

SPURIOUS CONDUCTED EMISSIONS - MULTIBAND



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
Block - DC	Fairview Microwave	SD3379	AMM	2022-09-09	2023-09-09
Block - DC	Fairview Microwave	SD3239	ANC	2022-03-02	2023-03-02
Signal Analyzer	Keysight	N9030B	R332	2022-07-28	2023-07-28
Attenuator	Fairview Microwave	SA3N10W-20	RKY	2022-11-15	2023-11-15
Analyzer - Spectrum Analyzer	Keysight	N9010A	AFO	2022-09-08	2023-09-08
Generator - Signal	Agilent	N5173B	TIW	2020-07-17	2023-07-17

TEST DESCRIPTION

The antenna port spurious emissions were measured at the RF output terminal of the EUT through 5 different attenuation configurations which continues through to the RF input of the spectrum analyzer. Analyzer plots utilizing a resolution bandwidth called out by the client's test plan were made for each modulation type from 9 KHz to 40 GHz. The conducted power of spurious emissions, up to the 10th harmonic of the transmit frequency, were investigated to ensure they were less than the limits also called out by the client's test plan shown below.

The measurement methods are detailed in KDB 971168 D01v03 section 6 and ANSI C63.26-2015.

Per FCC 2.1057(a)(1), the upper level of measurement is the 10th harmonic of the highest fundamental frequency.

These measurements are for the frequency band after the first 1.0 MHz bands immediately outside and adjacent to the frequency block.

RF conducted emissions testing was performed on the worst case port by band. The AQQQA antenna ports are all within the manufacturer's rated output power tolerances (the RF power variation between antenna ports is small as shown in this certification testing) and the antenna port 22 for the 3.7GHz band and port 57 for the 3.45GHz band were selected to perform the testing for this effort.

Per section FCC 27.53(n) and FCC 27.53 (l)(1), power of any emission outside of the authorized operating frequency range cannot exceed, of the two rule parts, the more restrictive limits. Per section 27.53(n), the power of any emission outside band edge region (frequency ranges below 3430MHz and above 3570MHz) cannot exceed -58.1 dBm/MHz. The limit is adjusted to -58.1 dBm [-40 dBm -10 log (64)] per FCC KDB 662911D01 v02r01 and ANSI C63.26-2015 section 6.4 because the BTS may operate as a 64 port MIMO transmitter. The resolution bandwidth to be used for these measurements must be ≥ 1 MHz per FCC 27.53(n)(1).

Dual band with 3.45GHz carriers at maximum (200W) and 3.7GHz carriers at 280W test cases.

The port power (7.5W) and radio power (480W) are at maximum rated levels. Testing was performed on TAB 57; the highest power port (worst case port) for the 3.45GHz Band. 256QAM modulation was used for all testing.

- (1) 3.45G Band NR40 carrier at maximum power (3.125W/TRX) at bot channel and the 3.7G Band NR40 carrier (4.375W/TRX) at top ch operating simultaneously. Maximum spacing between carriers.
- (2) 3.45G Band NR40 carrier at maximum power (3.125W/TRX) at top channel and the 3.7G Band NR40 carrier (4.375W /TRX) at bot ch operating simultaneously. Minimum spacing between carriers.
- (3) 3.45G Band NR40 carrier at maximum power (3.125W/TRX) at bot channel and the 3.7G Band NR100 carrier (4.375W /TRX) at top ch operating simultaneously. Maximum spacing between carriers.
- (4) 3.45G Band NR40 carrier at maximum power (3.125W/TRX) at top ch and the 3.7G Band NR100 carrier (4.375W /TRX) at bottom ch operating simultaneously. Minimum spacing between carriers.

Dual band with 3.7G carriers at maximum (320W) and 3.45G carriers at 160W test cases.

The port power (7.5W) and radio power (480W) are at maximum rated levels. Testing was performed on TAB 22; the highest power port (worst case port) for the 3.7GHz Band. 256QAM modulation was used for all testing.

- (1) 3.7G Band NR100 carrier at max power (5.00W/TRX) & max OBW at bot channel and the 3.45G Band NR20 carrier (2.50W/TRX) at max PSD (8W/MHz) at min OBW at top ch operating simultaneously. Min spacing
- (2) 3.7G Band NR100 carrier at max power (5.00W/TRX) & max OBW at top channel and the 3.45G Band NR20 carrier (2.50W /TRX) at max PSD (8W/MHz) and min OBW at bot ch operating simultaneously. Max spacing
- (3) 3.7G Band NR40 carrier at max power (5.00W/TRX) & max PSD (8W/MHz) at bot channel and the 3.45G Band NR20 carrier (2.50W /TRX) at max PSD (8W/MHz) and min OBW at top ch operating simultaneously. Min spacing
- (4) 3.7G Band NR40 carrier at max power (5.00W/TRX) & max PSD (8W/MHz) at top channel and the 3.45G Band NR20 carrier (2.50W /TRX) at max PSD (8W/MHz) and min OBW at bot ch operating simultaneously. Max spacing

SPURIOUS CONDUCTED EMISSIONS - MULTIBAND



TbTb 2022 08.03.0 XMI 2022 02.07.0

EUT: AQQQA		Work Order: NOKI0052	
Serial Number: YK224300010		Date: 25-Jan-23	
Customer: Nokia of America Corporation		Temperature: 23.1 °C	
Attendees: John Rattanavong, Michell Hill		Humidity: 29.2% RH	
Project: None		Barometric Pres.: 1023 mbar	
Tested by: Brandon Hobbs		Job Site: TX07	
Power: 54 VDC			
TEST SPECIFICATIONS		Test Method	
FCC 27:2023		ANSI C63.26:2015	
COMMENTS			
All measurement path losses were accounted for in the reference level offset including any attenuators, filters and DC blocks. Band n77 carriers were enabled at maximum power levels for the 3.45GHz band at 3.125watts/carrier and for the 3.7GHz band at 5watts/carrier in uniquely separate dual mode operating configurations.			
DEVIATIONS FROM TEST STANDARD			
None			
Configuration #	2,3,4,6,7	Signature	
		Frequency Range	Measured Freq (MHz)
			Max Value (dBm)
			Limit (dBm)
			Result

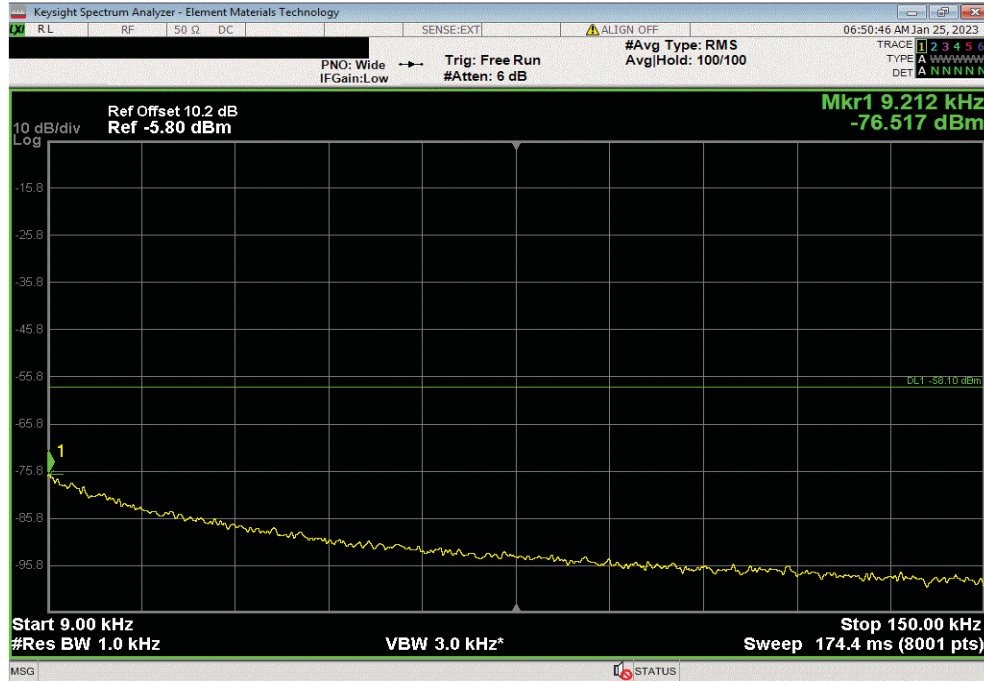
Worst Case Port			
Dual Band Mode, 3.45G (Max Power) and 3.7G Bands, 5G NR			
Configuration 1	9 kHz - 150 kHz	0.01	-76.5
Configuration 1	150 kHz - 30 MHz	0.15	-78.9
Configuration 1	30 MHz - 3.4 GHz	2976.22	-65.7
Configuration 1	4.03 GHz - 6 GHz	4429.91	-66.4
Configuration 1	3.1 GHz - 3.43 GHz	3429.67	-66.5
Configuration 1	3.57 GHz - 3.68 GHz	3668.45	-62.7
Configuration 1	4 GHz - 4.2 GHz	4003.8	-62.0
Configuration 1	3.4 GHz - 4.03 GHz	3448.5	-34.3
Configuration 1	6 GHz - 13 GHz	10418.75	-65.5
Configuration 1	13 GHz - 40 GHz	38855	-65.1
Configuration 2	9 kHz - 150 kHz	0.01	-76.9
Configuration 2	150 kHz - 30 MHz	0.31	-77.1
Configuration 2	30 MHz - 3.4 GHz	3336.39	-67.3
Configuration 2	4.03 GHz - 6 GHz	4754.22	-66.6
Configuration 2	3.1 GHz - 3.43 GHz	3346.84	-66.2
Configuration 2	3.57 GHz - 3.68 GHz	3670.98	-62.1
Configuration 2	4 GHz - 4.2 GHz	4005.6	-64.6
Configuration 2	3.4 GHz - 4.03 GHz	3860.05	-33.6
Configuration 2	6 GHz - 13 GHz	7655.15	-66.3
Configuration 2	13 GHz - 40 GHz	38842	-64.4
Configuration 3	9 kHz - 150 kHz	0.01	-77.2
Configuration 3	150 kHz - 30 MHz	0.15	-79.1
Configuration 3	30 MHz - 3.4 GHz	3166.63	-67.4
Configuration 3	4.03 GHz - 6 GHz	4735.75	-66.5
Configuration 3	3.1 GHz - 3.43 GHz	3428.02	-69.3
Configuration 3	3.57 GHz - 3.68 GHz	3672.19	-62.3
Configuration 3	4 GHz - 4.2 GHz	4005.2	-63.1
Configuration 3	3.4 GHz - 4.03 GHz	3860.05	-33.9
Configuration 3	6 GHz - 13 GHz	10632.6	-66.3
Configuration 3	13 GHz - 40 GHz	38855	-64.6
Configuration 4	9 kHz - 150 kHz	0.01	-76.1
Configuration 4	150 kHz - 30 MHz	0.15	-79.0
Configuration 4	30 MHz - 3.4 GHz	3295.11	-67.4
Configuration 4	4.03 GHz - 6 GHz	4749.05	-66.5
Configuration 4	3.1 GHz - 3.43 GHz	3298.33	-69.4
Configuration 4	3.57 GHz - 3.68 GHz	3672.41	-61.7
Configuration 4	4 GHz - 4.2 GHz	4013	-64.3
Configuration 4	3.4 GHz - 4.03 GHz	3859.89	-34.6
Configuration 4	6 GHz - 13 GHz	7234.45	-66.3
Configuration 4	13 GHz - 40 GHz	38884	-64.7
Dual Band Mode, 3.45G and 3.7G (Max Power) Bands, 5G NR			
Configuration 1	9 kHz - 150 kHz	0.01	-76.6
Configuration 1	150 kHz - 30 MHz	0.31	-76.4
Configuration 1	30 MHz - 3.4 GHz	3305.22	-67.3
Configuration 1	4.03 GHz - 6 GHz	5051.45	-66.3
Configuration 1	3.1 GHz - 3.43 GHz	3249.16	-69.8
Configuration 1	3.57 GHz - 3.68 GHz	3671.31	-62.2
Configuration 1	4 GHz - 4.2 GHz	4004.6	-64.6
Configuration 1	3.4 GHz - 4.03 GHz	3860.05	-33.8
Configuration 1	6 GHz - 13 GHz	10572.75	-66.4
Configuration 1	13 GHz - 40 GHz	38839	-65.1
Configuration 2	9 kHz - 150 kHz	0.01	-76.8
Configuration 2	150 kHz - 30 MHz	0.31	-76.7
Configuration 2	30 MHz - 3.4 GHz	3218.02	-67.5
Configuration 2	4.03 GHz - 6 GHz	4744.62	-66.3
Configuration 2	3.1 GHz - 3.43 GHz	3272.92	-69.6
Configuration 2	3.57 GHz - 3.68 GHz	3672.3	-62.6
Configuration 2	4 GHz - 4.2 GHz	4005.4	-63.2
Configuration 2	3.4 GHz - 4.03 GHz	3860.52	-33.3
Configuration 2	6 GHz - 13 GHz	10610.55	-66.4
Configuration 2	13 GHz - 40 GHz	38882	-64.9
Configuration 3	9 kHz - 150 kHz	0.01	-77.0
Configuration 3	150 kHz - 30 MHz	0.15	-78.3
Configuration 3	30 MHz - 3.4 GHz	3228.13	-67.6
Configuration 3	4.03 GHz - 6 GHz	4742.4	-66.6
Configuration 3	3.1 GHz - 3.43 GHz	3220.45	-69.8
Configuration 3	3.57 GHz - 3.68 GHz	3674.61	-61.4
Configuration 3	4 GHz - 4.2 GHz	4008	-64.4
Configuration 3	3.4 GHz - 4.03 GHz	3500	-34.1
Configuration 3	6 GHz - 13 GHz	9782.8	-65.9
Configuration 3	13 GHz - 40 GHz	38884	-65.7
Configuration 4	9 kHz - 150 kHz	0.01	-77.3
Configuration 4	150 kHz - 30 MHz	0.15	-78.6
Configuration 4	30 MHz - 3.4 GHz	3195.27	-67.6
Configuration 4	4.03 GHz - 6 GHz	4755.45	-66.3
Configuration 4	3.1 GHz - 3.43 GHz	3122.11	-69.7
Configuration 4	3.57 GHz - 3.68 GHz	3673.4	-63.2
Configuration 4	4 GHz - 4.2 GHz	4006.2	-62.6
Configuration 4	3.4 GHz - 4.03 GHz	3500	-35.9
Configuration 4	6 GHz - 13 GHz	10554.9	-66.2
Configuration 4	13 GHz - 40 GHz	38842	-65.2

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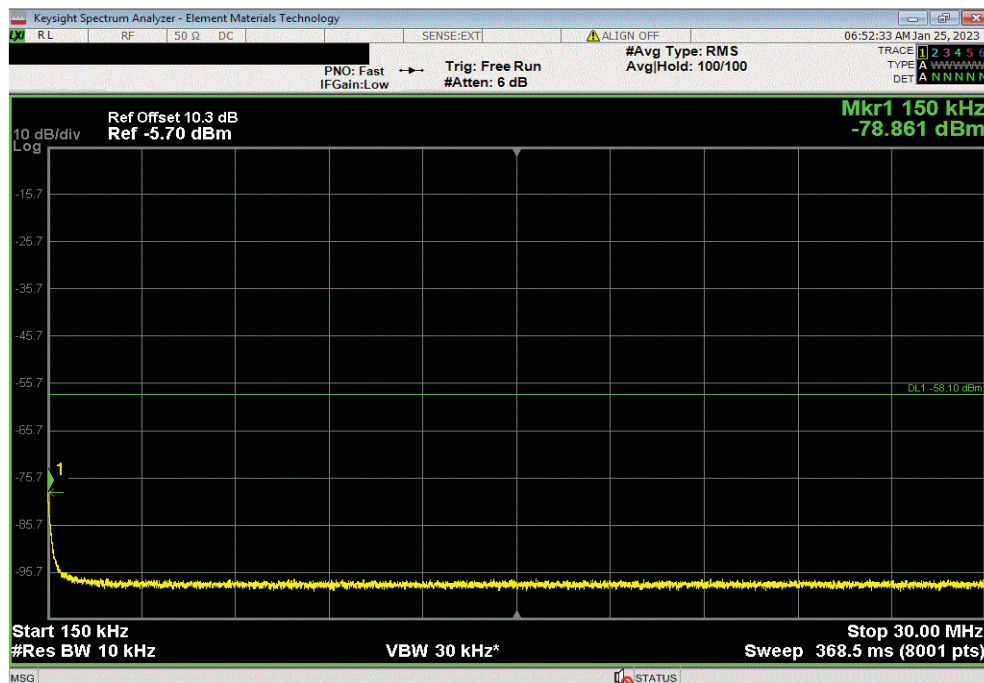


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Worst Case Port, Dual Band Mode, 3.45G (Max Power) and 3.7G Bands, 5G NR, Configuration 1					
Frequency Range	Measured Freq (MHz)	Max Value (dBm)	Limit (dBm)	Result	
9 kHz - 150 kHz	0.01	-76.52	-58.1	Pass	



Worst Case Port, Dual Band Mode, 3.45G (Max Power) and 3.7G Bands, 5G NR, Configuration 1					
Frequency Range	Measured Freq (MHz)	Max Value (dBm)	Limit (dBm)	Result	
150 kHz - 30 MHz	0.15	-78.86	-58.1	Pass	



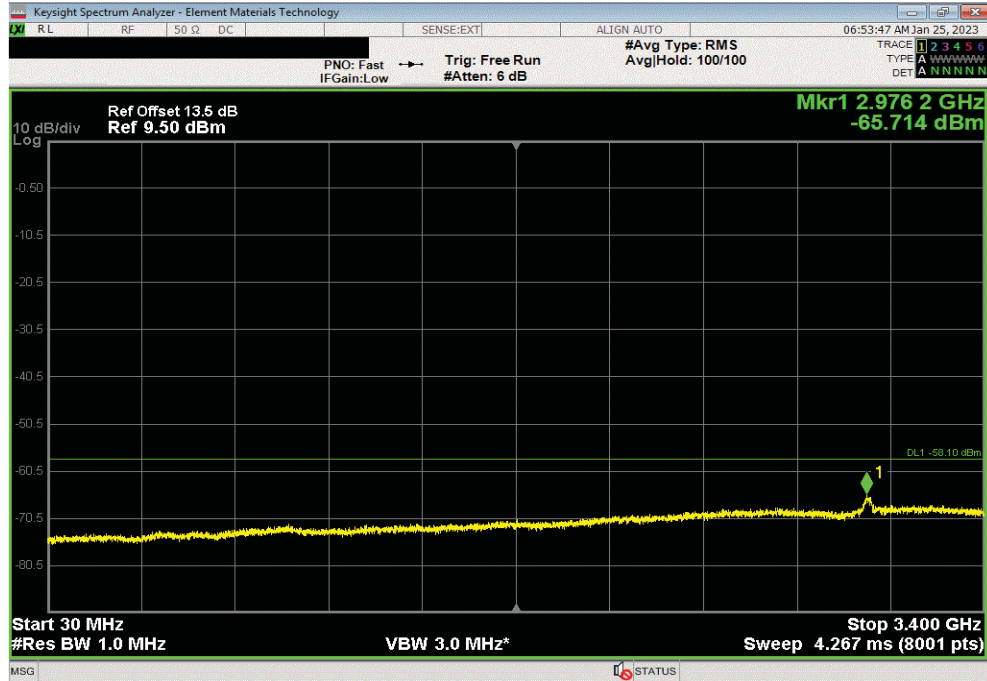
SPURIOUS CONDUCTED EMISSIONS - MULTIBAND



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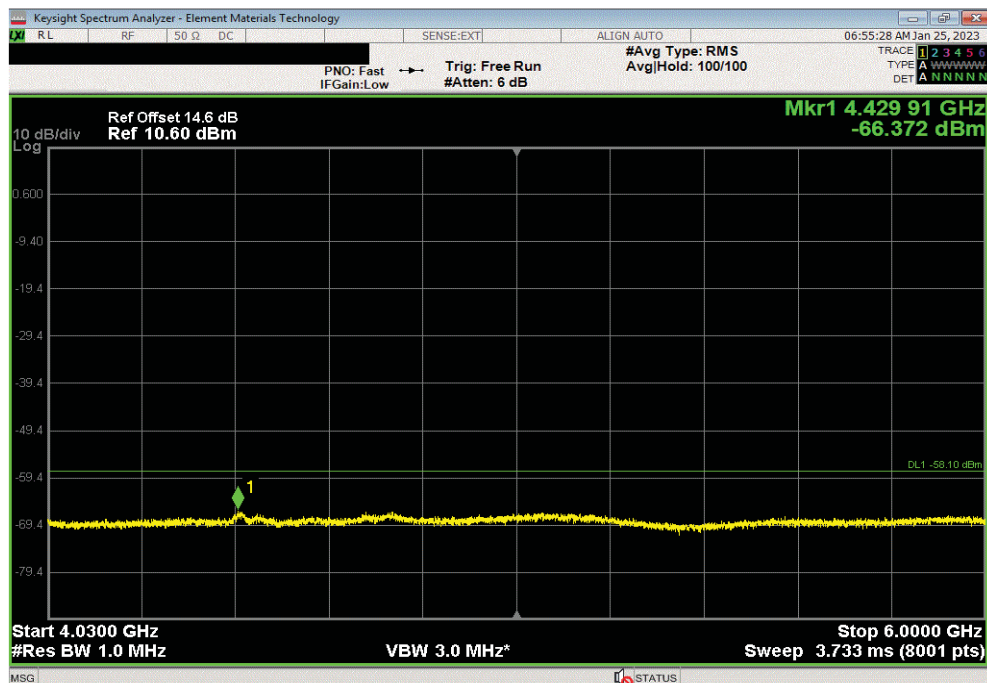
Worst Case Port, Dual Band Mode, 3.45G (Max Power) and 3.7G Bands, 5G NR, Configuration 1

Frequency Range	Measured Freq (MHz)	Max Value (dBm)	Limit (dBm)	Result
30 MHz - 3.4 GHz	2976.22	-65.71	-58.1	Pass



Worst Case Port, Dual Band Mode, 3.45G (Max Power) and 3.7G Bands, 5G NR, Configuration 1

Frequency Range	Measured Freq (MHz)	Max Value (dBm)	Limit (dBm)	Result
4.03 GHz - 6 GHz	4429.91	-66.37	-58.1	Pass

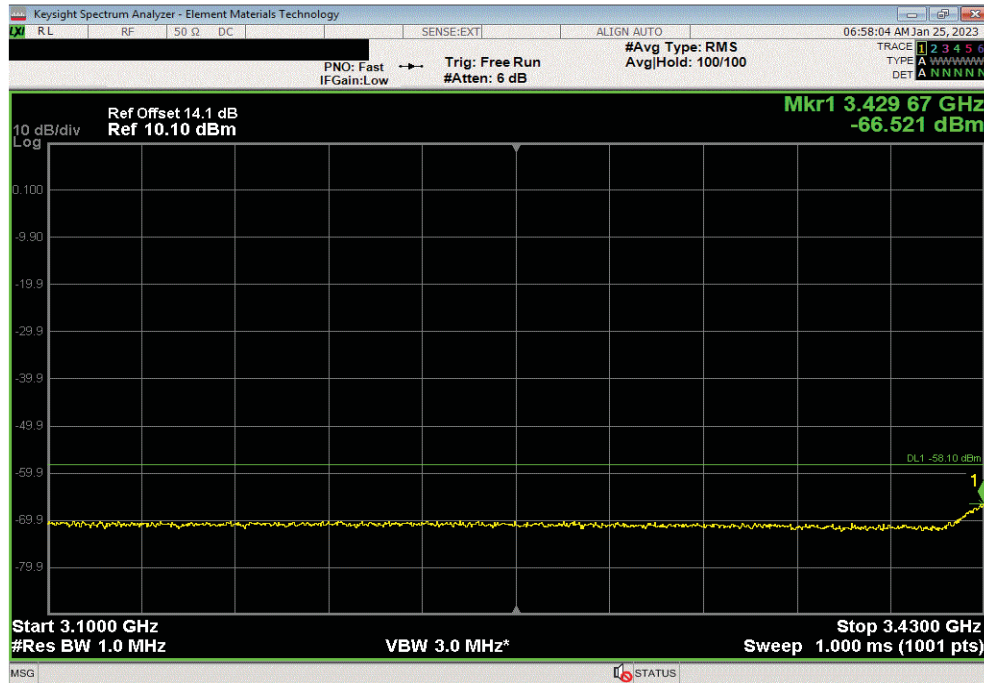


SPURIOUS CONDUCTED EMISSIONS - MULTIBAND

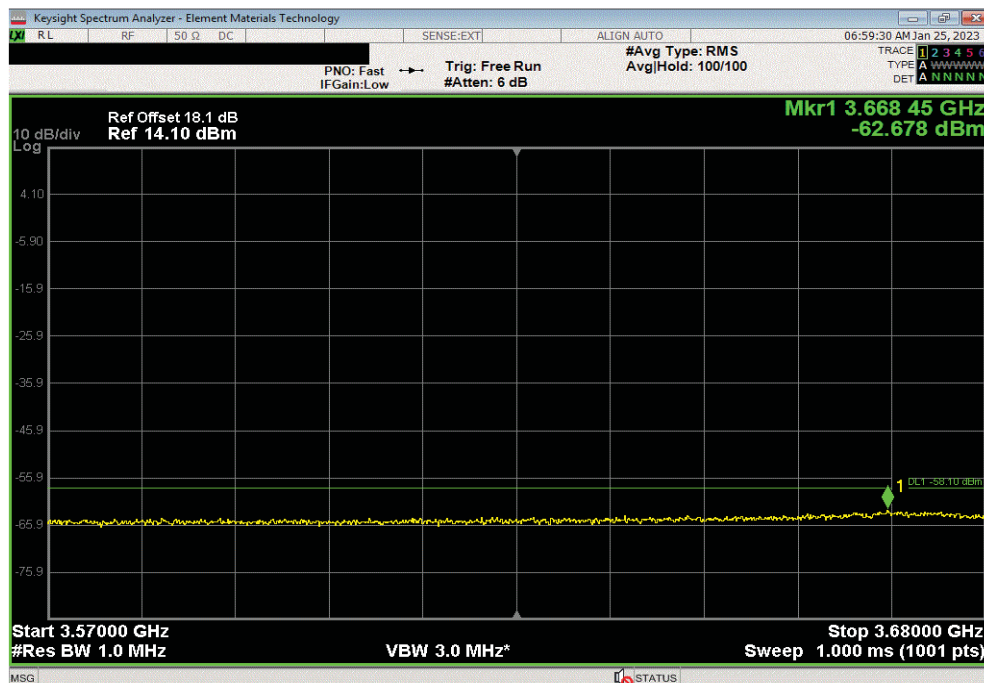


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Worst Case Port, Dual Band Mode, 3.45G (Max Power) and 3.7G Bands, 5G NR, Configuration 1					
Frequency Range	Measured Freq (MHz)	Max Value (dBm)	Limit (dBm)	Result	
3.1 GHz - 3.43 GHz	3429.67	-66.52	-58.1	Pass	



Worst Case Port, Dual Band Mode, 3.45G (Max Power) and 3.7G Bands, 5G NR, Configuration 1					
Frequency Range	Measured Freq (MHz)	Max Value (dBm)	Limit (dBm)	Result	
3.57 GHz - 3.68 GHz	3668.45	-62.68	-58.1	Pass	

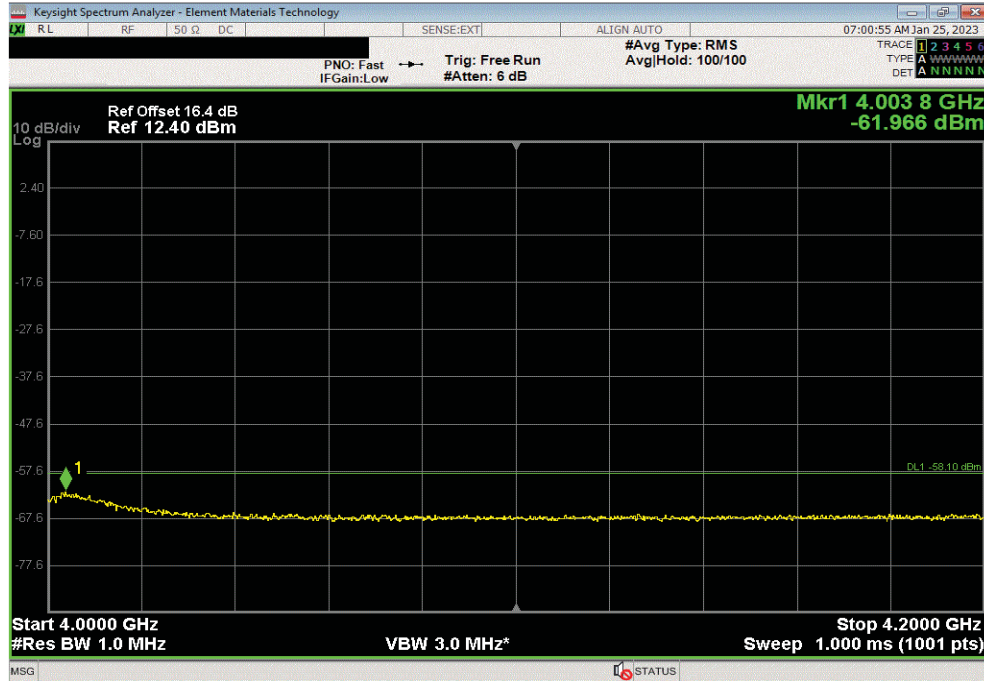


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TbTx 2022.06.03.0 XMI 2022.02.07.0

Worst Case Port, Dual Band Mode, 3.45G (Max Power) and 3.7G Bands, 5G NR, Configuration 1					
Frequency Range	Measured Freq (MHz)	Max Value (dBm)	Limit (dBm)	Result	
4 GHz - 4.2 GHz	4003.8	-61.97	-58.1	Pass	



Worst Case Port, Dual Band Mode, 3.45G (Max Power) and 3.7G Bands, 5G NR, Configuration 1					
Frequency Range	Measured Freq (MHz)	Max Value (dBm)	Limit (dBm)	Result	
3.4 GHz - 4.03 GHz	3448.5	-34.3	-31.1	Pass	

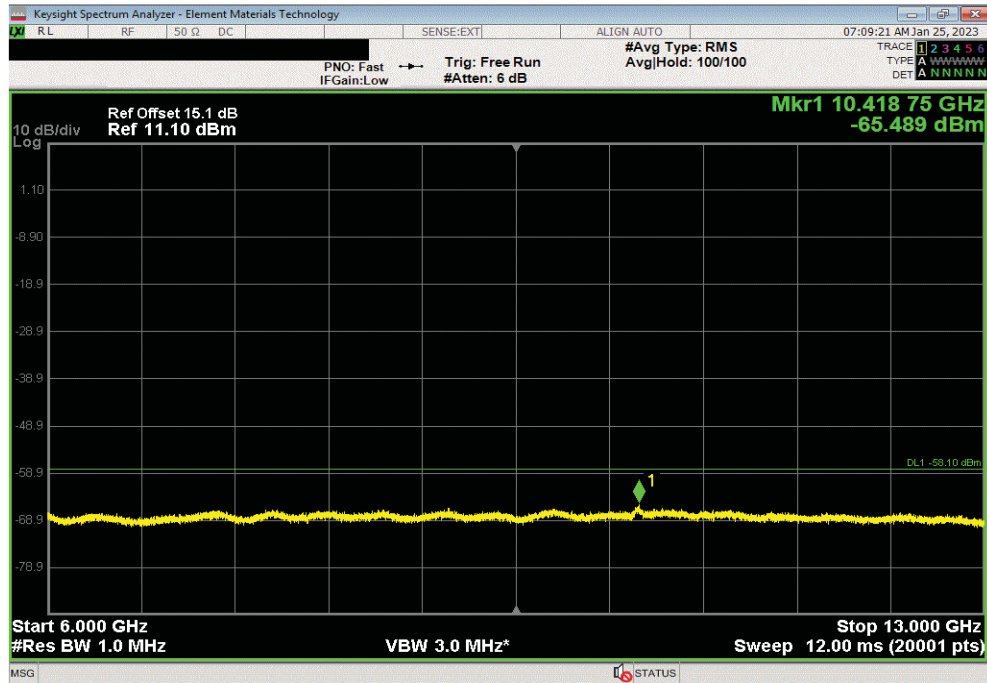


SPURIOUS CONDUCTED EMISSIONS - MULTIBAND

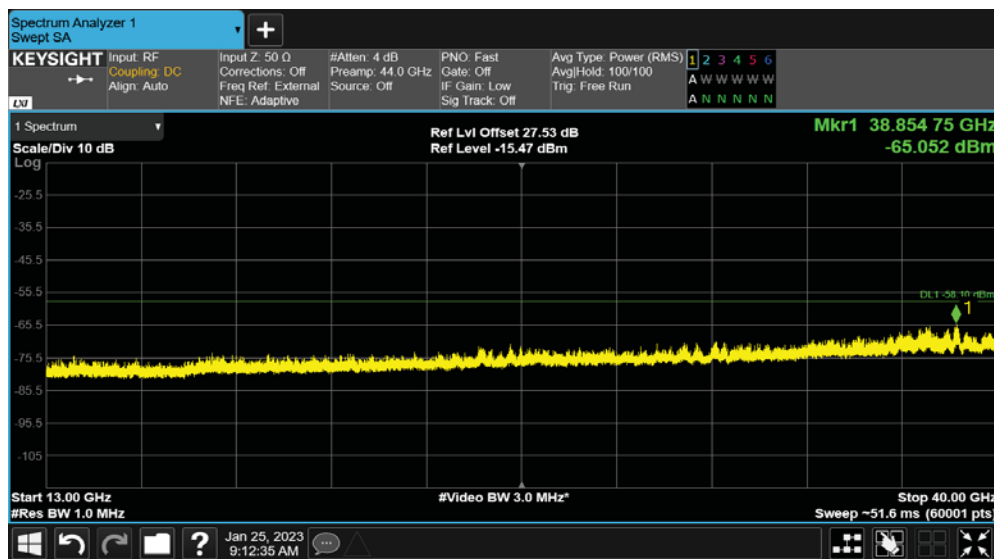


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Worst Case Port, Dual Band Mode, 3.45G (Max Power) and 3.7G Bands, 5G NR, Configuration 1					
Frequency Range	Measured Freq (MHz)	Max Value (dBm)	Limit (dBm)	Result	
6 GHz - 13 GHz	10418.75	-65.49	-58.1	Pass	



Worst Case Port, Dual Band Mode, 3.45G (Max Power) and 3.7G Bands, 5G NR, Configuration 1					
Frequency Range	Measured Freq (MHz)	Max Value (dBm)	Limit (dBm)	Result	
13 GHz - 40 GHz	38855	-65.052	-58.1	Pass	



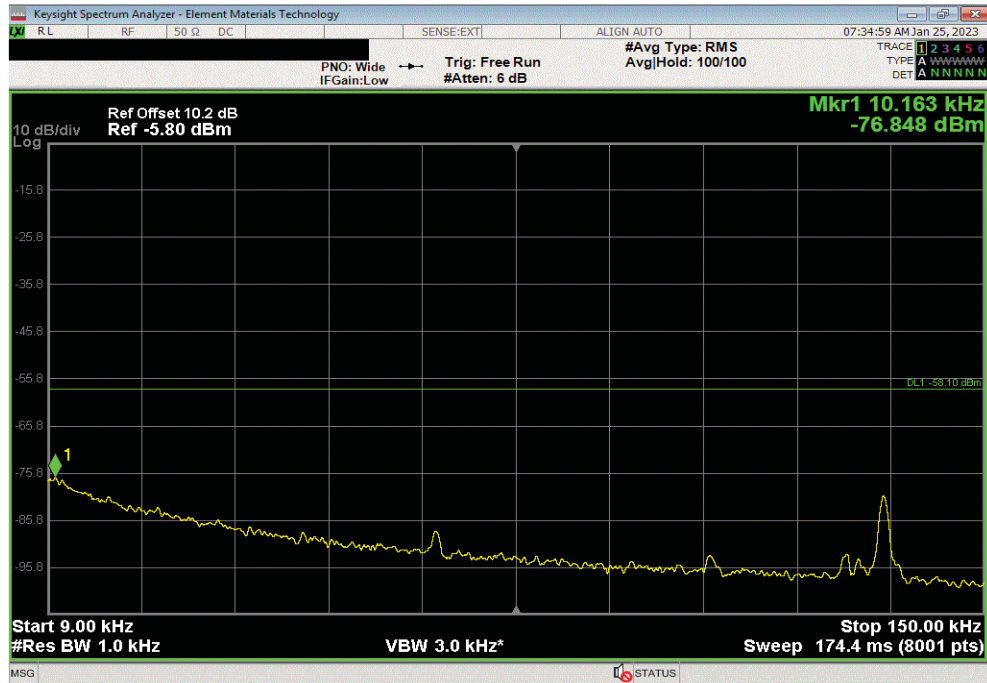
SPURIOUS CONDUCTED EMISSIONS - MULTIBAND



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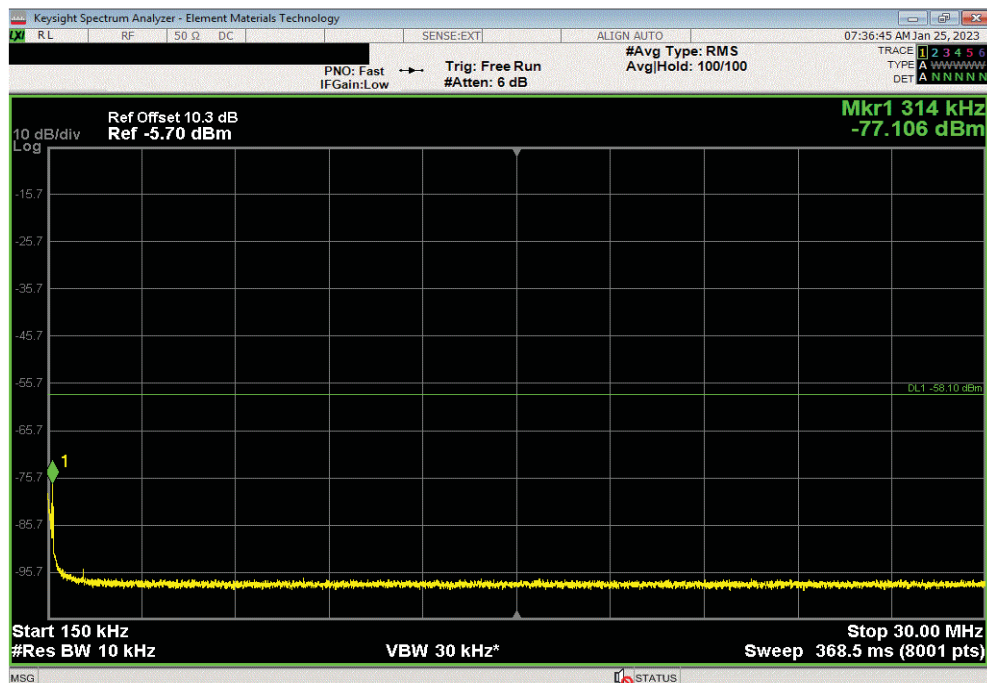
Worst Case Port, Dual Band Mode, 3.45G (Max Power) and 3.7G Bands, 5G NR, Configuration 2

Frequency Range	Measured Freq (MHz)	Max Value (dBm)	Limit (dBm)	Result
9 kHz - 150 kHz	0.01	-76.85	-58.1	Pass



Worst Case Port, Dual Band Mode, 3.45G (Max Power) and 3.7G Bands, 5G NR, Configuration 2

Frequency Range	Measured Freq (MHz)	Max Value (dBm)	Limit (dBm)	Result
150 kHz - 30 MHz	0.31	-77.11	-58.1	Pass



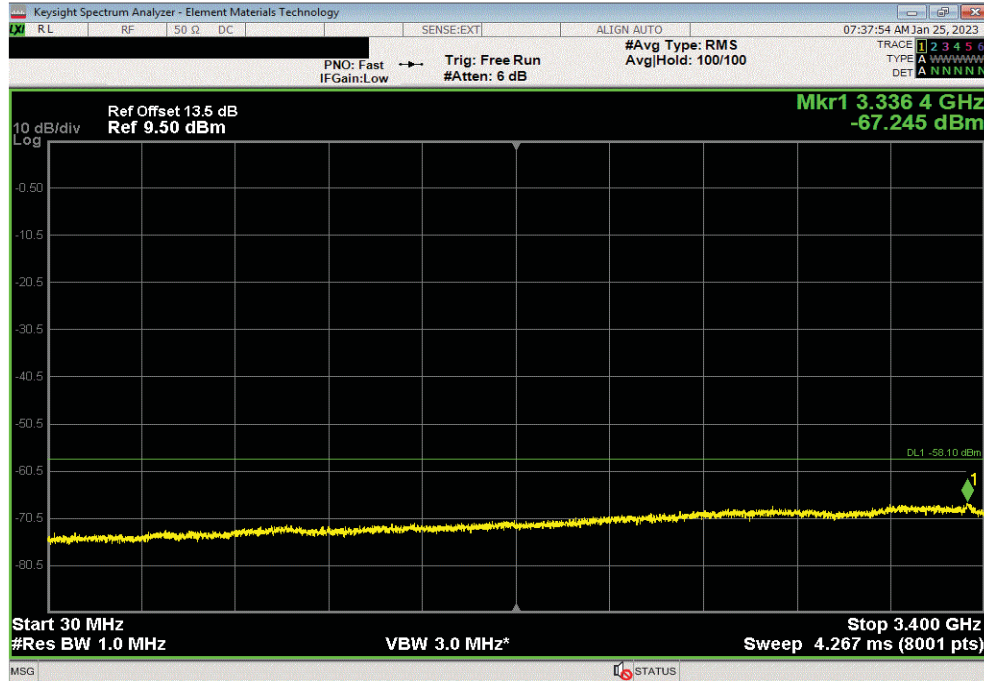
SPURIOUS CONDUCTED EMISSIONS - MULTIBAND



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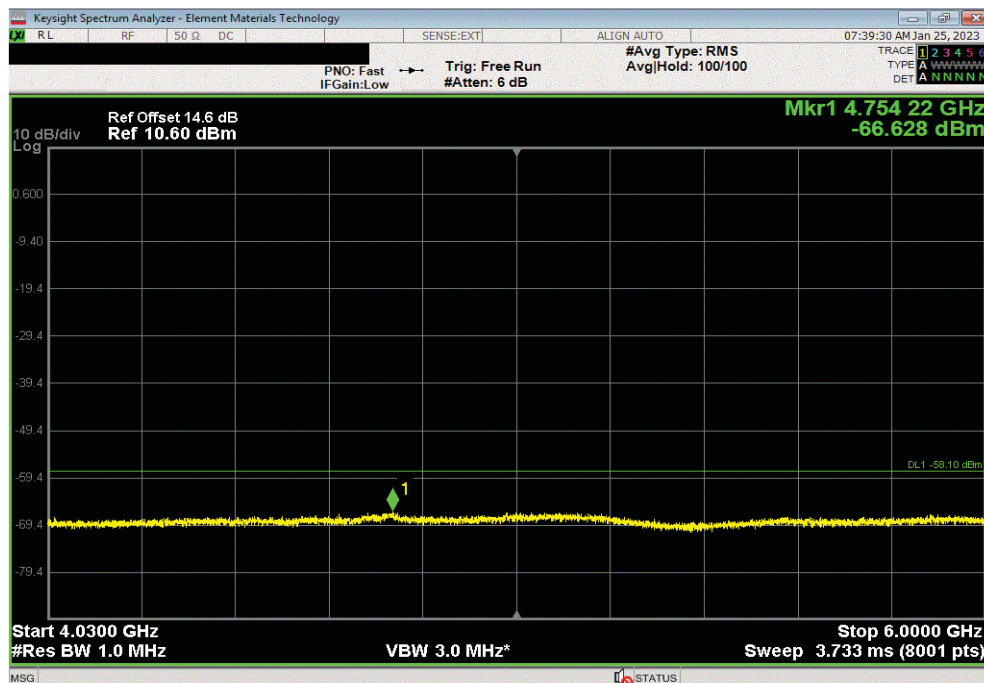
Worst Case Port, Dual Band Mode, 3.45G (Max Power) and 3.7G Bands, 5G NR, Configuration 2

Frequency Range	Measured Freq (MHz)	Max Value (dBm)	Limit (dBm)	Result
30 MHz - 3.4 GHz	3336.39	-67.25	-58.1	Pass



Worst Case Port, Dual Band Mode, 3.45G (Max Power) and 3.7G Bands, 5G NR, Configuration 2

Frequency Range	Measured Freq (MHz)	Max Value (dBm)	Limit (dBm)	Result
4.03 GHz - 6 GHz	4754.22	-66.63	-58.1	Pass

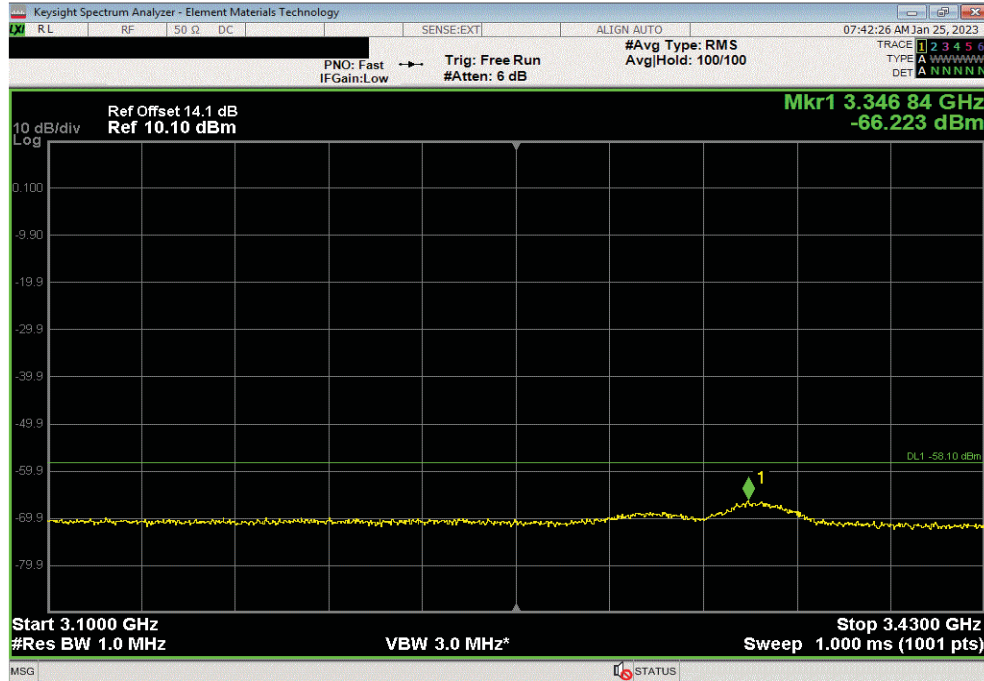


SPURIOUS CONDUCTED EMISSIONS - MULTIBAND

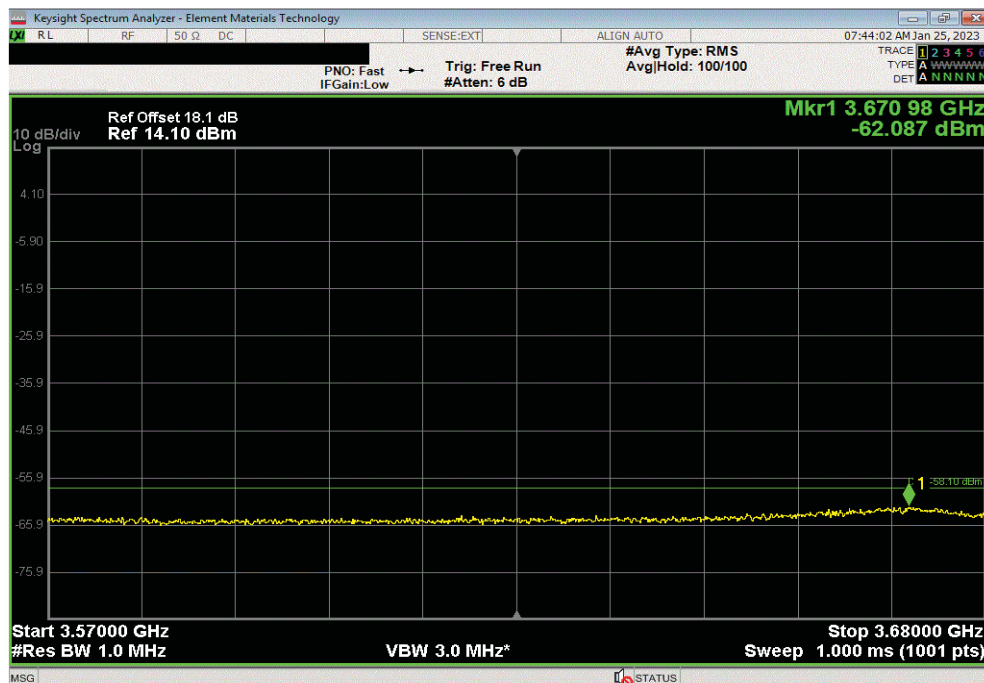


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Worst Case Port, Dual Band Mode, 3.45G (Max Power) and 3.7G Bands, 5G NR, Configuration 2					
Frequency Range	Measured Freq (MHz)	Max Value (dBm)	Limit (dBm)	Result	
3.1 GHz - 3.43 GHz	3346.84	-66.22	-58.1	Pass	



Worst Case Port, Dual Band Mode, 3.45G (Max Power) and 3.7G Bands, 5G NR, Configuration 2					
Frequency Range	Measured Freq (MHz)	Max Value (dBm)	Limit (dBm)	Result	
3.57 GHz - 3.68 GHz	3670.98	-62.09	-58.1	Pass	



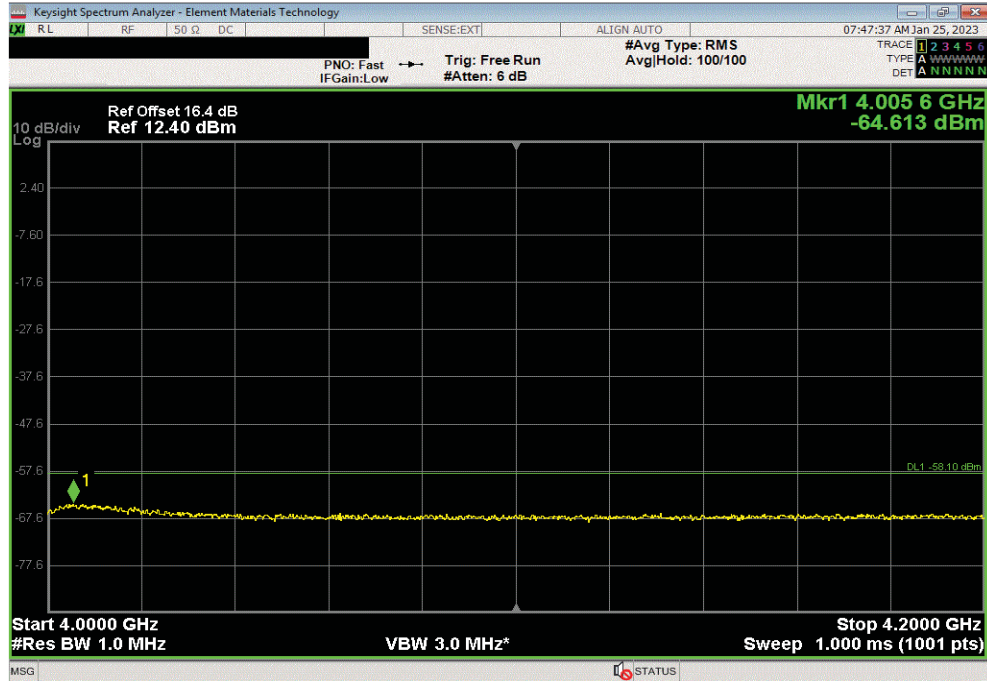
SPURIOUS CONDUCTED EMISSIONS - MULTIBAND



TbTx 2022.06.03.0 XMI 2022.02.07.0

Worst Case Port, Dual Band Mode, 3.45G (Max Power) and 3.7G Bands, 5G NR, Configuration 2

Frequency Range	Measured Freq (MHz)	Max Value (dBm)	Limit (dBm)	Result
4 GHz - 4.2 GHz	4005.6	-64.61	-58.1	Pass



Worst Case Port, Dual Band Mode, 3.45G (Max Power) and 3.7G Bands, 5G NR, Configuration 2

Frequency Range	Measured Freq (MHz)	Max Value (dBm)	Limit (dBm)	Result
3.4 GHz - 4.03 GHz	3860.05	-33.59	-31.1	Pass

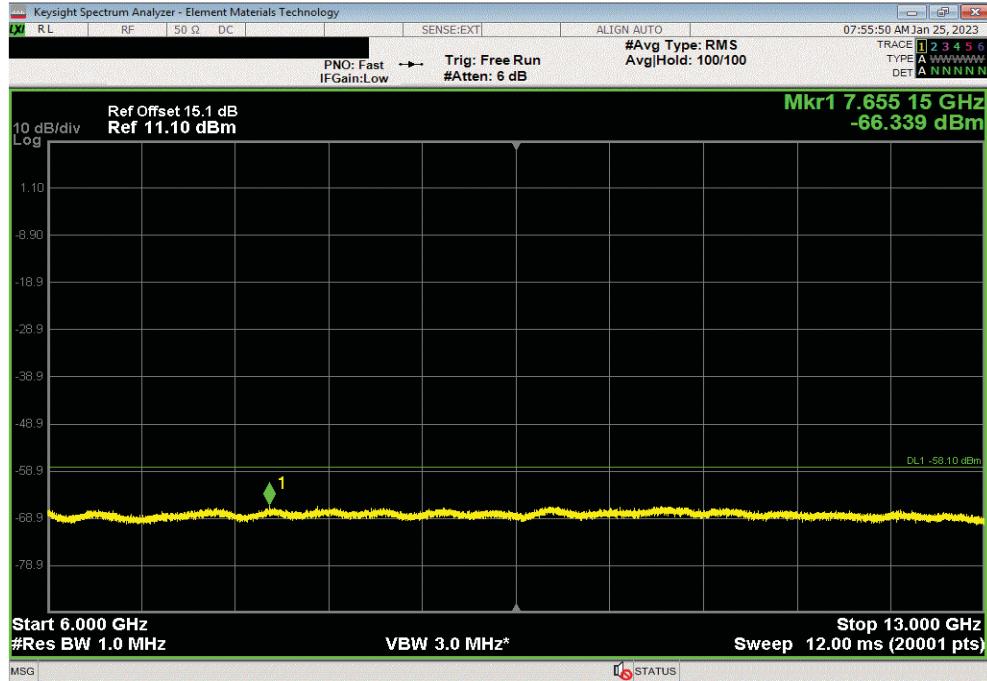


SPURIOUS CONDUCTED EMISSIONS - MULTIBAND

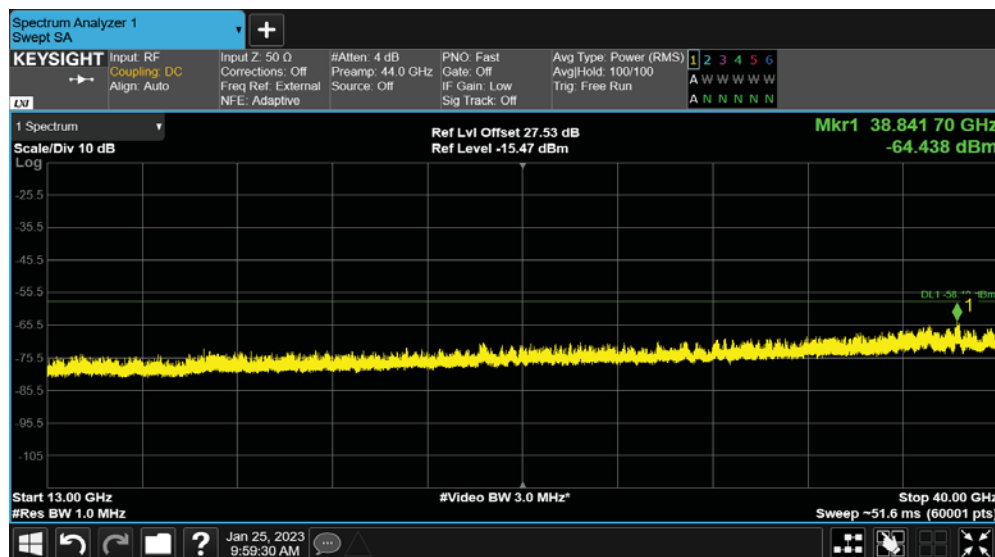


TbTtx 2022.06.03.0 XMIT 2022.02.07.0

Worst Case Port, Dual Band Mode, 3.45G (Max Power) and 3.7G Bands, 5G NR, Configuration 2					
Frequency Range	Measured Freq (MHz)	Max Value (dBm)	Limit (dBm)	Result	
6 GHz - 13 GHz	7655.15	-66.34	-58.1	Pass	



Worst Case Port, Dual Band Mode, 3.45G (Max Power) and 3.7G Bands, 5G NR, Configuration 2					
Frequency Range	Measured Freq (MHz)	Max Value (dBm)	Limit (dBm)	Result	
13 GHz - 40 GHz	38842	-64.44	-58.1	Pass	

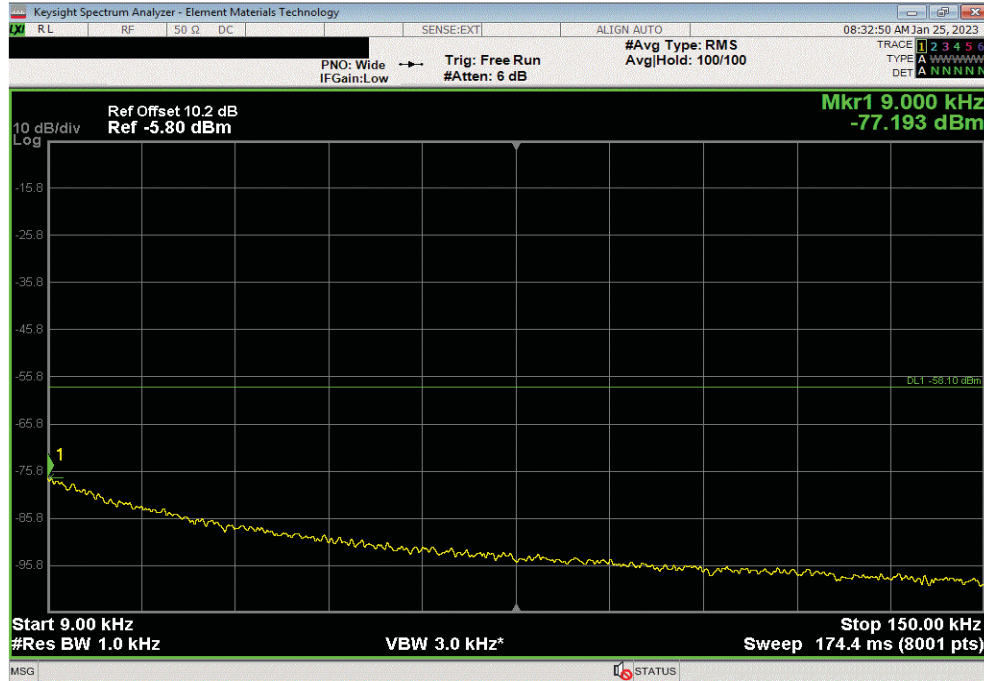


SPURIOUS CONDUCTED EMISSIONS - MULTIBAND

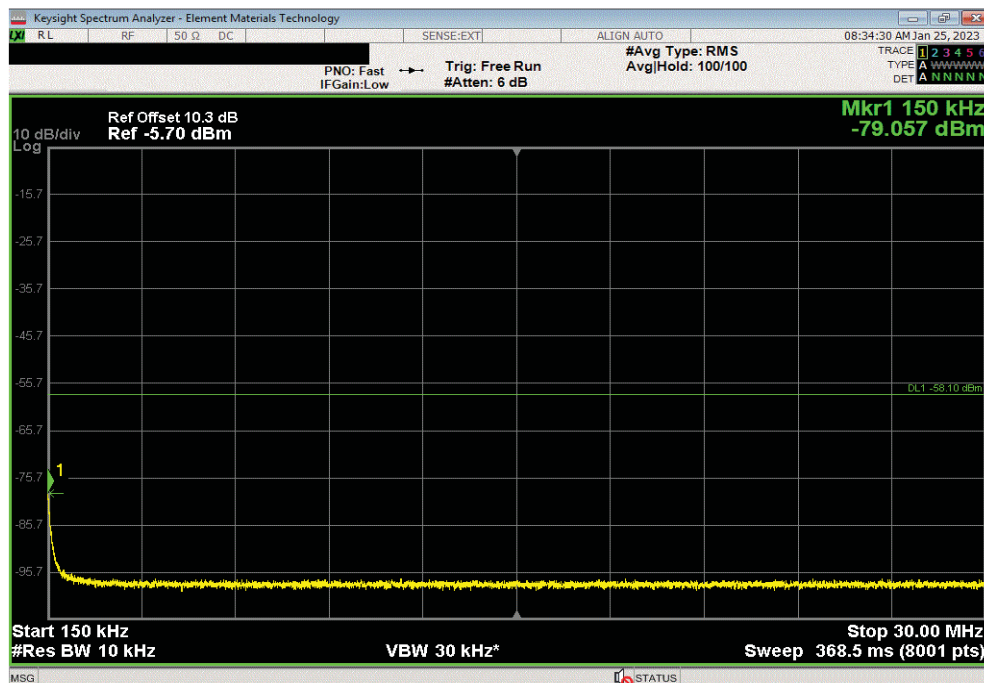


TbTtx 2022.06.03.0 XMt 2022.02.07.0

Worst Case Port, Dual Band Mode, 3.45G (Max Power) and 3.7G Bands, 5G NR, Configuration 3					
Frequency Range	Measured Freq (MHz)	Max Value (dBm)	Limit (dBm)	Result	
9 kHz - 150 kHz	0.01	-77.19	-58.1	Pass	



Worst Case Port, Dual Band Mode, 3.45G (Max Power) and 3.7G Bands, 5G NR, Configuration 3					
Frequency Range	Measured Freq (MHz)	Max Value (dBm)	Limit (dBm)	Result	
150 kHz - 30 MHz	0.15	-79.06	-58.1	Pass	



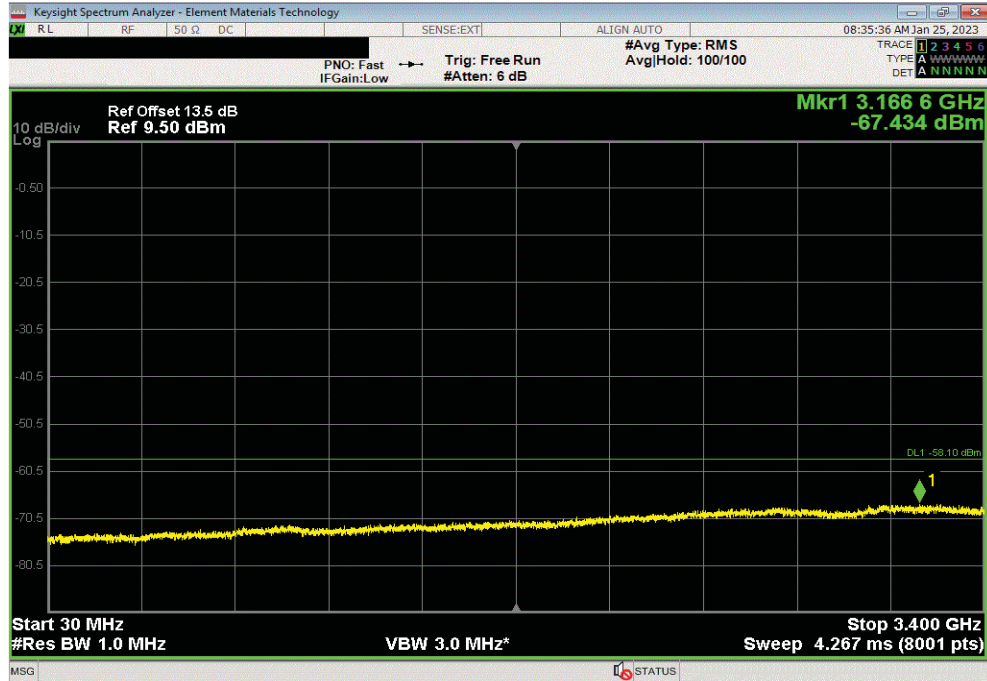
SPURIOUS CONDUCTED EMISSIONS - MULTIBAND



TbTtx 2022.06.03.0 XMit 2022.02.07.0

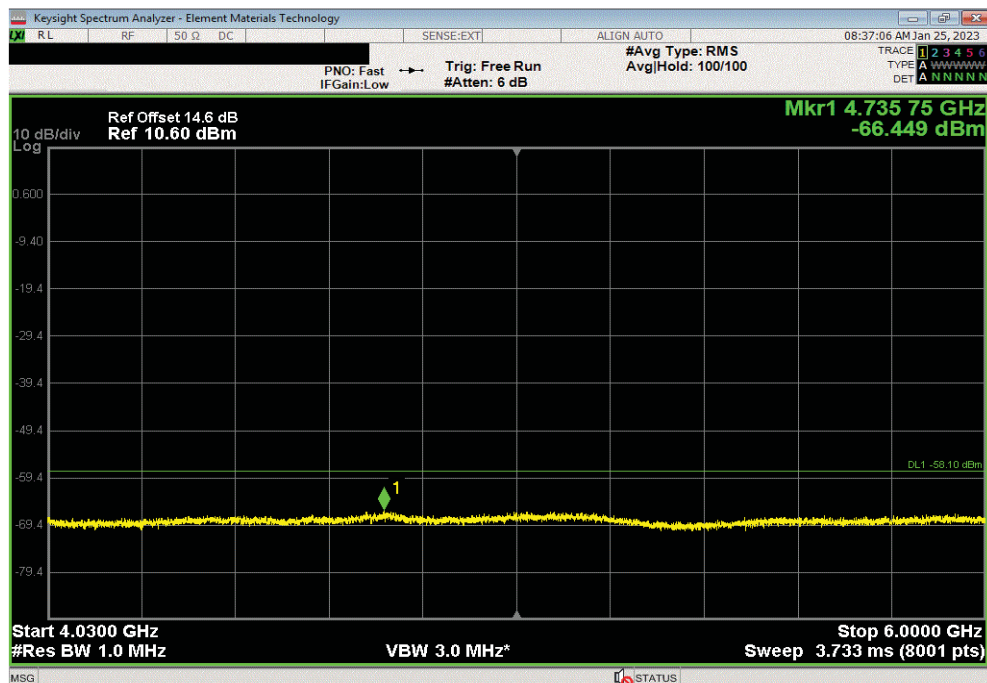
Worst Case Port, Dual Band Mode, 3.45G (Max Power) and 3.7G Bands, 5G NR, Configuration 3

Frequency Range	Measured Freq (MHz)	Max Value (dBm)	Limit (dBm)	Result
30 MHz - 3.4 GHz	3166.63	-67.43	-58.1	Pass



Worst Case Port, Dual Band Mode, 3.45G (Max Power) and 3.7G Bands, 5G NR, Configuration 3

Frequency Range	Measured Freq (MHz)	Max Value (dBm)	Limit (dBm)	Result
4.03 GHz - 6 GHz	4735.75	-66.45	-58.1	Pass

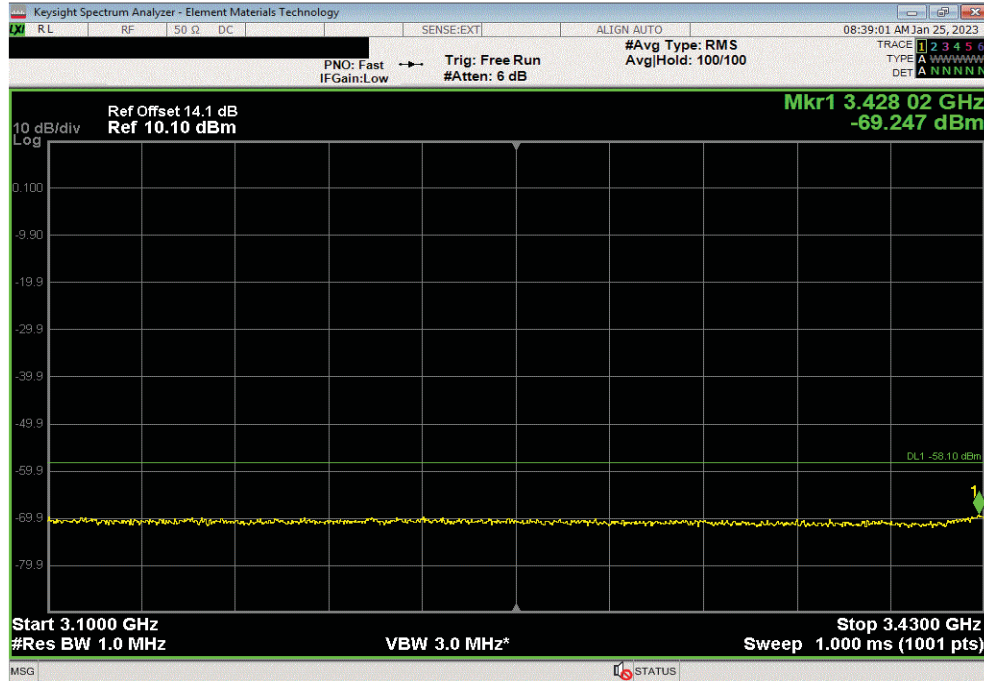


SPURIOUS CONDUCTED EMISSIONS - MULTIBAND

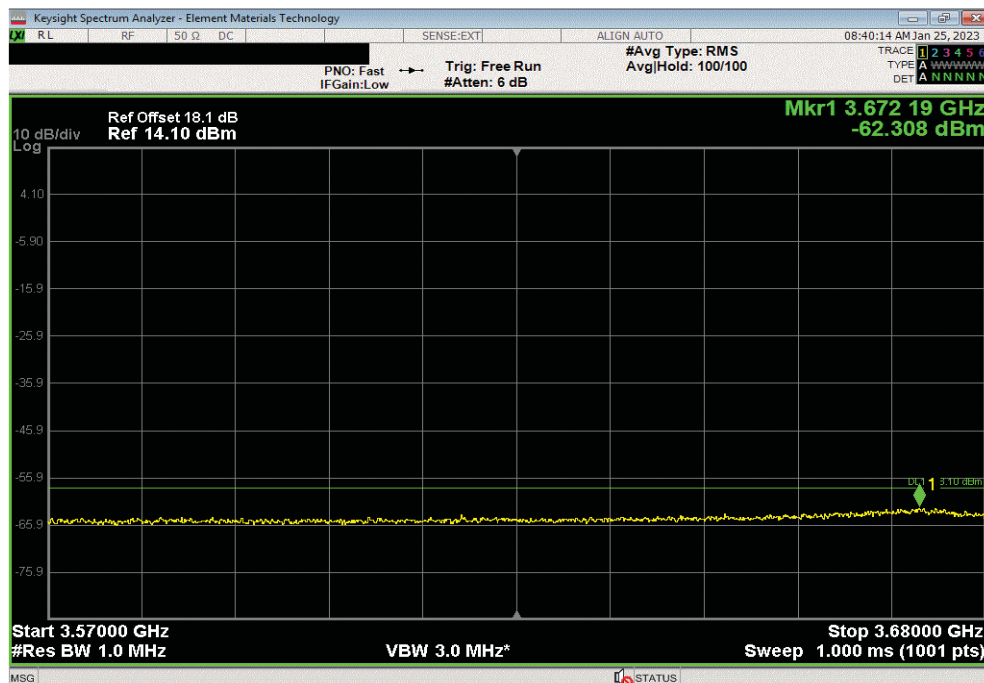


TbTx 2022.06.03.0 XMI 2022.02.07.0

Worst Case Port, Dual Band Mode, 3.45G (Max Power) and 3.7G Bands, 5G NR, Configuration 3					
Frequency Range	Measured Freq (MHz)	Max Value (dBm)	Limit (dBm)	Result	
3.1 GHz - 3.43 GHz	3428.02	-69.25	-58.1	Pass	



Worst Case Port, Dual Band Mode, 3.45G (Max Power) and 3.7G Bands, 5G NR, Configuration 3					
Frequency Range	Measured Freq (MHz)	Max Value (dBm)	Limit (dBm)	Result	
3.57 GHz - 3.68 GHz	3672.19	-62.31	-58.1	Pass	

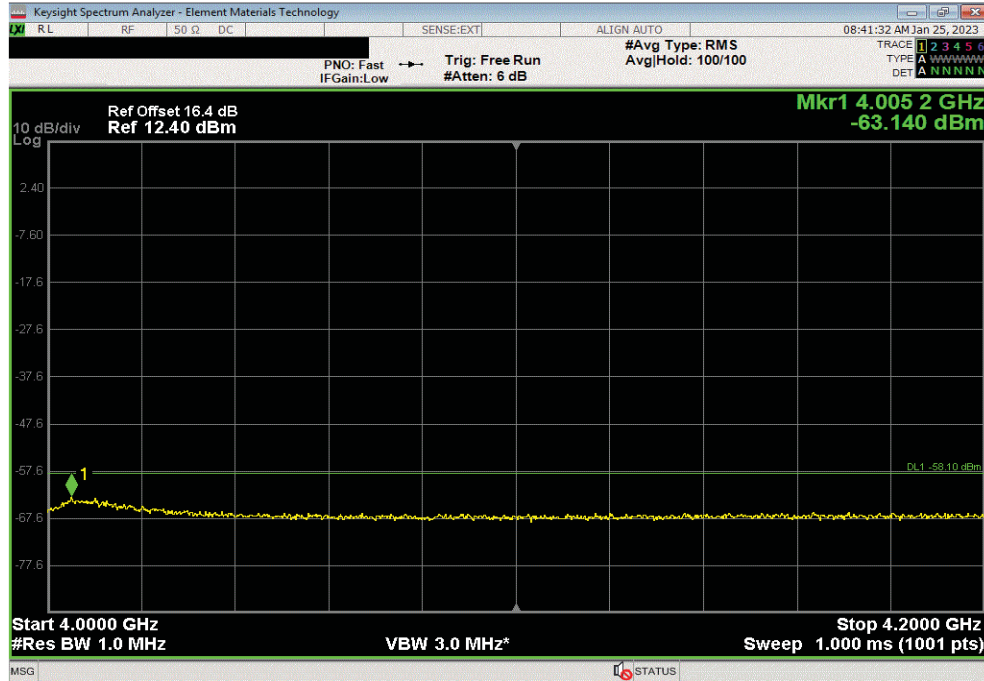


SPURIOUS CONDUCTED EMISSIONS - MULTIBAND

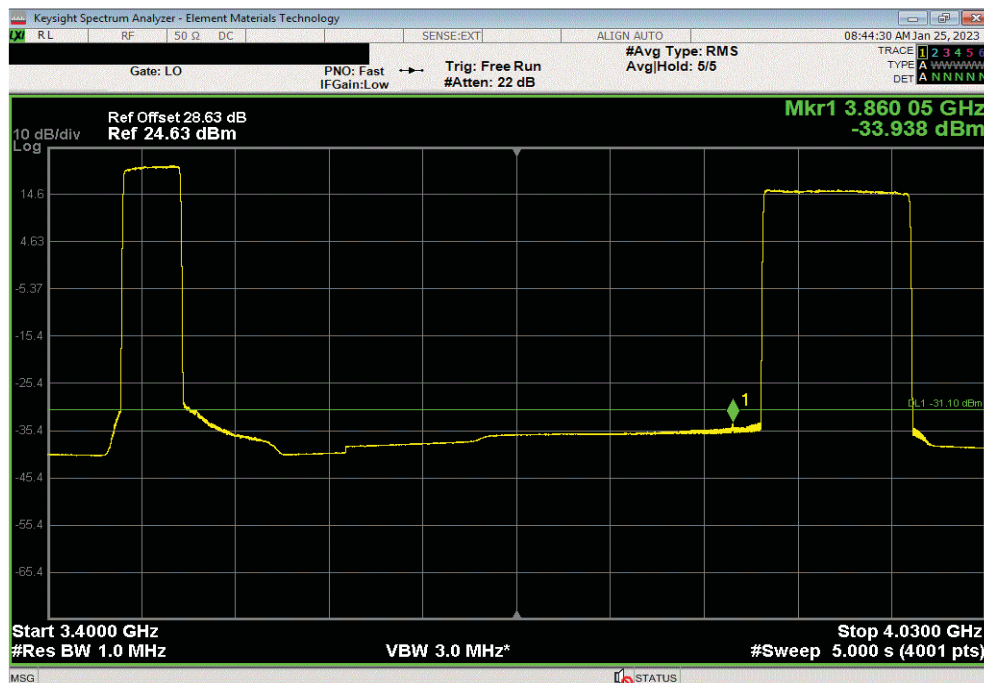


TbTtx 2022.06.03.0 XMIT 2022.02.07.0

Worst Case Port, Dual Band Mode, 3.45G (Max Power) and 3.7G Bands, 5G NR, Configuration 3					
Frequency Range	Measured Freq (MHz)	Max Value (dBm)	Limit (dBm)	Result	
4 GHz - 4.2 GHz	4005.2	-63.14	-58.1	Pass	



Worst Case Port, Dual Band Mode, 3.45G (Max Power) and 3.7G Bands, 5G NR, Configuration 3					
Frequency Range	Measured Freq (MHz)	Max Value (dBm)	Limit (dBm)	Result	
3.4 GHz - 4.03 GHz	3860.05	-33.94	-31.1	Pass	

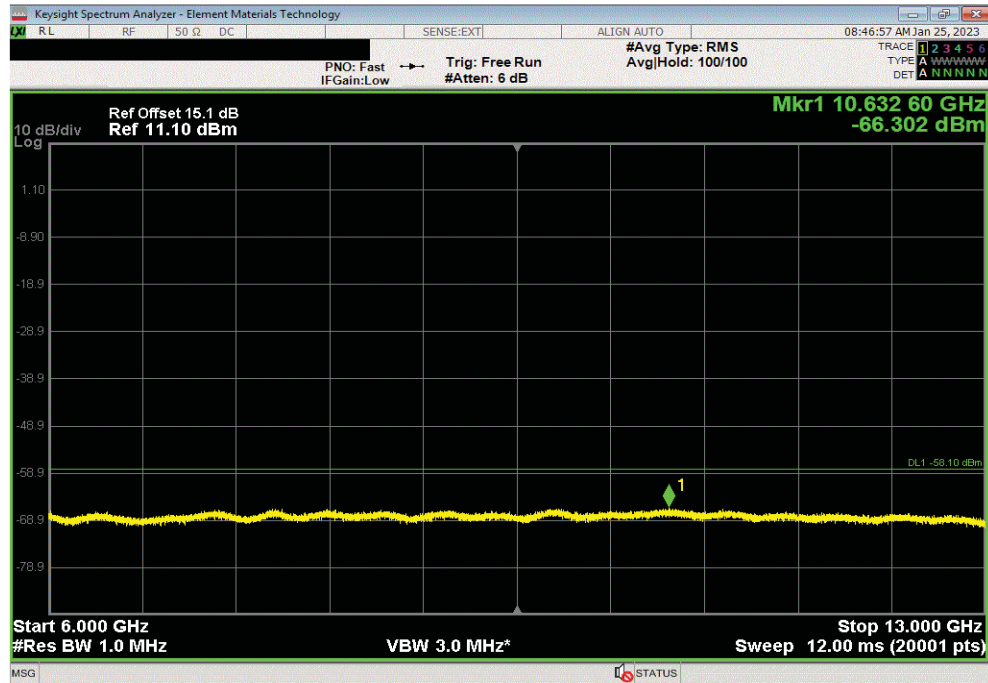


SPURIOUS CONDUCTED EMISSIONS - MULTIBAND

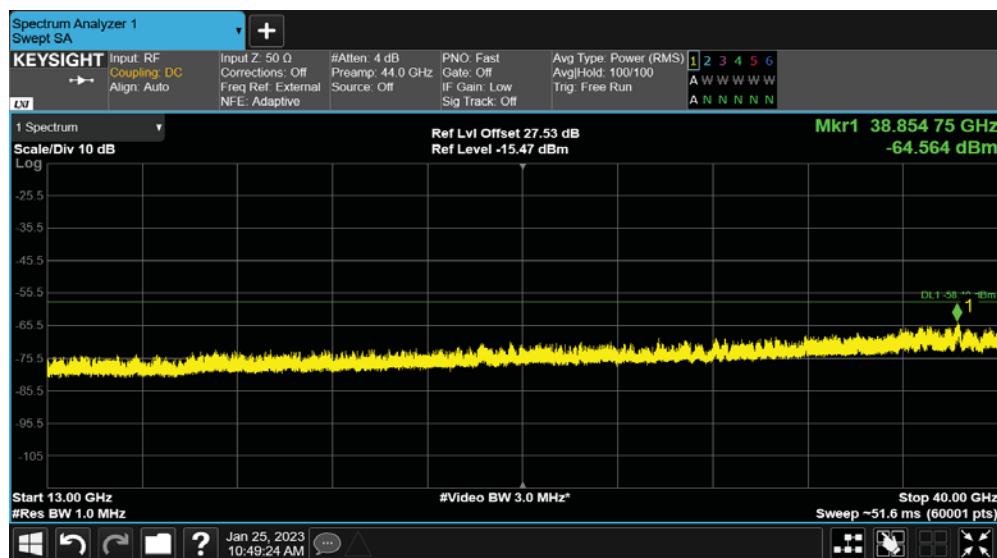


TbTx 2022.06.03.0 XMI 2022.02.07.0

Worst Case Port, Dual Band Mode, 3.45G (Max Power) and 3.7G Bands, 5G NR, Configuration 3					
Frequency Range	Measured Freq (MHz)	Max Value (dBm)	Limit (dBm)	Result	
6 GHz - 13 GHz	10632.6	-66.3	-58.1	Pass	



Worst Case Port, Dual Band Mode, 3.45G (Max Power) and 3.7G Bands, 5G NR, Configuration 3					
Frequency Range	Measured Freq (MHz)	Max Value (dBm)	Limit (dBm)	Result	
13 GHz - 40 GHz	38855	-64.564	-58.1	Pass	



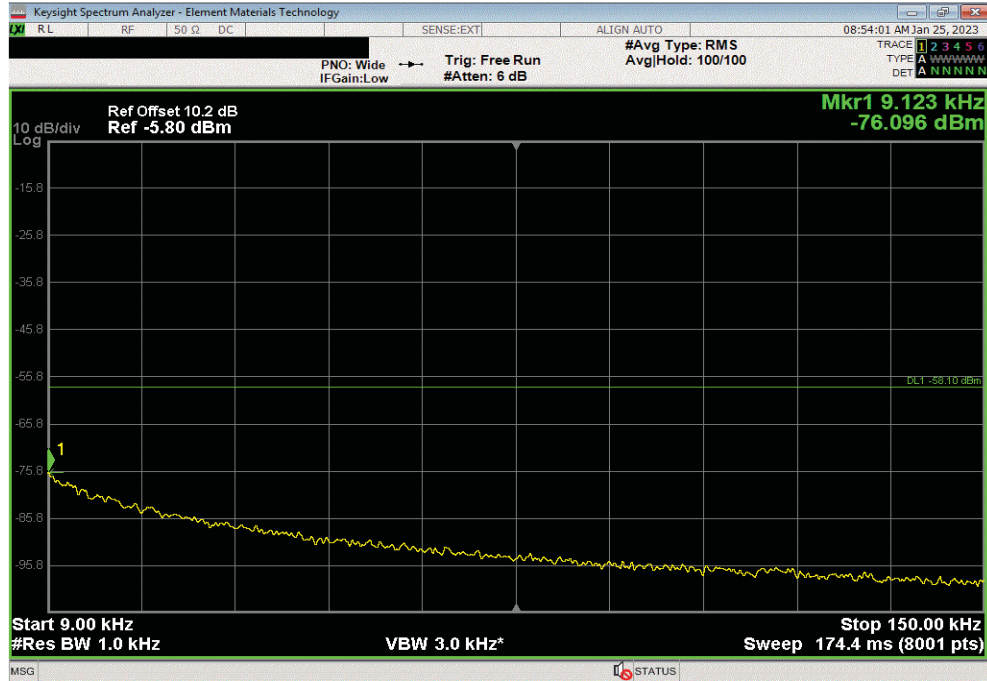
SPURIOUS CONDUCTED EMISSIONS - MULTIBAND



TbTtx 2022.06.03.0 XMit 2022.02.07.0

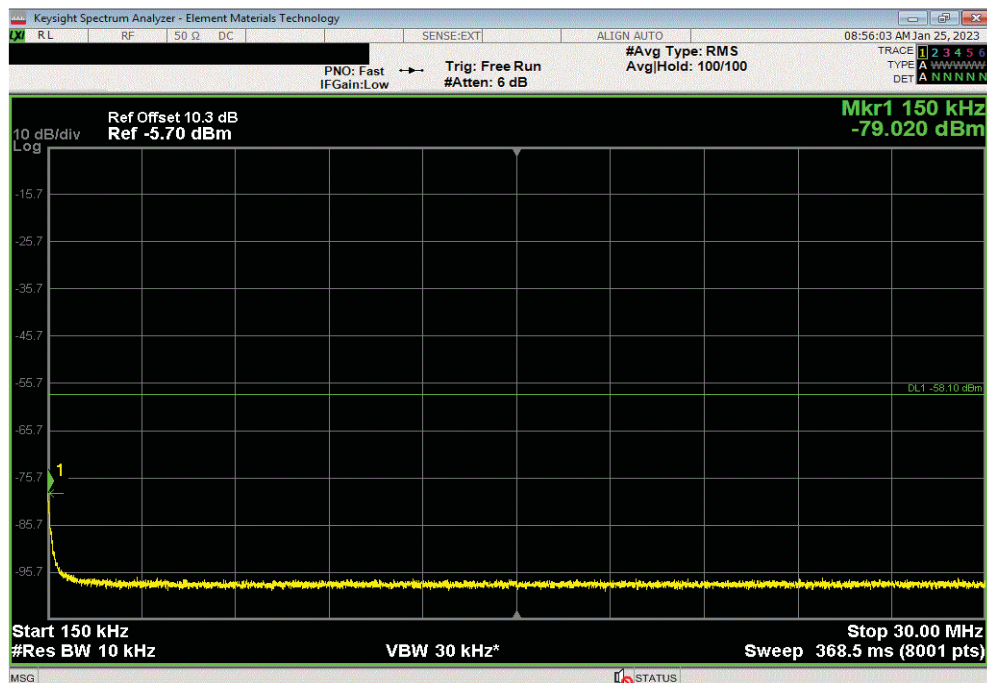
Worst Case Port, Dual Band Mode, 3.45G (Max Power) and 3.7G Bands, 5G NR, Configuration 4

Frequency Range	Measured Freq (MHz)	Max Value (dBm)	Limit (dBm)	Result
9 kHz - 150 kHz	0.01	-76.1	-58.1	Pass



Worst Case Port, Dual Band Mode, 3.45G (Max Power) and 3.7G Bands, 5G NR, Configuration 4

Frequency Range	Measured Freq (MHz)	Max Value (dBm)	Limit (dBm)	Result
150 kHz - 30 MHz	0.15	-79.02	-58.1	Pass



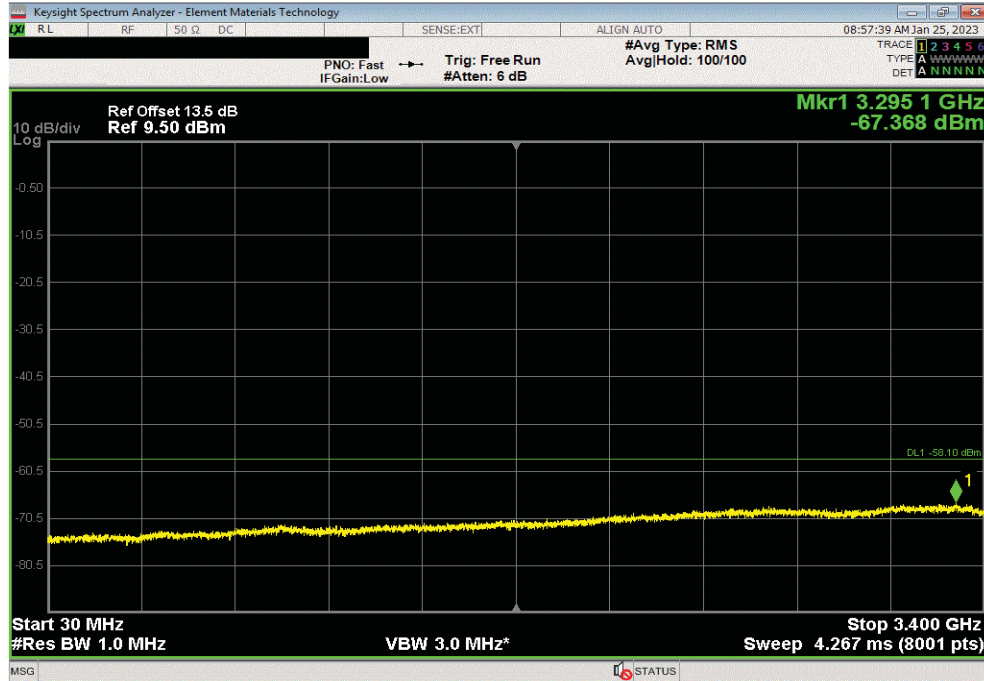
SPURIOUS CONDUCTED EMISSIONS - MULTIBAND



TbTtx 2022.06.03.0 XMit 2022.02.07.0

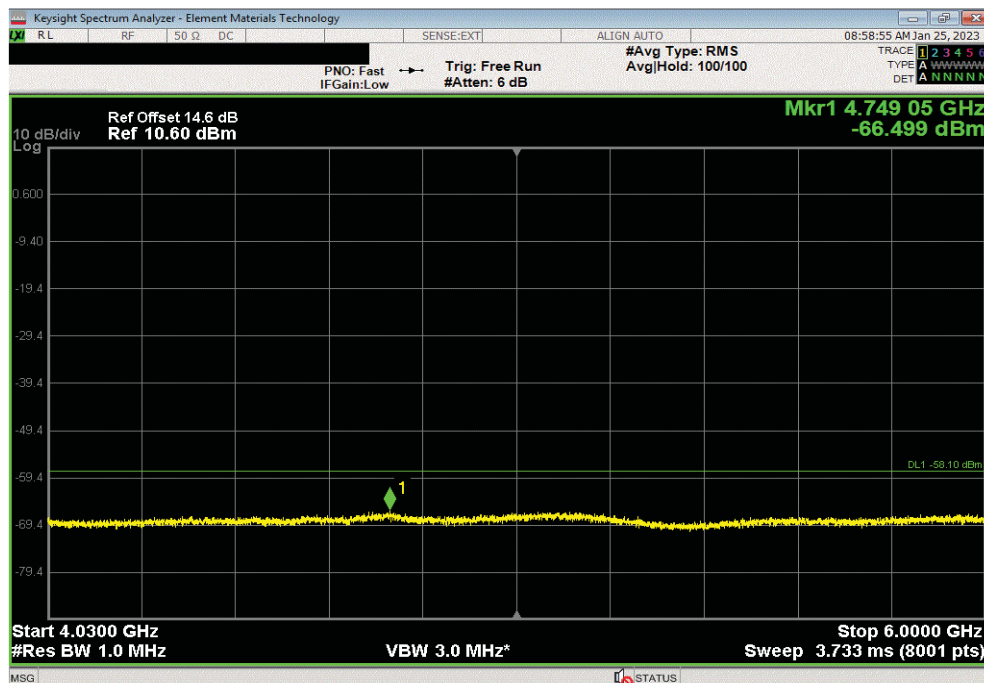
Worst Case Port, Dual Band Mode, 3.45G (Max Power) and 3.7G Bands, 5G NR, Configuration 4

Frequency Range	Measured Freq (MHz)	Max Value (dBm)	Limit (dBm)	Result
30 MHz - 3.4 GHz	3295.11	-67.37	-58.1	Pass



Worst Case Port, Dual Band Mode, 3.45G (Max Power) and 3.7G Bands, 5G NR, Configuration 4

Frequency Range	Measured Freq (MHz)	Max Value (dBm)	Limit (dBm)	Result
4.03 GHz - 6 GHz	4749.05	-66.5	-58.1	Pass

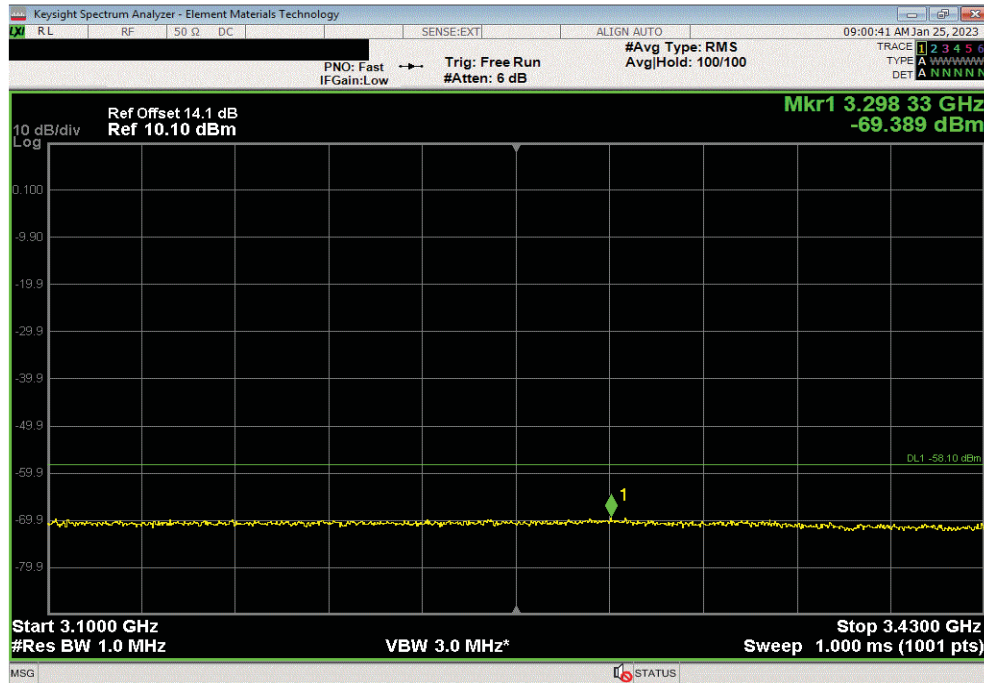


SPURIOUS CONDUCTED EMISSIONS - MULTIBAND

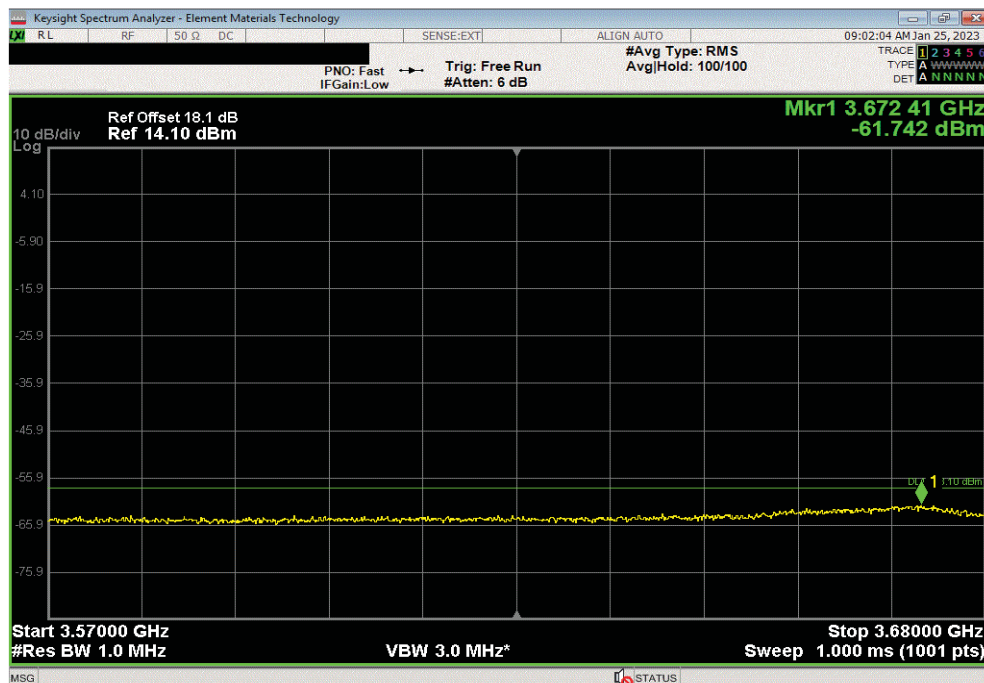


TbTx 2022.06.03.0 XbTx 2022.02.07.0

Worst Case Port, Dual Band Mode, 3.45G (Max Power) and 3.7G Bands, 5G NR, Configuration 4					
Frequency Range	Measured Freq (MHz)	Max Value (dBm)	Limit (dBm)	Result	
3.1 GHz - 3.43 GHz	3298.33	-69.39	-58.1	Pass	



Worst Case Port, Dual Band Mode, 3.45G (Max Power) and 3.7G Bands, 5G NR, Configuration 4					
Frequency Range	Measured Freq (MHz)	Max Value (dBm)	Limit (dBm)	Result	
3.57 GHz - 3.68 GHz	3672.41	-61.74	-58.1	Pass	

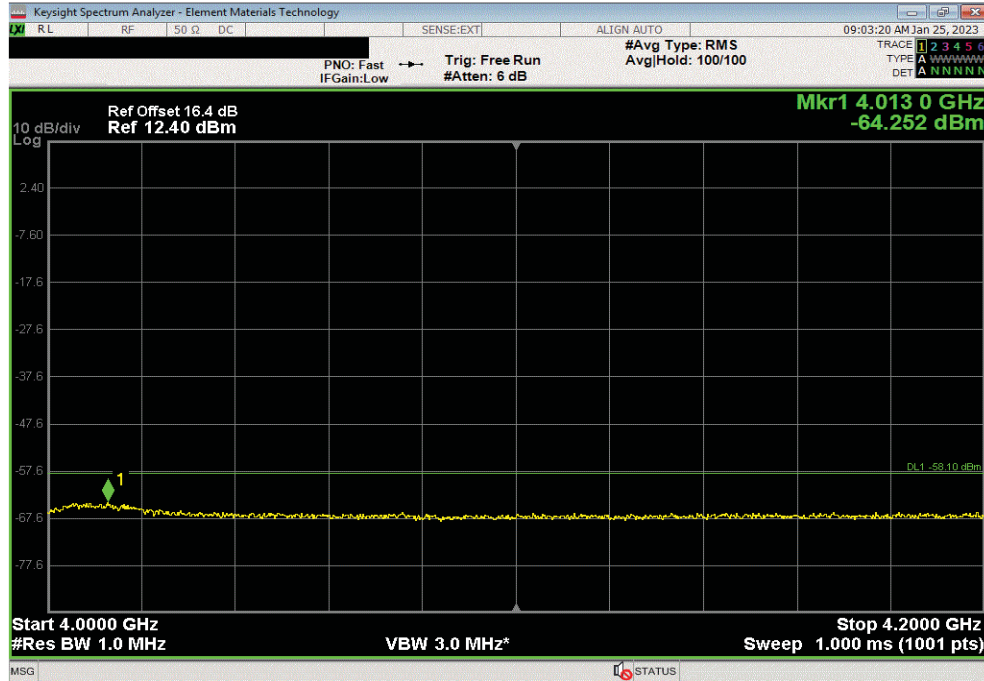


SPURIOUS CONDUCTED EMISSIONS - MULTIBAND

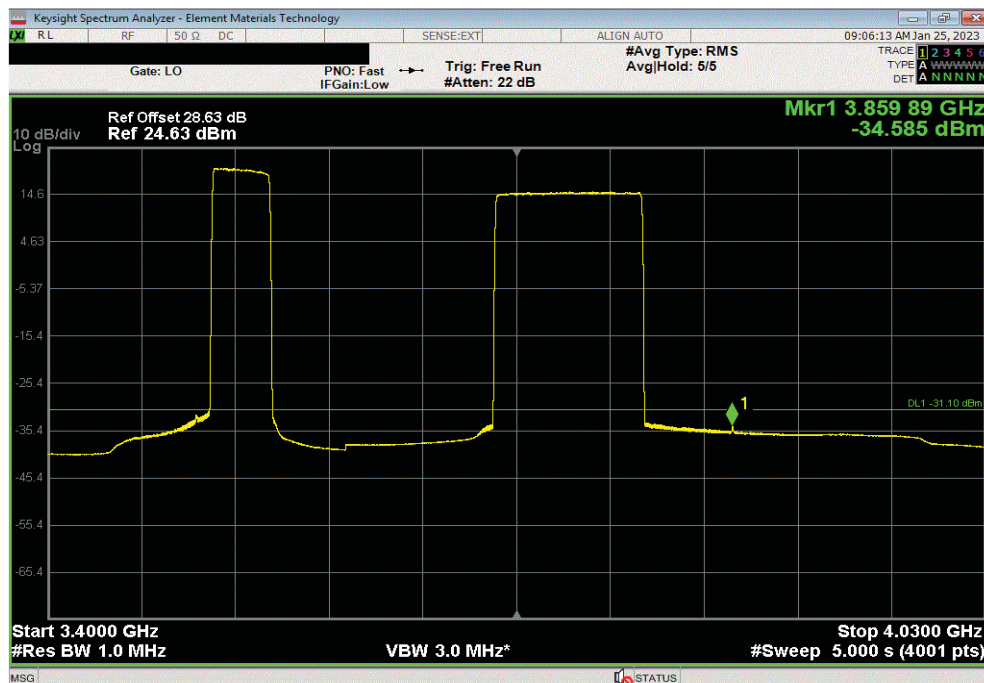


TbTtx 2022.06.03.0 XMIT 2022.02.07.0

Worst Case Port, Dual Band Mode, 3.45G (Max Power) and 3.7G Bands, 5G NR, Configuration 4					
Frequency Range	Measured Freq (MHz)	Max Value (dBm)	Limit (dBm)	Result	
4 GHz - 4.2 GHz	4013	-64.25	-58.1	Pass	



Worst Case Port, Dual Band Mode, 3.45G (Max Power) and 3.7G Bands, 5G NR, Configuration 4					
Frequency Range	Measured Freq (MHz)	Max Value (dBm)	Limit (dBm)	Result	
3.4 GHz - 4.03 GHz	3859.89	-34.59	-31.1	Pass	



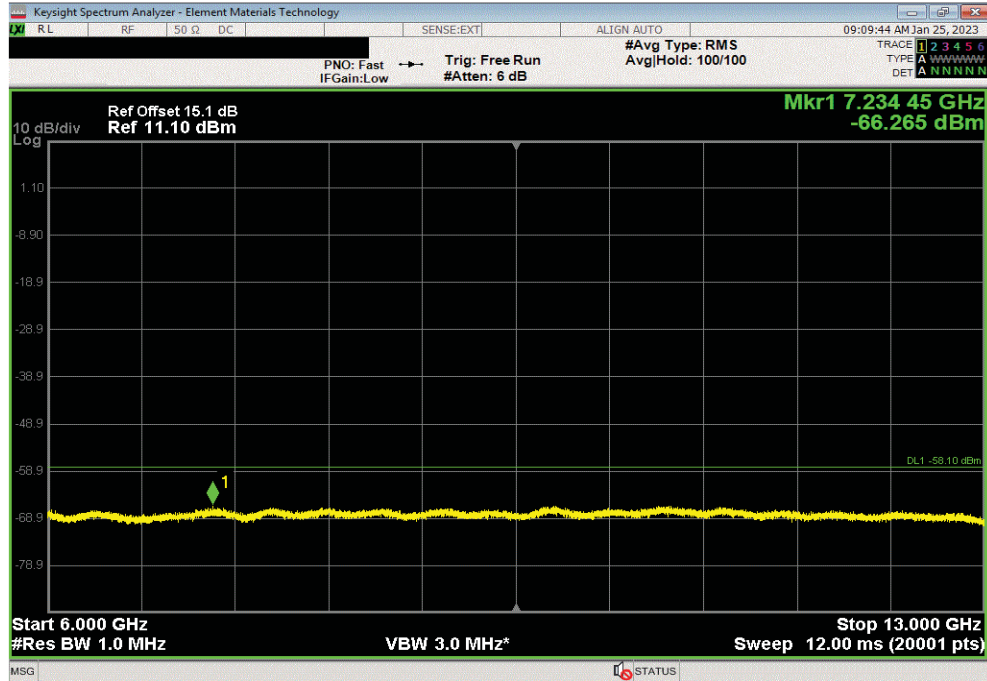
SPURIOUS CONDUCTED EMISSIONS - MULTIBAND



TbTx 2022.06.03.0 XbTx 2022.02.07.0

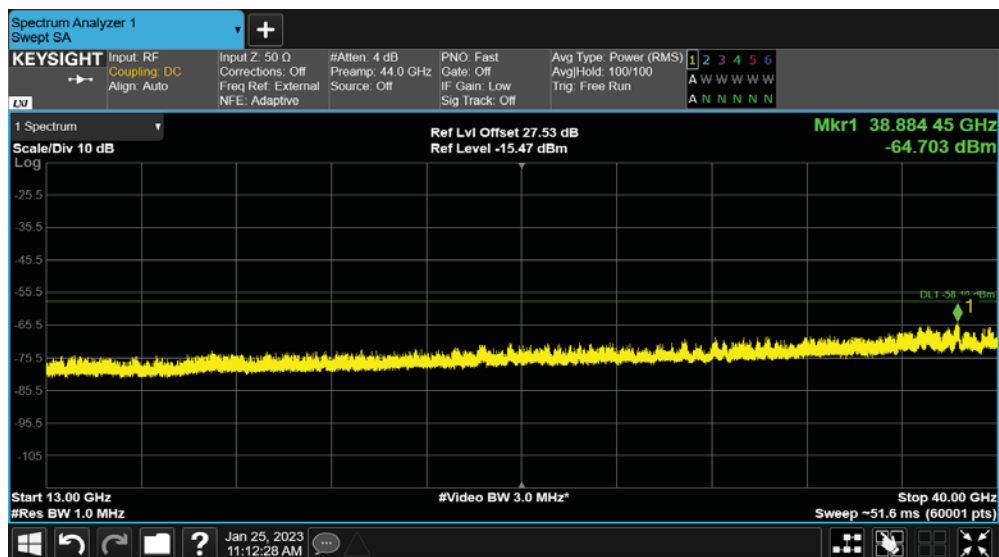
Worst Case Port, Dual Band Mode, 3.45G (Max Power) and 3.7G Bands, 5G NR, Configuration 4

Frequency Range	Measured Freq (MHz)	Max Value (dBm)	Limit (dBm)	Result
6 GHz - 13 GHz	7234.45	-66.27	-58.1	Pass



Worst Case Port, Dual Band Mode, 3.45G (Max Power) and 3.7G Bands, 5G NR, Configuration 4

Frequency Range	Measured Freq (MHz)	Max Value (dBm)	Limit (dBm)	Result
13 GHz - 40 GHz	38884	-64.703	-58.1	Pass



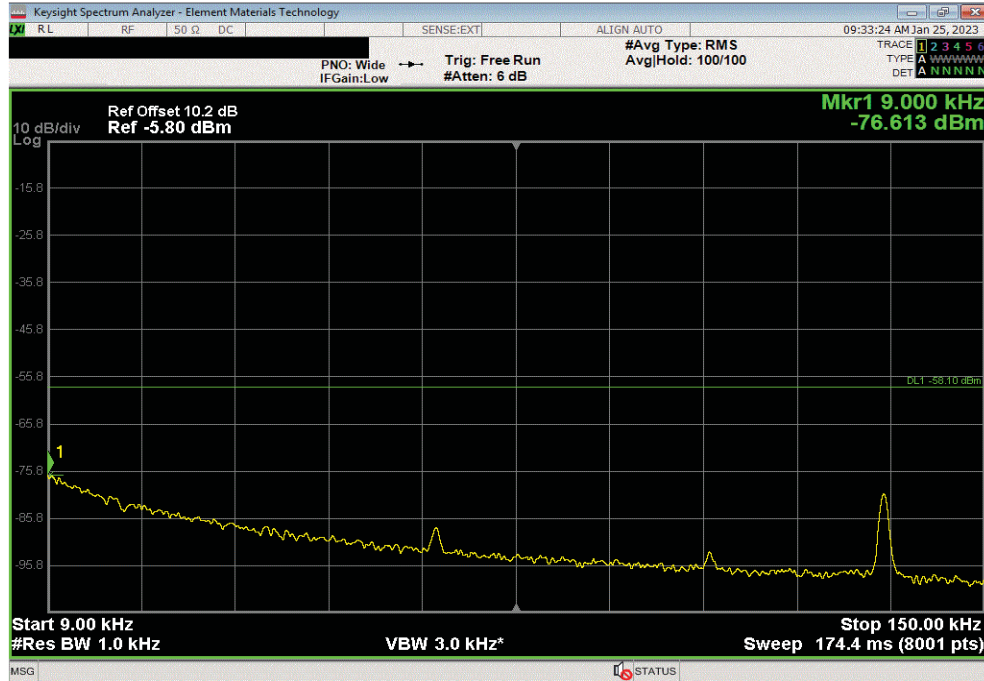
SPURIOUS CONDUCTED EMISSIONS - MULTIBAND



TbTtx 2022.06.03.0 XMt 2022.02.07.0

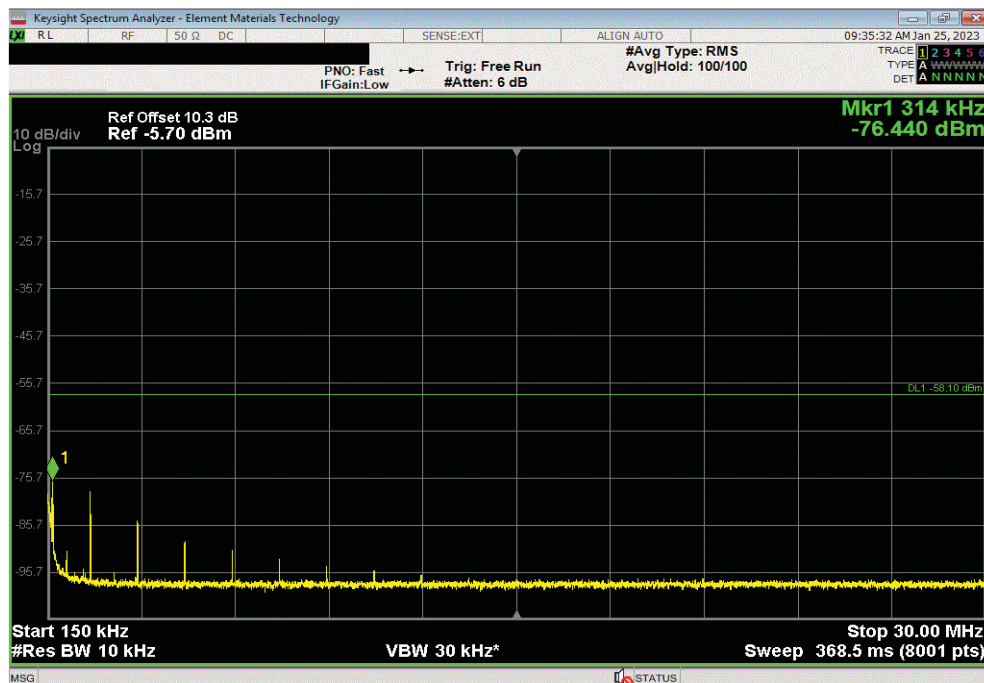
Worst Case Port, Dual Band Mode, 3.45G and 3.7G (Max Power) Bands, 5G NR, Configuration 1

Frequency Range	Measured Freq (MHz)	Max Value (dBm)	Limit (dBm)	Result
9 kHz - 150 kHz	0.01	-76.61	-58.1	Pass



Worst Case Port, Dual Band Mode, 3.45G and 3.7G (Max Power) Bands, 5G NR, Configuration 1

Frequency Range	Measured Freq (MHz)	Max Value (dBm)	Limit (dBm)	Result
150 kHz - 30 MHz	0.31	-76.44	-58.1	Pass

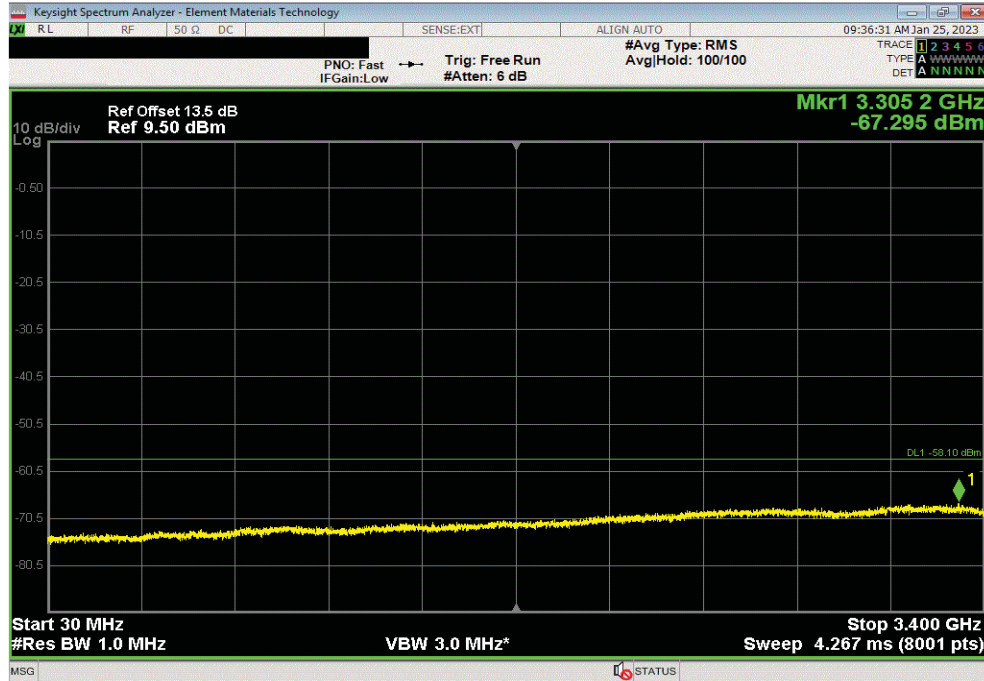


SPURIOUS CONDUCTED EMISSIONS - MULTIBAND

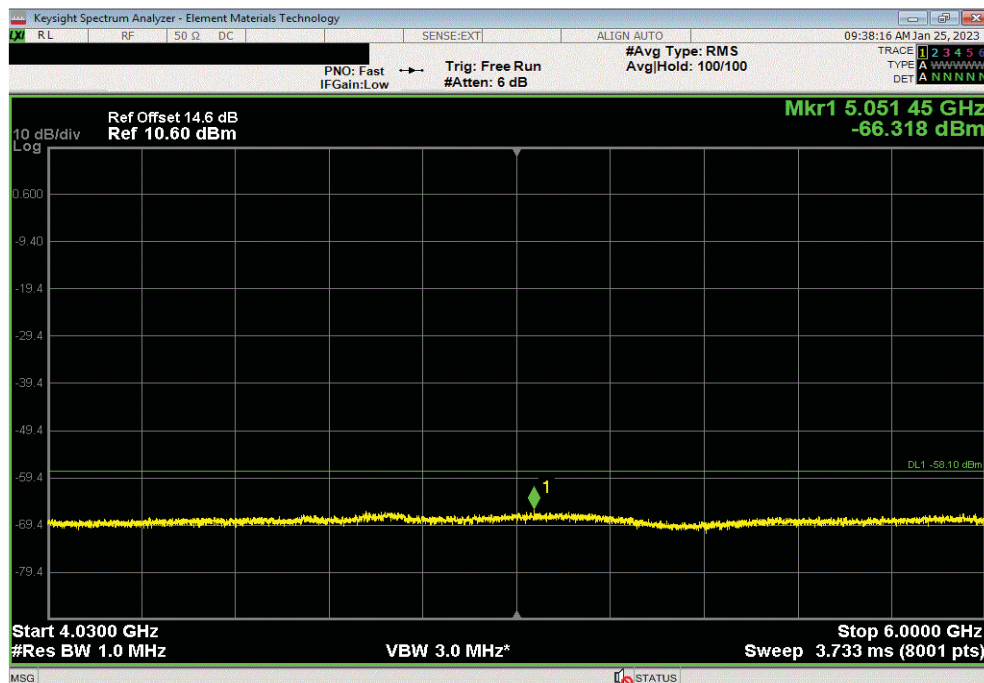


TbTtx 2022.06.03.0 XMit 2022.02.07.0

Worst Case Port, Dual Band Mode, 3.45G and 3.7G (Max Power) Bands, 5G NR, Configuration 1					
Frequency Range	Measured Freq (MHz)	Max Value (dBm)	Limit (dBm)	Result	
30 MHz - 3.4 GHz	3305.22	-67.3	-58.1	Pass	



Worst Case Port, Dual Band Mode, 3.45G and 3.7G (Max Power) Bands, 5G NR, Configuration 1					
Frequency Range	Measured Freq (MHz)	Max Value (dBm)	Limit (dBm)	Result	
4.03 GHz - 6 GHz	5051.45	-66.32	-58.1	Pass	

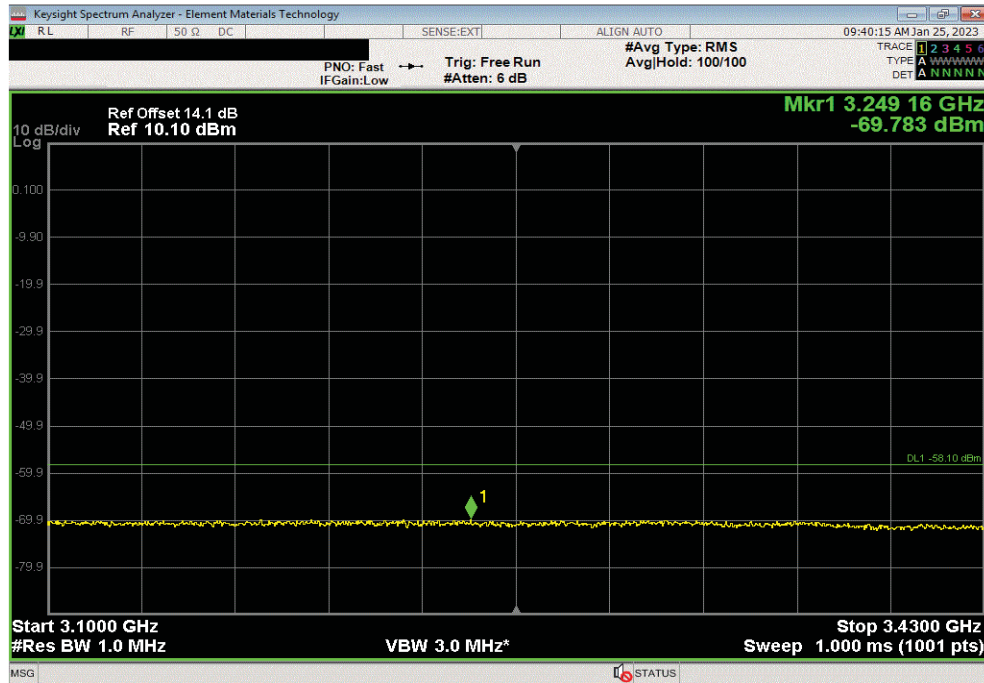


SPURIOUS CONDUCTED EMISSIONS - MULTIBAND

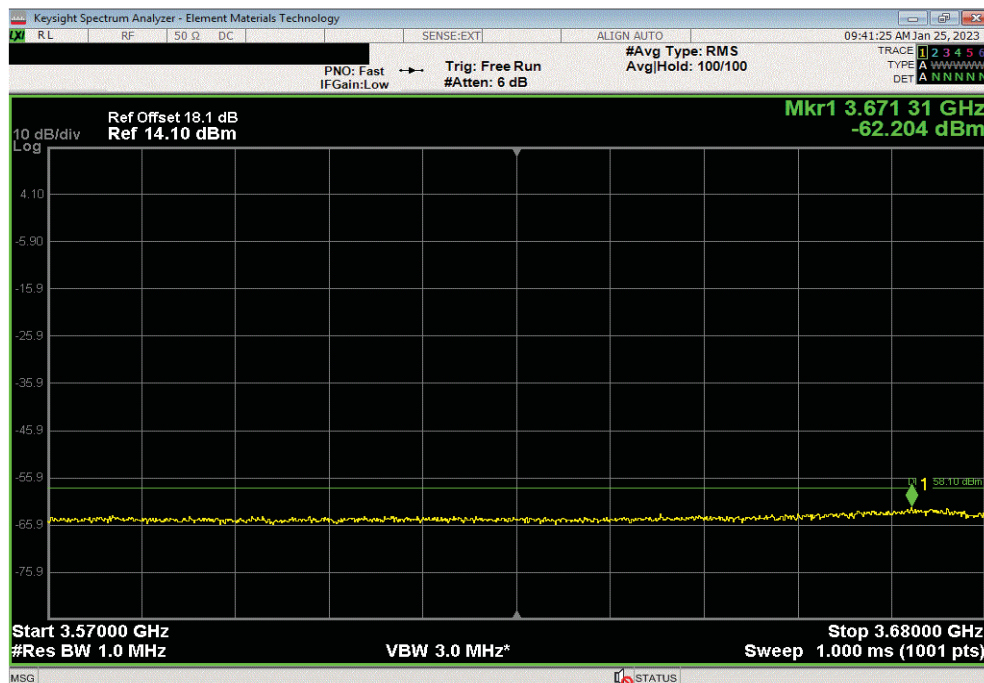


TbTx 2022.06.03.0 XMI 2022.02.07.0

Worst Case Port, Dual Band Mode, 3.45G and 3.7G (Max Power) Bands, 5G NR, Configuration 1					
Frequency Range	Measured Freq (MHz)	Max Value (dBm)	Limit (dBm)	Result	
3.1 GHz - 3.43 GHz	3249.16	-69.78	-58.1	Pass	



Worst Case Port, Dual Band Mode, 3.45G and 3.7G (Max Power) Bands, 5G NR, Configuration 1					
Frequency Range	Measured Freq (MHz)	Max Value (dBm)	Limit (dBm)	Result	
3.57 GHz - 3.68 GHz	3671.31	-62.2	-58.1	Pass	



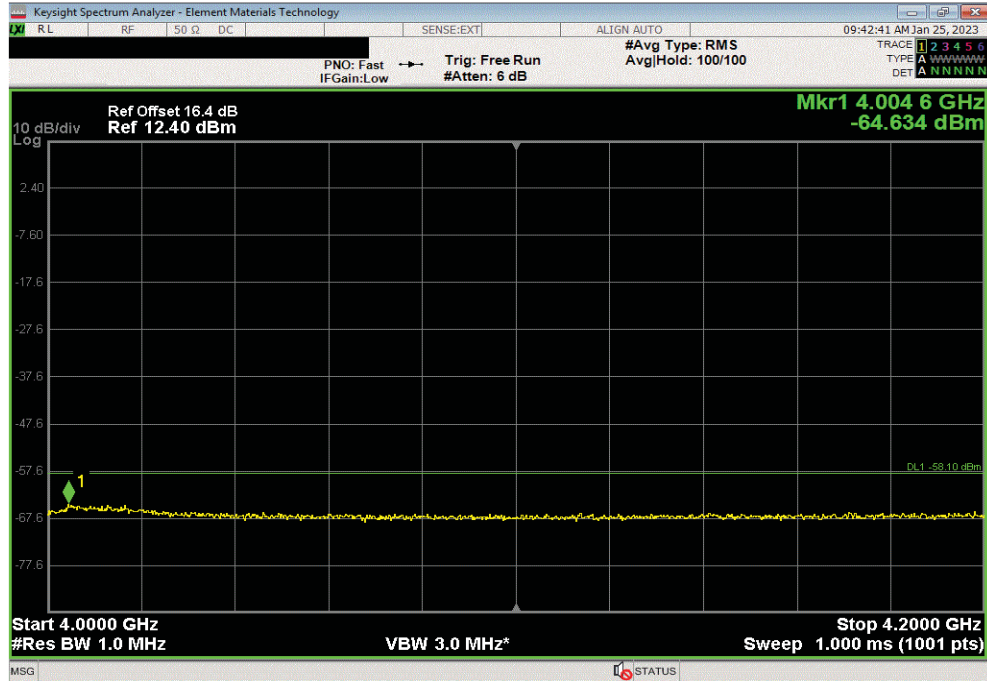
SPURIOUS CONDUCTED EMISSIONS - MULTIBAND



TbTx 2022.06.03.0 XMI 2022.02.07.0

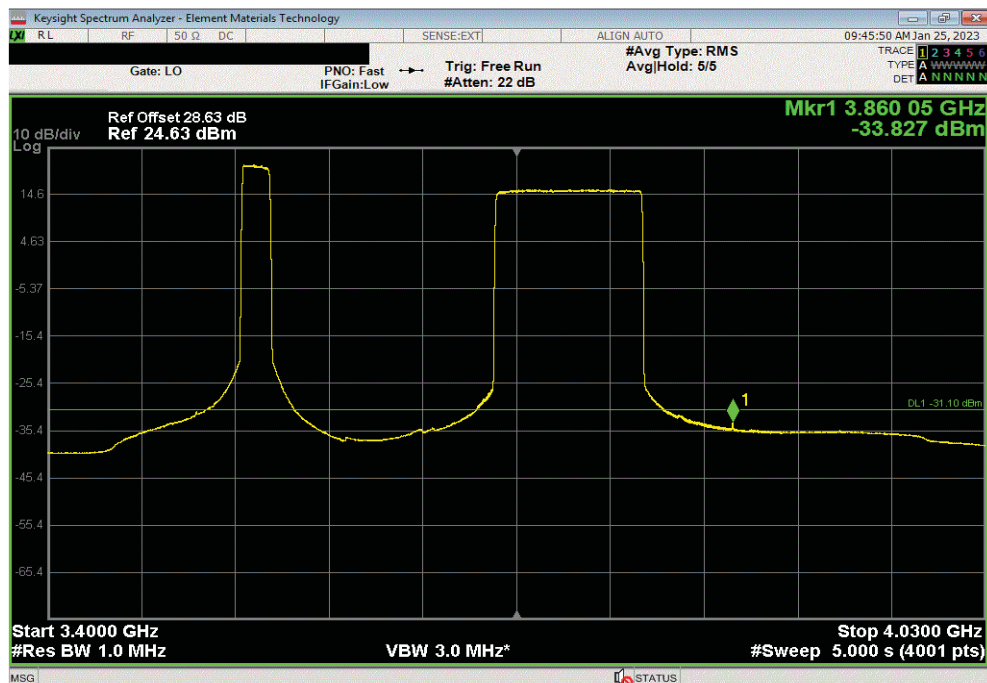
Worst Case Port, Dual Band Mode, 3.45G and 3.7G (Max Power) Bands, 5G NR, Configuration 1

Frequency Range	Measured Freq (MHz)	Max Value (dBm)	Limit (dBm)	Result
4 GHz - 4.2 GHz	4004.6	-64.63	-58.1	Pass



Worst Case Port, Dual Band Mode, 3.45G and 3.7G (Max Power) Bands, 5G NR, Configuration 1

Frequency Range	Measured Freq (MHz)	Max Value (dBm)	Limit (dBm)	Result
3.4 GHz - 4.03 GHz	3860.05	-33.83	-31.1	Pass

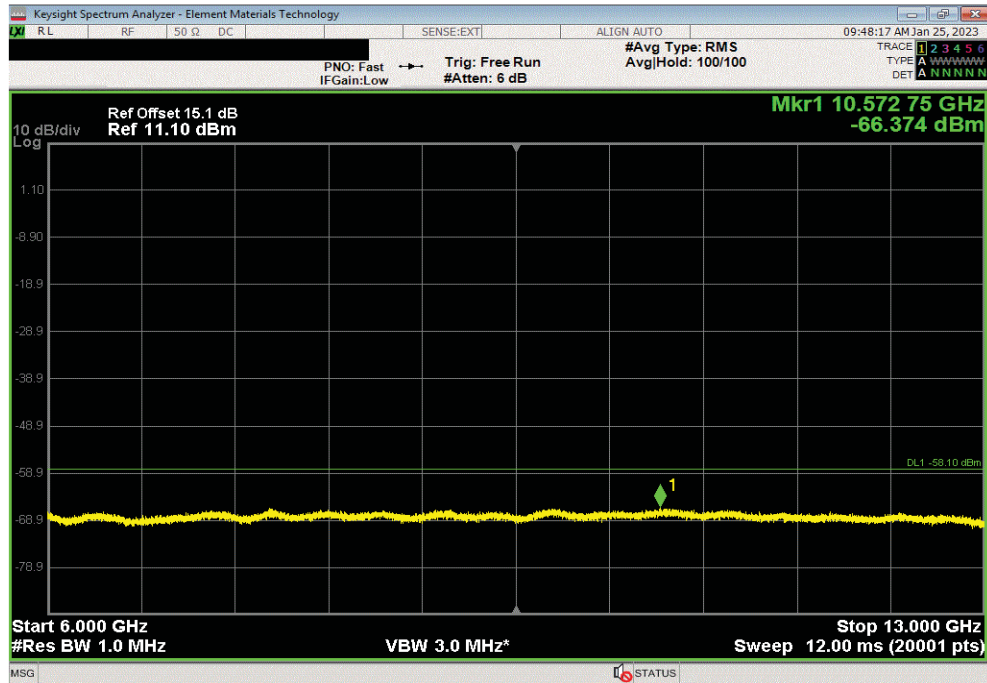


SPURIOUS CONDUCTED EMISSIONS - MULTIBAND

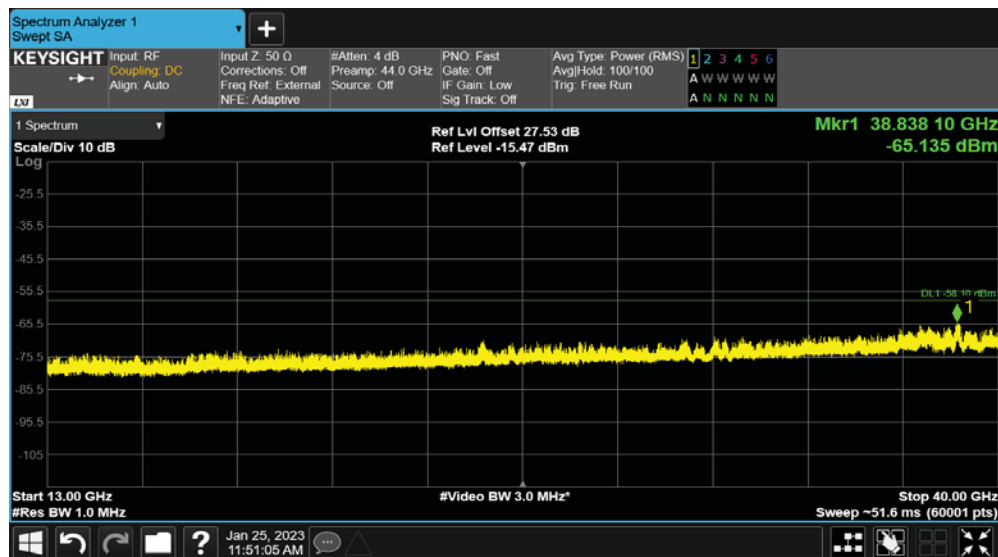


TbTx 2022.06.03.0 XMI 2022.02.07.0

Worst Case Port, Dual Band Mode, 3.45G and 3.7G (Max Power) Bands, 5G NR, Configuration 1					
Frequency Range	Measured Freq (MHz)	Max Value (dBm)	Limit (dBm)	Result	
6 GHz - 13 GHz	10572.75	-66.37	-58.1	Pass	



Worst Case Port, Dual Band Mode, 3.45G and 3.7G (Max Power) Bands, 5G NR, Configuration 1					
Frequency Range	Measured Freq (MHz)	Max Value (dBm)	Limit (dBm)	Result	
13 GHz - 40 GHz	38838	-65.135	-58.1	Pass	



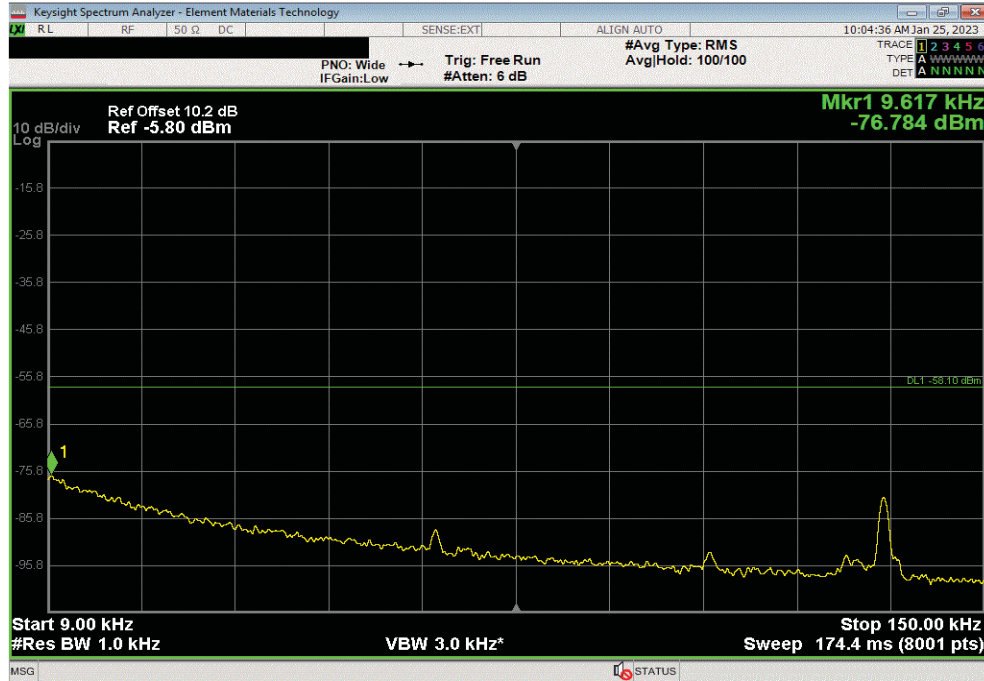
SPURIOUS CONDUCTED EMISSIONS - MULTIBAND



TbTx 2022.06.03.0 XMt 2022.02.07.0

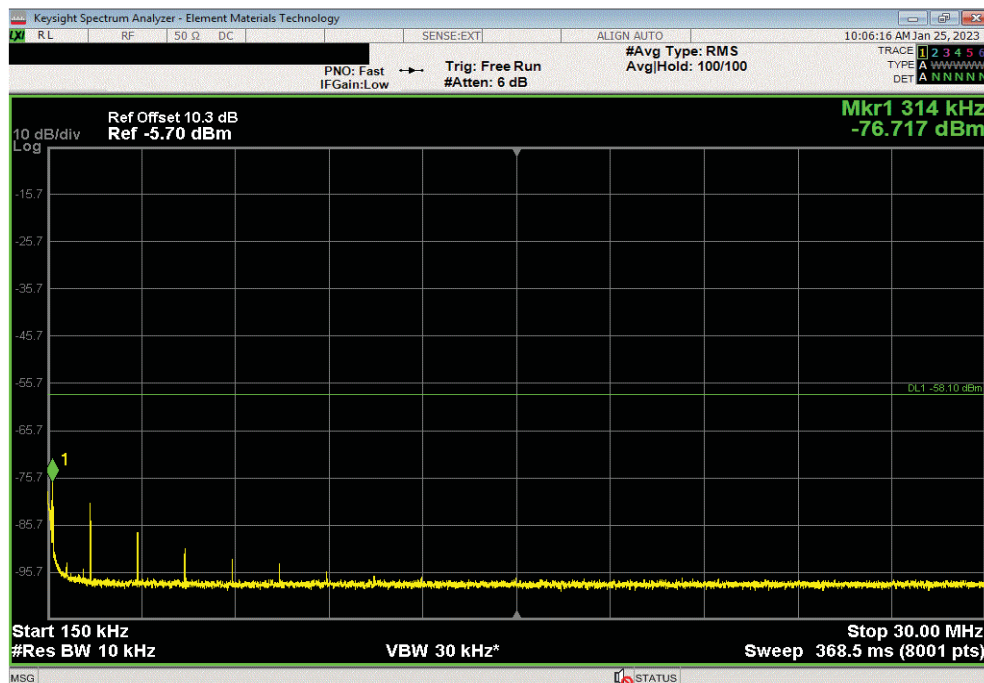
Worst Case Port, Dual Band Mode, 3.45G and 3.7G (Max Power) Bands, 5G NR, Configuration 2

Frequency Range	Measured Freq (MHz)	Max Value (dBm)	Limit (dBm)	Result
9 kHz - 150 kHz	0.01	-76.78	-58.1	Pass



Worst Case Port, Dual Band Mode, 3.45G and 3.7G (Max Power) Bands, 5G NR, Configuration 2

Frequency Range	Measured Freq (MHz)	Max Value (dBm)	Limit (dBm)	Result
150 kHz - 30 MHz	0.31	-76.72	-58.1	Pass



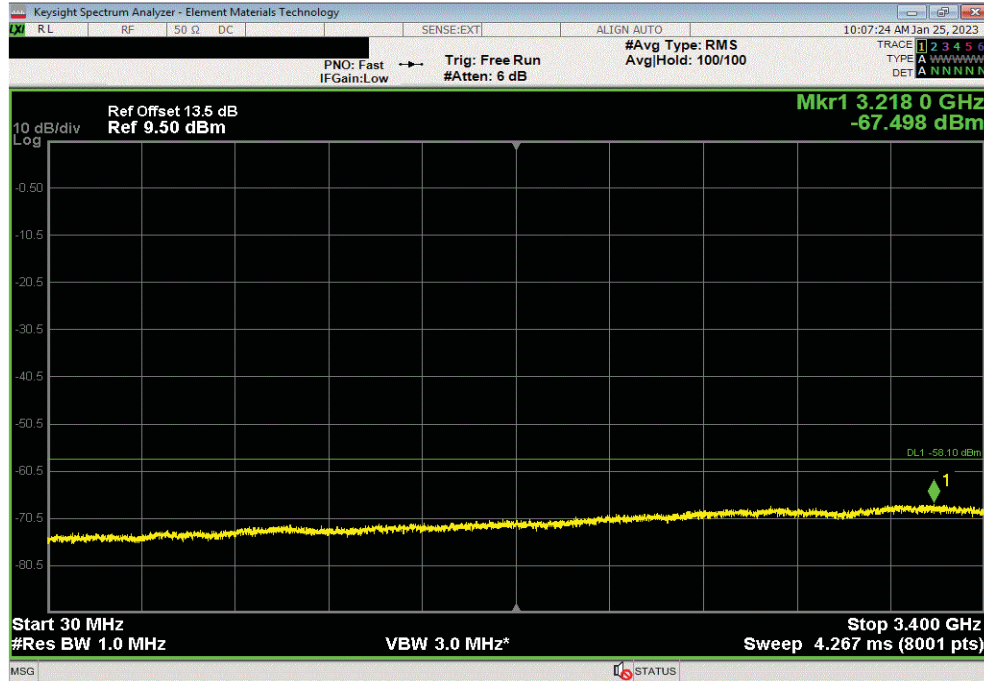
SPURIOUS CONDUCTED EMISSIONS - MULTIBAND



TbTx 2022.06.03.0 XMt 2022.02.07.0

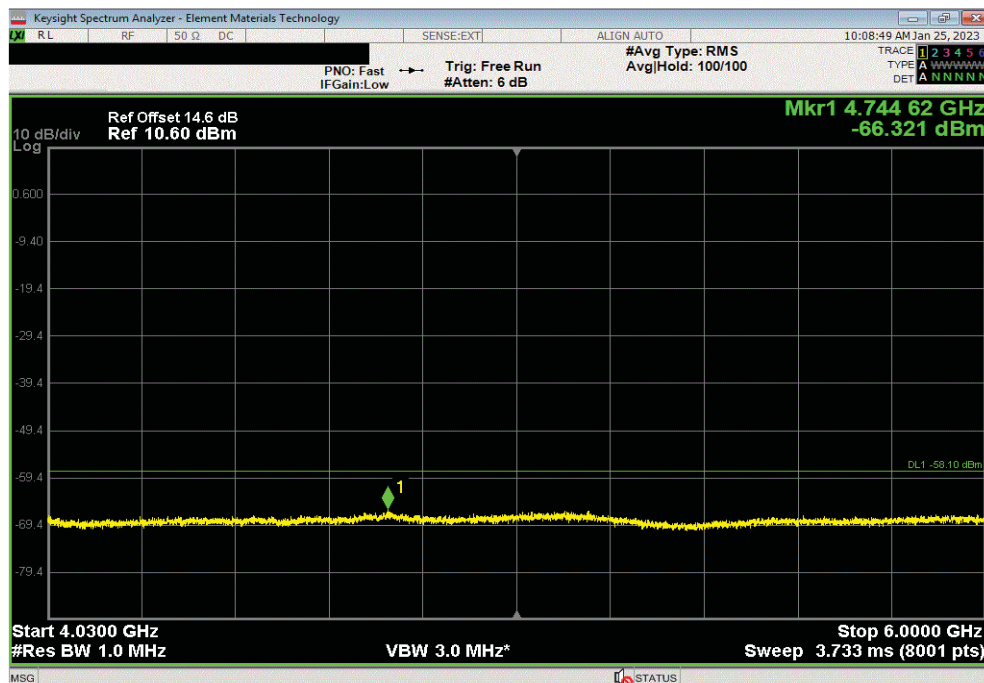
Worst Case Port, Dual Band Mode, 3.45G and 3.7G (Max Power) Bands, 5G NR, Configuration 2

Frequency Range	Measured Freq (MHz)	Max Value (dBm)	Limit (dBm)	Result
30 MHz - 3.4 GHz	3218.02	-67.5	-58.1	Pass



Worst Case Port, Dual Band Mode, 3.45G and 3.7G (Max Power) Bands, 5G NR, Configuration 2

Frequency Range	Measured Freq (MHz)	Max Value (dBm)	Limit (dBm)	Result
4.03 GHz - 6 GHz	4744.62	-66.32	-58.1	Pass



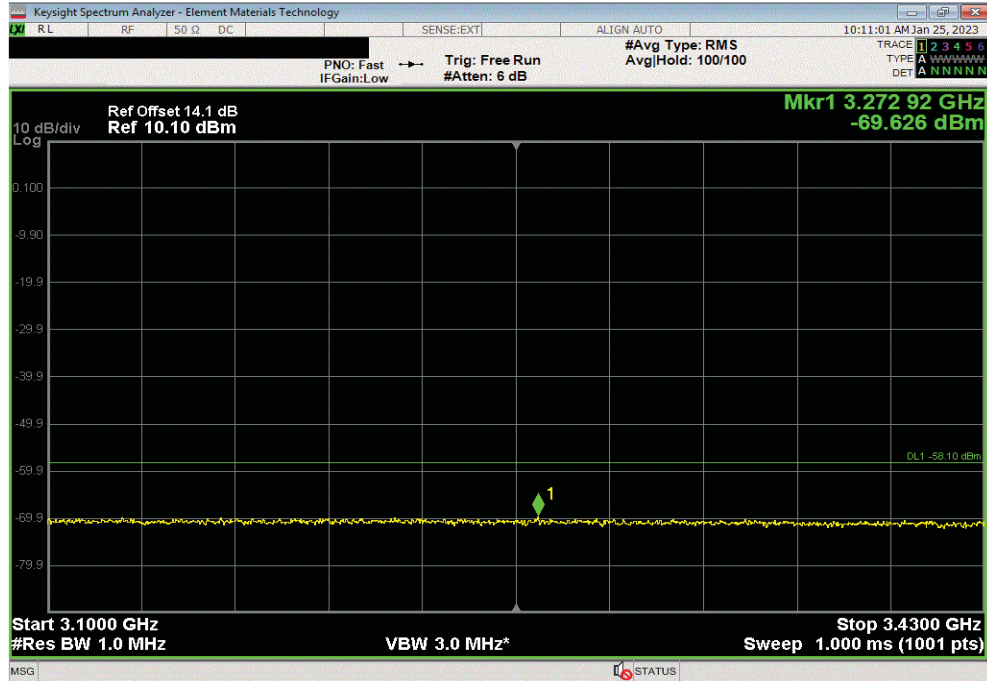
SPURIOUS CONDUCTED EMISSIONS - MULTIBAND



TbTx 2022.06.03.0 XMt 2022.02.07.0

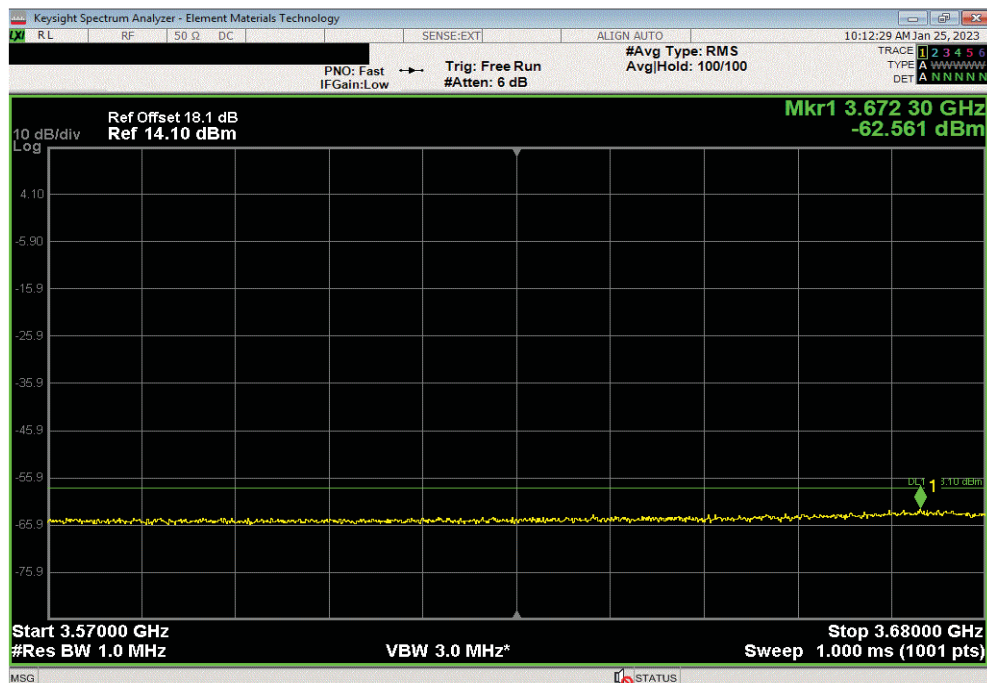
Worst Case Port, Dual Band Mode, 3.45G and 3.7G (Max Power) Bands, 5G NR, Configuration 2

Frequency Range	Measured Freq (MHz)	Max Value (dBm)	Limit (dBm)	Result
3.1 GHz - 3.43 GHz	3272.92	-69.63	-58.1	Pass



Worst Case Port, Dual Band Mode, 3.45G and 3.7G (Max Power) Bands, 5G NR, Configuration 2

Frequency Range	Measured Freq (MHz)	Max Value (dBm)	Limit (dBm)	Result
3.57 GHz - 3.68 GHz	3672.3	-62.56	-58.1	Pass



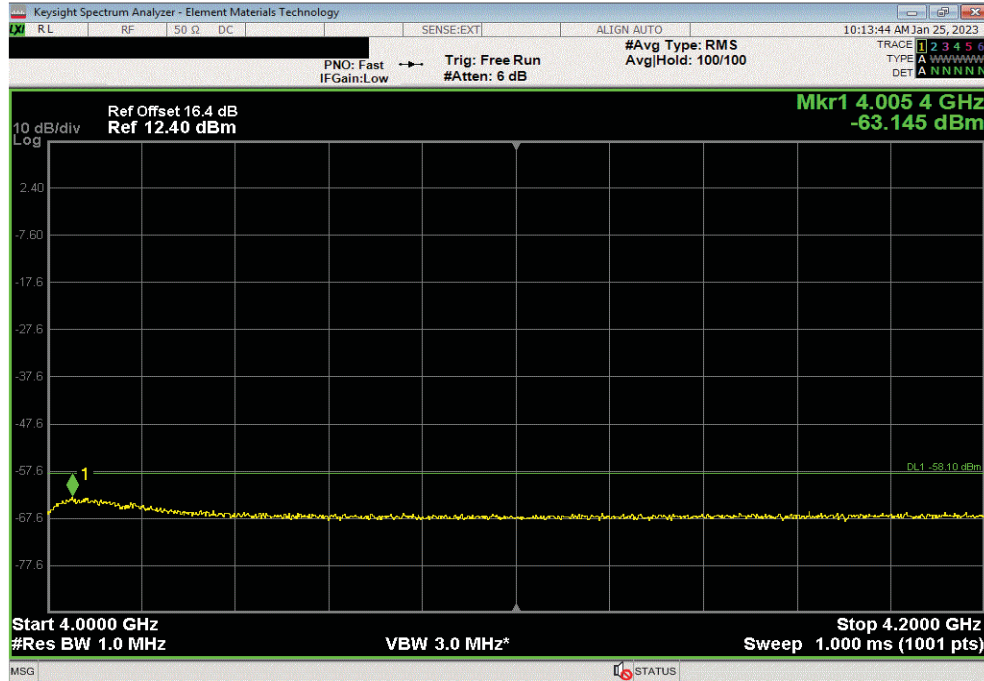
SPURIOUS CONDUCTED EMISSIONS - MULTIBAND



TbTx 2022.06.03.0 XMI 2022.02.07.0

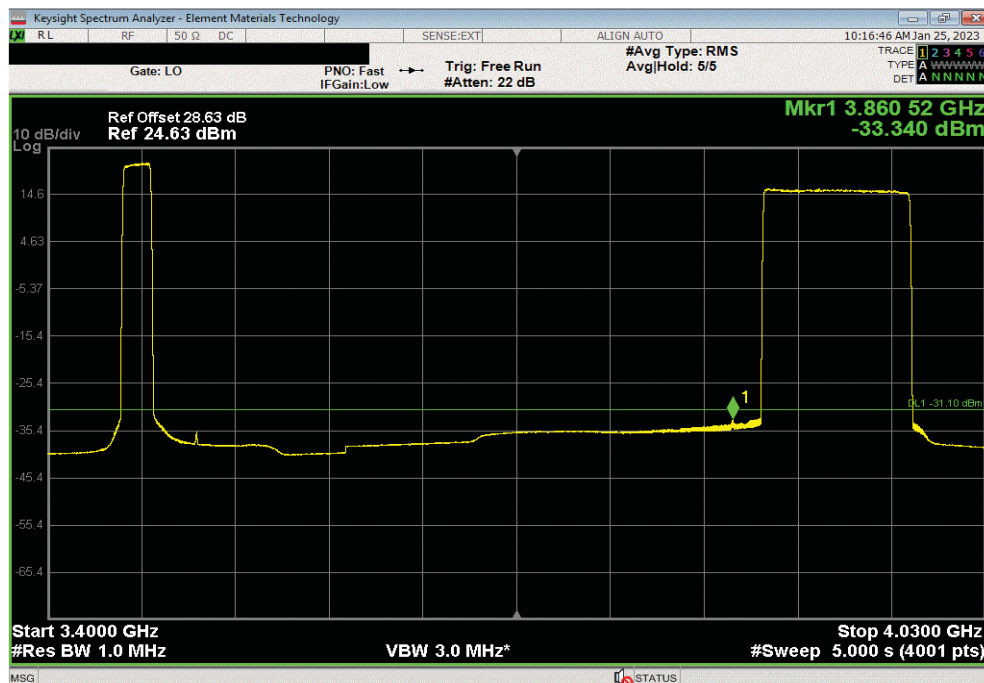
Worst Case Port, Dual Band Mode, 3.45G and 3.7G (Max Power) Bands, 5G NR, Configuration 2

Frequency Range	Measured Freq (MHz)	Max Value (dBm)	Limit (dBm)	Result
4 GHz - 4.2 GHz	4005.4	-63.15	-58.1	Pass



Worst Case Port, Dual Band Mode, 3.45G and 3.7G (Max Power) Bands, 5G NR, Configuration 2

Frequency Range	Measured Freq (MHz)	Max Value (dBm)	Limit (dBm)	Result
3.4 GHz - 4.03 GHz	3860.52	-33.34	-31.1	Pass

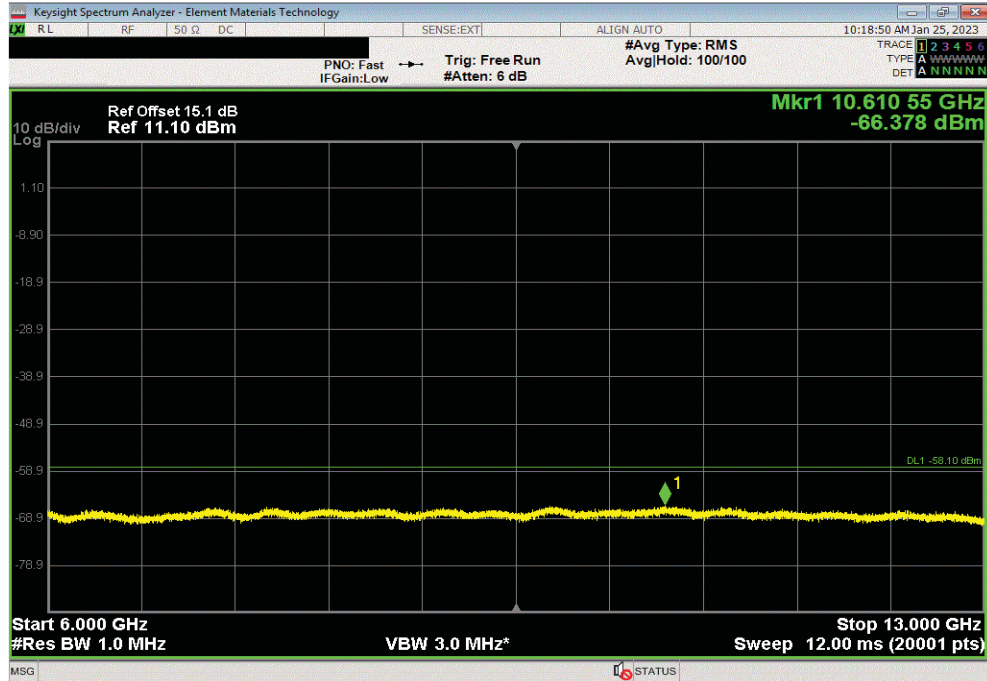


SPURIOUS CONDUCTED EMISSIONS - MULTIBAND

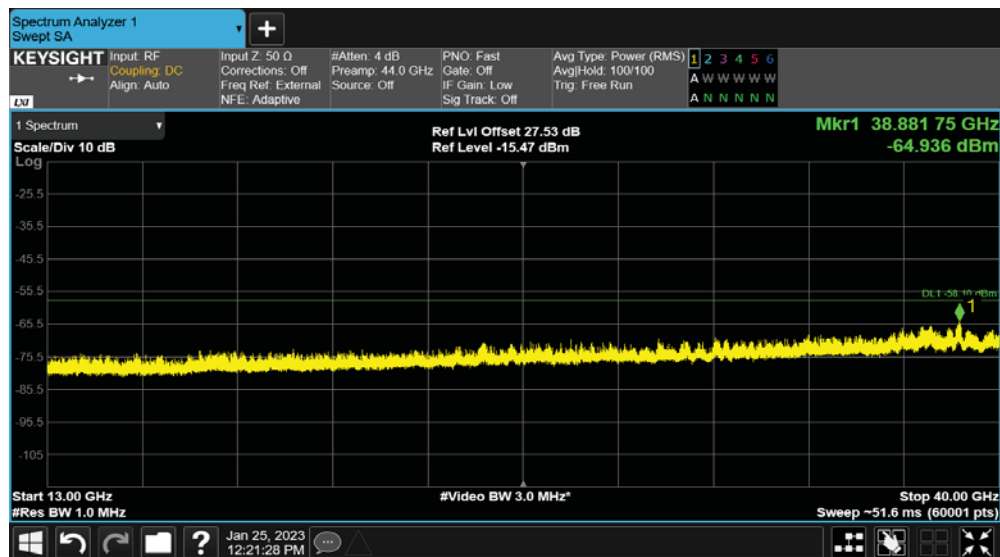


TbTx 2022.06.03.0 XbTx 2022.02.07.0

Worst Case Port, Dual Band Mode, 3.45G and 3.7G (Max Power) Bands, 5G NR, Configuration 2					
Frequency Range	Measured Freq (MHz)	Max Value (dBm)	Limit (dBm)	Result	
6 GHz - 13 GHz	10610.55	-66.38	-58.1	Pass	



Worst Case Port, Dual Band Mode, 3.45G and 3.7G (Max Power) Bands, 5G NR, Configuration 2					
Frequency Range	Measured Freq (MHz)	Max Value (dBm)	Limit (dBm)	Result	
13 GHz - 40 GHz	38882	-64.936	-58.1	Pass	



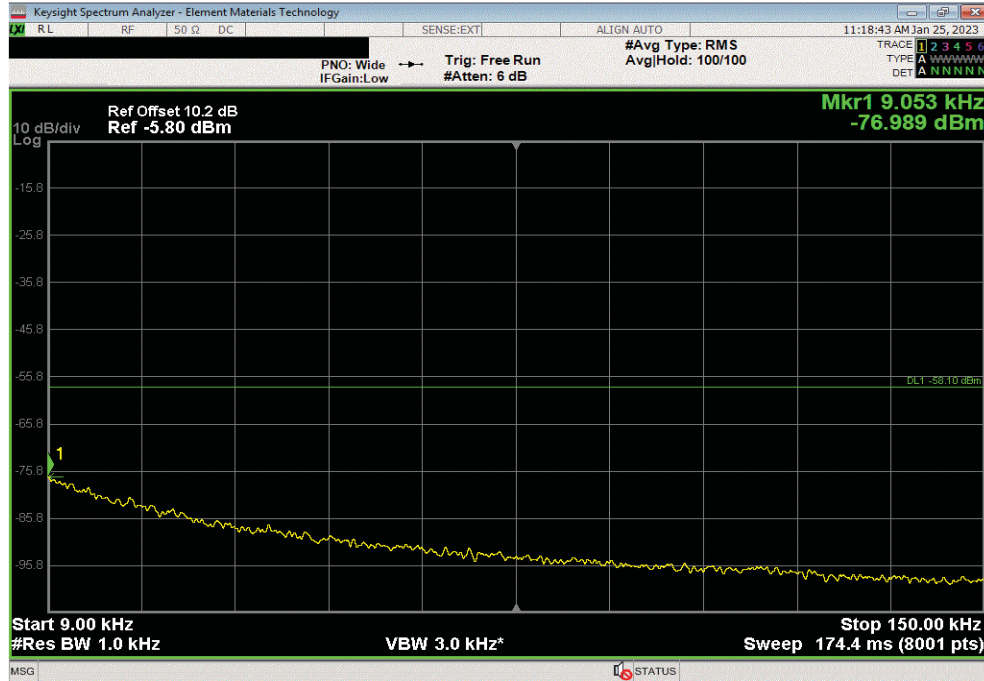
SPURIOUS CONDUCTED EMISSIONS - MULTIBAND



TbTtx 2022.06.03.0 XMit 2022.02.07.0

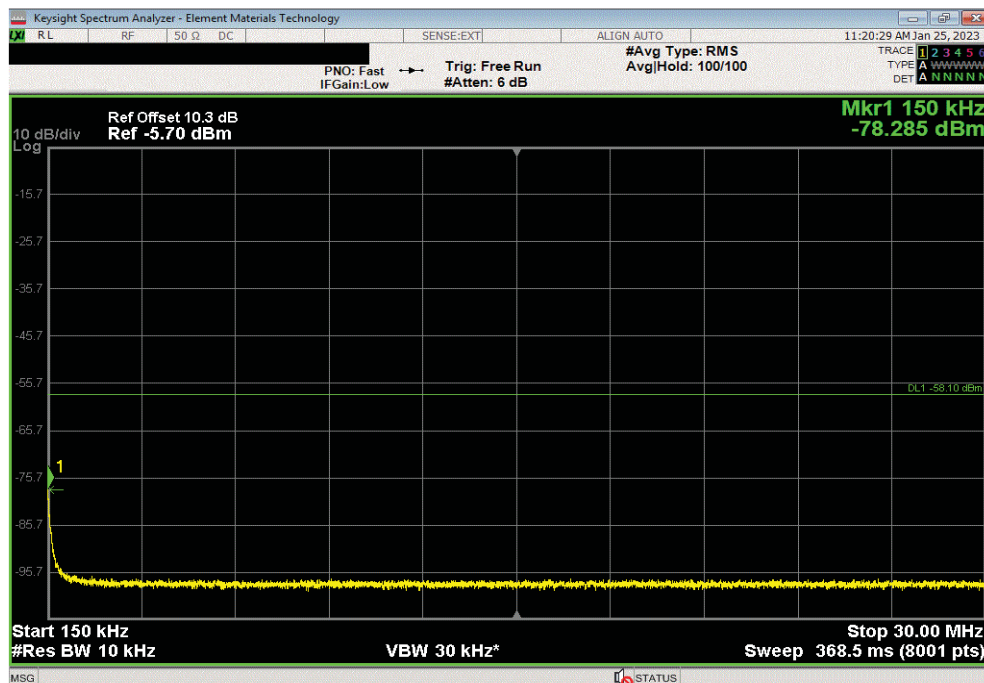
Worst Case Port, Dual Band Mode, 3.45G and 3.7G (Max Power) Bands, 5G NR, Configuration 3

Frequency Range	Measured Freq (MHz)	Max Value (dBm)	Limit (dBm)	Result
9 kHz - 150 kHz	0.01	-76.99	-58.1	Pass



Worst Case Port, Dual Band Mode, 3.45G and 3.7G (Max Power) Bands, 5G NR, Configuration 3

Frequency Range	Measured Freq (MHz)	Max Value (dBm)	Limit (dBm)	Result
150 kHz - 30 MHz	0.15	-78.29	-58.1	Pass



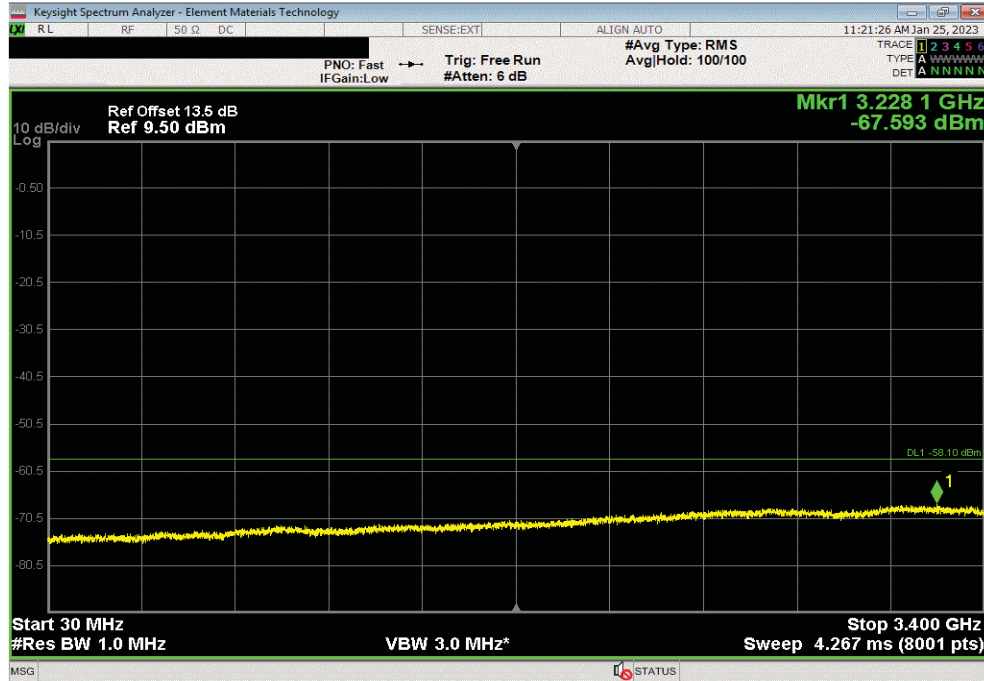
SPURIOUS CONDUCTED EMISSIONS - MULTIBAND



TbTx 2022.06.03.0 XMt 2022.02.07.0

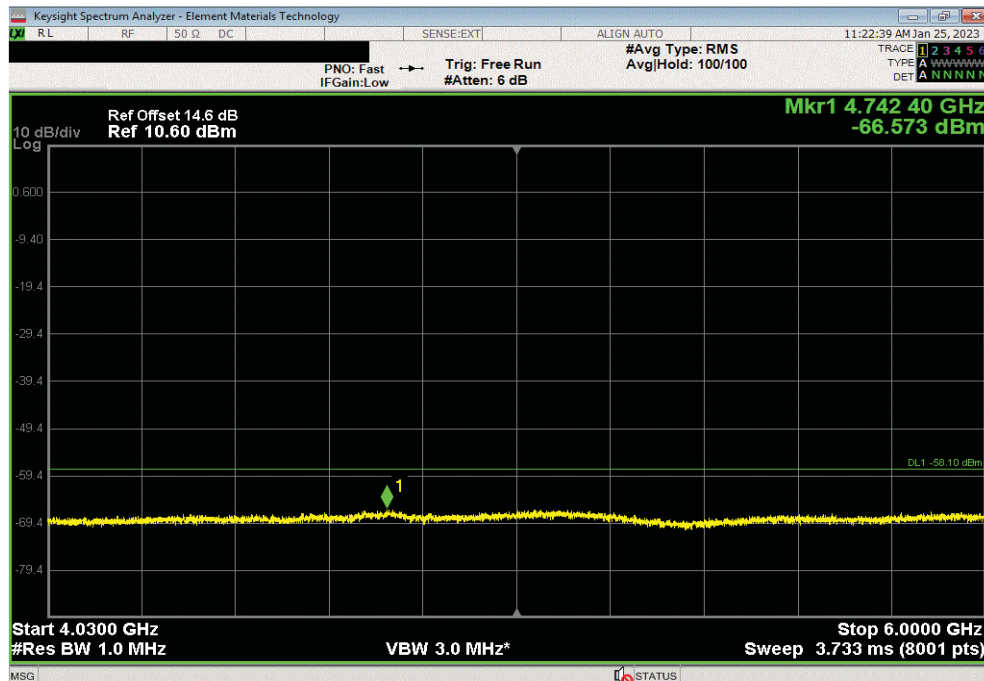
Worst Case Port, Dual Band Mode, 3.45G and 3.7G (Max Power) Bands, 5G NR, Configuration 3

Frequency Range	Measured Freq (MHz)	Max Value (dBm)	Limit (dBm)	Result
30 MHz - 3.4 GHz	3228.13	-67.59	-58.1	Pass



Worst Case Port, Dual Band Mode, 3.45G and 3.7G (Max Power) Bands, 5G NR, Configuration 3

Frequency Range	Measured Freq (MHz)	Max Value (dBm)	Limit (dBm)	Result
4.03 GHz - 6 GHz	4742.4	-66.57	-58.1	Pass

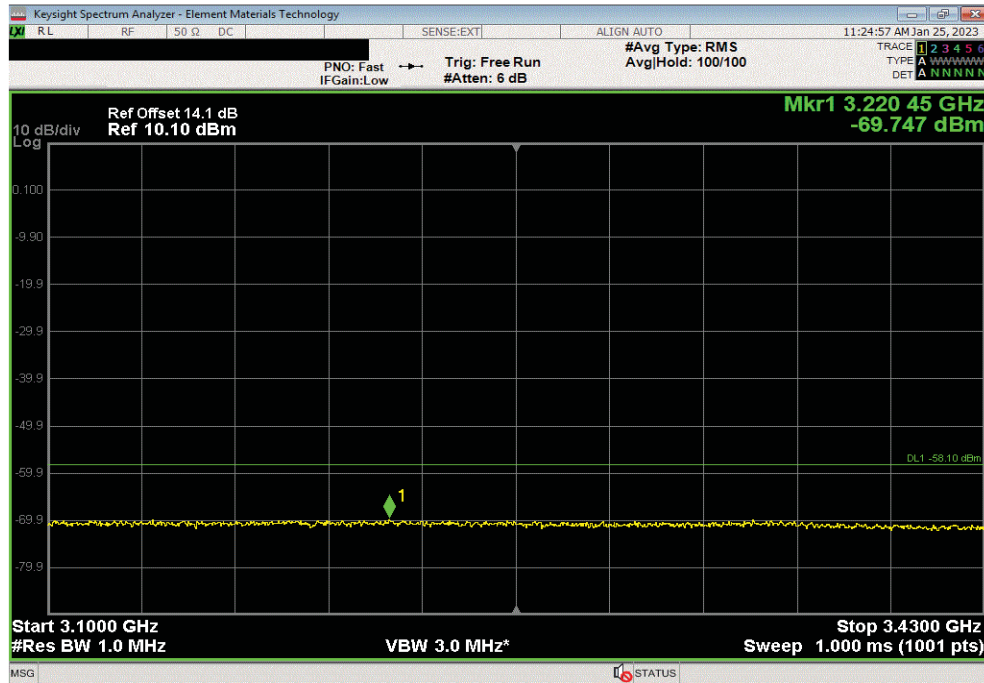


SPURIOUS CONDUCTED EMISSIONS - MULTIBAND

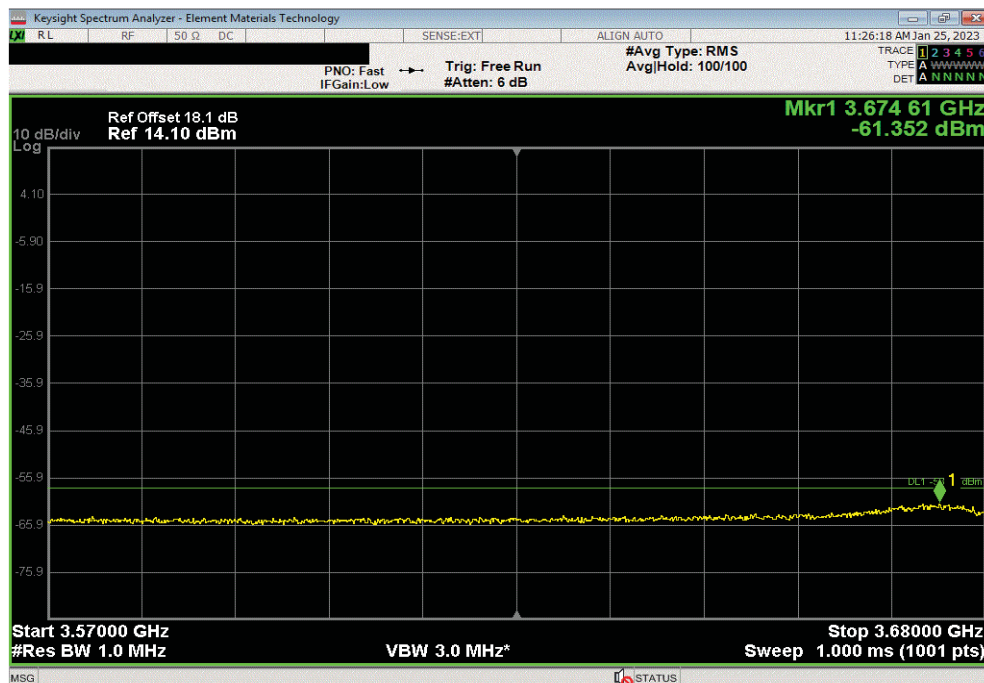


TbTx 2022.06.03.0 XMt 2022.02.07.0

Worst Case Port, Dual Band Mode, 3.45G and 3.7G (Max Power) Bands, 5G NR, Configuration 3					
Frequency Range	Measured Freq (MHz)	Max Value (dBm)	Limit (dBm)	Result	
3.1 GHz - 3.43 GHz	3220.45	-69.75	-58.1	Pass	



Worst Case Port, Dual Band Mode, 3.45G and 3.7G (Max Power) Bands, 5G NR, Configuration 3					
Frequency Range	Measured Freq (MHz)	Max Value (dBm)	Limit (dBm)	Result	
3.57 GHz - 3.68 GHz	3674.61	-61.35	-58.1	Pass	

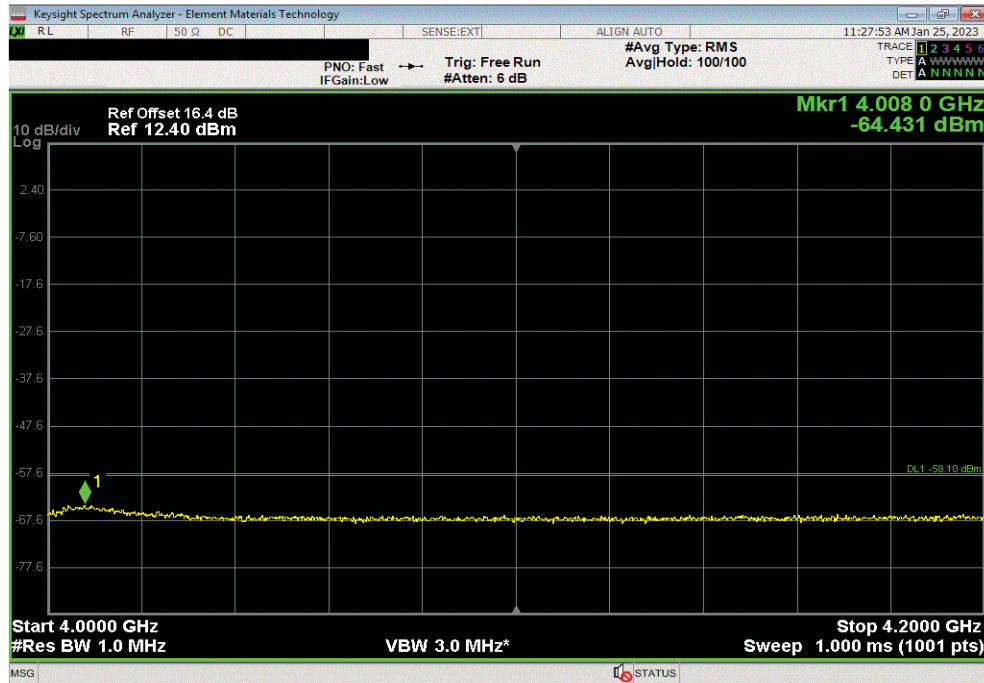


SPURIOUS CONDUCTED EMISSIONS - MULTIBAND

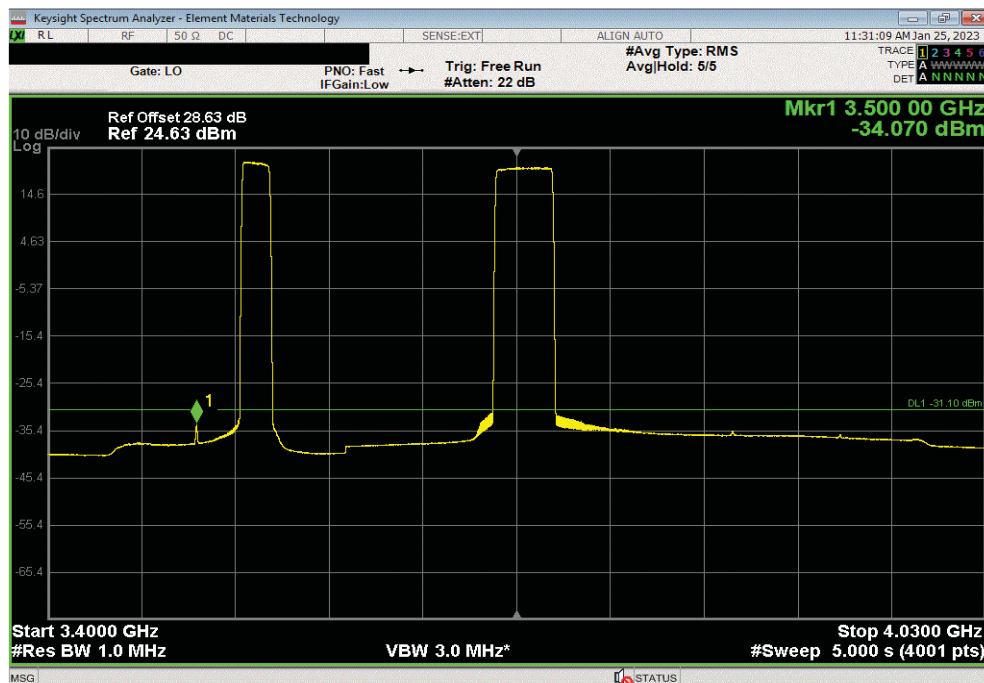


TbTx 2022.06.03.0 XMI 2022.02.07.0

Worst Case Port, Dual Band Mode, 3.45G and 3.7G (Max Power) Bands, 5G NR, Configuration 3					
Frequency Range	Measured Freq (MHz)	Max Value (dBm)	Limit (dBm)	Result	
4 GHz - 4.2 GHz	4008	-64.43	-58.1	Pass	



Worst Case Port, Dual Band Mode, 3.45G and 3.7G (Max Power) Bands, 5G NR, Configuration 3					
Frequency Range	Measured Freq (MHz)	Max Value (dBm)	Limit (dBm)	Result	
3.4 GHz - 4.03 GHz	3500	-34.07	-31.1	Pass	

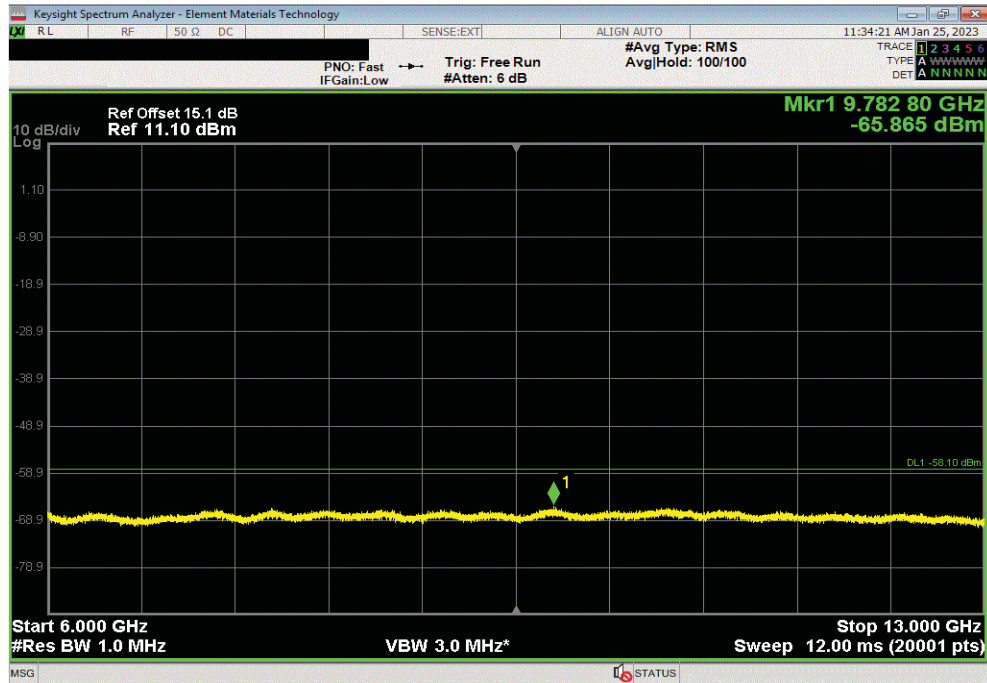


SPURIOUS CONDUCTED EMISSIONS - MULTIBAND

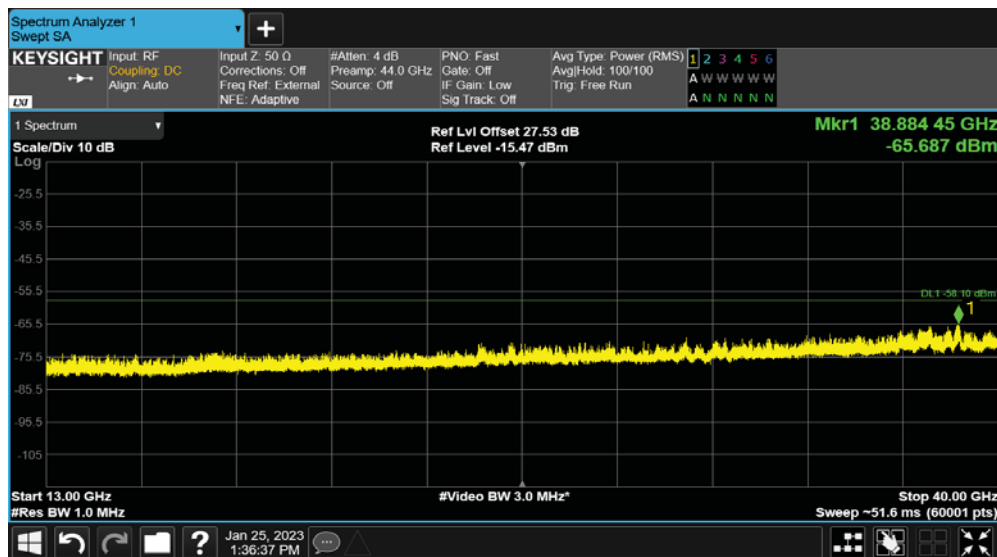


TbTx 2022.06.03.0 XMI 2022.02.07.0

Worst Case Port, Dual Band Mode, 3.45G and 3.7G (Max Power) Bands, 5G NR, Configuration 3					
Frequency Range	Measured Freq (MHz)	Max Value (dBm)	Limit (dBm)	Result	
6 GHz - 13 GHz	9782.8	-65.86	-58.1	Pass	



Worst Case Port, Dual Band Mode, 3.45G and 3.7G (Max Power) Bands, 5G NR, Configuration 3					
Frequency Range	Measured Freq (MHz)	Max Value (dBm)	Limit (dBm)	Result	
13 GHz - 40 GHz	38884	-65.687	-58.1	Pass	



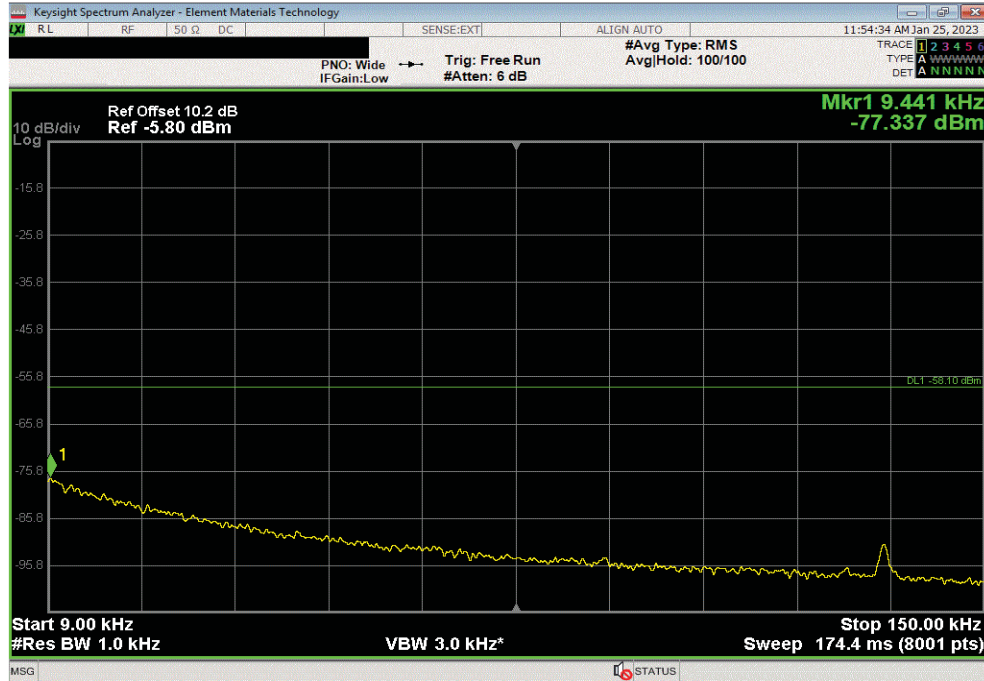
SPURIOUS CONDUCTED EMISSIONS - MULTIBAND



TbTtx 2022.06.03.0 XMt 2022.02.07.0

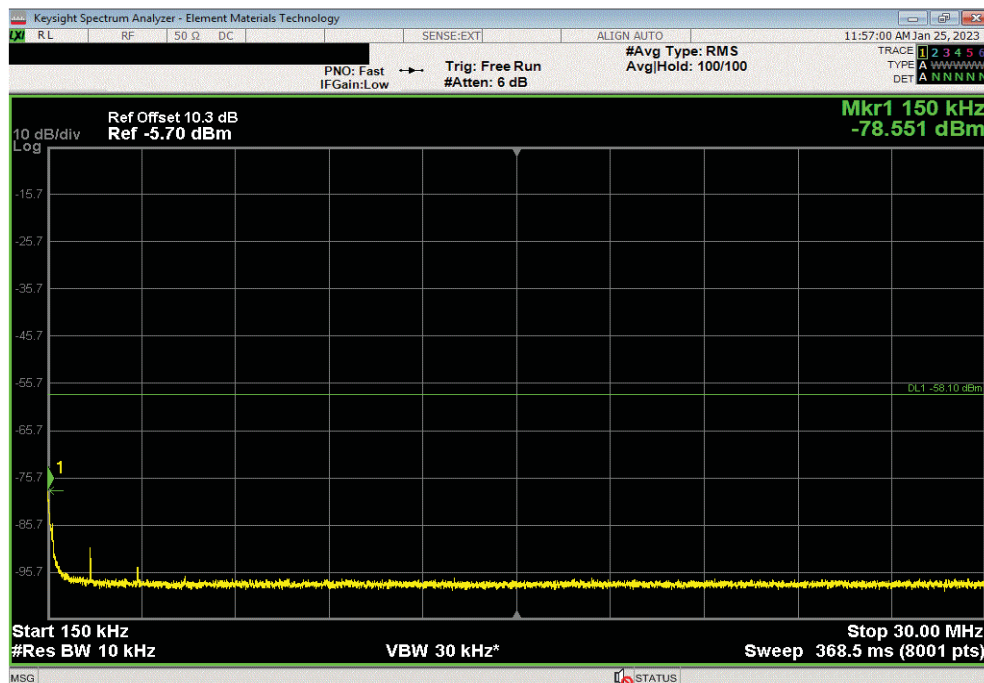
Worst Case Port, Dual Band Mode, 3.45G and 3.7G (Max Power) Bands, 5G NR, Configuration 4

Frequency Range	Measured Freq (MHz)	Max Value (dBm)	Limit (dBm)	Result
9 kHz - 150 kHz	0.01	-77.34	-58.1	Pass



Worst Case Port, Dual Band Mode, 3.45G and 3.7G (Max Power) Bands, 5G NR, Configuration 4

Frequency Range	Measured Freq (MHz)	Max Value (dBm)	Limit (dBm)	Result
150 kHz - 30 MHz	0.15	-78.55	-58.1	Pass



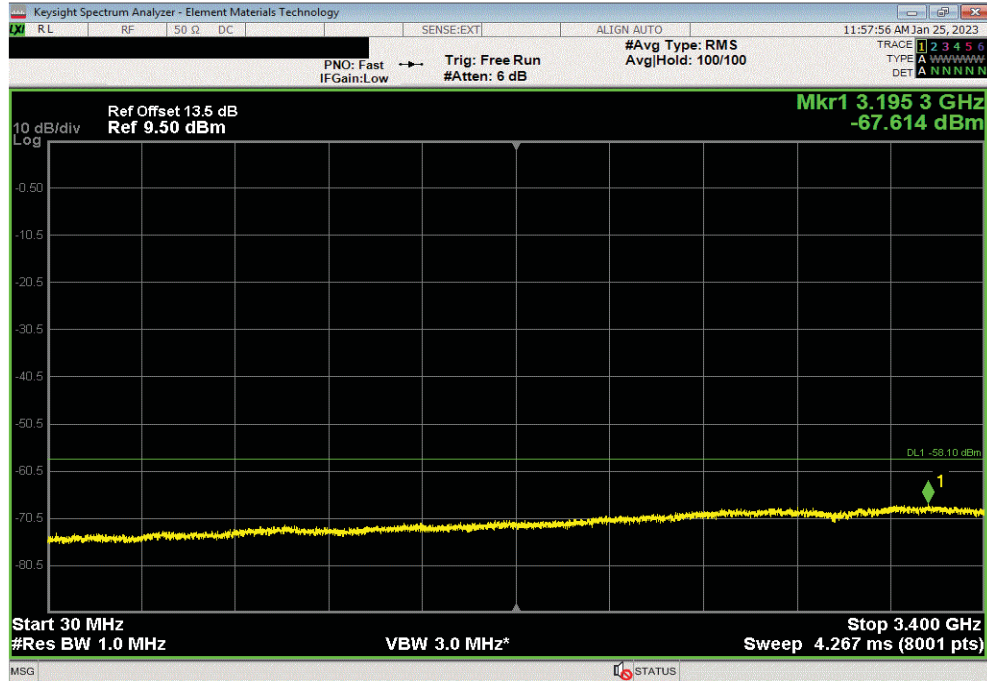
SPURIOUS CONDUCTED EMISSIONS - MULTIBAND



TbTtx 2022.06.03.0 XMit 2022.02.07.0

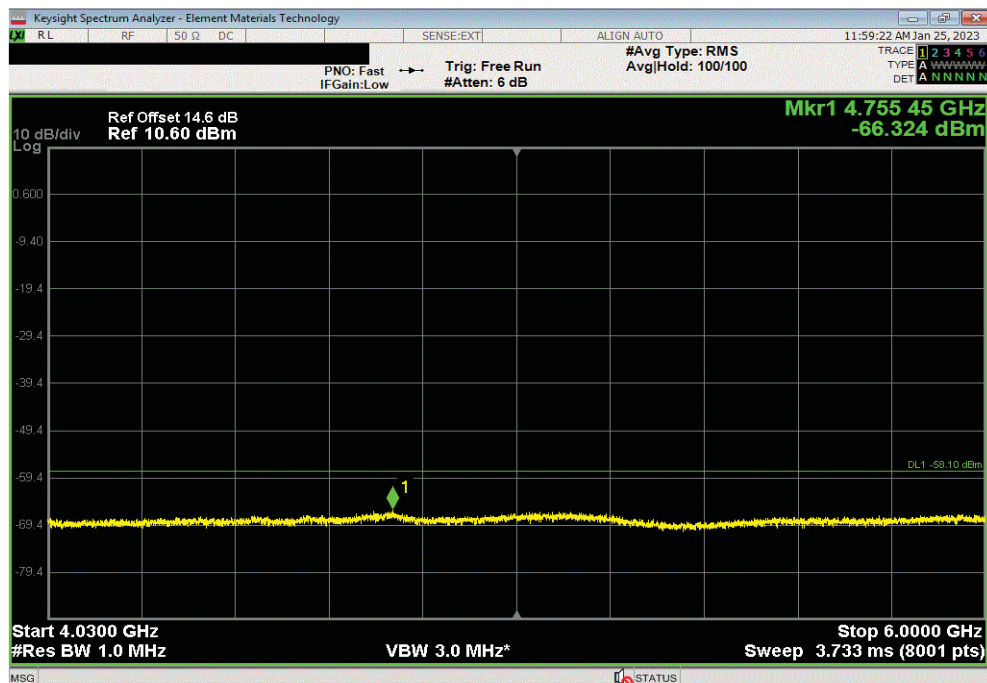
Worst Case Port, Dual Band Mode, 3.45G and 3.7G (Max Power) Bands, 5G NR, Configuration 4

Frequency Range	Measured Freq (MHz)	Max Value (dBm)	Limit (dBm)	Result
30 MHz - 3.4 GHz	3195.27	-67.61	-58.1	Pass



Worst Case Port, Dual Band Mode, 3.45G and 3.7G (Max Power) Bands, 5G NR, Configuration 4

Frequency Range	Measured Freq (MHz)	Max Value (dBm)	Limit (dBm)	Result
4.03 GHz - 6 GHz	4755.45	-66.32	-58.1	Pass

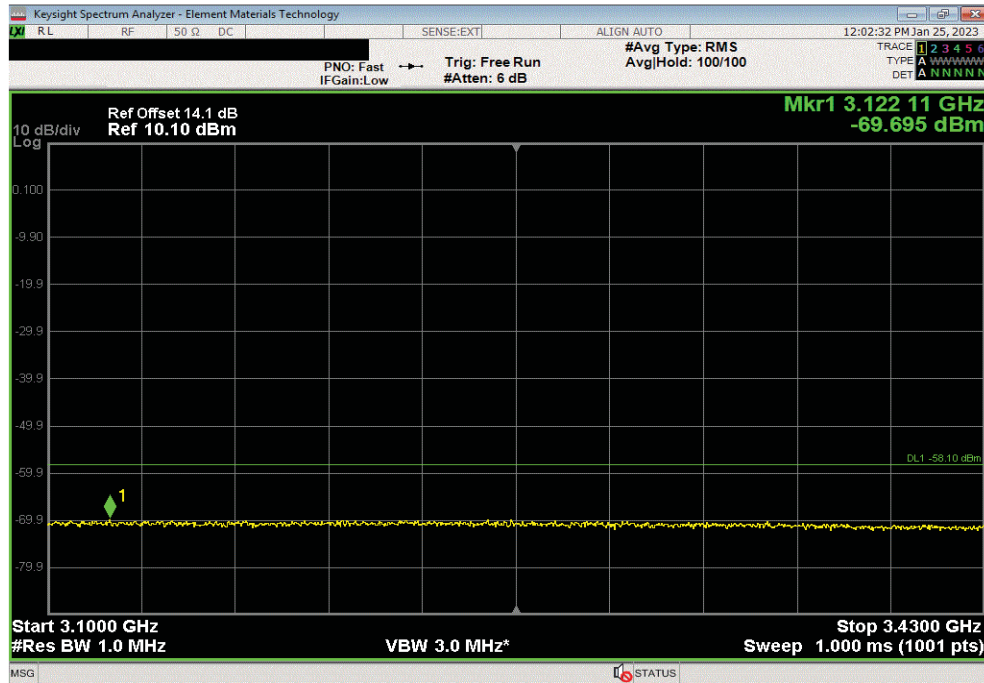


SPURIOUS CONDUCTED EMISSIONS - MULTIBAND

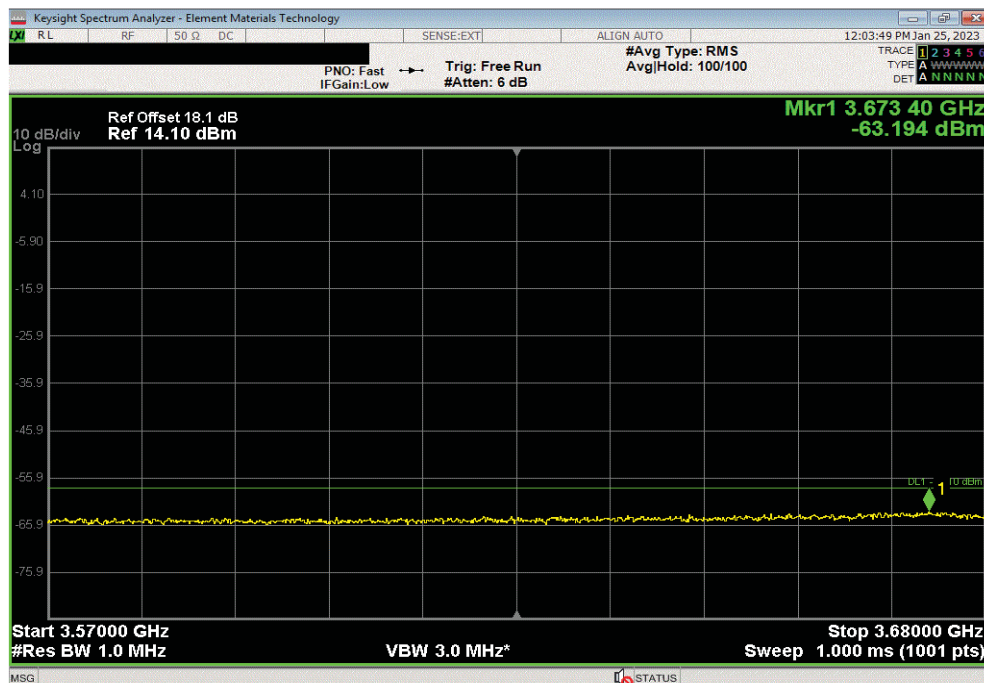


TbTx 2022.06.03.0 XMI 2022.02.07.0

Worst Case Port, Dual Band Mode, 3.45G and 3.7G (Max Power) Bands, 5G NR, Configuration 4					
Frequency Range	Measured Freq (MHz)	Max Value (dBm)	Limit (dBm)	Result	
3.1 GHz - 3.43 GHz	3122.11	-69.7	-58.1	Pass	



Worst Case Port, Dual Band Mode, 3.45G and 3.7G (Max Power) Bands, 5G NR, Configuration 4					
Frequency Range	Measured Freq (MHz)	Max Value (dBm)	Limit (dBm)	Result	
3.57 GHz - 3.68 GHz	3673.4	-63.19	-58.1	Pass	



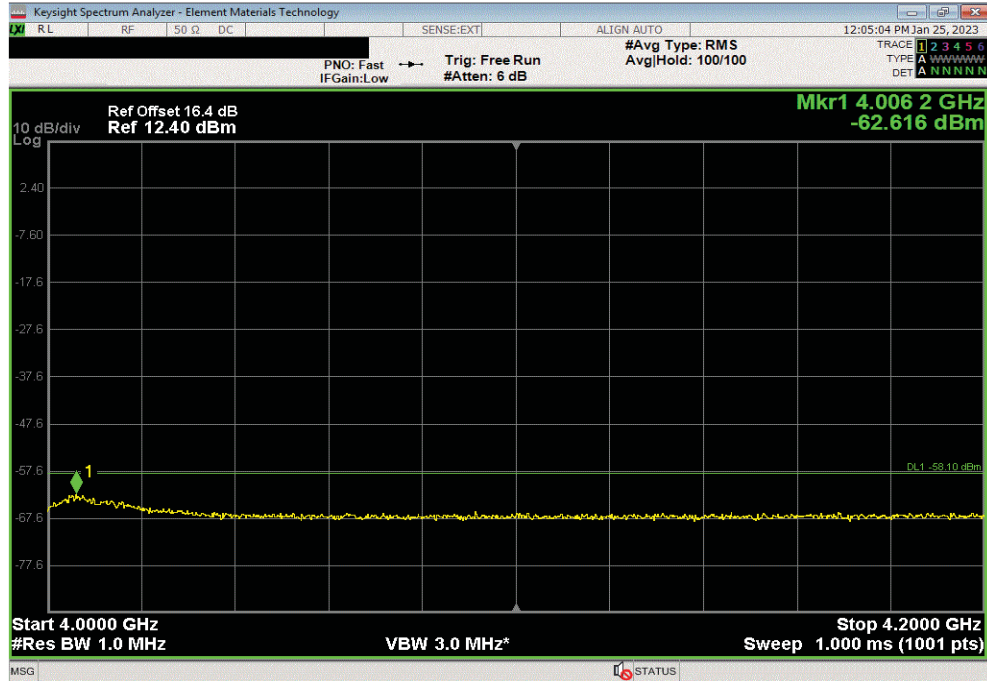
SPURIOUS CONDUCTED EMISSIONS - MULTIBAND



TbTx 2022.06.03.0 XMI 2022.02.07.0

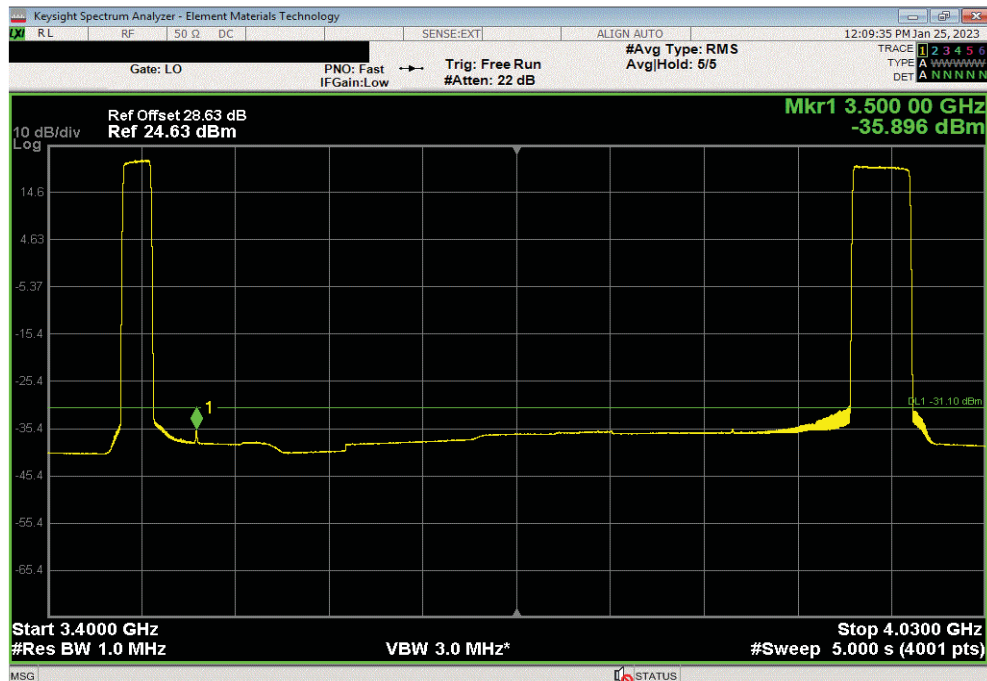
Worst Case Port, Dual Band Mode, 3.45G and 3.7G (Max Power) Bands, 5G NR, Configuration 4

Frequency Range	Measured Freq (MHz)	Max Value (dBm)	Limit (dBm)	Result
4 GHz - 4.2 GHz	4006.2	-62.62	-58.1	Pass



Worst Case Port, Dual Band Mode, 3.45G and 3.7G (Max Power) Bands, 5G NR, Configuration 4

Frequency Range	Measured Freq (MHz)	Max Value (dBm)	Limit (dBm)	Result
3.4 GHz - 4.03 GHz	3500	-35.9	-31.1	Pass

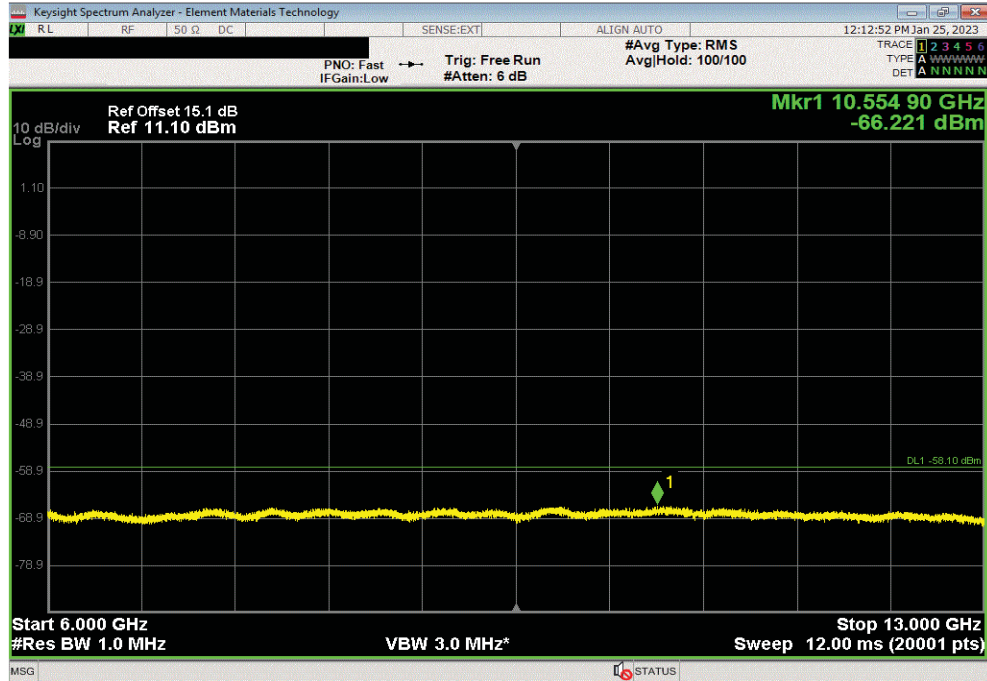


SPURIOUS CONDUCTED EMISSIONS - MULTIBAND



TbTtX 2022.06.03.0 XMit 2022.02.07.0

Worst Case Port, Dual Band Mode, 3.45G and 3.7G (Max Power) Bands, 5G NR, Configuration 4					
Frequency Range	Measured Freq (MHz)	Max Value (dBm)	Limit (dBm)	Result	
6 GHz - 13 GHz	10554.9	-66.22	-58.1	Pass	



Worst Case Port, Dual Band Mode, 3.45G and 3.7G (Max Power) Bands, 5G NR, Configuration 4					
Frequency Range	Measured Freq (MHz)	Max Value (dBm)	Limit (dBm)	Result	
13 GHz - 40 GHz	38842	-65.216	-58.1	Pass	

