



 Bureau Veritas Consumer Product Services Inc.
 Work Order - W0790

 Radiated Emissions Electric Field 1m Distance
 EUT Power Input - Battery

 Top Peaks Vertical 6-18GHz
 Test Site - CH1

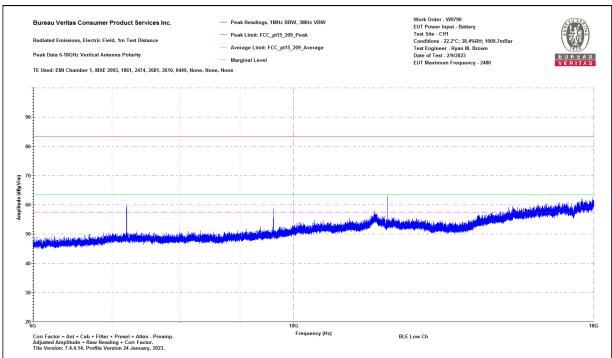
 Notes:
 Conditions - 22.2°C; 38.4%RH; 1009.7mBar

 BLE Low Ch
 Test Engineer - Ryan M. Brown

 0
 Date of Test - 2/9/2023

					Adjusted					Average			Average		
		Raw RMS	Correction	Adjusted	RMS	Peak Limit			Peak Worst	Limit	Average		Worst	Antenna	EUT
Frequency	Raw Peak	Average	Factor	Peak	Average	FCC 15.209	Peak Margin	Peak Result	Margin	FCC 15.209	Margin	Average Result	Margin	Height	Azimuth
(MHz)	(dBµV)	(dBµV)	(dB/m)	(dBµV/m)	(dBµV/m)	(dBµV/m)	(dB)	(Pass/Fail)	(dB)	(dBµV/m)	(dB)	(Pass/Fail)	(dB)	(cm)	(degrees)
11720.1	49.1	38.1	8.7	57.8	46.8	83.5	-25.7	PASS		63.5	-16.7	PASS		150	108
12012.6	54.5	49.3	8.6	63.1	57.9	83.5	-20.4	PASS	-20.4	63.5	-5.6	PASS	-5.6	150	70
17964.3	47.1	35.4	15.4	62.5	50.8	83.5	-21.0	PASS		63.5	-12.7	PASS		150	32

6-18GHz Vertical Data Table



6-18GHz Vertical Plot

Bureau Veritas Consumer Product Services Inc.

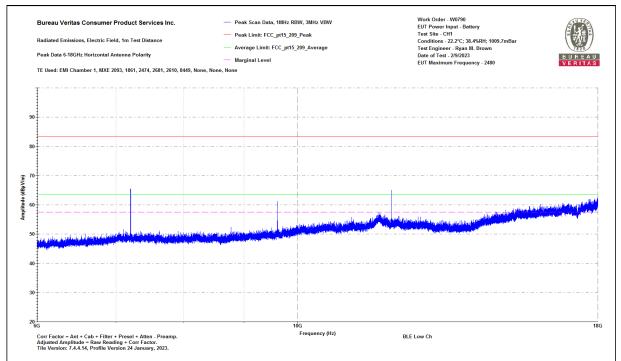
One Distribution Center Circle, #1 Littleton, MA Tel.: (978) 486-8880 Fax: (978) 486-8828





Bureau Ver	itas Consui	mer Produc	t Services In	IC.		Work Orde	er - W0790								
Radiated E	missions Ele	ectric Field	1m Distance	2		EUT Power	r Input - Batt	tery							
Top Peaks I	Horizontal	6-18GHz				Test Site -	CH1								
Notes:						Conditions	s - 22.2°C; 38	3.4%RH; 1009.	7mBar						
BLE Low Ch	1					Test Engin	eer - Ryan N	1. Brown							
0						Date of Te	st - 2/9/2023	3							
					Adjusted					Average			Average		
		Raw RMS	Correction	Adjusted	RMS	Peak Limit			Peak Worst	Limit	Average		Worst	Antenna	EUT
Frequency	Raw Peak	Raw RMS Average	Correction Factor	Adjusted Peak	-		Peak Margin	Peak Result	Peak Worst Margin	•	Average Margin	Average Result	•	Antenna Height	EUT Azimuth
Frequency (MHz)	Raw Peak (dBµV)			•	RMS		Peak Margin	Peak Result (Pass/Fail)		Limit	-	Average Result (Pass/Fail)	Worst		
		Average (dBµV)	Factor (dB/m)	Peak (dBµV/m)	RMS Average	FCC 15.209	Peak Margin		Margin	Limit FCC 15.209	Margin	-	Worst Margin	Height	Azimuth

6-18GHz Horizontal Data Table



6-18GHz Horizontal Plot

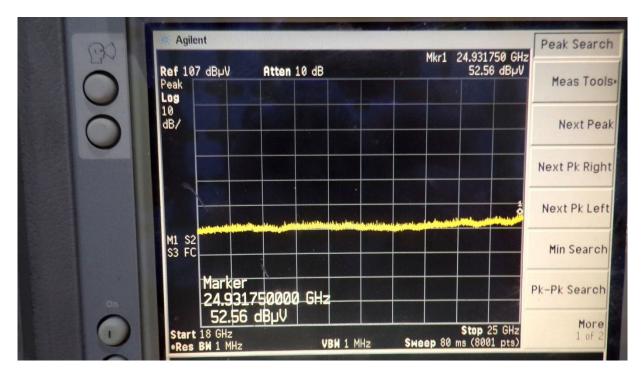
Bureau Veritas Consumer Product Services Inc.





Date	e: 29-Mar-23			Company:	Assa Ablo	у						v	Vork Order:	W0790
	r: Ryan M. Brow	n		EUT Desc:	CEM100						EUT Opera	ting Voltage	Frequency:	Battery
Temp	b: 21			Humidity:	43%			Pressure:	1005					
		Freque	ency Range:	18-25GHz							Measureme	nt Distance:	0.1 m	
Notes	BLE Low										EU	T Max Freq:	2480MHz	
Antenna		Peak	Average	Preamp	Antenna	Cable	Adjusted	Adjusted	FCC Clas	s B High Fro Peak	equency -	FCC Cla	ss B High Fi Average	requency
Polarization (H / V)	Frequency (MHz)	Reading (dBµV)	Reading (dBµV)	Factor (dB)	Factor (dB/m)	Factor (dB)	Peak Reading (dBµV/m)	Avg Reading (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Result (Pass/Fail)	Limit (dBµV/m)	Margin (dB)	Result (Pass/Fa
Noise Floor	24931.8	52.56	52.6	 41.2	40.3	 9.1	60.8	60.8	 103.5	-42.7	 Pass	 83.5	-22.7	 Pass
Tal	ble Result:		Pass	by	-22.7	dB					W	orst Freq:	24931.8	MHz
Test Site Analyze		1 v 1.017.2	225		Asset #23 18-26.5GH					Cable 2: Antenna:	 18-26.5GHz	Horn	Cable 3: Preselector: Copyright Curl	

18-25GHz Data Table



18-25GHz Plot

Bureau Veritas Consumer Product Services Inc.



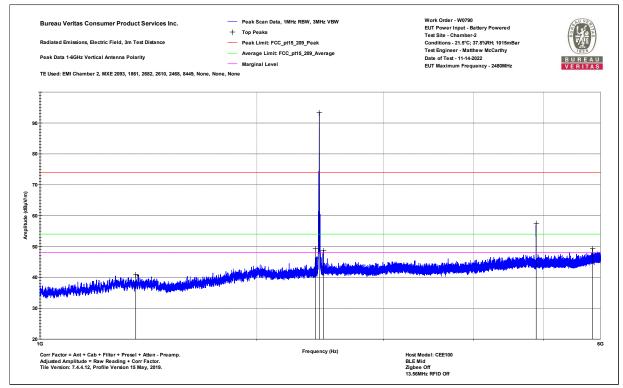


Channel 20

Host Model CEE100

Bureau Ver	ritas Consum	ner Product	Services Inc			Work Orde	er - W0790								
Radiated Er	missions Ele	ctric Field 3	m Distance			EUT Powe	r Input - Bati	ery Powered							
Top Peaks V	Vertical 1-60	GHz				Test Site -	Chamber-2								
Notes:						Conditions	- 21.5°C; 37	.8%RH; 1015n	nBar						
Host Mode	I: CEE100					Test Engine	eer - Matthe	w McCarthy							
BLE Mid						Date of Te	st - 11-14-20								
Zigbee Off															
					Adjusted					Average			Average		
		Raw RMS	Correction	Adjusted	RMS	Peak Limit			Peak Worst	Limit	Average		Worst	Antenna	
Frequency	Raw Peak	Average	Factor	Peak	Average		Peak Margin	Peak Result	Margin	FCC 15.209	Margin	Average Result	Margin	Height	EUT Azimuth
(MHz)	(dBµV)	(dBµV)	(dB/m)	(dBµV/m)	(dBµV/m)	(dBµV/m)	(dB)	(Pass/Fail)	(dB)	(dBµV/m)	(dB)	(Pass/Fail)	(dB)	(cm)	(degrees)
1358.13	48.3	36.6	-7.4	40.9	29.2	74	-33.1	PASS		54	-24.8	PASS		200	259
1358.13 2410.63		36.6 37.4	-7.4 -2.7	40.9 49.3	29.2 34.7	74 74	-33.1 -24.7	PASS PASS		54 54	-24.8 -19.3	PASS PASS		200 200	259 31
	52				-					-					
2410.63	52				-			PASS		-					
2410.63 2441.5	52 50.7	37.4	-2.7	49.3 48.6	34.7	74	-24.7	PASS FUNDAMENT	 AL	54	-19.3	PASS	-	200	31

1-6GHz Vertical Data Table



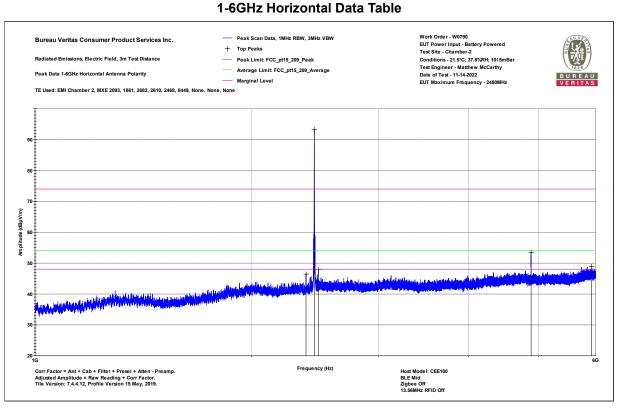
1-6GHz Vertical Plot





Bureau Veritas Consumer Product Services Inc. Radiated Emissions Electric Field 3m Distance Top Peaks Horizontal 1-6GHz Notes: Host Model: CEE100 BLE Mid Zigbee Off Work Order - W0790 EUT Power Input - Battery Powered Test Site - Chamber-2 Conditions - 21.5°C; 37.8%RH; 1015mBar Test Engineer - Matthew McCarthy Date of Test - 11-14-2022

Frequency (MHz)	Raw Peak (dBμV)	Raw RMS Average (dBμV)	Correction Factor (dB/m)	Adjusted Peak (dBµV/m)	Adjusted RMS Average (dBµV/m)	Peak Limit FCC 15.209 (dBµV/m)	Peak Margin (dB)	Peak Result (Pass/Fail)	Peak Worst Margin (dB)	Average Limit FCC 15.209 (dBµV/m)	Average Margin (dB)	Average Result (Pass/Fail)	Average Worst Margin (dB)	Antenna Height (cm)	EUT Azimuth (degrees)
2378.25		36.3			33.4	74	-27.5	PASS		54	-20.6	PASS		100	18
2441.5								FUNDAMENT	AL						
2473.75	50	37.1	-2.1	47.9	35	74	-26.1	PASS		54	-19	PASS		100	266
4883.13	52.2	46.2	1.4	53.6	47.6	74	-20.4	PASS	-20.4	54	-6.4	PASS	-6.4	300	18
5919.5	45.9	34	3	48.9	37	74	-25.1	PASS		54	-17	PASS		200	69



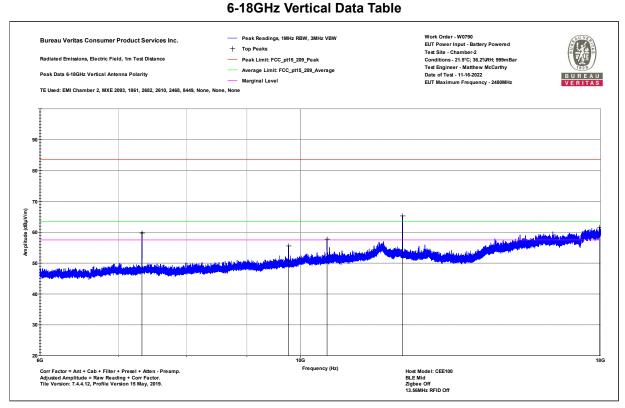
1-6GHz Horizontal Plot





Bureau Veritas Consumer Product Services Inc. Radiated Emissions Electric Field 3m Distance Vertical 6-18GHz Notes: Host Model: CEE100 BLE Mid Zigbee Off Work Order - W0790 EUT Power Input - Battery Powered Test Site - Chamber-2 Conditions - 21.5°C; 36.2%RH; 999mBar Test Engineer - Matthew McCarthy Date of Test - 11-16-2022

Frequency	Raw Peak	Raw RMS Average	Correction Factor	Adjusted Peak	Adjusted RMS Average		Peak Margin	Peak Result	Peak Worst Margin	Average Limit FCC 15.209	Average Margin	Average Result	Average Worst Margin		EUT Azimuth
(MHz)	(dBµV)	(dBµV)	(dB/m)	(dBµV/m)	(dBµV/m)	(dBµV/m)	(dB)	(Pass/Fail)	(dB)	(dBµV/m)	(dB)	(Pass/Fail)	(dB)	(cm)	(degrees)
7327.5	55.6	49.7	4.2	59.8	53.9	83.5	-23.7	PASS		63.5	-9.6	PASS		175	31
9766.2	49.8	43	5.7	55.5	48.7	83.5	-28	PASS		63.5	-14.8	PASS		175	315
10532.4	50.7	35.5	7.1	57.8	42.6	83.5	-25.7	PASS		63.5	-20.9	PASS		200	246
12212.7	56.8	51	8.5	65.3	59.5	83.5	-18.2	PASS	-18.2	63.5	-4	PASS	-4	150	56
17967.9	46.3	35	15.3	61.6	50.3	83.5	-21.9	PASS		63.5	-13.2	PASS		175	279



6-18GHz Vertical Plot

Bureau Veritas Consumer Product Services Inc.

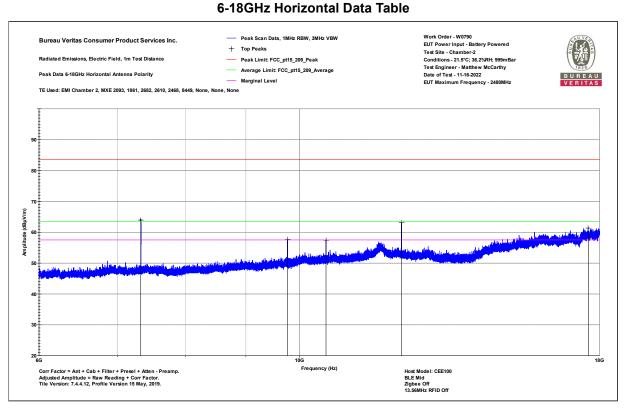
One Distribution Center Circle, #1 Littleton, MA Tel.: (978) 486-8880 Fax: (978) 486-8828





Bureau Veritas Consumer Product Services Inc. Radiated Emissions Electric Field 3m Distance Horizontal 6-18GHz Notes: Host Model: CEE100 BLE Mid Zigbee Off Work Order - W0790 EUT Power Input - Battery Powered Test Site - Chamber-2 Conditions - 21.5°C; 36.2%RH; 999mBar Test Engineer - Matthew McCarthy Date of Test - 11-16-2022

Frequency	Raw Peak	Raw RMS Average	Correction Factor	Adjusted Peak	Adjusted RMS Average	Peak Limit FCC 15.209	Peak Margin	Peak Result	Peak Worst Margin	Average Limit FCC 15.209	Average Margin	Average Result	Average Worst Margin	Antenna Height	EUT Azimuth
(MHz)	(dBµV)	(dBµV)	(dB/m)	(dBµV/m)	(dBµV/m)	(dBµV/m)	(dB)	(Pass/Fail)	(dB)	(dBµV/m)	(dB)	(Pass/Fail)	(dB)	(cm)	(degrees)
7324.5	59.7	54.1	4.2	63.9	58.3	83.5	-19.6	PASS	-19.6	63.5	-5.2	PASS	-5.2	150	17
9766.2	51.9	47.3	5.7	57.6	53	83.5	-25.9	PASS		63.5	-10.5	PASS		175	50
10531.5	50.3	34.7	7.1	57.4	41.8	83.5	-26.1	PASS		63.5	-21.7	PASS		100	18
12212.7	54.5	47	8.5	63	55.5	83.5	-20.5	PASS		63.5	-8	PASS		125	12
17608.8	46.3	34.7	15	61.3	49.7	83.5	-22.2	PASS		63.5	-13.8	PASS		200	286



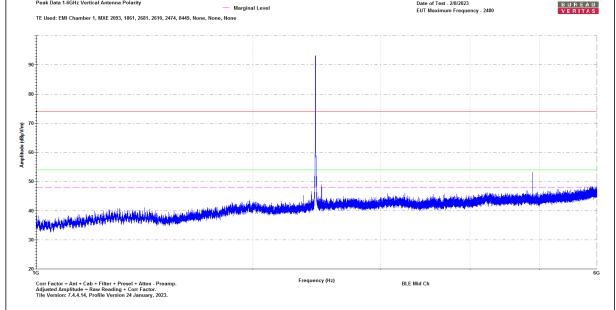
6-18GHz Horizontal Plot





Host Model CEB100

Bureau Ver	itas Consur	ner Product	t Services In	nc.		Work Orde	er - W0790								
Radiated E	missions Ele	ectric Field 3	3m Distance	5		EUT Power	Input - Batt	tery							
1-6GHz Ver	tical Data					Test Site - 0	CH1								
Notes:						Conditions	- 22.2°C; 38	.4%RH; 1009.	7mBar						
BLE Mid Ch						Test Engine	eer - Ryan N	1. Brown							
0						Date of Te	st - 2/8/2023	3							
					• 4* - 1 - 4					• • • • • • •			•		
		Raw RMS	Correction	Adjusted	Adjusted RMS	Peak Limit			Peak Worst	Average Limit	Average		Average Worst	Antenna	EUT
Frequency	Raw Peak	Average	Factor	Peak	Average		Peak Margin	Peak Result	Margin	FCC 15.209	Margin	Average Result	Margin	Height	Azimuth
(MHz)	(dBµV)	(dBµV)	(dB/m)	(dBµV/m)	(dBµV/m)	(dBµV/m)	(dB)	(Pass/Fail)	(dB)	(dBµV/m)	(dB)	(Pass/Fail)	(dB)	(cm)	(degrees)
2410.38	49.4	49.4	-2.8	46.6	46.6	74	-27.4	PASS		54	-7.4	PASS		200	133
2441.5								Fundament	al			•			
2490.13	51.3	36.9	-2.4	48.9	34.5	74	-25.1	PASS		54	-19.5	PASS		300	0
3246.88	47.3	47.3	-1.4	45.9	45.9	74	-28.1	PASS		54	-8.1	PASS		300	181
4885	54.7	48.1	0.6	55.3	48.7	74	-18.7	PASS	-18.7	54	-5.3	PASS	-5.3	200	59
5997.13	45.4	36.6	3.0	48.4	39.6	74	-25.6	PASS		54	-14.4	PASS		100	221
						1-6GH	lz Vert	ical Da	ta Tab	le					
В	ıreau Veritas	Consumer P	roduct Servi	ces Inc.	-	— Peak Scan I	Data, 1MHz RBW	/, 3MHz VBW		E	/ork Order - W			(An	No.
Ra	diated Emissior	ns, Electric Field	d, 3m Test Dista	ince	-		FCC_pt15_209_F nit: FCC_pt15_20			c		2°C; 38.4%RH; 1009.7 Ryan M. Brown	nBar		
Pe	ak Data 1-6GHz	Vertical Antenn	na Polarity			Junear Cli					ate of Test - 2/			BUB	EAU



1-6GHz Vertical Plot

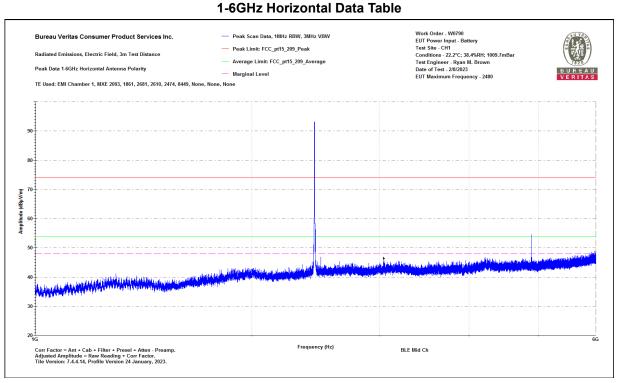
Bureau Veritas Consumer Product Services Inc.





Bureau Veritas Consumer Product Services Inc. Radiated Emissions Electric Field 3m Distance 1-6GHz Horizontal Data Notes: BLE Mid Ch 0 Work Order - W0790 EUT Power Input - Battery Test Site - CH1 Conditions - 22.2°C; 38.4%RH; 1009.7mBar Test Engineer - Ryan M. Brown Date of Test - 2/8/2023

		Raw RMS	Correction	Adjusted	Adjusted RMS	Peak Limit			Peak Worst	Average Limit	Average		Average Worst	Antenna	EUT
Frequency	Raw Peak	Average	Factor	Peak	Average	FCC 15.209	Peak Margin	Peak Result	Margin	FCC 15.209	Margin	Average Result	Margin	Height	Azimuth
(MHz)	(dBµV)	(dBµV)	(dB/m)	(dBµV/m)	(dBµV/m)	(dBµV/m)	(dB)	(Pass/Fail)	(dB)	(dBµV/m)	(dB)	(Pass/Fail)	(dB)	(cm)	(degrees)
1295.13	48.6	48.6	-7.6	41.0	41.0	74	-33.0	PASS		54	-13.0	PASS		200	206
2441.5								Fundamenta	al						
2490.38	49.2	49.2	-2.4	46.8	46.8	74	-27.2	PASS		54	-7.2	PASS		200	130
3047.5	47.7	47.7	-1.3	46.4	46.4	74	-27.6	PASS		54	-7.6	PASS		200	54
4885	54.0	46.4	0.6	54.6	47.0	74	-19.4	PASS	-19.4	54	-7.0	PASS	-7.0	300	329
5971	45.9	36.3	3.0	48.9	39.3	74	-25.1	PASS		54	-14.7	PASS		300	296



1-6GHz Horizontal Plot

Bureau Veritas Consumer Product Services Inc.

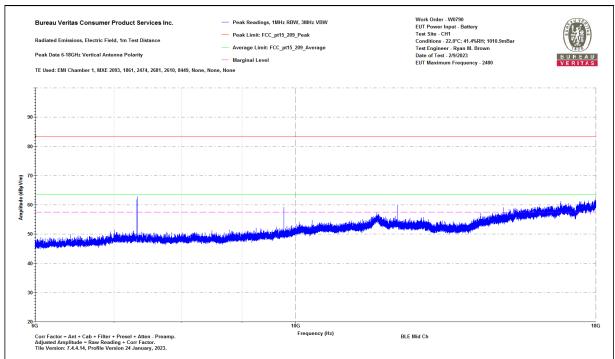




Bureau Veritas Consumer Product Services Inc. Radiated Emissions Electric Field 1m Distance Top Peaks Vertical 6-18GHz Notes: BLE Mid Ch 0 Work Order - W0790 EUT Power Input - Battery Test Site - CH1 Conditions - 22.0°C; 41.4%RH; 1010.9mBar Test Engineer - Ryan M. Brown Date of Test - 2/9/2023

					Adjusted					Average			Average		
		Raw RMS	Correction	Adjusted	RMS	Peak Limit			Peak Worst	Limit	Average		Worst	Antenna	EUT
Frequency	Raw Peak	Average	Factor	Peak	Average	FCC 15.209	Peak Margin	Peak Result	Margin	FCC 15.209	Margin	Average Result	Margin	Height	Azimuth
(MHz)	(dBµV)	(dBµV)	(dB/m)	(dBµV/m)	(dBµV/m)	(dBµV/m)	(dB)	(Pass/Fail)	(dB)	(dBµV/m)	(dB)	(Pass/Fail)	(dB)	(cm)	(degrees)
7327.5	58.0	52.7	4.8	62.8	57.5	83.5	-20.7	PASS		63.5	-6.0	PASS	-6.0	185	0
12207.6	54.0	46.4	9.1	63.1	55.5	83.5	-20.4	PASS	-20.4	63.5	-8.0	PASS		187	70
17987.1	46.6	35.4	15.6	62.2	51.0	83.5	-21.3	PASS		63.5	-12.5	PASS		175	208

6-18GHz Vertical Data Table



6-18GHz Vertical Plot

Bureau Veritas Consumer Product Services Inc.

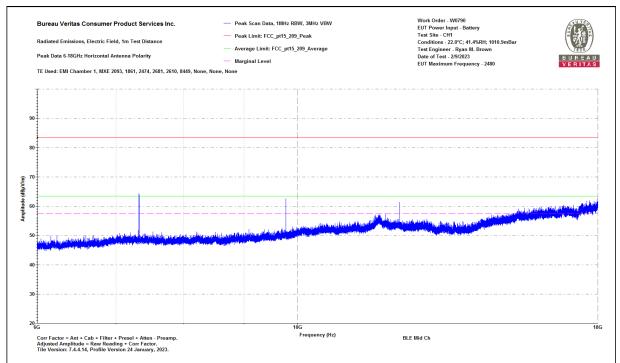




Bureau Veritas Consumer Product Services Inc. Radiated Emissions Electric Field 1m Distance Top Peaks Horizontal 6-18GHz Notes: BLE Mid Ch 0 Work Order - W0790 EUT Power Input - Battery Test Site - CH1 Conditions - 22.0°C; 41.4%RH; 1010.9mBar Test Engineer - Ryan M. Brown Date of Test - 2/9/2023

					Adjusted					Average			Average		
		Raw RMS	Correction	Adjusted	RMS	Peak Limit			Peak Worst	Limit	Average		Worst	Antenna	EUT
Frequency	Raw Peak	Average	Factor	Peak	Average	FCC 15.209	Peak Margin	Peak Result	Margin	FCC 15.209	Margin	Average Result	Margin	Height	Azimuth
(MHz)	(dBµV)	(dBµV)	(dB/m)	(dBµV/m)	(dBµV/m)	(dBµV/m)	(dB)	(Pass/Fail)	(dB)	(dBµV/m)	(dB)	(Pass/Fail)	(dB)	(cm)	(degrees)
7324.8	59.5	54.5	4.8	64.3	59.3	83.5	-19.2	PASS	-19.2	63.5	-4.2	PASS	-4.2	150	0
12207.6	52.2	46.8	9.1	61.3	55.9	83.5	-22.2	PASS		63.5	-7.6	PASS		175	0
17976.9	46.9	35.8	15.5	62.4	51.3	83.5	-21.1	PASS		63.5	-12.2	PASS		150	70

6-18GHz Horizontal Data Table



6-18GHz Horizontal Plot

Bureau Veritas Consumer Product Services Inc.

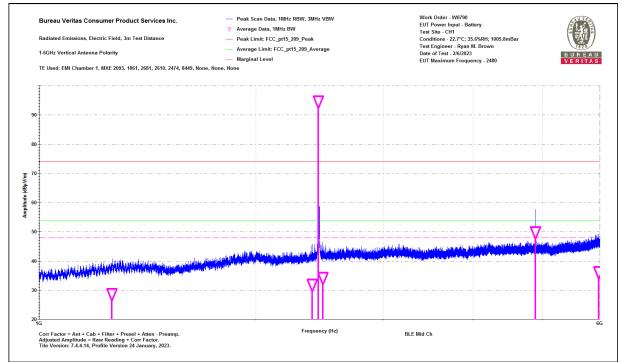




Host Model CEM100

Bureau Vei	ritas Consui	mer Produc	t Services Ir	nc.		Work Orde	er - W0790								
Radiated E	missions Ele	ectric Field 3	3m Distance	9		EUT Powe	r Input - Bat	tery							
1-6GHz Vei	rtical Data					Test Site -	CH1								
Notes:						Conditions	s - 22.7°C; 35	5.6%RH; 1005.	8mBar						
BLE Mid Ch	n					Test Engin	eer - Ryan N	1. Brown							
0						Date of Te	st - 2/6/202	3							
					Adjusted					Average			Average		
_		Raw RMS	Correction	Adjusted	RMS	Peak Limit			Peak Worst	Limit	Average		Worst	Antenna	EUT
Frequency	Raw Peak	Average	Factor	Peak	RMS Average	FCC 15.209	Peak Margin	Peak Result	Margin	Limit FCC 15.209	Margin	Average Result	Worst Margin	Height	Azimuth
(MHz)	(dBµV)	Average (dBµV)	Factor (dB/m)	Peak (dBµV/m)	RMS Average (dBµV/m)	FCC 15.209 (dBµV/m)	(dB)	(Pass/Fail)		Limit FCC 15.209 (dBµV/m)	Margin (dB)	(Pass/Fail)	Worst	Height (cm)	Azimuth (degrees)
		Average (dBµV)	Factor (dB/m)	Peak (dBµV/m)	RMS Average	FCC 15.209			Margin	Limit FCC 15.209	Margin		Worst Margin	Height	Azimuth
(MHz)	(dBµV) 46.6	Average (dBμV) 38.4	Factor (dB/m) -7.7	Peak (dBμV/m) 38.9	RMS Average (dBµV/m)	FCC 15.209 (dBµV/m)	(dB)	(Pass/Fail)	Margin (dB)	Limit FCC 15.209 (dBµV/m)	Margin (dB)	(Pass/Fail)	Worst Margin (dB)	Height (cm)	Azimuth (degrees)
(MHz) 1261.3	(dBµV) 46.6	Average (dBμV) 38.4	Factor (dB/m) -7.7	Peak (dBμV/m) 38.9	RMS Average (dBµV/m) 30.7	FCC 15.209 (dBµV/m) 74	(dB) -35.1	(Pass/Fail) PASS	Margin (dB) 	Limit FCC 15.209 (dBµV/m) 54	Margin (dB) -23.3	(Pass/Fail) PASS	Worst Margin (dB)	Height (cm) 100	Azimuth (degrees) 301
(MHz) 1261.3 2394.5	(dBµV) 46.6	Average (dBµV) 38.4 37.6	Factor (dB/m) -7.7 -3.0	Peak (dBμV/m) 38.9 41.2	RMS Average (dBµV/m) 30.7	FCC 15.209 (dBµV/m) 74	(dB) -35.1	(Pass/Fail) PASS PASS	Margin (dB) 	Limit FCC 15.209 (dBµV/m) 54	Margin (dB) -23.3	(Pass/Fail) PASS	Worst Margin (dB)	Height (cm) 100	Azimuth (degrees) 301
(MHz) 1261.3 2394.5 2441.5	(dBµV) 46.6 44.2	Average (dBμV) 38.4 37.6 36.3	Factor (dB/m) -7.7 -3.0 -2.5	Peak (dBμV/m) 38.9 41.2 40.9	RMS Average (dBμV/m) 30.7 34.6	FCC 15.209 (dBμV/m) 74 74	(dB) -35.1 -32.8	(Pass/Fail) PASS PASS Fundament	Margin (dB) al	Limit FCC 15.209 (dBµV/m) 54 54	Margin (dB) -23.3 -19.4	(Pass/Fail) PASS PASS	Worst Margin (dB) 	Height (cm) 100 292	Azimuth (degrees) 301 25

1-6GHz Vertical Data Table



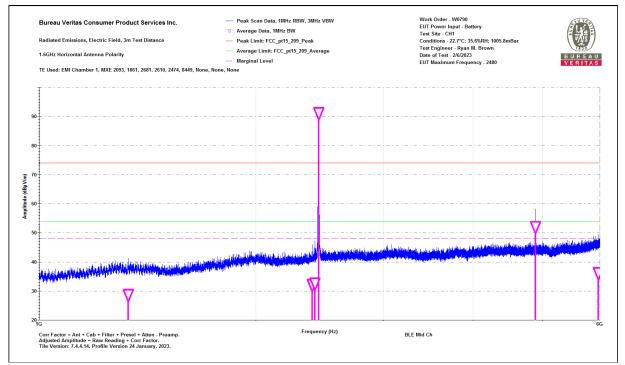
1-6GHz Vertical Plot





Bureau Ver Radiated E 1-6GHz Ho Notes: BLE Mid Ch 0	missions Ele rizontal Dat	ectric Field 3				EUT Power Test Site - Conditions Test Engin		5.6%RH; 1005. 1. Brown	8mBar						
Frequency (MHz)	Raw Peak (dBµV)	Raw RMS Average (dBμV)	Correction Factor (dB/m)	Adjusted Peak (dBµV/m)	Adjusted RMS Average (dBµV/m)	Peak Limit FCC 15.209 (dBµV/m)	Peak Margin (dB)	Peak Result (Pass/Fail)	Peak Worst Margin (dB)	Average Limit FCC 15.209 (dBµV/m)	Average Margin (dB)	Average Result (Pass/Fail)	Average Worst Margin (dB)	Antenna Height (cm)	EUT Azimuth (degrees)
1329.7	44.9	38.3	-7.7	37.2	30.6	74	-36.8	PASS		54	-23.4	PASS		101	81
2394	44.9	36.5	-3.0	41.9	33.5	74	-32.1	PASS		54	-20.5	PASS		299	275
2414.4	46.3	36.8	-2.8	43.5	34.0	74	-30.5	PASS		54	-20.0	PASS		293	295
2442.5						•		Fundament	al			•		•	
4885	58.1	52.4	0.6	58.7	53.0	74	-15.3	PASS	-15.3	54	-1.0	PASS	-1.0	300	289
					37.5		1		1	54	-16.5	PASS		125	45

1-6GHz Horizontal Data Table



1-6GHz Horizontal Plot

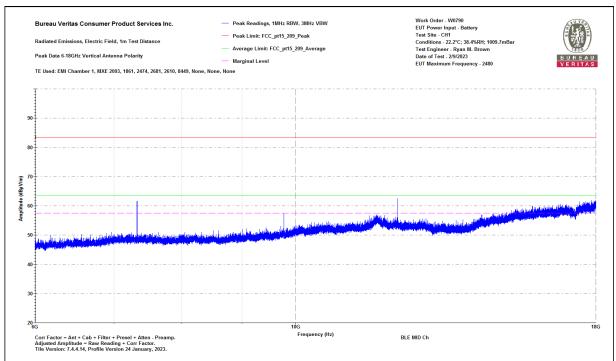




Bureau Veritas Consumer Product Services Inc. Radiated Emissions Electric Field 1m Distance Top Peaks Vertical 6-18GHz Notes: BLE MID Ch 0 Work Order - W0790 EUT Power Input - Battery Test Site - CH1 Conditions - 22.2°C; 38.4%RH; 1009.7mBar Test Engineer - Ryan M. Brown Date of Test - 2/9/2023

					Adjusted					Average			Average		
		Raw RMS	Correction	Adjusted	RMS	Peak Limit			Peak Worst	Limit	Average		Worst	Antenna	EUT
Frequency	Raw Peak	Average	Factor	Peak	Average	FCC 15.209	Peak Margin	Peak Result	Margin	FCC 15.209	Margin	Average Result	Margin	Height	Azimuth
(MHz)	(dBµV)	(dBµV)	(dB/m)	(dBµV/m)	(dBµV/m)	(dBµV/m)	(dB)	(Pass/Fail)	(dB)	(dBµV/m)	(dB)	(Pass/Fail)	(dB)	(cm)	(degrees)
7327.5	56.8	51.8	4.8	61.6	56.6	83.5	-21.9	PASS		63.5	-6.9	PASS		150	297
12207.6	53.3	48.5	9.1	62.4	57.6	83.5	-21.1	PASS	-21.1	63.5	-5.9	PASS	-5.9	150	69
17841.9	47.3	35.1	14.6	61.9	49.7	83.5	-21.6	PASS		63.5	-13.8	PASS		125	95

6-18GHz Vertical Data Table



6-18GHz Vertical Plot

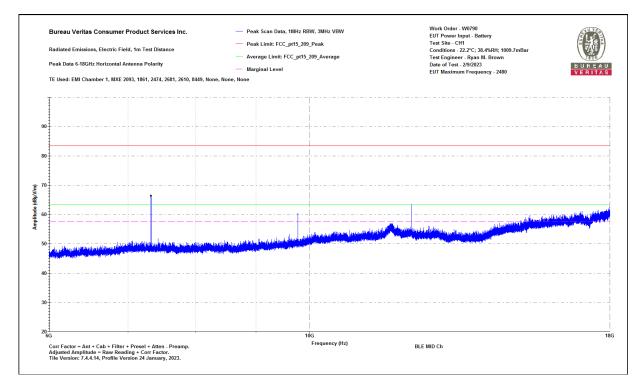
Bureau Veritas Consumer Product Services Inc.





Bureau Ver	ritas Consur	mer Produc	t Services Ir	nc.		Work Orde	er - W0790								
Radiated E	missions Ele	ectric Field	1m Distance	е		EUT Power	r Input - Bat	tery							
Top Peaks	Horizontal 6	5-18GHz				Test Site - 0	CH1								
Notes:						Conditions	- 22.2°C; 38	3.4%RH; 1009.	7mBar						
BLE MID CH	h					Test Engine	eer - Ryan N	1. Brown							
0	0					0	st - 2/9/202								
ľ	0					Date of Te.	51 2, 5, 202	-							
														•	
					Adjusted					Average			Average		
		Raw RMS	Correction	Adjusted	RMS	Peak Limit			Peak Worst	Limit	Average		Worst	Antenna	EUT
Frequency	Raw Peak	Raw RMS Average	Correction Factor	Adjusted Peak	-		Peak Margin	Peak Result	Peak Worst Margin	-	Average Margin	Average Result	•	Antenna Height	EUT Azimuth
Frequency (MHz)	Raw Peak (dBµV)				RMS		Peak Margin (dB)	Peak Result (Pass/Fail)		Limit	•	Average Result (Pass/Fail)	Worst		-
	(dBµV)	Average (dBµV)	Factor (dB/m)	Peak (dBµV/m)	RMS Average	FCC 15.209	•		Margin	Limit FCC 15.209	Margin	•	Worst Margin	Height	Azimuth
(MHz)	(dBµV) 61.6	Average (dBμV) 57.3	Factor (dB/m) 4.8	Peak (dBµV/m)	RMS Average (dBµV/m)	FCC 15.209 (dBµV/m)	(dB)	(Pass/Fail)	Margin (dB)	Limit FCC 15.209 (dBµV/m)	Margin (dB)	(Pass/Fail)	Worst Margin (dB)	Height (cm)	Azimuth (degrees)
(MHz) 7324.5	(dBµV) 61.6 54.3	Average (dBμV) 57.3 43.5	Factor (dB/m) 4.8 9.1	Реак (dBµV/m) 66.4 63.4	RMS Average (dBµV/m) 62.1	FCC 15.209 (dBμV/m) 83.5	(dB) -17.1	(Pass/Fail) PASS	Margin (dB) -17.1	Limit FCC 15.209 (dBµV/m) 63.5	Margin (dB) -1.4	(Pass/Fail) PASS	Worst Margin (dB) -1.4	Height (cm) 150	Azimuth (degrees) 32





6-18GHz Horizontal Plot

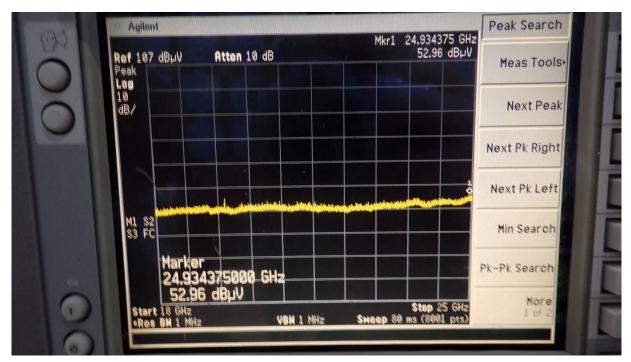
Bureau Veritas Consumer Product Services Inc.





Date	e: 29-Mar-23			Company:	Assa Ablo	у						V	Vork Order:	W0790
Engineer	Ryan M. Brow	n		EUT Desc:	CEM100						EUT Opera	ting Voltage	Frequency:	Battery
Temp	: 21			Humidity:	43%			Pressure:	1005					
		Freque	ency Range:	18-25GHz							Measureme	nt Distance:	0.1 m	
Notes	: BLE Mid										EU	T Max Freq:	2480MHz	
A-1		Prote				Cable	Adheadard	Adlandard	FCC Clas	s B High Fr	equency -	FCC Cla	ss B High Fi	requency
Antenna Polarization	Frequency	Peak Reading	Average Reading	Preamp Factor	Antenna Factor	Factor	Adjusted Peak Reading	Adjusted Avg Reading	Limit	Peak Margin	Result	Limit	Average Margin	Result
(H / V)	(MHz)	(dBµV)	(dBµV)	(dB)	(dB/m)	(dB)	(dBµV/m)	(dBµV/m)	(dBµV/m)	(dB)	(Pass/Fail)	(dBµV/m)	(dB)	(Pass/Fa
Noise Floor														
	24934.4	52.96	53.0	41.1	40.3	9.1	61.3	61.3	103.5	-42.2	Pass	83.5	-22.2	Pass
Tal	ble Result:		Pass	by	-22.2	dB					W	orst Freq:	24934.4	MHz
Test Site	: EMI Chamber	1		Cable 1:	Asset #23	23				Cable 2:			Cable 3:	
	: Gold			Decomposition	18-26.5GH					A	18-26.5GHz	l la un	Preselector:	

18-25GHz Data Table



18-25GHz Plot

Bureau Veritas Consumer Product Services Inc.



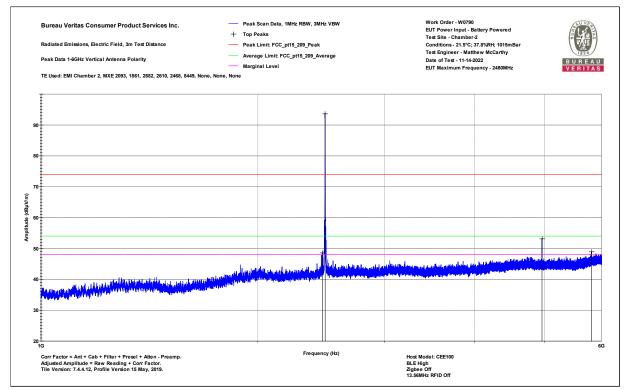


Channel 39

Host Model CEE100

					· · · · · · · · · · · · · · · · · · ·							·			
Bureau Ver	ritas Consun	ner Product	Services Inc	.		Work Orde	er - W0790								
Radiated E	missions Ele	ctric Field 3	m Distance			EUT Power	r Input - Bat	tery Powered							
Top Peaks	Vertical 1-6	GHz				Test Site -	Chamber-2								
Notes:						Conditions	- 21.5°C; 37	.8%RH; 1015n	nBar						
Host Mode	el: CEE100					Test Engine	eer - Matthe	w McCarthy							
BLE High						Date of Te	st - 11-14-20								
Zigbee Off															
Ligocc on															
					Adjusted					Average			Average		
		Raw RMS	Correction	Adjusted	RMS	Peak Limit			Peak Worst	-	Average		Worst	Antenna	
Frequency	Raw Peak	Average	Factor	Peak	Average	FCC 15.209	Peak Margin	Peak Result	Margin	FCC 15.209	Margin	Average Result	Margin	Height	EUT Azimuth
(MHz)	(dBµV)	(dBµV)	(dB/m)	(dBµV/m)	(dBµV/m)	(dBµV/m)	(dB)	(Pass/Fail)	(dB)	(dBµV/m)	(dB)	(Pass/Fail)	(dB)	(cm)	(degrees)
2458.88	50.8	35.7	-2.2	48.6	33.5	74	-25.4	PASS		54	-20.5	PASS		200	50
2480.5					•	•		FUNDAMENT	AL						•
	1			1						5.4	-7.3	DACC	7.0		1
4961.13	51.4	44.9	1.8	53.2	46.7	74	-20.8	PASS	-20.8	54	-/.3	PASS	-7.3	200	50
4961.13 5810.5		-	-		46.7 36.8	74	-20.8	PASS	-20.8	54	-7.3	PASS	-7.3	200	50 170

1-6GHz Vertical Data Table

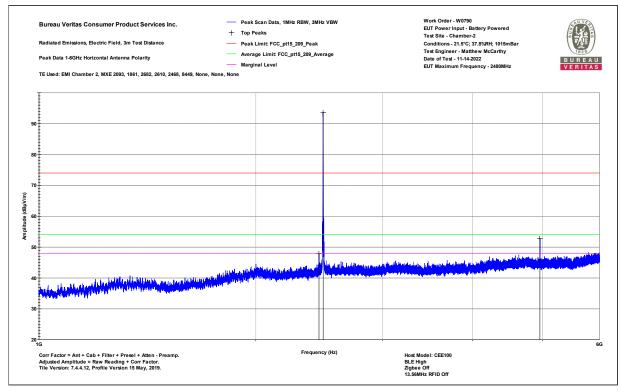


1-6GHz Vertical Plot





Bureau Ver	itas Consum	ner Product	Services Inc			Work Orde	er - W0790								
Radiated Er	missions Ele	ctric Field 3	m Distance			EUT Powe	r Input - Bati	ery Powered							
Top Peaks I	Horizontal 1	-6GHz				Test Site -	Chamber-2								
Notes:						Conditions	- 21.5°C; 37	.8%RH; 1015n	nBar						
Host Mode	I: CEE100					Test Engin	eer - Matthe	w McCarthy							
BLE High	0					Date of Te	st - 11-14-20								
Zigbee Off															
0															
										Average			Average		
	Row PMS Correction Adjusted PMS														
		Raw RMS	Correction	Adjusted	RMS	Peak Limit			Peak Worst	Limit	Average		Worst	Antenna	
Frequency	Raw Peak	Raw RMS Average	Correction Factor	Adjusted Peak			Peak Margin	Peak Result	Peak Worst Margin	Limit FCC 15.209	Average Margin	Average Result	Worst Margin	Antenna Height	EUT Azimutł
Frequency (MHz)	Raw Peak (dBµV)				RMS			Peak Result (Pass/Fail)			•	Average Result (Pass/Fail)			EUT Azimuth (degrees)
	(dBµV)	Average	Factor	Peak (dBμV/m)	RMS Average	FCC 15.209	Peak Margin		Margin	FCC 15.209	Margin	-	Margin	Height	
(MHz)	(dBµV) 50.3	Average (dBµV)	Factor (dB/m)	Peak (dBμV/m)	RMS Average (dBµV/m)	FCC 15.209 (dBµV/m)	Peak Margin (dB)	(Pass/Fail)	Margin (dB) 	FCC 15.209 (dBµV/m)	Margin (dB)	(Pass/Fail)	Margin (dB)	Height (cm)	(degrees)
(MHz) 2447.63	(dBµV) 50.3	Average (dBµV)	Factor (dB/m) -2.4	Peak (dBμV/m) 47.9	RMS Average (dBµV/m)	FCC 15.209 (dBµV/m)	Peak Margin (dB)	(Pass/Fail) PASS	Margin (dB) 	FCC 15.209 (dBµV/m)	Margin (dB)	(Pass/Fail)	Margin (dB)	Height (cm)	(degrees)
(MHz) 2447.63 2480.5	(dBµV) 50.3	Average (dBμV) 36.1	Factor (dB/m) -2.4	Peak (dBμV/m) 47.9	RMS Average (dBμV/m) 33.7 47.8	FCC 15.209 (dBμV/m) 74 74	Peak Margin (dB) -26.1 -21.1	(Pass/Fail) PASS FUNDAMENT	Margin (dB) AL -21.1	FCC 15.209 (dBμV/m) 54 54	Margin (dB) -20.3	(Pass/Fail) PASS	Margin (dB) 	Height (cm) 200	(degrees) 146



1-6GHz Horizontal Plot

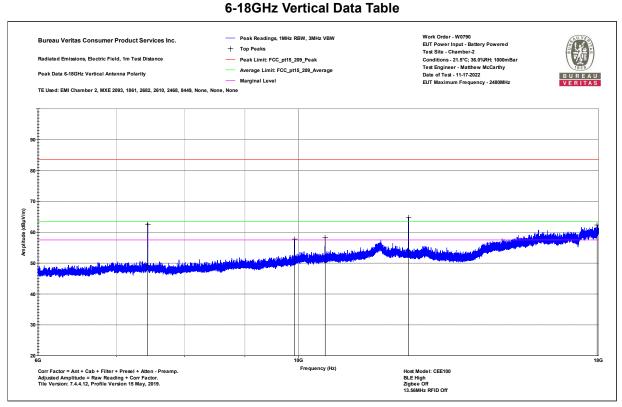
Bureau Veritas Consumer Product Services Inc.





Bureau Veritas Consumer Product Services Inc. Radiated Emissions Electric Field 3m Distance Vertical 6-18GHz Notes: Host Model: CEE100 BLE High Zigbee Off Work Order - W0790 EUT Power Input - Battery Powered Test Site - Chamber-2 Conditions - 21.5°C; 36.0%RH; 1000mBar Test Engineer - Matthew McCarthy Date of Test - 11-17-2022

					Adjusted					Average			Average		
		Raw RMS	Correction	Adjusted	RMS	Peak Limit			Peak Worst	Limit	Average		Worst	Antenna	
Frequency	Raw Peak	Average	Factor	Peak	Average	FCC 15.209	Peak Margin	Peak Result	Margin	FCC 15.209	Margin	Average Result	Margin	Height	EUT Azimuth
(MHz)	(dBµV)	(dBµV)	(dB/m)	(dBµV/m)	(dBµV/m)	(dBµV/m)	(dB)	(Pass/Fail)	(dB)	(dBµV/m)	(dB)	(Pass/Fail)	(dB)	(cm)	(degrees)
7438.5	58.5	52.9	4.1	62.6	57	83.5	-20.9	PASS		63.5	-6.5	PASS		175	13
9921.9	51.9	46.9	5.8	57.7	52.7	83.5	-25.8	PASS		63.5	-10.8	PASS		175	315
10535.4	51.1	35.3	7.1	58.2	42.4	83.5	-25.3	PASS		63.5	-21.1	PASS		100	112
12402.6	56.4	49.1	8.4	64.8	57.5	83.5	-18.7	PASS	-18.7	63.5	-6	PASS	-6	150	55
17953.5	47.2	35.1	15.1	62.3	50.2	83.5	-21.2	PASS		63.5	-13.3	PASS		100	266



6-18GHz Vertical Plot

Bureau Veritas Consumer Product Services Inc.

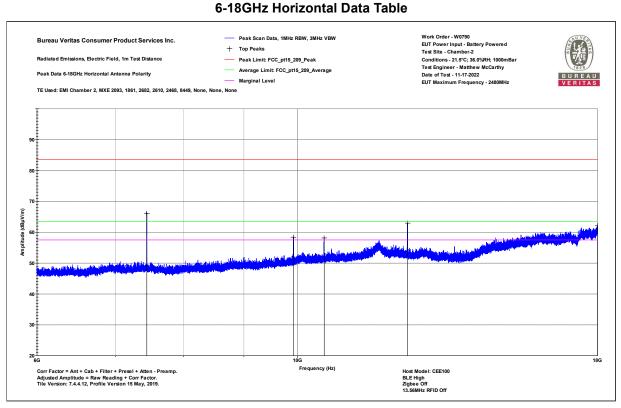
One Distribution Center Circle, #1 Littleton, MA Tel.: (978) 486-8880 Fax: (978) 486-8828





Bureau Veritas Consumer Product Services Inc. Radiated Emissions Electric Field 3m Distance Horizontal 6-18GHz Notes: Host Model: CEE100 BLE High Zigbee Off Work Order - W0790 EUT Power Input - Battery Powered Test Site - Chamber-2 Conditions - 21.5°C; 36.0%RH; 1000mBar Test Engineer - Matthew McCarthy Date of Test - 11-17-2022

Frequency (MHz)	Raw Peak (dBµV)	Raw RMS Average (dBµV)	Correction Factor (dB/m)	Adjusted Peak (dBµV/m)	Adjusted RMS Average (dBµV/m)	Peak Limit FCC 15.209 (dBµV/m)	Peak Margin (dB)	Peak Result (Pass/Fail)	Peak Worst Margin (dB)	Average Limit FCC 15.209 (dBµV/m)	Average Margin (dB)	Average Result (Pass/Fail)	Average Worst Margin (dB)	Antenna Height (cm)	EUT Azimuth (degrees)
7441.5		56.7		66.2	60.8	83.5	-17.3	PASS	-17.3	63.5	-2.7	PASS	-2.7	150	18
9918		46.7		58.5	52.5	83.5	-25	PASS		63.5	-11	PASS		175	48
10535.4		34.5	7.1	58.1	41.6	83.5	-25.4	PASS		63.5	-21.9	PASS		100	229
12402.3	54.5	48.4	8.4	62.9	56.8	83.5	-20.6	PASS		63.5	-6.7	PASS		175	30
18000	46.3	35.8	15.7	62	51.5	83.5	-21.5	PASS		63.5	-12	PASS		150	95



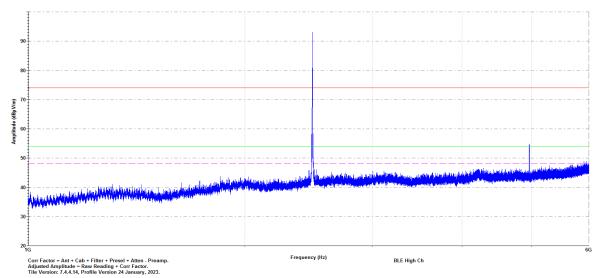
6-18GHz Horizontal Plot





Host Model CEB100

Bureau Ver	itas Consur	ner Product	Services In	IC.		Work Orde	er - W0790								
Radiated Er	missions Ele	ectric Field 3	8m Distance	2		EUT Power	· Input - Batt	ery							
1-6GHz Ver	tical Data					Test Site - 0	CH1								
Notes:						Conditions	- 22.2°C; 38	.4%RH; 1009.	7mBar						
BLE High Ch	n					Test Engine	eer - Ryan M	. Brown							
0						Date of Te	st - 2/8/2023	8							
Frequency	Raw Peak	Raw RMS Average	Correction Factor	Adjusted Peak	Adjusted RMS Average	Peak Limit FCC 15.209	Peak Margin	Peak Result	Peak Worst Margin	Average Limit FCC 15.209	Average Margin	Average Result	Average Worst Margin	Antenna Height	EUT Azimuth
(MHz)	(dBµV)	(dBµV)	(dB/m)	(dBµV/m)	(dBµV/m)	(dBµV/m)	(dB)	(Pass/Fail)	(dB)	(dBµV/m)	(dB)	(Pass/Fail)	(dB)	(cm)	(degrees
1308.13	48.7	48.7	-7.7	41.0	41.0	74	-33.0	PASS		54	-13.0	PASS		200	315
1437.13	48.4	48.4	-7.5	40.9	40.9	74	-33.1	PASS		54	-13.1	PASS		200	95
1847.88	48.3	48.3	-4.5	43.8	43.8	74	-30.2	PASS		54	-10.2	PASS		300	221
2480.5								Fundament	al						
4959.25	56.4	50.1	1.0	57.4	51.1	74	-16.7	PASS	-16.7	54	-2.9	PASS	-2.9	200	57
5908.38	46.1	36.0	2.9	49.0	38.9	74	-25.0	PASS		54	-15.1	PASS		100	182
						1-6GH	lz Vert	ical Da	ta Tab	le					
		Consumer P					Data, 1MHz RBW FCC pt15 209 F			E	Vork Order - Wo UT Power Inpu est Site - CH1			and the second s	
Rad	diated Emission	ns, Electric Field	l, 3m Test Dista	nce								°C; 38.4%RH; 1009.7r	nBar		20 /
Pea	ak Data 1-6GHz	Vertical Anten	na Polarity		_	 Average Lin Marginal Le 	nit: FCC_pt15_20 wel	a [–] evelaĝe		0	est Engineer - I ate of Test - 2/8 UT Maximum F			BUF	EAU



1-6GHz Vertical Plot

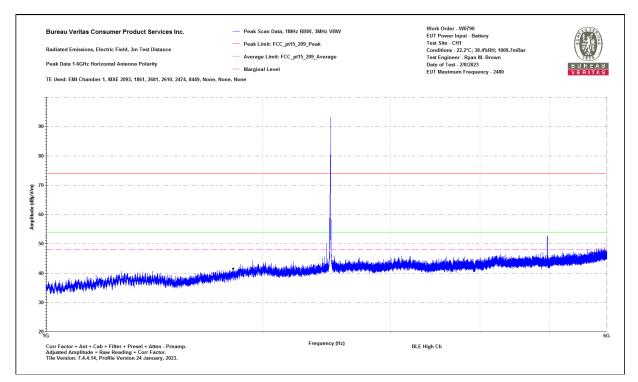
Bureau Veritas Consumer Product Services Inc.





Bureau Ver	ritas Consur	ner Product	Services In	с.		Work Orde	er - W0790								
Radiated E	missions Ele	ectric Field 3	8m Distance			EUT Power	r Input - Batt	ery							
1-6GHz Ho	rizontal Dat	а				Test Site -	CH1								
Notes:						Conditions	- 22.2°C; 38	.4%RH; 1009.3	7mBar						
BLE High Cl	h					Test Engin	eer - Ryan N	l. Brown							
0	0					Date of Te	st - 2/8/2023	3							
					Adjusted					Average			Average		
		Raw RMS	Correction	Adjusted	RMS	Peak Limit			Peak Worst	Limit	Average		Worst	Antenna	EUT
Frequency	Raw Peak	Raw RMS Average	Correction Factor	Adjusted Peak	RMS Average		Peak Margin	Peak Result	Peak Worst Margin	Limit FCC 15.209	Average Margin	Average Result	Worst Margin	Antenna Height	EUT Azimuth
Frequency (MHz)	Raw Peak (dBµV)			•				Peak Result (Pass/Fail)			•	Average Result (Pass/Fail)			-
	(dBµV)	Average (dBμV)	Factor (dB/m)	Peak (dBµV/m)	Average	FCC 15.209	Peak Margin		Margin	FCC 15.209	Margin	-	Margin	Height	Azimuth
(MHz)	(dBµV) 52.9	Average (dBμV)	Factor (dB/m)	Peak (dBµV/m)	Average (dBμV/m)	FCC 15.209 (dBµV/m)	Peak Margin (dB)	(Pass/Fail)	Margin (dB) 	FCC 15.209 (dBµV/m)	Margin (dB)	(Pass/Fail)	Margin (dB)	Height (cm)	Azimuth (degrees)
(MHz) 2448.38	(dBµV) 52.9	Average (dBμV)	Factor (dB/m) -2.6	Peak (dBµV/m)	Average (dBμV/m)	FCC 15.209 (dBµV/m)	Peak Margin (dB)	(Pass/Fail) PASS	Margin (dB) 	FCC 15.209 (dBµV/m)	Margin (dB)	(Pass/Fail)	Margin (dB)	Height (cm)	Azimuth (degrees)





1-6GHz Horizontal Plot



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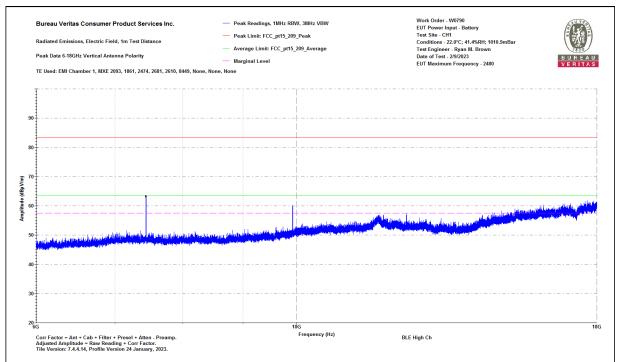
Test Report for Assa Abloy Inc. Report No. EW0790-2 Issue 3



Bureau Veritas Consumer Product Services Inc. Radiated Emissions Electric Field 1m Distance Top Peaks Vertical 6-18GHz Notes: BLE High Ch Work Order - W0790 EUT Power Input - Battery Test Site - CH1 Conditions - 22.0°C; 41.4%RH; 1010.9mBar Test Engineer - Ryan M. Brown Date of Test - 2/9/2023

					Adjusted					Average			Average		
		Raw RMS	Correction	Adjusted	RMS	Peak Limit			Peak Worst	Limit	Average		Worst	Antenna	EUT
Frequency	Raw Peak	Average	Factor	Peak	Average	FCC 15.209	Peak Margin	Peak Result	Margin	FCC 15.209	Margin	Average Result	Margin	Height	Azimuth
(MHz)	(dBµV)	(dBµV)	(dB/m)	(dBµV/m)	(dBµV/m)	(dBµV/m)	(dB)	(Pass/Fail)	(dB)	(dBµV/m)	(dB)	(Pass/Fail)	(dB)	(cm)	(degrees)
7441.5	58.7	53.2	4.6	63.3	57.8	83.5	-20.2	PASS	-20.2	63.5	-5.7	PASS	-5.7	200	0
12397.5	48.6	45.6	8.7	57.3	54.3	83.5	-26.2	PASS		63.5	-9.2	PASS		150	69
17681.7	47.0	35.9	14.9	61.9	50.8	83.5	-21.6	PASS		63.5	-12.7	PASS		175	315

6-18GHz Vertical Data Table



6-18GHz Vertical Plot

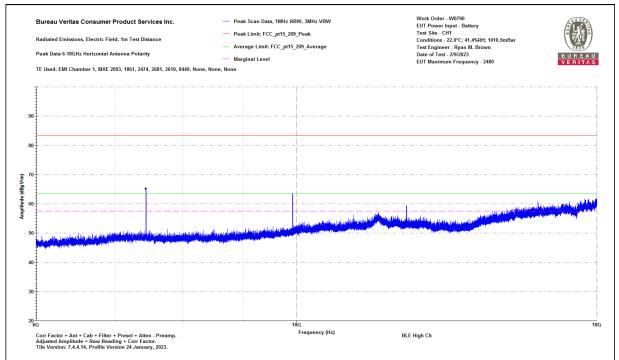
Bureau Veritas Consumer Product Services Inc.





Bureau Ver	ritas Consur	ner Product	Services In	с.		Work Orde	er - W0790								
Radiated E	missions Ele	ectric Field 1	m Distance			EUT Power	r Input - Bati	tery							
Top Peaks	Horizontal 6	5-18GHz				Test Site -	CH1								
Notes:						Conditions	s - 22.0°C; 41	4%RH; 1010.9	ƏmBar						
BLE High Cl	h					Test Engin	eer - Ryan N	1. Brown							
ο	0					Date of Te	st - 2/9/202	3							
			1												
					Adjusted					Average			Average		
		Raw RMS	Correction	Adjusted	Adjusted RMS	Peak Limit			Peak Worst	Average Limit	Average		Average Worst	Antenna	EUT
Frequency	Raw Peak	Raw RMS Average	Correction Factor	Adjusted Peak			Peak Margin	Peak Result	Peak Worst Margin	•	Average Margin	Average Result	•	Antenna Height	EUT Azimuth
Frequency (MHz)	Raw Peak (dBµV)			•	RMS			Peak Result (Pass/Fail)		Limit	-	Average Result (Pass/Fail)	Worst		-
	(dBµV)	Average (dBµV)	Factor	Peak	RMS Average	FCC 15.209	Peak Margin		Margin	Limit FCC 15.209	Margin	•	Worst Margin	Height	Azimuth
(MHz)	(dBµV) 60.5	Average (dBμV) 57.7	Factor (dB/m)	Peak (dBµV/m)	RMS Average (dBµV/m)	FCC 15.209 (dBµV/m)	Peak Margin (dB)	(Pass/Fail)	Margin (dB)	Limit FCC 15.209 (dBµV/m)	Margin (dB)	(Pass/Fail)	Worst Margin (dB)	Height (cm)	Azimuth (degrees)
(MHz) 7438.5	(dBµV) 60.5 50.9	Average (dBμV) 57.7 45.6	Factor (dB/m) 4.6 8.7	Peak (dBμV/m) 65.1 59.6	RMS Average (dBµV/m) 62.3	FCC 15.209 (dBµV/m) 83.5	Peak Margin (dB) -18.4	(Pass/Fail) PASS	Margin (dB) -18.4	Limit FCC 15.209 (dBµV/m) 63.5	Margin (dB) -1.2	(Pass/Fail) PASS	Worst Margin (dB) -1.2	Height (cm) 150	Azimuth (degrees) 0





6-18GHz Horizontal Plot

Bureau Veritas Consumer Product Services Inc.

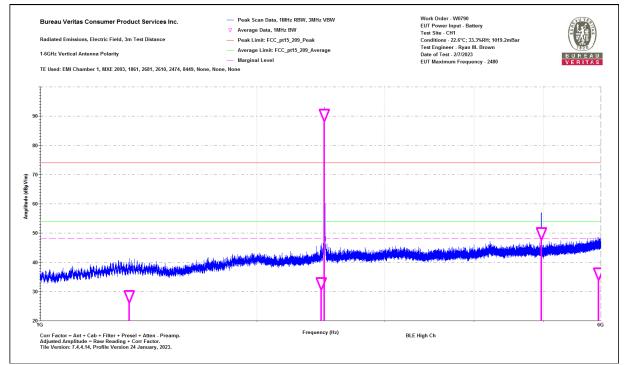




Host Model CEM100

Bureau Ver	ritas Consui	mer Produc	t Services Ir	ιс.		Work Orde	er - W0790								
Radiated Ei	missions Ele	ectric Field	3m Distance	e		EUT Power	Input - Bat	tery							
1-6GHz Ver	rtical Data					Test Site - (CH1								
Notes:						Conditions	- 22.6°C; 33	3.3%RH; 1019.	2mBar						
BLE High Cl	h					Test Engine	eer - Ryan N	1. Brown							
0						0	st - 2/7/202								
					Adjusted					Average			Average		
		Raw RMS	Correction	Adjusted	Adjusted RMS	Peak Limit			Peak Worst	Average Limit	Average		Average Worst	Antenna	EUT
Frequency	Raw Peak	Raw RMS Average	Correction Factor	Adjusted Peak			Peak Margin	Peak Result	Peak Worst Margin		Average Margin	Average Result	•	Antenna Height	EUT Azimutł
Frequency (MHz)	Raw Peak (dBµV)				RMS		Peak Margin (dB)	Peak Result (Pass/Fail)		Limit	-	Average Result (Pass/Fail)	Worst		Azimut
	(dBµV)	Average (dBµV)	Factor	Peak (dBμV/m)	RMS Average	FCC 15.209	-		Margin	Limit FCC 15.209	Margin	•	Worst Margin	Height	Azimut
(MHz)	(dBµV)	Average (dBμV) 37.3	Factor (dB/m) -7.7	Реак (dBµV/m) 37.2	RMS Average (dBµV/m)	FCC 15.209 (dBµV/m)	(dB)	(Pass/Fail)	Margin (dB)	Limit FCC 15.209 (dBµV/m)	Margin (dB)	(Pass/Fail)	Worst Margin (dB)	Height (cm)	Azimuth (degrees
(MHz) 1329	(dBµV) 44.9	Average (dBμV) 37.3	Factor (dB/m) -7.7	Реак (dBµV/m) 37.2	RMS Average (dBµV/m) 29.6	FCC 15.209 (dBµV/m) 74	(dB) -36.8	(Pass/Fail) PASS	Margin (dB) 	Limit FCC 15.209 (dBµV/m) 54	Margin (dB) -24.4	(Pass/Fail) PASS	Worst Margin (dB)	Height (cm) 125	Azimuti (degrees 87
(MHz) 1329 2457.1	(dBµV) 44.9	Average (dBμV) 37.3 36.6	Factor (dB/m) -7.7 -2.6	Peak (dBμV/m) 37.2 42.4	RMS Average (dBµV/m) 29.6	FCC 15.209 (dBµV/m) 74	(dB) -36.8	(Pass/Fail) PASS PASS	Margin (dB) 	Limit FCC 15.209 (dBµV/m) 54	Margin (dB) -24.4	(Pass/Fail) PASS	Worst Margin (dB)	Height (cm) 125	Azimuti (degrees 87





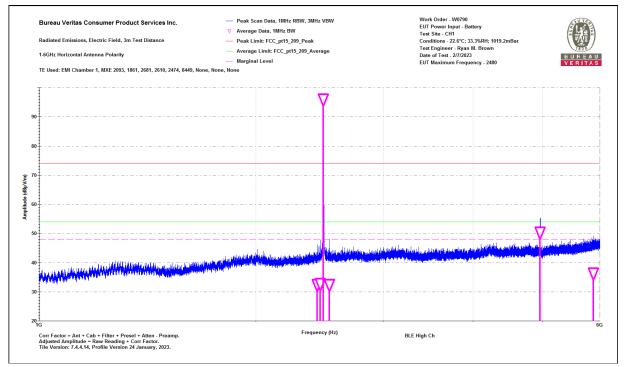
1-6GHz Vertical Plot





Radiated E		ectric Field 3				EUT Power Test Site - Conditions Test Engin		3.3%RH; 1019. 1. Brown	2mBar						
Frequency (MHz)	Raw Peak (dBµV)	Raw RMS Average (dBμV)	Correction Factor (dB/m)	Adjusted Peak (dBµV/m)	Adjusted RMS Average (dBµV/m)	Peak Limit FCC 15.209 (dBµV/m)	Peak Margin (dB)	Peak Result (Pass/Fail)	Peak Worst Margin (dB)	Average Limit FCC 15.209 (dBµV/m)	Average Margin (dB)	Average Result (Pass/Fail)	Average Worst Margin (dB)	Antenna Height (cm)	EUT Azimuth (degrees)
2432.5	43.2	37.3	-2.7	40.5	34.6	74	-33.5	PASS		54	-19.4	PASS		298	320
2454.4	44.5	36.9	-2.6	41.9	34.3	74	-32.1	PASS		54	-19.7	PASS		275	292
2479.5								Fundament	al						
2529.2	44.0	36.1	-2.3	41.7	33.8	74	-32.3	PASS		54	-20.2	PASS	-	275	267
4959	56.5	50.8	1.0	57.5	51.8	74	-16.5	PASS	-16.5	54	-2.2	PASS	-2.2	280	300
5880.7	42.7	34.3	2.8	45.5	37.1	74	-28.5	PASS		54	-16.9	PASS		284	46

1-6GHz Horizontal Data Table



1-6GHz Horizontal Plot

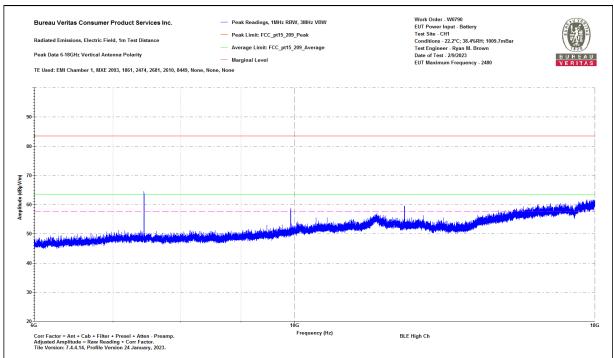




Bureau Veritas Consumer Product Services Inc. Radiated Emissions Electric Field 1m Distance Top Peaks Vertical 6-18GHz Notes: BLE High Ch 0 Work Order - W0790 EUT Power Input - Battery Test Site - CH1 Conditions - 22.2°C; 38.4%RH; 1009.7mBar Test Engineer - Ryan M. Brown Date of Test - 2/9/2023

					Adjusted					Average			Average		
		Raw RMS	Correction	Adjusted	RMS	Peak Limit			Peak Worst	Limit	Average		Worst	Antenna	EUT
Frequency	Raw Peak	Average	Factor	Peak	Average	FCC 15.209	Peak Margin	Peak Result	Margin	FCC 15.209	Margin	Average Result	Margin	Height	Azimuth
(MHz)	(dBµV)	(dBµV)	(dB/m)	(dBµV/m)	(dBµV/m)	(dBµV/m)	(dB)	(Pass/Fail)	(dB)	(dBµV/m)	(dB)	(Pass/Fail)	(dB)	(cm)	(degrees)
7438.5	59.9	56.0	4.6	64.5	60.6	83.5	-19.0	PASS	-19.0	63.5	-2.9	PASS	-2.9	200	0
12397.5	50.8	43.1	8.7	59.5	51.8	83.5	-24.0	PASS		63.5	-11.7	PASS		150	32
17723.4	46.9	35.7	14.8	61.7	50.5	83.5	-21.8	PASS		63.5	-13.0	PASS		100	108

6-18GHz Vertical Data Table



6-18GHz Vertical Plot

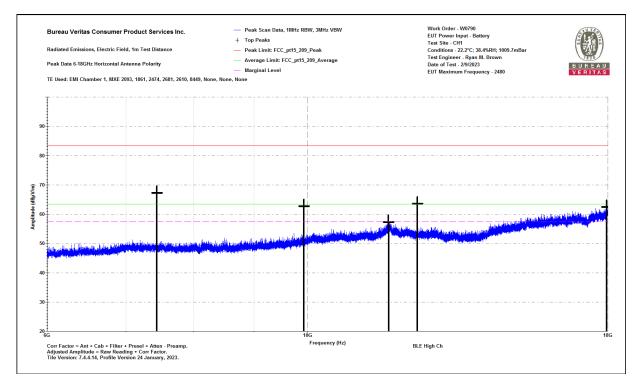
Bureau Veritas Consumer Product Services Inc.





Bureau Ver	itas Consu	mer Produc	t Services Ir	nc.		Work Orde	er - W0790								
Radiated Er	missions Ele	ectric Field 1	1m Distance	9		EUT Power	r Input - Bat	tery							
Top Peaks	Horizontal	6-18GHz				Test Site -	CH1								
Notes:						Conditions	s - 22.2°C; 38	3.4%RH; 1009.	7mBar						
BLE High Ch	n					Test Engine	eer - Ryan N	1. Brown							
0						0	st - 2/9/202								
					Adjusted					Average			Average		
		Raw RMS	Correction	Adjusted	Adjusted RMS	Peak Limit			Peak Worst	Average Limit	Average		Average Worst	Antenna	EUT
Frequency	Raw Peak	Raw RMS Average	Correction Factor	Adjusted Peak			Peak Margin	Peak Result	Peak Worst Margin		Average Margin	Average Result	•	Antenna Height	EUT Azimuth
Frequency (MHz)	Raw Peak (dBµV)			•	RMS		Peak Margin (dB)	Peak Result (Pass/Fail)		Limit	-	Average Result (Pass/Fail)	Worst		-
		Average (dBµV)	Factor	Peak (dBµV/m)	RMS Average	FCC 15.209	•		Margin	Limit FCC 15.209	Margin		Worst Margin	Height	Azimuth
(MHz)	(dBµV)	Average (dBμV) 58.2	Factor (dB/m) 4.6	Реак (dBµV/m) 67.2	RMS Average (dBµV/m)	FCC 15.209 (dBµV/m)	(dB)	(Pass/Fail)	Margin (dB)	Limit FCC 15.209 (dBµV/m)	Margin (dB)	(Pass/Fail)	Worst Margin (dB)	Height (cm)	Azimuth (degrees)
(MHz) 7441.5	(dBµV) 62.6 48.5	Average (dBμV) 58.2 37.8	Factor (dB/m) 4.6	Peak (dBμV/m) 67.2 57.3	RMS Average (dBµV/m) 62.8	FCC 15.209 (dBμV/m) 83.5	(dB) -16.3	(Pass/Fail) PASS	Margin (dB) -16.3	Limit FCC 15.209 (dBµV/m) 63.5	Margin (dB) -0.7	(Pass/Fail) PASS	Worst Margin (dB) -0.7	Height (cm) 175	Azimuth (degrees) 56





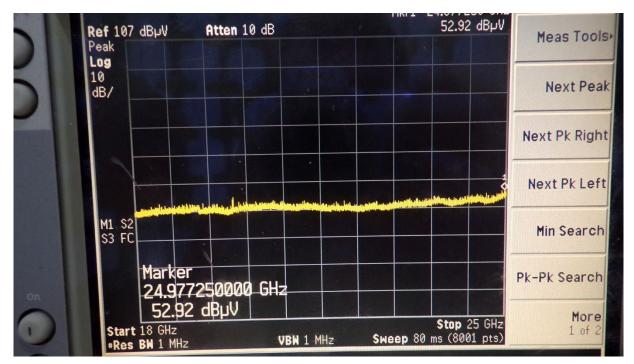
6-18GHz Horizontal Plot





	29-IVIar-23	Hun Frequency Range: 18-2 E High Peak Average Pre Frequency Reading Frequency Frequency Reading Frequency (MHz) (dBµV) (dBµV) (dBµV) Frequency Freque				y						v	Vork Order:	W0790
Engineer:	Ryan M. Brow		EUT Desc:	CEM100						EUT Opera	ting Voltage	/Frequency:	Battery	
Temp:	21			Humidity:	43%			Pressure:	1005					
		Freque	ency Range:	18-25GHz							Measureme	nt Distance:	0.1 m	
Notes:	BLE High										EU	T Max Freq:	2480MHz	
			Average	Preamp	Antenna	Cable	Adjusted	Adjusted	FCC Clas	s B High Fro Peak	equency -	FCC Cla	ss B High Fi Average	requency -
Polarization (H / V)	Frequency (MHz)			Factor (dB)	Factor (dB/m)	Factor (dB)	Peak Reading (dBµV/m)	Avg Reading (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Result (Pass/Fail)	Limit (dBµV/m)	Margin (dB)	Result (Pass/Fa
Noise Floor	24977.3	52.92	52.9	 40.9	 40.3	 9.2	 61.5	 61.5	 103.5	 -42.0	 Pass	 83.5	 -22.0	 Pass
Tabl	e Result:		Pass	by	-22.0	dB					W	orst Freq:	24977.3	MHz
	Test Site: EMI Chamber 1 Analyzer: Gold				Asset #232 18-26.5GH					Cable 2: Antenna:	 18-26.5GHz	Horn	Cable 3: Preselector:	

18-25GHz Data Table



18-25GHz Plot

Bureau Veritas Consumer Product Services Inc.

One Distribution Center Circle, #1 Littleton, MA Tel.: (978) 486-8880 Fax: (978) 486-8828





Radiated Band-edges:

Host Model CEE100

Date:	17-Nov-22			Company:	Assa Ablo	у						١	Vork Order:	W0790
Engineer:	Matthew McC	arthy		EUT Desc:	CEE100						EUT Opera	ating Voltage	Frequency:	Battery
Temp:	21.5°C			Humidity:	36%			Pressure:	1000mBar					
		Frequ	ency Range:	2400-2500	MHz						Measureme	nt Distance:	1 m	
Notes:	Power Setting	5									EU	T Max Freq:	2480MHz	
									FC	FCC 15.209 - Peak		FCC	15.209 - Av	erage
Antenna Polarization (H/V)	Frequency (MHz)	Peak Reading (dBµV)	Average Reading (dBuV)	Preamp Factor (dB)	Antenna Factor (dB/m)	Cable Factor (dB)	Adjusted Peak Reading (dBuV/m)	Adjusted Avg Reading (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Result (Pass/Fail)	Limit (dBuV/m)	Margin (dB)	Result (Pass/Fail
BLE Low Channe		(uphA)	(uphv)	(ub)	(08/11)	(ub)	(dBµV/III)	(dbpv/m)	(ubµv/iii)	(ub)	(Fass/Fall)	(ubµv/iii)	(UB)	(Fass/Fai
V	2390.0	48.37	48.4	38.5	32.0	3.1	44.9	44.9	83.5	-38.6	Pass	63.5	-18.6	Pass
н	2390.0	52.1	52.1	38.5	32.0	3.1	48.7	48.7	83.5	-34.9	Pass	63.5	-14.9	Pass
	l .													
LE High Chann	el 2483.5	72.7	65.1	38.6	32.8	3.4	70.3	62.7	83.5	-13.3	Pass	63.5	-0.9	Pass
н	2483.5	70.29	63.6	38.6	32.8	3.4	67.8	61.2	83.5	-15.7	Pass	63.5	-0.9	Pass
Tab	le Result:		Pass	by	-0.9	dB					W	orst Freq:	2483.5	MHz
Test Site:	Test Site: EMI Chamber 2 Cable 1: Asset #2682						Cable 2:	Asset #2610		Cable 3:	Asset #24			
Analyzer:	2093			Preamp:	8449B					Antenna:	Blue Horn		Preselector:	

Host Model CEB100

Date:	13-Feb-23			Company:	Assa Ablo	у						v	/ork Order:	W0790
Engineer:	Ryan M. Brow	n		EUT Desc:	CEB 100						EUT Opera	ting Voltage/	Frequency:	Battery
Temp:	20.0			Humidity:	47%			Pressure:	993					
		Freque	ency Range:	BLE Band	Edge						Measureme	nt Distance:	1 m	
Notes:	Power Set to !	5									EU	T Max Freq:	2480	
							FCC Clas	s B High Fr	equency -	FCC Clas	s B High Fi	equency		
Antenna		Peak	Average	Preamp	Antenna	Cable	Adjusted	Adjusted		Peak	-		Average	r
olarization	Frequency	Reading	Reading	Factor	Factor	Factor	Peak Reading	Avg Reading	Limit	Margin	Result	Limit	Margin	Result
(H / V)	(MHz)	(dBµV)	(dBµV)	(dB)	(dB/m)	(dB)	(dBµV/m)	(dBµV/m)	(dBµV/m)	(dB)	(Pass/Fail)	(dBµV/m)	(dB)	(Pass/Fa
V	2390.0	49.35	49.4	38.5	32.6	3.4	46.9	46.9	83.5	-36.6	Pass	63.5	-16.6	Pass
н	2390.0	48.05	48.1	38.5	32.6	3.4	45.6	45.6	83.5	-37.9	Pass	63.5	-17.9	Pass
V	2483.5	71.47	65.1	38.6	32.8	3.3	69.0	62.6	83.5	-14.5	Pass	63.5	-0.9	Pass
н	2483.5	71.94	65.4	38.6	32.8	3.3	69.4	62.9	83.5	-14.1	Pass	63.5	-0.6	Pass
Tab	le Result:		Pass	by	-0.6	dB					W	orst Freq:	2483.5	MHz
Test Site:	Test Site: EMI Chamber 1 Cable 1: Asset #2682				82				Cable 2:	Asset #2610		Cable 3:	Asset #24	
	Asset #2093			Preamp:	0.1.100				Antenna: Blue Horn Preselector:					

Host Model CEM100

Date:	10-Feb-23			Company:	Assa Ablo	у						v	/ork Order:	W0790
Engineer:	Ryan M. Brow	n		EUT Desc:	CEM 100						EUT Opera	ting Voltage/	Frequency:	Battery
Temp:	22.6			Humidity:	33%			Pressure:	1019.2					
		Freque	ency Range:	BLE Band	Edge						Measureme	nt Distance:	1 m	
Notes:	Power Set to 5	5									EU	T Max Freq:	2480	
	FCC Class B High Frequency -				equency -	FCC Clas	s B High Fr	equency -						
Antenna	-	Peak	Average	Preamp	Antenna	Cable	Adjusted	Adjusted Peak					Average	
olarization (H / V)	(MHz)	(dBµV)	(dBµV)	Factor (dB)	Factor (dB/m)	Factor (dB)	Peak Reading (dBuV/m)	Avg Reading (dBµV/m)	Limit (dBuV/m)	Margin (dB)	Result (Pass/Fail)	Limit (dBµV/m)	Margin (dB)	Result (Pass/Fa
V V	2390.0	50.05	(dDµ1) 50.1	38.5	32.6	3.4	47.6	47.6	83.5	-35.9	Pass	63.5	-15.9	Pass
н	2390.0	50.8	50.8	38.5	32.6	3.4	48.3	48.3	83.5	-35.2	Pass	63.5	-15.2	Pass
V	2483.5	72.07	65.1	38.6	32.8	3.3	69.6	62.6	83.5	-13.9	Pass	63.5	-0.9	Pass
Н	2483.5	68.32	60.7	38.6	32.8	3.3	65.8	58.2	83.5	-17.7	Pass	63.5	-5.3	Pass
Tabl	Table Result: Pass by -0.9 dB								W	orst Freq:	2483.5	MHz		
Test Site:	st Site: EMI Chamber 1 Cable 1: Asset #2681							Cable 2:	Asset #2610		Cable 3:	Asset #24		
Analyzer:	Asset #1328			Preamp:	8449B			Antenna: Blue Horn Preselector						

Bureau Veritas Consumer Product Services Inc.

One Distribution Center Circle, #1 Littleton, MA Tel.: (978) 486-8880 Fax: (978) 486-8828

Page 79 of 98





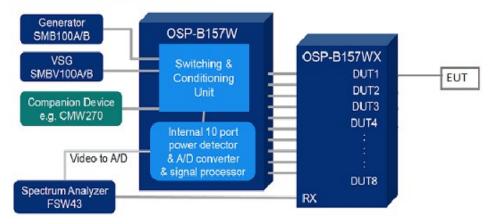
4.3 6dB CHANNEL BANDWIDTH & 99% OBW

4.3.1 LIMITS

The minimum 6 dB bandwidth shall be 500 kHz.

4.3.2 TEST SETUP

SCHEMATIC RF-CABLING



4.3.3 TEST EQUIPMENT USED

Equipment	Manufacturer	Asset No.	Model No.	Serial No.	Last Cal.	Next Cal.
Cable	Carlisle	2595	UTIFLEX	None	1/21/2022	1/21/2023
Signal Analyzer	Rohde-Schwarz	2200	FSV 40	101551	10/26/2021	10/26/2022
OSP-B157W8	Rohde-Schwarz	2558	OSP_B157W8	100955	8/26/2021	8/26/2023

Test equipment used for all conducted antenna port tests (Test Date: 7/7/2022) except for Conducted Peak Output Power and 99% Occupied Bandwidth

Equipment	Manufacturer	Asset No.	Model No.	Serial No.	Last Cal.	Next Cal.
Cable	Carlisle	2595	UTIFLEX	None	1/17/2023	1/17/2024
Signal Analyzer	Rohde-Schwarz	2200	FSV 40	101551	10/11/2022	10/11/2023
OSP-B157W8	Rohde-Schwarz	2558	OSP_B157W8	100955	8/26/2021	8/26/2023

Test equipment used for Conducted Peak Output Power (Test Date: 3/9/2023) and 99%

Occupied Bandwidth (Test Date: 4/24/2023)





4.3.4 TEST PROCEDURES

6dB CHANNEL BANDWIDTH

- a. Set RBW = 100 kHz.
- b. Set the video bandwidth (VBW) \ge 3 RBW.
- c. Detector = Peak.
- d. Trace mode = max hold.
- e. Sweep = auto couple.
- f. Allow the trace to stabilize.
- g. Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

99% OBW

- a. The instrument center frequency is set to the nominal EUT channel center frequency. The frequency span for the spectrum analyzer shall be between 1.5 times and 5.0 times the OBW.
- b. The nominal IF filter bandwidth (3 dB RBW) shall be in the range of 1% to 5% of the OBW, and VBW shall be approximately three times the RBW, unless otherwise specified by the applicable requirement.
- c. Set the reference level of the instrument as required, keeping the signal from exceeding the maximum input mixer level for linear operation. In general, the peak of the spectral envelope shall be more than [10 log (OBW/RBW)] below the reference level. Specific guidance is given in 4.1.5.2.
- d. Step a) through step c) might require iteration to adjust within the specified range.
- e. Video averaging is not permitted. Where practical, a sample detection and single sweep mode shall be used. Otherwise, peak detection and max hold mode (until the trace stabilizes) shall be used.
- f. Use the 99% power bandwidth function of the instrument (if available) and report the measured bandwidth.

4.3.5 DEVIATIONS

No deviations from the standard.

4.3.6 EUT OPERATING CONDITIONS

EUT was operated according to manufacturer's specifications.

Bureau Veritas Consumer Product Services Inc.





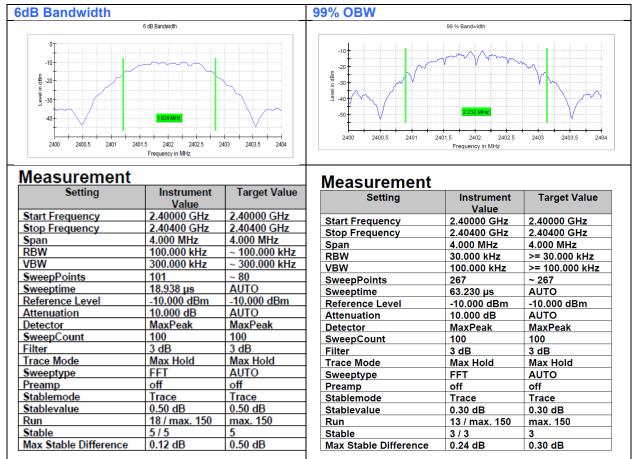
4.3.7 TEST RESULTS

6dB BW Test date: 7/7/2022

99% OBW Test date: 4/24/2023

CHANNEL	CHANNEL FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	99% OBW (MHz)	PASS / FAIL
0	2402	1.624	2.232	Pass
20	2442	1.584	2.232	Pass
39	2480	1.624	2.232	Pass

CH0







4.000 MHz >= 30.000 kHz

>= 100.000 kHz

~ 267

AUTO -10.000 dBm

AUTO

MaxPeak 100 3 dB

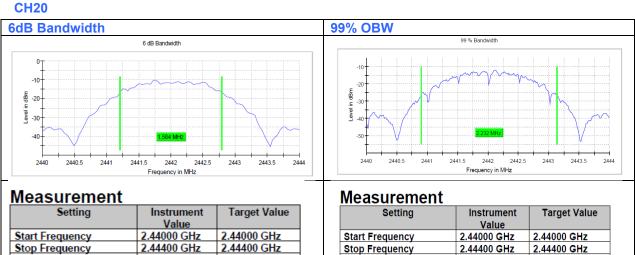
Max Hold AUTO off

Trace

0.30 dB

0.30 dB

max. 150 3



Setung	Value	Target value	Setting	Valu
Start Frequency	2.44000 GHz	2.44000 GHz	Start Frequency	2.44000 (
Stop Frequency	2.44400 GHz	2.44400 GHz	Stop Frequency	2.44400 (
Span	4.000 MHz	4.000 MHz	Span	4.000 MH
RBW	100.000 kHz	~ 100.000 kHz	RBW	30.000 ki
VBW	300.000 kHz	~ 300.000 kHz	VBW	100.000
SweepPoints	101	~ 80	SweepPoints	267
Sweeptime	18.938 µs	AUTO	Sweeptime	63.230 µs
Reference Level	-10.000 dBm	-10.000 dBm	Reference Level	-10.000 d
Attenuation	10.000 dB	AUTO	Attenuation	10.000 d
Detector	MaxPeak	MaxPeak	Detector	MaxPeak
SweepCount	100	100	SweepCount	100
Filter	3 dB	3 dB	Filter	3 dB
Trace Mode	Max Hold	Max Hold	Trace Mode	Max Hold
Sweeptype	FFT	AUTO	Sweeptype	FFT
Preamp	off	off	Preamp	off
Stablemode	Trace	Trace	Stablemode	Trace
Stablevalue	0.50 dB	0.50 dB	Stablevalue	0.30 dB
Run	15 / max. 150	max. 150	Run	18 / max.
Stable	5/5	5	Stable	3/3
Max Stable Difference	0.18 dB	0.50 dB	Max Stable Difference	0.24 dB





dB Bandwidth			99% OBW	99% OBW		
6 dB Bandwidth			-	99 % Bandwidth		
0 -10 -10 -10 -10 -10 -10 -10 -10 -10 -1	2 2479.5 2480 248 Frequency in MHz	05 2481 24815 2482		2212 AHz 2479.5 2480 2480.5 Frequency in MHz	2481 2481.5	
leasuremen	t		Measuremen	t		
Setting	Instrument Value	Target Value	Setting	Instrument	Target Va	
Start Frequency	2.47800 GHz	2.47800 GHz	Start Frequency	2.47800 GHz	2.47800 GH	
Stop Frequency	2.48200 GHz	2.48200 GHz	Stop Frequency	2.48200 GHz	2.48200 GH	
Span	4.000 MHz	4.000 MHz	Span	4.000 MHz	4.000 MHz	
RBW	100.000 kHz	~ 100.000 kHz	RBW	30.000 kHz	>= 30.000	
/BW	300.000 kHz	~ 300.000 kHz	VBW	100.000 kHz	>= 100.000	
SweepPoints	101	~ 80	SweepPoints	267	~ 267	
Sweeptime	18.938 µs	AUTO	Sweeptime	63.230 µs	AUTO	
Reference Level	-10.000 dBm	-10.000 dBm	Reference Level	-10.000 dBm	-10.000 dB	
Attenuation	10.000 dB	AUTO	Attenuation	10.000 dB	AUTO	
Detector	MaxPeak	MaxPeak	Detector	MaxPeak	MaxPeak	
SweepCount	100	100	SweepCount	100	100	
Filter	3 dB	3 dB	Filter	3 dB	3 dB	
Trace Mode	Max Hold	Max Hold	Trace Mode	Max Hold	Max Hold	
Sweeptype	FFT	AUTO	Sweeptype	FFT	AUTO	
Preamp	off	off	Preamp	off	off	
Stablemode	Trace	Trace	Stablemode	Trace	Trace	
	0.50 dB	0.50 dB	Stablevalue	0.30 dB	0.30 dB	
Stablevalue			Run	16 / max. 150	max. 150	
	18 / max, 150	max. 150				
Stablevalue Run Stable	18 / max. 150 5 / 5	max. 150 5	Stable	3/3	3	





4.4 CONDUCTED OUTPUT POWER

4.4.1 LIMITS

For systems using digital modulation in the 2400–2483.5 MHz band: 1 Watt (30dBm)

4.4.2 TEST SETUP

Refer to section 4.3.2.

4.4.3 TEST EQUIPMENT USED

Refer to section 4.3.3.

4.4.4 TEST PROCEDURES

Peak conducted output power was measured in accordance with ANSI C63.10 - 2013 Section 11.9.1.1 (RBW \geq DTS bandwidth).

4.4.5 DEVIATIONS

No deviations from the standard.

4.4.6 EUT OPERATING CONDITIONS

EUT was operated according to manufacturer's specifications

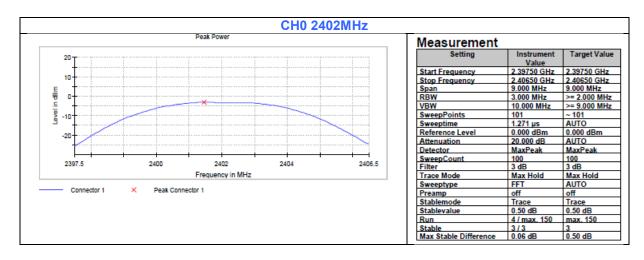


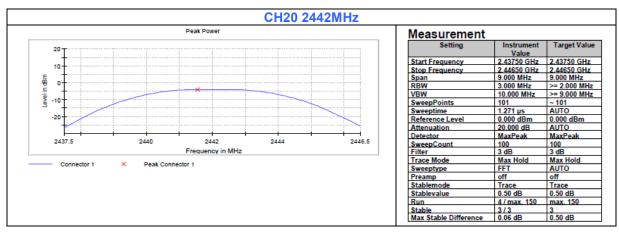


4.4.7 TEST RESULTS

Test date: 3/9/2023

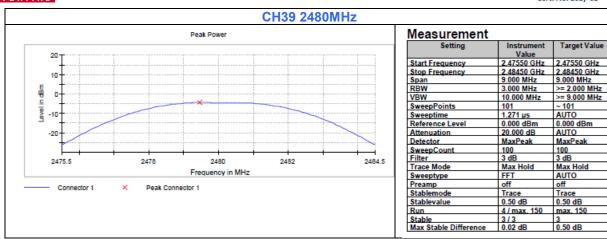
CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER (dBm)	PEAK POWER (mW)	PEAK POWER LIMIT (W)	PASS/FAIL
0	2402	-3.2	0.48	1	PASS
20	2442	-4.0	0.40	1	PASS
39	2480	-4.4	0.36	1	PASS















4.5 POWER SPECTRAL DENSITY

4.5.1 LIMITS

The limit for Power Spectral Density is 8dBm/3KHz.

4.5.2 TEST SETUP

Refer to section 4.3.2.

4.5.3 TEST EQUIPMENT USED

Refer to section 4.3.3.

- 4.5.4 TEST PROCEDURES
 - 1. Set the span to 1.5 times the DTS bandwidth
 - 2. Set the RBW = 10 kHz, VBW \ge 3 x RBW, Detector = peak.
 - 3. Sweep time = auto couple, Trace mode = max hold, allow trace to fully stabilize.
 - 4. Use the peak marker function to determine the maximum amplitude level.

4.5.5 DEVIATIONS

No deviations from the standard.

4.5.6 EUT OPERATING CONDITIONS

EUT was operated according to manufacturer's specifications.

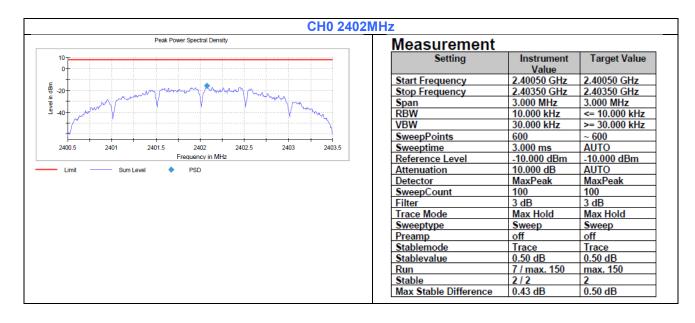


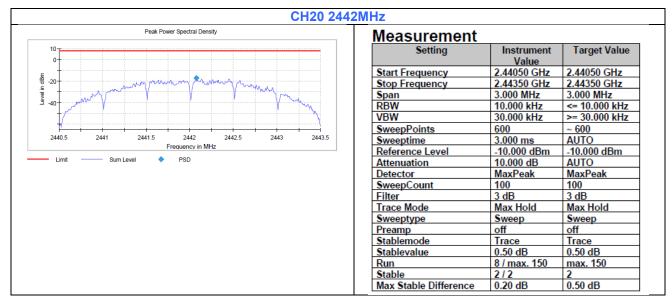


4.5.7 TEST RESULTS

Test date: 7/7/2022

Channel	FREQ. (MHz)	PSD (dBm/3kHz)	Limit (dBm/3kHz)	PASS /FAIL
0	2402	-15.742	8	PASS
20	2442	-16.984	8	PASS
39	2480	-17.819	8	PASS





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CH39 2480	MHz		
Peak Power Spectral Density	Measurement		
	Setting	Instrument Value	Target Value
₩ -20-	Start Frequency	2.47850 GHz	2.47850 GHz
= -20	Stop Frequency	2.48150 GHz	2.48150 GHz
	Span	3.000 MHz	3.000 MHz
	RBW	10.000 kHz	<= 10.000 kHz
	VBW	30.000 kHz	>= 30.000 kHz
2478.5 2479 2479.5 2480 2480.5 2481 2481.5	SweepPoints	600	~ 600
Frequency in MHz	Sweeptime	3.000 ms	AUTO
Limit Sum Level 🔶 PSD	Reference Level	-10.000 dBm	-10.000 dBm
	Attenuation	10.000 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	9 / max. 150	max. 150
	Stable	2/2	2
	Max Stable Difference	0.28 dB	0.50 dB





4.6 CONDUCTED SPURIOUS EMISSIONS AND BAND-EDGES

4.6.1 LIMITS

20dB below the highest emission level in the operating band (in 100kHz RBW).

4.6.2 TEST SETUP

Refer to section 4.3.2.

4.6.3 TEST EQUIPMENT USED

Refer to section 4.3.3.

4.6.4 TEST PROCEDURES

MEASUREMENT PROCEDURE REF

- 1. Set the RBW = 100 kHz.
- 2. Set the VBW \ge 300 kHz.
- 3. Detector = peak.
- 4. Sweep time = auto couple.
- 5. Trace mode = max hold.
- 6. Allow trace to fully stabilize.
- 7. Use the peak marker function to determine the maximum power level in any 100 kHz band segment within the fundamental EBW.





MEASUREMENT PROCEDURE OOBE

- 1. Set RBW = 100 kHz.
- 2. Set VBW ≥ 300 kHz.
- 3. Set span to encompass the spectrum to be examined
- 4. Detector = peak.
- 5. Trace Mode = max hold.
- 6. Sweep = auto couple.

4.6.5 DEVIATIONS

No deviations from the standard.

4.6.6 EUT OPERATING CONDITIONS

EUT was operated according to manufacturer's specifications.





4.6.7 TEST RESULTS

Test date: 7/7/2022

CH 0				
Pre Measur	emer	nts		Spurious
Frequency	Level	Margin	Limit	
(MHz)	(dBm)	(dB)	(dBm)	-20
2395.021008	-33.0	5.3	-27.6	-20+
4807.166065	-49.1		-27.6	₩ 40-
12003.035168	-53.3	25.7	-27.6	
9614.406396	-53.3	25.7	-27.6	-60-
9604.412133	-53.5	25.9	-27.6	-80
12013.029431	-54.3	26.6	-27.6	
1847.331933	-58.6	31.0	-27.6	30M 5060 80100M 200 300 400500 8001G 2G 3G 4G 5G 6 8 10G 20G260
1867.247899	-64.2	36.6	-27.6	Frequency in Hz
2225.735294	-65.3	37.7	-27.6	Limit — Sum Level — Threshold X Critical X Final Cri
2205.819328	-68.0	40.4	-27.6	
4797.171802	-68.4	40.8	-27.6	
14411.652465	-68.7	41.1	-27.6	
2275.525210	-69.2	41.5	-27.6	
781.827731	-69.2	41.6	-27.6	
2385.063025	-70.6	42.9	-27.6	
Pre Measur	emen	t 1		
Setting		Instrumen	t Tai	Value
-		Value		
RBW		<u>00.000 kHz</u>		<u>0 kHz</u>
VBW		00.000 kHz		0 kHz
SweepPoints	23		~ 238	
Sweeptime		3.700 ms	AUT	
Reference Level	-3	0.000 dBm	-30.0	Bm
Attenuation	0.	000 dB	AUT	
Detector	M	axPeak	Max	
SweepCount	3		3	
Filter		dB	3 dB	
Trace Mode		ax Hold	Max	
Sweeptype		weep	AUT	
Preamp	of		off	
Stablemode		race	Trace	
Stablevalue		00 dB	1.00	
Run		/ max. 40	max.	
Stable		/2	2	
Max Stable Differen		00 dB	1.00	
Max Stable Differen		00 00	1.00	
CH 20				
				Spurious
Pre Measur	1			4
Frequency	Level	Margin	Limit	-20-
(MHz)	(dBm)	(dB)	(dBm)	₿ "n
9764.320336	-46.9		-28.6	
9774.314598			-28.6	-60- <u>6</u> -
4887.120166	-51.1	22.5	-28.6	
12212.914683	-58.7	30.2	-28.6	
12202.920421	-60.3	31.7	-28.6	30M 5060 80100M 200 300 400500 8001G 2G 3G 4G 5G 6 8 10G 20G26G Frequency in Hz
2126.155462			-28.6	Limit — Sum Level — Threshold × Critical × Final Criti
1867.247899			-28.6	Linnik Journ Leven Trineshold A Chucan A Filhal Chu
2315.357143			-28.6	
2245.651261			-28.6	
2243.031201			-28.6	
2116.197479		39.8	-28.6	
2116.197479 2215.777311			00.0	
2116.197479 2215.777311 2225.735294	-69.0	40.4	-28.6	
2116.197479 2215.777311 2225.735294 4877.125903	-69.0 -69.4	40.4 40.8	-28.6	
2116.197479 2215.777311 2225.735294	-69.0 -69.4 -69.8	40.4 40.8 41.2	-28.6 -28.6	

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Setting	Instrument	Target Value	
BW	Value 100.000 kHz	<= 100.000 kHz	
W 300.000 kHz		>= 300.000 kHz	
weepPoints	238	~ 238	
weeptime	23.700 ms	AUTO	
Reference Level	-30.000 dBm	-30.000 dBm	
Attenuation	0.000 dB	AUTO	
Detector	MaxPeak	MaxPeak	
SweepCount	3	3	
Filter	3 dB	3 dB	
Trace Mode	Max Hold	Max Hold	
Sweeptype	Sweep	AUTO	
Preamp Stations and	off	off	
<u>Stablemode</u> Stablevalue	Trace 1.00 dB	Trace 1.00 dB	
Run	8 / max. 40	max. 40	
Stable	2/2	2	
Max Stable Difference	0.00 dB	1.00 dB	
39			
re Measurem	onte		Spurious
		Limit	m
Frequency Lev (MHz) (dB		Limit (dBm)	-20
		(dBm)	
	3.6 13.1	-30.4	ei - 40-
	4.8 14.4	-30.4	§ -60
	9.7 19.3	-30.4	-80-
	2.8 22.4	-30.4	30M 5060 80100M 200 300 400500 8001G 2G 3G 4G 5G 6 8 10G
	2.9 22.5	-30.4	Frequency in Hz
	3.5 23.0	-30.4	Limit — Sum Level — Threshold × Critical ×
	4.8 24.3	-30.4	
	7.5 27.1	-30.4	
	1.2 30.8	-30.4	
	1.3 30.9	-30.4	
	5.8 35.4	-30.4	
	6.4 35.9	-30.4	
	7.6 37.2	-30.4	
	8.6 38.2	-30.4	
2225.735294 -6	9.1 38.7	-30.4	
Pre Measureme	opt 1		
Setting	Instrument Value	Target Value	
RBW	100.000 kHz	<= 100.000 kHz	
/BW	300.000 kHz	>= 300.000 kHz	
SweepPoints	238	~ 238	
weeptime	23.700 ms	AUTO	
Reference Level	-30.000 dBm	-30.000 dBm	
Attenuation	0.000 dB	AUTO	
Detector	MaxPeak	MaxPeak	
SweepCount	3 2 dB	3 2 dB	
ilter	3 dB	3 dB	
race Mode	Max Hold	Max Hold	
Sweeptype Preamp	Sweep off	AUTO off	
Stablemode	Trace	Trace	
Stablevalue	1.00 dB	1.00 dB	
		max. 40	
Run			
Run Stable	5 / max. 40 2 / 2	2	





Conducted Band-edges:

Test date: 7/7/2022

Measurements					Band Edge		
Frequency (MHz) 2399.925000 2399.875000 2399.975000 2399.75000 2399.775000 2399.725000 2399.675000 2399.125000	Level (dBm) -34.1 -34.5 -34.5 -34.5 -36.8 -37.0 -37.8 -40.7 -41.3	Margin (dB) 7.2 7.5 7.5 9.8 10.1 10.8 13.7 14.3	Limit (dBm) -27.0 P/ -27.0 P/ -27.0 P/ -27.0 P/ -27.0 P/ -27.0 P/ -27.0 P/ -27.0 P/ -27.0 P/ -27.0 P/	ASS ASS ASS ASS ASS ASS ASS	-10 -20 -20 -20 -20 -20 -20 -20 -20 -20 -2	2380 2400 2420 Frequency in MHz X Fail	2440 2460 2
2399.075000 2399.275000 2399.225000 2399.175000 2399.325000 2398.975000 2398.925000	-41.6 -41.8 -42.2 -42.5 -42.9 -43.1 -43.2	14.6 14.8 15.3 15.5 15.9 16.1 16.2	-27.0 P/ -27.0 P/ -27.0 P/ -27.0 P/ -27.0 P/ -27.0 P/ -27.0 P/	ASS ASS ASS ASS ASS ASS			
leasureme					Measurement Setting	2 Instrument	Target Valu
Setting		Instrument Value	-	t Value	Start Frequency	Value 2.40000 GHz	2.40000 GHz
tart Frequency		31000 GHz			Stop Frequency	2.48350 GHz	2.48350 GHz
top Frequency		40000 GHz			Span	83.500 MHz	83.500 MHz
pan		0.000 MHz	90.000 N				
BW		00.000 kHz			Setting	Instrument	Target Value
BW		00.000 kHz		JOU KHZ	2014	Value	400.000.000
weepPoints		300	~ 1800		RBW	100.000 kHz	<= 100.000 kH;
weeptime Reference Level	T	13.672 µs	AUTO -10.000	-ID	VBW SweepPoints	300.000 kHz 1670	>= 300.000 kHz ~ 1670
		<u>0.000 dBm</u>).000 dB	AUTO	abm	Sweeptime	94.727 us	AUTO
ttenuation				L.	Reference Level	-10.000 dBm	-10.000 dBm
etector		<u>axPeak</u>)0	MaxPea 100	К	Attenuation	10.000 dB	AUTO
weepCount ilter		dB	3 dB		Detector	MaxPeak	MaxPeak
race Mode		ax Hold	Max Hol		SweepCount	100	100
		ax noid FT	AUTO	a	Filter	3 dB	3 dB
weeptype	of		off		Trace Mode	Max Hold	Max Hold
reamp					Sweeptype	FFT	AUTO
tablemode		ace	Trace		Preamp	off	off
tablevalue		50 dB	0.50 dB		Stablemode	Trace	Trace
lun		<u>/ max. 150</u>	max. 15	U	Stablevalue	0.50 dB	0.50 dB
table	_	/3	3		Run	10 / max. 150	max. 150
Law Cook Is Diff							
Max Stable Differen	ce 0.	00 dB	0.50 dB		Stable	3/3	3

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P



leasurem	ents					Band Edge	
Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)	Result	-10		A
2483.925000	-49.6	21.4	-28.2	PASS		L Dista	/ .
2483.975000	-49.8	21.6	-28.2	PASS	₹ -40 	North Martin Contraction	. <u>.</u>
2483.875000	-50.1	22.0	-28.2	PASS			A A
2483.775000	-50.1	22.0	-28.2	PASS	-60	koltikus hu	and the second
2483.825000	-50.5	22.4		PASS	2400 2420	2440 2460 Frequency in MHz	2480 25
2484.125000	-50.6	22.4	-28.2		Limit Sum Level	Frequency in MHz Fail	
2484.075000	-50.8	22.7	-28.2		Limit Sum Level	< Fail	
2483.725000	-51.0	22.9		PASS			
2484.025000	-51.5	23.4		PASS			
2484.175000	-52.0	23.8		PASS			
2484.225000	-52.4	24.3		PASS			
2483.675000	-52.6	24.5	28.2	PASS			
2484.275000	-53.1	24.9		PASS			
2483.625000	-53.4	25.2		PASS			
2483.575000	-554.6	26.5		PASS			
2403.313000	-34.0	20.3	-20.2	LA33			
Measureme	ent 1				Measurement 2		_
Setting		Instrumen Value	it Ta	rget Value	Setting	Instrument Value	Target Valu
Start Frequency	2	.40000 GHz	2.40	000 GHz	Start Frequency	2.48350 GHz	2.48350 GHz
Stop Frequency		.48350 GHz		350 GHz	Stop Frequency	2.50000 GHz	2.50000 GHz
Span	8	3.500 MHz	83.5	00 MHz	Span	16.500 MHz	16.500 MHz
RBW	1	00.000 kHz	<= 1	00.000 kHz	Cotting a	Instances	Tannat Mala
VBW	3	00.000 kHz	>= 3	00.000 kHz	Setting	Instrument	Target Valu
SweepPoints	1	670	~ 16	70	DDW	Value	< 400 000 bit
Sweeptime		4.727 µs	AUT		RBW VBW	100.000 kHz 300.000 kHz	<= 100.000 kH >= 300.000 kH
Reference Level		10.000 dBm		000 dBm	SweepPoints	300.000 KHZ 330	>= 300.000 KH
Attenuation		0.000 dB	AUT		Sweeptime	330 18.945 µs	~ 330 AUTO
Detector		laxPeak		Peak	Sweeptime Reference Level	-10.000 dBm	-10.000 dBm
SweepCount		00	100		Attenuation	10.000 dBm	AUTO
Filter		dB	3 dB		Detector	MaxPeak	MaxPeak
Trace Mode		lax Hold		Hold	SweepCount	100	100
Sweeptype		FT	AUT	0	Filter	3 dB	3 dB
Preamp		ff	off		Trace Mode	Max Hold	Max Hold
Stablemode		race	Trac		Sweeptype	FFT	AUTO
Stablevalue		.50 dB	0.50		Preamp	off	off
Run		<u>5 / max. 15</u>		. 150	Stablemode	Trace	Trace
	3	/3	3	10	Stablevalue	0.50 dB	0.50 dB
Stable		47					
	nce 0	.17 dB	0.50	dB			
Stable	nce 0	.17 dB	0.50	dB	Run Stable	25/max. 150 3/3	max. 150





5 PHOTOGRAPHS OF THE TEST CONFIGURATION

Please refer to the Test Setup Photos exhibit.





6 APPENDIX A – MODIFICATIONS

No modifications were made to the EUT during testing.

---END OF REPORT----