

FCC TEST REPORT

FOR

Pet Mate Ltd

Elite Super Selective Cat Flap

Model No.:305N

Prepared for : Pet Mate Ltd
Address : Lyon Road, Hersham, Surrey, KT12 3PU

Prepared by : Shenzhen LCS Compliance Testing Laboratory Ltd.
Address : 1F., Xingyuan Industrial Park, Tongda Road, Bao'an Blvd., Bao'an District, Shenzhen, Guangdong, China

Date of receipt of test sample : November 01, 2012
Number of tested samples : 1
Serial number : Prototype
Date of Test : November 01, 2012 –December 14, 2012
Date of Report : December 14, 2012

FCC TEST REPORT
FCC CFR 47 PART 15 C (15.209)**Report Reference No. : LCS121029102QF**

Date of Issue : December 14, 2012

Testing Laboratory Name..... : Shenzhen LCS Compliance Testing Laboratory Ltd.Address : 1F., Xingyuan Industrial Park, Tongda Road, Bao'an Blvd.,
Bao'an District, Shenzhen, Guangdong, ChinaTesting Location/ Procedure..... : Full application of Harmonised standards ☒
Partial application of Harmonised standards ☐
Other standard testing method ☐**Applicant's Name : Pet Mate Ltd**

Address : Lyon Road, Hersham, Surrey, KT12 3PU

Test Specification

Standard..... : FCC CFR 47 PART 15 C (15.209)

Test Report Form No..... : LCSEMC-1.0

TRF Originator : Shenzhen LCS Compliance Testing Laboratory Ltd.

Master TRF..... : Dated 2011-03

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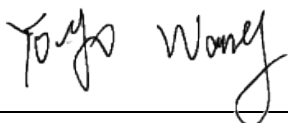
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Test Item Description..... : Elite Super Selective Cat Flap

Trade Mark : N/A

Model/ Type reference : 305N

Ratings : DC 6.0V by 4*AA batteries

Result : **Positive****Compiled by:**

Yoyo Wang/ File administrators

Supervised by:

Vito Cao/ Technique principal

Approved by:

Gavin Liang/ Manager

FCC -- TEST REPORT

Test Report No. : LCS121029102QFDecember 14, 2012

Date of issue

Type / Model..... : 305N

EUT..... : Elite Super Selective Cat Flap

Applicant..... : Pet Mate Ltd

Address..... : Lyon Road, Hersham, Surrey, KT12 3PU

Telephone..... : /

Fax..... : /

Manufacturer..... : Pet Mate Ltd

Address..... : Lyon Road, Hersham, Surrey, KT12 3PU

Telephone..... : /

Fax..... : /

Factory..... : Pet Mate Ltd

Address..... : Lyon Road, Hersham, Surrey, KT12 3PU

Telephone..... : /

Fax..... : /

Test Result:**Positive**

The test report merely corresponds to the test sample.

It is not permitted to copy extracts of these test result without the written permission of the test laboratory.

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1. GENERAL INFORMATION

1.1 Description of Device (EUT)

EUT : Elite Super Selective Cat Flap

Model Number : 305N

Power Supply : DC 6.0V by 4*AA batteries

Frequency Range : 125KHz

Channel Number : 1

Modulation Technology : FSK

Module Channel : 1

Antenna Type : Integral Antenna

Antenna Gain : 2.0dBi

1.2 Host System Configuration List and Details

Manufacturer	Description	Model	Serial Number	Certificate
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1.3 External I/O Cable

Cable Description	Length (M)	From/Port	To
--	--	--	--

1.4 Description of Test Facility

Site Description

EMC Lab.

: Accredited by CNAS, June 04, 2010

The Certificate Registration Number. is L4595.

Accredited by FCC, July 14, 2011

The Certificate Registration Number. is 899208.

Accredited by Industry Canada, May. 02, 2011

The Certificate Registration Number. is 9642A-1

1.5 Statement of The Measurement Uncertainty

The data and results referenced in this document are true and accurate. The reader is cautioned that there may be errors within the calibration limits of the equipment and facilities. The measurement uncertainty was calculated for all measurements listed in this test report acc. To CISPR 16 – 4 “Specification for radio disturbance and immunity measuring apparatus and methods – Part 4: Uncertainty in EMC Measurements” and is documented in the LCS quality system acc. To DIN EN ISO/IEC 17025. Furthermore, component and process variability of devices similar to that tested may result in additional deviation. The manufacturer has the sole responsibility of continued compliance of the device.

1.6 Measurement Uncertainty

Test Item	Frequency Range	Uncertainty	Note
Radiation Uncertainty :	9KHz~30MHz	$\pm 3.10\text{dB}$	(1)
	30MHz~200MHz	$\pm 2.96\text{dB}$	(1)
	200MHz~1000MHz	$\pm 3.10\text{dB}$	(1)
	1GHz~26.5GHz	$\pm 3.80\text{dB}$	(1)
Conduction Uncertainty :	150kHz~30MHz	$\pm 1.63\text{dB}$	(1)
Power disturbance :	30MHz~300MHz	$\pm 1.60\text{dB}$	(1)

(1). This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of $k=2$.

1.7 Description Of Test Modes

The EUT was operated in the normal operating mode. All X, Y, Z axis had been tested and the worst case was record.

1.8 Summary Of Test Result

Test Items	FCC Rules	Result
Conducted Emissions	15.207	N/A
Radiated Emissions	15.205 & 15.209	PASS
20dB Bandwidth	15.215	PASS
Antenna Requirement	15.203	PASS

2. TEST METHODOLOGY

The tests documented in this report were performed in accordance with ANSI C63.4, FCC CFR PART 15C 15.209.

2.1 EUT Configuration

The EUT configuration for testing is installed on RF field strength measurement to meet the Commissions requirement and operating in a manner that intends to maximize its emission characteristics in a continuous normal application.

2.2 EUT Exercise

The EUT was operated in the engineering mode to fix the TX frequency that was for the purpose of the measurements.

According to its specifications, the EUT must comply with the requirements of the Section 15.209 under the FCC Rules Part 15 Subpart C.

2.3 General Test Procedures

2.3.1 Conducted Emissions (N/A)

The EUT is placed on the turntable, which is 0.8 m above ground plane. According to the requirements in Section 13.1.4.1 of ANSI C63.4 Conducted emissions from the EUT measured in the frequency range between 0.15 MHz and 30MHz using Quasi-peak and average detector modes.

2.3.2 Radiated Emissions

The EUT is placed on a turn table, which is 0.8 m above ground plane. The turntable shall rotate 360 degrees to determine the position of maximum emission level. EUT is set 3m away from the receiving antenna, which varied from 1m to 4m to find out the highest emission. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical. In order to find out the maximum emissions, exploratory radiated emission measurements were made according to the requirements in Section 13.1.4.1 of ANSI C63.4

3. SYSTEM TEST CONFIGURATION

3.1 Justification

N/A.

3.2 EUT Exercise Software

N/A.

3.3 Special Accessories

N/A.

3.4 Block Diagram/Schematics

Please refer to the report.

3.5 Equipment Modifications

Shenzhen LCS Compliance Testing Laboratory Ltd. has not done any modification on the EUT.

3.6 Test Setup

Please refer to the test setup photo.

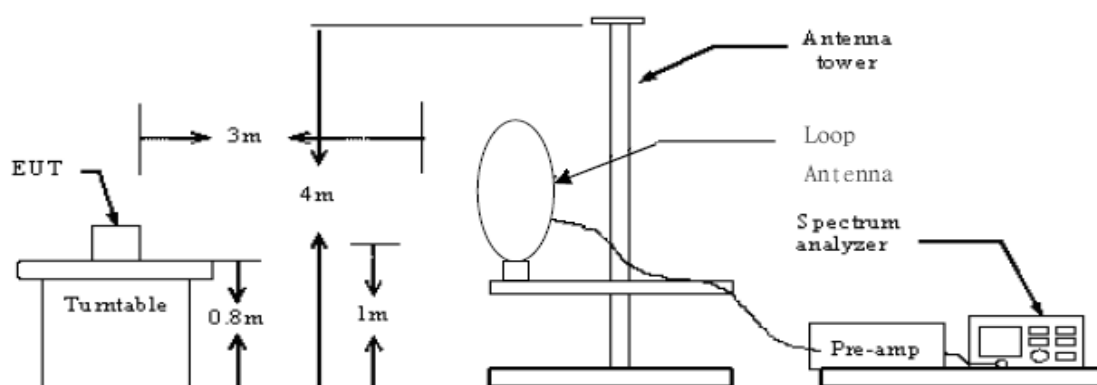
4. RADIATED MEASUREMENT

4.1 Radiated Emission

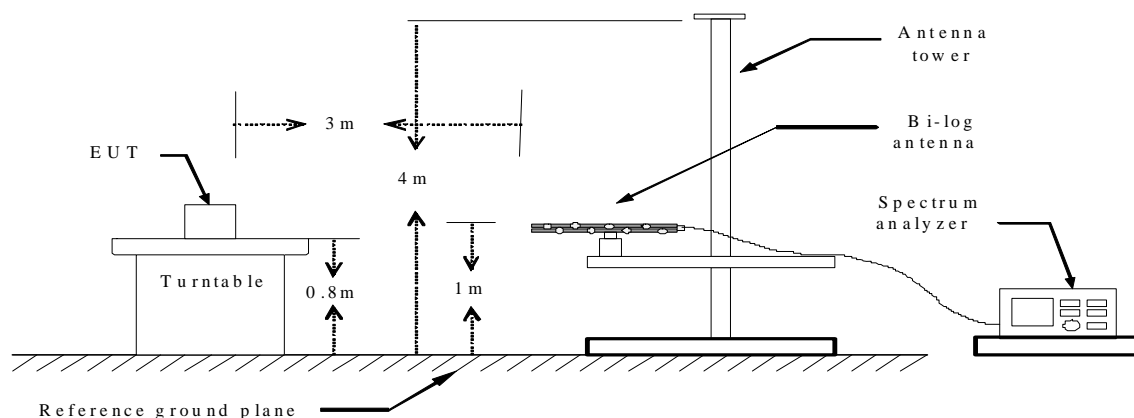
Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Due Date
1	Spectrum Analyzer	Agilent	E4407B	MY41440292	2012-06-18	2013/06/17
2	Test Receiver	Rohde & Schwarz	ESCS30	828985/018	2012-06-18	2013/06/17
3	Loop antenna	EMCO	6502	0042963	2012-06-18	2013/06/17
4	Log per Antenna	Schwarzbeck	VULB9163	142	2012-06-18	2013/06/17
5	Horn-antenna	SCHWARZBECK	BBHA9120D	D:266	2012-06-18	2013/06/17
6	DC Filter	MPE	23872C	N/A	2012-06-18	2013/06/17

4.1.1 Test Equipment

4.1.2 Block Diagram of Test Setup



9KHz ~ 30MHz



30MHz ~ 1GHz

4.1.3 Radiated Emission Limit

15.205 (a) Except as shown in paragraph (d) of this section, only spurious emissions are permitted in any of the frequency bands listed below:

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\)
13.36-13.41			

\1\ Until February 1, 1999, this restricted band shall be 0.490-0.510 MHz.

\2\ Above 38.6

Part 15.205 (b) Except as provided in paragraphs (d) and (e), the field strength of emissions appearing within these frequency bands shall not exceed the limits shown in Section 15.209. At frequencies equal to or less than 1000 MHz, compliance with the limits in Section 15.209 shall be demonstrated using measurement instrumentation employing a CISPR quasi-peak detector.

Part 15.209 (a) except as provided elsewhere in this Subpart, the emissions from an intentional radiator shall not exceed the field strength levels specified in the following table:

Frequency (MHz)	Field strength (microvolts/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

Limit calculation and transfer to 3m distance as showed in the following table:

Frequency (MHz)	Limit (dBuV/m)	Distance (m)
0.009-0.490	$20\log(2400/F(\text{KHz}))+40\log(300/3)$	3
0.490-1.705	$20\log(2400/F(\text{KHz}))+40\log(300/3)$	3
1.705-30.0	69.5	3
30-88	40.0	3
88-216	43.5	3
216-960	46.0	3
Above 960	54.0	3

4.1.4 Test Results

PASS.

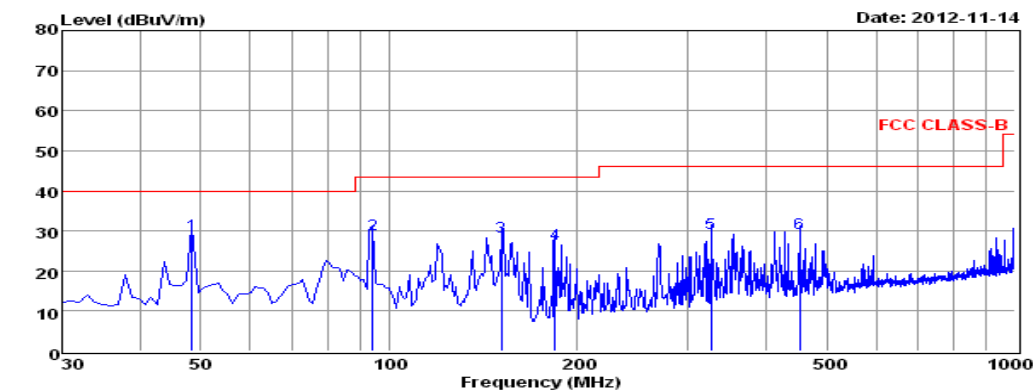
The test data please refer to following page:

9KHz ~ 30MHz

Freq. MHz	Antenna Pol.	Reading dBuV	Factor dB	Measure d dBuV	Limit dBuV/m	Margin dB	Remark
0.125	H	71.81	12.01	83.82	105.67	-21.85	Peak
0.250	H	50.10	12.00	62.10	99.65	-37.55	Peak
0.375	H	--			96.12		--
0.875	H	--			68.76		--
1.000	H	--			67.76		--
3.54	H	37.11	11.71	48.82	69.5	-20.68	Peak
10.78	H	18.21	11.04	29.25	69.5	-40.25	Peak
17.71	H	14.11	10.54	24.65	69.5	-44.85	Peak
25.10	H	15.47	9.60	25.07	69.5	-44.43	Peak
28.64	H	12.33	8.91	21.24	69.5	-48.26	Peak
0.125	V	71.77	12.01	83.78	105.67	-21.89	Peak
0.250	V	49.50	12.00	61.50	99.65	-38.15	Peak
0.375	V	--			96.12		--
0.875	V	--			68.76		--
1.000	V	--			67.76		--
3.61	V	37.13	11.69	48.82	69.5	-20.68	Peak
10.74	V	18.24	11.01	29.25	69.5	-40.25	Peak
17.75	V	15.84	10.57	26.41	69.5	-43.09	Peak
25.13	V	15.51	9.59	25.1	69.5	-44.40	Peak
28.59	V	12.31	8.93	21.24	69.5	-48.26	Peak

*Note: Factor= Antenna Gain + Cable Loss – Amplifier Gain;

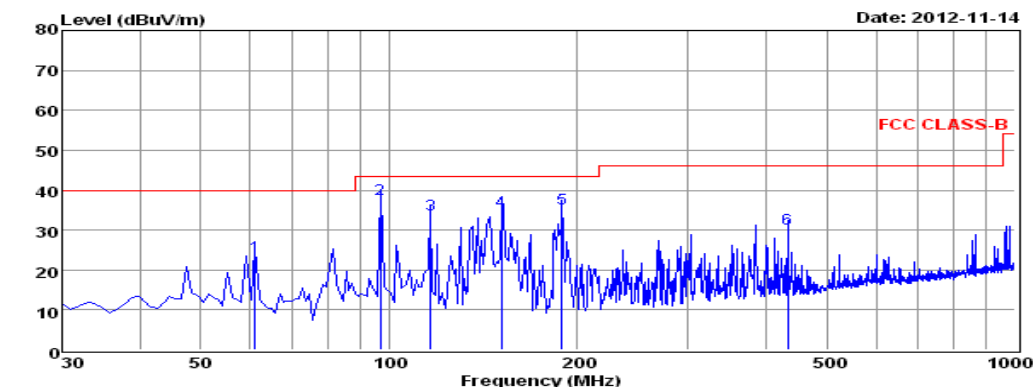
“--” means noise floor.

30MHz ~ 1GHz

Env. /Ins: 24°C/56%
 EUT: Elite Super Selective Cat Flap
 M/N: 305N
 Power Rating: DC 6V
 Test Mode: Normal
 Operator: KEN
 Memo:
 pol: VERTICAL

	Freq.	Reading	CabLos	AntFac	PreFac	Measured	Limit	Over	Remark
	MHz	dBuV	dB	dB/m	dB	dBuV/m	dBuV/m	dB	
1	48.43	45.54	0.35	13.34	30.14	29.09	40.00	-10.91	QP
2	94.02	46.23	0.58	12.66	30.19	29.28	43.50	-14.22	QP
3	151.25	49.83	0.73	8.31	30.20	28.67	43.50	-14.83	QP
4	184.23	46.34	0.70	10.05	30.20	26.89	43.50	-16.61	QP
5	326.82	45.08	1.04	13.60	30.14	29.58	46.00	-16.42	QP
6	452.92	42.45	1.35	15.58	30.07	29.31	46.00	-16.69	QP

Note: 1. All readings are Quasi-peak values.
 2. Measured = Reading + Antenna Factor + Cable Loss - Amp Factor.
 3. The emission levels that are 20dB below the official limit are not reported.



Env. /Ins: 24°C/56%
 EUT: Elite Super Selective Cat Flap
 M/N: 305N
 Power Rating: DC 6V
 Test Mode: Normal
 Operator: KEN
 Memo:
 pol: HORIZONTAL

	Freq.	Reading	CabLos	AntFac	PreFac	Measured	Limit	Over	Remark
	MHz	dBuV	dB	dB/m	dB	dBuV/m	dBuV/m	dB	
1	61.04	40.83	0.49	12.28	30.16	23.44	40.00	-16.56	QP
2	96.93	54.26	0.61	12.96	30.20	37.63	43.50	-5.87	QP
3	116.33	52.29	0.68	11.13	30.20	33.90	43.50	-9.60	QP
4	151.25	56.09	0.73	8.31	30.20	34.93	43.50	-8.57	QP
5	189.08	54.35	0.86	10.48	30.20	35.49	43.50	-8.01	QP
6	433.52	43.79	1.18	15.53	30.08	30.42	46.00	-15.58	QP

Note: 1. All readings are Quasi-peak values.
 2. Measured = Reading + Antenna Factor + Cable Loss - Amp Factor.
 3. The emission levels that are 20dB below the official limit are not reported.

5. BANDWIDTH OF THE OPERATING FREQUENCY

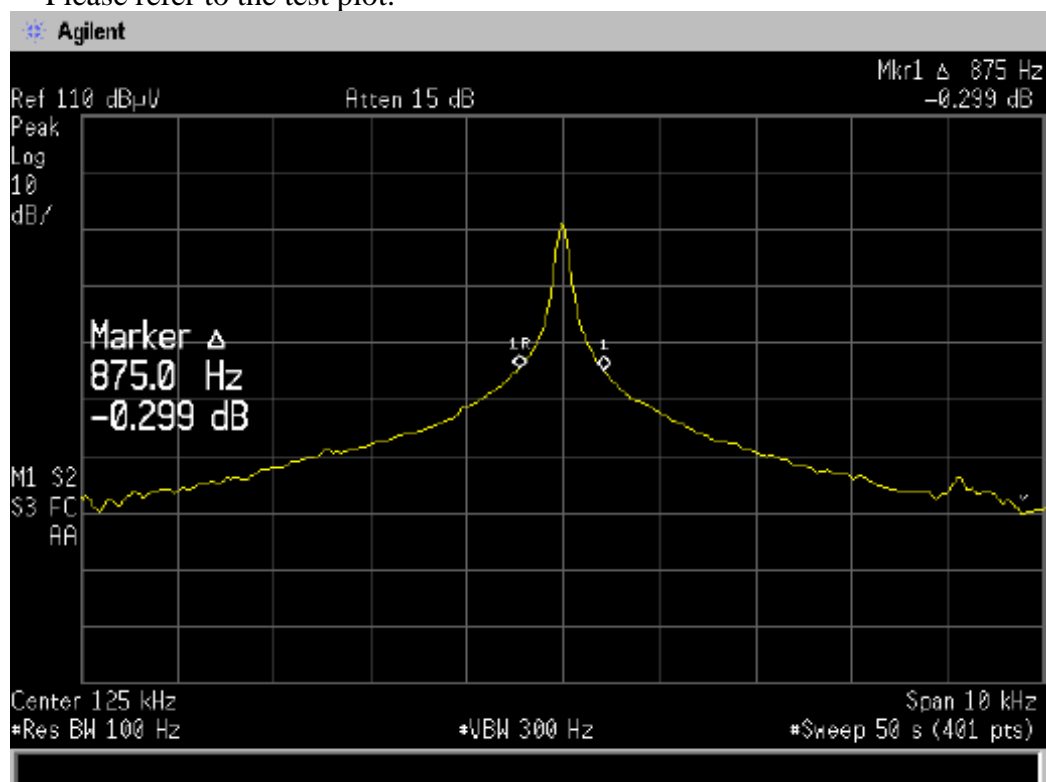
5.1 Standard Applicable

According to its specifications, the EUT must comply with the 20dB Bandwidth measurement of the Section 15.215 under the FCC Rules Part 15 Subpart C.

5.2 Test Result

EUT	Elite Super Selective Cat Flap	
RBW	100Hz	
VBW	300Hz	
SPAN	10KHz	
Carrier Freq. (KHz)	20dB Bandwidth (KHz)	Limit (KHz)
125	0.875	None

Please refer to the test plot:



6. ANTENNA REQUIREMENT

6.1 Standard Applicable

According to antenna requirement of §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. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this Section. The manufacturer may design the unit so that a broken antenna can be re-placed by the user, but the use of a standard antenna jack or electrical connector is prohibited. This requirement does not apply to carrier current devices or to devices operated under the provisions of Sections 15.211, 15.213, 15.217, 15.219, or 15.221. Further, this requirement does not apply to intentional radiators that must be professionally installed, such as perimeter protection systems and some field disturbance sensors, or to other intentional radiators which, in accordance with Section 15.31(d), must be measured at the installation site. However, the installer shall be responsible for ensuring that the proper antenna is employed so that the limits in this Part are not exceeded.

And according to §15.247(4)(1), system operating in the 2400-2483.5MHz bands that are used exclusively for fixed, point-to-point operations may employ transmitting antennas with directional gain greater than 6dBi provided the maximum peak output power of the intentional radiator is reduced by 1 dB for every 3 dB that the directional gain of the antenna exceeds 6 dBi.

6.2 Antenna Connected Construction

This EUT uses an integral antenna which is permanently attached on the tap (refer to EUT interior photographs) .

7. MANUFACTURER/ APPROVAL HOLDER DECLARATION

The following identical model(s):

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Belong to the tested device:

Product description : Elite Super Selective Cat Flap

Model name : 305N

-----THE END OF REPORT-----