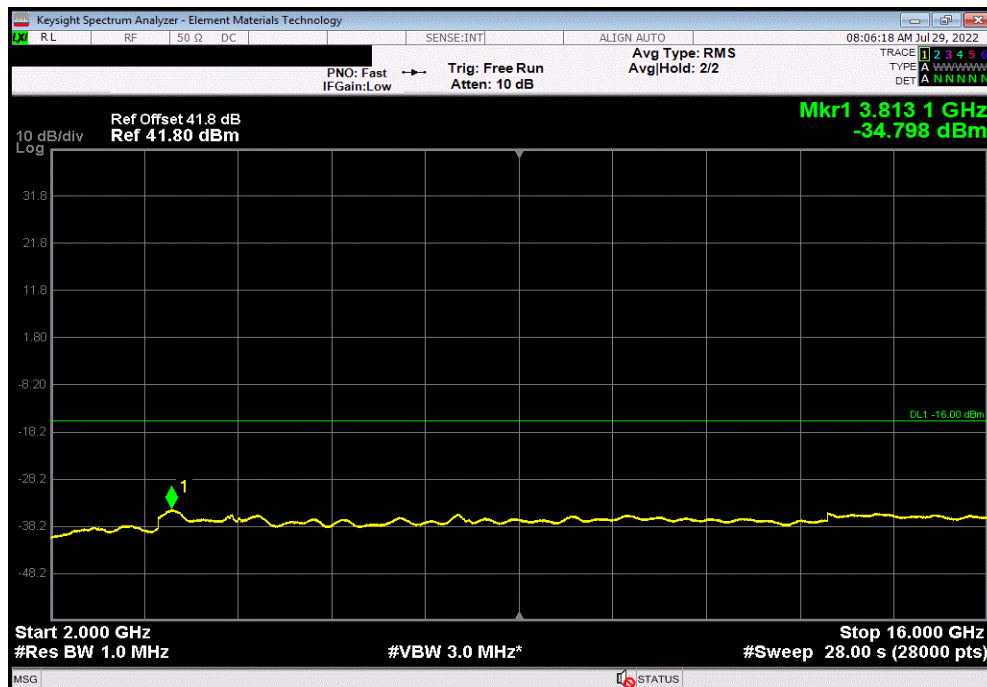


TbTtx 2022.05.02.0 XMt 2022.02.07.0

5G NR, Band n24, SCS 15kHz, 10 MHz Bandwidth, 16-QAM Modulation, Mid Channel 1531 MHz, 52 RB/0 Offset					
Frequency Range	Measured Freq (MHz)	Max Value (dBm)	Limit (dBm)	Result	
30 MHz - 1 GHz	1983.25	-42.53	-16	Pass	



5G NR, Band n24, SCS 15kHz, 10 MHz Bandwidth, 16-QAM Modulation, Mid Channel 1531 MHz, 52 RB/0 Offset					
Frequency Range	Measured Freq (MHz)	Max Value (dBm)	Limit (dBm)	Result	
1 GHz - 16 GHz	3813.06	-34.8	-16	Pass	

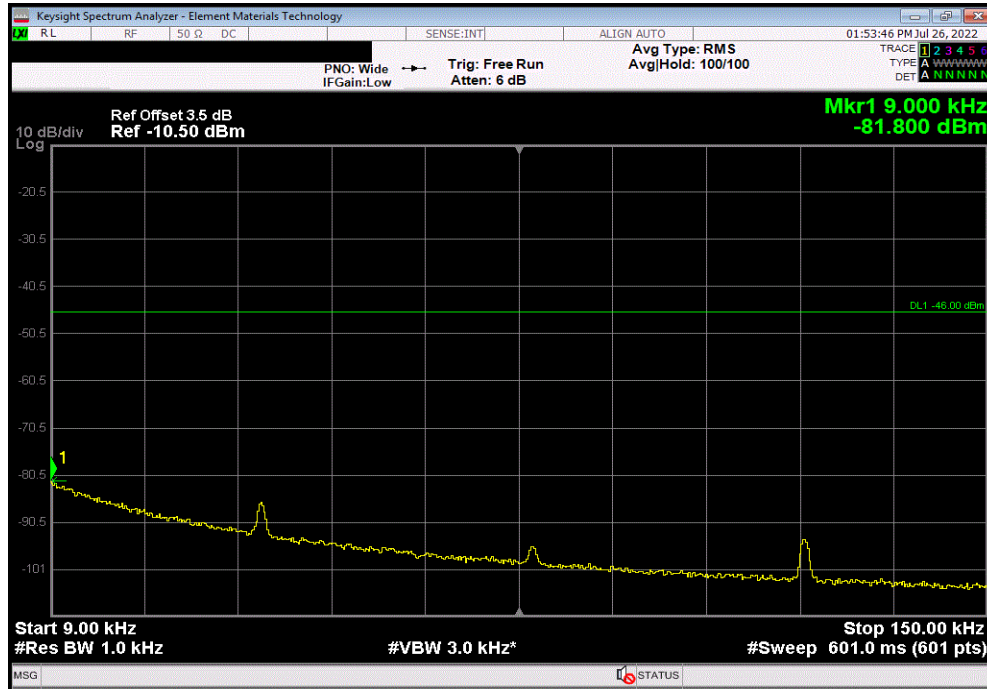


SPURIOUS EMISSIONS AT THE ANTENNA TERMINALS, 3dBi

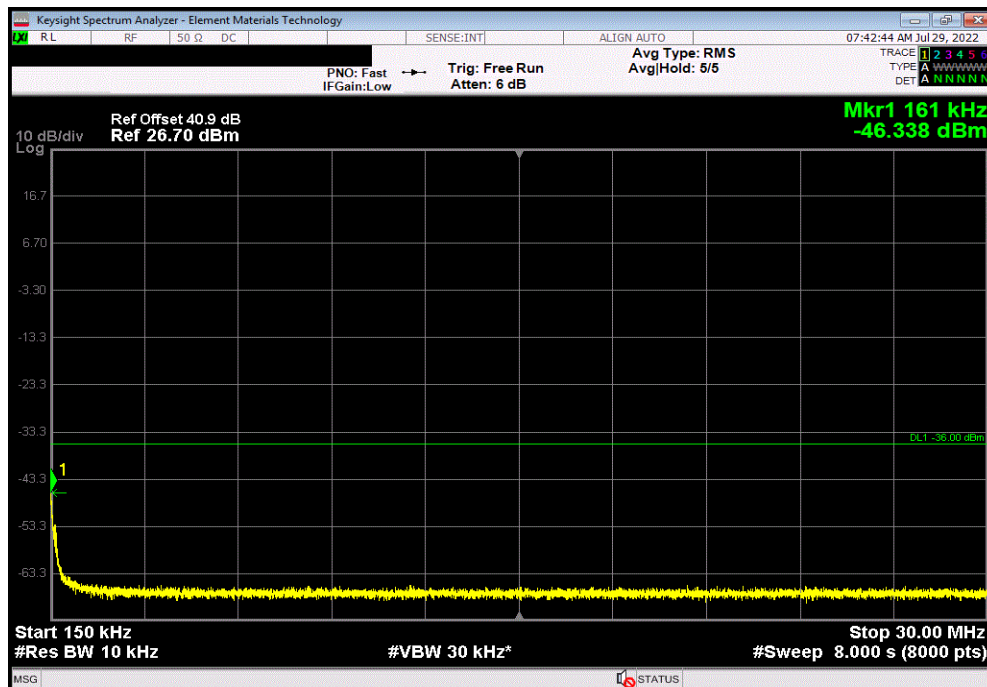


TbTx 2022.05.02.0 XMt 2022.02.07.0

5G NR, Band n24, SCS 15kHz, 10 MHz Bandwidth, 64-QAM Modulation, Mid Channel 1531 MHz, 52 RB/0 Offset					
Frequency Range	Measured Freq (MHz)	Max Value (dBm)	Limit (dBm)	Result	
9 kHz - 150 kHz	0.01	-81.8	-46	Pass	



5G NR, Band n24, SCS 15kHz, 10 MHz Bandwidth, 64-QAM Modulation, Mid Channel 1531 MHz, 52 RB/0 Offset					
Frequency Range	Measured Freq (MHz)	Max Value (dBm)	Limit (dBm)	Result	
150 kHz - 30 MHz	0.16	-46.34	-36	Pass	

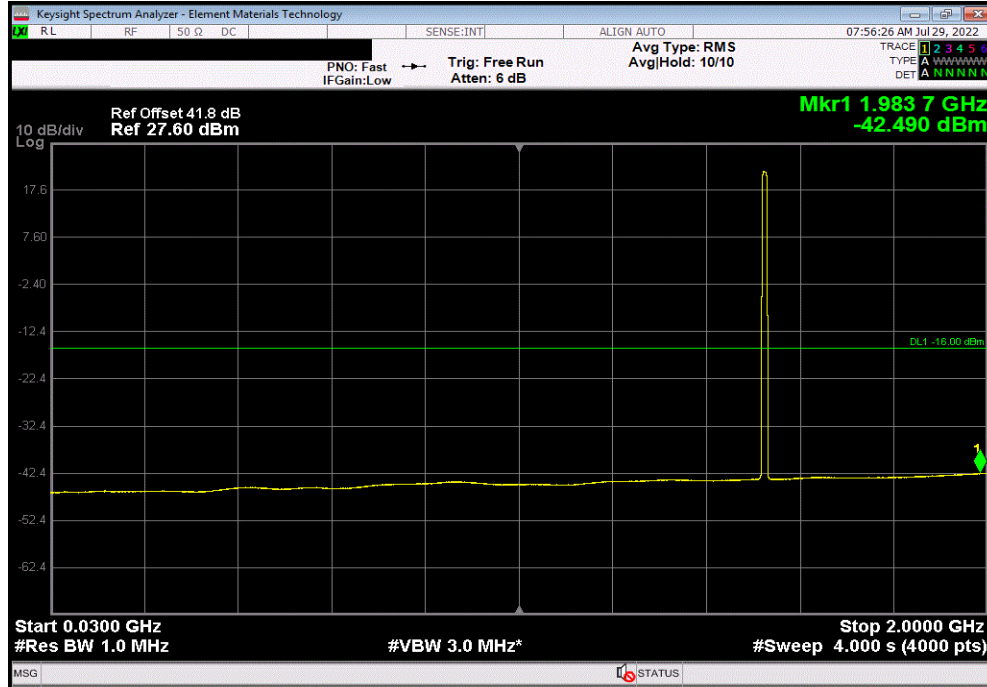


SPURIOUS EMISSIONS AT THE ANTENNA TERMINALS, 3dBi

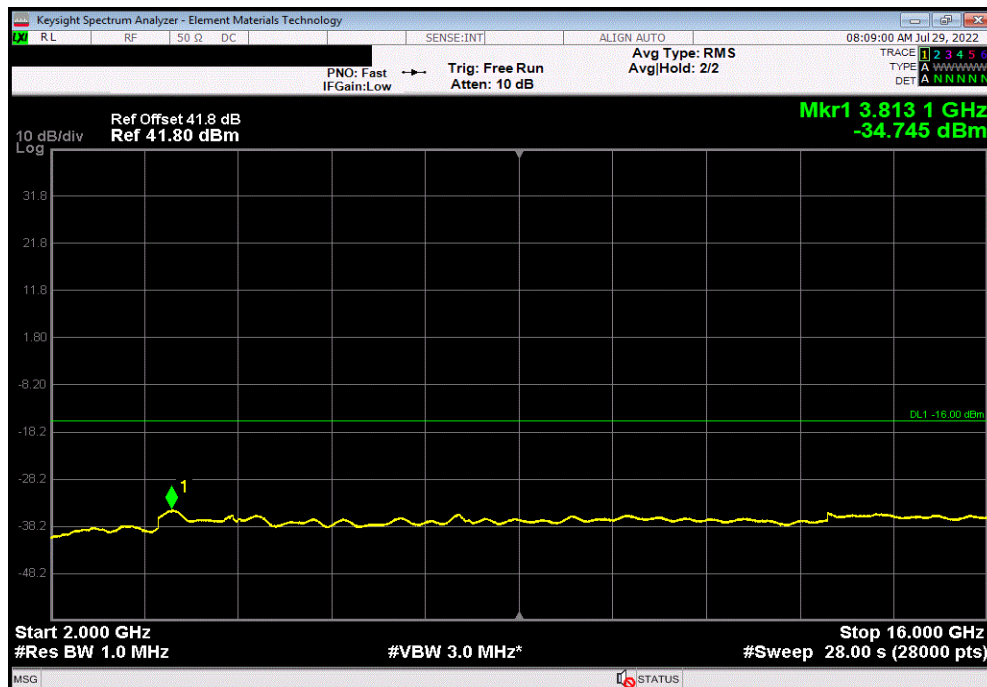


TbTx 2022.05.02.0 XMt 2022.02.07.0

5G NR, Band n24, SCS 15kHz, 10 MHz Bandwidth, 64-QAM Modulation, Mid Channel 1531 MHz, 52 RB/0 Offset					
Frequency Range	Measured Freq (MHz)	Max Value (dBm)	Limit (dBm)	Result	
30 MHz - 1 GHz	1983.74	-42.49	-16	Pass	



5G NR, Band n24, SCS 15kHz, 10 MHz Bandwidth, 64-QAM Modulation, Mid Channel 1531 MHz, 52 RB/0 Offset					
Frequency Range	Measured Freq (MHz)	Max Value (dBm)	Limit (dBm)	Result	
1 GHz - 16 GHz	3813.06	-34.74	-16	Pass	

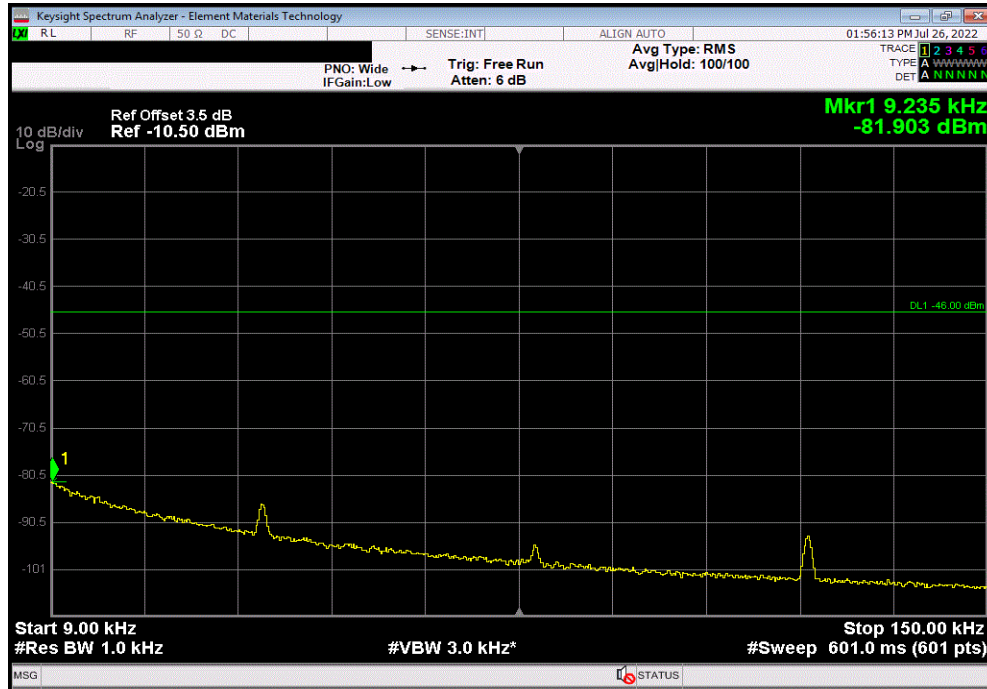


SPURIOUS EMISSIONS AT THE ANTENNA TERMINALS, 3dBi

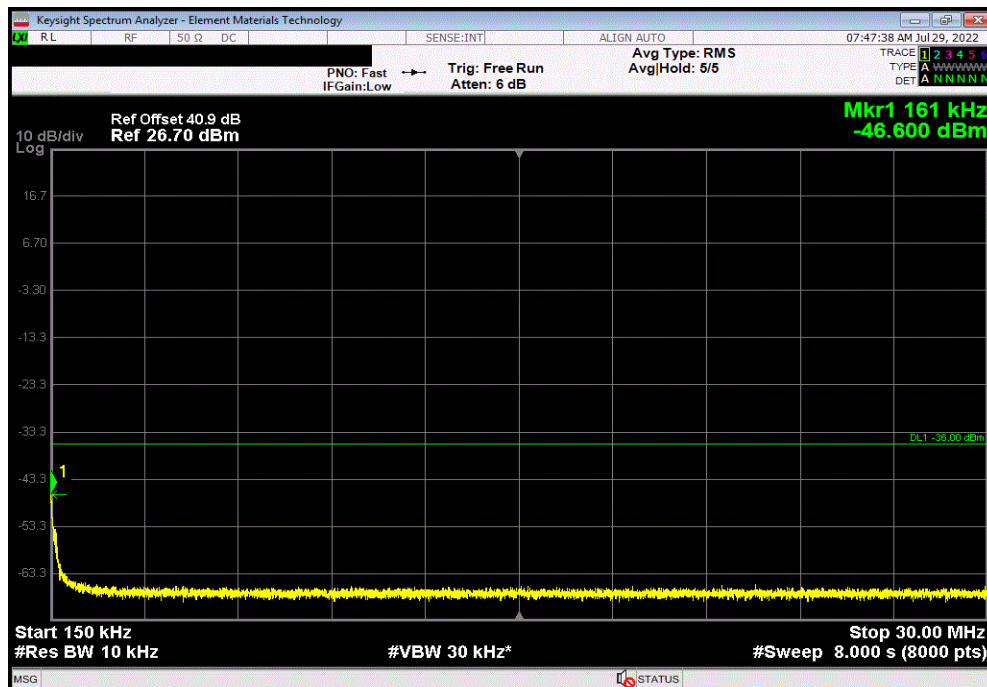


TbTx 2022.05.02.0 XMt 2022.02.07.0

5G NR, Band n24, SCS 15kHz, 10 MHz Bandwidth, 256-QAM Modulation, Mid Channel 1531 MHz, 52 RB/0 Offset					
Frequency Range	Measured Freq (MHz)	Max Value (dBm)	Limit (dBm)	Result	
9 kHz - 150 kHz	0.01	-81.9	-46	Pass	



5G NR, Band n24, SCS 15kHz, 10 MHz Bandwidth, 256-QAM Modulation, Mid Channel 1531 MHz, 52 RB/0 Offset					
Frequency Range	Measured Freq (MHz)	Max Value (dBm)	Limit (dBm)	Result	
150 kHz - 30 MHz	0.16	-46.6	-36	Pass	

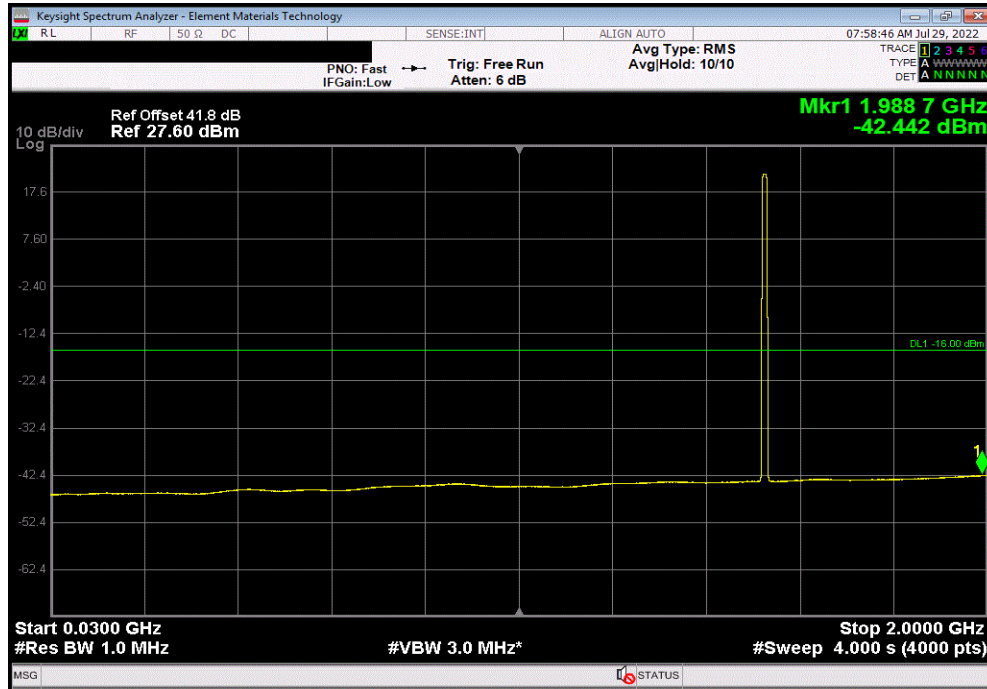


SPURIOUS EMISSIONS AT THE ANTENNA TERMINALS, 3dBi



TbTtx 2022.05.02.0 XMt 2022.02.07.0

5G NR, Band n24, SCS 15kHz, 10 MHz Bandwidth, 256-QAM Modulation, Mid Channel 1531 MHz, 52 RB/0 Offset					
Frequency Range	Measured Freq (MHz)	Max Value (dBm)	Limit (dBm)	Result	
30 MHz - 1 GHz	1988.67	-42.44	-16	Pass	



5G NR, Band n24, SCS 15kHz, 10 MHz Bandwidth, 256-QAM Modulation, Mid Channel 1531 MHz, 52 RB/0 Offset					
Frequency Range	Measured Freq (MHz)	Max Value (dBm)	Limit (dBm)	Result	
1 GHz - 16 GHz	3823.07	-34.67	-16	Pass	

