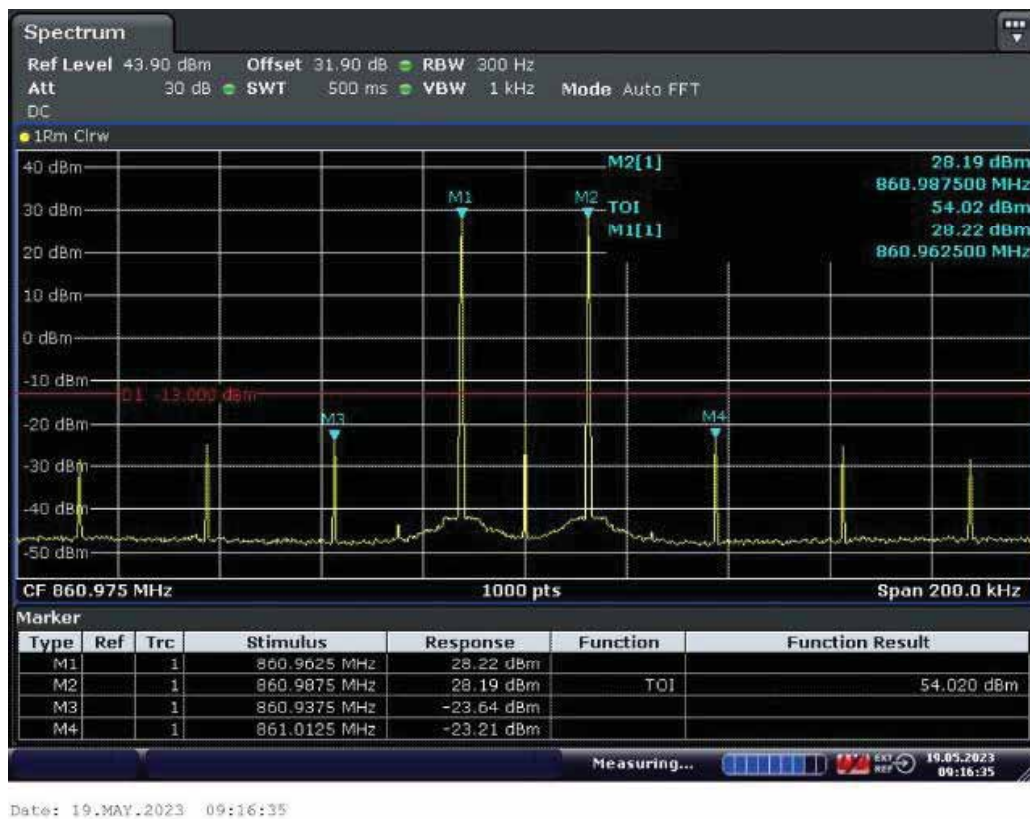




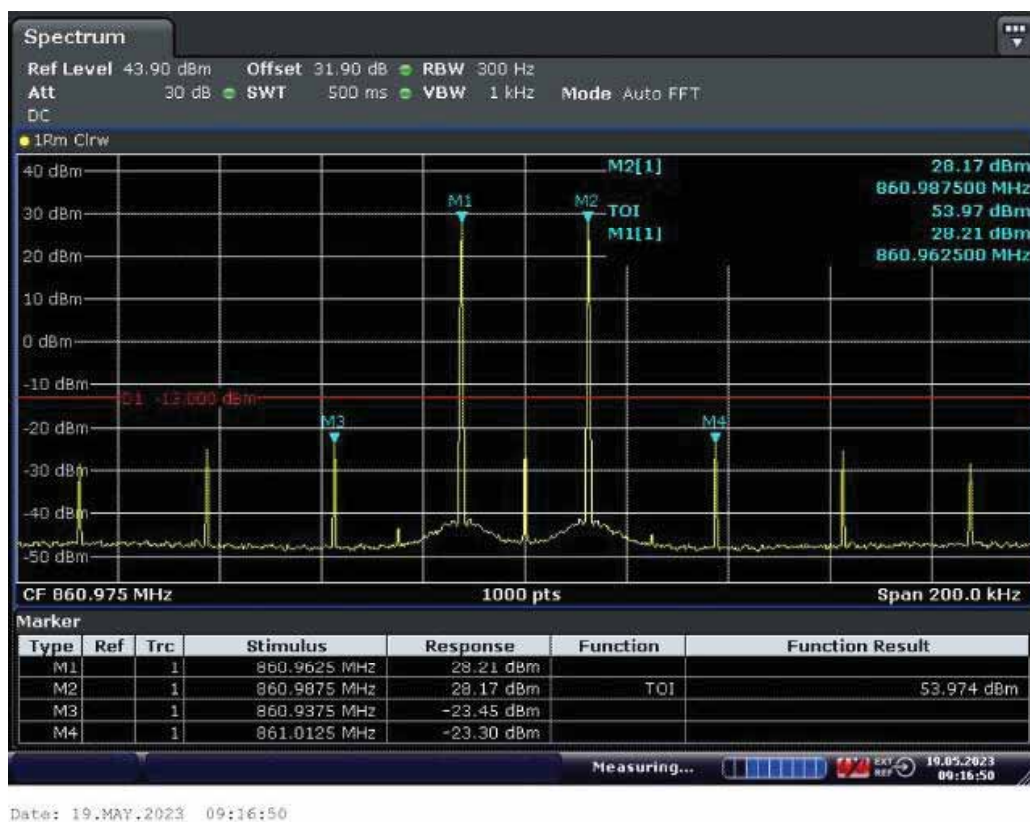
Mid Frequency and with the ALC threshold level



Mid Frequency and with the input signal amplitude set 3 dB above the ALC threshold



High Frequency and with the ALC threshold level



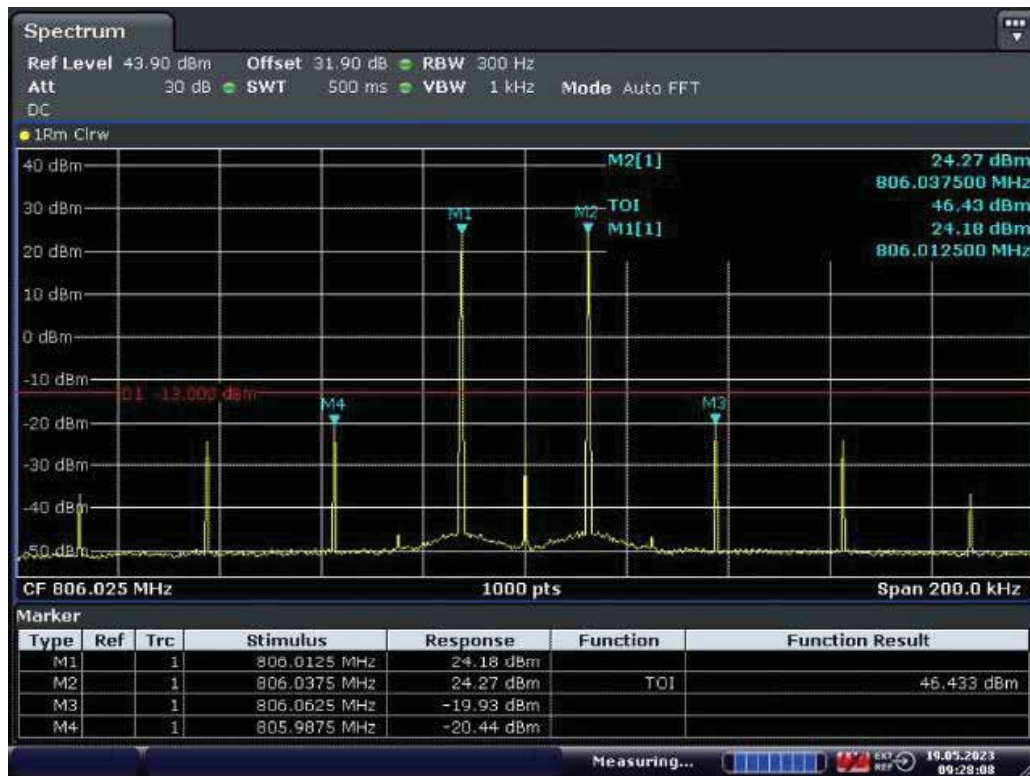
High Frequency and with the input signal amplitude set 3 dB above the ALC threshold

11.18.1.4.2.2. Uplink



Date: 19.MAY.2023 09:27:51

Low Frequency and with the ALC threshold level



Date: 19.MAY.2023 09:28:08

Low Frequency and with the input signal amplitude set 3 dB above the ALC threshold



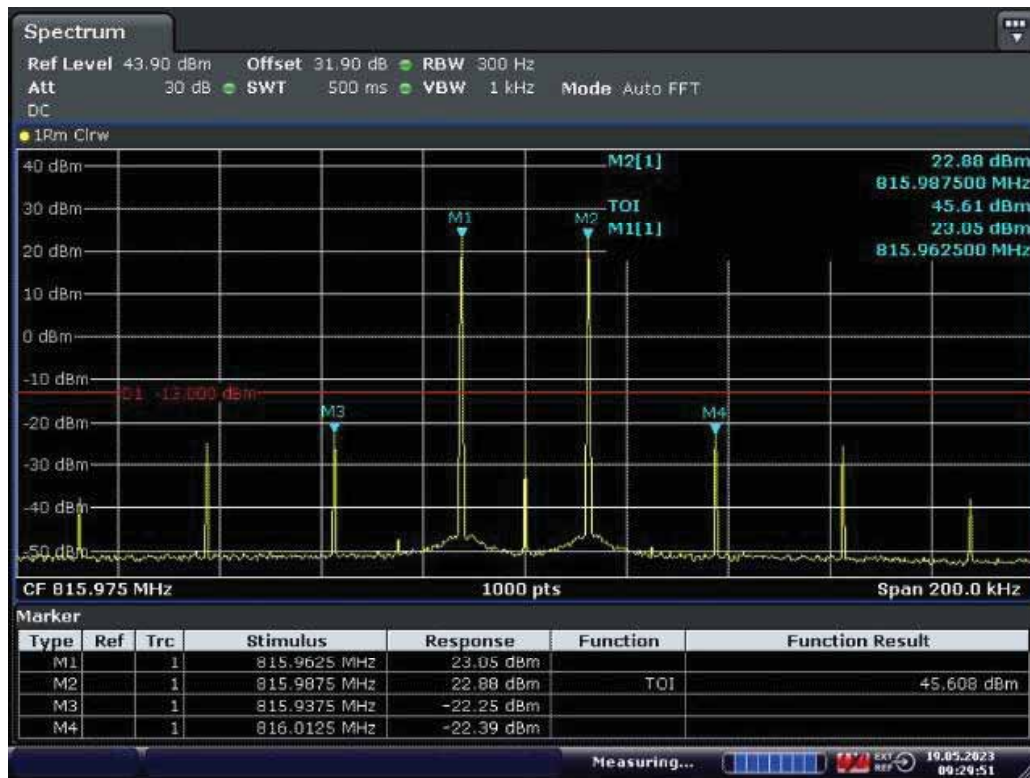
Date: 19.MAY.2023 09:28:59

Mid Frequency and with the ALC threshold level



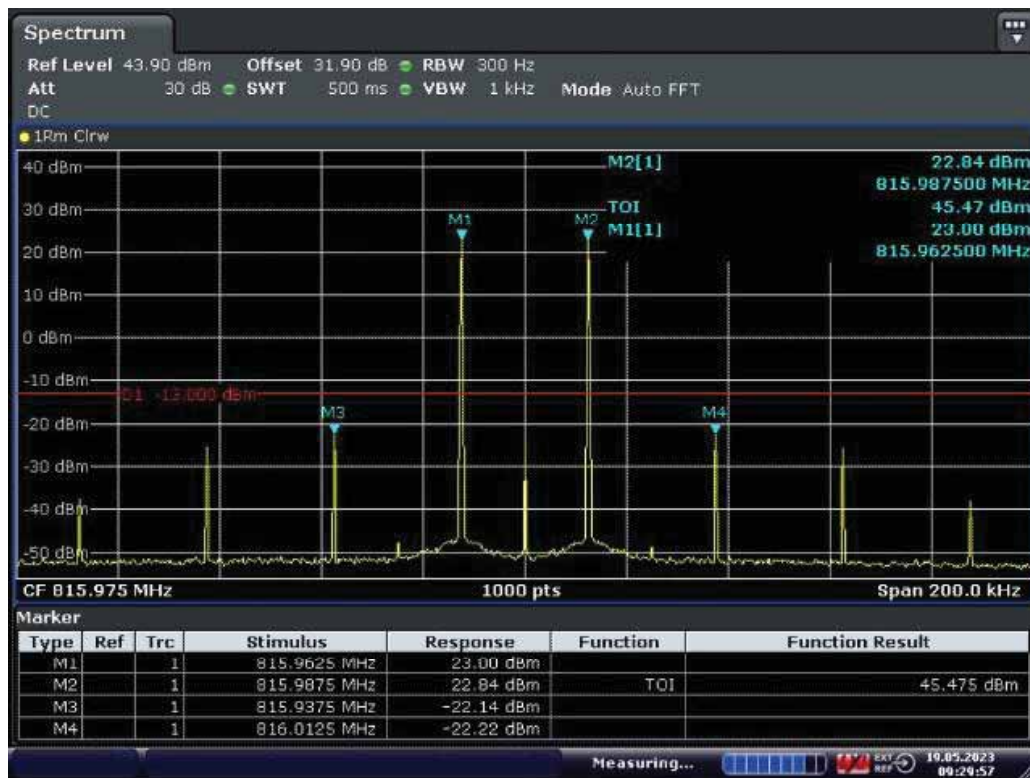
Date: 19.MAY.2023 09:29:05

Mid Frequency and with the input signal amplitude set 3 dB above the ALC threshold



Date: 19.MAY.2023 09:29:51

High Frequency and with the ALC threshold level



Date: 19.MAY.2023 09:29:57

High Frequency and with the input signal amplitude set 3 dB above the ALC threshold

11.19. Conducted spurious emissions

11.19.1. Test results

Test Date (yy-mm-dd): 2023-05-19

Normal condition: Temp: 26.9°C, Humid: 55%, Atmospheric Pressure:101kpa

Supply Voltage: AC 110V, 50Hz

11.19.1.1. 700MHz Band

Test Frequency		Spurious Limit(dBm)	RBW (kHz)	Max. Spurious Mark Level (dBm)	Margin ^{1*} (dB)	Result
(1) Downlink Transmit (Frequency range: 769MHz~775MHz)						
Frequency 772.0MHz	9kHz~1GHz	-13.0	100	-47.8	34.8	PASS
	1GHz~10GHz	-13.0	100	-50.9	37.9	PASS
(2) Uplink Transmit (Frequency range: 799MHz~805MHz)						
Frequency 802.0MHz	9kHz~1GHz	-13.0	100	-46.1	33.1	PASS
	1GHz~10GHz	-13.0	100	-50.4	37.4	PASS
NOTE: ^{1*} --Margin= specification limit -Maximum mark level.						

11.19.1.2. 800MHz Band

Frequency range		Max. Spurious Limit(dBm)	RBW (kHz)	Max. Spurious mark Level (dBm)	Margin ^{1*} (dB)	Result
(3) Downlink transmit mode (Frequency range: 851MHz~861MHz)						
frequency 856.0MHz	9kHz~1GHz	-13.0	100	-48.7	35.7	PASS
	1GHz~8.6GHz	-13.0	100	-50.6	37.6	PASS
(4) Uplink transmit mode(Frequency range: 806MHz~816MHz)						
frequency 811.0MHz	9kHz~1GHz	-13.0	100	-46.4	33.4	PASS
	1GHz~8.6GHz	-13.0	100	-50.0	37.0	PASS
NOTE 1: ^{1*} --Margin= specification limit -Maximum mark level.						

----- The following blanks -----

- 1.1.2. Test screenshot
- 11.19.1.3. 700MHz Band
- 11.19.1.3.1. Downlink



Date: 19.MAY.2023 08:51:10

9kHz~1GHz



Date: 19.MAY.2023 08:46:40

1GHz~10GHz

11.19.1.3.2. Uplink



Date: 19.MAY.2023 08:42:22

9kHz~1GHz

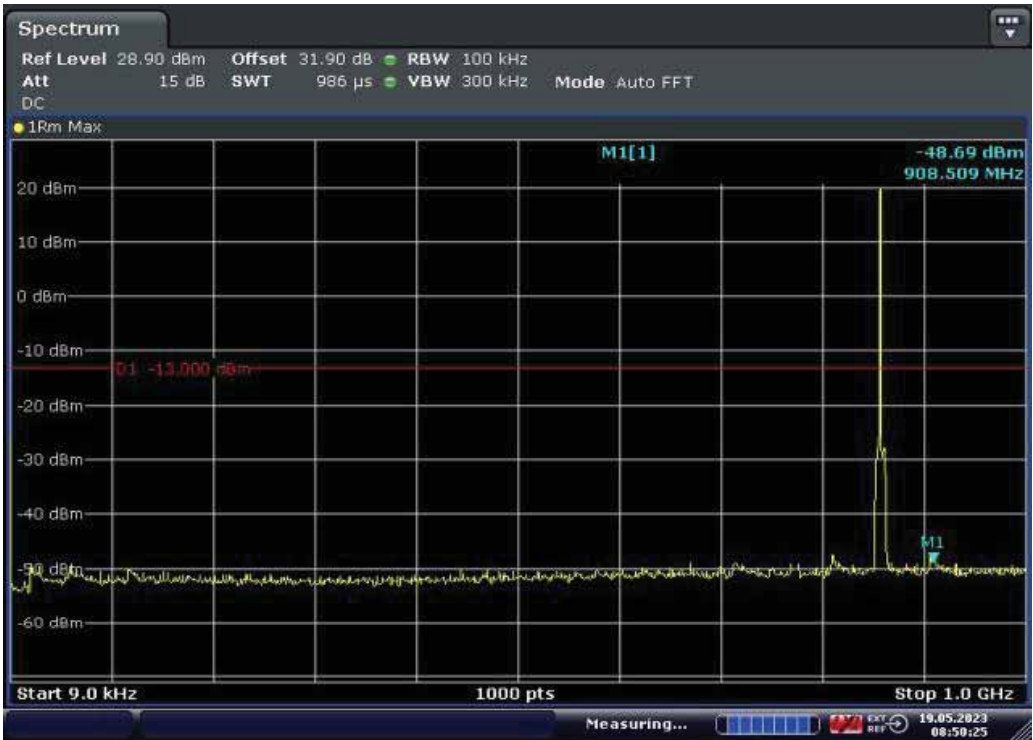


Date: 19 MAY 2023 08:45:05

1GHz~10GHz

11.19.1.4. 800MHz Band

11.19.1.4.1. Downlink



Date: 19.MAY.2023 08:50:25

9kHz~1GHz



Date: 19.MAY.2023 08:47:09

1GHz~10GHz

11.19.1.4.2. Uplink



Date: 19.MAY.2023 08:43:29

9kHz~1GHz



Date: 19 MAY 2023 08:45:23

1GHz~10GHz

11.20. Frequency stability

11.20.1. Test results

Test Date (yy-mm-dd): 2023-06-04

Normal condition: Temp:25.5℃, Humid: 45%, Atmospheric Pressure:101kpa

Extreme test conditions:

Temp range: -30℃~+50℃

Test Date: 2023-06-04

11.20.1.1. Downlink

11.20.1.1.1. The center frequency is 772.0MHz

Temperature (℃)	Voltage	Input carrier Frequency (MHz)	Comparison of deviation value between output frequency and input frequency(Hz)	Limit (ppm)	Frequency stability (ppm)	Result
-30	AC 93.5V(110*85%)	772.0	-1.0	±1.5	-0.0013	PASS
	AC 110V	772.0	0.7	±1.5	0.0009	PASS
	AC 126.5V(110*115%)	772.0	0.3	±1.5	0.0004	PASS
-20	AC 93.5V(110*85%)	772.0	0.0	±1.5	0.0000	PASS
	AC 110V	772.0	0.4	±1.5	0.0005	PASS
	AC 126.5V(110*115%)	772.0	-0.1	±1.5	-0.0001	PASS
-10	AC 93.5V(110*85%)	772.0	-0.4	±1.5	-0.0005	PASS
	AC 110V	772.0	-0.1	±1.5	-0.0001	PASS
	AC 126.5V(110*115%)	772.0	0.0	±1.5	0.0000	PASS
0	AC 93.5V(110*85%)	772.0	0.2	±1.5	0.0003	PASS
	AC 110V	772.0	0.3	±1.5	0.0004	PASS
	AC 126.5V(110*115%)	772.0	0.6	±1.5	0.0008	PASS
10	AC 93.5V(110*85%)	772.0	-1.0	±1.5	-0.0013	PASS
	AC 110V	772.0	-0.2	±1.5	-0.0003	PASS
	AC 126.5V(110*115%)	772.0	0.6	±1.5	0.0008	PASS
20	AC 93.5V(110*85%)	772.0	1.1	±1.5	0.0014	PASS
	AC 110V	772.0	-0.8	±1.5	-0.0010	PASS
	AC 126.5V(110*115%)	772.0	-0.7	±1.5	-0.0009	PASS
30	AC 93.5V(110*85%)	772.0	-0.7	±1.5	-0.0009	PASS
	AC 110V	772.0	0.0	±1.5	0.0000	PASS
	AC 126.5V(110*115%)	772.0	0.4	±1.5	0.0005	PASS
40	AC 93.5V(110*85%)	772.0	0.2	±1.5	0.0003	PASS
	AC 110V	772.0	1.0	±1.5	0.0013	PASS
	AC 126.5V(110*115%)	772.0	0.4	±1.5	0.0005	PASS
50	AC 93.5V(110*85%)	772.0	1.1	±1.5	0.0014	PASS
	AC 110V	772.0	0.8	±1.5	0.0010	PASS

	AC 126.5V(110*115%)	772.0	-0.1	±1.5	-0.0001	PASS
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NOTE: The test result is accurate to 4 decimal places.

11.20.1.1.2. The center frequency is 856MHz

Temperature (℃)	Voltage	Input carrier Frequency (MHz)	Comparison of deviation value between output frequency and input frequency(Hz)	Limit (ppm)	Frequency stability (ppm)	Result
-30	AC 93.5V(110*85%)	856.0	0.7	±1.0	0.0008	PASS
	AC 110V	856.0	0.3	±1.0	0.0004	PASS
	AC 126.5V(110*115%)	856.0	-0.5	±1.0	-0.0006	PASS
-20	AC 93.5V(110*85%)	856.0	-0.7	±1.0	-0.0008	PASS
	AC 110V	856.0	-0.5	±1.0	-0.0006	PASS
	AC 126.5V(110*115%)	856.0	-0.1	±1.0	-0.0001	PASS
-10	AC 93.5V(110*85%)	856.0	0.1	±1.0	0.0001	PASS
	AC 110V	856.0	-0.8	±1.0	-0.0009	PASS
	AC 126.5V(110*115%)	856.0	0.2	±1.0	0.0002	PASS
0	AC 93.5V(110*85%)	856.0	-0.1	±1.0	-0.0001	PASS
	AC 110V	856.0	0.9	±1.0	0.0011	PASS
	AC 126.5V(110*115%)	856.0	0.9	±1.0	0.0011	PASS
10	AC 93.5V(110*85%)	856.0	0.4	±1.0	0.0005	PASS
	AC 110V	856.0	1.2	±1.0	0.0014	PASS
	AC 126.5V(110*115%)	856.0	-0.2	±1.0	-0.0002	PASS
20	AC 93.5V(110*85%)	856.0	-1.0	±1.0	-0.0012	PASS
	AC 110V	856.0	0.9	±1.0	0.0011	PASS
	AC 126.5V(110*115%)	856.0	0.6	±1.0	0.0007	PASS
30	AC 93.5V(110*85%)	856.0	0.8	±1.0	0.0009	PASS
	AC 110V	856.0	-1.0	±1.0	-0.0012	PASS
	AC 126.5V(110*115%)	856.0	-0.7	±1.0	-0.0008	PASS
40	AC 93.5V(110*85%)	856.0	-0.3	±1.0	-0.0004	PASS
	AC 110V	856.0	0.9	±1.0	0.0011	PASS
	AC 126.5V(110*115%)	856.0	0.4	±1.0	0.0005	PASS
50	AC 93.5V(110*85%)	856.0	-0.1	±1.0	-0.0001	PASS
	AC 110V	856.0	-0.9	±1.0	-0.0011	PASS
	AC 126.5V(110*115%)	856.0	-0.7	±1.0	-0.0008	PASS

NOTE: The test result is accurate to 4 decimal places.

11.21. Radiated spurious emissions

11.21.1. Test results

11.21.1.1. Below 1GHz

11.21.1.1.1. 700MHz Band

11.21.1.1.1.1. Polarization type: Horizontal

Test Result:	PASS	Polarization:	Horizontal
Standard:	FCC PART 90	Power Source:	AC 110V, 50Hz
Test item:	Radiation spurious emissions	Date:	2023-05-31
Temp.(°C)/Hum.(%RH):	23.2°C/54%RH	Time:	10:37:41
EUT:	Public Safety DAS	Test mode:	Downlink mode
Model:	RH78V3-B	Distance:	3m
Note:	/		



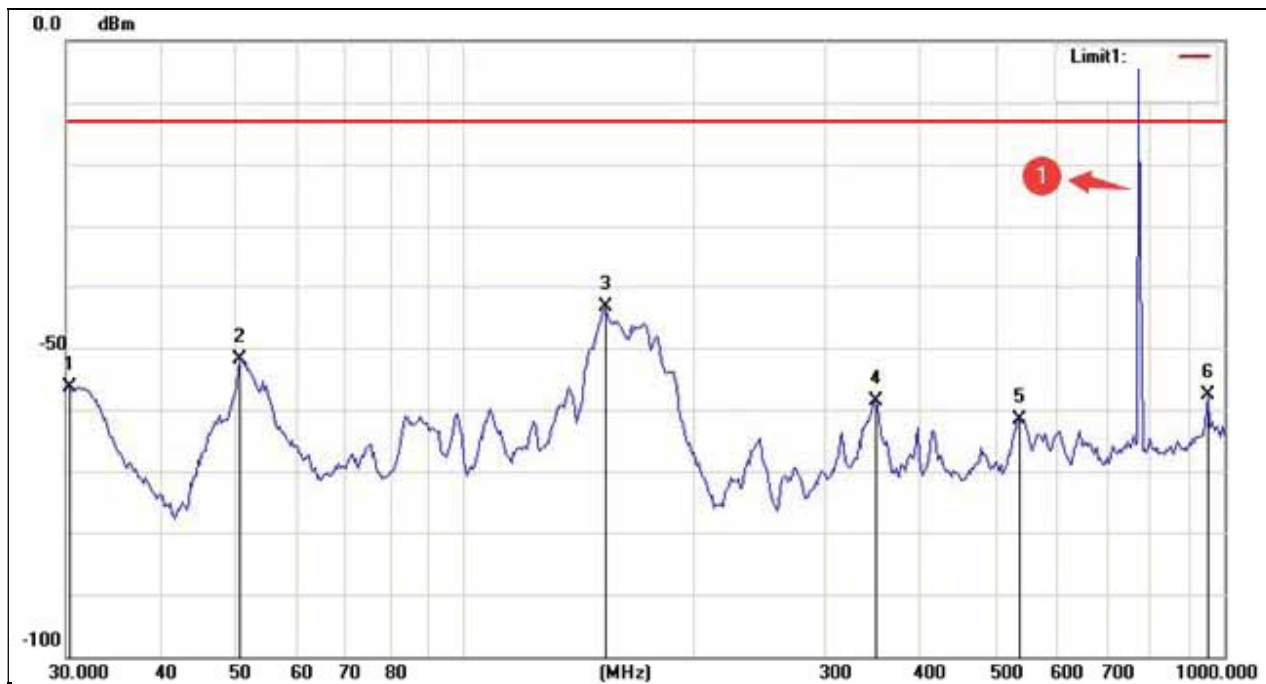
No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBm)	Factor(dB)	(dBm)	(dBm)	(dB)	
1	31.7341	-93.19	31.19	-62.00	-13.00	-49.00	peak
2	51.4530	-87.80	29.17	-58.63	-13.00	-45.63	peak
3	174.1811	-71.89	23.49	-48.40	-13.00	-35.40	peak
4	413.8470	-90.44	27.78	-62.66	-13.00	-49.66	peak
5	645.1195	-95.41	33.92	-61.49	-13.00	-48.49	peak
6	994.3963	-97.22	35.89	-61.33	-13.00	-48.33	peak

NOTE 1: When the read value of the test frequency does not exceed the peak limit, peak is used instead of RMS value.

NOTE 2: In the above figure, ⊙ means downlink signal, its frequency is 772MHz,.

11.21.1.1.1.2. Polarization type: Vertical

Test Result:	PASS	Polarization:	Vertical
Standard:	FCC PART 90	Power Source:	AC 110V, 50Hz
Test item:	Radiation spurious emissions	Date:	2023-05-31
Temp.(°C)/Hum.(%RH):	23.2°C/54%RH	Time:	10:42:04
EUT:	Public Safety DAS	Test mode:	Downlink mode
Model:	RH78V3-B	Distance:	3m
Note:	/		



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBm)	Factor(dB)	(dBm)	(dBm)	(dB)	
1	30.3391	-79.65	23.37	-56.28	-13.00	-43.28	peak
2	50.8779	-77.75	25.96	-51.79	-13.00	-38.79	peak
3	153.9253	-70.72	27.27	-43.45	-13.00	-30.45	peak
4	347.6834	-86.39	27.66	-58.73	-13.00	-45.73	peak
5	538.9442	-92.32	30.75	-61.57	-13.00	-48.57	peak
6	950.6823	-93.61	35.98	-57.63	-13.00	-44.63	peak

NOTE 1: When the read value of the test frequency does not exceed the peak limit, peak is used instead of RMS value.

NOTE 2: In the above figure, ⊙ means downlink signal, its frequency is 772MHz..

11.21.1.1.2. 800MHz Band

11.21.1.1.2.1. Polarization type: Horizontal

Test Result:	PASS	Polarization:	Horizontal
Standard:	FCC PART 90	Power Source:	AC 110V, 50Hz
Test item:	Radiation spurious emissions	Date:	2023-05-31
Temp.(°C)/Hum.(%RH):	23.2°C/54%RH	Time:	10:34:20
EUT:	Public Safety DAS	Test mode:	Downlink mode
Model:	RH78V3-B	Distance:	3m
Note:	/		



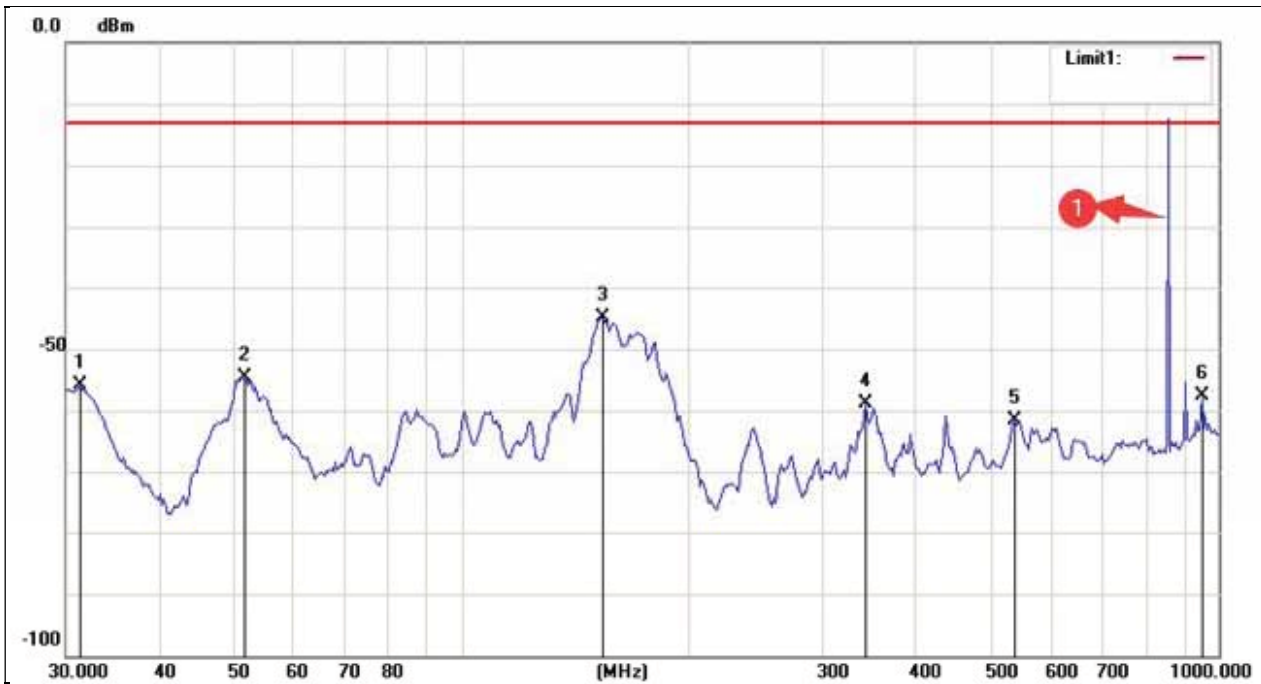
No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBm)	Factor(dB)	(dBm)	(dBm)	(dB)	
1	30.1691	-93.24	31.65	-61.59	-13.00	-48.59	peak
2	51.4530	-92.04	29.17	-62.87	-13.00	-49.87	peak
3	83.8947	-83.89	21.80	-62.09	-13.00	-49.09	peak
4	177.1425	-77.67	23.68	-53.99	-13.00	-40.99	peak
5	423.2548	-90.91	28.67	-62.24	-13.00	-49.24	peak
6	659.7846	-95.86	34.23	-61.63	-13.00	-48.63	peak

NOTE 1: When the read value of the test frequency does not exceed the peak limit, peak is used instead of RMS value.

NOTE 2: In the above figure, ① means downlink signal, its frequency is 856MHz..

11.21.1.1.2.2. Polarization type: Vertical

Test Result:	PASS	Polarization:	Vertical
Standard:	FCC PART 90	Power Source:	AC 110V, 50Hz
Test item:	Radiation spurious emissions	Date:	2023-05-31
Temp.(°C)/Hum.(%RH):	23.2°C/54%RH	Time:	10:29:44
EUT:	Public Safety DAS	Test mode:	Downlink mode
Model:	RH78V3-B	Distance:	3m
Note:	/		



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBm)	Factor(dB)	(dBm)	(dBm)	(dB)	
1	31.3795	-79.13	23.26	-55.87	-13.00	-42.87	peak
2	51.7429	-80.48	25.87	-54.61	-13.00	-41.61	peak
3	153.9253	-72.02	27.27	-44.75	-13.00	-31.75	peak
4	341.8711	-86.30	27.39	-58.91	-13.00	-45.91	peak
5	538.9442	-92.45	30.75	-61.70	-13.00	-48.70	peak
6	950.6823	-93.50	35.98	-57.52	-13.00	-44.52	peak

NOTE 1: When the read value of the test frequency does not exceed the peak limit, peak is used instead of RMS value.

NOTE 2: In the above figure, ① means downlink signal, its frequency is 856MHz,.

11.21.1.2. Above 1GHz

11.21.1.2.1. 700MHz Band

11.21.1.2.1.1. Polarization type: Horizontal

Test Result:	PASS	Polarization:	Horizontal
Standard:	FCC PART 90	Power Source:	AC 110V, 50Hz
Test item:	Radiation spurious emissions	Date:	2023-05-31
Temp.(°C)/Hum.(%RH):	23.2°C/54%RH	Time:	10:08:45
EUT:	Public Safety DAS	Test mode:	Downlink mode
Model:	RH78V3-B	Distance:	3m
Note:	/		

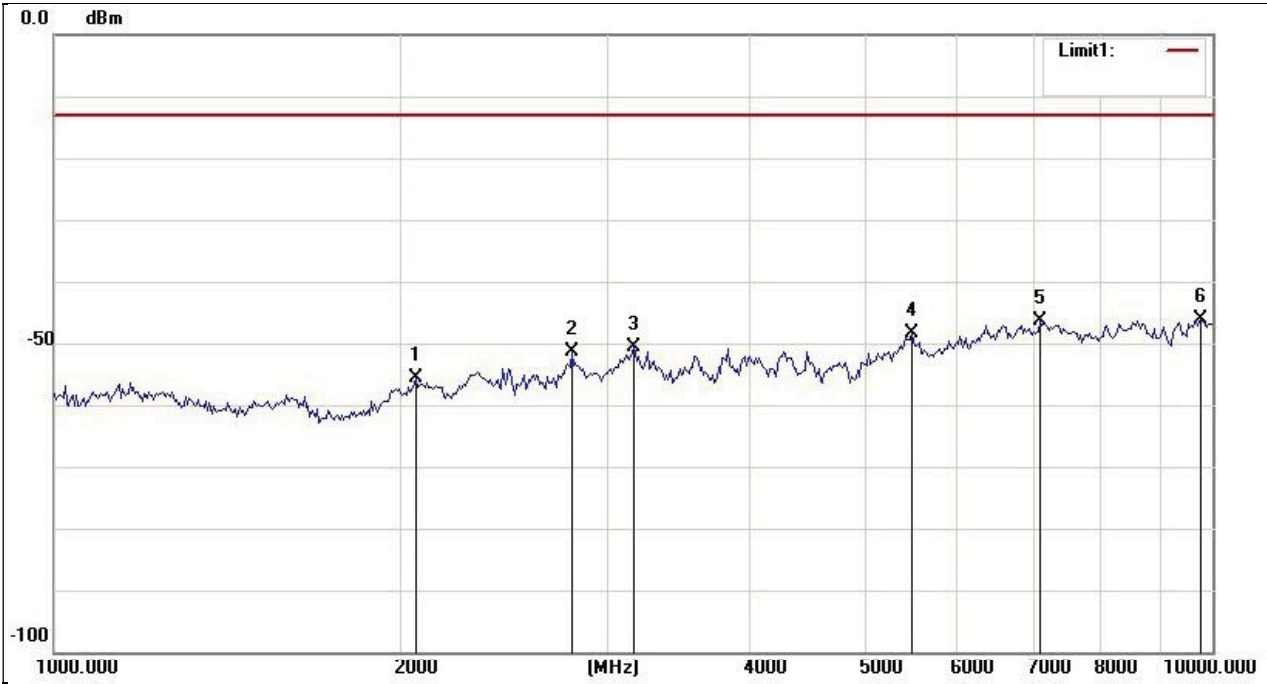


No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBm)	Factor(dB)	(dBm)	(dBm)	(dB)	
1	1285.211	-63.44	10.00	-53.44	-13.00	-40.44	peak
2	2478.739	-61.80	10.09	-51.71	-13.00	-38.71	peak
3	3162.278	-61.85	11.56	-50.29	-13.00	-37.29	peak
4	5520.611	-65.85	17.60	-48.25	-13.00	-35.25	peak
5	6812.921	-66.58	21.77	-44.81	-13.00	-31.81	peak
6	9745.005	-67.42	21.93	-45.49	-13.00	-32.49	peak

NOTE: When the read value of the test frequency does not exceed the peak limit, peak is used instead of RMS value.

11.21.1.2.1.2. Polarization type: Vertical

Test Result:	PASS	Polarization:	Vertical
Standard:	FCC PART 90	Power Source:	AC 110V, 50Hz
Test item:	Radiation spurious emissions	Date:	2023-05-31
Temp.(°C)/Hum.(%RH):	23.2°C/54%RH	Time:	10:05:27
EUT:	Public Safety DAS	Test mode:	Downlink mode
Model:	RH78V3-B	Distance:	3m
Note:	/		



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBm)	Factor(dB)	(dBm)	(dBm)	(dB)	
1	2053.525	-64.35	8.66	-55.69	-13.00	-42.69	peak
2	2799.725	-61.93	10.67	-51.26	-13.00	-38.26	peak
3	3162.278	-61.99	11.34	-50.65	-13.00	-37.65	peak
4	5500.278	-66.10	17.65	-48.45	-13.00	-35.45	peak
5	7095.149	-68.34	21.99	-46.35	-13.00	-33.35	peak
6	9781.031	-68.22	22.11	-46.11	-13.00	-33.11	peak

NOTE: When the read value of the test frequency does not exceed the peak limit, peak is used instead of RMS value.

11.21.1.2.2. 800MHz Band

11.21.1.2.2.1. Polarization type: Horizontal

Test Result:	PASS	Polarization:	Horizontal
Standard:	FCC PART 90	Power Source:	AC 110V, 50Hz
Test item:	Radiation spurious emissions	Date:	2023-05-31
Temp.(°C)/Hum.(%RH):	23.2°C/54%RH	Time:	10:12:18
EUT:	Public Safety DAS	Test mode:	Downlink mode
Model:	RH78V3-B	Distance:	3m
Note:	/		



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBm)	Factor(dB)	(dBm)	(dBm)	(dB)	
1	1343.399	-63.80	9.00	-54.80	-13.00	-41.80	peak
2	2001.161	-63.80	9.80	-54.00	-13.00	-41.00	peak
3	3584.984	-63.91	12.26	-51.65	-13.00	-38.65	peak
4	5965.420	-66.56	18.25	-48.31	-13.00	-35.31	peak
5	7498.942	-67.21	22.09	-45.12	-13.00	-32.12	peak
6	10000.000	-68.55	22.70	-45.85	-13.00	-32.85	peak

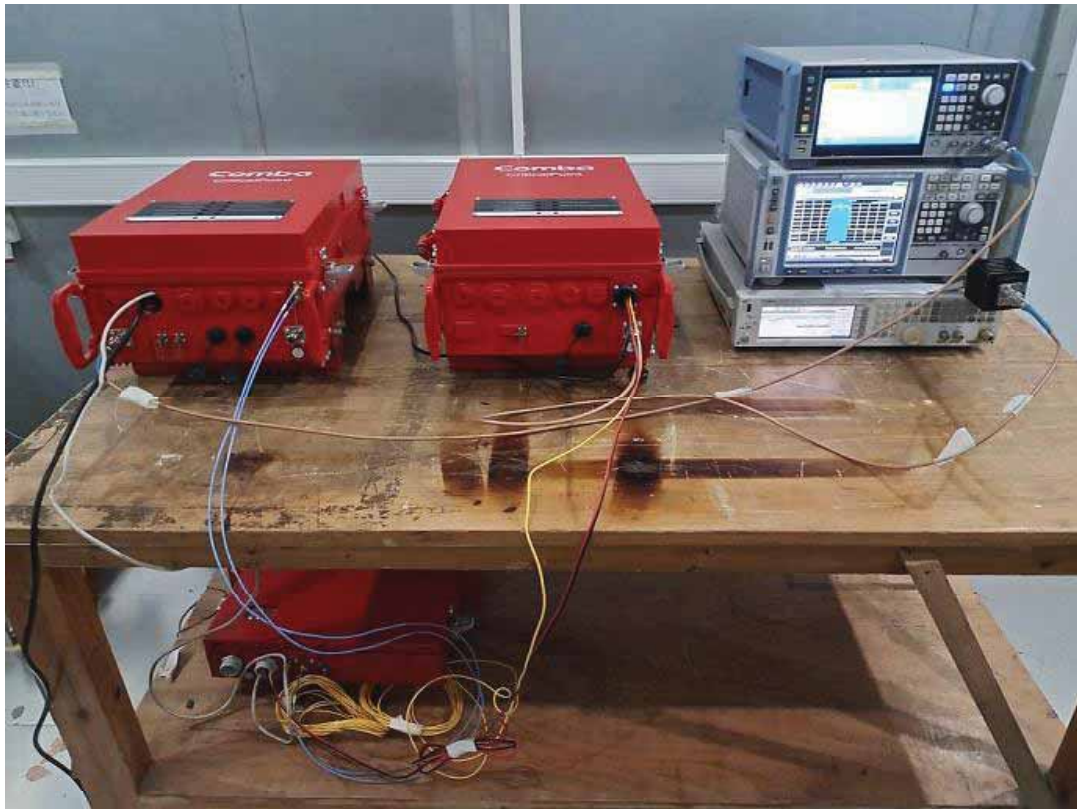
NOTE: When the read value of the test frequency does not exceed the peak limit, peak is used instead of RMS value.

11.21.1.2.2.2. Polarization type: Vertical

Test Result:	PASS	Polarization:	Vertical
Standard:	FCC PART 90	Power Source:	AC 110V, 50Hz
Test item:	Radiation spurious emissions	Date:	2023-05-31
Temp.(°C)/Hum.(%RH):	23.2°C/54%RH	Time:	10:16:29
EUT:	Public Safety DAS	Test mode:	Downlink mode
Model:	RH78V3-B	Distance:	3m
Note:	/		



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBm)	Factor(dB)	(dBm)	(dBm)	(dB)	
1	2076.384	-64.25	9.06	-55.19	-13.00	-42.19	peak
2	3162.278	-62.74	11.34	-51.40	-13.00	-38.40	peak
3	4295.491	-65.93	14.68	-51.25	-13.00	-38.25	peak
4	5480.019	-66.37	17.78	-48.59	-13.00	-35.59	peak
5	6590.377	-67.35	20.93	-46.42	-13.00	-33.42	peak
6	9853.482	-67.48	22.06	-45.42	-13.00	-32.42	peak
NOTE: When the read value of the test frequency does not exceed the peak limit, peak is used instead of RMS value.							

Appendix B. Photograph of the test connection diagram

Normal temperature test scenario



Test scenario-2



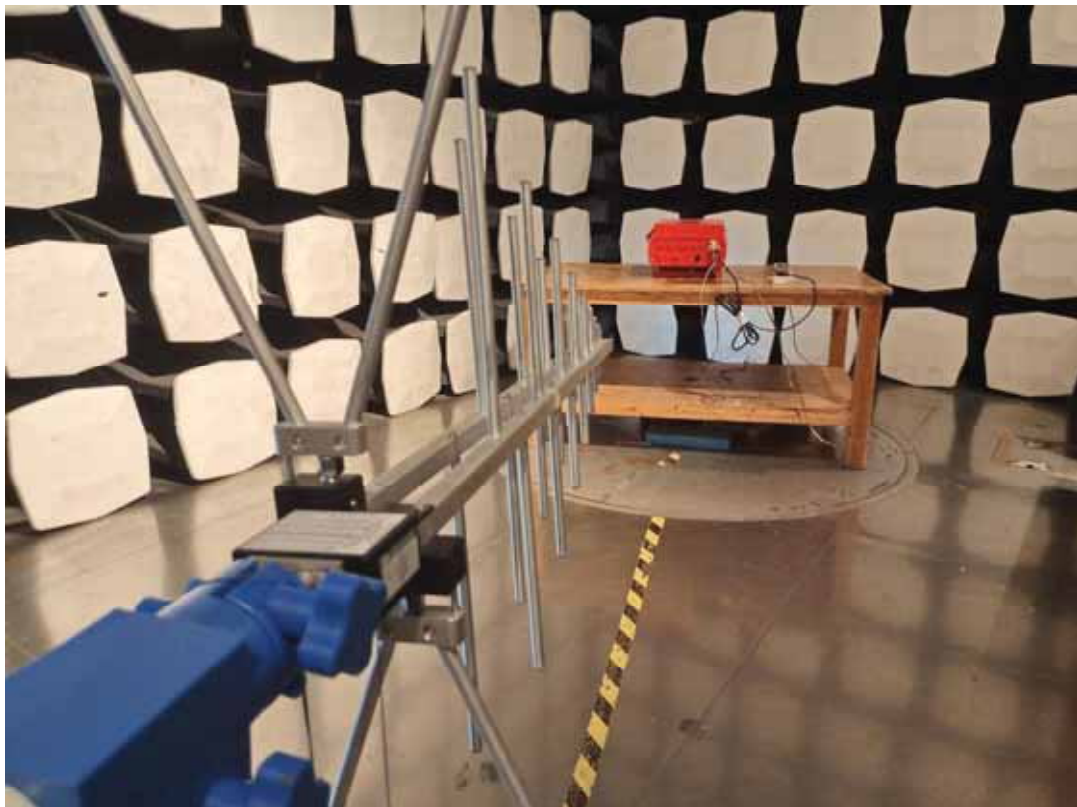
Test scenario-3



Temperature change test-1



Temperature change test-2



Radiated spurious emissions—Below 1GHz



Radiated spurious emissions—Above 1GHz

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Appendix C. Photographs of EUT

C.1 External photos



Top surface



Front surface



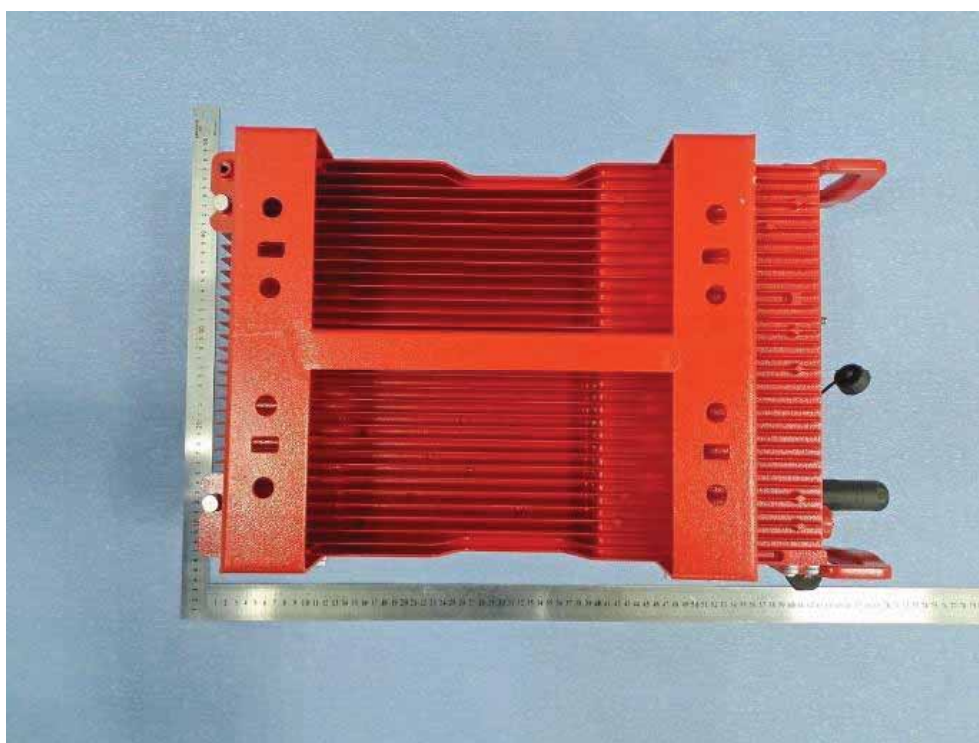
Side surface-1



Side surface-2



Behind surface



Bottom surface

----- **End of Report** -----