TEST REPORT

Application No.:	SZEM1906015096AT
Applicant:	Brand Addition Ltd
Address of Applicant:	Trafford Wharf Road, Manchester, M17 1DD, Manchester, United Kingdom
Manufacturer:	Brand Addition Ltd
Address of Manufacturer:	Trafford Wharf Road, Manchester, M17 1DD, Manchester, United Kingdom
Factory:	Casun Technologies Co., Ltd
Address of Factory:	4/F, B Building, No.8 Eastern Zone, Shangxue Technology Park, Bantian, Shenzhen, China
Equipment Under Test (EUT):	
EUT Name:	Wireless Charger
Model No.:	2951299
Trade mark:	TOMMY HILFIGER
FCC ID:	2ALSK2951299
Standard(s) :	47 CFR Part 18
Date of Receipt:	2019-06-13
Date of Test:	2019-06-13 to 2019-07-23
Date of Issue:	2019-07-25
Test Result:	**Pass***

* In the configuration tested, the EUT complied with the standards specified above.

Keny Xu
EMC Laboratory Manager

Revision Record				
Version	**Chapter**	**Date**	**Modifier**	**Remark**
01		2019-07-25		Original

Authorized for issue by:

Peter Geng /Project Engineer

Eric Fu /Reviewer

2 Test Summary

Radio Spectrum Matter Part				
Item	**Standard**	**Method**	**Requirement**	**Result**
Conducted disturbance	47 CFR Part 18	FCC MP-5	Part 18.307	Pass
Radiated emission	47 CFR Part 18	FCC MP-5	Part 18.305	Pass

3 Contents

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4 General Information

4.1 Details of E.U.T.

	Power supply:	Input: DC 5V/1.5A Output: DC 5V/1A
	Antenna Type:	Loop Antenna
	Modulation Type:	Load Modulation
	Operation Frequency:	103.57kHz to 184.13kHz

4.2 Description of Support Units

Description	Manufacturer	Model No.	Serial No.
Adapter	Apple	A1357 W010A051	REF. No.SEA0500
iPhone 8	Apple	A1863	F4GVQ656JC6D
Micro USB Cable	PHILIPS	SWR2101	REF. No.SEA0700

4.3 Measurement Uncertainty

No.	Item	Measurement Uncertainty
1	Radio Frequency	± 7.25 x 10^{-8}
2	Conduction emission	± 3.0dB
3	Radiated Spurious emission test	± 4.5dB
4	Temperature test	± 1℃
5	Humidity test	± 3%
6	Supply voltages	± 1.5%
7	Time	± 3%

4.4 Test Location

All tests were performed at:

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen Branch

No. 1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, Guangdong, China. 518057.

Tel: +86 755 2601 2053 Fax: +86 755 2671 0594

No tests were sub-contracted.

4.5 Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

• CNAS (No. CNAS L2929)

CNAS has accredited SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch EMC Lab to ISO/IEC 17025:2005 General Requirements for the Competence of Testing and Calibration Laboratories (CNAS-CL01 Accreditation Criteria for the Competence of Testing and Calibration Laboratories) for the competence in the field of testing.

• A2LA (Certificate No. 3816.01)

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen EMC Laboratory is accredited by the American Association for Laboratory Accreditation(A2LA). Certificate No. 3816.01.

• VCCI

The 3m Fully-anechoic chamber for above 1GHz, 10m Semi-anechoic chamber for below 1GHz, Shielded Room for Mains Port Conducted Interference Measurement and Telecommunication Port Conducted Interference Measurement of SGS-CSTC Standards Technical Services Co., Ltd. have been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: G-20026, R-14188, C-12383 and T-11153 respectively.

• FCC –Designation Number: CN1178

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen EMC Laboratory has been recognized as an accredited testing laboratory.

Designation Number: CN1178. Test Firm Registration Number: 406779.

• Innovation, Science and Economic Development Canada

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen EMC Laboratory has been recognized by ISED as an accredited testing laboratory.

CAB identifier: CN0006.

IC#: 4620C.

4.6 Deviation from Standards

None

4.7 Abnormalities from Standard Conditions

None

5 Equipment List

Conducted disturbance					
Equipment	**Manufacturer**	**Model No**	**Inventory No**	**Cal Date**	**Cal Due Date**
Shielding Room	ChangZhou ZhongYu	GB-88	SEM001-06	2019-06-13	2024-06-12
Measurement Software	AUDIX	e3 V8.2014-6-27	N/A	N/A	N/A
Coaxial Cable	SGS	N/A	SEM024-01	2019-07-11	2020-07-10
LISN	Rohde & Schwarz	ENV216	SEM007-01	2018-09-25	2019-09-24
LISN	ETS-LINDGREN	3816/2	SEM007-02	2019-04-01	2020-03-31
EMI Test Receiver	Rohde & Schwarz	ESCI	SEM004-02	2019-04-01	2020-03-31

Radiated emission					
Equipment	**Manufacturer**	**Model No**	**Inventory No**	**Cal Date**	**Cal Due Date**
10m Semi-Anechoic Chamber	SAEMC	FSAC1018	SEM001-03	2018-03-31	2021-03-30
Measurement Software	AUDIX	e3 V8.2014-6-27	N/A	N/A	N/A
Coaxial Cable	SGS	N/A	SEM029-01	2019-07-11	2020-07-10
EMI Test Receiver (9kHz-7GHz)	Rohde & Schwarz	ESR	SEM004-03	2019-04-01	2020-03-31
BiConiLog Antenna (26-3000MHz)	ETS-LINDGREN	3142C	SEM003-02	2019-05-24	2022-05-23
Pre-amplifier	Sonoma Instrument Co	310N	SEM005-04	2019-04-12	2020-04-11
Active Loop Antenna	ETS-Lindgren	6502	SEM003-08	2017-08-22	2020-08-21

General used equipment					
Equipment	**Manufacturer**	**Model No**	**Inventory No**	**Cal Date**	**Cal Due Date**
Humidity/ Temperature Indicator	Shanghai Meteorological Industry Factory	ZJ1-2B	SEM002-03	2018-09-27	2019-09-26
Humidity/ Temperature Indicator	Shanghai Meteorological Industry Factory	ZJ1-2B	SEM002-04	2018-09-27	2019-09-26
Humidity/ Temperature Indicator	Mingle	N/A	SEM002-08	2018-09-27	2019-09-26
Barometer	Changchun Meteorological Industry Factory	DYM3	SEM002-01	2019-04-04	2020-04-03

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6 Radio Spectrum Matter Test Results

6.1 Conducted disturbance

Test Requirement Part 18.307
Test Method: FCC MP-5
Limit:

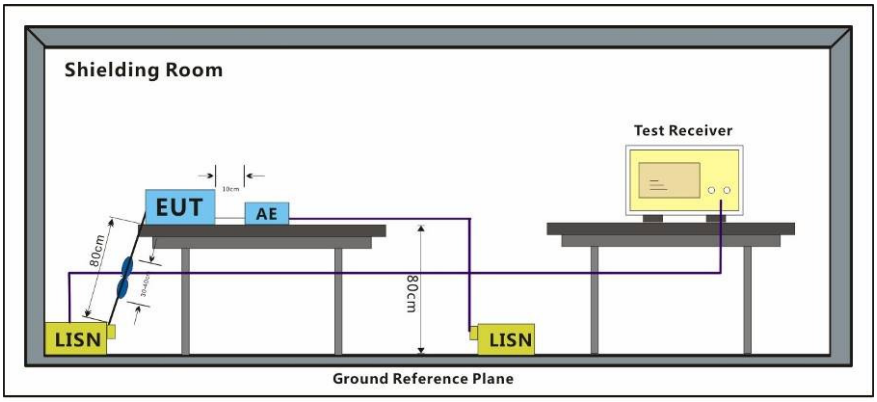
Frequency of emission (MHz)	Conducted limit (dB μ V)	
	Quasi-peak	Average
0.15-0.5	66 to 56*	56 to 46*
0.5-5	56	46
5-30	60	50

*Decreases with the logarithm of the frequency.

6.1.1 E.U.T. Operation

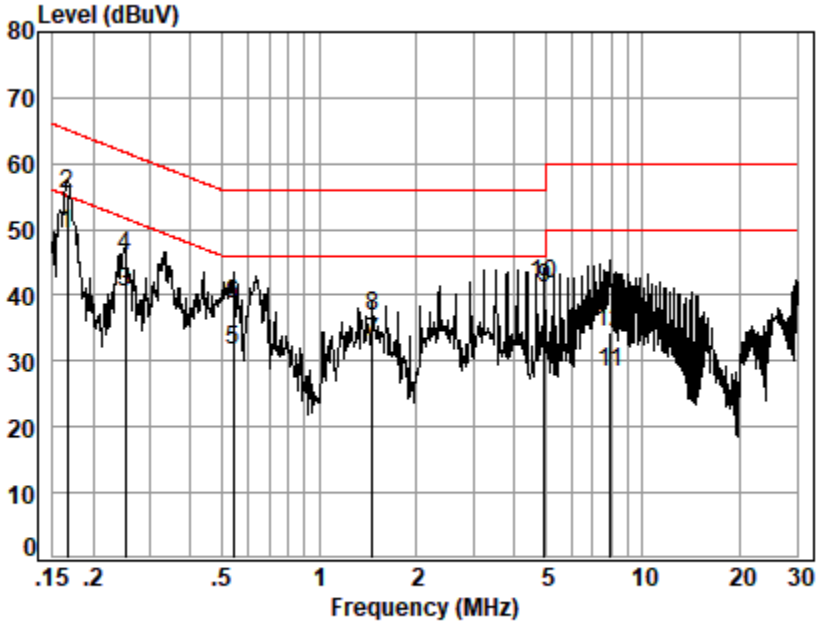
Operating Environment:
Temperature: 23.5 °C Humidity: 54 % RH Atmospheric Pressure: 1005 mbar
Test mode a:Charge mode_Keep the EUT charging

6.1.2 Test Setup Diagram



6.1.3 Measurement Procedure and Data

Mode:a; Line:Live Line



Site : Shielding Room
Condition: Line
Job No. : 15096AT
Test mode: a

	Freq	Cable Loss	LISN Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dB	dBuV	dBuV	dBuV	dB	
1	0.1659	0.01	9.66	39.75	49.42	55.16	-5.74	Average
2	0.1659	0.01	9.66	45.68	55.35	65.16	-9.81	QP
3	0.2508	0.03	9.67	30.88	40.58	51.73	-11.15	Average
4	0.2508	0.03	9.67	36.20	45.90	61.73	-15.83	QP
5	0.5436	0.06	9.67	21.86	31.59	46.00	-14.41	Average
6	0.5436	0.06	9.67	28.84	38.57	56.00	-17.43	QP
7	1.4640	0.13	9.73	23.03	32.89	46.00	-13.11	Average
8	1.4640	0.13	9.73	26.90	36.76	56.00	-19.24	QP
9	4.9782	0.17	9.74	31.03	40.94	46.00	-5.06	Average
10	4.9782	0.17	9.74	31.89	41.80	56.00	-14.20	QP
11	7.9353	0.17	9.80	18.35	28.32	50.00	-21.68	Average
12	7.9353	0.17	9.80	24.40	34.37	60.00	-25.63	QP

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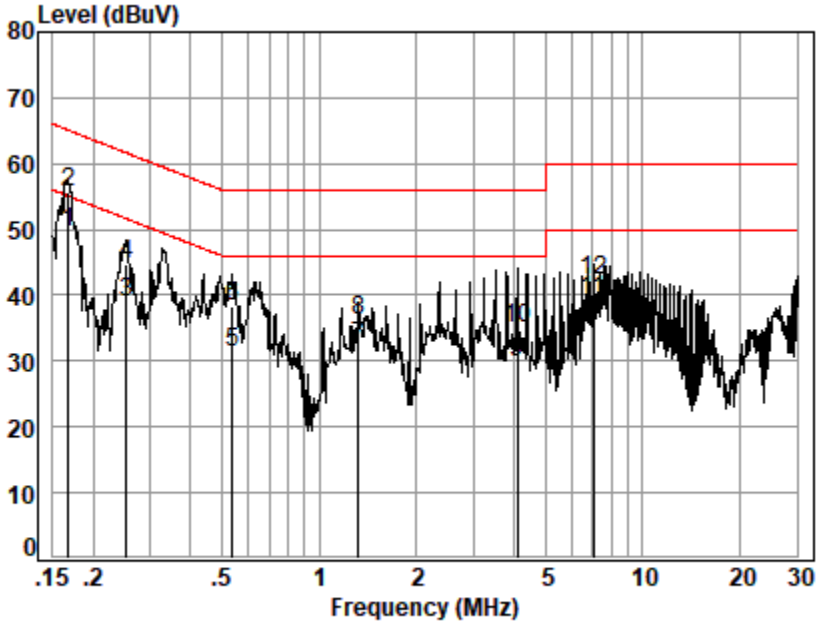
Mode:a; Line:Neutral Line



Site : Shielding Room
Condition: Neutral
Job No. : 15096AT
Test mode: a

	Freq	Cable Loss	LISN Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dB	dBuV	dBuV	dBuV	dB	
1	0.1677	0.01	9.64	40.08	49.73	55.08	-5.35	Average
2	0.1677	0.01	9.64	45.89	55.54	65.08	-9.54	QP
3	0.2535	0.03	9.64	29.20	38.87	51.64	-12.77	Average
4	0.2535	0.03	9.64	35.01	44.68	61.64	-16.96	QP
5	0.5407	0.06	9.64	21.53	31.23	46.00	-14.77	Average
6	0.5407	0.06	9.64	28.62	38.32	56.00	-17.68	QP
7	1.3168	0.12	9.70	22.35	32.17	46.00	-13.83	Average
8	1.3168	0.12	9.70	26.38	36.20	56.00	-19.80	QP
9	4.0920	0.16	9.69	19.96	29.81	46.00	-16.19	Average
10	4.0920	0.16	9.69	25.21	35.06	56.00	-20.94	QP
11	7.0249	0.17	9.76	29.34	39.27	50.00	-10.73	Average
12	7.0249	0.17	9.76	32.32	42.25	60.00	-17.75	QP

6.2 Radiated emission

Test Requirement Part 18.305
Test Method: FCC MP-5
Measurement Distance: 3m
Limit:

(b) The field strength levels of emissions which lie outside the bands specified in §18.301, unless otherwise indicated, shall not exceed the following:

Equipment	Operating frequency	RF Power generated by equipment (watts)	Field strength limit (uV/m)	Distance (meters)
Any type unless otherwise specified (miscellaneous)	Any ISM frequency	Below 500 500 or more	25 25 × SQRT(power/500)	300 [1]300
	Any non-ISM frequency	Below 500 500 or more	15 15 × SQRT(power/500)	300 [1]300
Industrial heaters and RF stabilized arc welders	On or below 5,725 MHz Above 5,725 MHz	Any Any	10 ([2])	1,600 ([2])
Medical diathermy	Any ISM frequency Any non-ISM frequency	Any Any	25 15	300 300
Ultrasonic	Below 490 kHz	Below 500 500 or more	2,400/F(kHz) 2,400/F(kHz) × SQRT (power/500)	300 [3]300
	490 to 1,600 kHz Above 1,600 kHz	Any Any	24,000/F(kHz) 15	30 30
Induction cooking ranges	Below 90 kHz On or above 90 kHz	Any Any	1,500 300	[4]30 [4]30

[1]Field strength may not exceed 10 μV/m at 1600 meters. Consumer equipment operating below 1000 MHz is not permitted the increase in field strength otherwise permitted here for power over 500 watts.

[2]Reduced to the greatest extent possible.

[3]Field strength may not exceed 10 μV/m at 1600 meters. Consumer equipment is not permitted the increase in field strength otherwise permitted here for over 500 watts.

[4]Induction cooking ranges manufactured prior to February 1, 1980, shall be subject to the field strength limits for miscellaneous ISM equipment.

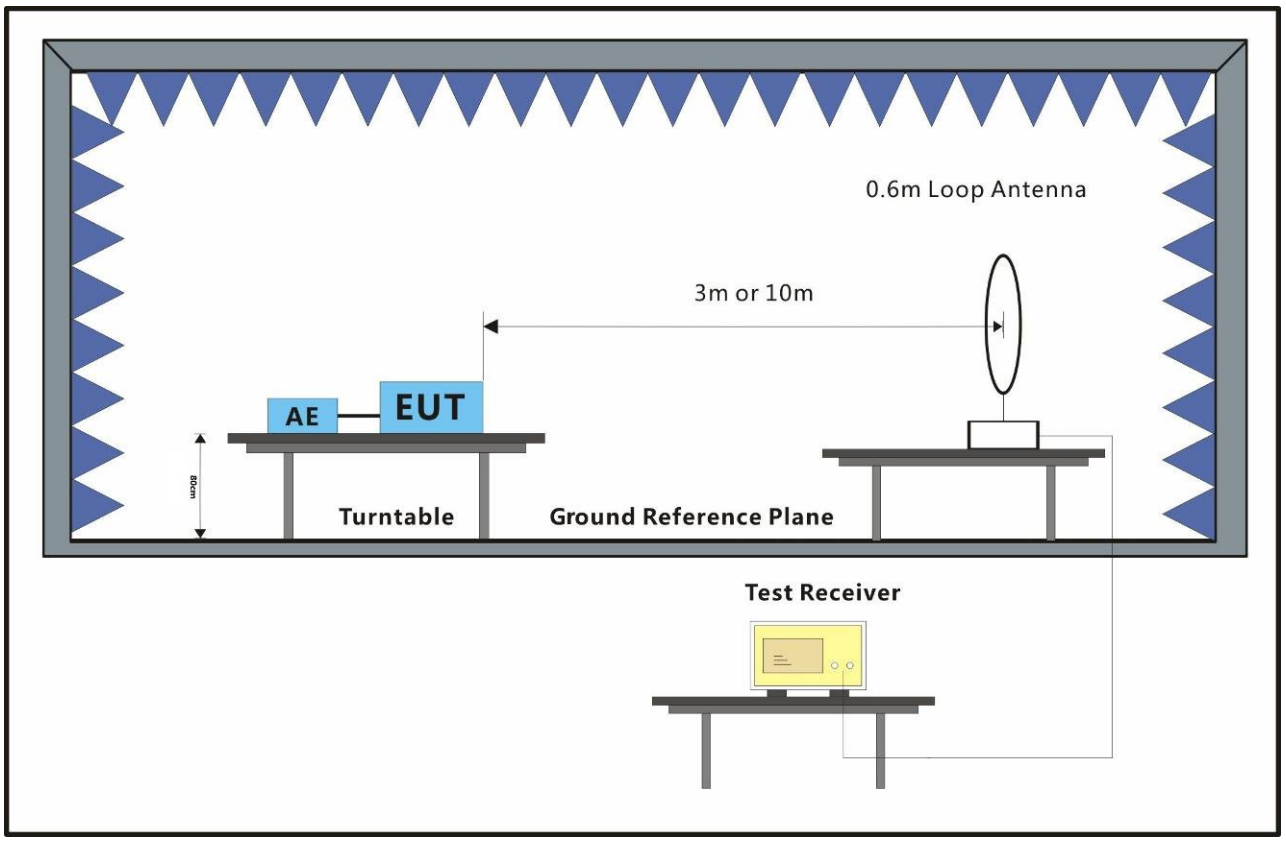
6.2.1 E.U.T. Operation

Operating Environment:

Temperature: 25 °C Humidity: 51 % RH Atmospheric Pressure: 1005 mbar

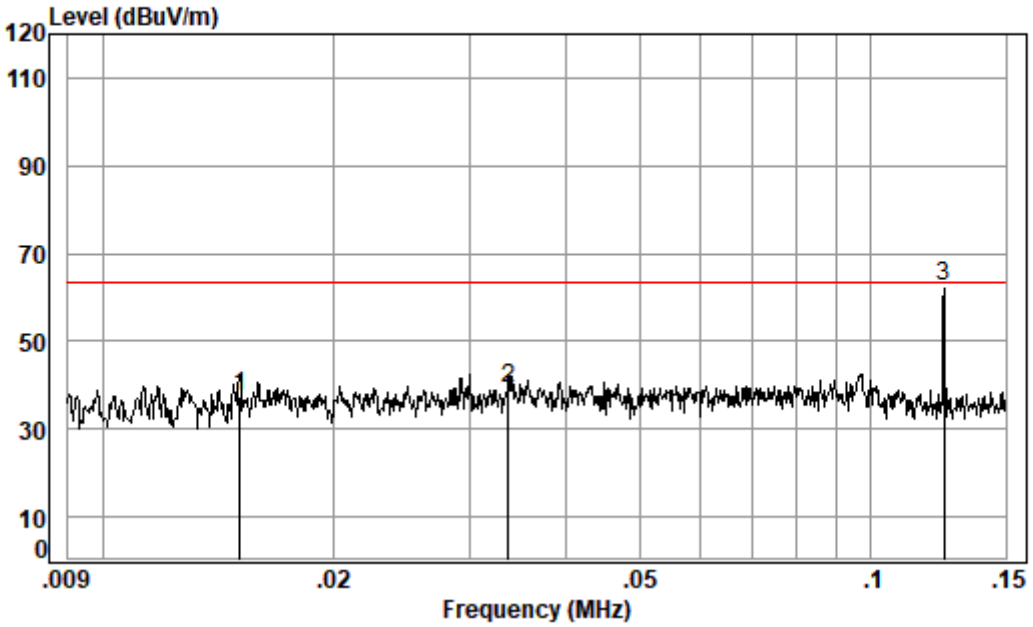
Test mode a:Charge mode_Keep the EUT charging

6.2.2 Test Setup Diagram



6.2.3 Measurement Procedure and Data

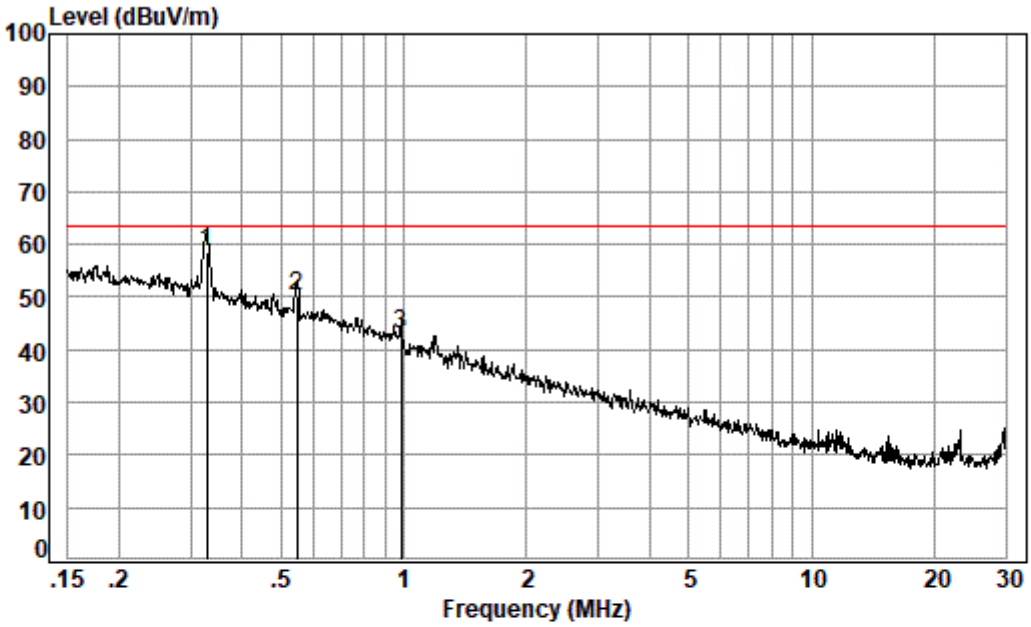
Mode a:
9kHz-150kHz



Condition: 3m
Job No. : 15096AT
Test Mode: wireless charge

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	0.02	0.25	16.76	32.55	53.11	37.57	63.52	-25.95	QP
2 qp	0.03	0.16	13.51	32.56	58.02	39.13	63.52	-24.39	QP
3 pp	0.12	0.06	11.84	32.56	83.30	62.64	63.52	-0.88	Average

150kHz-30MHz



Condition: 3m
Job No. : 15096AT
Test Mode: wireless charge

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1 pp	0.33	0.09	11.88	32.56	78.96	58.37	63.52	-5.15	QP
2	0.55	0.13	11.77	32.56	70.88	50.22	63.52	-13.30	QP
3	0.98	0.23	12.00	32.56	63.35	43.02	63.52	-20.50	QP

7 Photographs

7.1 Test Setup

Refer to Setup Photos

7.2 EUT Constructional Details (EUT Photos)

Refer to EUT external and internal photos

- End of the Report -

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