



RF TEST REPORT

Product Name: Digital charcoal Griddle+Grill+Smoker

Model Name: MB20040220, MB20042924, MB20040122, MB20040221,
MB20041220, MB20041823, MB20041023, MB20041525, MB20040226

FCC ID: 2AONDGRAVITY

Issued For : Premier Specialty Brands, LLC

3400 Rivergreen Ct Ste 600, Duluth Georgia, United States,
30096

Issued By : Shenzhen LGT Test Service Co., Ltd.

Room 205, Building 13, Zone B, Chen Hsong Industrial Park,
No.177 Renmin West Road, Jinsha Community, Kengzi Street,
Pingshan New District, Shenzhen, China

Report Number: LGT25G316RF05

Sample Received Date: 24 June 2020

Date of Test: 24 June 2020 ~ 02 Sep. 2025

Date of Issue: 05 Sep. 2025

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TEST REPORT CERTIFICATION

Applicant: Premier Specialty Brands, LLC
Address: 3400 Rivergreen Ct Ste 600, Duluth Georgia, United States, 30096
Manufacturer: Premier Specialty Brands, LLC
Address: 3400 Rivergreen Ct Ste 600, Duluth Georgia, United States, 30096
Product Name: Digital charcoal Griddle+Grill+Smoker
Trademark: Masterbuilt
Model Name: MB20040220, MB20042924, MB20040122, MB20040221, MB20041220, MB20041823, MB20041023, MB20041525, MB20040226
Sample Status: Normal

APPLICABLE STANDARDS	
STANDARD	TEST RESULTS
FCC Part 15.247, Subpart C ANSI C63.10-2020/Cor 1-2023	PASS

Prepared by:

Zane Shan

Zane Shan
Engineer

Approved by:

Vita Li

Vita Li
Technical Director





Table of Contents

1. SUMMARY OF TEST RESULTS	5
1.1 TEST FACTORY	6
1.2 MEASUREMENT UNCERTAINTY	6
2. GENERAL INFORMATION	7
2.1 GENERAL DESCRIPTION OF THE EUT	7
2.2 DESCRIPTION OF THE TEST MODES	10
2.3 TEST SOFTWARE AND POWER LEVEL	10
2.4 BLOCK DIGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED	11
2.5 DESCRIPTION OF NECESSARY ACCESSORIES AND SUPPORT UNITS	12
2.6 EQUIPMENTS LIST	13
3. EMC EMISSION TEST	15
3.1 CONDUCTED EMISSION MEASUREMENT	15
3.2 TEST PROCEDURE	16
3.3 TEST SETUP	16
3.4 EUT OPERATING CONDITIONS	16
3.5 TEST RESULTS	17
4. RADIATED EMISSION MEASUREMENT	19
4.1 RADIATED EMISSION LIMITS	19
4.2 TEST PROCEDURE	21
4.3 TEST SETUP	22
4.4 EUT OPERATING CONDITIONS	22
4.5 FIELD STRENGTH CALCULATION	23
4.6 TEST RESULTS	24



Revision History

Rev.	Issue Date	Report Number	Revisions
00	Aug. 11, 2023	LGT23G117RF05	Initial Issue
01	Oct. 09, 2023	LGT23H086RF05	Add additional model MB20041023 with adapter XY24SE-120150VQ-UT, this does not affect RF parameters, no testing is required.
02	12 Aug. 2024	LGT24H004RF05	Add additional model MB20041525 and factory information. According to the model difference, no tests need to be performed.
03	Sep. 05, 2025	LGT25G316RF05	Add additional model MB20040226, the motherboard is equipped with a temperature control program jumper switch and the local circuit has been modified. This change do not affect the radio frequency parameters, only performed Conducted Emissions and Radiated Spurious Emissions. Compared with the latest standards, the other test items still meet the requirements of the latest standards.



1. SUMMARY OF TEST RESULTS

Test procedures according to the technical standards:
KDB 558074 D01 15.247 Meas Guidance v05r02.

FCC Part 15.247, Subpart C			
Standard Section	Test Item	Judgment	Remark
15.207	Conducted Emission	PASS	--
15.247 (c)	Radiated Spurious Emission	PASS	--

NOTE:

- (1) 'N/A' denotes test is not applicable in this Test Report.
- (2) All tests are according to ANSI C63.10-2020/Cor 1-2023.



1.1 TEST FACTORY

SHENZHEN STS TEST SERVICES CO., LTD

Add. : A 1/F, Building B, Zhuoke Science Park, No.190 Chongqing Road, HepingShequ, Fuyong Sub-District, Bao'an District, Shenzhen, Guang Dong, China

FCC test Firm Registration Number: 625569

IC test Firm Registration Number: 12108A

A2LA Certificate No.: 4338.01

1.2 MEASUREMENT UNCERTAINTY

The reported uncertainty of measurement $y \pm U$, where expanded uncertainty U is based on a standard uncertainty multiplied by a coverage factor of $k=2$, providing a level of confidence of approximately **95** %.

No.	Item	Uncertainty
1	RF output power, conducted	$\pm 0.68\text{dB}$
2	Unwanted Emissions, conducted	$\pm 2.988\text{dB}$
3	All emissions, radiated 30-1GHz	$\pm 6.7\text{dB}$
4	All emissions, radiated 1G-6GHz	$\pm 5.5\text{dB}$
5	All emissions, radiated >6G	$\pm 5.8\text{dB}$
6	Conducted Emission (9KHz-150KHz)	$\pm 3.37\text{dB}$
7	Conducted Emission (150KHz-30MHz)	$\pm 3.83\text{dB}$



2. GENERAL INFORMATION

2.1 GENERAL DESCRIPTION OF THE EUT

Product Name:	Digital charcoal Griddle+Grill+Smoker	
Trade Name:	Masterbuilt	
Model Name:	MB20040221	
Series Model:	MB20040220, MB20042924, MB20040122, MB20041220, MB20041823, MB20041023, MB20041525, MB20040226	
Model Difference:	See the table on page 9	
Product Description:	The EUT is a “Digital charcoal Griddle+Grill+Smoker”	
	Operation Frequency:	2402~2480 MHz
	Modulation Type:	GFSK
	Radio Technology:	BLE
	Bluetooth Version:	4.2
	Bluetooth Configuration:	LE(Support 1M PHY)
	Number Of Channel:	40
	Antenna Designation:	Please refer to the Note 3.
	Antenna Gain (dBi)	0dBi
Channel List:	Please refer to the Note 2.	
Power Source:	Input: AC 100-240VAC 50/60Hz 1A Max	
	Output: DC 12V 1.5A	
	Input: AC 100-240V 50/60hz 0.6A	
	Output: DC 12V 1.5A 18.0W	
Hardware version number:	Input: AC 100-240V 50/60hz 0.6A Max	
	Output: DC 12V 1.5A 18.0W	
Hardware version number:	V2.1	
Software version number:	V001 R000	
Connecting I/O Port(s):	Please refer to the Note 1.	

Note:

1. For a more detailed features description, please refer to the manufacturer’s specifications or the User Manual.



Product model	Image	Customer internal series name	Difference	
MB20040220		GSG560, for North American	B20042924 with rain cover, others are identical with MB20040220.	GSG560 has the same amount of carbon and control system with GSG800/ GSG900/ GSG1050 series, only the grilling area is different.
MB20042924		GSG560, with rain cover, for North American		
MB20040122		GSG800 Costco, for worldwide	Only the Power adapter is different, MB20040122 is equipped with all power adapters including North American and European and Australian. In addition, MB20040122 is shipped without frying pan.	
MB20040221		GSG800, for North American		
MB20041220		GSG1050, for North American		
MB20041823		GSG900, for worldwide	GSG900 removed the frying pan, add pizza oven accessory, others are identical with GSG800 series.	
MB20041023	Similar with MB20040221, only the size is different. MB20041023 (1311*607*1278 mm) is smaller than MB20040221 (1290*603*1250 mm).			
MB20041525		Slightly different in appearance with MB20041220, MB20041525 add a door to the bottom and install the controller on the right side.		
MB20040226		Slightly different in Accessories with MB20041823, The previous oven accessories of MB20040226 was replaced with a frying pan (the frying pan is not electric and is considered an accessory).		



2.

Channel List							
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
00	2402	10	2422	20	2442	30	2462
01	2404	11	2424	21	2444	31	2464
02	2406	12	2426	22	2446	32	2466
03	2408	13	2428	23	2448	33	2468
04	2410	14	2430	24	2450	34	2470
05	2412	15	2432	25	2452	35	2472
06	2414	16	2434	26	2454	36	2474
07	2416	17	2436	27	2456	37	2476
08	2418	18	2438	28	2458	38	2478
09	2420	19	2440	29	2460	39	2480

3.

Table for Filed Antenna

Ant.	Brand	Model Name	Antenna Type	Connector	Gain (dBi)	NOTE
1	Masterbuilt	MB20040221	External	N/A	0dBi	BLE ANT



2.2 DESCRIPTION OF THE TEST MODES

For conducted test items and radiated spurious emissions

Each of these EUT operation mode(s) or test configuration mode(s) mentioned below was evaluated respectively.

Worst Mode	Description	Data/Modulation
Mode 1	TX CH00(2402MHz)	1 Mbps/GFSK
Mode 2	TX CH19(2440MHz)	1 Mbps/GFSK
Mode 3	TX CH39(2480MHz)	1 Mbps/GFSK

Note:

- (1) The measurements are performed at all Bit Rate of Transmitter, the worst data was reported.
- (2) We have be tested for all available U.S. voltage and frequencies(For 120V,50/60Hz and 240V, 50/60Hz) for which the device is capable of operation, and the worst case of 120V/60Hz is shown in the report.
- (3) The battery is full-charged during the radiated and RF conducted test.

For AC Conducted Emission

Test Case	
AC Conducted Emission	Mode 4 : Keeping BT TX

2.3 TEST SOFTWARE AND POWER LEVEL

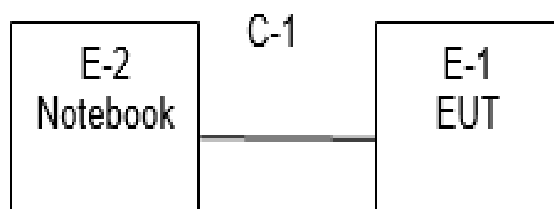
During testing channel & power controlling software provided by the customer was used to control the operating channel as well as the output power level.

RF Function	Type	Mode Or Modulation type	Ant Gain(dBi)	Power Class	Software For Testing
BLE	BLE	GFSK	0	5	espRFTTool_2.0.exe

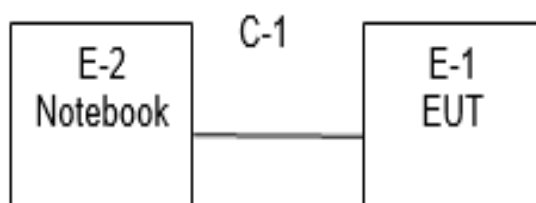


2.4 BLOCK DIGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED

Radiated Spurious Emission Test



Conducted Emission Test





2.5 DESCRIPTION OF NECESSARY ACCESSORIES AND SUPPORT UNITS

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

Necessary accessories

Item	Equipment	Mfr/Brand	Model/Type No.	Serial No.	Note
	Adapter	Dongguan City GangQi Electronic CO., Ltd	GQ24-120150-AX	N/A	N/A
	Adapter	Dongguan Ctiland Electronics CO., Ltd	DQS181-120150-U	N/A	N/A
	Adapter	Shenzhen Rongweixin Technology Co., Ltd	R122-1201500ID	N/A	N/A
	Adapter	XING YUAN ELECTRONICS CO., LTD	XY24SE-120150VQ-UT	N/A	N/A

Support units

Item	Equipment	Mfr/Brand	Model/Type No.	Serial No.	Note
E-2	Notebook	DELL	VOSTRO.3800	N/A	N/A
C-1	USB Cable	N/A	100cm	N/A	N/A

Note:

- (1) The support equipment was authorized by Declaration of Confirmation.
- (2) For detachable type I/O cable should be specified the length in cm in 『Length』 column.



2.6 EQUIPMENTS LIST

Conducted Emission					
Equipment	Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Until
EMI Test Receiver	R&S	ESU8	100372	2025.03.06	2026.03.05
LISN	COM-POWER	LI-115	02032	2025.03.05	2026.03.04
LISN	SCHWARZBECK	NNLK 8122	00160	2025.03.05	2026.03.04
Transient Limiter	CYBERTEK	EM5010A	E225010004 9	2025.03.05	2026.03.04
Coaxial cables (9kHz-30MHz)	Juncoax	JMR600-N MNM-2M	N.A	2025.03.06	2026.03.05
Temperature & Humidity	JINGCHUANG	BT-3	N.A	2025.03.10	2026.03.09
Testing Software	EMC-I_V1.4.0.3_SKET				

Radiated Test equipment					
Equipment	Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Until
EMI Test Receiver	R&S	ESU8	100372	2025.03.06	2026.03.05
Active loop Antenna	ETS	6502	00049544	2025.03.11	2028.03.10
Spectrum Analyzer	Keysight	N9010B	MY60242508	2025.03.05	2026.03.04
Trilog Broadband Antenna (30M-1G)	SCHWARZBECK	VULB 9168	2705	2024.05.17	2027.05.16
Horn Antenna(1-18G)	SCHWARZBECK	3115	10SL0060	2025.03.10	2028.03.09
Horn Antenna(18-40G)	SCHWARZBECK	BBHA 9170	685	2023.10.23	2026.10.22
Pre-amplifier(30M-1G)	EMtrace	RP01A	02019	2025.03.06	2026.03.05
Pre-amplifier(1-26.5G)	Agilent	8449B	3008A4722	2025.03.06	2026.03.05
Pre-amplifier(18-40G)	SCHWARZBECK	BBV 9721	9721-019	2024.10.21	2025.10.20
Coaxial cables (9kHz-1GHz)	Juncoax	JMR600-N MNM-8M	N.A	2025.03.06	2026.03.05
Coaxial cables (1GHz-18GHz)	TaiHe	UCD460B- NMSM-1M 9	N.A	2025.03.06	2026.03.05
Coaxial cables (18GHz-40GHz)	Junkosha Inc.	MWX241-0 5000KMSK MS	N.A	2025.03.08	2026.03.07
Temperature& Humidity test chamber	AISRY	LX-1000L	171200018	2025.07.30	2026.07.29
Antenna Tower	SAEMC	BK-4AT-BS -D	SK20210930 08	N.A	N.A
Temperature & Humidity	JINGCHUANG	BT-3	N.A	2025.03.10	2026.03.09
Testing Software	EMC-I_V1.4.0.3_SKET				

RF Conducted Test equipment					
Equipment	Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Until
Signal Analyzer	Keysight	N9010B	MY60242508	2025.03.05	2026.03.04
Signal Analyzer	Keysight	N9020A	MY50530994	2025.03.05	2026.03.04
Signal Analyzer	R&S	FSV40-N	102245	2025.02.17	2026.02.16
Power Sensor	R&S	NRP8S	149.0006K02 -104963-Ae	2025.03.06	2026.03.05
RF Automatic Test system	MW	MW100-RFC B	MW220324L G-33	2025.03.06	2026.03.05
MXG Vector Signal Generator	Keysight	N5182B	MY59100717	2025.03.05	2026.03.04



Temperature& Humidity test chamber	AISRY	LX-1000L	171200018	2025.07.30	2026.07.29
Attenuator	eastsheep	90db	N.A	2025.03.06	2026.03.05
Temperature & Humidity	JINGCHUANG	BT-3	N.A	2025.03.10	2026.03.09
Digital multimeter	MASTECH	MS8261	MBGBC8305 3	2025.03.05	2026.03.04
DC source	Keysight	E3634A	MY58036468	2025.03.06	2026.03.05
Testing Software	MTS8310_V2.0.0.0_MW				



3. EMC EMISSION TEST

3.1 CONDUCTED EMISSION MEASUREMENT

3.1.1 POWER LINE CONDUCTED EMISSION LIMITS

The radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies, within the band 150 kHz to 30 MHz, shall not exceed the limits in the following table.

FREQUENCY (MHz)	Conducted Emission 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

Note:

- (1) The tighter limit applies at the band edges.
- (2) The limit of “ * ” marked band means the limitation decreases linearly with the logarithm of the frequency in the range.

The following table is the setting of the receiver

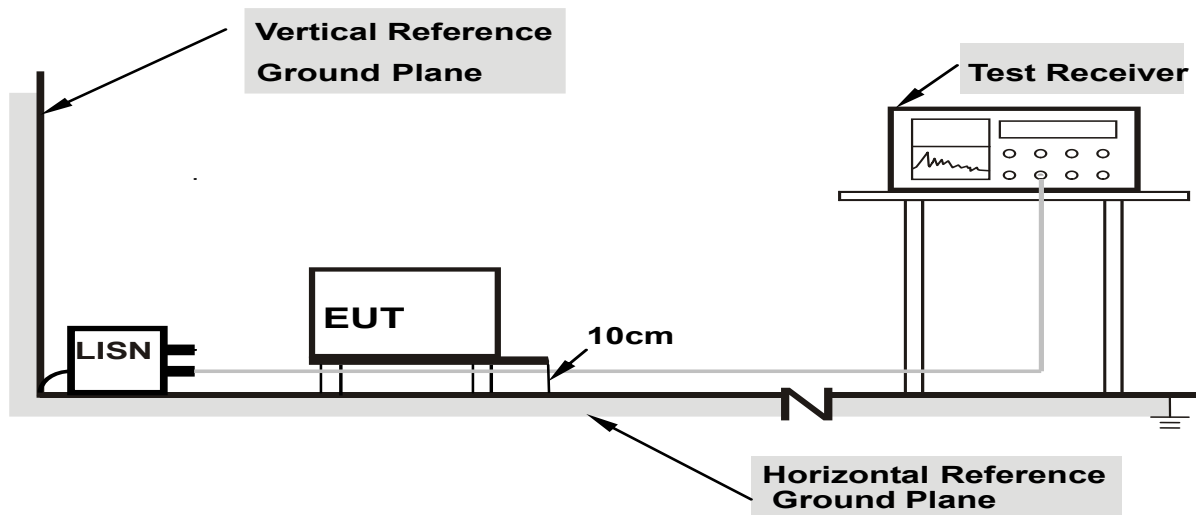
Receiver Parameters	Setting
Attenuation	10 dB
Start Frequency	0.15 MHz
Stop Frequency	30 MHz
IF Bandwidth	9 kHz



3.2 TEST PROCEDURE

- The EUT was 0.1 meters from the horizontal ground plane and 0.4 meters from the vertical ground plane with EUT being connected to the power mains through a line impedance stabilization network (LISN). All other support equipments powered from additional LISN(s). The LISN provide 50 Ohm/ 50uH of coupling impedance for the measuring instrument.
- Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 to 40 cm long.
- I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.
- LISN at least 80 cm from nearest part of EUT chassis.
- For the actual test configuration, please refer to the related Item –EUT Test Photos.

3.3 TEST SETUP



Note: 1.Support units were connected to second LISN.

2.Both of LISNs (AMN) are 80 cm from EUT and at least 80 from other units and other metal planes

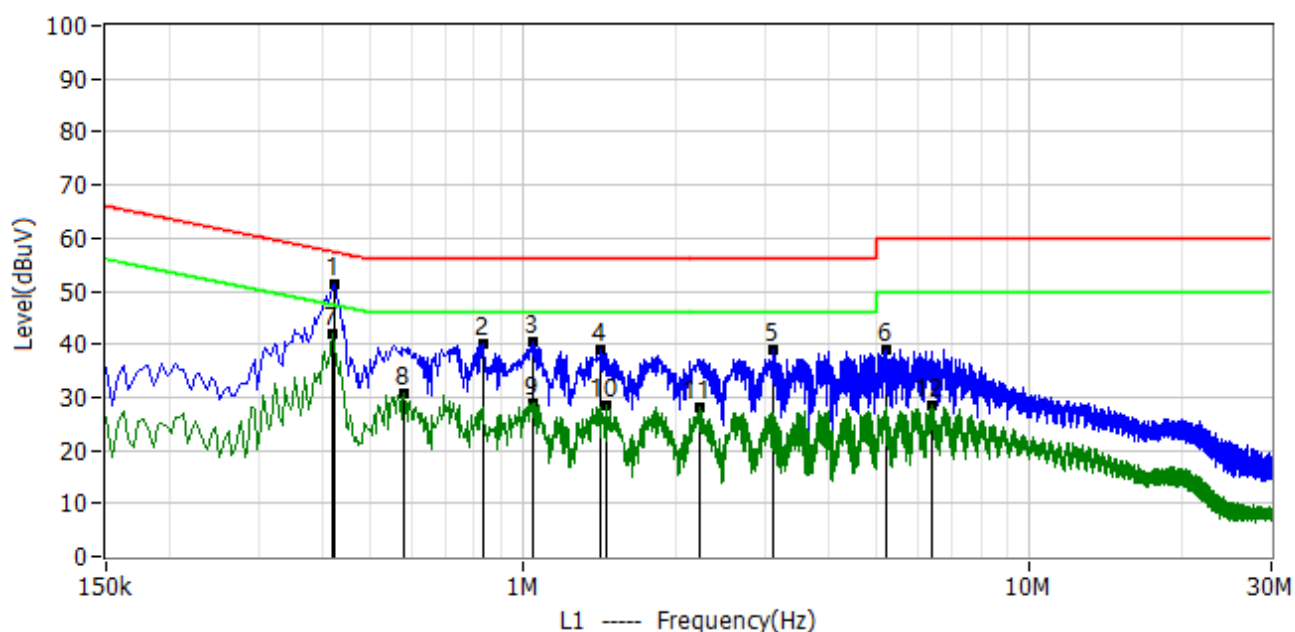
3.4 EUT OPERATING CONDITIONS

The EUT was configured for testing in a typical fashion (as a customer would normally use it). The EUT has been programmed to continuously transmit during test. This operating condition was tested and used to collect the included data.



3.5 TEST RESULTS

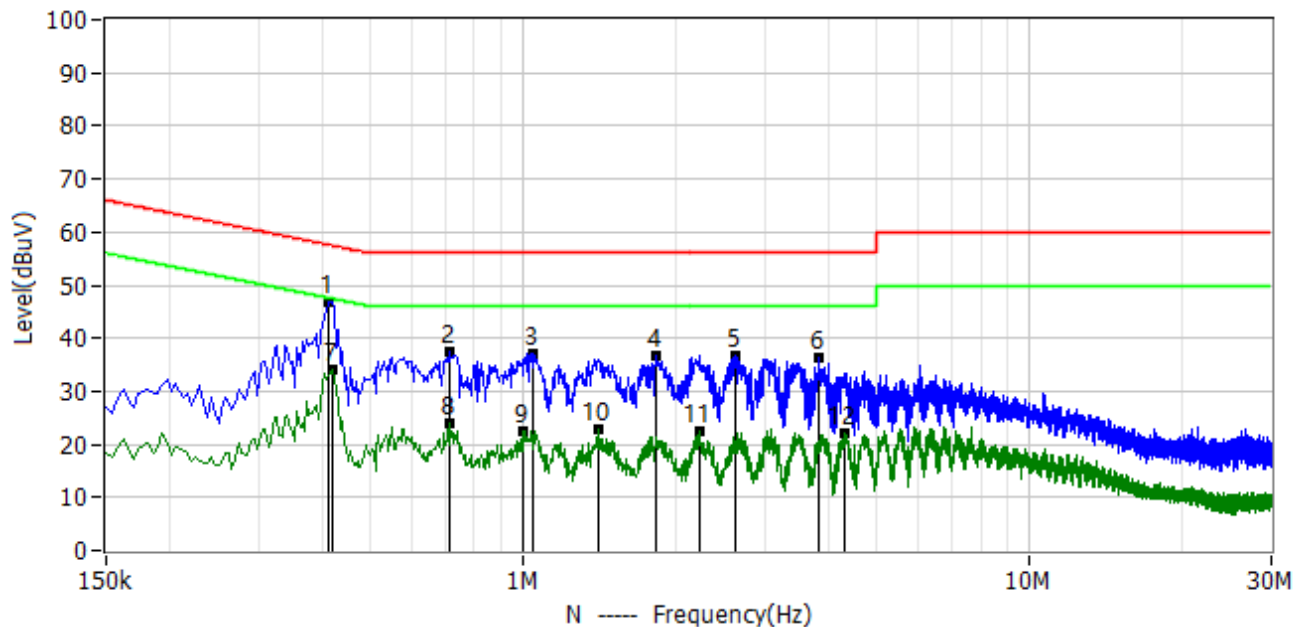
Project: LGT25G316	Test Engineer: LiuH
EUT: Digital charcoal Griddle+Grill+Smoker	Temperature: 25.2°C
M/N: MB20040226	Humidity: 45%RH
Test Voltage: AC 120V/60Hz	Test Data: 2025-08-13
Test Mode: TX BLE 2402	
Note:	



No.	Frequency MHz	Reading dBuV	Factor dB	Level dBuV	Limit dBuV	Margin dB	Detector	Polar
1*	0.422	40.28	10.87	51.15	57.41	-6.26	QP	L1
2*	0.830	29.01	10.88	39.89	56.00	-16.11	QP	L1
3*	1.046	29.48	10.87	40.35	56.00	-15.65	QP	L1
4*	1.422	27.72	11.11	38.83	56.00	-17.17	QP	L1
5*	3.126	27.78	11.32	39.10	56.00	-16.90	QP	L1
6*	5.210	27.77	11.35	39.12	60.00	-20.88	QP	L1
7*	0.418	30.93	10.87	41.80	47.49	-5.68	AV	L1
8*	0.582	19.74	10.95	30.69	46.00	-15.31	AV	L1
9*	1.042	18.07	10.87	28.94	46.00	-17.06	AV	L1
10*	1.454	17.31	11.13	28.44	46.00	-17.56	AV	L1
11*	2.238	17.00	11.12	28.12	46.00	-17.88	AV	L1
12*	6.430	17.01	11.39	28.40	50.00	-21.60	AV	L1



Project: LGT25G316	Test Engineer: LiuH
EUT: Digital charcoal Griddle+Grill+Smoker	Temperature: 25.2°C
M/N: MB20040226	Humidity: 45%RH
Test Voltage: AC 120V/60Hz	Test Data: 2025-08-13
Test Mode: TX BLE 2402	
Note:	



No.	Frequency MHz	Reading dBuV	Factor dB	Level dBuV	Limit dBuV	Margin dB	Detector	Polar
1*	0.414	36.03	10.82	46.85	57.57	-10.72	QP	N
2*	0.714	26.45	10.85	37.30	56.00	-18.70	QP	N
3*	1.042	26.24	10.86	37.10	56.00	-18.90	QP	N
4*	1.834	25.62	11.13	36.75	56.00	-19.25	QP	N
5*	2.630	25.43	11.20	36.63	56.00	-19.37	QP	N
6*	3.826	25.12	11.27	36.39	56.00	-19.61	QP	N
7*	0.418	23.16	10.82	33.98	47.49	-13.50	AV	N
8*	0.714	13.22	10.85	24.07	46.00	-21.93	AV	N
9*	0.994	11.77	10.84	22.61	46.00	-23.39	AV	N
10*	1.410	11.66	11.05	22.71	46.00	-23.29	AV	N
11*	2.226	11.27	11.16	22.43	46.00	-23.57	AV	N
12*	4.326	10.78	11.29	22.07	46.00	-23.93	AV	N



4. RADIATED EMISSION MEASUREMENT

4.1 RADIATED EMISSION LIMITS

In any 100 kHz bandwidth outside the operating frequency band. In case the emission fall within the Restricted band specified on Part15.205(a) &209(a) limit in the table and according to ANSI C63.10-2020/Cor 1-2023 below has to be followed.

LIMITS OF RADIATED EMISSION MEASUREMENT (Frequency Range 9kHz-1000MHz)

Frequencies (MHz)	Field Strength (micorvolts/meter)	Measurement Distance (meters)
0.009~0.490	2400/F(KHz)	300
0.490~1.705	24000/F(KHz)	30
1.705~30.0	30	30
30~88	100	3
88~216	150	3
216~960	200	3
Above 960	500	3

LIMITS OF RADIATED EMISSION MEASUREMENT (Above 1000MHz)

FREQUENCY (MHz)	(dBuV/m) (at 3M)	
	PEAK	AVERAGE
Above 1000	74	54

Notes:

- (1) The limit for radiated test was performed according to FCC PART 15C.
- (2) The tighter limit applies at the band edges.
- (3) Emission level (dBuV/m)=20log Emission level (uV/m).

LIMITS OF RESTRICTED FREQUENCY BANDS

FREQUENCY (MHz)	FREQUENCY (MHz)	FREQUENCY (MHz)	FREQUENCY (GHz)
0.090-0.110	16.42-16.423	399.9-410	4.5-5.15
0.495-0.505	16.69475-16.69525	608-614	5.35-5.46
2.1735-2.1905	16.80425-16.80475	960-1240	7.25-7.75
4.125-4.128	25.5-25.67	1300-1427	8.025-8.5
4.17725-4.17775	37.5-38.25	1435-1626.5	9.0-9.2
4.20725-4.20775	73-74.6	1645.5-1646.5	9.3-9.5
6.215-6.218	74.8-75.2	1660-1710	10.6-12.7
6.26775-6.26825	108-121.94	1718.8-1722.2	13.25-13.4
6.31175-6.31225	123-138	2200-2300	14.47-14.5
8.291-8.294	149.9-150.05	2310-2390	15.35-16.2
8.362-8.366	156.52475-156.52525	2483.5-2500	17.7-21.4
8.37625-8.38675	156.7-156.9	2690-2900	22.01-23.12
8.41425-8.41475	162.0125-167.17	3260-3267	23.6-24.0
12.29-12.293	167.72-173.2	3332-3339	31.2-31.8
12.51975-12.52025	240-285	3345.8-3358	36.43-36.5
12.57675-12.57725	322-335.4	3600-4400	Above 38.6
13.36-13.41			



For Radiated Emission

Spectrum Parameter	Setting
Attenuation	Auto
Detector	Peak/QP/AV
Start Frequency	9 KHz/150KHz(Peak/QP/AV)
Stop Frequency	150KHz/30MHz(Peak/QP/AV)
RB / VB (emission in restricted band)	200Hz (From 9kHz to 0.15MHz)/ 9KHz (From 0.15MHz to 30MHz); 200Hz (From 9kHz to 0.15MHz)/ 9KHz (From 0.15MHz to 30MHz)

Spectrum Parameter	Setting
Attenuation	Auto
Detector	Peak/QP
Start Frequency	30 MHz(Peak/QP)
Stop Frequency	1000 MHz (Peak/QP)
RB / VB (emission in restricted band)	120 KHz / 300 KHz

Spectrum Parameter	Setting
Attenuation	Auto
Detector	Peak/AV
Start Frequency	1000 MHz(Peak/AV)
Stop Frequency	10th carrier hamonic(Peak/AV)
RB / VB (emission in restricted band)	1 MHz / 3 MHz(Peak) 1 MHz/1/T MHz(AVG)

For Restricted band

Spectrum Parameter	Setting
Detector	Peak/AV
Start/Stop Frequency	Lower Band Edge: 2310 to 2410 MHz Upper Band Edge: 2475 to 2500 MHz
RB / VB	1 MHz / 3 MHz(Peak) 1 MHz/1/T MHz(AVG)



Receiver Parameter	Setting
Start ~ Stop Frequency	9kHz~90kHz / RB 200Hz for PK & AV
Start ~ Stop Frequency	90kHz~110kHz / RB 200Hz for QP
Start ~ Stop Frequency	110kHz~490kHz / RB 200Hz for PK & AV
Start ~ Stop Frequency	490kHz~30MHz / RB 9kHz for QP
Start ~ Stop Frequency	30MHz~1000MHz / RB 120kHz for QP

4.2 TEST PROCEDURE

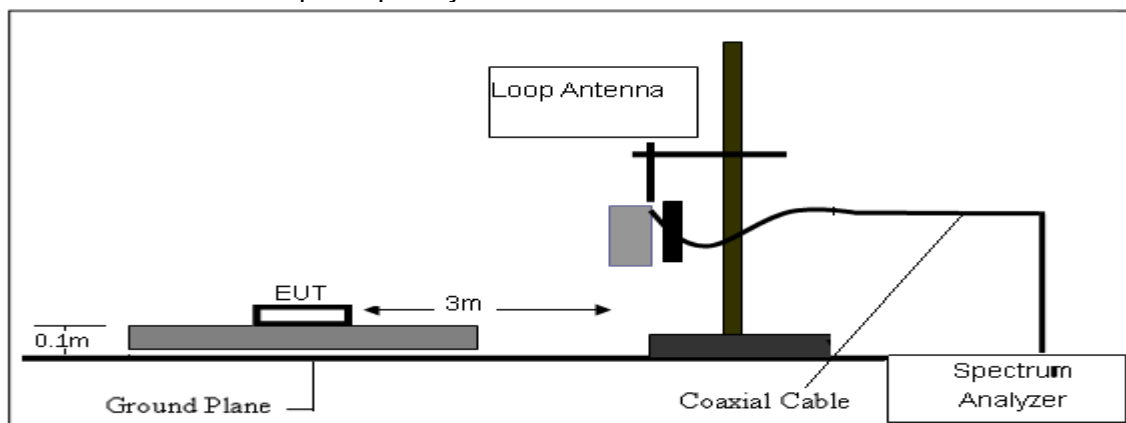
- The measuring distance of at 3 m shall be used for measurements at frequency 0.009MHz up to 1GHz, and above 1GHz.
- The EUT was placed on the top of a rotating table 0.1 meters(above 1GHz is 0.1 m) above the ground at a 3 meter anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- The height of the equipment shall be 0.1 m(above 1GHz is 0.1 m); the height of the test antenna shall vary between 1 m to 4 m. Horizontal and vertical polarizations of the antenna are set to make the measurement.
- The initial step in collecting conducted emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured.
- If the Peak Mode measured value compliance with and lower than Quasi Peak Mode Limit, the EUT shall be deemed to meet QP Limits and then no additional QP Mode measurement performed.
- For the actual test configuration, please refer to the related Item –EUT Test Photos.

Note:

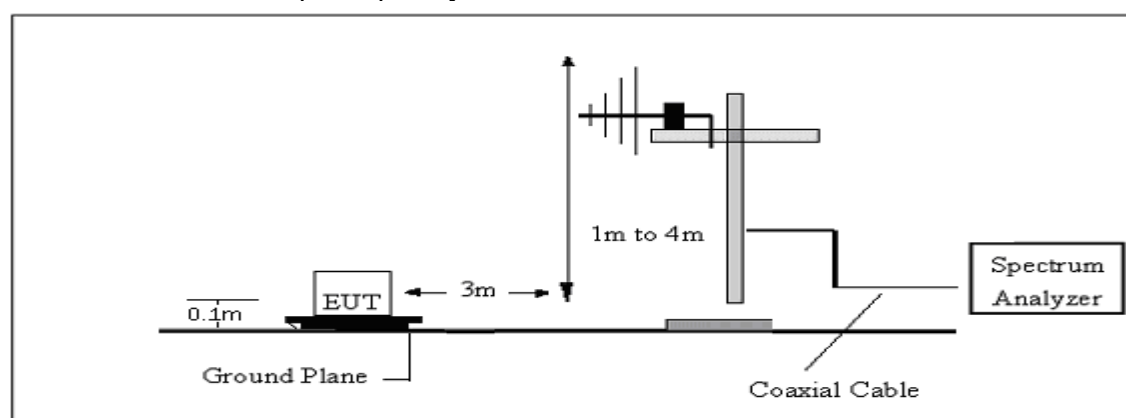
Both horizontal and vertical antenna polarities were tested and performed pretest to three orthogonal axis. The worst case emissions were reported.

4.3 TEST SETUP

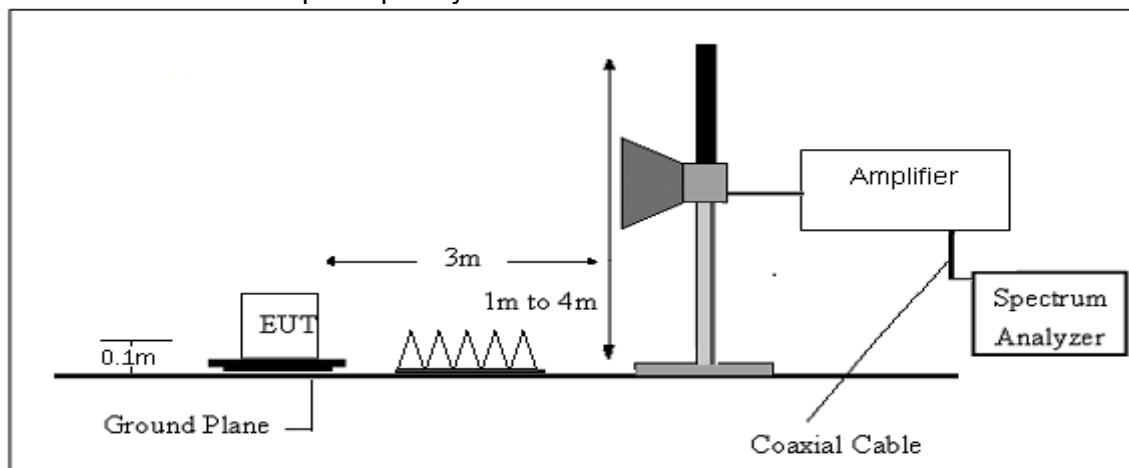
(A) Radiated Emission Test-Up Frequency Below 30MHz



(B) Radiated Emission Test-Up Frequency 30MHz~1GHz



(C) Radiated Emission Test-Up Frequency Above 1GHz



4.4 EUT OPERATING CONDITIONS

The EUT tested system was configured as the statements of 2.3 Unless otherwise a special operating condition is specified in the follows during the testing.



4.5 FIELD STRENGTH CALCULATION

The field strength is calculated by adding the Antenna Factor and Cable Factor and subtracting the Amplifier Gain and Duty Cycle Correction Factor (if any) from the measured reading. The basic equation with a sample calculation is as follows:

$$FS = RA + AF + CL - AG$$

Where

FS = Field Strength

CL = Cable Attenuation Factor (Cable Loss)

RA = Reading Amplitude

AG = Amplifier Gain

AF = Antenna Factor

For example

Frequency	FS	RA	AF	CL	AG	Factor
(MHz)	(dB μ V/m)	(dB μ V/m)	(dB)	(dB)	(dB)	(dB)
300	40	58.1	12.2	1.6	31.9	-18.1

$$\text{Factor} = \text{AF} + \text{CL} - \text{AG}$$



4.6 TEST RESULTS

(Between 9KHz – 30 MHz)

Temperature:	23.5(C)	Relative Humidity:	58%RH
Test Voltage:	AC 120V/60Hz	Polarization:	--
Test Mode:	TX Mode		

Freq.	Reading	Limit	Margin	State
(MHz)	(dBuV/m)	(dBuV/m)	(dB)	P/F
--	--	--	--	PASS
--	--	--	--	PASS

Note:

The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.

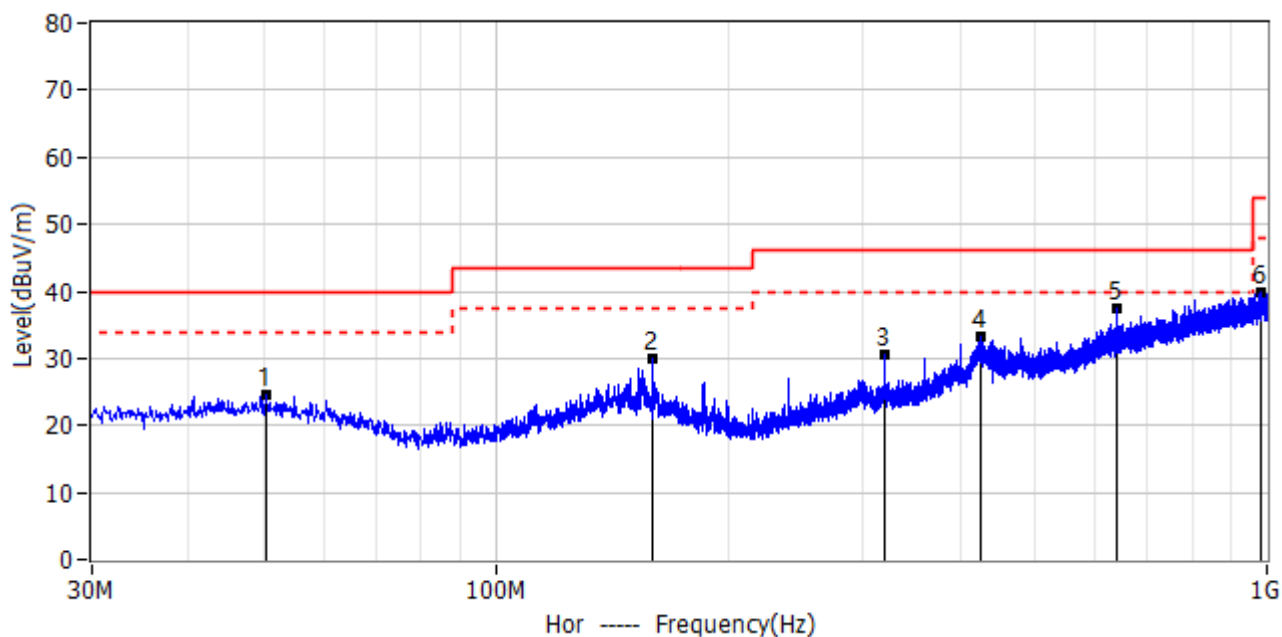
Distance extrapolation factor = $40 \log (\text{specific distance/test distance})(\text{dB})$;

Limit line = specific limits(dBuv) + distance extrapolation factor.



(30MHz -1000MHz)

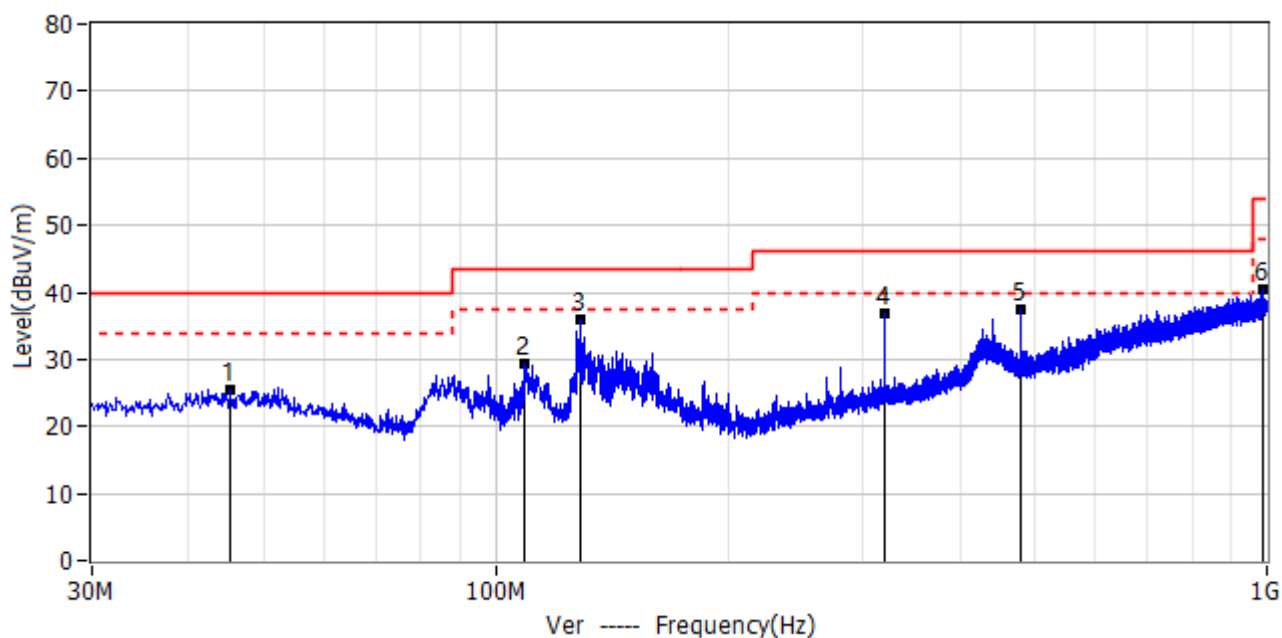
Project: LGT25G316	Test Engineer: LiuH
EUT: Digital charcoal Griddle+Grill+Smoker	Temperature: 24.1°C
M/N: MB20040226	Humidity: 52%RH
Test Voltage: AC 120V/60HZ	Test Data: 2025-08-15
Test Mode: TX BLE 2402	
Note:	



No.	Frequency MHz	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
1*	50.370	3.93	20.76	24.69	40.00	-15.31	QP	Hor
2*	159.859	7.95	22.08	30.03	43.50	-13.47	QP	Hor
3*	320.030	7.54	23.02	30.56	46.00	-15.44	QP	Hor
4*	424.548	7.27	25.85	33.12	46.00	-12.88	QP	Hor
5*	640.009	7.00	30.34	37.34	46.00	-8.66	QP	Hor
6*	984.723	4.42	35.49	39.91	54.00	-14.09	QP	Hor



Project: LGT25G316	Test Engineer: LiuH
EUT: Digital charcoal Griddle+Grill+Smoker	Temperature: 24.1°C
M/N: MB20040226	Humidity: 52%RH
Test Voltage: AC 120V/60HZ	Test Data: 2025-08-15
Test Mode: TX BLE 2402	
Note:	

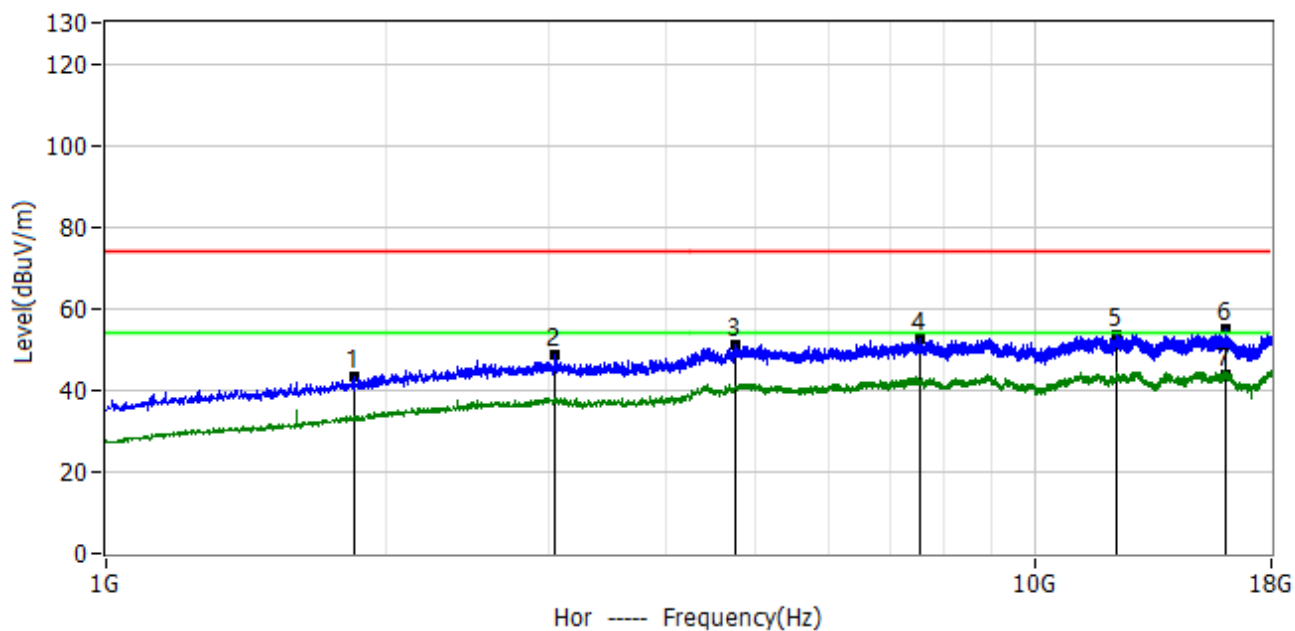


No.	Frequency MHz	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
1*	45.278	4.68	20.70	25.38	40.00	-14.62	QP	Ver
2*	109.298	11.17	18.11	29.28	43.50	-14.22	QP	Ver
3*	128.940	15.44	20.45	35.89	43.50	-7.61	QP	Ver
4*	320.030	13.88	23.02	36.90	46.00	-9.10	QP	Ver
5*	479.959	10.06	27.32	37.38	46.00	-8.62	QP	Ver
6*	990.785	5.39	35.03	40.42	54.00	-13.58	QP	Ver



(1GHz~25GHz) Spurious emission Requirements

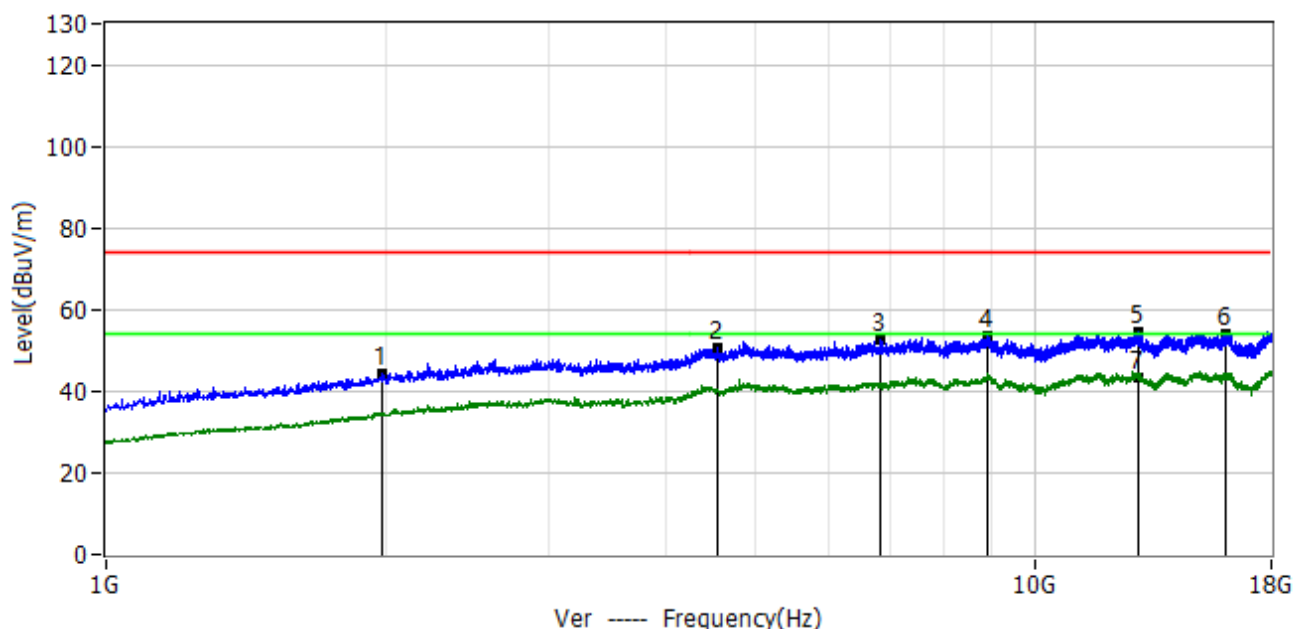
Project: LGT25G316	Test Engineer: LiuH
EUT: Digital charcoal Griddle+Grill+Smoker	Temperature: 25.6°C
M/N: MB20040226	Humidity: 52%RH
Test Voltage: AC 120V/60Hz	Test Data: 2025-08-20
Test Mode: BLE 2402	
Note:	



No.	Frequency MHz	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
1*	1847.9000	59.77	-16.62	43.15	74.00	-30.85	PK	Hor
2*	3044.2000	56.70	-8.14	48.56	74.00	-25.44	PK	Hor
3*	4759.1000	57.12	-5.81	51.31	74.00	-22.69	PK	Hor
4*	7528.0000	59.58	-7.05	52.53	74.00	-21.47	PK	Hor
5*	12271.0000	58.30	-4.92	53.38	74.00	-20.62	PK	Hor
6*	16081.1000	58.98	-3.85	55.13	74.00	-18.87	PK	Hor
7*	16081.1000	47.45	-3.85	43.60	54.00	-10.40	AV	Hor



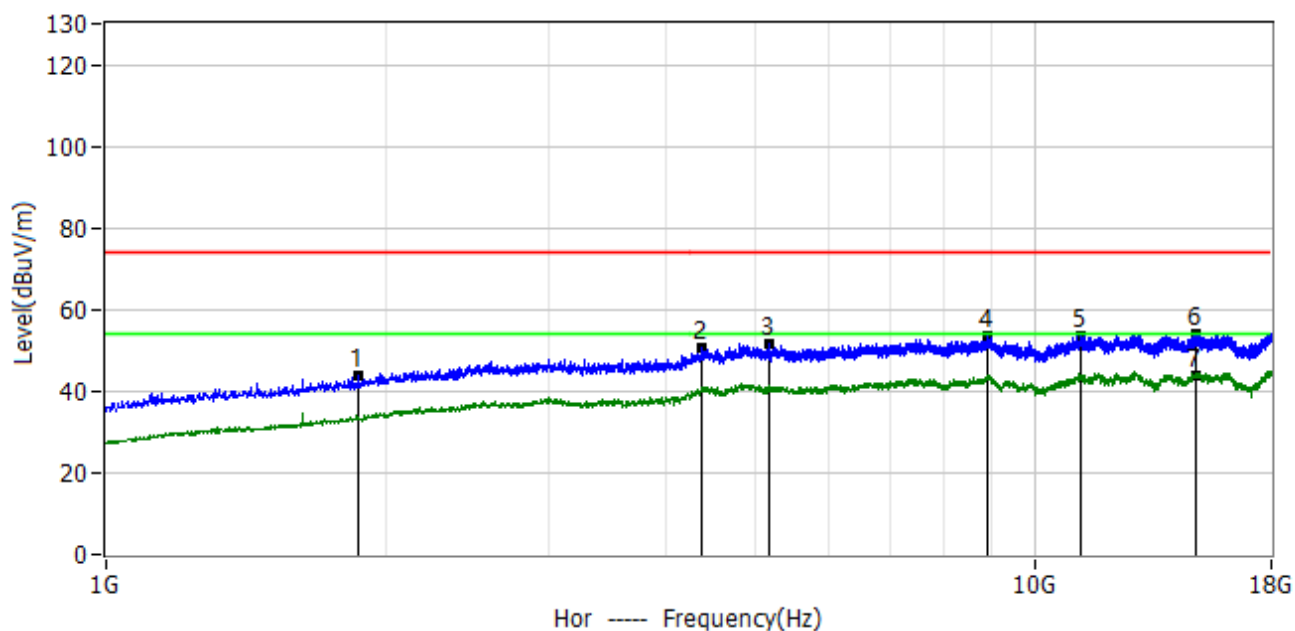
Project: LGT25G316	Test Engineer: LiuH
EUT: Digital charcoal Griddle+Grill+Smoker	Temperature: 25.6°C
M/N: MB20040226	Humidity: 52%RH
Test Voltage: AC 120V/60Hz	Test Data: 2025-08-20
Test Mode: BLE 2402	
Note:	



No.	Frequency MHz	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
1*	1983.9000	59.32	-14.97	44.35	74.00	-29.65	PK	Ver
2*	4550.9000	56.18	-5.64	50.54	74.00	-23.46	PK	Ver
3*	6828.9000	59.83	-7.23	52.60	74.00	-21.40	PK	Ver
4*	8913.5000	60.49	-7.08	53.41	74.00	-20.59	PK	Ver
5*	12944.6000	59.25	-4.88	54.37	74.00	-19.63	PK	Ver
6*	16057.7000	57.72	-3.75	53.97	74.00	-20.03	PK	Ver
7*	12944.6000	48.38	-4.88	43.50	54.00	-10.50	AV	Ver



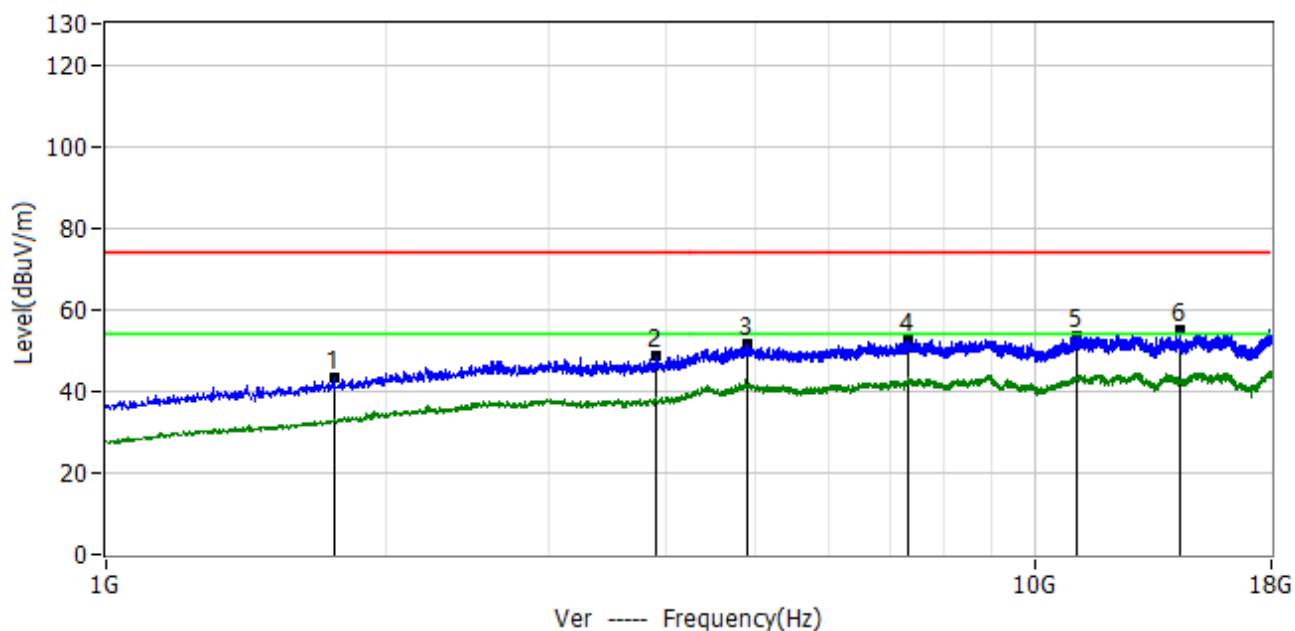
Project: LGT25G316	Test Engineer: LiuH
EUT: Digital charcoal Griddle+Grill+Smoker	Temperature: 25.6°C
M/N: MB20040226	Humidity: 52%RH
Test Voltage: AC 120V/60Hz	Test Data: 2025-08-20
Test Mode: BLE 2440	
Note:	



No.	Frequency MHz	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
1*	1869.1000	59.96	-16.36	43.60	74.00	-30.40	PK	Hor
2*	4385.1000	56.51	-6.08	50.43	74.00	-23.57	PK	Hor
3*	5188.4000	58.43	-6.72	51.71	74.00	-22.29	PK	Hor
4*	8907.1000	60.47	-7.09	53.38	74.00	-20.62	PK	Hor
5*	11202.1000	58.73	-5.07	53.66	74.00	-20.34	PK	Hor
6*	14952.7000	58.23	-4.03	54.20	74.00	-19.80	PK	Hor
7*	14952.7000	48.03	-4.03	44.00	54.00	-10.00	AV	Hor



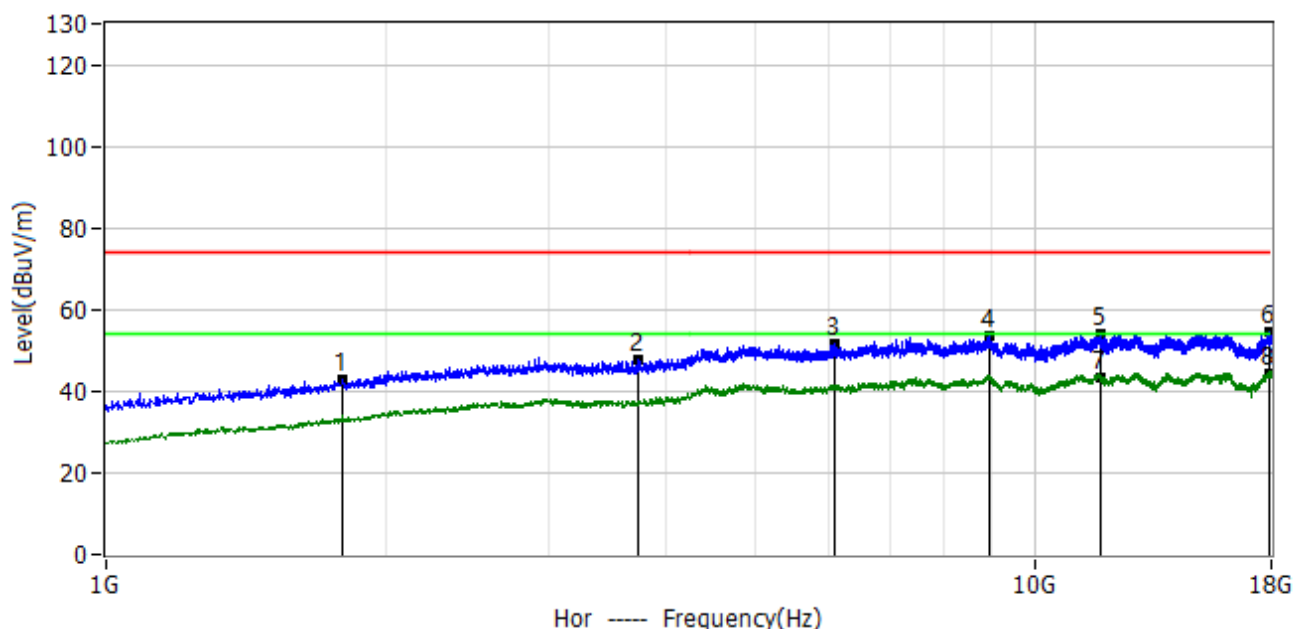
Project: LGT25G316	Test Engineer: LiuH
EUT: Digital charcoal Griddle+Grill+Smoker	Temperature: 25.6°C
M/N: MB20040226	Humidity: 52%RH
Test Voltage: AC 120V/60Hz	Test Data: 2025-08-20
Test Mode: BLE 2440	
Note:	



No.	Frequency MHz	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
1*	1762.9000	61.06	-17.63	43.43	74.00	-30.57	PK	Ver
2*	3911.2000	56.34	-7.80	48.54	74.00	-25.46	PK	Ver
3*	4905.7000	57.33	-5.93	51.40	74.00	-22.60	PK	Ver
4*	7319.7000	59.73	-7.03	52.70	74.00	-21.30	PK	Ver
5*	11098.0000	58.47	-5.08	53.39	74.00	-20.61	PK	Ver
6*	14385.4000	60.76	-5.78	54.98	74.00	-19.02	PK	Ver



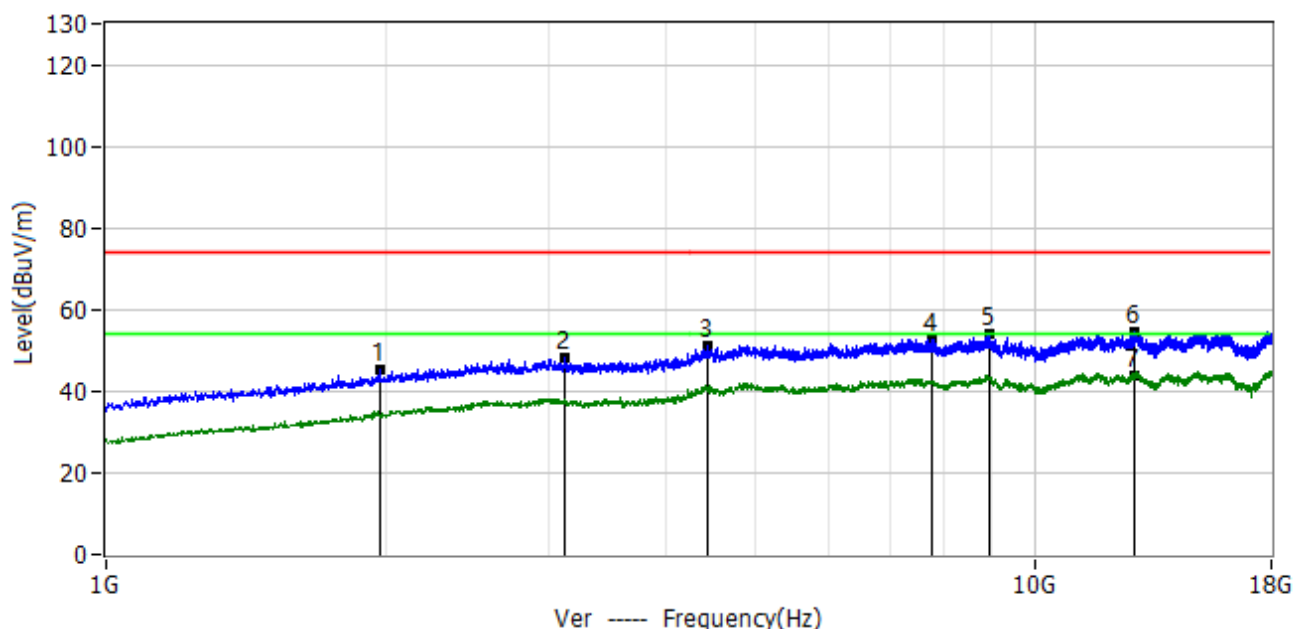
Project: LGT25G316	Test Engineer: LiuH
EUT: Digital charcoal Griddle+Grill+Smoker	Temperature: 25.6°C
M/N: MB20040226	Humidity: 52%RH
Test Voltage: AC 120V/60Hz	Test Data: 2025-08-20
Test Mode: BLE 2480	
Note:	



No.	Frequency MHz	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
1*	1801.1000	60.04	-17.19	42.85	74.00	-31.15	PK	Hor
2*	3747.6000	55.75	-8.00	47.75	74.00	-26.25	PK	Hor
3*	6106.4000	59.57	-7.88	51.69	74.00	-22.31	PK	Hor
4*	8947.5000	60.39	-7.05	53.34	74.00	-20.66	PK	Hor
5*	11786.5000	59.03	-4.97	54.06	74.00	-19.94	PK	Hor
6*	17917.1000	57.74	-3.09	54.65	74.00	-19.35	PK	Hor
7*	11786.5000	48.07	-4.97	43.10	54.00	-10.90	AV	Hor
8*	17917.1000	47.19	-3.09	44.10	54.00	-9.90	AV	Hor



Project: LGT25G316	Test Engineer: LiuH
EUT: Digital charcoal Griddle+Grill+Smoker	Temperature: 25.6°C
M/N: MB20040226	Humidity: 52%RH
Test Voltage: AC 120V/60Hz	Test Data: 2025-08-20
Test Mode: BLE 2480	
Note:	



Note:

1) Factor = Antenna Factor + Cable Loss – Pre-amplifier.

Emission Level = Reading + Factor

2) The frequency emission of peak points that did not show above the forms are at least 20dB below the limit, the frequency emission is mainly from the environment noise.

*****END OF THE REPORT*****