

Test Mode	Channel	Polarization	Verdict	
11AX HE40	MCH	Horizontal	PASS	



No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	[MHz]	[dBuV]	[dB/m]	[dBuV/m]	[dBuV/m]	[dB]	
1	8791.6615	42.29	6.23	48.52	74.00	-25.48	Horizontal
2	9747.7185	45.07	6.48	51.55	74.00	-22.45	Horizontal
3	14796.8496	38.71	12.84	51.55	74.00	-22.45	Horizontal
4	15865.0456	37.63	14.67	52.30	74.00	-21.70	Horizontal
5	17685.1481	37.03	18.15	55.18	74.00	-18.82	Horizontal
6	17821.7277	36.13	18.96	55.09	74.00	-18.91	Horizontal
7	17974.1218	35.96	19.70	55.66	74.00	-18.34	Horizontal

#### AV Result:

No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	[MHz]	[dBuV]	[dB/m]	[dBuV/m]	[dBuV/m]	[dB]	
1	17685.1481	26.68	18.15	44.83	54.00	-9.17	Horizontal
2	17821.7277	26.21	18.96	45.17	54.00	-8.83	Horizontal
3	17974.1218	26.14	19.70	45.84	54.00	-8.16	Horizontal

Note: 1. Measurement = Reading Level + Correct Factor,

- 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- 3. Peak detector: RBW: 1 MHz, VBW: 3 MHz.
- 4. Average detector: RBW: 1 MHz, VBW: 1/T MHz(refer to clause 7.1.).
- 5. For above 3GHz part, filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for HPF losses.
- 6. Only the worst case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.





Test Mode	Channel	Polarization	Verdict	
11AX HE40	MCH	Vertical	PASS	



No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	[MHz]	[dBuV]	[dB/m]	[dBuV/m]	[dBuV/m]	[dB]	
1	7967.8710	42.17	5.51	47.68	74.00	-26.32	Vertical
2	8915.3019	42.56	6.14	48.70	74.00	-25.30	Vertical
3	9747.7185	46.77	6.48	53.25	74.00	-20.75	Vertical
4	15944.1180	38.32	14.48	52.80	74.00	-21.20	Vertical
5	16562.3203	37.31	15.88	53.19	74.00	-20.81	Vertical
6	17689.4612	36.53	18.18	54.71	74.00	-19.29	Vertical
7	17910.8639	35.75	19.26	55.01	74.00	-18.99	Vertical

#### AV Result:

No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	[MHz]	[dBuV]	[dB/m]	[dBuV/m]	[dBuV/m]	[dB]	
1	17689.4612	26.46	18.18	44.64	54.00	-9.36	Vertical
2	17910.8639	26.58	19.26	45.84	54.00	-8.16	Vertical

Note: 1. Measurement = Reading Level + Correct Factor,

- 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- 3. Peak detector: RBW: 1 MHz, VBW: 3 MHz.
- 4. Average detector: RBW: 1 MHz, VBW: 1/T MHz(refer to clause 7.1.).
- 5. For above 3GHz part, filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for HPF losses.
- 6. Only the worst case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.



Test Mode	Channel	Polarization	Verdict	
11AX HE40	HCH	Horizontal	PASS	



No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	[MHz]	[dBuV]	[dB/m]	[dBuV/m]	[dBuV/m]	[dB]	
1	8519.9400	41.80	6.54	48.34	74.00	-25.66	Horizontal
2	9808.1010	45.19	6.37	51.56	74.00	-22.44	Horizontal
3	14743.6555	39.41	12.89	52.30	74.00	-21.70	Horizontal
4	16119.5149	38.23	14.88	53.11	74.00	-20.89	Horizontal
5	16647.1434	37.68	15.75	53.43	74.00	-20.57	Horizontal
6	17731.1539	36.44	18.53	54.97	74.00	-19.03	Horizontal
7	17939.6175	35.53	19.45	54.98	74.00	-19.02	Horizontal

#### AV Result:

No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	[MHz]	[dBuV]	[dB/m]	[dBuV/m]	[dBuV/m]	[dB]	
1	17731.1539	25.89	18.53	44.42	54.00	-9.58	Horizontal
2	17939.6175	25.85	19.45	45.30	54.00	-8.70	Horizontal

Note: 1. Measurement = Reading Level + Correct Factor,

- 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- 3. Peak detector: RBW: 1 MHz, VBW: 3 MHz.
- 4. Average detector: RBW: 1 MHz, VBW: 1/T MHz(refer to clause 7.1.).
- 5. For above 3GHz part, filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for HPF losses.
- 6. Only the worst case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.



Test Mode	Test Mode Channel		Verdict	
11AX HE40	HCH	Vertical	PASS	



No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	[MHz]	[dBuV]	[dB/m]	[dBuV/m]	[dBuV/m]	[dB]	
1	7122.5153	43.67	3.98	47.65	74.00	-26.35	Vertical
2	7969.3087	43.09	5.44	48.53	74.00	-25.47	Vertical
3	9808.1010	46.82	6.37	53.19	74.00	-20.81	Vertical
4	15846.3558	37.64	14.73	52.37	74.00	-21.63	Vertical
5	16734.8419	37.63	16.03	53.66	74.00	-20.34	Vertical
6	17629.0786	36.63	18.05	54.68	74.00	-19.32	Vertical
7	17959.7450	35.79	19.63	55.42	74.00	-18.58	Vertical

#### AV Result:

No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	[MHz]	[dBuV]	[dB/m]	[dBuV/m]	[dBuV/m]	[dB]	
1	17629.0786	26.37	18.05	44.42	54.00	-9.58	Vertical
2	17959.7450	25.87	19.63	45.50	54.00	-8.50	Vertical

Note: 1. Measurement = Reading Level + Correct Factor,

- 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- 3. Peak detector: RBW: 1 MHz, VBW: 3 MHz.
- 4. Average detector: RBW: 1 MHz, VBW: 1/T MHz(refer to clause 7.1.).
- 5. For above 3GHz part, filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for HPF losses.
- 6. Only the worst case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.



## Part 3: 18GHz~26.5GHz



### SPURIOUS EMISSIONS 18GHz TO 26.5GHz (WORST-CASE CONFIGURATION)

PK F	Result:						
No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	[MHz]	[dBuV]	[dB/m]	[dBuV/m]	[dBuV/m]	[dB]	
1	18672.4172	50.19	-6.32	43.87	74.00	-30.13	Horizontal
2	19740.9741	49.26	-5.38	43.88	74.00	-30.12	Horizontal
3	22915.1915	48.31	-3.70	44.61	74.00	-29.39	Horizontal
4	24135.9136	48.90	-2.73	46.17	74.00	-27.83	Horizontal
5	25382.9883	49.58	-3.26	46.32	74.00	-27.68	Horizontal
6	25767.2267	49.38	-2.91	46.47	74.00	-27.53	Horizontal

Note: 1. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit. 2. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

3. Measurement = Reading Level + Correct Factor,

Correct Factor = Antenna Factor + Loss (Cable) – Amplifier Gain.

4. Only the worst case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.



Test Mode	Channel	Polarization	Verdict
11B	HCH	Vertical	PASS



No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	[MHz]	[dBuV]	[dB/m]	[dBuV/m]	[dBuV/m]	[dB]	
1	18550.0050	51.27	-6.50	44.77	74.00	-29.23	Vertical
2	19765.6266	49.57	-5.36	44.21	74.00	-29.79	Vertical
3	21436.0436	49.62	-5.86	43.76	74.00	-30.24	Vertical
4	23153.2153	48.59	-3.44	45.15	74.00	-28.85	Vertical
5	23957.3957	48.75	-2.68	46.07	74.00	-27.93	Vertical
6	24815.9816	50.65	-3.35	47.30	74.00	-26.70	Vertical

Note: 1. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit. 2. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

3. Measurement = Reading Level + Correct Factor, Correct Factor = Antenna Factor + Loss (Cable) – Amplifier Gain.

4. Only the worst case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.

Form-ULID-008536-9 V3.0



## Part 4: 30MHz~1GHz



### SPURIOUS EMISSIONS 30M TO 1GHz (WORST-CASE CONFIGURATION)

No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	[MHz]	[dBuV]	[dB/m]	[dBuV/m]	[dBuV/m]	[dB]	
1	46.2976	-0.34	20.26	19.92	40.00	-20.08	Peak
2	143.4043	0.70	20.24	20.94	43.50	-22.56	Peak
3	188.1258	2.66	17.86	20.52	43.50	-22.98	Peak
4	300.1720	0.10	21.09	21.19	46.00	-24.81	Peak
5	512.6233	2.12	26.26	28.38	46.00	-17.62	Peak
6	725.4625	4.61	30.16	34.77	46.00	-11.23	Peak

- Note: 1. If Peak Result complies with QP limit, QP Result is deemed to comply with QP limit. 2. Test setup: RBW: 120 kHz, VBW: 300 kHz, Sweep time: auto.
  - 3. Measurement = Reading Level + Correct Factor,
  - Correct Factor = Antenna Factor + Loss (Cable).







No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	[MHz]	[dBuV]	[dB/m]	[dBuV/m]	[dBuV/m]	[dB]	
1	44.5515	0.10	20.15	20.25	40.00	-19.75	Peak
2	52.5063	0.30	20.62	20.92	40.00	-19.08	Peak
3	167.3657	0.94	20.05	20.99	43.50	-22.51	Peak
4	183.7604	3.47	18.39	21.86	43.50	-21.64	Peak
5	493.8034	6.76	25.72	32.48	46.00	-13.52	Peak
6	689.8600	3.23	29.55	32.78	46.00	-13.22	Peak

Note: 1. If Peak Result complies with QP limit, QP Result is deemed to comply with QP limit. 2. Test setup: RBW: 120 kHz, VBW: 300 kHz, Sweep time: auto.

3. Measurement = Reading Level + Correct Factor,

Correct Factor = Antenna Factor + Loss (Cable).





## Part 5: 9kHz~30MHz

I est Mode	Chanr	nei	Freq	uency Range	•	verdict
11B	MCH	1	9k	Hz~150kHz		PASS
60						
50						
40						
30						
20						
Ē 10						
0 0 0 0						
		<b>*</b>	4	-		
-20 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	when may have and	Nº Mahlan Kali	MALLAN LAN	t to a transmission		
-30		91	THE PRIME AND	A MARINA AND A MARINA	What we have a start with the second of the second se	ditada and the
-40						A MARKAN AND AND A MARKAN
-50						in the state
-60	2014	201	40k	604	906	1
9K	ZUK	30K	40K	OUK	OUK	10

### SPURIOUS EMISSIONS Below 30MHz (WORST CASE CONFIGURATION-FACE ON)

No.	Frequency	Reading Level	Correct Factor	FCC Result	FCC Limit	ISED Result	ISED Limit	Margin	Remark
	[MHz]	[dBuV]	[dB/m]	[dBuV/m]	[dBuV/m]	[dBuA/m]	[dBuA/m]	[dB]	
1	0.0207	47.59	-61.74	-14.15	41.28	-65.65	-10.22	-55.43	Peak
2	0.0263	45.60	-61.66	-16.06	39.21	-67.56	-12.29	-55.27	Peak
3	0.0314	43.88	-61.60	-17.72	37.67	-69.22	-13.83	-55.39	Peak
4	0.0378	42.12	-61.60	-19.48	36.06	-70.98	-15.44	-55.54	Peak
5	0.0470	39.06	-61.60	-22.54	34.16	-74.04	-17.34	-56.70	Peak
6	0.0501	36.53	-61.60	-25.07	33.60	-76.57	-17.90	-58.67	Peak

Note: 1. Measurement = Reading Level + Correct Factor,

Correct Factor = Antenna Factor + Loss (Cable) + Distance Factor.

- 2. If Peak Result complies with AV and QP limit, AV and QP Result are deemed to comply with AV limit.
- 3. All 3 polarizations(Horizontal, Face-on and Face-off) of the loop antenna had been tested, but only the worst data recorded in the report.







No.	Frequency	Reading Level	Correct Factor	FCC Result	FCC Limit	ISED Result	ISED Limit	Margin	Remark
	[MHz]	[dBuV]	[dB/m]	[dBuV/m]	[dBuV/m]	[dBuA/m]	[dBuA/m]	[dB]	
1	0.2217	30.54	-61.78	-31.24	20.69	-82.74	-30.81	-51.93	Peak
2	0.2660	28.36	-61.80	-33.44	19.10	-84.94	-32.40	-52.54	Peak
3	0.3068	25.56	-61.82	-36.26	17.87	-87.76	-33.63	-54.13	Peak
4	0.3880	25.25	-61.84	-36.59	15.82	-88.09	-35.68	-52.41	Peak
5	0.4229	22.16	-61.85	-39.69	14.88	-91.19	-36.62	-54.57	Peak
6	0.4329	20.98	-61.85	-40.87	14.59	-92.37	-36.91	-55.46	Peak

Note: 1. Measurement = Reading Level + Correct Factor,

Correct Factor = Antenna Factor + Loss (Cable) + Distance Factor.

- 2. If Peak Result complies with AV and QP limit, AV and QP Result are deemed to comply with AV limit.
- 3. All 3 polarizations(Horizontal, Face-on and Face-off) of the loop antenna had been tested, but only the worst data recorded in the report.

Form-ULID-008536-9 V3.0







No.	Frequency	Reading Level	Correct Factor	FCC Result	FCC Limit	ISED Result	ISED Limit	Margin	Remark
	[MHz]	[dBuV]	[dB/m]	[dBuV/m]	[dBuV/m]	[dBuA/m]	[dBuA/m]	[dB]	
1	0.7822	16.78	-21.87	-5.09	29.74	-56.59	-21.76	-34.83	Peak
2	1.2131	12.71	-21.85	-9.14	25.93	-60.64	-25.57	-35.07	Peak
3	1.3547	11.72	-21.84	-10.12	24.97	-61.62	-26.53	-35.09	Peak
4	1.7532	9.68	-21.84	-12.16	29.54	-63.66	-21.96	-41.70	Peak
5	1.9775	9.36	-21.83	-12.47	29.54	-63.97	-21.96	-42.01	Peak
6	3.3439	7.83	-21.78	-13.95	29.54	-65.45	-21.96	-43.49	Peak

Note: 1. Measurement = Reading Level + Correct Factor,

Correct Factor = Antenna Factor + Loss (Cable) + Distance Factor.

- 2. If Peak Result complies with AV and QP limit, AV and QP Result are deemed to comply with AV limit.
- 3. All 3 polarizations(Horizontal, Face-on and Face-off) of the loop antenna had been tested, but only the worst data recorded in the report.

Form-ULID-008536-9 V3.0



# 9. AC POWER LINE CONDUCTED EMISSIONS

## LIMITS

## Please refer to FCC §15.207 (a)

	Limit (dBuV)				
	Quasi-peak	Average			
0.15 -0.5	66 - 56 *	56 - 46 *			
0.50 -5.0	56.00	46.00			
5.0 -30.0	60.00	50.00			

### TEST SETUP AND PROCEDURE



The EUT is put on a table of non-conducting material that is 80cm high. The vertical conducting wall of shielding is located 40cm to the rear of the EUT. The power line of the EUT is connected to the AC mains through an Artificial Mains Network (A.M.N.). A EMI Measurement Receiver (R&S Test Receiver ESR3) is used to test the emissions from both sides of AC line. According to the requirements in Section 6.2 of ANSI C63.10-2013.Conducted emissions from the EUT measured in the frequency range between 0.15 MHz and 30MHz using CISPR Quasi-Peak and average detector mode. The bandwidth of EMI test receiver is set at 9kHz.

The arrangement of the equipment is installed to meet the standards and operating in a manner, which tends to maximize its emission characteristics in a normal application.



### TEST ENVIRONMENT

Temperature	22°C	Relative Humidity	56%
Atmosphere Pressure	101kPa	Test Voltage	AC 120V

### LINE L RESULTS (WORST-CASE CONFIGURATION)



# Final\_Result

Frequency [MHz]	QuasiPeak [dBµV]	Average [dBµV]	Limit [dBµV]	Margin [dB]	Meas. Time [ms]	Bandwidth [kHz]	Line	Filter	Corr. [dB]
0.157463		26.08	55.60	29.52	1000.0	9.000	L1	OFF	9.6
0.157463	45.46		65.60	20.14	1000.0	9.000	L1	OFF	9.6
0.371388		22.84	48.47	25.63	1000.0	9.000	L1	OFF	9.5
0.371388	32.30		58.47	26.17	1000.0	9.000	L1	OFF	9.5
0.396263		25.26	47.93	22.67	1000.0	9.000	L1	OFF	9.5
0.396263	36.94		57.93	20.99	1000.0	9.000	L1	OFF	9.5
20.258950		24.17	50.00	25.83	1000.0	9.000	L1	OFF	9.5
20.258950	35.96		60.00	24.04	1000.0	9.000	L1	OFF	9.5
20.808688		22.98	50.00	27.02	1000.0	9.000	L1	OFF	9.5
20.808688	34.12		60.00	25.88	1000.0	9.000	L1	OFF	9.5
23.129525		26.80	50.00	23.20	1000.0	9.000	L1	OFF	9.5
23.129525	33.52		60.00	26.48	1000.0	9.000	L1	OFF	9.5

Note: 1. If QP Result complies with AV limit, AV Result is deemed to comply with AV limit.

- 2. Test setup: RBW: 200 Hz (9 kHz-150 kHz), 9 kHz (150 kHz-30 MHz).
- 3. Step size: 80Hz (0.009MHz-0.15MHz), 4 kHz (0.15MHz-30MHz), Scan time: auto.
- 4. The extension cord/outlet strip was calibrated with the LISN as required by ANSI C63.10:2013 Clause 6.2.2.
- 5. Pre-testing all test modes and channels, and find the MCH of 11B which is the worst case, so only the worst case is included in this test report.
- 6. Two models of docker will be collocated to the EUT, both of them have been test, only the worse case is recorded in this test report.





## LINE N RESULTS (WORST-CASE CONFIGURATION)

# Final\_Result

Frequency [MHz]	QuasiPeak [dBµV]	Average [dBµV]	Limit [dBµV]	Margin [dB]	Meas. Time [ms]	Bandwidth [kHz]	Line	Filter	Corr. [dB]
0.157463		25.19	55.60	30.41	1000.0	9.000	Ν	OFF	9.6
0.157463	42.00		65.60	23.60	1000.0	9.000	N	OFF	9.6
0.393775		28.68	47.98	19.30	1000.0	9.000	N	OFF	9.5
0.393775	32.26		57.98	25.73	1000.0	9.000	N	OFF	9.5
19.709213		26.67	50.00	23.33	1000.0	9.000	Ν	OFF	9.5
19.709213	36.06		60.00	23.94	1000.0	9.000	N	OFF	9.5
20.258950		26.82	50.00	23.18	1000.0	9.000	N	OFF	9.5
20.258950	36.21		60.00	23.79	1000.0	9.000	N	OFF	9.5
20.808688		25.20	50.00	24.80	1000.0	9.000	N	OFF	9.5
20.808688	34.53		60.00	25.47	1000.0	9.000	N	OFF	9.5
21.664388		26.20	50.00	23.80	1000.0	9.000	N	OFF	9.5
21.664388	35.92		60.00	24.08	1000.0	9.000	Ν	OFF	9.5

Note: 1. If QP Result complies with AV limit, AV Result is deemed to comply with AV limit.

- 2. Test setup: RBW: 200 Hz (9 kHz—150 kHz), 9 kHz (150 kHz—30 MHz).
- 3. Step size: 80Hz (0.009MHz-0.15MHz), 4 kHz (0.15MHz-30MHz), Scan time: auto.
- 4. The extension cord/outlet strip was calibrated with the LISN as required by ANSI C63.10:2013 Clause 6.2.2.
- 5. Pre-testing all test modes and channels, and find the MCH of 11B which is the worst case, so only the worst case is included in this test report.
- 6. Two models of docker will be collocated to the EUT, both of them have been test, only the worse case is recorded in this test report.



# **10. ANTENNA REQUIREMENTS**

### APPLICABLE REQUIREMENTS

### Please refer to FCC §15.203

An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section. The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.

### Please refer to FCC §15.247(b)(4)

The conducted output power limit specified in paragraph (b) of this section is based on the use of antennas with directional gains that do not exceed 6 dBi. Except as shown in paragraph (c) of this section, if transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced below the stated values in paragraphs (b)(1), (b)(2), and (b)(3) of this section, as appropriate, by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

### ANTENNA GAIN

The antenna gain of EUT is less than 6 dBi

# **END OF REPORT**