



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: LGT25G316RF04

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:

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Engineer

Approved by:

Vita Li

Vita Li
Technical Director





Table of Contents	Page
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 FREQUENCY HOPPING SYSTEM REQUIREMENTS	11
2.4 TABLE OF PARAMETERS OF TEST SOFTWARE SETTING	12
2.5 BLOCK DIGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED	12
2.6 DESCRIPTION OF NECESSARY ACCESSORIES AND SUPPORT UNITS	13
2.7 EQUIPMENTS LIST	14
3. EMC EMISSION TEST	16
3.1 CONDUCTED EMISSION MEASUREMENT	16
3.2 RADIATED EMISSION MEASUREMENT	20



Revision History

Rev.	Issue Date	Report Number	Revisions
00	Aug. 11, 2023	LGT23G117RF04	Initial Issue
01	Oct. 09, 2023	LGT23H086RF04	Add additional model MB20041023 with adapter XY24SE-120150VQ-UT, this does not affect RF parameters, no testing is required.
02	12 Aug. 2024	LGT24H004RF04	Add additional model MB20041525 and factory information. According to the model difference, no tests need to be performed.
03	Sep. 05, 2025	LGT25G316RF04	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	--
15.209	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	$\pm 5.6\text{dB}$
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
Channel List:	Please refer to the Note 2.
Bluetooth:	Frequency:2402 – 2480 MHz Modulation: GFSK(1Mbps), $\pi/4$ -DQPSK(2Mbps), 8DPSK(3Mbps)
Bluetooth Version:	4.2
Bluetooth Configuration:	BR+EDR
Antenna Type:	Please refer to the Note 3.
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 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	The GSG1050 is only slightly larger than the GSG800's barbecue area (furnace cavity) size, others are identical.		
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)
00	2402	27	2429	54	2456
01	2403	28	2430	55	2457
02	2404	29	2431	56	2458
03	2405	30	2432	57	2459
04	2406	31	2433	58	2460
05	2407	32	2434	59	2461
06	2408	33	2435	60	2462
07	2409	34	2436	61	2463
08	2410	35	2437	62	2464
09	2411	36	2438	63	2465
10	2412	37	2439	64	2466
11	2413	38	2440	65	2467
12	2414	39	2441	66	2468
13	2415	40	2442	67	2469
14	2416	41	2443	68	2470
15	2417	42	2444	69	2471
16	2418	43	2445	70	2472
17	2419	44	2446	71	2473
18	2420	45	2447	72	2474
19	2421	46	2448	73	2475
20	2422	47	2449	74	2476
21	2423	48	2450	75	2477
22	2424	49	2451	76	2478
23	2425	50	2452	77	2479
24	2426	51	2453	78	2480
25	2427	52	2454		
26	2428	53	2455		

3. Table for Filed Antenna

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



2.2 DESCRIPTION OF THE TEST MODES

To investigate the maximum EMI emission characteristics generated from EUT, the test system was pre-scanning tested based on the consideration of following EUT operation mode or test configuration mode which possibly have effect on EMI emission level. Each of these EUT operation mode(s) or test configuration mode(s) mentioned above was evaluated respectively.

Worst Mode	Description	Data Rate/Modulation
Mode 1	TX CH00	1Mbps/GFSK
Mode 2	TX CH39	1Mbps/GFSK
Mode 3	TX CH78	1Mbps/GFSK
Mode 4	TX CH00	2 Mbps/ $\pi/4$ -DQPSK
Mode 5	TX CH39	2 Mbps/ $\pi/4$ -DQPSK
Mode 6	TX CH78	2 Mbps/ $\pi/4$ -DQPSK
Mode 7	TX CH00	3 Mbps/8DPSK
Mode 8	TX CH39	3 Mbps/8DPSK
Mode 9	TX CH78	3 Mbps/8DPSK
Mode 10	Hopping	GFSK
Mode 11	Hopping	$\pi/4$ -DQPSK
Mode 12	Hopping	8DPSK

Note:

- (1) The measurements are performed at all Bit Rate of Transmitter, the worst data was reported.
- (2) We have been 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 13 : Keeping BT TX



2.3 FREQUENCY HOPPING SYSTEM REQUIREMENTS

Standard and Limit

According to FCC Part 15.247(a)(1), The system shall hop to channel frequencies that are selected at the system hopping rate from a pseudo randomly ordered list of hopping frequencies. Each frequency must be used equally on the average by each transmitter. The system receivers shall have input bandwidths that match the hopping channel bandwidths of their corresponding transmitters and shall shift frequencies in synchronization with the transmitted signals.

Frequency hopping spread spectrum systems are not required to employ all available hopping channels during each transmission. However, the system, consisting of both the transmitter and the receiver, must be designed to comply with all of the regulations in this section should the transmitter be presented with a continuous data (or information) stream. In addition, a system employing short transmission bursts must comply with the definition of a frequency hopping system and must distribute its transmissions over the minimum number of hopping channels specified in this section.

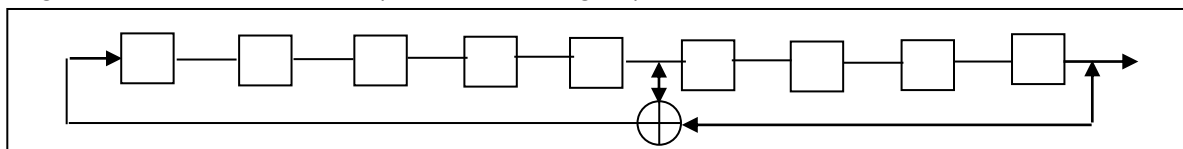
The incorporation of intelligence within a frequency hopping spread spectrum system that permits the system to recognize other users within the spectrum band so that it individually and independently chooses and adapts its hop sets to avoid hopping on occupied channels is permitted. The coordination of frequency hopping systems in any other manner for the express purpose of avoiding the simultaneous occupancy of individual hopping frequencies by multiple transmitters is not permitted.

(2) The Pseudorandom sequence may be generated in a nine-stage shift register whose 5th and 9th stage outputs are added in a modulo-two addition stage. And the result is fed back to the input of the first stage. The sequence begins with the first one of 9 consecutive ones: i.e. the shift register is initialized with nine ones.

Number of shift register stages: 9

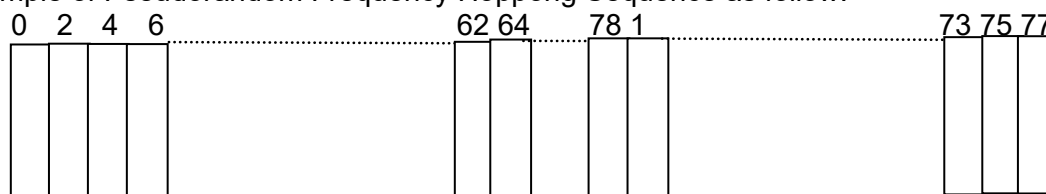
Length of pseudo-random sequence: $2^9 - 1 = 511$ bits

Longest sequence of zeros: 8 (non-inverted signal)



Linear Feedback Shift Register for Generator of the PRBS sequence

An example of Pseudorandom Frequency Hopping Sequence as follow:



Each frequency used equally on the average by each transmitter.

The system receivers have input bandwidths that match the hopping channel bandwidths of their corresponding transmitters and shift frequencies in synchronization with the transmitted signals.

(3) Frequency Hopping System

This transmitter device is frequency hopping device, and complies with FCC part 15.247 rule.

This device uses Bluetooth radio which operates in 2400-2483.5 MHz band. Bluetooth uses a radio technology called frequency-hopping spread spectrum, which chops up the data being sent and transmits chunks of it on up to 79 bands (1 MHz each; centred from 2402 to 2480 MHz) in the range 2,400-2,483.5MHz. The transmitter switches hop frequencies 1,600 times per second to assure a high degree of data security. All Bluetooth devices participating in a given piconet are synchronized to the frequency-hopping channel for the piconet. The frequency hopping sequence is determined by the master's device address and the phase of the hopping sequence (the frequency to hop at a specific time) is determined by the master's internal clock. Therefore, all slaves in a piconet must know the master's device address and must synchronize their clocks with the master's clock.



Adaptive Frequency Hopping (AFH) was introduced in the Bluetooth specification to provide an effective way for a Bluetooth radio to counteract normal interference. AFH identifies "bad" channels, where either other wireless devices are interfering with the Bluetooth signal or the Bluetooth signal is interfering with another device. The AFH-enabled Bluetooth device will then communicate with other devices within its piconet to share details of any identified bad channels. The devices will then switch to alternative available "good" channels, away from the areas of interference, thus having no impact on the bandwidth used.

This device was tested with a bluetooth system receiver to check that the device maintained hopping synchronization, and the device complied with these requirements FCC Part 15.247 rule.

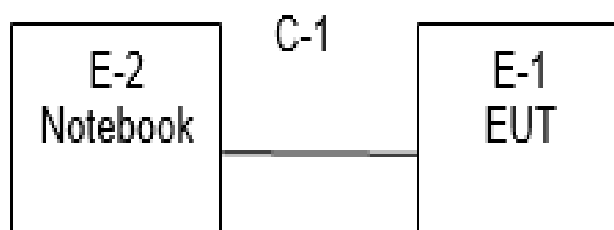
2.4 TABLE OF PARAMETERS OF TEST SOFTWARE SETTING

During testing channel & power controlling software provided by the customer was used to control the operating channel as well as the output power level. The RF output power selection is for the setting of RF output power expected by the customer and is going to be fixed on the firmware of the final end product power parameters of FHSS.

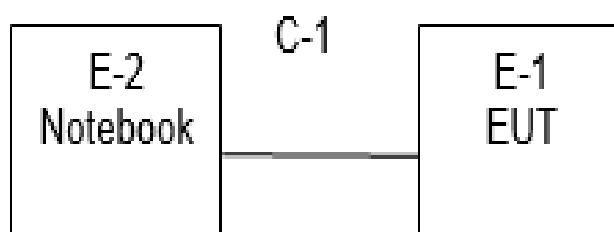
RF Function	Type	Mode Or Modulation type	Ant Gain(dBi)	Power Class	Software For Testing
BT	BR+EDR	GFSK	0	6	espRFTool_2.0.exe
		$\pi/4$ -DQPSK	0	6	
		8DPSK	0	6	

2.5 BLOCK DIGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED

Radiated Spurious Emission Test



Conducted Emission Test





2.6 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 Citiland 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.



2.7 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

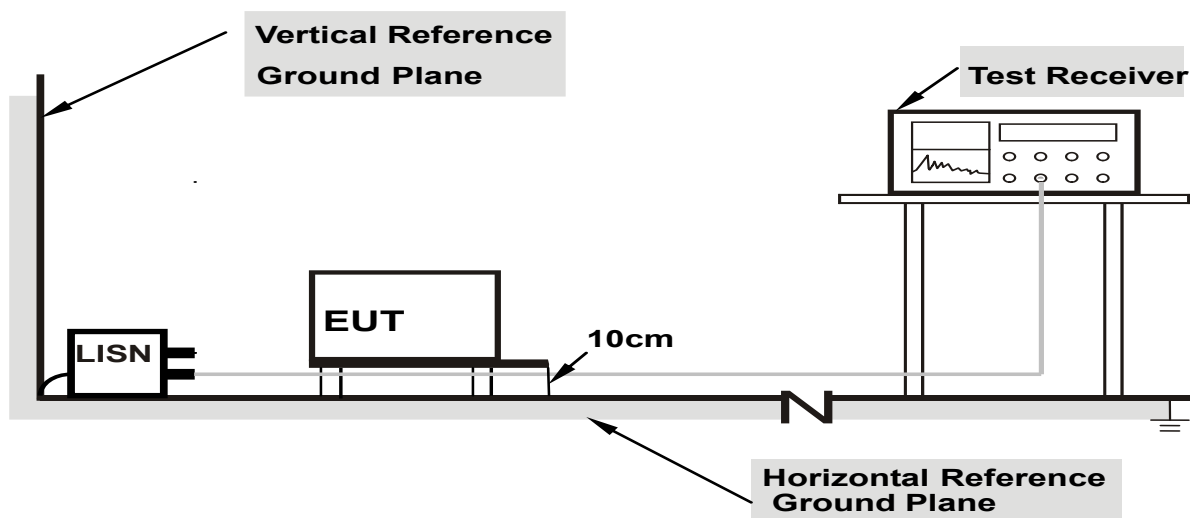
Receiver Parameters	Setting
Attenuation	10 dB
Start Frequency	0.15 MHz
Stop Frequency	30 MHz
IF Bandwidth	9 kHz



3.1.2 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.

3.1.3 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

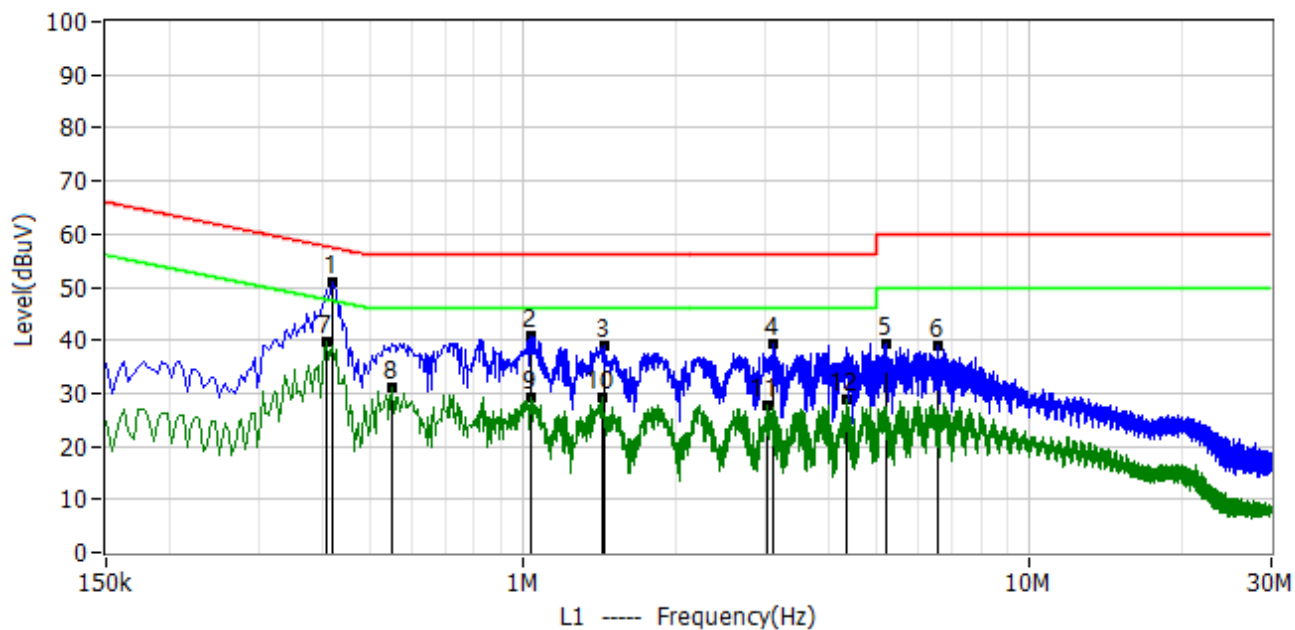
3.1.4 EUT OPERATING CONDITIONS

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.



3.1.5 TEST RESULT

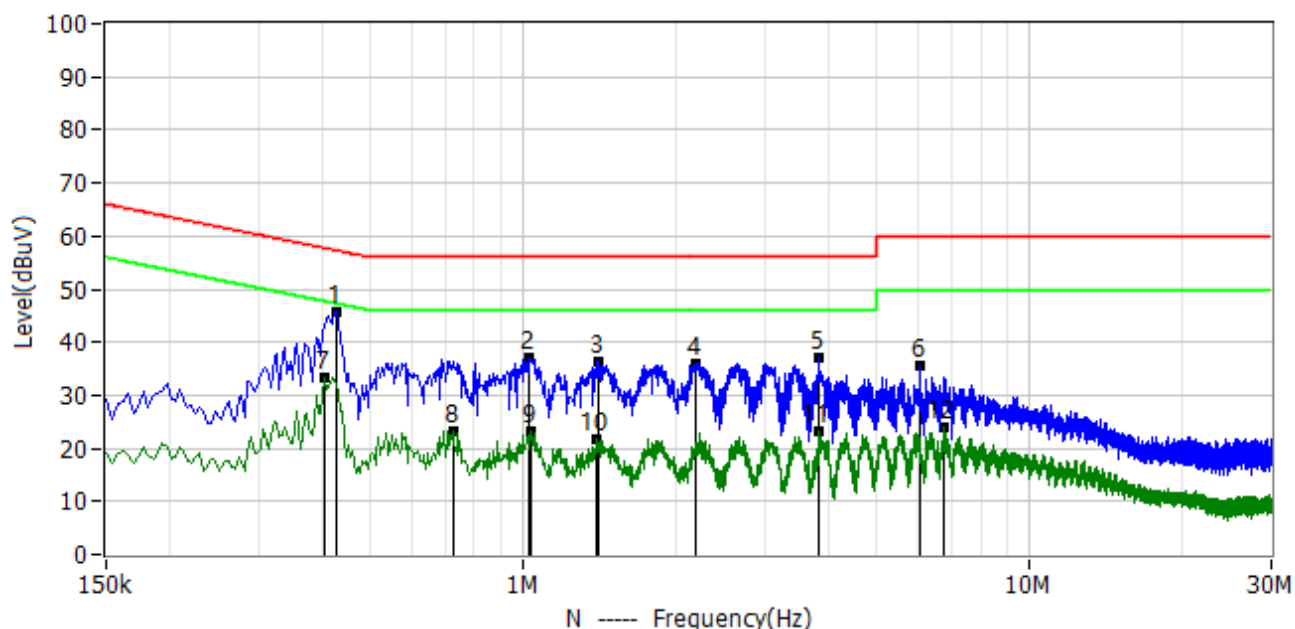
Project: LGT25G316	Test Engineer: LiuH
EUT: Digital charcoal Griddle+Grill+Smoker	Temperature: 25.2°C
M/N: MB20040226	Humidity: 45%RH
Test Voltage: AC 120V/60Hz	Test Data: 2025-08-13
Test Mode: TX DH5 2402	
Note:	



No.	Frequency MHz	Reading dBuV	Factor dB	Level dBuV	Limit dBuV	Margin dB	Detector	Polar
1*	0.418	40.14	10.87	51.01	57.49	-6.48	QP	L1
2*	1.038	30.06	10.86	40.92	56.00	-15.08	QP	L1
3*	1.450	27.67	11.13	38.80	56.00	-17.20	QP	L1
4*	3.126	27.89	11.32	39.21	56.00	-16.79	QP	L1
5*	5.210	27.92	11.35	39.27	60.00	-20.73	QP	L1
6*	6.598	27.56	11.39	38.95	60.00	-21.05	QP	L1
7*	0.410	28.94	10.86	39.80	47.65	-7.85	AV	L1
8*	0.550	20.05	10.94	30.99	46.00	-15.01	AV	L1
9*	1.038	18.22	10.86	29.08	46.00	-16.92	AV	L1
10*	1.434	17.95	11.12	29.07	46.00	-16.93	AV	L1
11*	3.038	16.28	11.33	27.61	46.00	-18.39	AV	L1
12*	4.342	17.55	11.26	28.81	46.00	-17.19	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 DH5 2402	
Note:	



No.	Frequency MHz	Reading dBuV	Factor dB	Level dBuV	Limit dBuV	Margin dB	Detector	Polar
1*	0.426	34.87	10.82	45.69	57.33	-11.64	QP	N
2*	1.030	26.05	10.85	36.90	56.00	-19.10	QP	N
3*	1.402	25.38	11.04	36.42	56.00	-19.58	QP	N
4*	2.198	24.91	11.16	36.07	56.00	-19.93	QP	N
5*	3.826	25.80	11.27	37.07	56.00	-18.93	QP	N
6*	6.082	24.14	11.36	35.50	60.00	-24.50	QP	N
7*	0.406	22.45	10.82	33.27	47.73	-14.46	AV	N
8*	0.726	12.53	10.85	23.38	46.00	-22.62	AV	N
9*	1.038	12.27	10.86	23.13	46.00	-22.87	AV	N
10*	1.394	10.86	11.04	21.90	46.00	-24.10	AV	N
11*	3.826	12.00	11.27	23.27	46.00	-22.73	AV	N
12*	6.770	12.76	11.39	24.15	50.00	-25.85	AV	N



3.2 RADIATED EMISSION MEASUREMENT

3.2.1 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) &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 (0.009MHz - 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 (1GHz-25 GHz)

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: 2476 to 2500 MHz
RB / VB	1 MHz / 3 MHz(Peak) 1 MHz/1/T MHz(AVG)



Receiver Parameter	Setting
Attenuation	Auto
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

3.2.2 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 test site. 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 QuasiPeak 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:

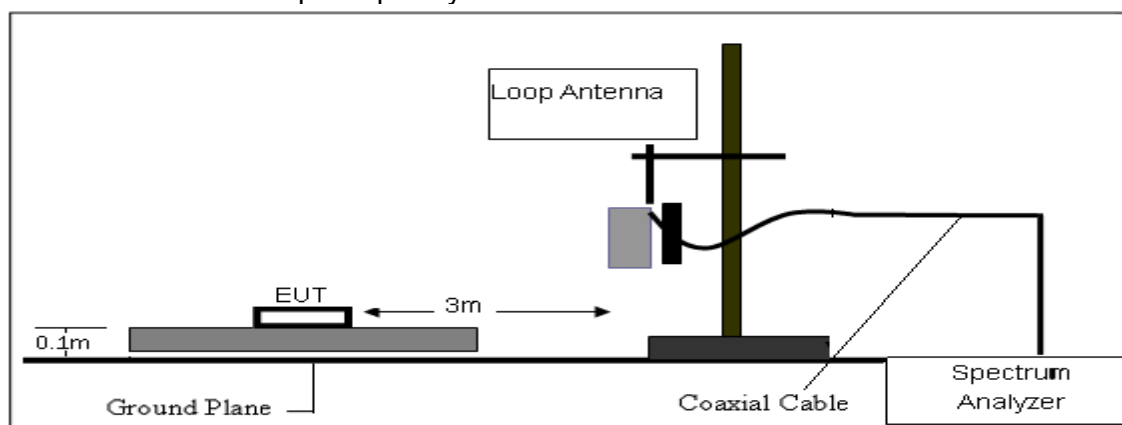
Both horizontal and vertical antenna polarities were tested and performed pretest to three orthogonal axis. The worst case emissions were reported.

3.2.3 DEVIATION FROM TEST STANDARD

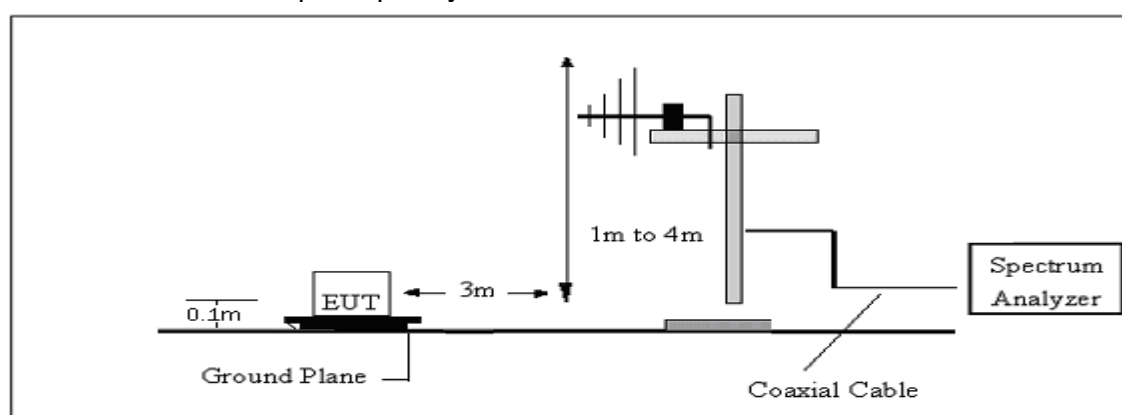
No deviation.

3.2.4 TESTSETUP

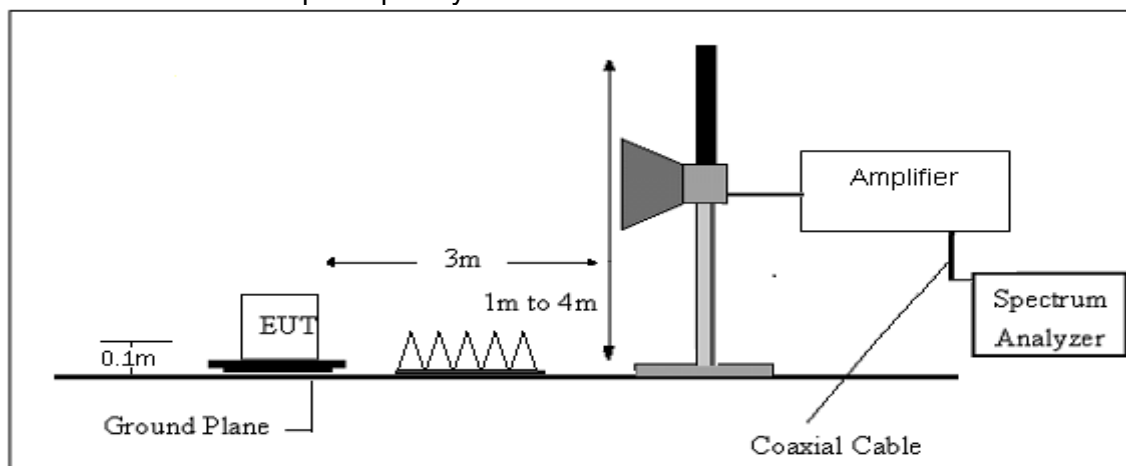
(A) Radiated Emission Test-Up Frequency Below 30MHz



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



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



3.2.5 EUT OPERATING CONDITIONS

The EUT tested system was configured as the statements of 2.4 Unless otherwise a special operating condition is specified in the follows during the testing.



3.2.6 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)	(dBμV/m)	(dBμV/m)	(dB)	(dB)	(dB)	(dB)
300	40	58.1	12.2	1.6	31.9	-18.1

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



3.2.7 TEST RESULTS

(9KHz-30MHz)

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

Freq.	Reading	Limit	Margin	State	Test Result
(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.

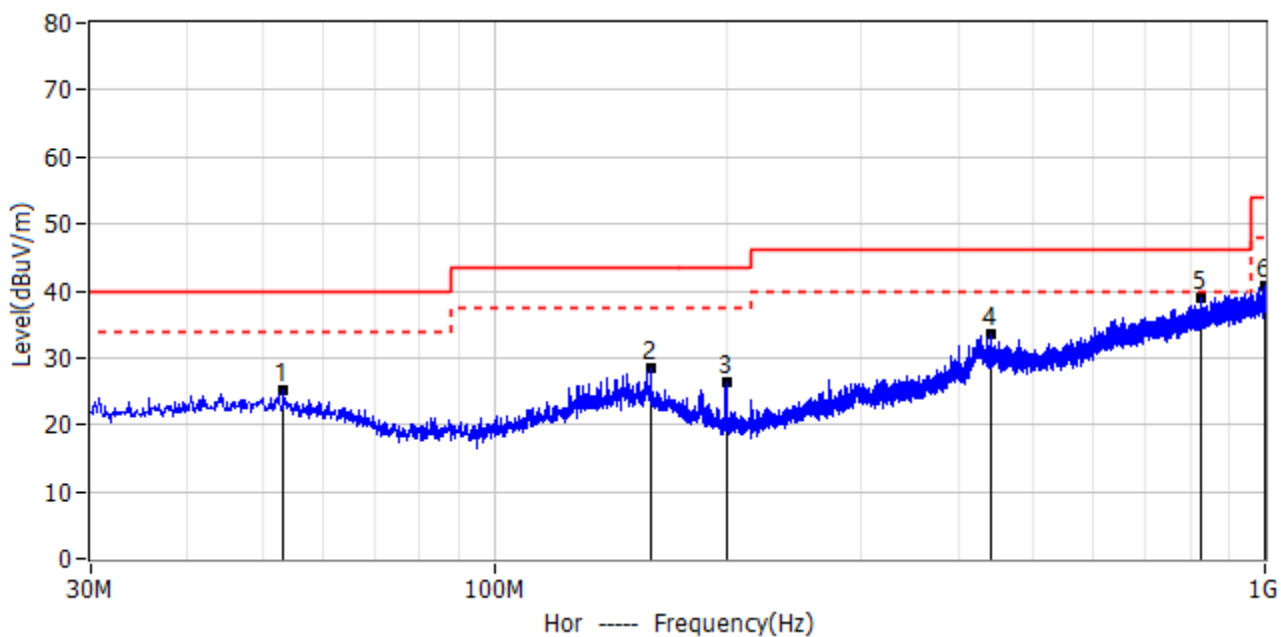
Distance extrapolation factor = $40 \log (\text{specific distance/test distance})(\text{dB})$;

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



(30MHz-1000MHz)

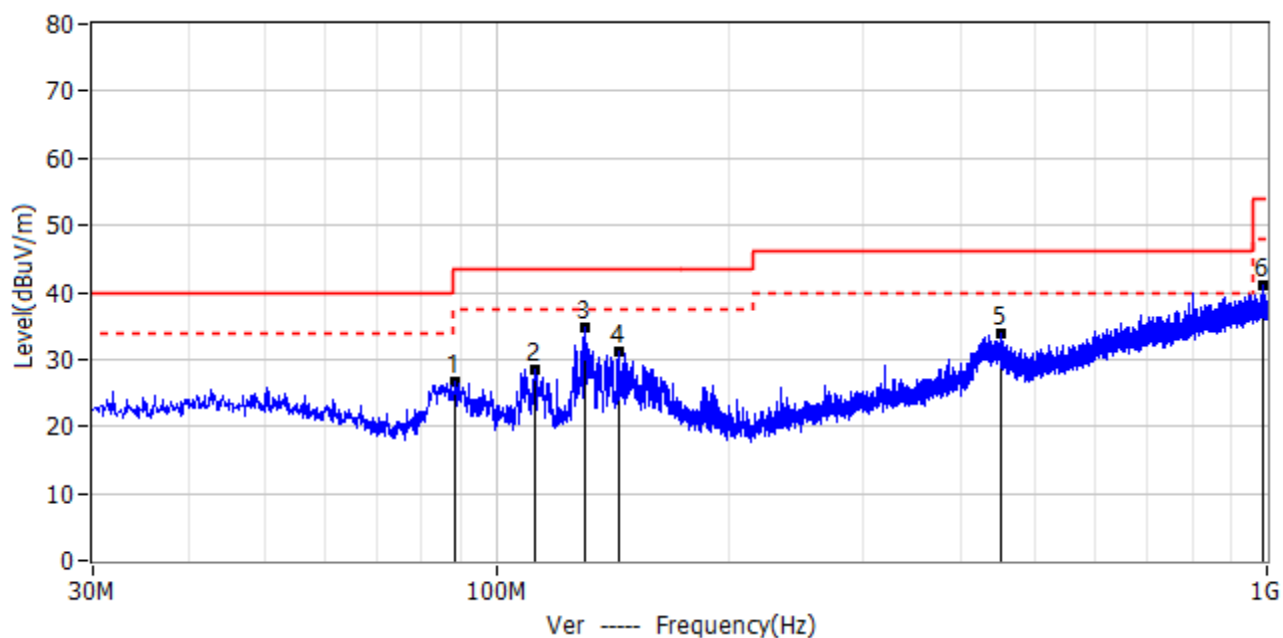
Project: LGT25G316	Test Engineer: LiuH
EUT: Digital charcoal Griddle+Grill+Smoker	Temperature: 24.1°C
M/N: MB20040226	Humidity: 52%RH
Test Voltage: AC 120V/60HZ	Test Data: 2025-08-15
Test Mode: TX DH5 2402	
Note:	



No.	Frequency MHz	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
1*	53.280	4.23	20.86	25.09	40.00	-14.91	QP	Hor
2*	159.859	6.30	22.08	28.38	43.50	-15.12	QP	Hor
3*	199.993	8.45	18.03	26.48	43.50	-17.02	QP	Hor
4*	440.068	7.07	26.43	33.50	46.00	-12.50	QP	Hor
5*	826.491	5.72	33.15	38.87	46.00	-7.13	QP	Hor
6*	997.211	5.49	35.14	40.63	54.00	-13.37	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 DH5 2402	
Note:	

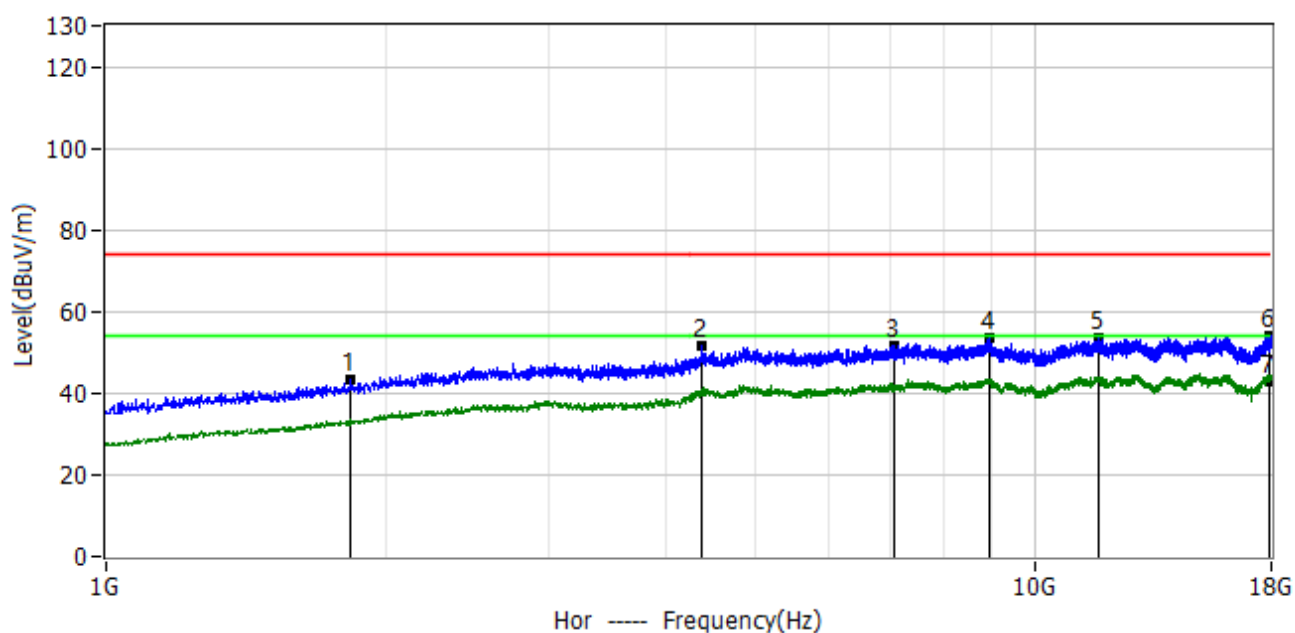


No.	Frequency MHz	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
1*	88.443	9.96	16.58	26.54	43.50	-16.96	QP	Ver
2*	112.208	9.84	18.76	28.60	43.50	-14.90	QP	Ver
3*	130.395	13.89	20.86	34.75	43.50	-8.75	QP	Ver
4*	144.460	9.43	21.61	31.04	43.50	-12.46	QP	Ver
5*	450.495	6.98	26.81	33.79	46.00	-12.21	QP	Ver
6*	985.935	5.59	35.42	41.01	54.00	-12.99	QP	Ver



(1GHz~25GHz) Spurious emission Requirements

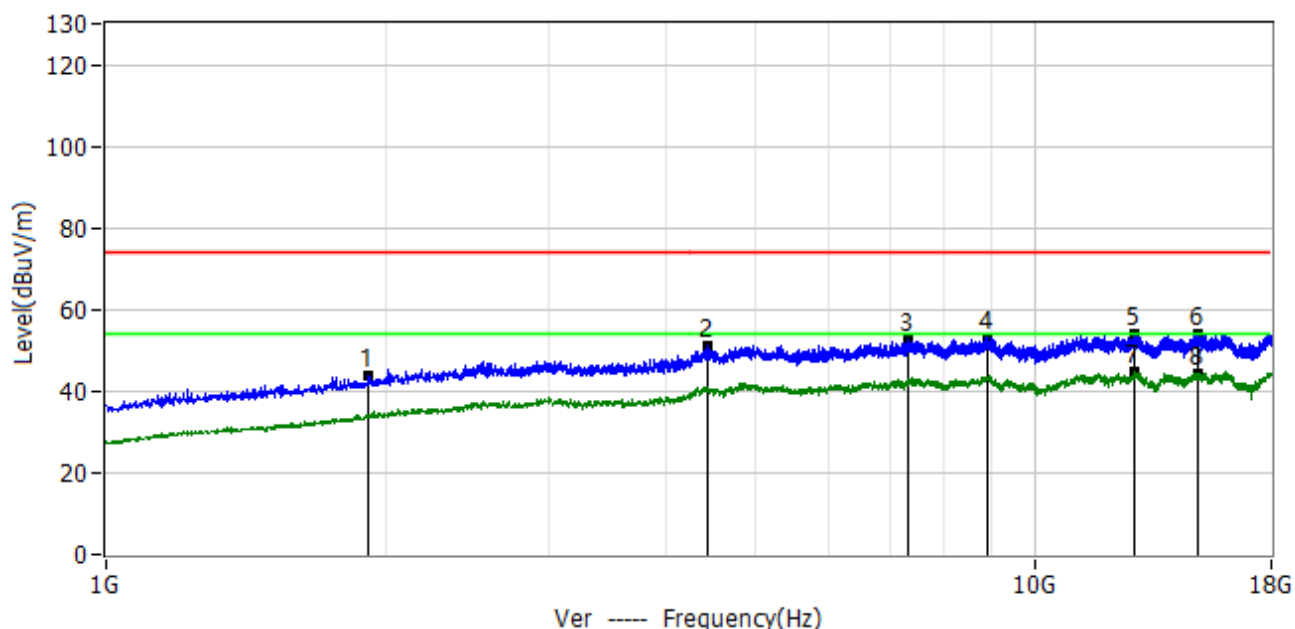
Project: LGT25G316	Test Engineer: LiuH
EUT: Digital charcoal Griddle+Grill+Smoker	Temperature: 25.6°C
M/N: MB20040226	Humidity: 52%RH
Test Voltage: AC 120V/60Hz	Test Data: 2025-08-20
Test Mode: 3DH5 2402	
Note:	



No.	Frequency MHz	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
1*	1833.0000	60.15	-16.80	43.35	74.00	-30.65	PK	Hor
2*	4389.4000	57.50	-6.06	51.44	74.00	-22.56	PK	Hor
3*	7047.7000	58.84	-7.09	51.75	74.00	-22.25	PK	Hor
4*	8936.9000	60.82	-7.06	53.76	74.00	-20.24	PK	Hor
5*	11722.7000	58.31	-4.98	53.33	74.00	-20.67	PK	Hor
6*	17889.5000	57.28	-3.16	54.12	74.00	-19.88	PK	Hor
7*	17889.5000	46.16	-3.16	43.00	54.00	-11.00	AV	Hor



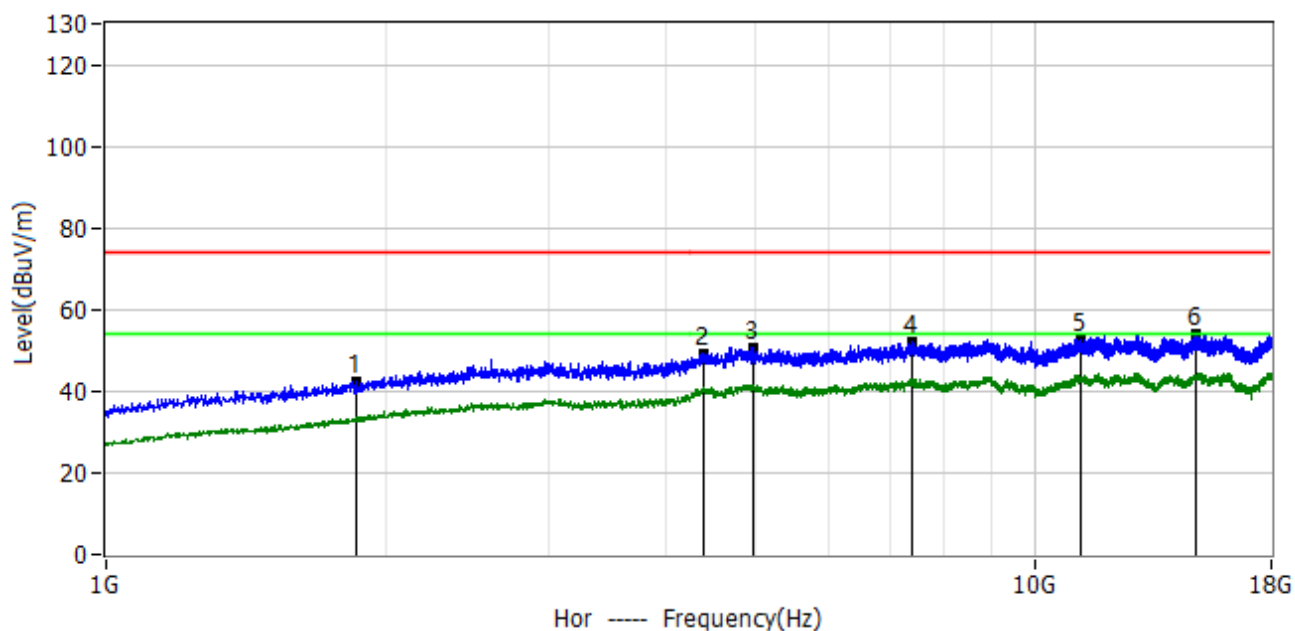
Project: LGT25G316	Test Engineer: LiuH
EUT: Digital charcoal Griddle+Grill+Smoker	Temperature: 25.6°C
M/N: MB20040226	Humidity: 52%RH
Test Voltage: AC 120V/60Hz	Test Data: 2025-08-20
Test Mode: 3DH5 2402	
Note:	



No.	Frequency MHz	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
1*	1920.1000	59.52	-15.74	43.78	74.00	-30.22	PK	Ver
2*	4436.1000	57.06	-5.87	51.19	74.00	-22.81	PK	Ver
3*	7300.6000	59.62	-7.03	52.59	74.00	-21.41	PK	Ver
4*	8922.0000	60.05	-7.08	52.97	74.00	-21.03	PK	Ver
5*	12842.6000	58.95	-4.89	54.06	74.00	-19.94	PK	Ver
6*	14986.7000	57.95	-3.86	54.09	74.00	-19.91	PK	Ver
7*	12842.6000	49.49	-4.89	44.60	54.00	-9.40	AV	Ver
8*	14986.7000	47.96	-3.86	44.10	54.00	-9.90	AV	Ver



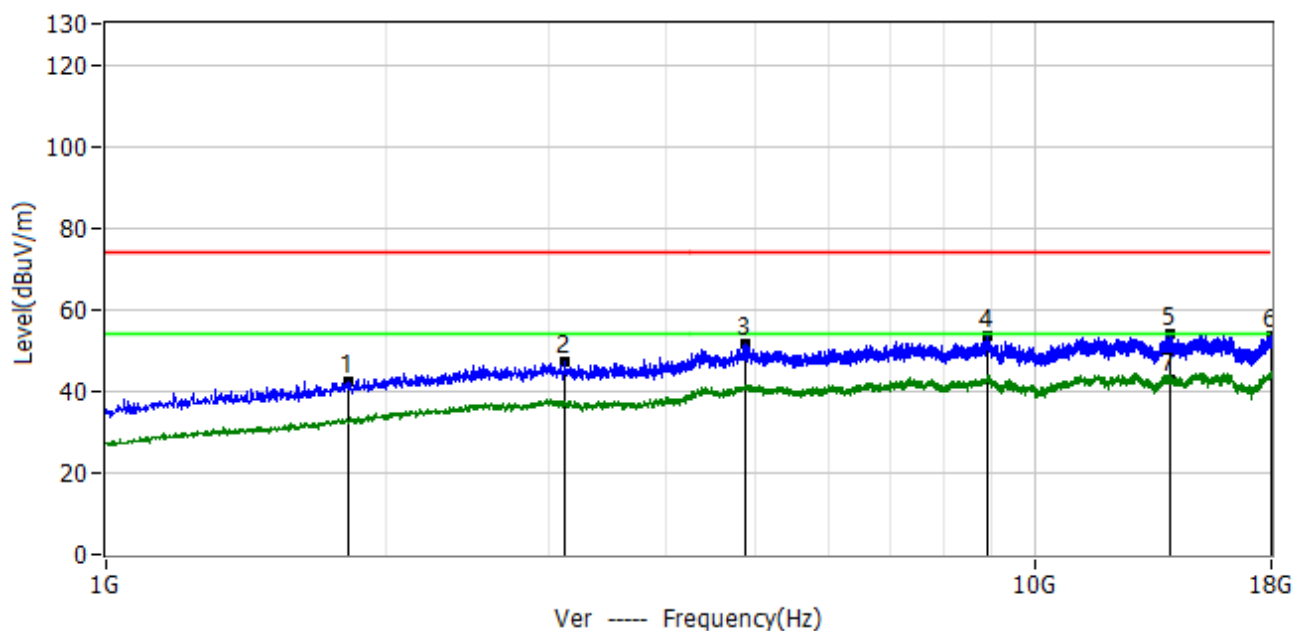
Project: LGT25G316	Test Engineer: LiuH
EUT: Digital charcoal Griddle+Grill+Smoker	Temperature: 25.6°C
M/N: MB20040226	Humidity: 52%RH
Test Voltage: AC 120V/60Hz	Test Data: 2025-08-20
Test Mode: 3DH5 2441	
Note:	



No.	Frequency MHz	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
1*	1860.6000	58.81	-16.46	42.35	74.00	-31.65	PK	Hor
2*	4406.4000	55.24	-5.99	49.25	74.00	-24.75	PK	Hor
3*	4988.6000	56.71	-6.00	50.71	74.00	-23.29	PK	Hor
4*	7372.9000	59.23	-7.02	52.21	74.00	-21.79	PK	Hor
5*	11223.4000	57.70	-5.06	52.64	74.00	-21.36	PK	Hor
6*	14957.0000	58.13	-4.01	54.12	74.00	-19.88	PK	Hor



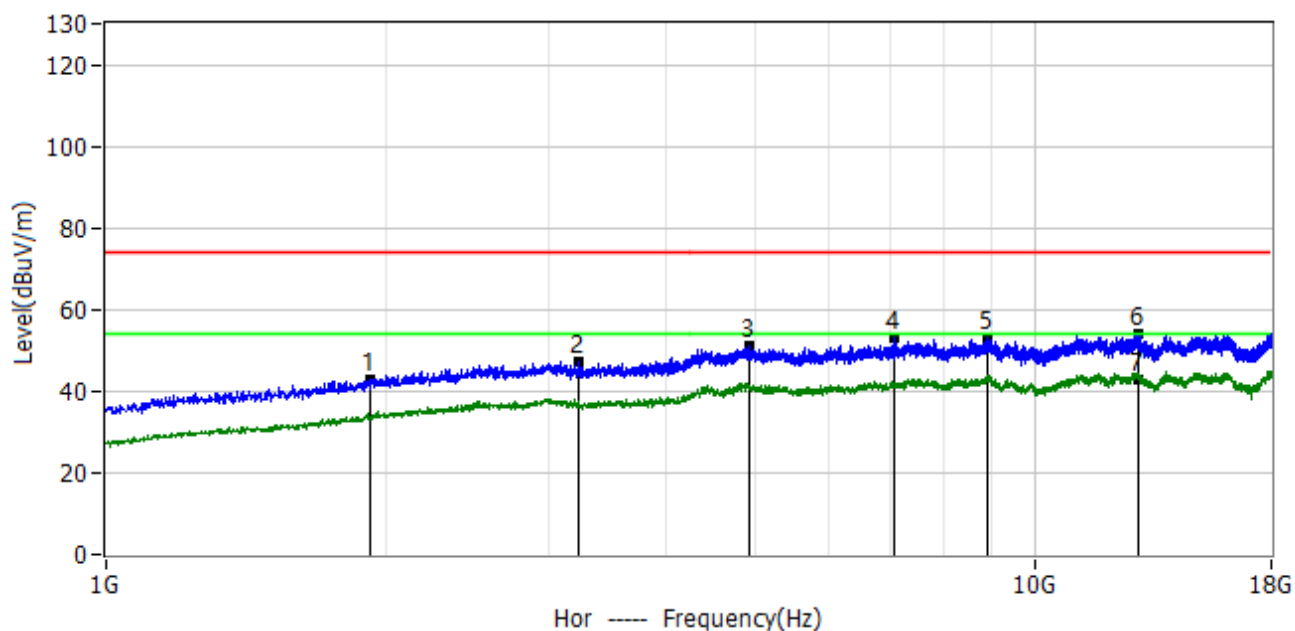
Project: LGT25G316	Test Engineer: LiuH
EUT: Digital charcoal Griddle+Grill+Smoker	Temperature: 25.6°C
M/N: MB20040226	Humidity: 52%RH
Test Voltage: AC 120V/60Hz	Test Data: 2025-08-20
Test Mode: 3DH5 2441	
Note:	



No.	Frequency MHz	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
1*	1820.2000	59.42	-16.96	42.46	74.00	-31.54	PK	Ver
2*	3120.7000	55.57	-8.16	47.41	74.00	-26.59	PK	Ver
3*	4893.0000	57.33	-5.92	51.41	74.00	-22.59	PK	Ver
4*	8890.1000	60.45	-7.11	53.34	74.00	-20.66	PK	Ver
5*	13973.1000	58.19	-4.01	54.18	74.00	-19.82	PK	Ver
6*	18000.0000	56.43	-2.87	53.56	74.00	-20.44	PK	Ver
7*	13973.1000	46.91	-4.01	42.90	54.00	-11.10	AV	Ver



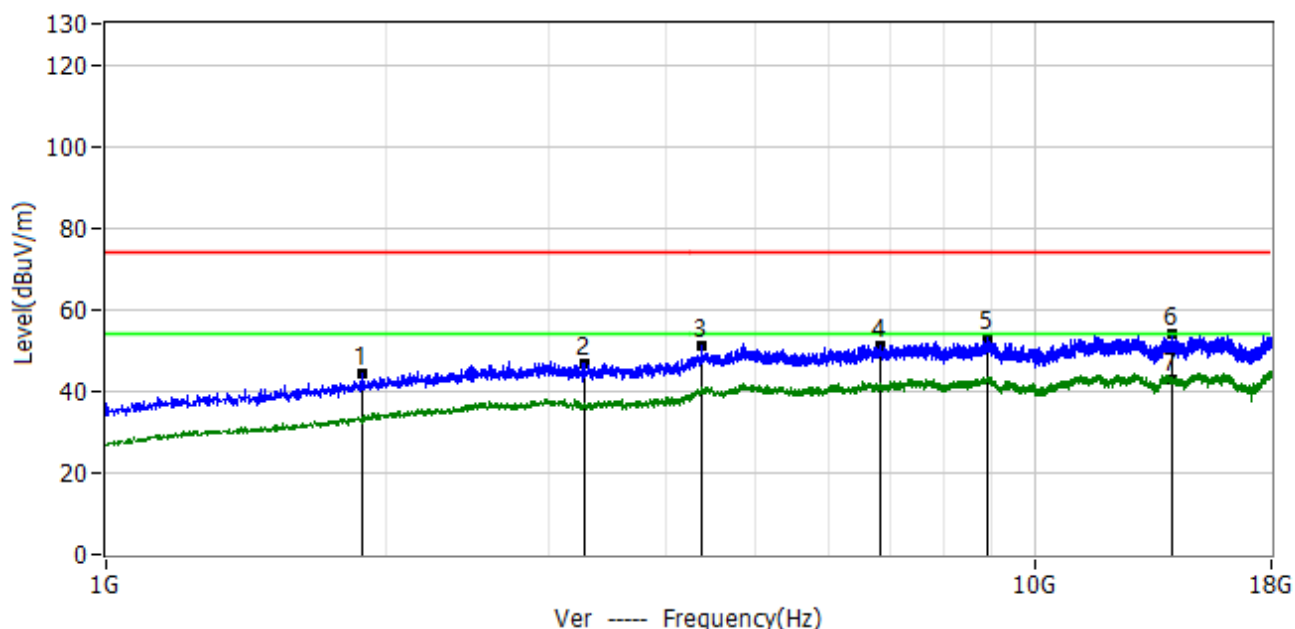
Project: LGT25G316	Test Engineer: LiuH
EUT: Digital charcoal Griddle+Grill+Smoker	Temperature: 25.6°C
M/N: MB20040226	Humidity: 52%RH
Test Voltage: AC 120V/60Hz	Test Data: 2025-08-20
Test Mode: 3DH5 2480	
Note:	



No.	Frequency MHz	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
1*	1928.6000	58.63	-15.64	42.99	74.00	-31.01	PK	Hor
2*	3224.9000	55.62	-8.20	47.42	74.00	-26.58	PK	Hor
3*	4927.0000	57.01	-5.95	51.06	74.00	-22.94	PK	Hor
4*	7047.7000	60.23	-7.09	53.14	74.00	-20.86	PK	Hor
5*	8913.5000	60.20	-7.08	53.12	74.00	-20.88	PK	Hor
6*	12951.0000	58.98	-4.88	54.10	74.00	-19.90	PK	Hor
7*	12951.0000	47.68	-4.88	42.80	54.00	-11.20	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: 3DH5 2480	
Note:	



No.	Frequency MHz	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
1*	1890.4000	60.34	-16.10	44.24	74.00	-29.76	PK	Ver
2*	3278.0000	54.95	-8.22	46.73	74.00	-27.27	PK	Ver
3*	4387.2000	57.25	-6.07	51.18	74.00	-22.82	PK	Ver
4*	6824.6000	58.40	-7.24	51.16	74.00	-22.84	PK	Ver
5*	8917.7000	59.94	-7.08	52.86	74.00	-21.14	PK	Ver
6*	14079.4000	58.53	-4.29	54.24	74.00	-19.76	PK	Ver
7*	14079.4000	47.19	-4.29	42.90	54.00	-11.10	AV	Ver

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.

3) Pre-test DH5, 2DH5 and 3DH5, only the worst case 3DH5 was reported in this report.

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