
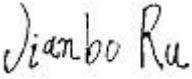
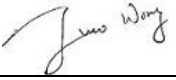


Test Report

FCC EVALUATION REPORT FOR CERTIFICATION	
Project Reference No.	352676
Product	Digital Electric Smoker
Brand Name	Char-Broil
Model	14202004, 14202005, 4632466XX ("XX" - Numbers for optional sales year and carton packaging. For example:18, 19, 20etc.)
Alternate Model	N/A
Tested according to	FCC Rules and Regulations Part 15 Subpart C 15.249, ANSI C63.10-2013

Tested in period	June 12, 2018
Issued date	June 13, 2018
Issued by	 Nemko Shanghai Ltd. Shenzhen Branch Unit CD, Floor 10, Tower 2, Kefa Road 8#, Hi-Technology Park, Nanshan District, Shenzhen, China Phone : +86 755 8221 0420 Fax : +86 755 8221 3363
Name and address of the Test House	(See page 7)
Tested by	 2018/6/13 <hr/> Jianbo Ru date
Verified by	 2018/6/13 <hr/> Juno Wong date

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Contents of This Report

1. Client Information	3
1.1 Applicant	3
1.2 Manufacturer.....	3
1.3 Scope.....	3
2. Equipment under Test (EUT)	4
2.1 Identification of EUT	4
2.2 Detail spec:	4
2.3 Additional Information Related to Testing	4
3. General Test Conditions.....	5
3.1 Location	5
3.2 Operating Environment.....	5
3.3 Operating During Test.....	5
3.4 Test Equipment	5
4. Measurement Uncertainty	6
5. Conducted Emission (150 KHz to 30 MHz)	7
5.1 Test Procedure.....	7
5.2 Measurement Equipment.....	7
5.3 Test Result	7
5.3.1 Diagram 5-1	8
5.3.2 Diagram 5-2	9
6. Radiated Electromagnetic Disturbances.....	10
6.1 Test Procedure.....	10
6.2 Measurement Equipment 30MHz-1000MHz:.....	10
6.3 Test Result Spurious emission worse case:	10
6.3.1 Diagram 6-1	12
6.3.2 Diagram 6-2	13
7 Antenna requirement.....	14
7.1 Requirement.....	14
7.2 Result	14
Appendix A Sample Label	15

1. Client Information

1.1 Applicant

Company Name:

Char-Broil

Company Address:

1442 Belfast Avenue, Columbus, GA 31904, USA

1.2 Manufacturer

Company Name:

Char-Broil

Company Address:

1442 Belfast Avenue, Columbus, GA 31904, USA

1.3 Scope

- Measurement and determination of electromagnetic emissions (EME) of radio frequency devices including intentional and/or unintentional radiators for compliance with the technical rules and regulations of the Federal Communications Commission under FCC part 15.



2. Equipment under Test (EUT)

2.1 Identification of EUT

Category:	Digital Electric Smoker
Model Name:	14202004, 14202005, 4632466XX ("XX" - Numbers for optional sales year and carton packaging. For example:18, 19, 20etc.)
Alternate model:	N/A
Brand name:	Char-Broil
Technical data (Rating, etc.):	As below

2.2 Detail spec:

Operating Frequency Band: 2402MHz~2480MHz

Operating Frequency: 2440MHz

Number of Channel: 1

Modulation Type: GFSK

Mode of operation (duplex, simplex, half duplex) : duplex

Antenna Type: Internal PCB Antenna

Antenna gain: 0 dBi

Rating: 120 V, 60 Hz, 800 Watts

2.3 Additional Information Related to Testing

This report is on the basis of the FCC ID: 2AARR4885637CB-TR. Add new models 4632466XX, which are same as the original models: 14202004 & 14202005. They are electrically identical, only different in the enclosure size and power. So, we add the new model for AC power line conducted emissions and radiated spurious emission (30MHz-1000MHz) test.

3. General Test Conditions

3.1 Location

AUDIX Technology (Shenzhen) Co., Ltd.

No.6, Ke Feng Rd., 52 Block, Shenzhen Science & Industrial Park, Nantou, Shenzhen, Guangdong, China.

Designation Number: CN5022

Note: all test are witnessed by NEMKO engineer

3.2 Operating Environment

All tests and measurements were performed in a shielded enclosure or a controlled environment suitable for the tests conducted. The climatic conditions in the test area are automatically controlled and recorded continuously.

Parameters	Recording during test	Accepted deviation
Ambient temperature	20-25°C	15 – 35 °C
Relative humidity	45-55%	30 - 60%
Atmospheric pressure	101.2 kPa -101.3kPa	86-106kPa

3.3 Operating During Test

Test mode: 120V 60Hz

TM1 : Continuance TX mode

Remark : When measurements of the variation of the input power or the radiated signal level of the fundamental frequency component of the emission, as appropriate, have been performed with the supply voltage varied between 85% and 115% of the nominal rated supply voltage. No findable change appear.

No findable change appear.

And only choose the worse mode to be the representative test mode

3.4 Test Equipment

The test equipments used in testing are calibrated on a regular basis. For most of the testing equipments accredited calibration is conducted once a year. For certain equipment the calibration interval is longer. Between the calibrations all test equipment are controlled and verified on a regular basis. The test equipments used are defined in each test section of this report.

4. Measurement Uncertainty

The Measurement Uncertainties stated were calculated in accordance with the requirements of NIST Technical Note 1297 with the confidence level of 95 %.

Conducted Emission :	0.15~30MHz	3.45 dB
Radiated Emission:	30MHz~1000MHz	4.50 dB
	1GHz-18GHz	4.70 dB

5. AC Power Line Conducted Emission (150 KHz to 30 MHz)

5.1 Test Procedure

The EUT was placed on a non-metallic table, 80cm above the ground plane. The EUT Power connected to the power mains through a line impedance stabilization network. This provided a 50-ohm coupling impedance for the EUT (Please refer to the test setup photographs). The other peripheral devices power cord connected to the power mains through another line impedance stabilization network.

Both sides of power line were checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipments and all of the interface cables were changed according to ANSI C63.10-2013 on conducted Emission test.

The bandwidth of test receiver is set at 9kHz. The frequency range from 150kHz to 30MHz is checked. The test result are reported as below.

5.2 Measurement Equipment

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Test Receiver	Rohde & Schwarz	ESHS10	838693/001	Oct.31, 17	1 Year
2.	L.I.S.N.#1	Rohde & Schwarz	ESH2-Z5	834066/011	Oct.31, 17	1 Year
3.	L.I.S.N.#3	Kyoritsu	KNW-242C	8-1920-1	May.08, 18	1 Year
4.	Terminator	Hubersuhner	50Ω	No. 1	May.08, 18	1 Year
5.	Terminator	Hubersuhner	50Ω	No. 2	May.08, 18	1 Year
6.	RF Cable	Fujikura	3D-2W	No.1	May.08, 18	1Year
7.	Coaxial Switch	Anritsu	MP59B	M50564	May.08, 18	1 Year
8.	Pulse Limiter	Rohde & Schwarz	ESH3-Z2	100341	May.08, 18	1 Year

5.3 Test Result

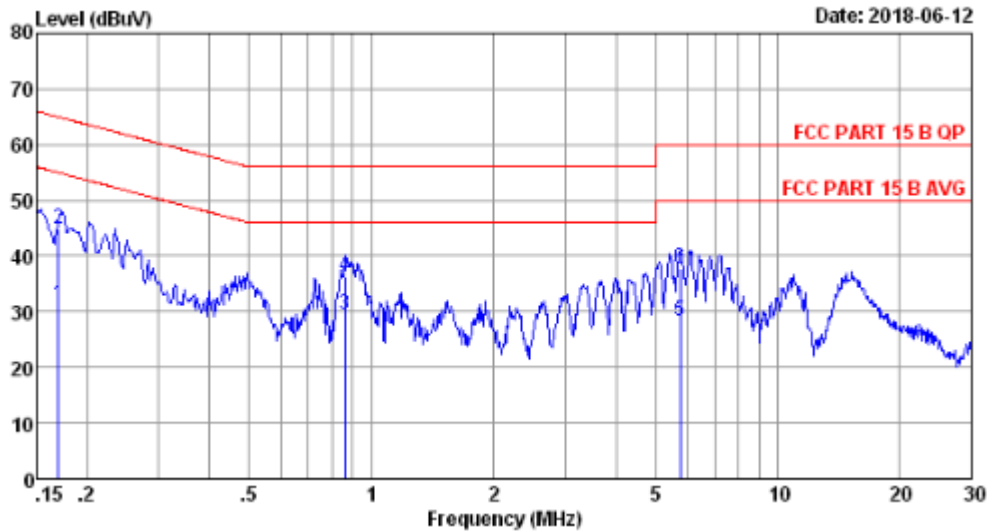
Test Mode	Diagram	Remarks	Result
TM1	5-1	Line L	Pass
	5-2	Line N	Pass

NOTES:

1. Measurements using CISPR quasi-peak mode & average mode.
2. All modes of operation were investigated and the worst -case emission are reported. See attached Plots.
3. Measurement =Reading + Correct factor (LISN Factor + Cable Loss)
4. LINE: L =Line, N = Neutral

5. The limit is on the FCC Part section 15.207.
6. Frequency = MHz Level = dBuV Limit = dBuV
7. When PK is lower than QP limit ,then QP value is deemed to comply with QP limit.

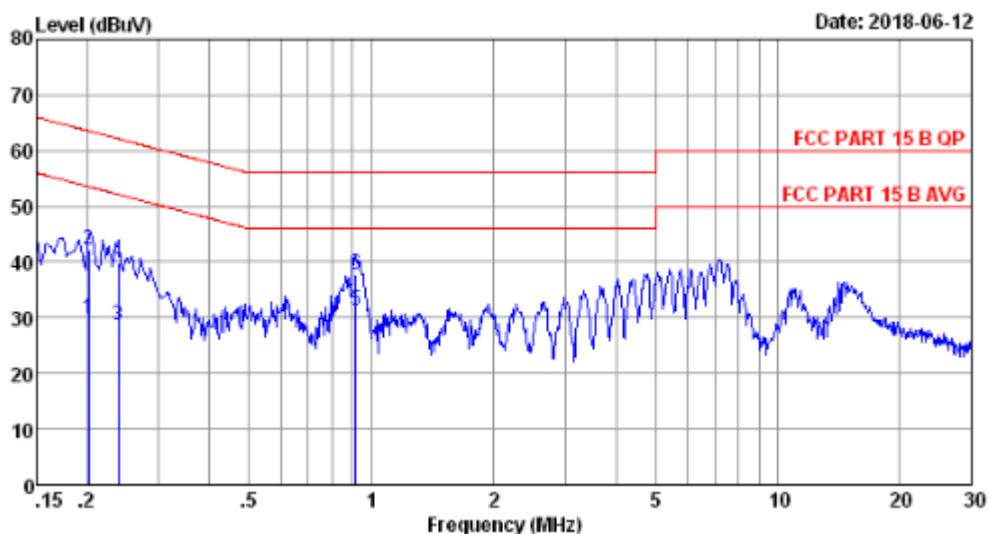
5.3.1 Diagram 5-1



No	Freq (MHz)	LISN Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV)	Limits (dBuV)	Margin (dB)	Remark
1	0.170	9.53	0.15	21.50	31.18	54.96	23.78	Average
2	0.170	9.53	0.15	35.10	44.78	64.96	20.18	QP
3	0.860	9.50	0.18	19.70	29.38	46.00	16.62	Average
4	0.860	9.50	0.18	26.50	36.18	56.00	19.82	QP
5	5.770	9.51	0.19	18.60	28.30	50.00	21.70	Average
6	5.770	9.51	0.19	28.00	37.70	60.00	22.30	QP

Remarks: 1. Emission Level=LISN Factor+Cable Loss+Reading.
 2. If the average limit is met when using a quasi-peak detector, the EUT shall be deemed to meet both limits and measurement with average detector is unnecessary.

5.3.2 Diagram 5-2



No	Freq (MHz)	LISN Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV)	Limits (dBuV)	Margin (dB)	Remark
1	0.202	9.47	0.15	20.10	29.72	53.53	23.81	Average
2	0.202	9.47	0.15	32.60	42.22	63.53	21.31	QP
3	0.238	9.46	0.15	18.90	28.51	52.17	23.66	Average
4	0.238	9.46	0.15	30.10	39.71	62.17	22.46	QP
5	0.914	9.35	0.18	21.80	31.33	46.00	14.67	Average
6	0.914	9.35	0.18	28.30	37.83	56.00	18.17	QP

Remarks: 1. Emission Level = LISN Factor + Cable Loss + Reading.
2. If the average limit is met when using a quasi-peak detector, the EUT shall be deemed to meet both limits and measurement with average detector is unnecessary.

6. Radiated Spurious Emission

6.1 Test Procedure

The EUT was placed on a non-metallic table, 80 cm above the ground plane inside a semi-anechoic chamber. An antenna was located 3m from the EUT on an adjustable mast.

The EUT were rotated 0 to 360 degree and the antenna height was varied between 1m and 4m in order to maximize the emission. Measurements in both horizontal and vertical polarities were made and the data was recorded. The test result are reported as below.

For below 1GHz

RBW=120 kHz; VBW=300KHz. The frequency range from 30MHz to 1000MHz is checked using QP detector .

For above 1GHz. The frequency range from 1GHz to 25GHz(10th harmonics) is checked.

RBW=1MHz ; VBW=1MHz, PK detector for peak emissions measurement above 1GHz

RBW=1MHz ; VBW=10Hz, PK detector for average emissions measure above 1GHz .

6.2 Measurement Equipment

30MHz-1000MHz:

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1	3#Chamber	AUDIX	N/A	N/A	Nov.24,17	1 Year
2	EMI Spectrum	Agilent	E4407B	MY41440292	May.08, 18	1 Year
3	Test Receiver	Rohde & Schwarz	ESVS10	834468/011	May.08, 18	1 Year
4	Amplifier	HP	8447D	2648A04738	May.08, 18	1 Year
5	Bilog Antenna	Schaffner	CBL6111C	2598	Dec.26, 16	2.0 Year
6	RF Cable	MIYAZAKI	CFD400-NL	3# Chamber No.1	May.08, 18	1 Year
7	Coaxial Switch	Anritsu	MP59B	M74389	May.08, 18	1 Year

1GHz-25GHz:

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1	Spectrum Analyzer	Agilent	E4407B	MY41440292	May.08, 18	1 Year
2	Horn Antenna	EMCO	3115	9510-4580	June.05, 18	1 Year
3	Amplifier	Agilent	8449B	3008A00863	May.08, 18	1 Year
4	RF Cable	Hubersuhner	SUCOFLEX106	77980/6	May.08, 18	1 Year
5	RF Cable	Hubersuhner	SUCOFLEX106	77977/6	May.08, 18	1 Year

6.3 Test Result

Spurious emission worse case:

Mode	Freq range	Channel	Test ANT polarity	Diagram	Test Result
GFSK	30MHz-1GHz:	2440MHz	H	6-1	Pass
	30MHz-1GHz:	2440MHz	V	6-2	Pass
	1GHz-18GHz:	2440MHz	H	--	N/A
	1GHz-18GHz:	2440MHz	V	--	N/A
	18GHz-25GHz:	2440MHz	H	--	N/A
	18GHz-25GHz:	2440MHz	V	--	N/A

NOTES:

1. All modes were measured and the worst case emission was reported.
2. H =Horizontal V=Vertical
3. Emission = Reading +Antenna Factor + Cable Loss –Amp Factor(if exist)
4. Emission level dBµV = 20 log Emission level µV/m
5. The lower limit shall apply at the transition frequencies
6. All the emissions appearing within 15.205 Restricted bands shall not exceed the limits shown in 15.209,all the other emissions shall be at least 20dB below the fundamental emissions, or comply with 15.209 limits.

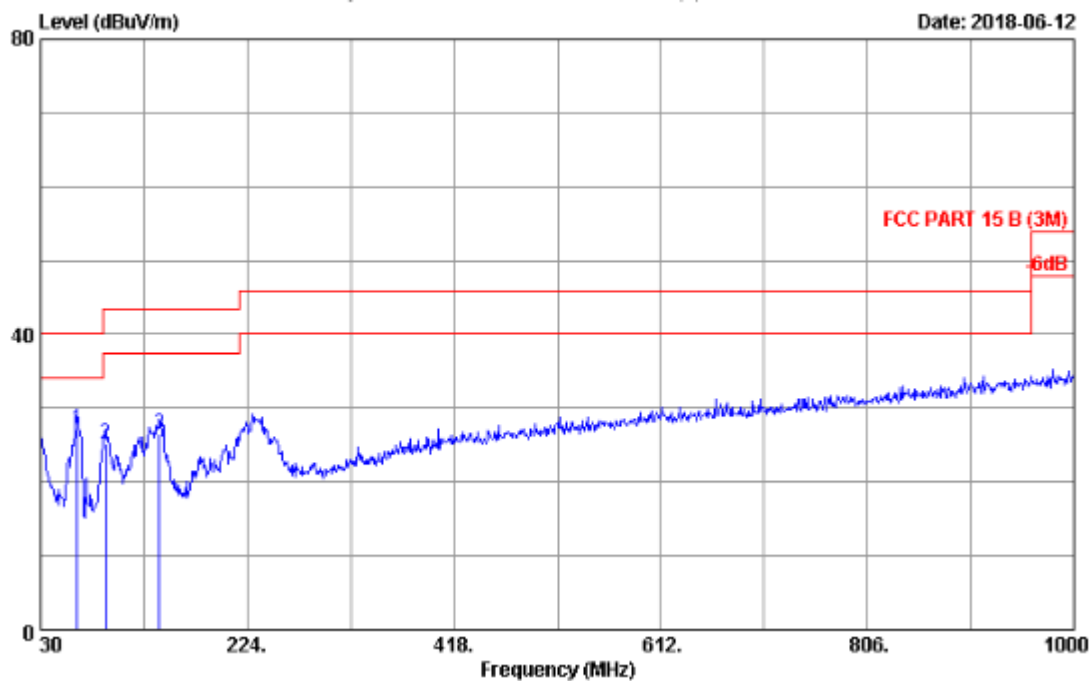
The limit of 15.209 of 3 meter distance is:

Frequency MHz	Distance m	Field strength		Distance m	Field strength
		µV/m	dBµV/m(QP)		dBµV/m(QP)
30-88	3	100	40.0	10	30.0
88-216	3	150	43.5	10	33.5
216-960	3	200	46.0	10	36.0
960-1000	3	500	54.0	10	44.0
Above 1000	3	74.0 dBµV/m (PK) 54.0 dBµV/m (AV)		/	/

15.205 Restricted bands of operation:

MHz	MHz	MHz	GHz
0.090 - 0.110	16.42 - 16.423	399.9 - 410	4.5 - 5.15
¹ 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	(²)

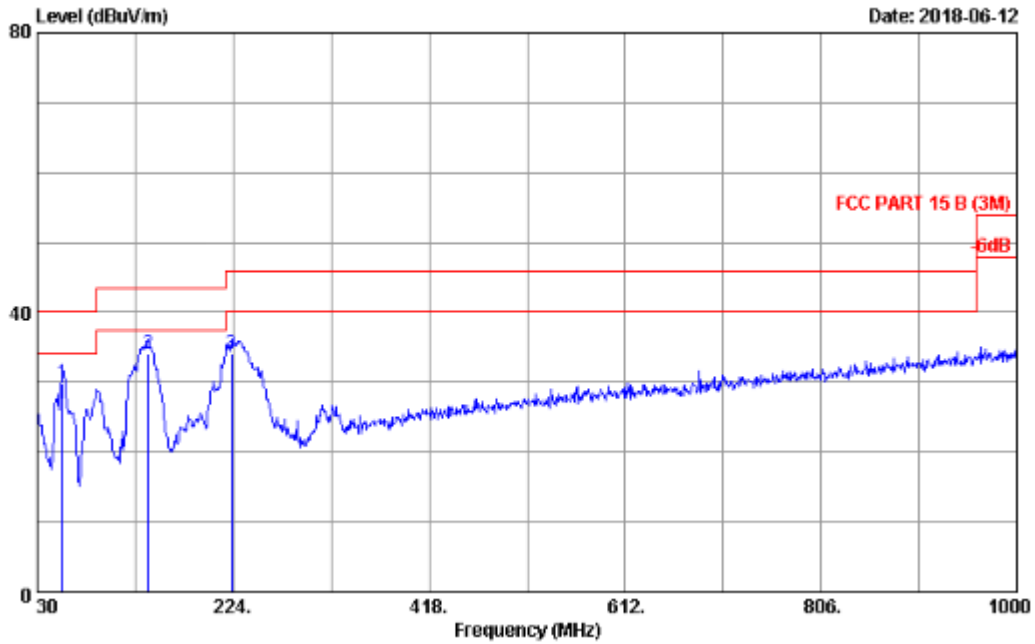
6.3.1 Diagram 6-1



No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	63.950	13.12	0.87	13.13	27.12	40.00	12.88	QP
2	91.110	16.60	1.05	7.50	25.15	43.50	18.35	QP
3	141.550	17.84	1.32	7.43	26.59	43.50	16.91	QP

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

6.3.2 Diagram 6-2



No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	55.220	14.40	0.81	14.70	29.91	40.00	10.09	QP
2	139.610	17.90	1.31	14.92	34.13	43.50	9.37	QP
3	222.060	17.05	1.77	15.31	34.13	46.00	11.87	QP

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.

7 Antenna requirement

7.1 Requirement

For intentional device, according to FCC 47 CFR Section 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. And according to FCC 47 CFR Section 15.247 (b), if transmitting antennas of directional gain greater than 6dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.

7.2 Result

The antenna used for this product is Internal Patch antenna that no antenna other than that furnished by the responsible party shall be used with the device, The maximum peak gain of this antenna is 0dBi.



Appendix A Sample Label

Labelling Requirements

The sample label shown shall be permanently affixed at a conspicuous location on the device and be readily visible to the user at the time of purchase.

*** The following paragraph specified in the label.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

FCC ID: 2AARR4885637CB-TR

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