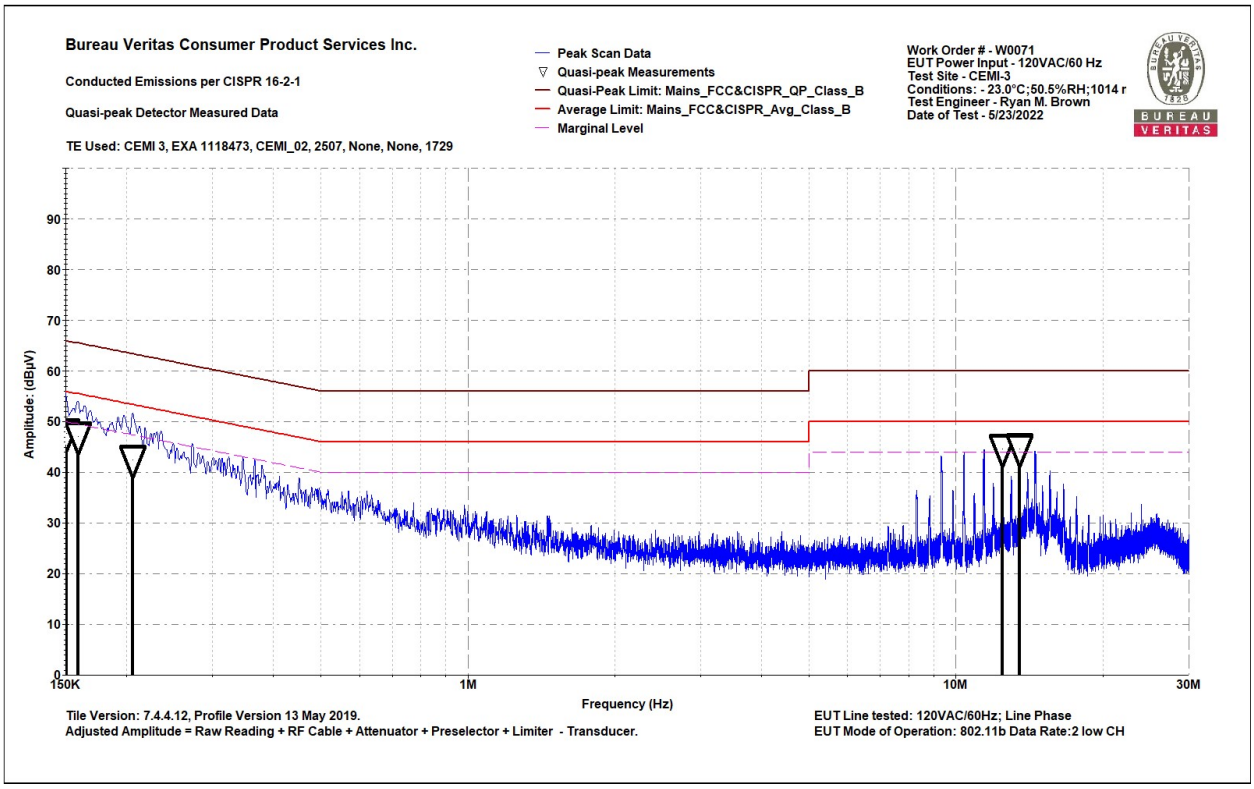


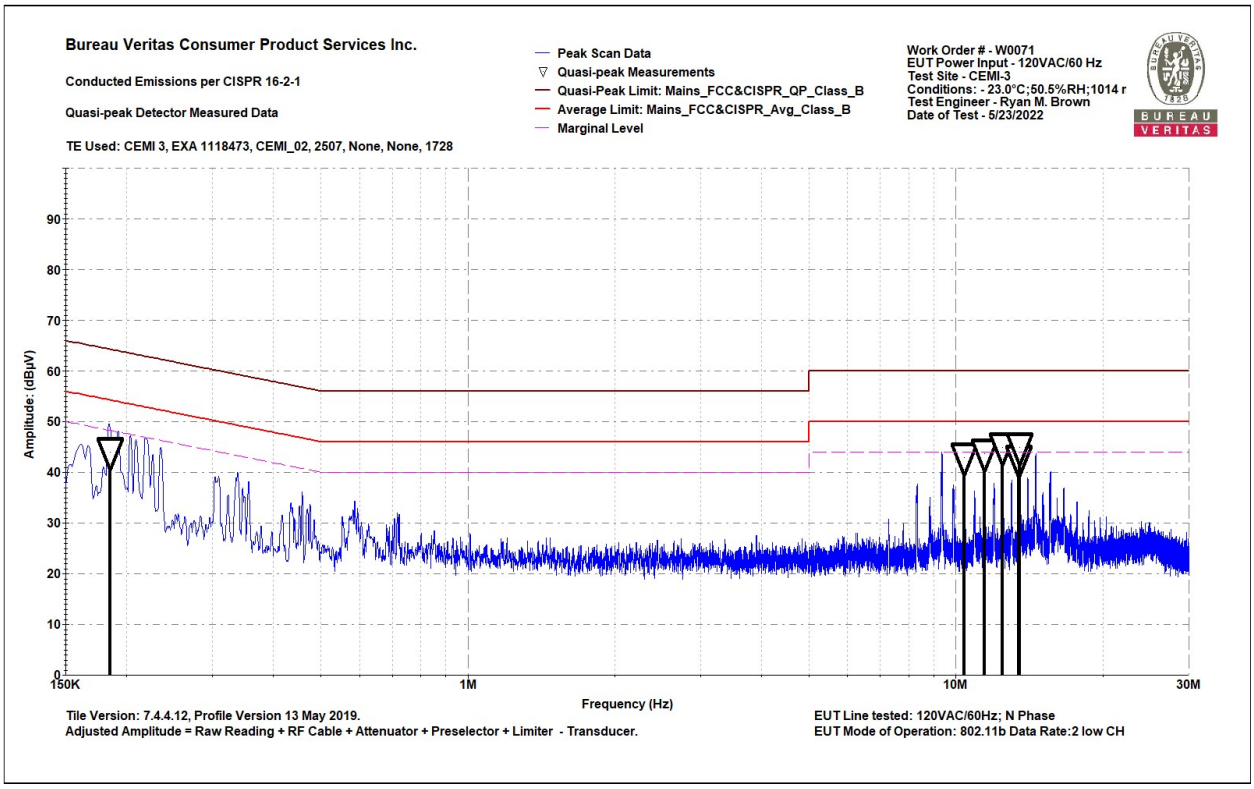
802.11b Low CH Data Rate 2 0.15 – 30 MHz Line

Bureau Veritas Consumer Product Services Inc.
Conducted Emissions per CISPR 16-2-1
Quasi-peak Detector Data
Notes:
EUT Line tested: 120VAC/60Hz; N Phase
EUT Mode of Operation: 802.11b Data Rate:2 low CH

Work Order # - W0071
EUT Power Input - 120VAC/60 Hz
Test Site - CEMI-3
Conditions: - 23.0°C;50.5%RH;1014 mBar
Test Engineer - Ryan M. Brown
Date of Test - 5/23/2022

Frequency (MHz)	Raw QP Reading (dBµV)	Correction Factor (dB)	Adjusted QP Amplitude (dBµV)	QP Lim: Mains_FCC&CISPR_QP_Class_B (dBµV)	Margin to QP Limit (dB)	QP Limit Results (Pass/Fail)	Worst Margin (QP Limit) (dB)	Av Lim: Mains_FCC&CISPR_Avg_Class_B (dBµV)	Margin to Avg Limit (dB)	Avg Limit Results (Pass/Fail)	Worst Margin (Avg Limit) (dB)
0.185	23.646	20.3	44	64.3	-20.3	PASS		54.3	-10.3	PASS	
10.389	22.536	20.4	42.9	60	-17.1	PASS		50	-7.1	PASS	
11.435	23.276	20.4	43.7	60	-16.3	PASS		50	-6.3	PASS	
12.471	24.531	20.4	44.9	60	-15.1	PASS		50	-5.1	PASS	
13.476	22.086	20.4	42.5	60	-17.5	PASS		50	-7.5	PASS	
13.495	24.58	20.4	45	60	-15	PASS	-15	50	-5	PASS	-5

802.11b Low CH Data Rate 2 0.15 – 30 MHz Neutral



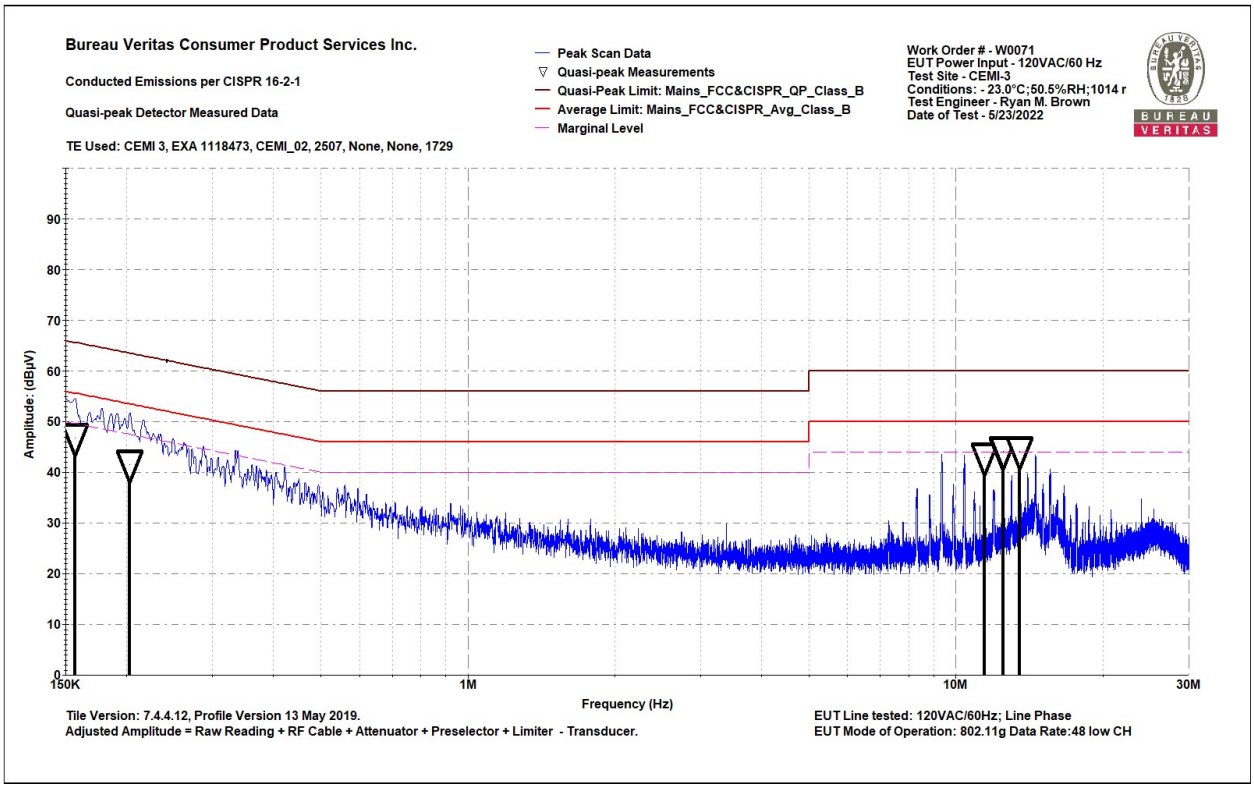
802.11b Low CH Data Rate 2 0.15 – 30 MHz Neutral

Bureau Veritas Consumer Product Services Inc.
Conducted Emissions per CISPR 16-2-1
Quasi-peak Detector Data
Notes:
EUT Line tested: 120VAC/60Hz; Line Phase
EUT Mode of Operation: 802.11g Data Rate:48 low CH

Work Order # - W0071
EUT Power Input - 120VAC/60 Hz
Test Site - CEMI-3
Conditions: - 23.0°C;50.5%RH;1014 mBar
Test Engineer - Ryan M. Brown
Date of Test - 5/23/2022

Frequency (MHz)	Raw QP Reading (dBµV)	Correction Factor (dB)	Adjusted QP Amplitude (dBµV)	QP Lim: Mains_FCC&CISPR_QP_Class_B (dBµV)	Margin to QP Limit (dB)	QP Limit Results (Pass/Fail)	Worst Margin (QP Limit) (dB)	Av Lim: Mains_FCC&CISPR_Avg_Class_B (dBµV)	Margin to Avg Limit (dB)	Avg Limit Results (Pass/Fail)	Worst Margin (Avg Limit) (dB)
0.157	26.429	20.3	46.7	65.6	-18.9	PASS		55.6	-8.9	PASS	
0.203	21.331	20.2	41.5	63.5	-22	PASS		53.5	-12	PASS	
11.441	22.468	20.4	42.9	60	-17.1	PASS		50	-7.1	PASS	
12.475	23.7	20.4	44.1	60	-15.9	PASS		50	-5.9	PASS	
12.482	23.714	20.4	44.1	60	-15.9	PASS		50	-5.9	PASS	
13.503	23.728	20.4	44.1	60	-15.9	PASS	-15.9	50	-5.9	PASS	-5.9

802.11g Low CH Data Rate 48 0.15 – 30 MHz Line



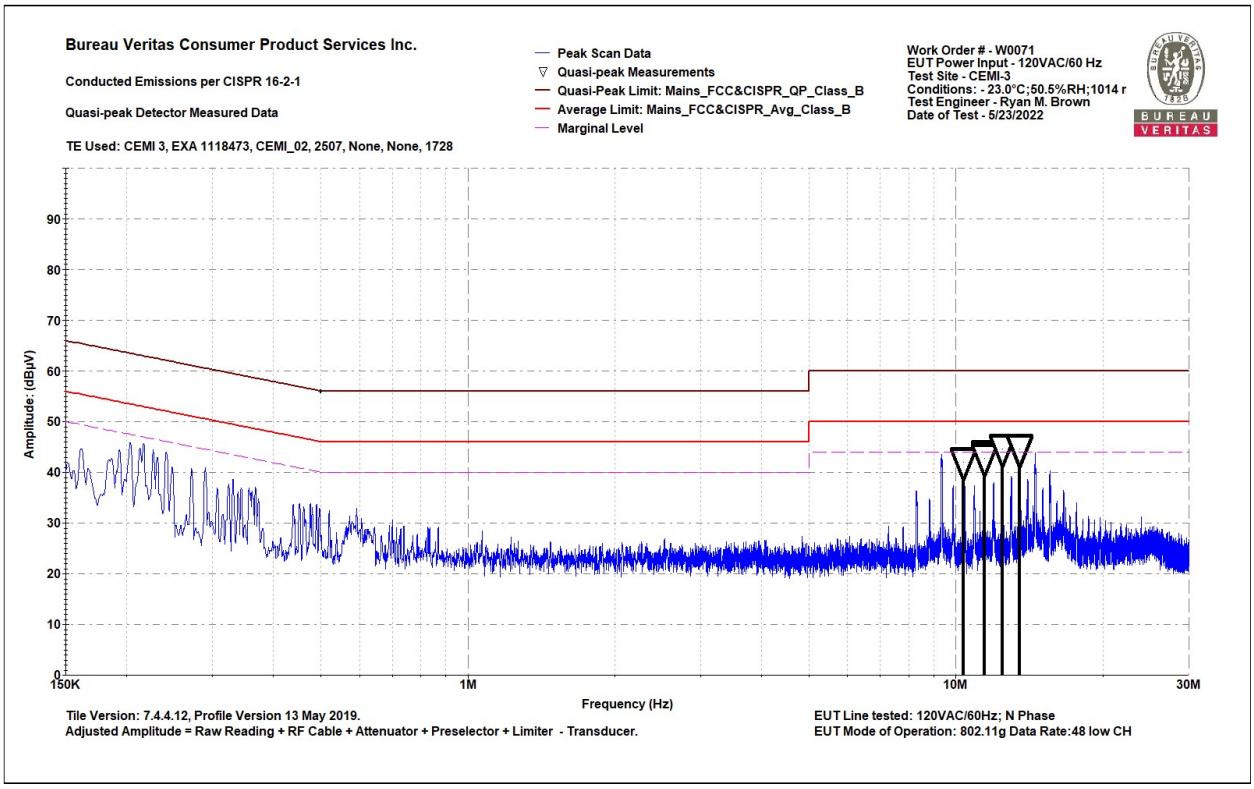
802.11g Low CH Data Rate 48 0.15 – 30 MHz Line

Bureau Veritas Consumer Product Services Inc.
Conducted Emissions per CISPR 16-2-1
Quasi-peak Detector Data
Notes:
EUT Line tested: 120VAC/60Hz; N Phase
EUT Mode of Operation: 802.11g Data Rate:48 low CH

Work Order # - W0071
EUT Power Input - 120VAC/60 Hz
Test Site - CEMI-3
Conditions: - 23.0°C;50.5%RH;1014 mBar
Test Engineer - Ryan M. Brown
Date of Test - 5/23/2022

Frequency (MHz)	Raw QP Reading (dBµV)	Correction Factor (dB)	Adjusted QP Amplitude (dBµV)	QP Lim: Mains_FCC&CISPR_QP_Class_B (dBµV)	Margin to QP Limit (dB)	QP Limit Results (Pass/Fail)	Worst Margin (QP Limit) (dB)	Av Lim: Mains_FCC&CISPR_Avg_Class_B (dBµV)	Margin to Avg Limit (dB)	Avg Limit Results (Pass/Fail)	Worst Margin (Avg Limit) (dB)
10.378	21.628	20.4	42	60	-18	PASS		50	-8	PASS	
11.433	22.941	20.4	43.4	60	-16.6	PASS		50	-6.6	PASS	
11.447	22.362	20.4	42.8	60	-17.2	PASS		50	-7.2	PASS	
12.468	24.12	20.4	44.5	60	-15.5	PASS		50	-5.5	PASS	
13.499	24.121	20.4	44.5	60	-15.5	PASS		50	-5.5	PASS	
13.5	24.162	20.4	44.6	60	-15.4	PASS	-15.4	50	-5.4	PASS	-5.4

802.11g Low CH Data Rate 48 0.15 – 30 MHz Neutral



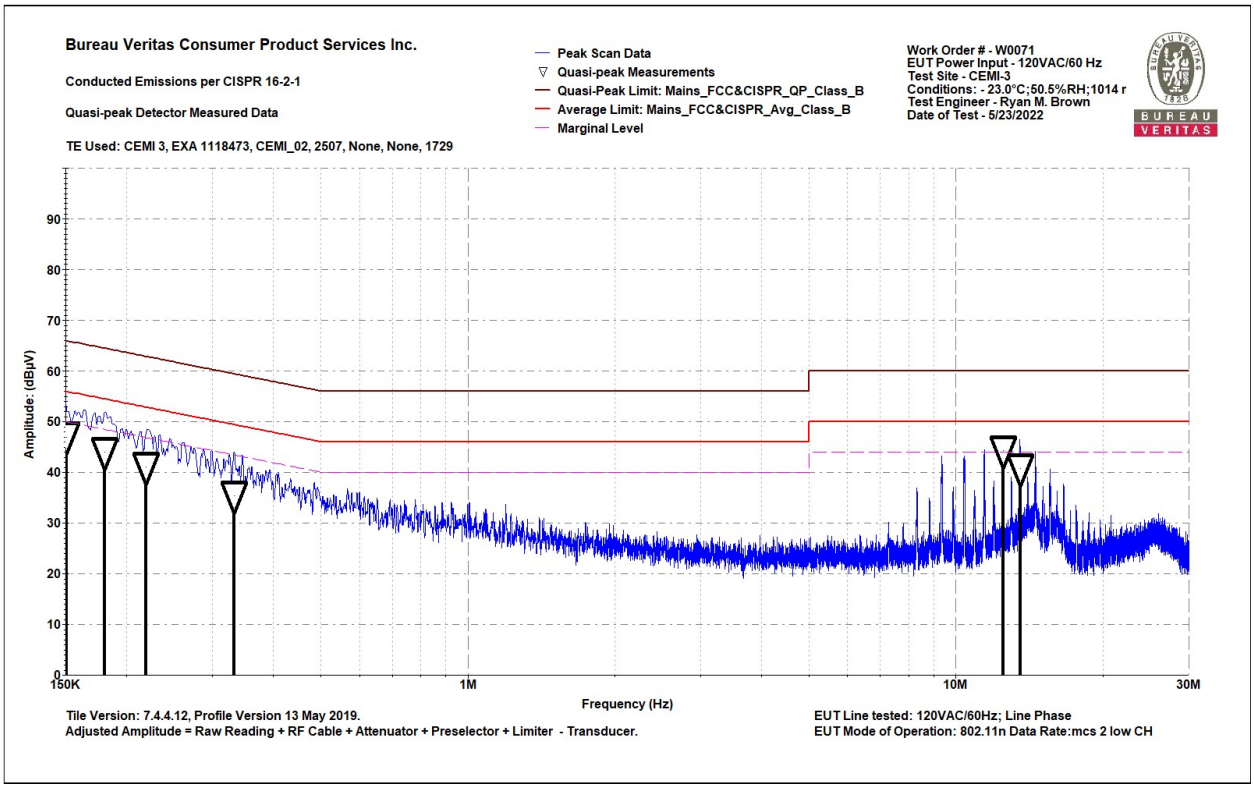
802.11g Low CH Data Rate 48 0.15 – 30 MHz Neutral

Bureau Veritas Consumer Product Services Inc.
Conducted Emissions per CISPR 16-2-1
Quasi-peak Detector Data
Notes:
EUT Line tested: 120VAC/60Hz; Line Phase
EUT Mode of Operation: 802.11n Data Rate:mcs 2 low CH

Work Order # - W0071
EUT Power Input - 120VAC/60 Hz
Test Site - CEMI-3
Conditions: - 23.0°C;50.5%RH;1014 mBar
Test Engineer - Ryan M. Brown
Date of Test - 5/23/2022

Frequency (MHz)	Raw QP Reading (dBµV)	Correction Factor (dB)	Adjusted QP Amplitude (dBµV)	QP Lim: Mains_FCC&CISPR_QP_Class_B (dBµV)	Margin to QP Limit (dB)	QP Limit Results (Pass/Fail)	Worst Margin (QP Limit) (dB)	Av Lim: Mains_FCC&CISPR_Avg_Class_B (dBµV)	Margin to Avg Limit (dB)	Avg Limit Results (Pass/Fail)	Worst Margin (Avg Limit) (dB)
0.149	4.878										
0.151	26.711	20.3	47	66	-19	PASS		56	-9	PASS	
0.18	23.741	20.2	44	64.5	-20.5	PASS		54.5	-10.5	PASS	
0.219	20.806	20.2	41	62.9	-21.8	PASS		52.9	-11.8	PASS	
0.332	15.17	20.2	35.4	59.4	-24	PASS		49.4	-14	PASS	
12.481	23.813	20.4	44.2	60	-15.8	PASS	-15.8	50	-5.8	PASS	-5.8
13.535	20.329	20.4	40.7	60	-19.3	PASS		50	-9.3	PASS	

802.11n Low CH Data Rate MCS 2 0.15 – 30 MHz Line



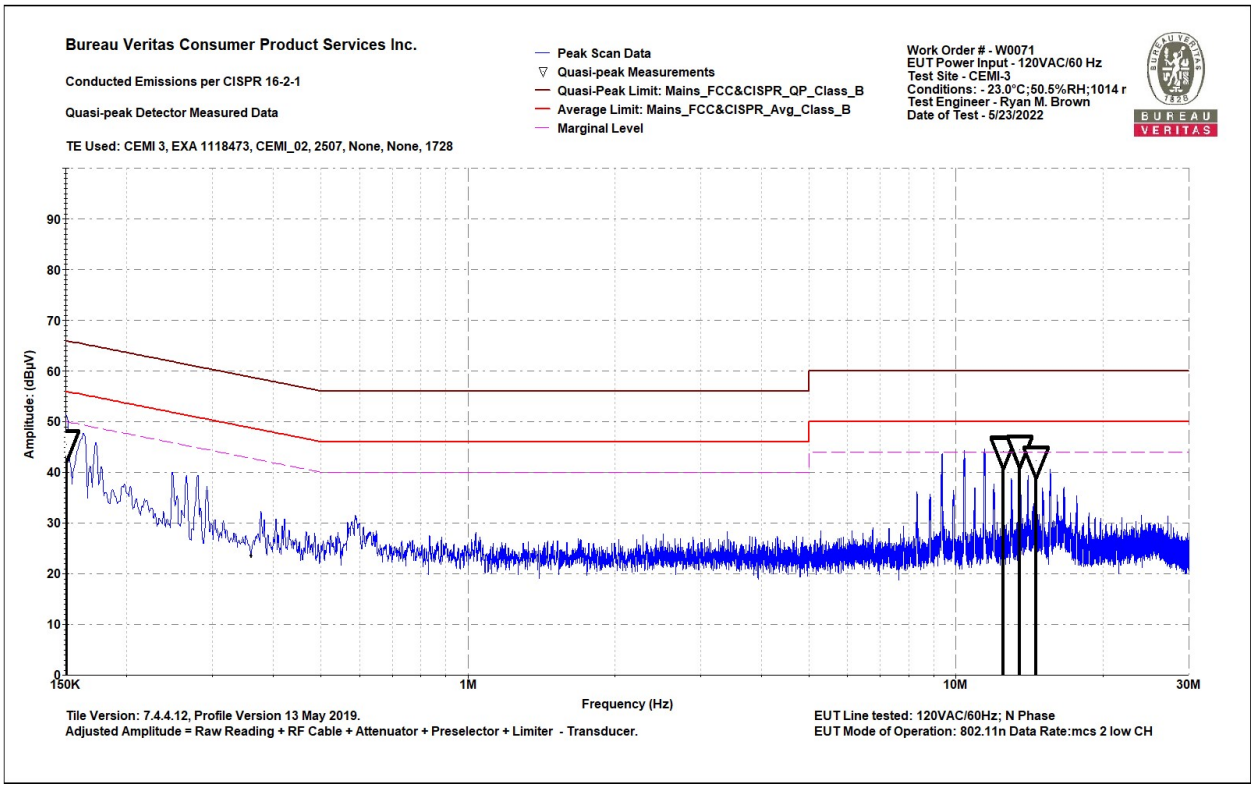
802.11n Low CH Data Rate MCS 2 0.15 – 30 MHz Line

Bureau Veritas Consumer Product Services Inc.
Conducted Emissions per CISPR 16-2-1
Quasi-peak Detector Data
Notes:
EUT Line tested: 120VAC/60Hz; N Phase
EUT Mode of Operation: 802.11n Data Rate:mcs 2 low CH

Work Order # - W0071
EUT Power Input - 120VAC/60 Hz
Test Site - CEMI-3
Conditions: - 23.0°C;50.5%RH;1014 mBar
Test Engineer - Ryan M. Brown
Date of Test - 5/23/2022

Frequency (MHz)	Raw QP Reading (dBµV)	Correction Factor (dB)	Adjusted QP Amplitude (dBµV)	QP Lim: Mains_FCC&CISPR_QP_Class_B (dBµV)	Margin to QP Limit (dB)	QP Limit Results (Pass/Fail)	Worst Margin (QP Limit) (dB)	Av Lim: Mains_FCC&CISPR_Avg_Class_B (dBµV)	Margin to Avg Limit (dB)	Avg Limit Results (Pass/Fail)	Worst Margin (Avg Limit) (dB)
0.15	25.168	20.4	45.5	66	-20.4	PASS		56	-10.4	PASS	
12.48	23.886	20.4	44.3	60	-15.7	PASS		50	-5.7	PASS	
12.49	23.726	20.4	44.1	60	-15.9	PASS		50	-5.9	PASS	
13.516	23.933	20.4	44.3	60	-15.7	PASS		50	-5.7	PASS	
13.522	24.088	20.4	44.5	60	-15.5	PASS	-15.5	50	-5.5	PASS	-5.5
14.566	21.861	20.4	42.2	60	-17.8	PASS		50	-7.8	PASS	

802.11n Low CH Data Rate MCS 2 0.15 – 30 MHz Neutral



802.11n Low CH Data Rate MCS 2 0.15 – 30 MHz QP/AVG Neutral

Test Equipment Used

Rev. 6/13/2022

Spectrum Analyzers / Receivers /Preselectors	Range	MN	Mfr	SN	Asset	Cat	Calibration Due	Calibrated on
Rental EXA Signal Analyzer(1118473)	9KHz-26.5GHz	N9010A-526;N	AT	MY51170076	1118473	I	8/5/2022	8/5/2021
LISNs/Measurement Probes	**Range**	**MN**	**Mfr**	**SN**	**Asset**	**Cat**	**Calibration Due**	**Calibrated on**
LISN Asset 1728	150kHz-30MHz	LI-150A	Com-Power	201084	1728	I	1/5/2023	1/5/2022
LISN Asset 1729	150kHz-30MHz	LI-150A	Com-Power	201085	1729	I	1/5/2023	1/5/2022
Conducted Test Sites (Mains / Telco)	**FCC Code**		**VCCI Code**			**Cat**	**Calibration Due**	**Calibrated on**
CEMI 3	719150		A-0015			III	NA	N/A
Meteorological Meters/Chambers		**MN**	**Mfr**	**SN**	**Asset**	**Cat**	**Calibration Due**	**Calibrated on**
Weather Clock (Pressure Only)		BA928	Oregon Scientific	C3166-1	831	I	11/23/2022	11/23/2020
Asset #2657		1235C97	Control Company	200435369	2657	I	7/23/2022	7/23/2020
Cables	**Range**		**Mfr**			**Cat**	**Calibration Due**	**Calibrated on**
CEMI-02	9kHz - 2GHz		C-S			II	2/17/2023	2/17/2022
Attenuators	**Range**	**MN**	**Mfr**	**SN**	**Asset**	**Cat**	**Calibration Due**	**Calibrated on**
20dB ATT(A#2507)	9kHz-2GHz	PE7014-20	Pasternack	2030	2507	II	8/4/2022	8/4/2021

All equipment is calibrated using standards traceable to NIST or other nationally recognized calibration standard.

Occupied Bandwidth

Test according to FCC title 47 part 15 §15.247(a), KDB 558074 D01 DTS Meas Guidance v05r02 and ANSI C63.10-2013 11.8.1
Measurement uncertainty calculated in accordance with ETSI TR 100 028-1.
Expanded Uncertainty (K=2) < 2%

REQUIREMENT

When an occupied bandwidth is not specified in the applicable RSS, the transmitted signal bandwidth to be reported is its 99% emission bandwidth, as calculated or measured.
[RSS-GEN 6.7]

MEASUREMENTS / RESULTS

Data Table

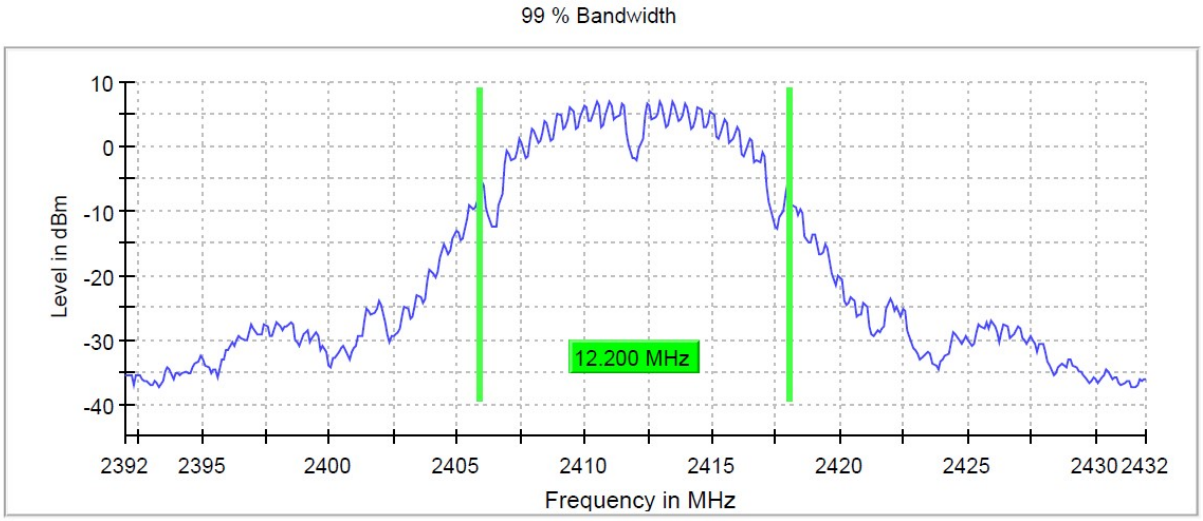
The worst case data rate for each mode was determined by the data rate with the widest bandwidth per ANSI C63.10 section 5.6.2.1

Data Rate	Bandwidth (MHz)	Band Edge Left (MHz)	Center Frequency (MHz)	Band Edge Right (MHz)	Result
802.11 b					
1	12.20	2405.850000	2412	2418.050000	PASS
1	12.20	2430.850000	2437	2443.050000	PASS
1	12.20	2455.850000	2462	2468.050000	PASS
2	12.10	2405.950000	2412	2418.050000	PASS
2	12.10	2430.850000	2437	2442.950000	PASS
2	12.10	2455.950000	2462	2468.050000	PASS
5.5	11.40	2406.250000	2412	2417.650000	PASS
5.5	11.40	2431.250000	2437	2442.650000	PASS
5.5	11.50	2456.250000	2462	2467.750000	PASS
11	11.50	2406.250000	2412	2417.750000	PASS
11	11.60	2431.150000	2437	2442.750000	PASS
11	11.60	2456.150000	2462	2467.750000	PASS

Data Rate	Bandwidth (MHz)	Band Edge Left (MHz)	Center Frequency (MHz)	Band Edge Right (MHz)	Result
802.11 g					
6	16.70	2403.650000	2412	2420.350000	PASS
6	16.80	2428.550000	2437	2445.350000	PASS
6	16.70	2453.650000	2462	2470.350000	PASS
9	16.70	2403.650000	2412	2420.350000	PASS
9	16.80	2428.550000	2437	2445.350000	PASS
9	16.70	2453.650000	2462	2470.350000	PASS
12	16.70	2403.650000	2412	2420.350000	PASS
12	16.70	2428.650000	2437	2445.350000	PASS
12	16.60	2453.750000	2462	2470.350000	PASS
18	16.70	2403.550000	2412	2420.250000	PASS
18	16.70	2428.550000	2437	2445.250000	PASS
18	16.60	2453.650000	2462	2470.250000	PASS
24	16.50	2403.750000	2412	2420.250000	PASS
24	16.50	2428.750000	2437	2445.250000	PASS
24	16.50	2453.750000	2462	2470.250000	PASS
36	16.50	2403.750000	2412	2420.250000	PASS
36	16.50	2428.750000	2437	2445.250000	PASS
36	16.50	2453.750000	2462	2470.250000	PASS
48	16.60	2403.650000	2412	2420.250000	PASS
48	16.60	2428.650000	2437	2445.250000	PASS
48	16.50	2453.750000	2462	2470.250000	PASS
54	16.50	2403.750000	2412	2420.250000	PASS
54	16.50	2428.750000	2437	2445.250000	PASS
54	16.40	2453.750000	2462	2470.150000	PASS

Data Rate	Bandwidth (MHz)	Band Edge Left (MHz)	Center Frequency (MHz)	Band Edge Right (MHz)	Result
			802.11 n		
MCS 0	17.80	2403.050000	2412	2420.850000	PASS
MCS 0	17.90	2428.080000	2437	2445.950000	PASS
MCS 0	17.70	2453.150000	2462	2470.850000	PASS
MCS 1	17.90	2403.050000	2412	2420.950000	PASS
MCS 1	17.80	2428.050000	2437	2445.850000	PASS
MCS 1	17.70	2453.150000	2462	2470.850000	PASS
MCS 2	17.80	2403.050000	2412	2420.850000	PASS
MCS 2	17.80	2428.050000	2437	2445.850000	PASS
MCS 2	17.70	2453.150000	2462	2470.850000	PASS
MCS 3	17.80	2403.050000	2412	2420.850000	PASS
MCS 3	17.80	2428.050000	2437	2445.850000	PASS
MCS 3	17.80	2453.050000	2462	2470.850000	PASS
MCS 4	17.80	2403.050000	2412	2420.850000	PASS
MCS 4	17.80	2428.050000	2437	2445.850000	PASS
MCS 4	17.70	2453.150000	2462	2470.850000	PASS
MCS 5	17.80	2403.050000	2412	2420.850000	PASS
MCS 5	17.80	2428.050000	2437	2445.850000	PASS
MCS 5	17.70	2453.150000	2462	2470.850000	PASS
MCS 6	17.80	2403.050000	2412	2420.850000	PASS
MCS 6	17.80	2428.050000	2437	2445.850000	PASS
MCS 6	17.70	2453.150000	2462	2470.850000	PASS
MCS 7	17.80	2403.050000	2412	2420.850000	PASS
MCS 7	17.80	2428.050000	2437	2445.850000	PASS
MCS 7	17.70	2453.150000	2462	2470.850000	PASS

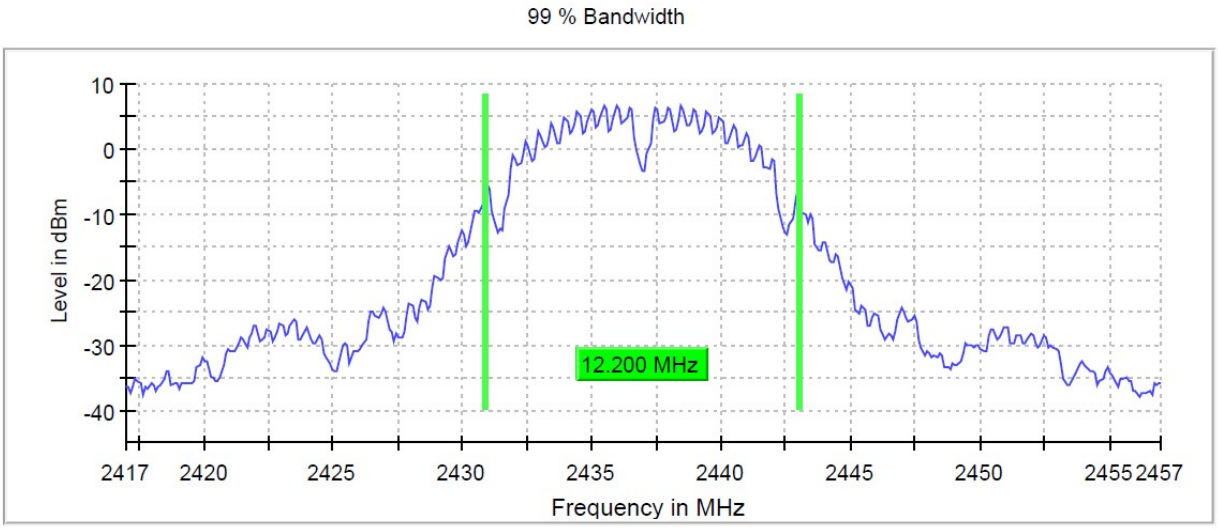
Plots



Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.39200 GHz	2.39200 GHz
Stop Frequency	2.43200 GHz	2.43200 GHz
Span	40.000 MHz	40.000 MHz
RBW	200.000 kHz	>= 200.000 kHz
VBW	1.000 MHz	>= 600.000 kHz
SweepPoints	400	~ 400
Sweeptime	28.477 µs	AUTO
Reference Level	20.000 dBm	20.000 dBm
Attenuation	40.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	100	100
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	FFT	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.30 dB	0.30 dB
Run	5 / max. 150	max. 150
Stable	3 / 3	3
Max Stable Difference	0.11 dB	0.30 dB

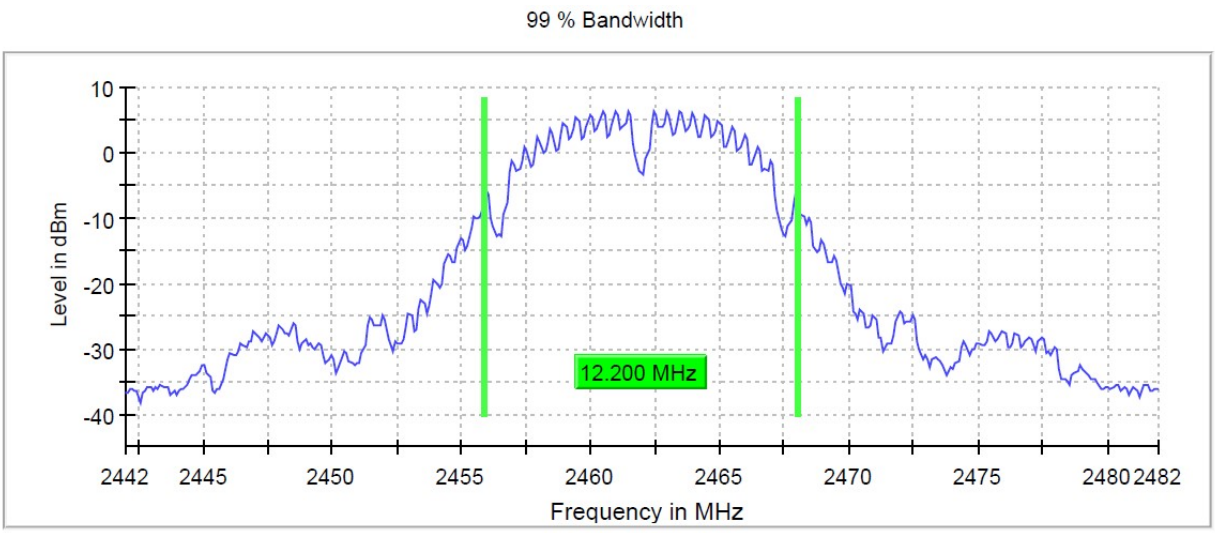
802.11 b Data Rate 1 Low Channel



Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.41700 GHz	2.41700 GHz
Stop Frequency	2.45700 GHz	2.45700 GHz
Span	40.000 MHz	40.000 MHz
RBW	200.000 kHz	>= 200.000 kHz
VBW	1.000 MHz	>= 600.000 kHz
SweepPoints	400	~ 400
Sweeptime	28.477 µs	AUTO
Reference Level	20.000 dBm	20.000 dBm
Attenuation	40.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	100	100
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	FFT	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.30 dB	0.30 dB
Run	4 / max. 150	max. 150
Stable	3 / 3	3
Max Stable Difference	0.19 dB	0.30 dB

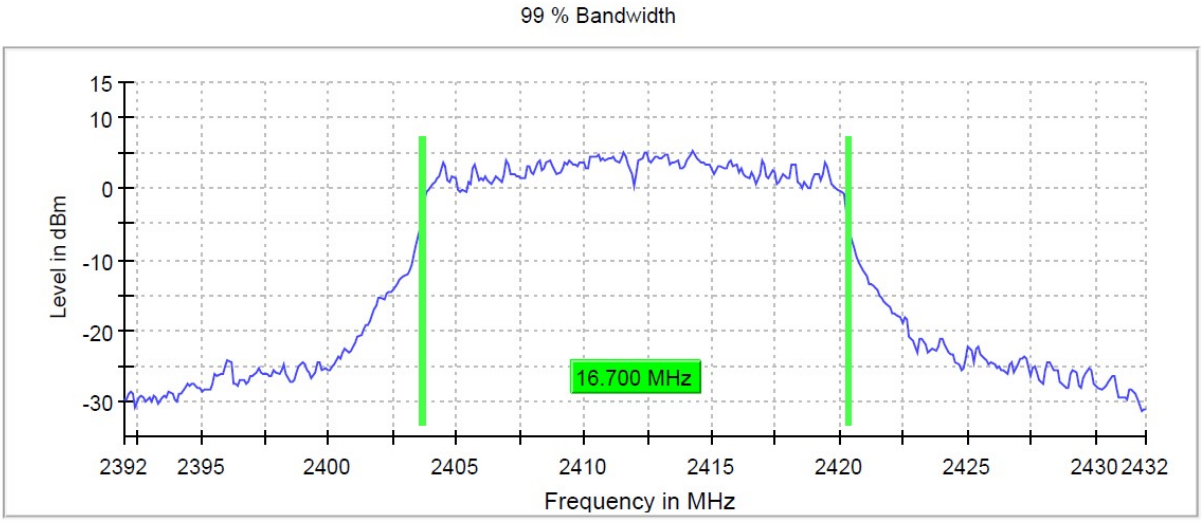
802.11 b Data Rate 1 Mid Channel



Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.44200 GHz	2.44200 GHz
Stop Frequency	2.48200 GHz	2.48200 GHz
Span	40.000 MHz	40.000 MHz
RBW	200.000 kHz	>= 200.000 kHz
VBW	1.000 MHz	>= 600.000 kHz
SweepPoints	400	~ 400
Sweeptime	28.477 µs	AUTO
Reference Level	20.000 dBm	20.000 dBm
Attenuation	40.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	100	100
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	FFT	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.30 dB	0.30 dB
Run	4 / max. 150	max. 150
Stable	3 / 3	3
Max Stable Difference	0.12 dB	0.30 dB

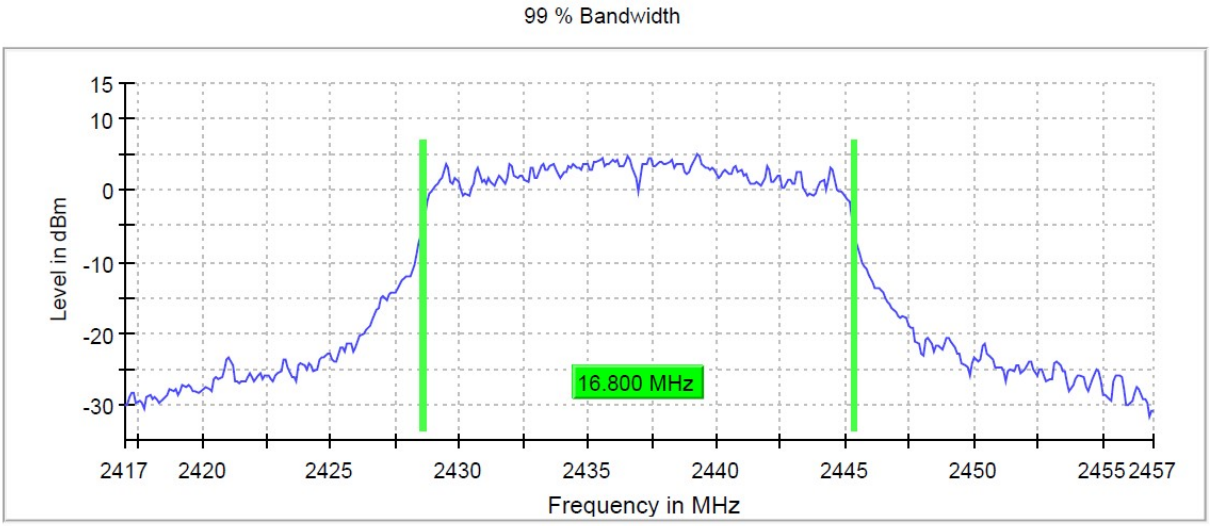
802.11 b Data Rate 1 High Channel



Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.39200 GHz	2.39200 GHz
Stop Frequency	2.43200 GHz	2.43200 GHz
Span	40.000 MHz	40.000 MHz
RBW	200.000 kHz	>= 200.000 kHz
VBW	1.000 MHz	>= 600.000 kHz
SweepPoints	400	~ 400
Sweeptime	28.477 µs	AUTO
Reference Level	20.000 dBm	20.000 dBm
Attenuation	40.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	100	100
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	FFT	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.30 dB	0.30 dB
Run	23 / max. 150	max. 150
Stable	3 / 3	3
Max Stable Difference	0.26 dB	0.30 dB

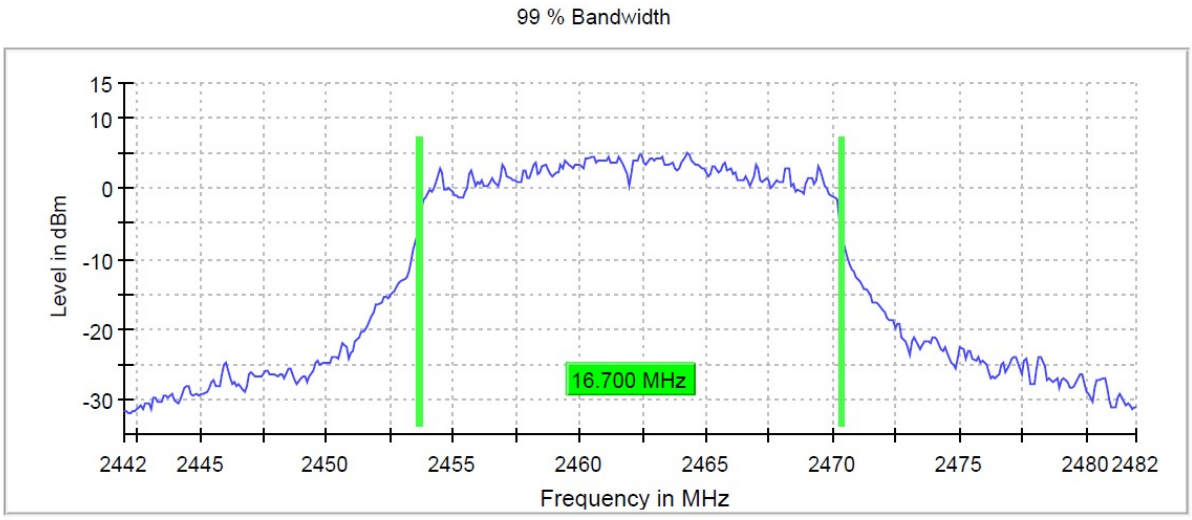
802.11 g Data Rate 9 Low Channel



Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.41700 GHz	2.41700 GHz
Stop Frequency	2.45700 GHz	2.45700 GHz
Span	40.000 MHz	40.000 MHz
RBW	200.000 kHz	>= 200.000 kHz
VBW	1.000 MHz	>= 600.000 kHz
SweepPoints	400	~ 400
Sweeptime	28.477 µs	AUTO
Reference Level	20.000 dBm	20.000 dBm
Attenuation	40.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	100	100
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	FFT	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.30 dB	0.30 dB
Run	26 / max. 150	max. 150
Stable	3 / 3	3
Max Stable Difference	0.22 dB	0.30 dB

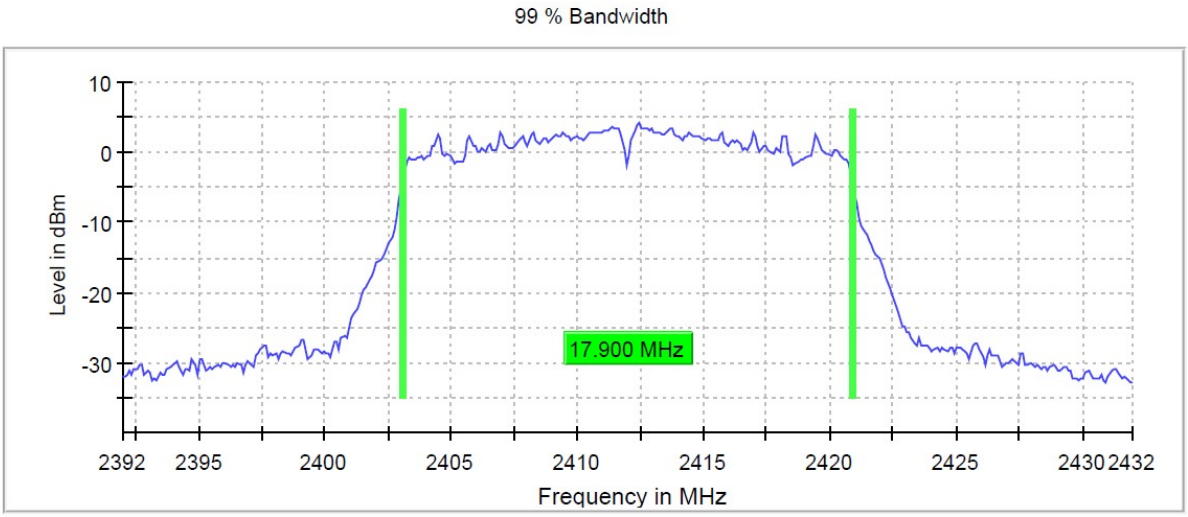
802.11 g Data Rate 9 Mid Channel



Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.44200 GHz	2.44200 GHz
Stop Frequency	2.48200 GHz	2.48200 GHz
Span	40.000 MHz	40.000 MHz
RBW	200.000 kHz	>= 200.000 kHz
VBW	1.000 MHz	>= 600.000 kHz
SweepPoints	400	~ 400
Sweeptime	28.477 µs	AUTO
Reference Level	20.000 dBm	20.000 dBm
Attenuation	40.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	100	100
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	FFT	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.30 dB	0.30 dB
Run	23 / max. 150	max. 150
Stable	3 / 3	3
Max Stable Difference	0.28 dB	0.30 dB

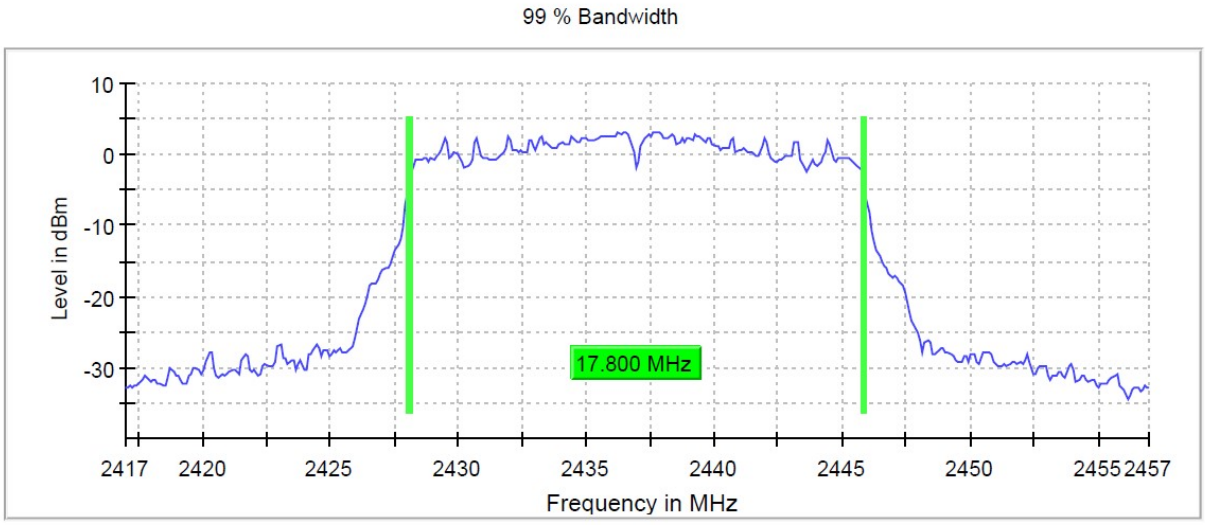
802.11 g Data Rate 9 High Channel



Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.39200 GHz	2.39200 GHz
Stop Frequency	2.43200 GHz	2.43200 GHz
Span	40.000 MHz	40.000 MHz
RBW	200.000 kHz	>= 200.000 kHz
VBW	1.000 MHz	>= 600.000 kHz
SweepPoints	400	~ 400
Sweeptime	28.477 µs	AUTO
Reference Level	20.000 dBm	20.000 dBm
Attenuation	40.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	100	100
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	FFT	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.30 dB	0.30 dB
Run	52 / max. 150	max. 150
Stable	3 / 3	3
Max Stable Difference	0.00 dB	0.30 dB

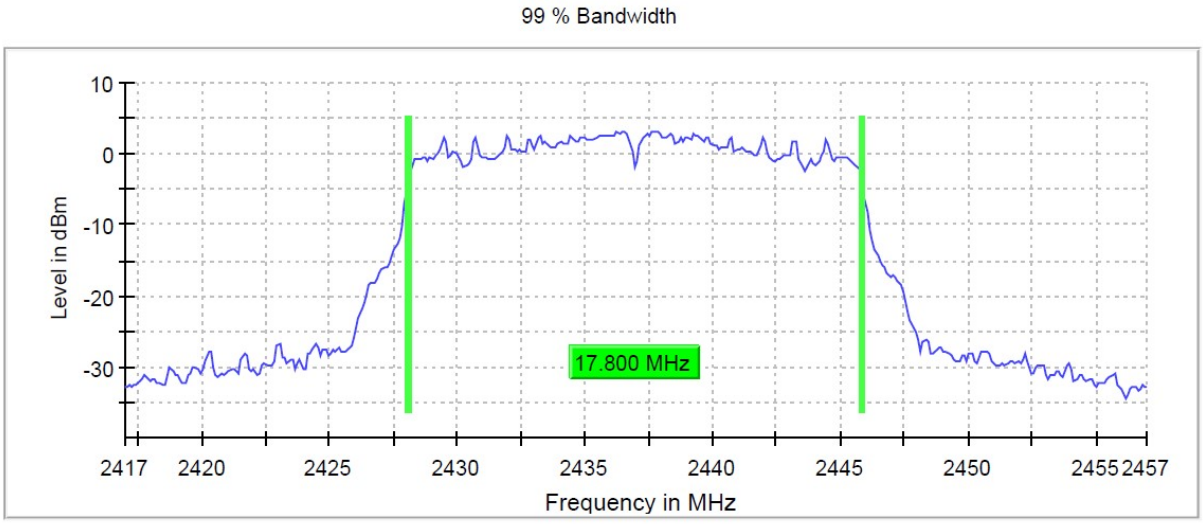
802.11 n Low Channel MCS 1



Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.41700 GHz	2.41700 GHz
Stop Frequency	2.45700 GHz	2.45700 GHz
Span	40.000 MHz	40.000 MHz
RBW	200.000 kHz	>= 200.000 kHz
VBW	1.000 MHz	>= 600.000 kHz
SweepPoints	400	~ 400
Sweeptime	28.477 µs	AUTO
Reference Level	20.000 dBm	20.000 dBm
Attenuation	40.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	100	100
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	FFT	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.30 dB	0.30 dB
Run	31 / max. 150	max. 150
Stable	3 / 3	3
Max Stable Difference	0.22 dB	0.30 dB

802.11 n Mid Channel MCS 1



Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.44700 GHz	2.44700 GHz
Stop Frequency	2.47700 GHz	2.47700 GHz
Span	30.000 MHz	30.000 MHz
RBW	100.000 kHz	<= 100.000 kHz
VBW	300.000 kHz	>= 300.000 kHz
SweepPoints	600	~ 600
Sweeptime	1.040 ms	AUTO
Reference Level	20.000 dBm	20.000 dBm
Attenuation	40.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	100	100
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	Sweep	Sweep
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	32 / max. 150	max. 150
Stable	2 / 2	2
Max Stable Difference	0.37 dB	0.50 dB

802.11 n High Channel MCS 1

Test Equipment Used

Rev. 7/5/2022

Spectrum Analyzers / Receivers /Preselectors	Range	MN	Mfr	SN	Asset	Cat	Calibration Due	Calibrated on
FSV40 Spectrum Analyzer	10Hz-40GHz	FSV40	ROHDE & SCHWARZ	101551	2200	I	10/26/2022	10/26/2021
Signal Generators/Comparaison Noise Emitter	**Range**	**MN**	**Mfr**	**SN**	**Asset**	**Cat**	**Calibration Due**	**Calibrated on**
SMBV100A Vector Signal Generator	9KHz-6GHz	SMBV100A	ROHDE & SCHWARZ	261919	2201	I	10/26/2022	10/26/2021
SMB100A Signal Generator	100kHz-40GHz	SMB100A	ROHDE & SCHWARZ	179884	2557	I	10/26/2022	10/26/2021
OSP-B157W8		OSP-B157W8	ROHDE & SCHWARZ	100955	2558	I	8/26/2022	8/26/2021
Meteorological Meters/Chambers		**MN**	**Mfr**	**SN**	**Asset**	**Cat**	**Calibration Due**	**Calibrated on**
Weather Clock (Pressure Only)		BA928	Oregon Scientific	C3166-1	831	I	11/23/2022	11/23/2020
Asset #2657		1235C97	Control Company	200435369	2657	I	7/23/2022	7/23/2020
Cables	**Range**		**Mfr**			**Cat**	**Calibration Due**	**Calibrated on**
Asset #2595	9KHz-40GHz		Carlisle			II	1/21/2023	1/21/2022

All equipment is calibrated using standards traceable to NIST or other nationally recognized calibration standard.

Measurement Uncertainty

The listed uncertainties are the worst case uncertainty for the entire range of measurement. Please note that the uncertainty values are provided for informational purposes only and are not used in determining the PASS/FAIL results.

Measurement	Expanded Uncertainty k=2	Maximum allowable uncertainty
Radiated Emissions (30-1000MHz) NIST CISPR	 5.6dB 4.6dB	 N/A 5.2dB (Ucispr)
Radiated Emissions (1-26.5GHz)	4.6dB	N/A
Radiated Emissions (above 26.5GHz)	4.9dB	N/A
Magnetic Radiated Emissions	5.6dB	N/A
Conducted Emissions NIST CISPR	 3.9dB 3.6dB	 N/A 3.6dB (Ucispr)
Telco Conducted Emissions (Current)	2.9dB	N/A
Telco Conducted Emissions (Voltage)	4.4dB	N/A
Electrostatic Discharge	11.5%	N/A
Radiated RF Immunity (Uniform Field)	1.6dB	N/A
Electrical Fast Transients	23.1%	N/A
Surge	23.1%	N/A
Conducted RF Immunity	3dB	N/A
Magnetic Immunity	12.8%	N/A
Dips and Interrupts	2.3V	N/A
Harmonics	3.5%	N/A
Flicker	3.5%	N/A
Radio frequency (@ 2.4GHz)	3.23×10^{-8}	1×10^{-7}
RF power, conducted	0.40dB	0.75dB
Maximum frequency deviation: • Within 300Hz and 6kHz of audio frequency / Within 6kHz and 25kHz of audio frequency	 3.4% 0.3dB	 5% 3dB
Adjacent channel power	1.9dB	3dB
Conducted spurious emission of transmitter, valid up to 12.75GHz	2.39dB	3dB
Conducted emission of receivers	1.3dB	3dB
Radiated emission of transmitter, valid up to 26.5GHz	3.9dB	6dB
Radiated emission of transmitter, valid up to 80GHz	3.3dB	6dB
Radiated emission of receiver, valid up to 26.5GHz	3.9dB	6dB
Radiated emission of receiver, valid up to 80GHz	3.3dB	6dB
Humidity	2.37%	5%
Temperature	0.7°C	1.0°C
Time	4.1%	10%
RF Power Density, Conducted	0.4dB	3dB
DC and low frequency voltages	1.3%	3%
Voltage (AC, <10kHz)	1.3%	2%
Voltage (DC)	0.62%	1%
The above reflects a 95% confidence level		

Conditions Of Testing

[Bureau Veritas Consumer Products Services, Inc., a Massachusetts corporation], and/or its affiliates (collectively, the "Company") will conduct, at the request of the Submitter ("Client"), the tests specified on the submitted Test Request Form or equivalent in accordance with, and subject to, the following terms and conditions (collectively, "Conditions"):

1. All orders for tests are subject to acceptance by the Company, and no order will constitute a binding commitment of the Company unless and until such order is accepted by it, as evidenced by the issuance of a written report ("Test Report") by the Company. The Test Report is issued solely by the Company, is intended for the exclusive use of Client and shall not be published, used for advertising purposes, copied or replicated for distribution to any other person or entity or otherwise publicly disclosed without the prior written consent of the Company. By submitting a request for services to the Company, Client consents to the disclosure to accreditation bodies of those records of Client relevant to the accreditation body's assessment of the Company's competence and compliance with relevant accreditation criteria. The Company shall not be liable for any loss or damage whatsoever resulting from the failure of the Company to provide its services within any time period for completion estimated by the Company. If Client anticipates using the Test Report in any legal proceeding, arbitration, dispute resolution forum or other proceeding, it shall so notify the Company prior to submitting the Test Report in such proceeding. The Company has no obligation to provide a fact or expert witness at such proceeding unless the Company agrees in advance to do so for a separate and additional fee.
2. The Test Report will set forth the findings of the Company solely with respect to the test samples identified therein. Unless specifically and expressly indicated in the Test Report, the results set forth in such Test Report are not intended to be indicative or representative of the quality or characteristics of the lot from which a test sample is taken, and Client shall not rely upon the Test Report as being so indicative or representative of the lot or of the tested product in general. The Test Report will reflect the findings of the Company at the time of testing only, and the Company shall have no obligation to update the Test Report after its issuance. The Test Report will set forth the results of the tests performed by the Company based upon the written information provided to the Company. The Test Report will be based solely on the samples and written information submitted to the Company by Client, and the Company shall not be obligated to conduct any independent investigation or inquiry with respect thereto.
3. The Company may, in its sole discretion, destroy samples which have been furnished to the Company for testing and which have not been destroyed in the course of testing. The Company may delegate the performance of all or a portion of the services contemplated hereunder to an affiliate, agent or subcontractor of the Company, and Client consents to such delegation.
4. These Conditions and the Test Report represent the entire understanding of the parties hereto with respect to the subject matter hereof and of the Test Report, and no modification, variance or extrapolation with respect thereto shall be permitted without the prior written consent of the Company.
5. The names, service marks, trademarks and copyrights of the Company and its affiliates, including the names "**BUREAU VERITAS," "BUREAU VERITAS CONSUMER PRODUCTS SERVICES," "BVCPS", "MTL", "ACTS", "MTL-ACTS" and CURTIS-STRAUS** (collectively, the "Marks") are and shall remain the sole property of the Company or its affiliates and shall not be used by Client except solely to the extent that Client obtains the prior written approval of the Company and then only in the manner prescribed by the Company. Client shall not contest the validity of the Marks or take any action that might impair the value or goodwill associated with the Marks or the image or reputation of the Company or its affiliates.
6. Payment in full shall be due 30 days after the date of invoice. Interest shall be due on overdue amounts from the due date until paid at an interest rate of 1.5% per month or, if less, the maximum rate permitted by law. The Company reserves the right, at any time and from time to time, to revoke any credit extended to Client. Client shall reimburse the Company for any costs it incurs in collecting past due amounts, including court costs and fees and expenses of attorneys and collection agencies. The Test Report may not be used or relied upon by Client if and for so long as Client fails to pay when due any invoice issued by the Company or any affiliate of it to Client or any affiliate or subsidiary of Client together with interest and penalties, if any, accrued thereon.
7. The Company disclaims any and all responsibility or liability arising out of or in connection with e-mail transmissions of such information.
8. Client understands and agrees that the Company is neither an insurer nor a guarantor, that the Company does not take the place of Client or any designer, manufacturer, agent, buyer, distributor or transportation or shipping company, and that the Company disclaims all liability in such capacities. Client further understands that if it seeks assurance against loss or damage, it should obtain appropriate insurance.
9. Client agrees that the Company, by providing the services, does not take the place of Client nor any third party, nor does the Company release them from any of their obligations, nor does the Company otherwise assume, abridge, abrogate or undertake to discharge any duty of any third party to Client or any duty of Client or any third party to any other third party, and Client will not release any third party from its obligations and duties with respect to the tested goods.
10. Client shall, on a timely basis, (a) provide adequate instructions to the Company in order to enable the Company to perform properly its services, (b) provide, or cause Client's suppliers and contractors to provide, the Company with all documents necessary to enable the Company to perform its services, (c) furnish the Company with all relevant information regarding Client's intended use and purposes of the tested goods, (d) advise the Company of essential dates and deadlines relevant to the tested goods and (e) fully exercise all rights and remedies available to Client against third parties in respect of the tested goods.
11. The Company shall undertake due care and ordinary skill in the performance of its services to Client, and the Company shall accept responsibility only were such skill has not been exercised and, even in such event, only to the extent of the limitation of liability set forth herein.
12. If Client desires to assert a claim arising from or relating to (i) the performance, purported performance or non-performance of any services by the Company or (ii) the sale, resale, manufacture, distribution or use of any tested goods, it must submit that claim to the Company in a writing that sets forth with particularity the basis for such claim within 60 days from discovery of the potential claim and not more than six months after the date of issuance of the Test Report to Client. Client waives any and all such claims including, without limitation, claims that the Test Report is inaccurate, incomplete or misleading or that additional or different testing is required, unless and then only to the extent that Client submits a written claim to the Company within both such time periods.
13. CLIENT SHALL, EXCEPT TO THE EXTENT OF COMPANY'S LIABILITY TO CLIENT HEREUNDER (WHICH IN NO EVENT SHALL EXCEED THE LIMITATION OF LIABILITY HEREIN), HOLD HARMLESS AND INDEMNIFY THE COMPANY, ITS AFFILIATES AND THEIR RESPECTIVE DIRECTORS, OFFICERS, EMPLOYEES, AGENTS AND SUBCONTRACTORS AGAINST ALL ACTUAL OR ALLEGED THIRD PARTY CLAIMS FOR LOSS, DAMAGE OR EXPENSE OF WHATSOEVER NATURE AND HOWSOEVER ARISING FROM OR RELATING TO (i) THE PERFORMANCE, PURPORTED PERFORMANCE OR NON-PERFORMANCE OF ANY SERVICES BY THE COMPANY OR (ii) THE SALE, RESALE, MANUFACTURE, DISTRIBUTION OR USE OF ANY TESTED GOODS.
14. EXCEPT AS MAY OTHERWISE BE EXPRESSLY AGREED TO IN WRITING BY THE COMPANY AND NOTWITHSTANDING ANY PROVISION TO THE CONTRARY CONTAINED HEREIN OR IN ANY TEST REPORT, NO WARRANTY OR GUARANTEE, EXPRESS OR IMPLIED, INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR USE, IS MADE.

15. (A) IN NO EVENT WHATSOEVER SHALL THE COMPANY BE LIABLE FOR ANY CONSEQUENTIAL, SPECIAL, INCIDENTAL, EXEMPLARY OR PUNITIVE DAMAGES IN CONNECTION WITH, RELATING TO OR ARISING OUT OF THE TEST REPORT OR THE SERVICES PROVIDED BY THE COMPANY HEREUNDER, INCLUDING WITHOUT LIMITATION LOSS OF OR DAMAGE TO PROPERTY; LOSS OF INCOME, PROFIT OR USE; OR ANY CLAIMS OR DEMANDS MADE AGAINST CLIENT OR ANY OTHER PERSON BY ANY THIRD PARTY IN CONNECTION WITH, RELATING TO OR ARISING OUT OF THE SERVICES PROVIDED BY THE COMPANY HEREUNDER.

(B)NOTWITHSTANDING ANY PROVISION TO THE CONTRARY CONTAINED HEREIN, AND IN RECOGNITION OF THE RELATIVE RISKS AND BENEFITS TO CLIENT AND THE COMPANY ASSOCIATED WITH THE TESTING SERVICES CONTEMPLATED HEREBY, THE RISKS HAVE BEEN ALLOCATED SUCH THAT UNDER NO CIRCUMSTANCES WHATSOEVER SHALL THE LIABILITY OF THE COMPANY TO CLIENT OR ANY THIRD PARTY IN RESPECT OF ANY CLAIM FOR LOSS, DAMAGE OR EXPENSE, OF WHATSOEVER NATURE OR MAGNITUDE, AND HOWSOEVER ARISING, EXCEED AN AMOUNT EQUAL TO FIVE (5) TIMES THE AMOUNT OF THE FEES PAID TO THE COMPANY FOR THE SPECIFIC SERVICES WHICH GAVE RISE TO SUCH CLAIM OR U.S.$10,000, WHICHEVER IS THE LESSER AMOUNT.

16. The Company shall not be liable for any loss or damage resulting from any delay or failure in performance of its obligations hereunder resulting directly or indirectly from any event of force majeure or any event outside the control of the Company. If any such event occurs, the Company may immediately cancel or suspend its performance hereunder without incurring any liability whatsoever to Client.

17. Company's services, including these Conditions, shall be governed by, and construed in accordance with, the local laws of the country where the Company performs the tests or, in the case of tests performed in the United States of America, the laws of Massachusetts without regard to conflicts of laws principles. If any aspect(s) of these Conditions is found to be illegal or unenforceable, the validity, legality and enforceability of all remaining aspects of these Conditions shall not in any way be affected or impaired thereby. Any proceeding related to the subject matter hereof shall be brought, if at all, in the courts of the country where the Company performs the tests or, in the case of tests performed in the United States of America, in the courts of Massachusetts. Client waives the right to interpose any counterclaim or setoffs of any nature in any litigation arising hereunder.

The complete list of the Approved Subcontractors Curtis-Straus may use to delegate the performance of work can be provided upon request.
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