

4.9 Restricted Band of Operation

4.9.1 Measurement procedure

[FCC 15.247(d), 15.205, 15.209]

Test was applied by following conditions.

Test method Test place EUT was placed on Antenna distance	:	ANSI C63.10 3m Semi-anechoic chamber Styrofoam table / (W)1.0m × (D)1.0m × (H)0.8m (below 1GHz) Styrofoam table / (W)0.6m × (D)0.6m ×(H)1.5m (above 1GHz) 3m
Spectrum analyzer setting - Peak - Average		RBW=1MHz, VBW=3MHz, Span=Arbitrary setting, Sweep=auto RBW=1MHz, VBW=3kHz, Span=Arbitrary setting, Sweep=auto Display mode=Linear

Average Measurement Setting [VBW]

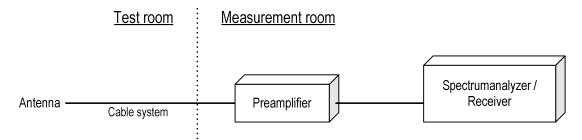
Mode	Duty Cycle (%)	T _{on} (us)	T _{off} (us)	1/T _{on} (kHz)	Determined VBW Setting
Bluetooth 4.1 EDR	76.93	2885	865	0.347	1kHz

Although these tests were performed other than open area test site,

adequate comparison measurements were confirmed against 30 m open are test site. Therefore sufficient tests were made to demonstrate that the alternative site produces results that correlate with the ones of tests made in an open field based on KDB 937606.

Radiated emission measurements are performed at 3m distance with the broadband antenna (Loop antenna, Biconical antenna, Log periodic antenna, Double ridged guide antenna and Broad-band horn Antenna). The antenna is positioned both the horizontal and vertical planes of polarization and height is varied 1m to 4m and stopped at height producing the maximum emission. As for the Loop antenna, it is positioned with its plane vertical, and the center of the Loop antenna is 1m above the ground plane. The EUT is Placed on a turntable, which is 0.8m/1.5m above ground plane. The turntable shall be rotated for 360 degrees to determine the position of maximum emission level. The test results represent the worst case emission for each emission with manipulating the EUT, support equipment, interconnecting cables and varying the mode of operation. Sufficient time for the EUT, support equipment, and test equipment are allowed in order for them to warm up to their normal operating condition.

- Test configuration





4.9.2 Limit

Emission at the boundary of the restricted band provided by 15.205 shall be lower than 15.209 limit.

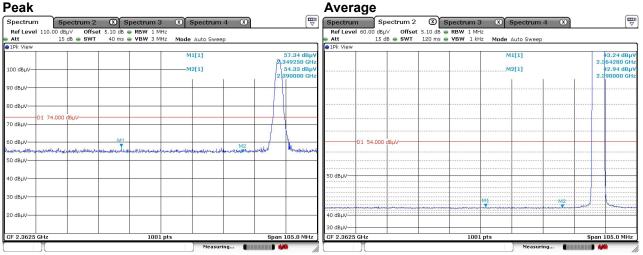
4.9.3 Measurement result

Channel	Frequency [MHz]	Results Chart	Result
Low	2402	See the Trace Data	Pass
High	2480	See the Trace Data	Pass

4.9.4 Test data

Date	:	04-February-2019			
Temperature	:	19.3 [°C]			
Humidity	:	32.1 [%]	Test engineer	:	
Test place	:	3m Semi-anechoic chamber			Chiaki Kanno

[With camera] [DH5] Channel: Low Horizontal Peak

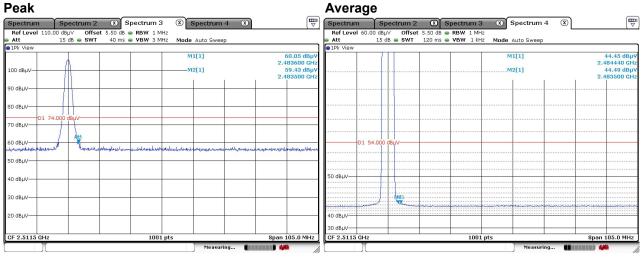


Vertical Peak

Average Peak Spectrum Spectrum 2 Spectrum 3 Spectrum Ref Level 50.00 dbµ/ Att Offset 5.10 db = RBW 1 MHz 15 db = SWT 120 ms = VBW 1 kHz Mode Auto Sweep IPL View IPL View IPL View IPL View IPL View IPL View Spectrum 3 Spectrum 4 S Spectrum Spectrum 2 🗴 Spectrum 3 🛞 Spectrum 4 🕷 Ref Level 110.00 dBµV Offset 5.10 dB ■ RBW 1 MHz SWT 40 ms ■ VBW 3 MHz Mode Auto Sweep 15 dB 👄 SWT Att 1Pk View M1[1] 57.25 dBµ 2.357850 GH 54.26 dBµ 2.390000 GH M1[1] 42.94 dBµ\ 2.359460 GH 42.64 dBµ\ 2.390000 GH 100 dBµV M2[1] M2[1] 90 dBµV 80 dBµV 1 74.000 70 dBµV 60 dBµV-M1 1 54 00 medilih Mushala 50 dBµV-50 dBµV· 40 dBuV 30 dBµV-M1 20 dBµV· 40 dBµV 30 dBuV-Span 105.0 MHz F 2.3625 1001 pt L 05.0 MHz CF 2.3625 GHz 1001 pt: Measuring... **61** asuring 10.



[DH5] Channel: High Horizontal Peak

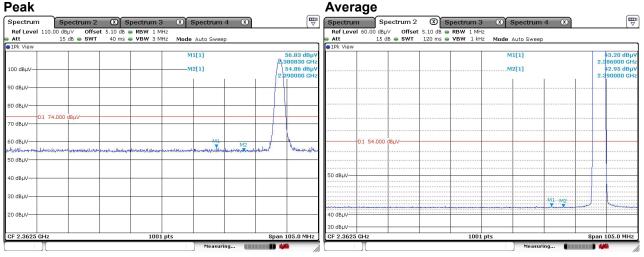


Vertical Book

Peak	_	Averag	e			
Spectrum 2 🕱 Spectrum 3 🛞 Spectrum 4	× (***	Spectrum	Spectrum 2	Spectrum 3	Spectrum 4	(E)
Ref Level 110.00 dBµV Offset 5.50 dB . RBW 1 MHz		Ref Level 60.		5.50 dB 👄 RBW 1 MHz		· · · · ·
Att 15 dB SWT 40 ms VBW 3 MHz Mode Auto Sweep		Att	15 dB 👄 SWT	120 ms 👄 VBW 1 kHz	Mode Auto Sweep	
1Pk View M1[1]	58.00 dBµV 2.534790 GHz	●1Pk View			M1[1]	43.86 dBµ 2.533210 GH
.00 dBµVM2[1]	55.58 dBµV 2.483500 GHz				M2[1]	43.52 dBµ 2.483500 GH
0 dBµV-						
0 dBµV						
UBUV		D1 !	54.000 dBµV			
0 dBµV		50 dBµV				
0 dBµV		50 авру				
0 dBµV					741 X	
to dBµV-		40 dBµV				
CF 2.5115 GHz 1001 pts	Span 105.0 MHz	CF 2.5115 GHz		1001	nts	Span 105.0 MHz
Measuring Measuring		0. 2.0110 driz		1001	Measuring	



[3-DH5] Channel: Low Horizontal

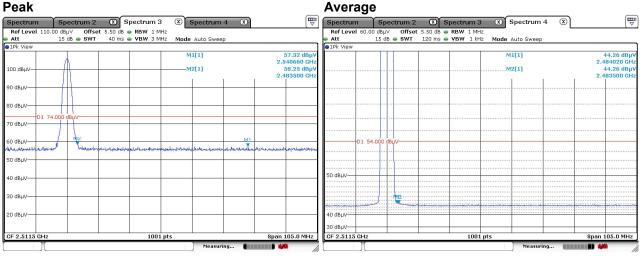


Vertical

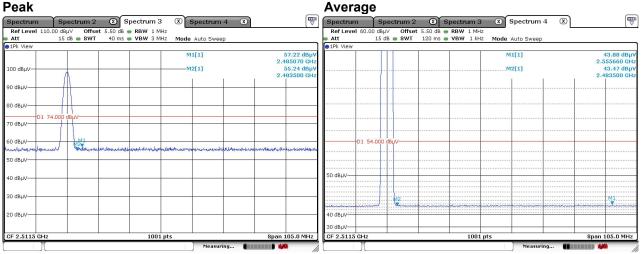
eak			Average	;			_
ectrum Spectrum 2 🛞 Spectrum 3	3 🕱 Spectrum 4 🕱	(₩)	Spectrum	Spectrum 2 🛛	Spectrum 3 🛛 🕱	Spectrum 4 🛛 🕱	("
efLevel 110.00 dBµV Offset 5.10 dB ● RBW 1 M tt 15 dB ● SWT 40 ms ● VBW 3 M	IHz IHz Mode Auto Sweep	<u>`</u>	RefLevel 60.0	0 dBµV Offset 5.10 dB 15 dB ⊜ SWT 120 ms	B BRBW 1 MHz	Auto Swoon	
Vk View	ine indde Addo Sweep		• 1Pk View	15 05 0 011 120 115		Auto Sweep	
) dBµV	M2[1]	56.67 dBµV 2.332680 GHz 54.99 dBµV 2.390000 GHz				M1[1] M2[1]	43.14 dBμ 2.386520 GH 42.69 dBμ 2.390000 GH
dBµV-							
dBµV							
dBµV							
dBUV MI	manuarnischertenensieheen unterigenet	hereastic	D1 54	1.000 dBµV			
dBµV							
dBµV			50 dBµV				
dBµV						M1 M2	
dBµV		_	40 dBµV				
2.3625 GHz 1001	Lpts Spa	an 105.0 MHz	30 dBµV CF 2.3625 GHz		1001 pts		Span 105.0 MHz



[3-DH5] Channel: High Horizontal Peak



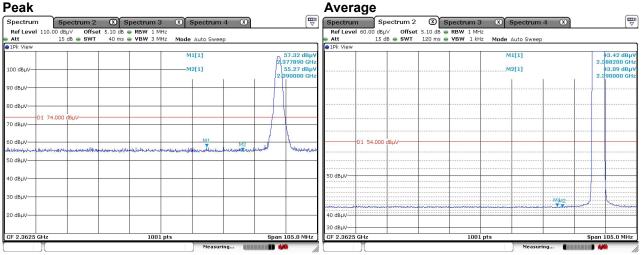
Vertical Peak







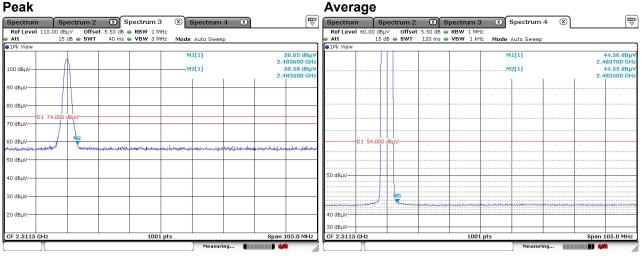
[Without camera] [DH5] Channel: Low Horizontal Peak



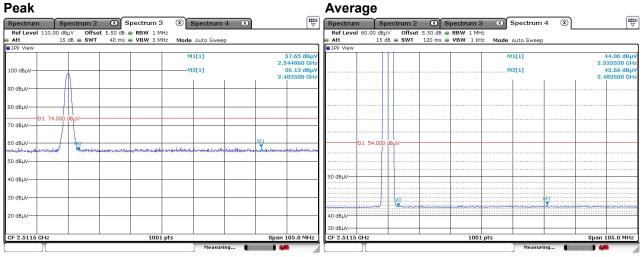
Vertical Book

Average Peak Spectrum Spectrum 2 Spectrum 3 Ref level 60.00 dByV offset 5.10 dB RBW 1 MHz Att 15 dB SWT 120 ms VBW 1 kHz Spectrum 3 Spectrum 4 S Spectrum Spectrum 2 🗴 Spectrum 3 🛞 Spectrum 4 🕷 Ref Level 110.00 dBµV Offset 5.10 dB ■ RBW 1 MHz SWT 40 ms ■ VBW 3 MHz Mode Auto Sweep 15 dB 👄 SWT Att 1Pk View Mode Auto Sweep M1[1] 57.25 dBµ 2.374850 GH 55.08 dBµ A.390000 GH M1[1] 43.47 dBµV 2.325890 GHz 42.97 dBµV 2.390000 GHz 100 dBµV M2[1] M2[1] 90 dBµV 80 dBµV 1 74.000 70 dBµV 60 dBµV-1 54.000 50 dBµV-50 dBµV· 40 dBuV 30 dBµV-MI M2 20 dBµV· 40 dBµV 30 dBuV-| Span 105.0 MHz F 2.3625 1001 pt LO5.0 MHz 1001 pt: CF 2.3625 GHz Measuring... feasuring

[DH5] Channel: High Horizontal Peak

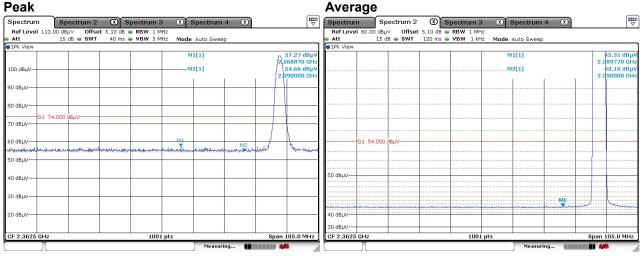


Vertical





[3-DH5] Channel: Low Horizontal Peak

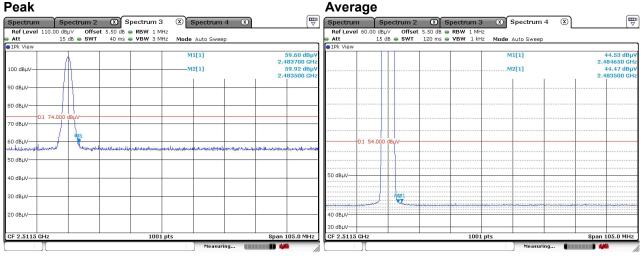


Vertical Book

Peak							_	Avera	age								_
Spectrum	Spectrum 2	🛞 Spe	ctrum 3	× Spectrum	4 🗴		(The second seco	Spectrum	<u> </u>	Spectrum 2	∞	Spectrum 3	🗶 Sp	ectrum 4	×		
Ref Level 110. Att	00 dBµV Offs 15 dB 👄 SWT	et 5.10 dB 👄 F 40 ms 👄 V		Mode Auto Swee	p			Ref Level				 RBW 1 MHz VBW 1 kHz 		ito Sweep			
1Pk View	1							●1Pk View									
LOO dBμV				M1[1] —_M2[1]			56.97 dBµ\ .384600 GH: 55.39 dBµ\ 390000 GH:						M1[M2[2.385	.26 dBµ' 5050 GH .09 dBµ' 3000 GH
0 dBµV																	
0 dBµV																	
0 dBµV	.000 dBµV																
0 dBµV	work it determined to a	يتي والمراكلين والدروم والمرتزم		he have been been and	M1 M2	mart	hourselow		D1 54.00	0 dBµV							
0 dBµV																	
0 dBµV							-	50 dBµV									
0 dBµV														M1	M2		
0 dBµV								40 dBµV				- Mar - Na -				2	
F 2.3625 GHz			1001 pts			Pna	1 105.0 MHz	30 dBµV-	011-			1001	ntc			Span 10	5 0 MU-
F 2.3023 GHZ			1001 pts	Measur		spa		CF 2.3623				1001	prs	Measuring			5.0 MHZ



[3-DH5] Channel: High Horizontal Peak



Vertical

Peak	Average
Spectrum Spectrum 2 🕱 Spectrum 3 🛞 Spectrum 4 🛪	Spectrum Spectrum 2 🕱 Spectrum 3 🛪 Spectrum 4 🛞
Ref Level 110.00 dBpV Offset 5.50 dB . RBW 1 MHz	Ref Level 60.00 dBpV Offset 5.50 dB . RBW 1 MHz
Att 15 dB SWT 40 ms VBW 3 MHz Mode Auto Sweep	■ Att 15 dB ■ SWT 120 ms ■ VBW 1 kHz Mode Auto Sweep
1Pk View	IPk View
M1[1] 57.64 dB 2.531850 G	
100 dBµV M2[1] 56.20 dB 2.483500 G	M2[1] 43.67 dB
0 dBuV	-
D1 74.000 dBµV-	
50 dBµV	D1 54.000 d8µV
men strate control . Welder a provide the part of the second and the second strategy and the second s	•
50 dBµV-	
40 dBµV	50 dBµV
80 dBµV	
20 dBµV	40 dBuV
CF 2.5115 GHz 1001 pts Span 105.0 MH	30 dBµV
CF 2.5115 GHz 1001 pts Span 105.0 MH	CF 2.5115 GHz 1001 pts Span 105.0 MH





4.10 AC Power Line Conducted Emissions

4.10.1 Measurement procedure

[FCC 15.207]

Test was applied by following conditions.

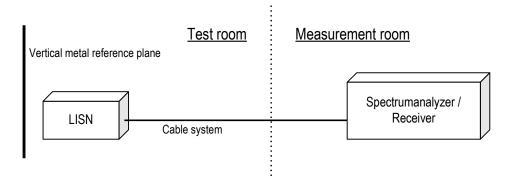
Test method Frequency range Test place EUT was placed on Vertical Metal Reference Plane Test receiver setting	:	ANSI C63.10 0.15 MHz to 30 MHz 3 m Semi-anechoic chamber FRP table / (W)2.0 m × (D)1.0 m × (H)0.8 m (W)2.0 m × (H)2.0 m 0.4 m away from EUT
- Detector - Bandwidth		Quasi-peak, Average 9 kHz

EUT and peripherals are connected to $50\Omega/50\mu$ H Line Impedance Stabilization Network (LISN) which are connected to reference ground plane, and are placed 80cm away from EUT. Excess of AC power cable is bundled in center.

LISN for peripheral is terminated in 50Ω .

EUT operating mode is selected to emit the maximum noise. Overall frequency range is investigated with spectrum analyzer using peak detector. Maximum emission configuration is determined by manipulating the EUT, peripherals, interconnecting cables. Then, emission measurements are performed with test receiver in above setting to each current-carrying conductor of the mains port. Sufficient time for EUT, peripherals and test equipment is provided in order for them to warm up to their normal operating condition. If the average limit is met when using a quasi-peak detector receiver, the EUT shall be deemed to meet both limits.

- Test configuration





4.10.2 Calculation method

Emission level = Reading + (LISN. Factor + Cable system loss) Margin = Limit – Emission level

Example:

Limit @ $6.770 \text{ MHz} : 60.0 \text{ dB}\mu\text{V}(\text{Quasi-peak})$: 50.0 dB μ V(Average) (Quasi peak) Reading = 41.2 dB μ V c.f = 10.3 dB Emission level = 41.2 + 10.3 = 51.5 dB μ V Margin = 60.0 - 51.5 = 8.5 dB (Average) Reading = 35.0 dB μ V c.f = 10.3 dB Emission level = 35.0 + 10.3 = 45.3 dB μ V Margin = 50.0 - 45.3 = 4.7 dB

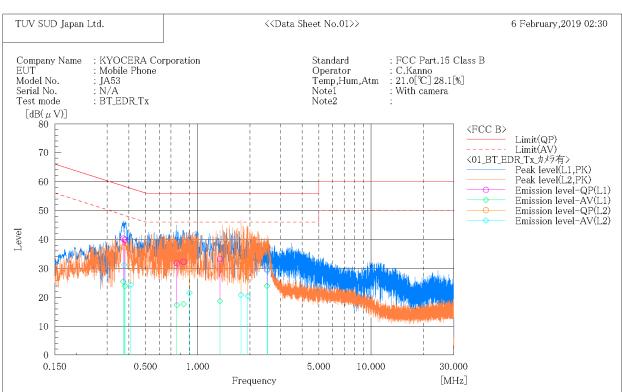
4.10.3 Limit

Frequency	Limit						
[MHz]	QP [dBuV]	AV [dBuV]					
0.15-0.5	66-56*	56-46*					
0.5-5	56	46					
5-30	60	50					

*: The limit decreases linearly with the logarithm of the frequency in the range 0.15MHz to 0.5MHz.

4.10.4 Test data

[With camera]



***** CONDUCTED EMISSION at MAINS PORT ***** [3m Semi-anechoic chamber]

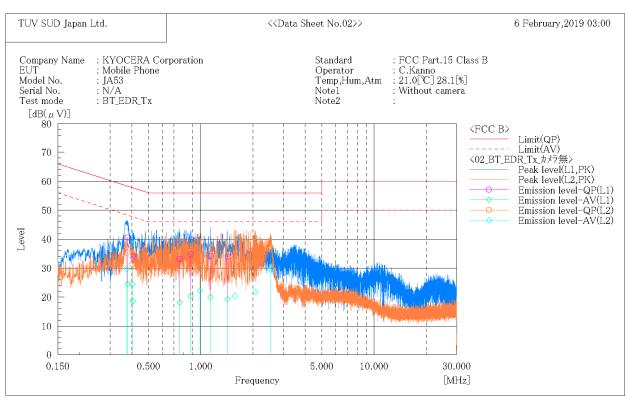
Final Result

	L1 Phase	_								
No.	Frequency	Reading	Reading	c.f	Result	Result	Limit	Limit	Margin	Margin
		QP	AV		QP	AV	QP	AV	QP	AV
	[MHz]	[dB(µV)]	[dB(µV)]	[dB]	[dB(µV)]	[dB(μV)]	[dB(μV)]	[dB(µV)]	[dB]	[dB]
1	0.372	30.0	15.2	10.3	40.3	25.5	58.5	48.5	18.2	23.0
$\frac{2}{3}$	0.381	29.6	13.6	10.3	39.9	23.9	58.3	48.3	18.4	24.4
3	0.759	21.5	7.1	10.3	31.8	17.4	56.0	46.0	24.2	28.6
4	0.829	22.0	7.4	10.3	32.3	17.7	56.0	46.0	23.7	28.3
5	1.345	23.0	8.5	10.3	33. 3	18.8	56.0	46.0	22.7	27.2
6	2.511	19.2	13.6	10.4	29.6	24.0	56.0	46.0	26.4	22.0
	L2 Phase	_								
No.	Frequency	Reading	Reading	c.f	Result	Result	Limit	Limit	Margin	Margin
1.00	1104-0110,	QP	AV		QP	AV	QP	AV	QP	AV
	[MHz]	$[dB(\mu V)]$	$[dB(\mu V)]$	[dB]	$[dB(\mu V)]$	$[dB(\mu V)]$	$[dB(\mu V)]$	$[dB(\mu V)]$	[dB]	[dB]
1	0.377	27.0	21.0	10.3	37.3	31.3	58.3	48.3	21.0	17.0
2	0.412	20.0	14.1	10.3	30.3	24.4	57.6	47.6	27.3	23.2
3	0.895	19.4	11.3	10.3	29.7	21.6	56.0	46.0	26.3	24.4
4	1.777	23.7	10.5	10.4	34.1	20.9	56.0	46.0	21.9	25.1
5	1.945	22.6	10.1	10.4	33.0	20.5	56.0	46.0	23.0	25.5
6	2.532	27.1	19.2	10.4	37.5	29.6	56.0	46.0	18.5	16.4





[Without camera]



***** CONDUCTED EMISSION at MAINS PORT ***** [3m Semi-anechoic chamber]

Final Result

	L1 Phase	_								
No.	Frequency	Reading	Reading	c.f	Result	Result	Limit	Limit	Margin	Margin
		QP	AV		QP	AV	QP	AV	QP	AV
	[MHz]	$[dB(\mu V)]$	[dB(µV)]	[dB]	[dB(µV)]	[dB(μV)]	[dB(μV)]	[dB(µV)]	[dB]	[dB]
1	0.379	30.3	14.2	10.3	40.6	24.5	58.3	48.3	17.7	23.8
2	0.406	23.7	8.4	10.3	34.0	18.7	57.7	47.7	23.7	29.0
3	0.756	22.9	7.9	10.3	33.2	18.2	56.0	46.0	22.8	27.8
4 5	0.875	24.5	10.1	10.3	34.8	20.4	56.0	46.0	21.2	25.6
5	1.140	23.9	9.8	10.3	34.2	20.1	56.0	46.0	21.8	25.9
6	1.430	23.7	9.0	10.3	34.0	19.3	56.0	46.0	22.0	26.7
	L2 Phase									
No.	Frequency	Reading	Reading	c.f	Result	Result	Limit	Limit	Margin	Margin
		QP	AV		QP	AV	QP	AV	QP	AV
	[MHz]	[dB(µV)]	[dB(µV)]	[dB]	[dB(µV)]	[dB(μV)]	[dB(µV)]	[dB(µV)]	[dB]	[dB]
1	0.374	25.1	19.5	10.3	35.4	29.8	58.4	48.4	23.0	18.6
$\frac{2}{3}$	0.404	21.2	14.1	10.3	31.5	24.4	57.8	47.8	26.3	23.4
3	0.992	20.8	11.9	10.3	31.1	22.2	56.0	46.0	24.9	23.8
4	1.575	23.9	10 1	10.3	34.2	90.4	56, 0	46.0	21.8	25.6
	1.010	20.9	10.1	10.0	04. Z	20.4	50. V	40.0	21.0	20.0
5 6	$ \begin{array}{c} 1.575 \\ 2.070 \\ 2.532 \end{array} $	23.9 23.9 27.0	10.1 11.4	10.3 10.4	34.2 34.3 37.4	20.4 21.8 29.5	56. 0 56. 0	46.0 46.0 46.0	21.8 21.7	23. 0 24. 2



5 Antenna requirement

According to FCC section 15.203, an intentional radiator shall be designed to ensure that no antenna other than furnished by the responsible party shall be used with the device. The antenna is a special antenna mounted inside of the EUT. Therefore, the EUT complies with the antenna requirement of FCC section 15.203.



6 Measurement Uncertainty

Expanded uncertainties stated are calculated with a coverage Factor k=2. Please note that these results are not taken into account when measurement uncertainty considerations contained in ETSI TR 100 028-0011 determining compliance or non-compliance with test result.

Test item	Measurement uncertainty
Conducted emission, AMN (9 kHz – 150 kHz)	±3.8 dB
Conducted emission, AMN (150 kHz – 30 MHz)	±3.3 dB
Radiated emission (9 kHz – 30 MHz)	±3.0 dB
Radiated emission (30 MHz – 1000 MHz)	±4.7 dB
Radiated emission (1 GHz – 6 GHz)	±4.9 dB
Radiated emission (6 GHz – 18 GHz)	±5.2 dB
Radiated emission (18 GHz – 40 GHz)	±5.8 dB



7 Laboratory Information

Testing was performed and the report was issued at:

TÜV SÜD Japan Ltd. Yonezawa Testing Center

 Address:
 5-4149-7 Hachimanpara, Yonezawa-shi, Yamagata, 992-1128 Japan

 Phone:
 +81-238-28-2881

 Fax:
 +81-238-28-2888

Accreditation and Registration

NVLAP LAB CODE: 200306-0

VLAC Accreditation No.: VLAC-013

BSMI

Laboratory Code: SL2-IN-E-6018, SL2-A1-E-6018

Innovation, Science and Economic Development Canada

Site number	Facility	Expiration date
4224A-4	3 m Semi-anechoic chamber	27-November-2020
4224A-5	10 m Semi-anechoic chamber No. 1	27-November-2020
4224A-6	10 m Semi-anechoic chamber No. 2	14-December-2019

VCCI Council

Registration number	Expiration date
A-0166	03-July-2019



Appendix A. Test Equipment

Antenna port conducted test

Equipment	Company	Model No.	Serial No.	Cal. Due	Cal. Date
Spectrum analyzer	Agilent Technologies	E4440A	US44302655	31-Jul-2019	02-Jul-2018
Attenuator	Weinschel	56-10	J4180	31-Jul-2019	12-Jul-2018
Power meter	ROHDE&SCHWARZ	NRP2	103269	31-Aug-2019	01-Aug-2018
Power sensor	ROHDE&SCHWARZ	NRP-Z81	102467	31-Aug-2019	01-Aug-2018

Radiated emission

Equipment	Company	Model No.	Serial No.	Cal. Due	Cal. Date
EMI Receiver	ROHDE&SCHWARZ	ESCI	100765	30-Sep-2019	20-Sep-2018
Spectrum analyzer	ROHDE&SCHWARZ	FSV40	101731	31-Dec-2019	07-Dec-2018
Spectrum analyzer	Agilent Technologies	E4440A	US40420937	31-Oct-2019	12-Oct-2018
Preamplifier	SONOMA	310	372170	30-Sep-2019	20-Sep-2018
Loop antenna	ROHDE&SCHWARZ	HFH2-Z2	100515	28-Feb-2019	20-Feb-2018
Attenuator	TDC	TAT-43B-06	N/A(S209)	31-Jul-2019	11-Jul-2018
Biconical antenna	Schwarzbeck	VHA9103/BBA9106	VHA91032155	31-Aug-2019	06-Aug-2018
Log periodic antenna	Schwarzbeck	UHALP9108A	0560	31-Aug-2019	06-Aug-2018
Attenuator	TAMAGAWA.ELEC	CFA-01/6dB	N/A(S465)	31-May-2019	16-May-2018
Attenuator	TAMAGAWA.ELEC	CFA-10/3dB	N/A(S503)	31-Jul-2019	11-Jul-2018
December	TO		4000440	31-Jan-2019	18-Jan-2018
Preamplifier	TSJ	MLA-100M18-B02-40	1929118	31-Jan-2020	17-Jan-2019
Allenuelen		004 40	001017.00	31-Jan-2019	18-Jan-2018
Attenuator	AEROFLEX	26A-10	081217-08	31-Jan-2020	17-Jan-2019
Double ridged guide antenna	ETS LINDGREN	3117	00052315	31-Mar-2019	14-Mar-2018
Attenuator	Agilent Technologies	8491B	MY39268633	31-Mar-2019	14-Mar-2018
Double ridged guide antenna	A.H.Systems Inc.	SAS-574	469	31-Aug-2019	24-Aug-2018
Preamplifier	TSJ	MLA-1840-B03-35	1240332	31-Aug-2019	24-Aug-2018
Notch filter	Micro-Tronics	BRM50702	045	31-May-2019	16-May-2018
		SUCOFLEX104/9m	MY30037/4	31-Jan-2019	18-Jan-2018
				31-Jan-2020	16-Jan-2019
		SUCOFLEX104/1m	my24610/4	31-Jan-2019	18-Jan-2018
				31-Jan-2020	16-Jan-2019
		SUCOFLEX104/8m	SN MY30031/4	31-Jan-2019	18-Jan-2018
Missesses eachie				31-Jan-2020	16-Jan-2019
Microwave cable	HUBER+SUHNER	SUCOFLEX104	MY32976/4	31-Jan-2019	18-Jan-2018
				31-Jan-2020	16-Jan-2019
		SUCOFLEX104/1.5m	MY19309/4	31-Jan-2019	19-Jan-2018
				31-Jan-2020	16-Jan-2019
		SUCOFLEX104/7m	41625/6	31-Jan-2019	19-Jan-2018
				31-Jan-2020	16-Jan-2019
PC	DELL	DIMENSION E521	75465BX	N/A	N/A
Software	TOYO Corporation	EP5/RE-AJ	0611193/V5.6.0	N/A	N/A
Absorber	RIKEN	PFP30	N/A	N/A	N/A
3m Semi an-echoic Chamber	TOKIN	N/A	N/A(9002-NSA)	31-May-2019	21-May-2018
3m Semi an-echoic Chamber	TOKIN	N/A	N/A(9002-SVSWR)	31-May-2019	22-May-2018



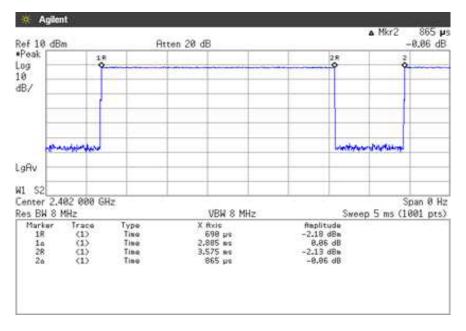
Conducted emission at mains port

Equipment	Company	Model No.	Serial No.	Cal. Due	Cal. Date
EMI Receiver	ROHDE&SCHWARZ	ESCI	100765	30-Sep-2019	20-Sep-2018
Attenuator	HUBER+SUHNER	6810.01.A	N/A (S411)	31-Jan-2020	17-Jan-2019
Line impedance stabilization network	Kyoritsu Electrical Works, Ltd.	KNW-407F	8-2003-1	28-Feb-2019	28-Feb-2018
Coaxial cable	FUJIKURA	5D-2W/4m	N/A (S350)	31-Jan-2020	16-Jan-2019
Coaxial cable	FUJIKURA	5D-2W/1m	N/A (S193)	31-Jan-2020	16-Jan-2019
Coaxial cable	HUBER+SUHNER	RG214/U/10m	N/A (S194)	31-Jan-2020	16-Jan-2019
PC	DELL	DIMENSION	75465BX	N/A	N/A
Software	TOYO Corporation	EP5/CE-AJ	0611193/V5.4.11	N/A	N/A

*: The calibrations of the above equipment are traceable to NIST or equivalent standards of the reference organizations.

Appendix B. Duty Cycle

[Plot & Calculation]



Duty Cycle = Ton / (Ton + Toff) = 2885[µs] / (2885[µs] + 865[µs]) = 76.93[%]