

Spurious Emission (Conducted)

Test place
Shielded room
Date
Temperature / Humidity
Engineer
Mode

Ise EMC Lab.
No.11
September 15, 2022
23 deg. C / 54 % RH
Tetsuro Yoshida
NR Band n77, Tx 3840 MHz Mid ch, BW 40 MHz, PI/2 BPSK, RB1-104
NR Band n77, Tx 3840 MHz Mid ch, BW 40 MHz, PI/2 BPSK, RB100-0

Part 27: For mobile operations in the 3700-3980 MHz band

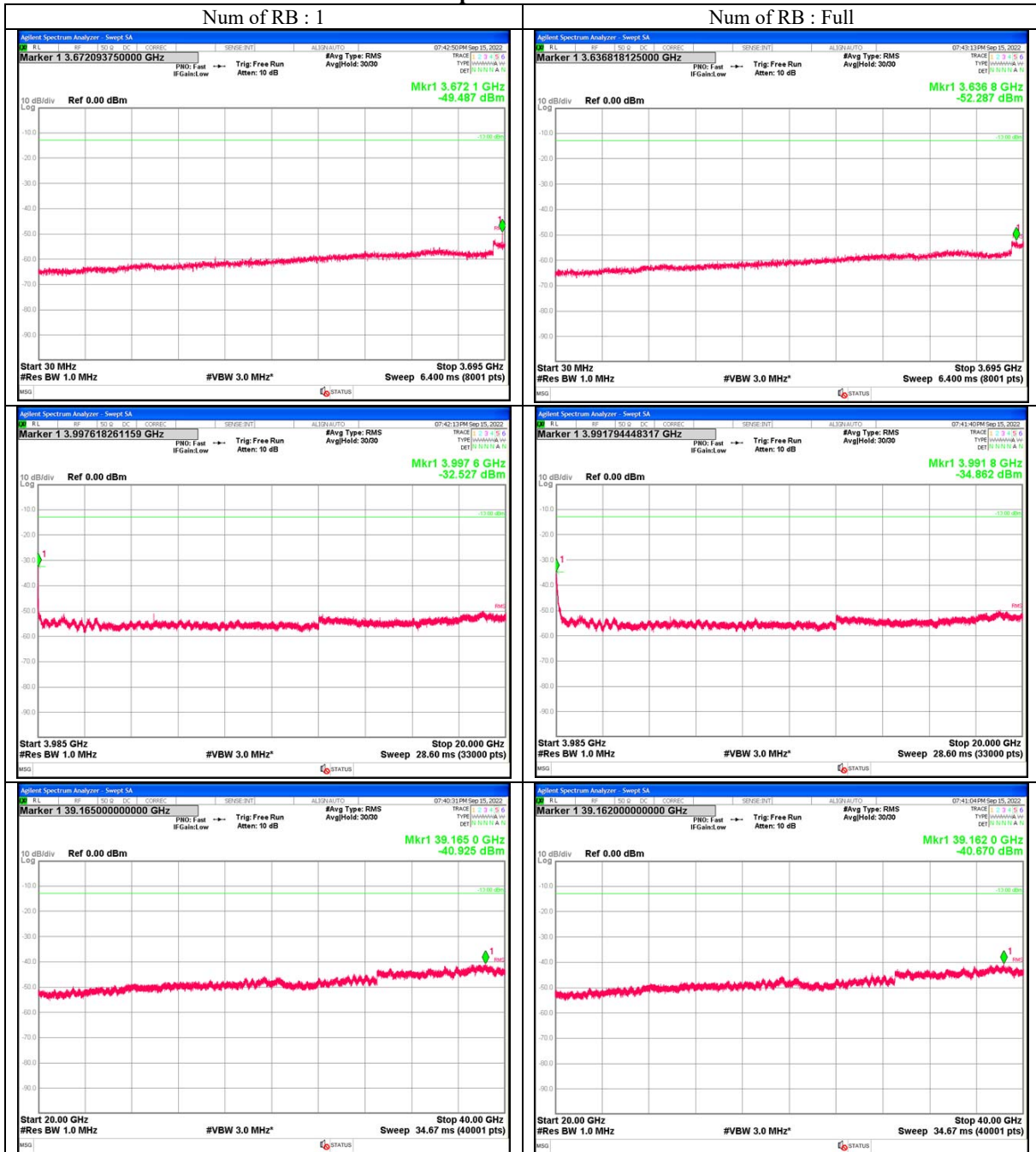


Spurious Emission (Conducted)

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Ise EMC Lab.
No.11
September 15, 2022
23 deg. C / 54 % RH
Tetsuro Yoshida
NR Band n77, Tx 3960 MHz High ch, BW 40 MHz, PI/2 BPSK, RB1-104
NR Band n77, Tx 3960 MHz High ch, BW 40 MHz, PI/2 BPSK, RB100-0

Part 27: For mobile operations in the 3700-3980 MHz band

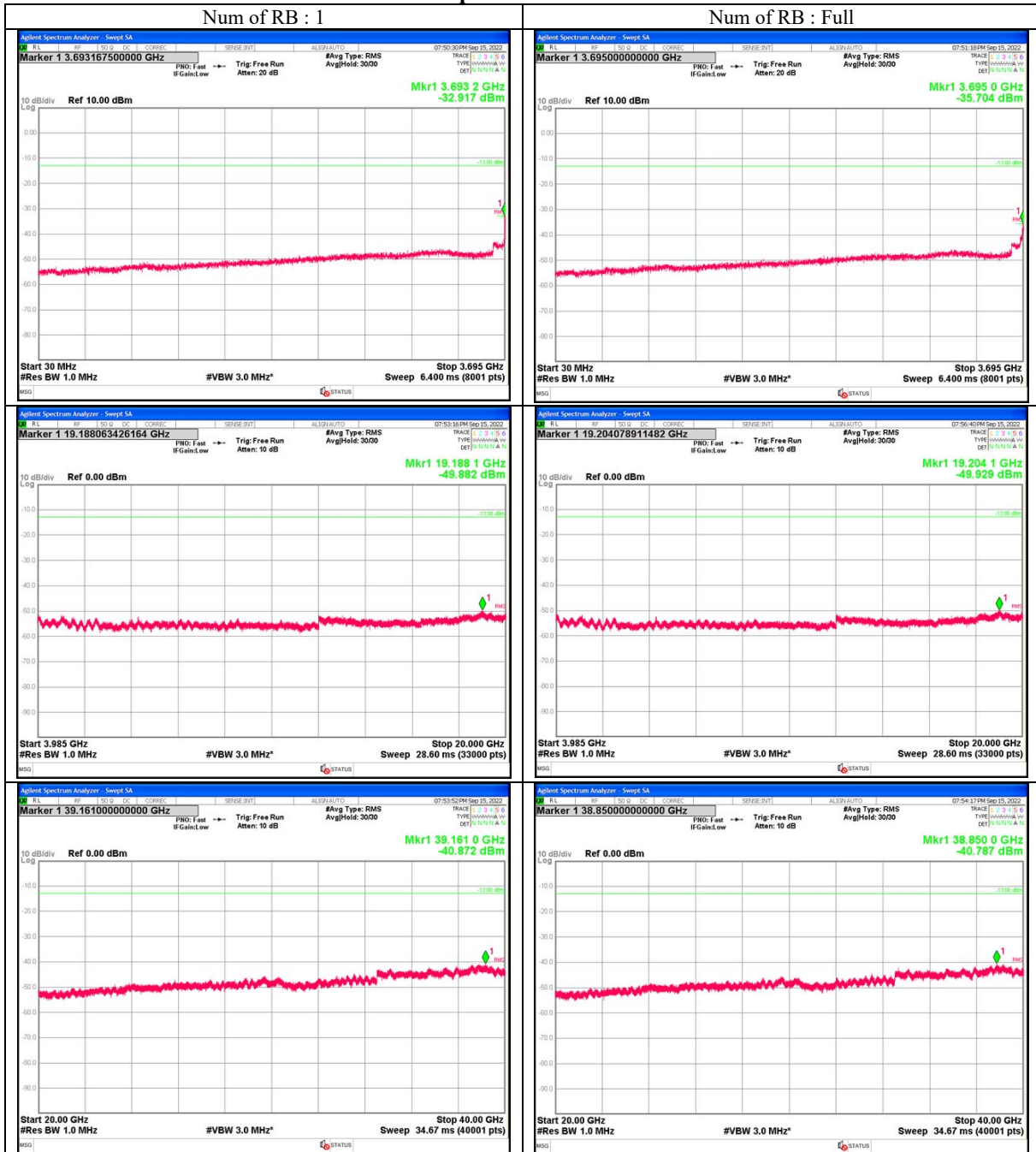


Spurious Emission (Conducted)

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Ise EMC Lab.
No.11
September 15, 2022
23 deg. C / 54 % RH
Tetsuro Yoshida
NR Band n77, Tx 3710.01 MHz Low ch, BW 20 MHz, PI/2 BPSK, RB1-1
NR Band n77, Tx 3710.01 MHz Low ch, BW 20 MHz, PI/2 BPSK, RB50-0

Part 27: For mobile operations in the 3700-3980 MHz band

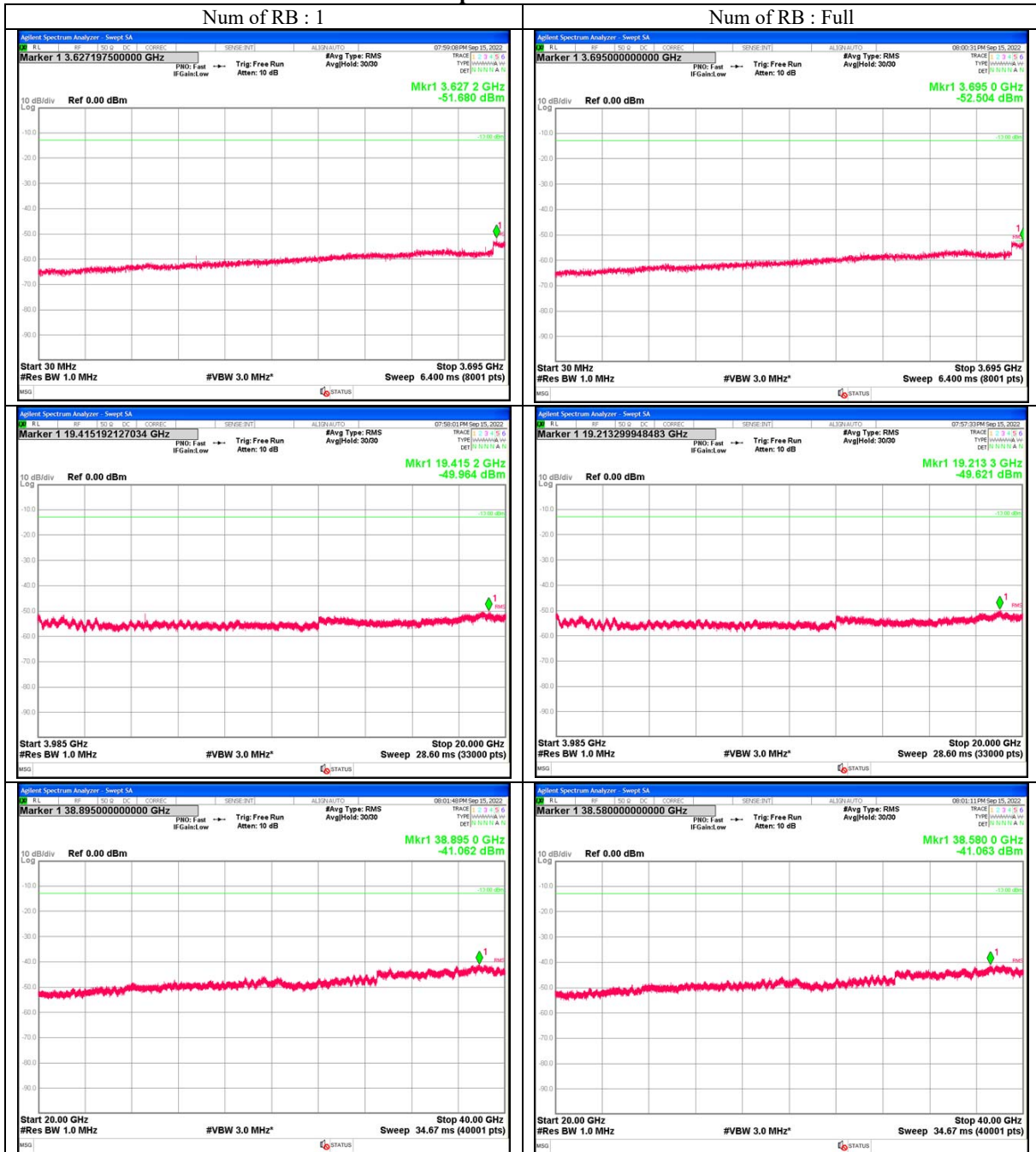


Spurious Emission (Conducted)

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Temperature / Humidity
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Ise EMC Lab.
No.11
September 15, 2022
23 deg. C / 54 % RH
Tetsuro Yoshida
NR Band n77, Tx 3840 MHz Mid ch, BW 20 MHz, PI/2 BPSK, RB1-1
NR Band n77, Tx 3840 MHz Mid ch, BW 20 MHz, PI/2 BPSK, RB50-0

Part 27: For mobile operations in the 3700-3980 MHz band

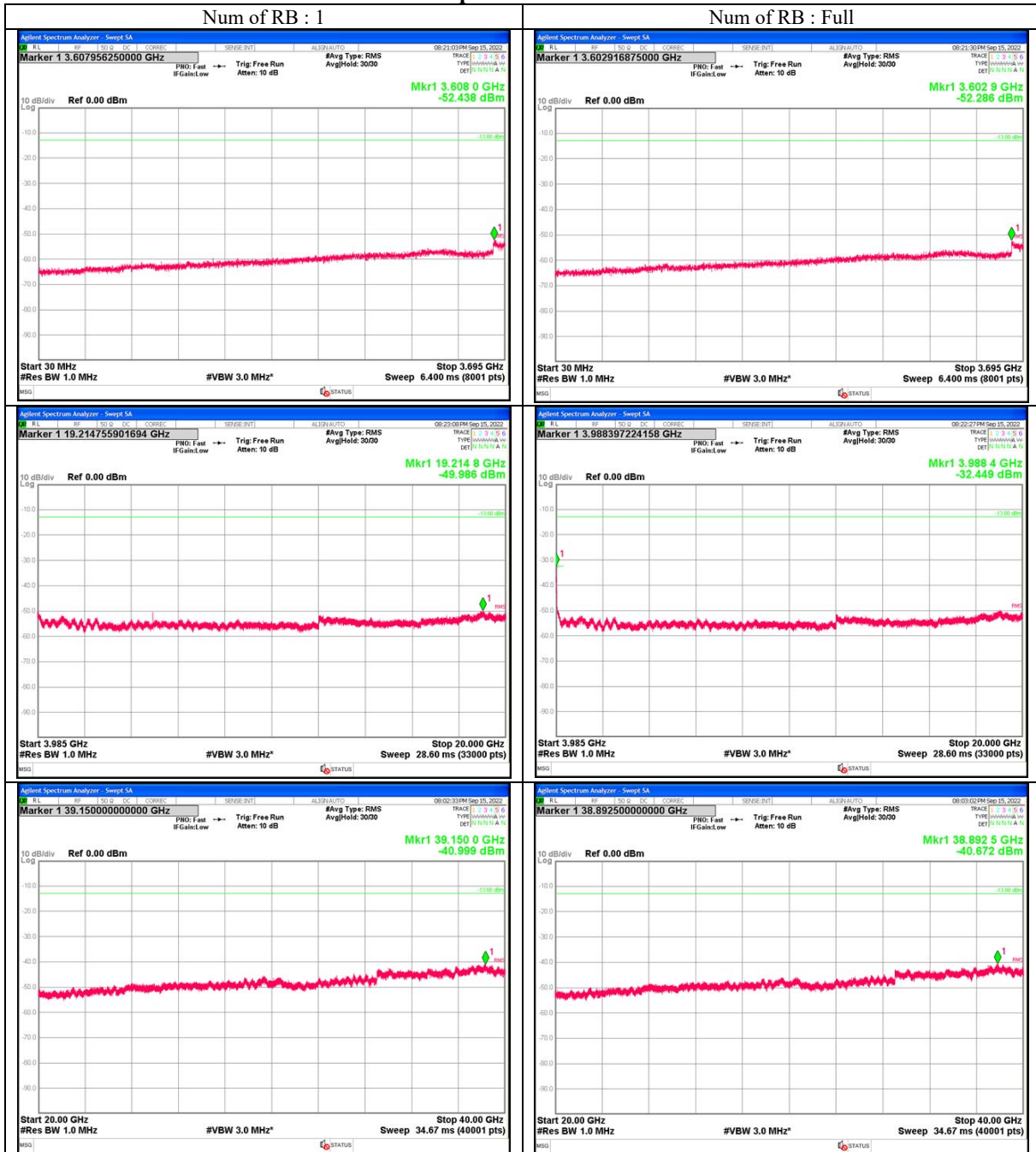


Spurious Emission (Conducted)

Test place
Shielded room
Date
Temperature / Humidity
Engineer
Mode

Ise EMC Lab.
No.11
September 15, 2022
23 deg. C / 54 % RH
Tetsuro Yoshida
NR Band n77, Tx 3969.99 MHz High ch, BW 20 MHz, PI/2 BPSK, RB1-1
NR Band n77, Tx 3969.99 MHz High ch, BW 20 MHz, PI/2 BPSK, RB50-0

Part 27: For mobile operations in the 3700-3980 MHz band



Spurious Emission (Radiated)

Test place	Ise EMC Lab.		
Semi Anechoic Chamber	No.3	No.3	No.3
Date	September 25, 2022	September 28, 2022	September 29, 2022
Temperature / Humidity	20 deg. C / 47 % RH	20 deg. C / 50 % RH	20 deg. C / 61 % RH
Engineer	Tetsuro Yoshida	Tetsuro Yoshida	Tetsuro Yoshida
	(1 GHz - 10 GHz)	(10 GHz - 40 GHz)	(Below 1 GHz)
Mode	NR Band n77, 3500.01 MHz, BW 100 MHz, 64QAM, 1RB Start0		

Part 27: For mobile operations in the 3450-3550 MHz band

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Result [dBuV/m]	EIRP [dBm]	ERP [dBm]	Limit [dBm]	Margin [dB]	Remark
Hori.	57.333	PK	36.0	8.7	7.5	32.2	20.1	-75.2	-77.3	-13.0	64.3	
Hori.	75.903	PK	30.2	6.5	7.8	32.2	12.3	-82.9	-85.1	-13.0	72.1	Floor noise
Hori.	100.633	PK	30.5	10.4	8.1	32.1	16.9	-78.4	-80.5	-13.0	67.5	Floor noise
Hori.	192.867	PK	34.6	16.5	9.1	32.1	28.1	-67.1	-69.3	-13.0	56.3	
Hori.	228.217	PK	38.7	11.8	9.4	32.0	27.8	-67.5	-69.6	-13.0	56.6	
Hori.	322.520	PK	34.3	14.4	10.2	32.0	26.9	-68.4	-70.5	-13.0	57.5	
Hori.	6902.512	PK	44.4	35.3	10.3	32.6	57.4	-37.9	-40.0	-13.0	27.0	
Hori.	10354.920	PK	48.1	39.8	-1.7	33.8	52.5	-42.8	-45.0	-13.0	32.0	
Hori.	13804.000	PK	43.7	41.5	-0.1	33.1	52.1	-43.1	-45.3	-13.0	32.3	Floor noise
Hori.	17255.000	PK	43.4	41.8	0.9	33.0	53.1	-42.2	-44.3	-13.0	31.3	Floor noise
Vert.	57.333	PK	44.5	8.7	7.5	32.2	28.5	-66.8	-68.9	-13.0	55.9	
Vert.	75.903	PK	35.8	6.5	7.8	32.2	17.9	-77.4	-79.5	-13.0	66.5	
Vert.	100.633	PK	36.4	10.4	8.1	32.1	22.8	-72.4	-74.6	-13.0	61.6	
Vert.	187.017	PK	39.8	16.4	9.0	32.1	33.1	-62.2	-64.3	-13.0	51.3	
Vert.	228.619	PK	25.7	11.8	9.4	32.0	14.8	-80.4	-82.6	-13.0	69.6	
Vert.	322.520	PK	33.9	14.4	10.2	32.0	26.5	-68.8	-70.9	-13.0	57.9	
Vert.	6902.512	PK	42.2	35.3	10.3	32.6	55.1	-40.1	-42.3	-13.0	29.3	
Vert.	10354.920	PK	48.9	39.8	-1.7	33.8	53.3	-42.0	-44.2	-13.0	31.2	
Vert.	13804.000	PK	43.8	41.5	-0.1	33.1	52.2	-43.1	-45.2	-13.0	32.2	Floor noise
Vert.	17255.000	PK	43.4	41.8	0.9	33.0	53.2	-42.1	-44.3	-13.0	31.3	Floor noise

Result (E) = Reading + Ant Factor + Loss (Cable+Attenuator+Filter+Distance factor(above 1 GHz)) - Gain(Amplifier)

EIRP = E + 20*log(D) -104.8

ERP =EIRP -2.15

*Other frequency noises omitted in this report were not seen or had enough margin (more than 20 dB).

Distance factor: 1 GHz - 10 GHz 20log (3.85 m / 3.0 m) = 2.17 dB
 10 GHz - 40 GHz 20log (1.0 m / 3.0 m) = -9.5 dB

Spurious Emission (Radiated)

Test place Ise EMC Lab.
Semi Anechoic Chamber No.3 No.3 No.3
Date September 25, 2022 September 28, 2022 September 29, 2022
Temperature / Humidity 20 deg. C / 47 % RH 20 deg. C / 50 % RH 20 deg. C / 61 % RH
Engineer Tetsuro Yoshida Tetsuro Yoshida Tetsuro Yoshida
(1 GHz - 10 GHz) (10 GHz - 40 GHz) (Below 1 GHz)
Mode NR Band n77, 3750 MHz, BW 100 MHz, 64QAM, 1RB Start0

Part 27: For mobile operations in the 3700-3980 MHz band

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Result [dBuV/m]	EIRP [dBm]	ERP [dBm]	Limit [dBm]	Margin [dB]	Remark
Hori.	57.333	PK	36.0	8.7	7.5	32.2	20.0	-75.3	-77.4	-13.0	64.4	
Hori.	75.903	PK	30.7	6.5	7.8	32.2	12.8	-82.4	-84.6	-13.0	71.6	Floor noise
Hori.	100.633	PK	30.3	10.4	8.1	32.1	16.7	-78.6	-80.7	-13.0	67.7	Floor noise
Hori.	192.867	PK	34.2	16.5	9.1	32.1	27.7	-67.5	-69.7	-13.0	56.7	
Hori.	228.217	PK	38.8	11.8	9.4	32.0	27.9	-67.3	-69.5	-13.0	56.5	
Hori.	322.140	PK	34.8	14.4	10.2	32.0	27.4	-67.9	-70.0	-13.0	57.0	
Hori.	7402.055	PK	44.0	36.6	9.8	32.9	57.6	-37.7	-39.8	-13.0	26.8	
Hori.	11102.090	PK	72.5	39.8	-1.4	33.8	77.1	-18.1	-20.3	-13.0	7.3	
Hori.	14852.380	PK	43.3	39.9	0.4	33.0	50.7	-44.6	-46.7	-13.0	33.7	Floor noise
Vert.	57.333	PK	44.3	8.7	7.5	32.2	28.4	-66.9	-69.1	-13.0	56.1	
Vert.	75.903	PK	35.9	6.5	7.8	32.2	18.0	-77.2	-79.4	-13.0	66.4	
Vert.	100.633	PK	36.3	10.4	8.1	32.1	22.7	-72.6	-74.7	-13.0	61.7	
Vert.	187.017	PK	39.5	16.4	9.0	32.1	32.8	-62.4	-64.6	-13.0	51.6	
Vert.	228.619	PK	25.9	11.8	9.4	32.0	15.1	-80.2	-82.4	-13.0	69.4	
Vert.	322.140	PK	33.9	14.4	10.2	32.0	26.4	-68.8	-71.0	-13.0	58.0	
Vert.	7402.055	PK	47.2	36.6	9.8	32.9	60.8	-34.5	-36.6	-13.0	23.6	
Vert.	11102.090	PK	67.7	39.8	-1.4	33.8	72.3	-23.0	-25.2	-13.0	12.2	
Vert.	14852.380	PK	43.3	39.9	0.4	33.0	50.6	-44.6	-46.8	-13.0	33.8	Floor noise

Result (E) = Reading + Ant Factor + Loss (Cable+Attenuator+Filter+Distance factor(above 1 GHz)) - Gain(Amplifier)

EIRP = E + 20*log(D) -104.8

ERP =EIRP -2.15

*Other frequency noises omitted in this report were not seen or had enough margin (more than 20 dB).

Distance factor: 1 GHz - 10 GHz 20log (3.85 m / 3.0 m) = 2.17 dB
10 GHz - 40 GHz 20log (1.0 m / 3.0 m) = -9.5 dB

Spurious Emission (Radiated)

Test place	Ise EMC Lab.		
Semi Anechoic Chamber	No.3	No.3	No.3
Date	September 25, 2022	September 28, 2022	September 29, 2022
Temperature / Humidity	20 deg. C / 47 % RH	20 deg. C / 50 % RH	20 deg. C / 61 % RH
Engineer	Tetsuro Yoshida	Tetsuro Yoshida	Tetsuro Yoshida
	(1 GHz - 10 GHz)	(10 GHz - 40 GHz)	(Below 1 GHz)
Mode	NR Band n77, 3840 MHz, BW 100 MHz, 64QAM, 1RB Start0		

Part 27: For mobile operations in the 3700-3980 MHz band

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Result [dBuV/m]	EIRP [dBm]	ERP [dBm]	Limit [dBm]	Margin [dB]	Remark
Hori.	57.333	PK	36.1	8.7	7.5	32.2	20.2	-75.1	-77.2	-13.0	64.2	
Hori.	75.903	PK	30.6	6.5	7.8	32.2	12.7	-82.5	-84.7	-13.0	71.7	Floor noise
Hori.	100.633	PK	30.3	10.4	8.1	32.1	16.7	-78.5	-80.7	-13.0	67.7	Floor noise
Hori.	192.867	PK	34.1	16.5	9.1	32.1	27.6	-67.6	-69.8	-13.0	56.8	
Hori.	228.217	PK	38.7	11.8	9.4	32.0	27.8	-67.5	-69.6	-13.0	56.6	
Hori.	322.140	PK	34.7	14.4	10.2	32.0	27.3	-68.0	-70.1	-13.0	57.1	
Hori.	7582.197	PK	49.7	36.5	9.8	32.9	63.1	-32.2	-34.3	-13.0	21.3	
Hori.	11373.000	AV	53.7	39.8	-1.3	33.8	58.5	-36.8	-38.9	-13.0	25.9	
Hori.	15164.000	PK	42.4	39.1	0.5	33.0	49.0	-46.2	-48.4	-13.0	35.4	Floor noise
Vert.	57.333	PK	44.7	8.7	7.5	32.2	28.8	-66.5	-68.6	-13.0	55.6	
Vert.	75.903	PK	35.8	6.5	7.8	32.2	17.9	-77.4	-79.5	-13.0	66.5	
Vert.	100.633	PK	36.4	10.4	8.1	32.1	22.8	-72.4	-74.6	-13.0	61.6	
Vert.	187.017	PK	39.6	16.4	9.0	32.1	32.9	-62.3	-64.5	-13.0	51.5	
Vert.	228.619	PK	26.0	11.8	9.4	32.0	15.2	-80.1	-82.3	-13.0	69.3	
Vert.	322.140	PK	33.7	14.4	10.2	32.0	26.3	-69.0	-71.1	-13.0	58.1	
Vert.	7582.197	PK	46.2	36.5	9.8	32.9	59.5	-35.7	-37.9	-13.0	24.9	
Vert.	11373.000	PK	75.7	39.8	-1.3	33.8	80.5	-14.8	-16.9	-13.0	3.9	
Vert.	15164.000	PK	43.0	39.1	0.5	33.0	49.6	-45.7	-47.8	-13.0	34.8	Floor noise

Result (E) = Reading + Ant Factor + Loss (Cable+Attenuator+Filter+Distance factor(above 1 GHz)) - Gain(Amplifier)

EIRP = E + 20*log(D) -104.8

ERP =EIRP -2.15

*Other frequency noises omitted in this report were not seen or had enough margin (more than 20 dB).

Distance factor: 1 GHz - 10 GHz 20log (3.85 m / 3.0 m) = 2.17 dB
 10 GHz - 40 GHz 20log (1.0 m / 3.0 m) = -9.5 dB

Spurious Emission (Radiated)

Test place	Ise EMC Lab.		
Semi Anechoic Chamber	No.3	No.3	No.3
Date	September 25, 2022	September 28, 2022	September 29, 2022
Temperature / Humidity	20 deg. C / 47 % RH	20 deg. C / 50 % RH	20 deg. C / 61 % RH
Engineer	Tetsuro Yoshida	Tetsuro Yoshida	Tetsuro Yoshida
	(1 GHz - 10 GHz)	(10 GHz - 40 GHz)	(Below 1 GHz)
Mode	NR Band n77, 3930 MHz, BW 100 MHz, 64QAM, 1RB Start0		

Part 27: For mobile operations in the 3700-3980 MHz band

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Result [dBuV/m]	EIRP [dBm]	ERP [dBm]	Limit [dBm]	Margin [dB]	Remark
Hori.	57.333	PK	36.2	8.7	7.5	32.2	20.3	-75.0	-77.1	-13.0	64.1	
Hori.	75.903	PK	30.5	6.5	7.8	32.2	12.6	-82.7	-84.8	-13.0	71.8	Floor noise
Hori.	100.633	PK	30.5	10.4	8.1	32.1	16.9	-78.3	-80.5	-13.0	67.5	Floor noise
Hori.	192.867	PK	34.3	16.5	9.1	32.1	27.9	-67.4	-69.5	-13.0	56.5	
Hori.	228.217	PK	38.6	11.8	9.4	32.0	27.7	-67.6	-69.7	-13.0	56.7	
Hori.	322.140	PK	34.8	14.4	10.2	32.0	27.4	-67.9	-70.0	-13.0	57.0	
Hori.	7761.975	PK	42.7	36.4	9.7	33.0	55.8	-39.5	-41.6	-13.0	28.6	Floor noise
Hori.	11640.000	PK	43.0	39.3	-1.1	33.7	47.5	-47.8	-49.9	-13.0	36.9	Floor noise
Hori.	15520.000	PK	44.2	38.2	0.5	33.0	50.1	-45.2	-47.3	-13.0	34.3	Floor noise
Vert.	57.333	PK	44.7	8.7	7.5	32.2	28.8	-66.5	-68.6	-13.0	55.6	
Vert.	75.903	PK	35.8	6.5	7.8	32.2	17.9	-77.3	-79.5	-13.0	66.5	
Vert.	100.633	PK	36.4	10.4	8.1	32.1	22.8	-72.5	-74.6	-13.0	61.6	
Vert.	187.017	PK	39.5	16.4	9.0	32.1	32.8	-62.4	-64.6	-13.0	51.6	
Vert.	228.619	PK	26.3	11.8	9.4	32.0	15.5	-79.8	-82.0	-13.0	69.0	
Vert.	322.140	PK	33.8	14.4	10.2	32.0	26.4	-68.9	-71.0	-13.0	58.0	
Vert.	7761.975	PK	42.4	36.4	9.7	33.0	55.6	-39.7	-41.8	-13.0	28.8	Floor noise
Vert.	11640.000	PK	43.1	39.3	-1.1	33.7	47.6	-47.7	-49.8	-13.0	36.8	Floor noise
Vert.	15520.000	PK	44.4	38.2	0.5	33.0	50.2	-45.1	-47.2	-13.0	34.2	Floor noise

Result (E) = Reading + Ant Factor + Loss (Cable+Attenuator+Filter+Distance factor(above 1 GHz)) - Gain(Amplifier)

EIRP = E + 20*log(D) -104.8

ERP =EIRP -2.15

*Other frequency noises omitted in this report were not seen or had enough margin (more than 20 dB).

Distance factor: 1 GHz - 10 GHz 20log (3.85 m / 3.0 m) = 2.17 dB
 10 GHz - 40 GHz 20log (1.0 m / 3.0 m) = -9.5 dB

Frequency Stability (Temperature / Voltage Variation)

Test place	Ise EMC Lab.		
Shielded room	No.7	No.7	No.7
Date	December 9, 2021	December 10, 2021	December 20, 2021
Temperature / Humidity	23 deg. C / 68 % RH	23 deg. C / 68 % RH	21 deg. C / 59 % RH
Engineer	Yutaka Yoshida		
Mode	NR Band n77 Tx 3500.01 MHz, 100 MHz BW, PI/2 BPSK		

Part 27: For mobile operations in the 3450-3550 MHz band

5G NR n77 PI/2 BPSK(100MHz BW)

Tested Frequency: 3500.01 [MHz] Channel : 633334

Temp [deg. C]	Volt [V]	Reading Frequency Error		Result [ppm]
		[Hz]	[MHz]	
50	120.0	-16.49	-0.00001649	- 0.0047
40	120.0	-15.27	-0.00001527	- 0.0044
30	120.0	-7.70	-0.00000770	- 0.0022
20	120.0	-11.35	-0.00001135	- 0.0032
10	120.0	-24.86	-0.00002486	- 0.0071
0	120.0	-16.99	-0.00001699	- 0.0049
-10	120.0	-13.83	-0.00001383	- 0.0040
-20	120.0	-4.72	-0.00000472	- 0.0013
-30	120.0	*N/A	*N/A	*N/A

Temp [deg. C]	Volt [V]	Reading Frequency Error		Result [ppm]	Remark
		[Hz]	[MHz]		
20	Battery End Point	-19.86	-0.00001986	- 0.0057	
20	AC102.0	-18.53	-0.00001853	- 0.0053	For reference
20	AC120.0	-8.95	-0.00000895	- 0.0026	For reference
20	AC138.0	-14.82	-0.00001482	- 0.0042	For reference
20	DC9.69	-15.87	-0.00001587	- 0.0045	For reference
20	DC11.4	-17.36	-0.00001736	- 0.0050	For reference
20	DC13.11	-8.39	-0.00000839	- 0.0024	For reference

*BatteryEnd Point: DC9.3V(measured)

Result = Frequency error[MHz] - Tested frequency[MHz] * 10⁶

*The temperature of the EUT was outside of its operating range, so the EUT did not work normally.

Frequency Stability (Temperature / Voltage Variation)

Test place	Ise EMC Lab.		
Shielded room	No.7	No.7	No.7
Date	December 9, 2021	December 10, 2021	December 20, 2021
Temperature / Humidity	23 deg. C / 68 % RH	23 deg. C / 68 % RH	21 deg. C / 59 % RH
Engineer	Yutaka Yoshida		
Mode	NR Band n77 Tx 3840.00 MHz, 100 MHz BW, PI/2 BPSK		

Part 27: For mobile operations in the 3700-3980 MHz band

5G NR n77 PI/2 BPSK(100MHz BW)

Tested Frequency: 3840.00 [MHz] Channel : 656000

Temp [deg. C]	Volt [V]	Reading Frequency Error		Result [ppm]
		[Hz]	[MHz]	
50	120.0	-24.25	-0.00002425	- 0.0063
40	120.0	-16.12	-0.00001612	- 0.0042
30	120.0	-19.85	-0.00001985	- 0.0052
20	120.0	1.64	0.00000164	+ 0.0004
10	120.0	-21.42	-0.00002142	- 0.0056
0	120.0	-5.83	-0.00000583	- 0.0015
-10	120.0	-18.40	-0.00001840	- 0.0048
-20	120.0	-5.36	-0.00000536	- 0.0014
-30	120.0	*N/A	*N/A	*N/A

Temp [deg. C]	Volt [V]	Reading Frequency Error		Result [ppm]	Remark
		[Hz]	[MHz]		
20	Battery End Point	-5.38	-0.00000538	- 0.0014	
20	AC102.0	-17.89	-0.00001789	- 0.0047	For reference
20	AC120.0	1.64	0.00000164	+ 0.0004	For reference
20	AC138.0	12.16	0.00001216	+ 0.0032	For reference
20	DC9.69	-19.81	-0.00001981	- 0.0052	For reference
20	DC11.4	-10.11	-0.00001011	- 0.0026	For reference
20	DC13.11	-12.94	-0.00001294	- 0.0034	For reference

*BatteryEnd Point: DC9.3V(measured)

Result = Frequency error[MHz] - Tested frequency[MHz] * 10⁶

*The temperature of the EUT was outside of its operating range, so the EUT did not work normally.

APPENDIX 2: Test instruments**Test equipment used for tests in 2021**

Test Item	Local ID	LIMS ID	Description	Manufacturer	Model	Serial	Last Calibration Date	Cal Int
AT	MAT-86	141366	Attenuator	Weinschel Associates	WA56-20	56200213	05/14/2021	12
AT	MCC-245	197220	Microwave cable	Huber+Suhner	SF126E/11PC35/11PC35/2000MM	537003/126E	03/04/2021	12
AT	MCH-04	141429	Temperature and Humidity Chamber	Espec	PL-2KP	14015723	08/05/2021	12
AT	MMM-08	141532	DIGITAL HiTESTER	HIOKI E.E. CORPORATION	3805	51201197	01/07/2021	12
AT	MOS-29	141568	Thermo-Hygrometer	CUSTOM. Inc	CTH-201	2901	01/15/2021	12
AT	MPM-16	141812	Power Meter	Keysight Technologies Inc	8990B	MY51000271	08/11/2021	12
AT	MPSE-22	141842	Power sensor	Keysight Technologies Inc	N1923A	MY54070003	08/11/2021	12
AT	MSA-17	141904	Spectrum Analyzer	Keysight Technologies Inc	N9030A	US51350215	09/30/2021	12
AT	MURC-13	196372	UXM 5G Wireless Test Platform	Keysight Technologies Inc	E7515B	MY59321679	03/29/2021	12

Test equipment used for tests in 2022 (1/2)

Test Item	Local ID	LIMS ID	Description	Manufacturer	Model	Serial	Last Calibration Date	Cal Int
AT	MAT-01	141210	Attenuator(20dB (above1GHz)	Keysight Technologies Inc	8490D,020	3249	12/08/2021	12
AT	MAT-21	141174	Attenuator(20dB (above1GHz)	HIROSE ELECTRIC CO.,LTD.	AT-120	901247	01/23/2022	12
AT	MCC-67	141329	Microwave Cable 1G-40GHz	Suhner	SUCOFLEX102	28635/2	04/01/2022	12
AT	MMM-08	141532	DIGITAL HiTESTER	HIOKI E.E. CORPORATION	3805	51201197	01/16/2022	12
AT	MMM-15	141548	DIGITAL HiTESTER	HIOKI E.E. CORPORATION	3805	070500636	05/16/2022	12
AT	MMM-17	141557	DIGITAL HiTESTER	HIOKI E.E. CORPORATION	3805	70900530	01/16/2022	12
AT	MOS-28	141567	Thermo-Hygrometer	CUSTOM. Inc	CTH-201	0008	01/10/2022	12
AT	MOS-33	88581	Thermo-Hygrometer	CUSTOM. Inc	CTH-201	-	07/03/2022	12
AT	MPM-16	141812	Power Meter	Keysight Technologies Inc	8990B	MY51000271	08/05/2022	12
AT	MPSE-22	141842	Power sensor	Keysight Technologies Inc	N1923A	MY54070003	08/05/2022	12
AT	MSA-13	141900	Spectrum Analyzer	Keysight Technologies Inc	E4440A	MY46185823	09/27/2022	12
RE	COTS-MEMI-02	178648	EMI measurement program	TSJ (Techno Science Japan)	TEPTO-DV	-	-	-
RE	MAEC-03	142008	AC3_Semi Anechoic Chamber(NSA)	TDK	Semi Anechoic Chamber 3m	DA-10005	05/23/2022	24
RE	MAEC-03-SVSWR	142013	AC3_Semi Anechoic Chamber(SVSWR)	TDK	Semi Anechoic Chamber 3m	DA-10005	04/01/2021	24
RE	MAT-95	142314	Attenuator	Pasternack Enterprises	PE7390-6	D/C 1504	06/13/2022	12
RE	MBA-08	141427	Biconical Antenna	Schwarzbeck Mess-Elektronik OHG	VHA9103B +BBA9106	08031	07/30/2022	12
RE	MCC-176	141279	Microwave Cable	Junkosha	MMX221-00500DMSDMS	1502S303	03/15/2022	12
RE	MCC-220	151897	Microwave Cable	Huber+Suhner	SF101EA/11PC24/11PC24/2.5M	SN MY1726/1EA	04/25/2022	12
RE	MCC-231	177964	Microwave Cable	Junkosha INC.	MMX221	1901S329(1m)/1902S579(5m)	03/15/2022	12
RE	MCC-51	141323	Coaxial cable	UL Japan	-	-	09/27/2022	12

Test equipment used for tests in 2022 (2/2)

Test Item	Local ID	LIMS ID	Description	Manufacturer	Model	Serial	Last Calibration Date	Cal Int
RE	MHA-16	141513	Horn Antenna 15-40GHz	Schwarzbeck Mess-Elektronik OHG	BBHA9170	BBHA9170306	07/05/2022	12
RE	MHA-21	141508	Horn Antenna 1-18GHz	Schwarzbeck Mess-Elektronik OHG	BBHA9120D	557	05/20/2022	12
RE	MHF-22	141293	High Pass Filter 7-20GHz	TOKIMEC	TF37NCCB	602	02/24/2022	12
RE	MJM-16	142183	Measure	KOMELON	KMC-36	-	-	-
RE	MLA-22	141266	Logperiodic Antenna (200-1000MHz)	Schwarzbeck Mess-Elektronik OHG	VUSLP9111B	9111B-191	08/26/2022	12
RE	MMM-08	141532	DIGITAL HiTESTER	HIOKI E.E. CORPORATION	3805	51201197	01/16/2022	12
RE	MOS-13	141554	Thermo-Hygrometer	CUSTOM. Inc	CTH-201	1301	01/10/2022	12
RE	MPA-11	141580	MicroWave System Amplifier	Keysight Technologies Inc	83017A	MY39500779	03/17/2022	12
RE	MPA-13	141582	Pre Amplifier	SONOMA INSTRUMENT	310	260834	02/25/2022	12
RE	MPA-33	220253	Broadband Amplifier	SAGE Millimeter, Inc.	SBB-0115033218- 2F2F-E3	0001	05/13/2022	12
RE	MSA-10	141899	Spectrum Analyzer	Keysight Technologies Inc	E4448A	MY46180655	02/18/2022	12

*Hyphens for Last Calibration Date and Cal Int (month) are instruments that Calibration is not required (e.g. software), or instruments checked in advance before use.

The expiration date of the calibration is the end of the expired month.

As for some calibrations performed after the tested dates, those test equipment have been controlled by means of an unbroken chains of calibrations.

All equipment is calibrated with valid calibrations. Each measurement data is traceable to the national or international standards.

Test item: RE: Radiated Spurious Emission test
 AT: Antenna Terminal Conducted tests