TEST REPORT No: (5217)009-0707

TEST REPORT

To:	**MR. CHRISTMAS LIMITED**	To:	-
Attn:	Daniel Liao	Attn:	-
Address:	Suite 901, Railway Plaza, 39 Chatham Road South, TST, Kowloon, Hong Kong	Address:	-
Fax:	2369 0136	Fax:	-
E-mail:	dliao@mrchristmas.com	E-mail:	-
Folder No.:	MRC-16DE203MTHS-B		

Factory name:	--
Location:	--
Product:	Mercury Glass Wireless Sphere by Valerie Model No.: 11952

Sample No:	HK161216/003 HK170103/006 HK170106/004
Date of Receipt:	December 12, 2016
Test date:	January 17, 2017 to February 21, 2017
Test Requested:	FCC Part 15 - 2015
Test Method:	ANSI C63.10 - 2013
FCC ID:	SHV11952

The results given in this report are related to the tested specimen of the described electrical apparatus.

CONCLUSION: The submitted sample was found to COMPLY with requirement of FCC Part 15 Subpart C.

Authorized Signature:

Reviewed by: Keith Yeung	Approved by: Law Man kit
Date: February 28, 2017	Date: February 28, 2017

BUREAU VERITAS HONG KONG LIMITED – Kowloon Bay Office
1/F Pacific Trade Centre,
2 Kai Hing Road, Kowloon Bay,
Kowloon,HONG KONG
Tel: +852 2331 0888
Fax: +852 2331 0889
www.cps.bureauveritas.com

TEST REPORT No: (5217)009-0707

Test Result Summary

EMISSION TEST			
Test requirement: FCC Part 15 - 2015			
Test Condition	Test Method	Test Result	
		Pass	Failed
Maximum Peak Conducted Output Power	ANSI C63.10	☒	☐
Spurious RF Conducted Emissions Test	ANSI C63.10	☒	☐
Conducted Emissions Test on AC, 0.15MHz to 30MHz	ANSI C63.10	☒	☐
Radiated Emissions Test, 9kHz to 40GHz	ANSI C63.10	☒	☐
Number of Hopping Frequency	ANSI C63.10	☒	☐
Band-edge measurement	ANSI C63.10	☒	☐
Hopping Channel Separation	ANSI C63.10	☒	☐
Time of Occupancy (Dwell Time)	ANSI C63.10	☒	☐
20dB Bandwidth of Fundamental Emission	ANSI C63.10	☒	☐
Duty Cycle Correction During 100msec	ANSI C63.10	☒	☐

Report Revision & Sample Re-submit History:

--

BUREAU VERITAS HONG KONG LIMITED – Kowloon Bay Office
1/F Pacific Trade Centre,
2 Kai Hing Road, Kowloon Bay,
Kowloon,HONG KONG
Tel: +852 2331 0888
Fax: +852 2331 0889
www.cps.bureauveritas.com

TEST REPORT No: (5217)009-0707

Location of the test laboratory

Radiated and Conducted emissions measurements are investigated and taken pursuant to the procedures of ANSI C63.10 – 2013. An Open Area Test Site and Full Anechoic Chamber are set up for investigation and located at :

BUREAU VERITAS HONG KONG LIMITED, EMC CENTRE

No. 2106-2107, 21/F., Westin Centre,
26 Hung To Road,
Kwun Tong, Kowloon,
Hong Kong

List of measuring equipment

Radiated Emission

EQUIPMENT	MANUFACTURER	MODEL NO.	SERIAL NO.	CAL. DATE	CAL. DUE DATE
EMI TEST RECEIVER	R&S	ESCI	100379	23-FEB-2016	22-FEB-2017
SIGNAL ANALYZER 40GHZ	R&S	FSV 40	100977	16-AUG-2016	15-AUG-2017
BILOG ANTENNA	SCHAFFNER	CBL6112D	25229	27-FEB-2016	26-FEB-2018
OPEN AREA TEST SITE	BVCPS	N/A	N/A	18-JUN-2016	17-JUN-2017
ANECHOIC CHAMBER	ALBATROSS	M-CDC	80374004499B	11-MAY-2016	10-MAY-2017
BICONICAL ANTENNA	R&S	HK116	100179	14-APR-2016	13-APR-2018
LOG-PERIODIC DIPOLE ARRAY ANTENNA	R&S	HL223	832369/001	07-APR-2016	06-APR-2018
LOOP ANTENNA	ETS-LINDGREN	6502	00102266	06-NOV-2015	05-NOV-2017
HORN ANTENNA (1-18GHZ)	SCHWARZBECK	BBHA9120D	9120D-692	05-NOV-2016	04-NOV-2018
HORN ANTENNA (7.5 – 18GHZ)	SCHWARZBECK	HWRD 750	00015	17-JUN-2016	16-JUN-2018
WIDEBAND HORN ANTENNA	STEATITE	QWH-SL-18-40-K-SG	12688	03-SEP-2015	02-SEP-2017
COAXIAL CABLE	SUHNER	N/A	N/A	07-JAN-2016	06-JAN-2017
COAXIAL CABLE	HUBER + SUHNER	RG214	N/A	04-OCT-2016	03-OCT-2017

Measurement Uncertainty

MEASUREMENT	FREQUENCY	UNCERTAINTY
Radiated emissions	9kHz to 30MHz	4.2dB
	30MHz to 200MHz	4.5dB
	200MHZ to 1GHz	5.6dB
	1GHz to 18GHz	4.7dB
	18GHz to 40GHz	5.2dB
Maximum Peak Conducted Output Power	30MHz to 18GHz	2.0dB

Remarks:-

N/A : Not Applicable or Not Available
The measurement instrumentation uncertainty would be taking into consideration on each of the test result

TEST REPORT No: (5217)009-0707

Equipment Under Test [EUT]

Description of Sample:

Model Name:	Mercury Glass Wireless Sphere by Valerie
Model Number:	11952
Additional Model Name:	--
Additional Model Number:	--
Additional Model information:	--
Rating:	120Va.c, 60Hz

Description of EUT Operation:

The Equipment Under Test (EUT) is a **MR. CHRISTMAS LTD.** of Remote Control Transceiver. It is a 1 button transceiver and operating at 2402MHz to 2480MHz. The lowest, middle and highest frequencies were tested and the results are shown in the report. The EUT transmit while received the corresponding signal, Modulation by IC, and type is GFSK.
There are total 79 channels and below is the frequency list :

2402	2403	2404	2405	2406	2407	2408	2409	2410	2411
2412	2413	1414	2415	2416	2417	2418	2419	2420	2421
2422	2423	2424	2425	2426	2427	2428	2429	2430	2431
2432	2433	2434	2435	2436	2437	2438	2439	2440	2441
2442	2443	2444	2445	2446	2447	2448	2449	2450	2451
2452	2453	2454	2455	2456	2457	2458	2459	2460	2461
2462	2463	2464	2465	2466	2467	2468	2469	2470	2471
2472	2473	2474	2475	2476	2477	2478	2479	2480	

The transmitter has different control:

1. ON/OFF button – power control

Antenna Requirement (Section 15.203)

The EUT is use of a permanently antenna. It is a PCB trace antanna. The antenna is not replaceable or user serviceable. The requirements of S15.203 are met. There are no deviations or exceptions to the specifications. Which gain is -0.68dBi.

Photo of Antenna

Test Results

Maximum Peak Conducted Output Power (Fundamental)

Test Requirement:	FCC Part 15 Section 15.247 (b)(1)
Test Method:	ANSI C63.10
Test Date(s):	2017-02-21
Temperature:	20.0 °C
Humidity:	63.0 %
Atmospheric Pressure:	100.7 kPa
Mode of Operation:	Transmission mode
Tested Voltage:	120Va.c., 60Hz

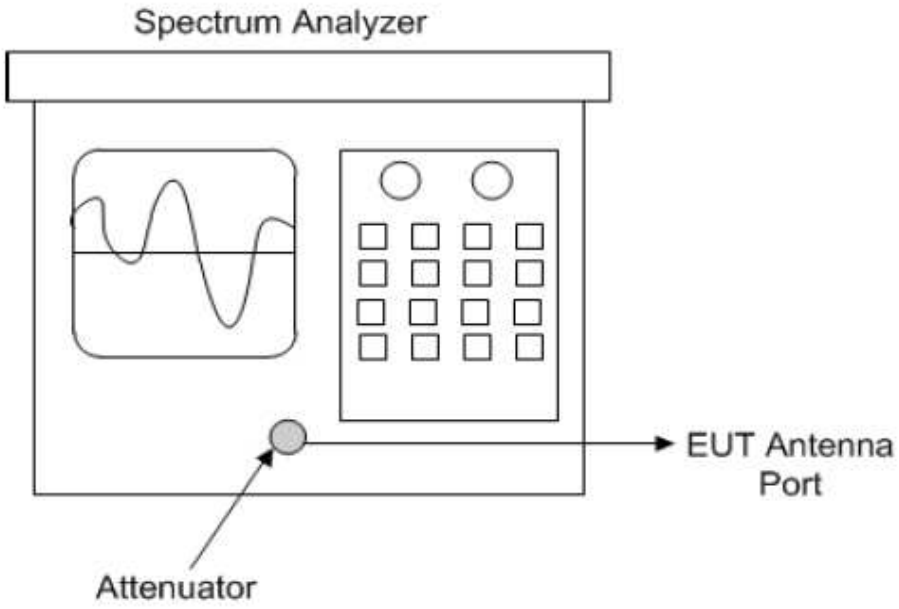
Test Procedure:

Maximum Peak Conducted Output Power measurements are investigated and taken pursuant to the procedures of ANSI C63.10 – 2013.

The RF output of the EUT was connected to spectrum analyser. All the attenuation or cable loss will be added to the measured maximum output power. The results are recorded in dBm.

Location: Room 2106, 26 Hung To Road, Kwun Tong, Kowloon, Hong Kong

Test Setup:



BUREAU VERITAS HONG KONG LIMITED – Kowloon Bay Office
1/F Pacific Trade Centre,
2 Kai Hing Road, Kowloon Bay,
Kowloon,HONG KONG
Tel: +852 2331 0888
Fax: +852 2331 0889
www.cps.bureauveritas.com

Limits for Maximum Peak Conducted Output Power of Fundamental [FCC 47CFR 15.247]:

Frequency Band of Fundamental [MHz]	Maximum Peak Conducted Output Power of Fundamental (Peak) [dBm]
2400-2483.5 (≥75 hopping channel)	30 (1 Watt)
2400-2483.5 (<75 hopping channel)	20 (0.125 Watt)

Measurement Data: DH5

Test Result of (Transmission mode): PASS

Frequency (MHz)	Maximum Conducted Output Power (dBm)	Maximum Conducted Output Power (Watt)	Limits (Watt)
2402	-11.40	0.000072	1
2441	-12.17	0.000060	1
2480	-12.96	0.000050	1

Measurement Data: 2DH5

Test Result of (Transmission mode): PASS

Frequency (MHz)	Maximum Conducted Output Power (dBm)	Maximum Conducted Output Power (Watt)	Limits (Watt)
2402	-12.34	0.000058	1
2441	-13.05	0.000049	1
2480	-13.91	0.000040	1

Measurement Data: 3DH5

Test Result of (Transmission mode): PASS

Frequency (MHz)	Maximum Conducted Output Power (dBm)	Maximum Conducted Output Power (Watt)	Limits (Watt)
2402	-12.03	0.000062	1
2441	-12.80	0.000052	1
2480	-13.57	0.000043	1

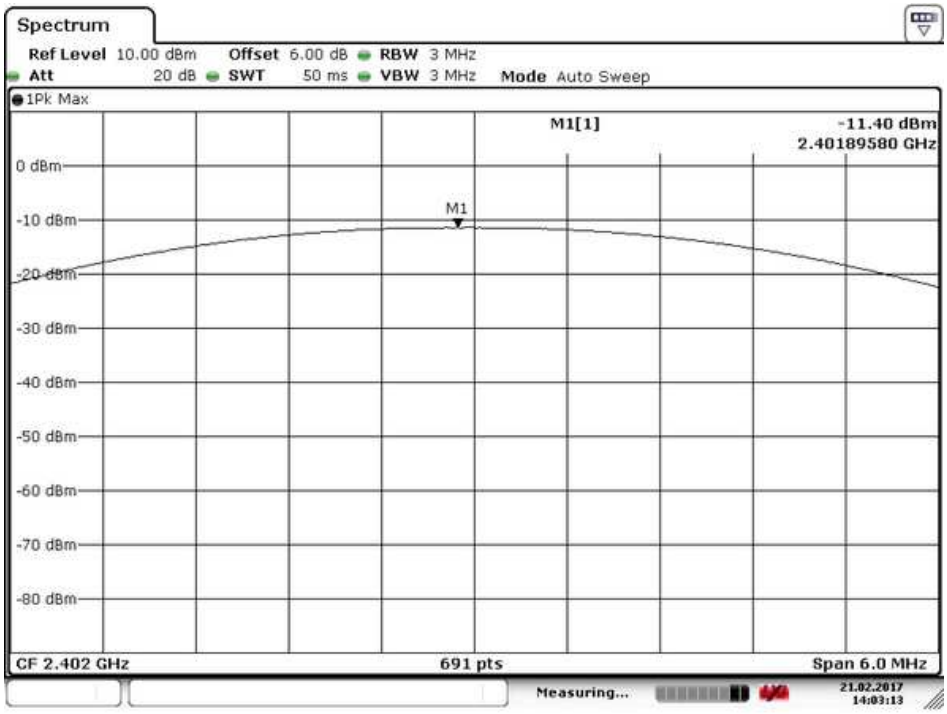
Note: includes Antenna Factor and Cable Loss.
Receiver setting: RBW = ≥ DTS bandwidth
VBW = 3 x RBW

BUREAU VERITAS HONG KONG LIMITED – Kowloon Bay Office
1/F Pacific Trade Centre,
2 Kai Hing Road, Kowloon Bay,
Kowloon,HONG KONG
Tel: +852 2331 0888
Fax: +852 2331 0889
www.cps.bureauveritas.com

TEST REPORT No: (5217)009-0707

Test Plot of the Maximum Conducted Output Power (Worst case)

Measurement Data: DH5



Date: 21.FEB.2017 14:03:13

Frequency (MHz)	Maximum Conducted Output Power (dBm)	Maximum Conducted Output Power (Watt)	Limits (Watt)
2402	-11.40	0.000072	1

Note: includes Antenna Factor and Cable Loss.
Receiver setting: RBW = ≥ DTS bandwidth
VBW = 3 x RBW

BUREAU VERITAS HONG KONG LIMITED – Kowloon Bay Office
1/F Pacific Trade Centre,
2 Kai Hing Road, Kowloon Bay,
Kowloon,HONG KONG
Tel: +852 2331 0888
Fax: +852 2331 0889
www.cps.bureauveritas.com

TEST REPORT No: (5217)009-0707

Spurious RF Conducted Emissions Test

Test Requirement:	FCC Part 15 Section 15.247 (d)
Test Method:	ANSI C63.10
Test Date(s):	2017-02-21
Temperature:	20.0 °C
Humidity:	63.0 %
Atmospheric Pressure:	100.7 kPa
Mode of Operation:	Transmission mode
Tested Voltage:	120Va.c., 60Hz

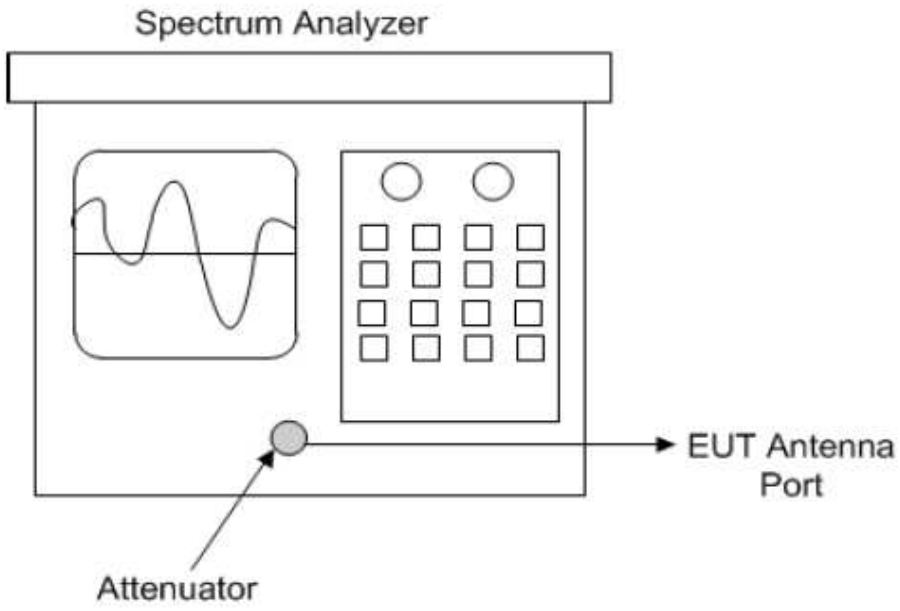
Test Procedure:

Spurious RF Conducted Emissions Test measurements are investigated and taken pursuant to the procedures of ANSI C63.10 – 2013.

The RF output of the EUT was connected to spectrum analyser. All the attenuation or cable loss will be added to the measured maximum output power. The results are recorded in dBm.

Location: Room 2106, 26 Hung To Road, Kwun Tong, Kowloon, Hong Kong

Test Setup:



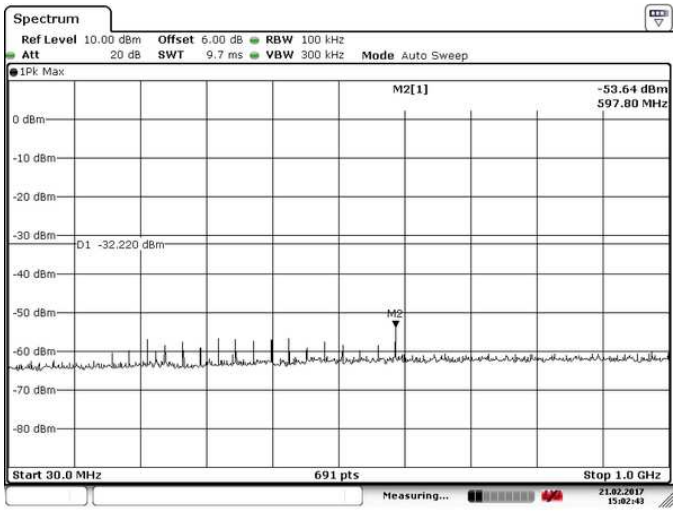
BUREAU VERITAS HONG KONG LIMITED – Kowloon Bay Office
1/F Pacific Trade Centre,
2 Kai Hing Road, Kowloon Bay,
Kowloon,HONG KONG
Tel: +852 2331 0888
Fax: +852 2331 0889
www.cps.bureauveritas.com

Limits for Spurious RF Conducted Emissions Test [FCC 47CFR 15.247]:

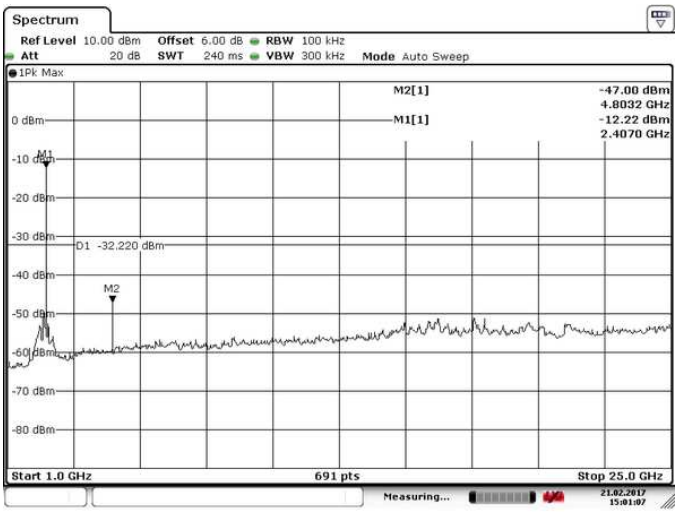
Frequency Range [MHz]	Limit [dBc]
30 - 25000	-20

Measurement Data: DH5

Test Result of (Transmission mode, Lowest frequency): PASS



Date: 21.FEB.2017 15:02:43



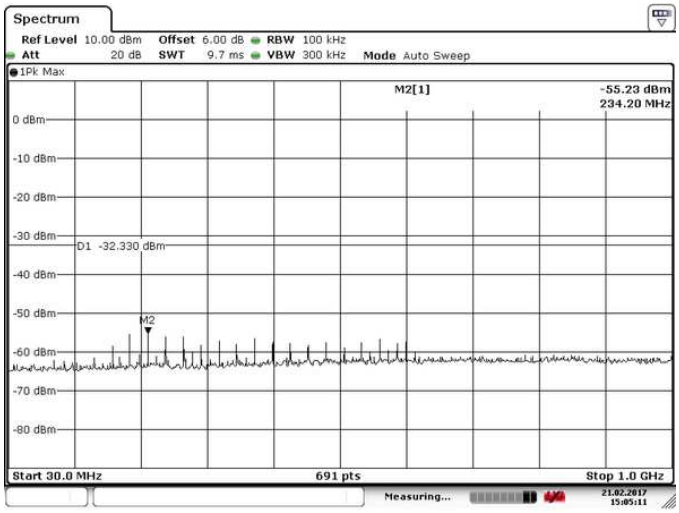
Date: 21.FEB.2017 15:01:07

BUREAU VERITAS HONG KONG LIMITED – Kowloon Bay Office
1/F Pacific Trade Centre,
2 Kai Hing Road, Kowloon Bay,
Kowloon,HONG KONG
Tel: +852 2331 0888
Fax: +852 2331 0889
www.cps.bureauveritas.com

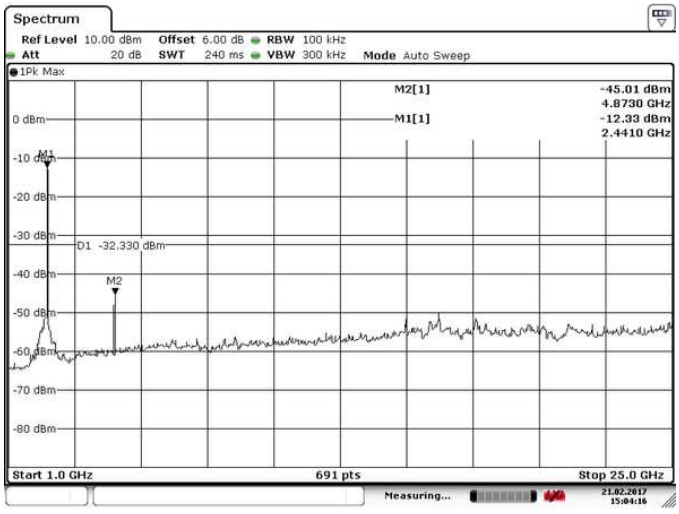
TEST REPORT No: (5217)009-0707

Measurement Data: DH5

Test Result of (Transmission mode, Middle frequency): PASS



Date: 21.FEB.2017 15:05:11

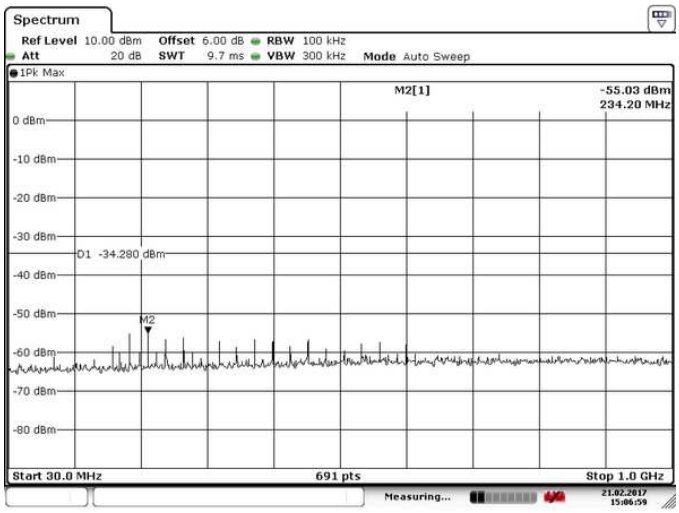


Date: 21.FEB.2017 15:04:17

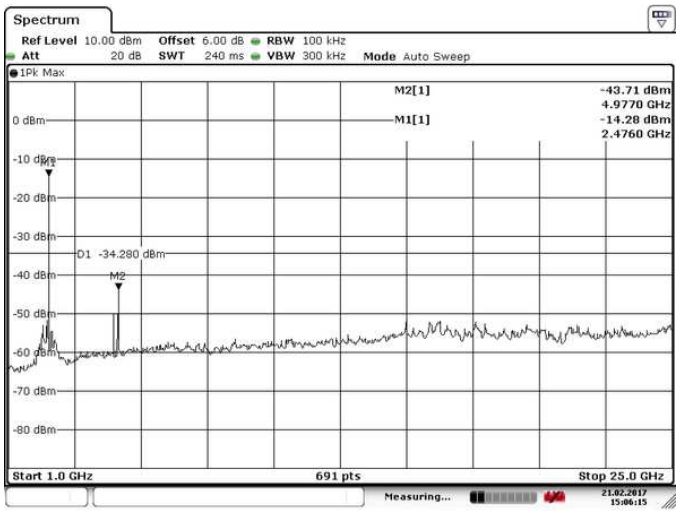
TEST REPORT No: (5217)009-0707

Measurement Data: DH5

Test Result of (Transmission mode, Highest frequency): PASS



Date: 21.FEB.2017 15:06:59



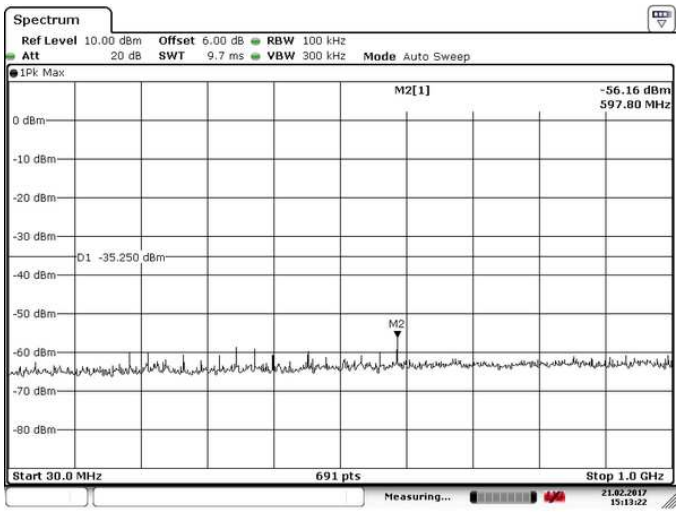
Date: 21.FEB.2017 15:06:15

BUREAU VERITAS HONG KONG LIMITED – Kowloon Bay Office
1/F Pacific Trade Centre,
2 Kai Hing Road, Kowloon Bay,
Kowloon,HONG KONG
Tel: +852 2331 0888
Fax: +852 2331 0889
www.cps.bureauveritas.com

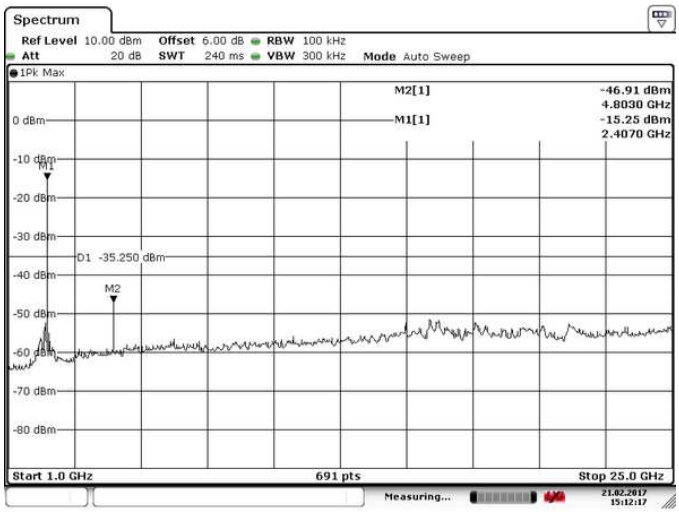
TEST REPORT No: (5217)009-0707

Measurement Data: 2DH5

Test Result of (Transmission mode, Lowest frequency): PASS



Date: 21.FEB.2017 15:13:22



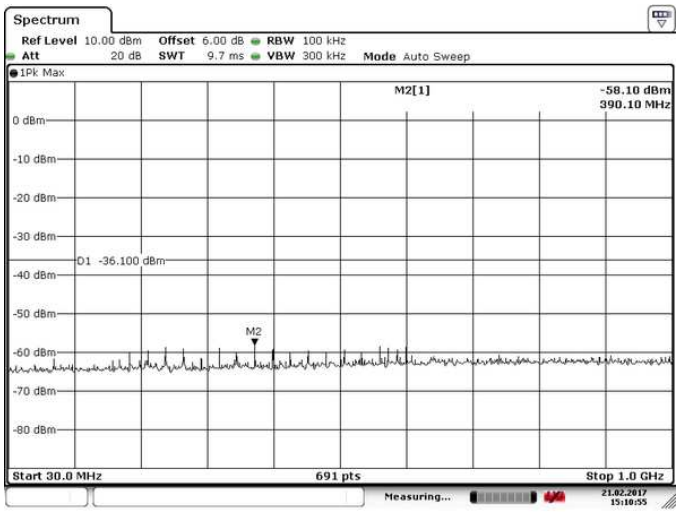
Date: 21.FEB.2017 15:12:17

BUREAU VERITAS HONG KONG LIMITED – Kowloon Bay Office
1/F Pacific Trade Centre,
2 Kai Hing Road, Kowloon Bay,
Kowloon,HONG KONG
Tel: +852 2331 0888
Fax: +852 2331 0889
www.cps.bureauveritas.com

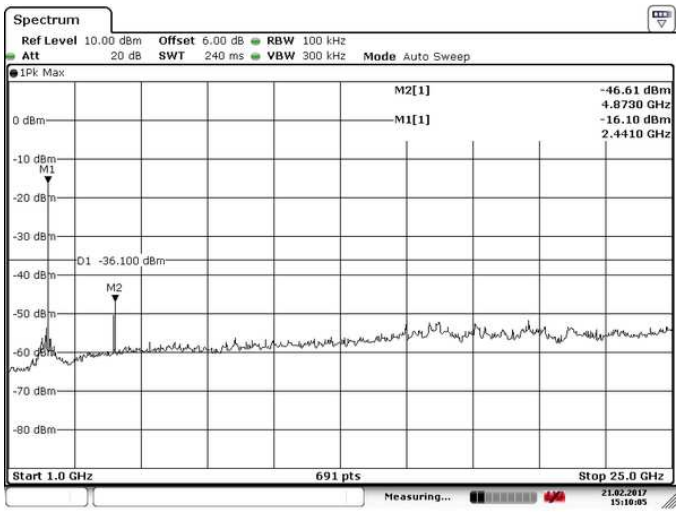
TEST REPORT No: (5217)009-0707

Measurement Data: 2DH5

Test Result of (Transmission mode, Middle frequency): PASS



Date: 21.FEB.2017 15:10:55



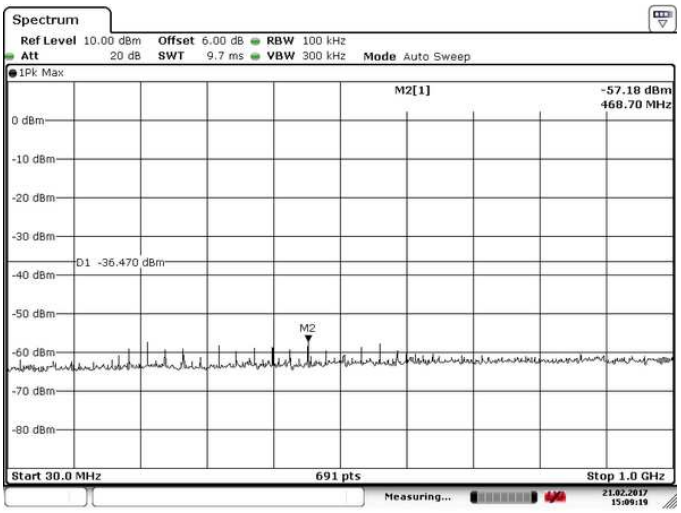
Date: 21.FEB.2017 15:10:06

BUREAU VERITAS HONG KONG LIMITED – Kowloon Bay Office
1/F Pacific Trade Centre,
2 Kai Hing Road, Kowloon Bay,
Kowloon,HONG KONG
Tel: +852 2331 0888
Fax: +852 2331 0889
www.cps.bureauveritas.com

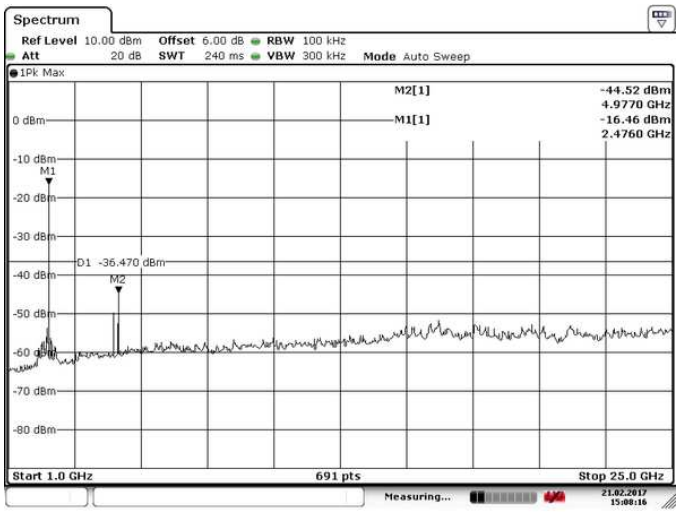
TEST REPORT No: (5217)009-0707

Measurement Data: 2DH5

Test Result of (Transmission mode, Highest frequency): PASS



Date: 21.FEB.2017 15:09:20



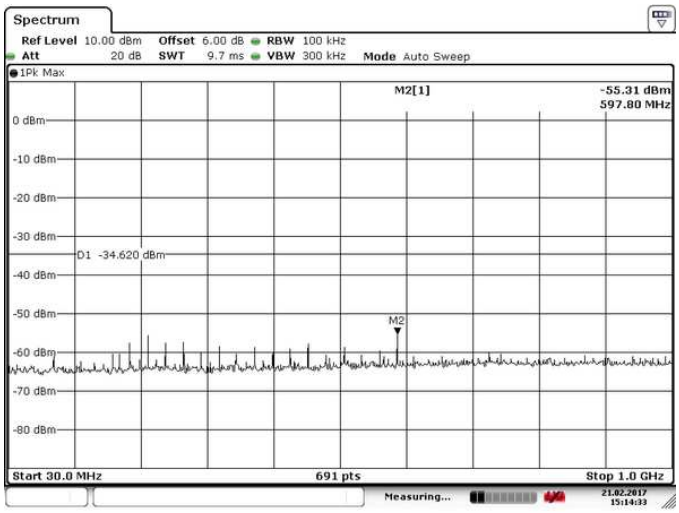
Date: 21.FEB.2017 15:08:16

BUREAU VERITAS HONG KONG LIMITED – Kowloon Bay Office
1/F Pacific Trade Centre,
2 Kai Hing Road, Kowloon Bay,
Kowloon,HONG KONG
Tel: +852 2331 0888
Fax: +852 2331 0889
www.cps.bureauveritas.com

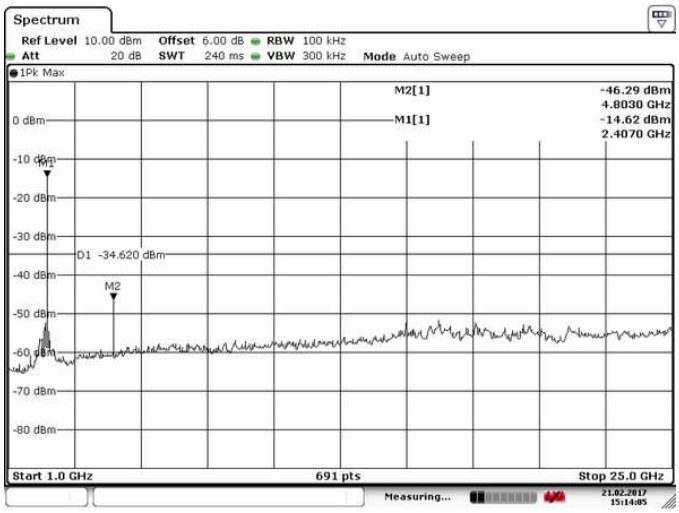
TEST REPORT No: (5217)009-0707

Measurement Data: 3DH5

Test Result of (Transmission mode, Lowest frequency): PASS



Date: 21.FEB.2017 15:14:33



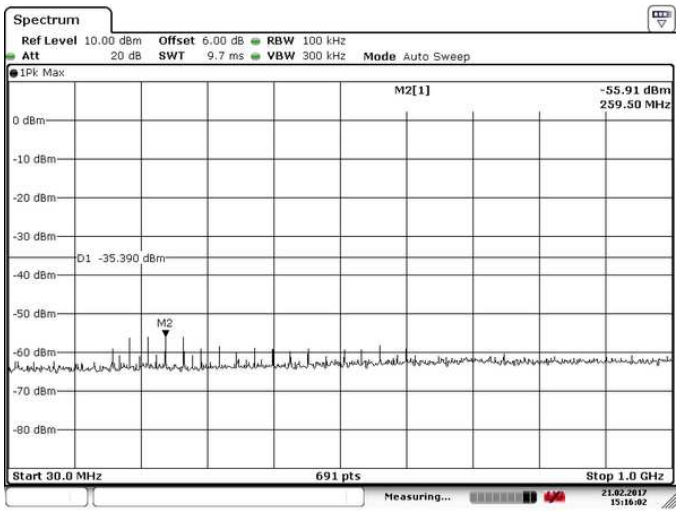
Date: 21.FEB.2017 15:14:06

BUREAU VERITAS HONG KONG LIMITED – Kowloon Bay Office
1/F Pacific Trade Centre,
2 Kai Hing Road, Kowloon Bay,
Kowloon,HONG KONG
Tel: +852 2331 0888
Fax: +852 2331 0889
www.cps.bureauveritas.com

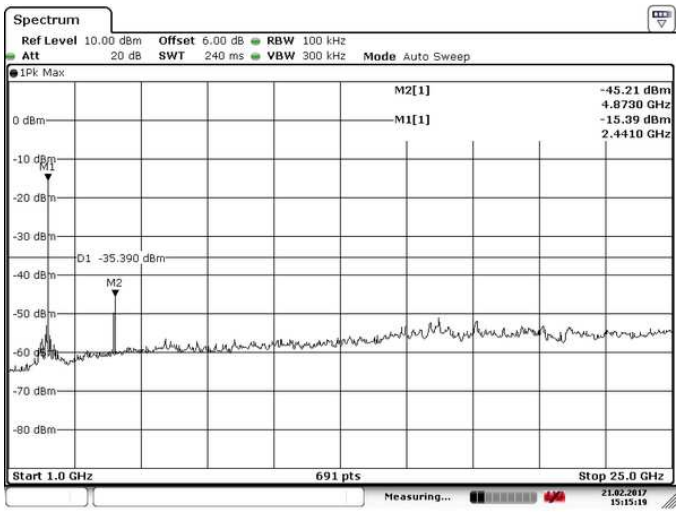
TEST REPORT No: (5217)009-0707

Measurement Data: 3DH5

Test Result of (Transmission mode, Middle frequency): PASS



Date: 21.FEB.2017 15:16:02



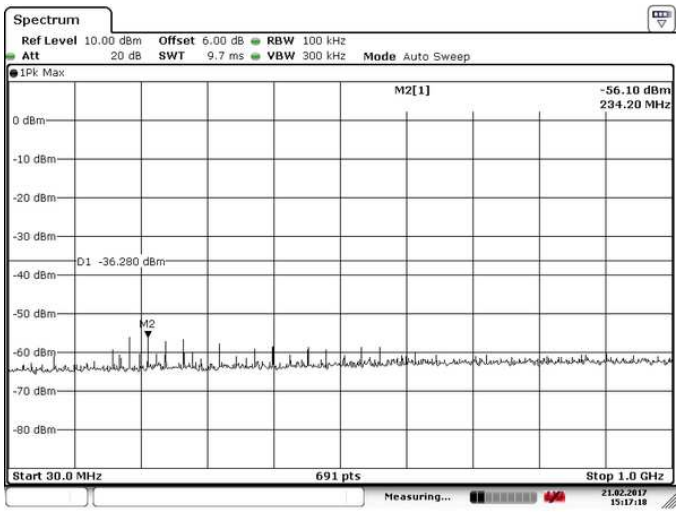
Date: 21.FEB.2017 15:15:20

BUREAU VERITAS HONG KONG LIMITED – Kowloon Bay Office
1/F Pacific Trade Centre,
2 Kai Hing Road, Kowloon Bay,
Kowloon,HONG KONG
Tel: +852 2331 0888
Fax: +852 2331 0889
www.cps.bureauveritas.com

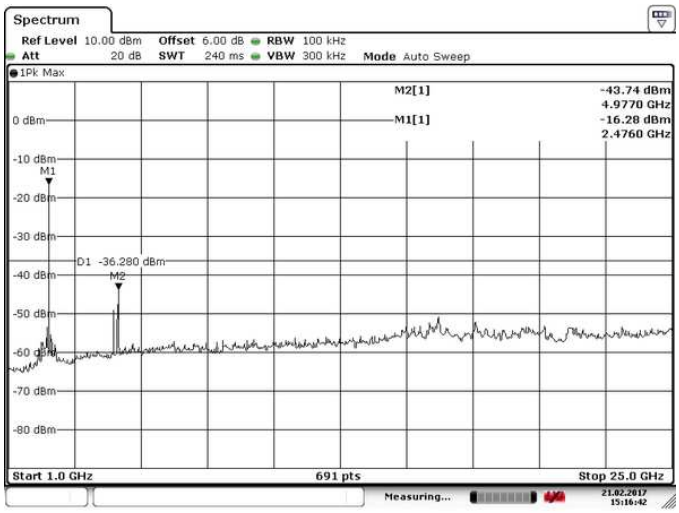
TEST REPORT No: (5217)009-0707

Measurement Data: 3DH5

Test Result of (Transmission mode, Highest frequency): PASS



Date: 21.FEB.2017 15:17:18



Date: 21.FEB.2017 15:16:41

BUREAU VERITAS HONG KONG LIMITED – Kowloon Bay Office
1/F Pacific Trade Centre,
2 Kai Hing Road, Kowloon Bay,
Kowloon,HONG KONG
Tel: +852 2331 0888
Fax: +852 2331 0889
www.cps.bureauveritas.com

TEST REPORT No: (5217)009-0707

Conducted Emissions (150kHz to 30MHz)

Test Requirement:	FCC Part 15 Section 15.207
Test Method:	ANSI C63.10
Test Limits:	Class B
Test Date(s):	2017-01-17
Temperature:	26.0 °C
Humidity:	50.0 %
Atmospheric Pressure:	100.9 kPa
Mode of Operation:	On mode
Tested Voltage:	120Va.c., 60Hz

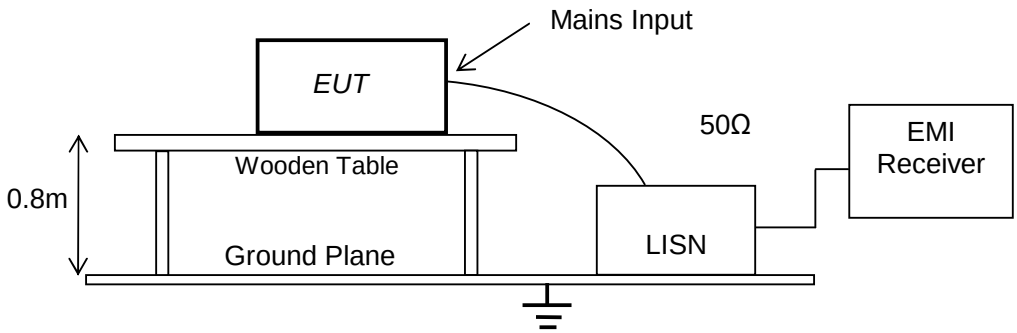
Test Method:

Conducted emissions measurements are investigated and also taken pursuant to the procedures of ANSI C63.10 – 2013. The EUT was setup as described in the procedures, and both lines were measured.

Initial measurements were performed in peak and average detection modes on the live and neutral line, any emissions recorded within 30dB of the relevant limit lines were re-measured using quasi-peak and average detection on the live and neutral lines with the worst case recorded in the table of results.

Location: No. 603, 6/F., Westin Centre, 26 Hung To Road, Kwun Tong, Kowloon, Hong Kong

Test Setup: Shielding Room



BUREAU VERITAS HONG KONG LIMITED – Kowloon Bay Office
1/F Pacific Trade Centre,
2 Kai Hing Road, Kowloon Bay,
Kowloon,HONG KONG
Tel: +852 2331 0888
Fax: +852 2331 0889
www.cps.bureauveritas.com

TEST REPORT No: (5217)009-0707

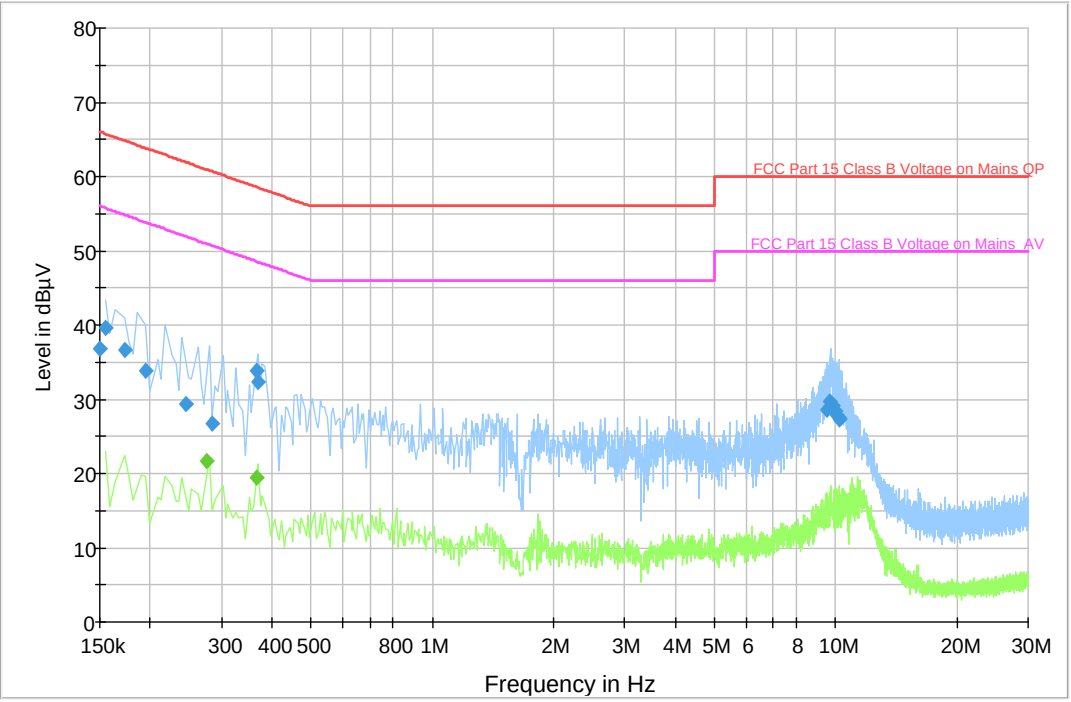
Measurement Data: Live

Test Result of (On mode): PASS

Results and limit lines for Conducted Emission:

Limits for Conducted Emission Test, please refer to limit lines (Quasi-Peak and Average) in the following diagram.

FCC Part 15 Class B Voltage



BUREAU VERITAS HONG KONG LIMITED – Kowloon Bay Office
1/F Pacific Trade Centre,
2 Kai Hing Road, Kowloon Bay,
Kowloon,HONG KONG
Tel: +852 2331 0888
Fax: +852 2331 0889
www.cps.bureauveritas.com

Results and limit lines for Conducted Emission:

Limits for Conducted Emission Test, please refer to limit lines (Quasi-Peak and Average) in the following tables.

Frequency (MHz)	QuasiPeak (dBµV)	Bandwidth (kHz)	Line	Margin (dB)	Limit (dBµV)
0.150000	36.8	9.000	L1	-29.2	66.0
0.154500	39.7	9.000	L1	-26.1	65.8
0.172500	36.6	9.000	L1	-28.2	64.8
0.195000	33.9	9.000	L1	-29.9	63.8
0.244500	29.3	9.000	L1	-32.6	61.9
0.285000	26.7	9.000	L1	-34.0	60.7
0.366000	33.8	9.000	L1	-24.8	58.6
0.370500	32.3	9.000	L1	-26.2	58.5
9.514500	28.6	9.000	L1	-31.4	60.0
9.699000	29.8	9.000	L1	-30.2	60.0
9.798000	29.2	9.000	L1	-30.8	60.0
10.014000	28.4	9.000	L1	-31.6	60.0
10.045500	27.9	9.000	L1	-32.1	60.0
10.180500	27.5	9.000	L1	-32.5	60.0
10.230000	27.3	9.000	L1	-32.7	60.0

Frequency (MHz)	Average (dBµV)	Bandwidth (kHz)	Line	Margin (dB)	Limit (dBµV)
0.276000	21.6	9.000	L1	-29.3	50.9
0.366000	19.5	9.000	L1	-29.1	48.6

BUREAU VERITAS HONG KONG LIMITED – Kowloon Bay Office
1/F Pacific Trade Centre,
2 Kai Hing Road, Kowloon Bay,
Kowloon,HONG KONG
Tel: +852 2331 0888
Fax: +852 2331 0889
www.cps.bureauveritas.com

TEST REPORT No: (5217)009-0707

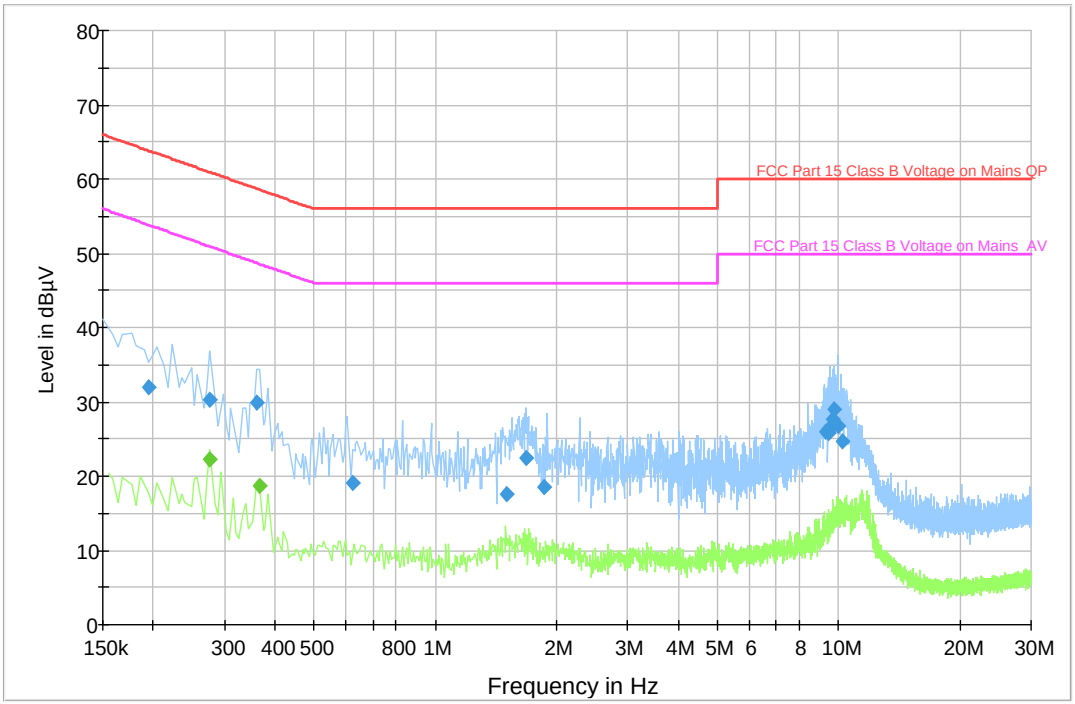
Measurement Data: Neutral

Test Result of (On mode): PASS

Results and limit lines for Conducted Emission:

Limits for Conducted Emission Test, please refer to limit lines (Quasi-Peak and Average) in the following diagram.

FCC Part 15 Class B Voltage



BUREAU VERITAS HONG KONG LIMITED – Kowloon Bay Office
1/F Pacific Trade Centre,
2 Kai Hing Road, Kowloon Bay,
Kowloon,HONG KONG
Tel: +852 2331 0888
Fax: +852 2331 0889
www.cps.bureauveritas.com

TEST REPORT No: (5217)009-0707
Results and limit lines for Conducted Emission:

Limits for Conducted Emission Test, please refer to limit lines (Quasi-Peak and Average) in the following tables.

Frequency (MHz)	QuasiPeak (dBµV)	Bandwidth (kHz)	Line	Margin (dB)	Limit (dBµV)
0.195000	32.0	9.000	N	-31.8	63.8
0.276000	30.3	9.000	N	-30.6	60.9
0.361500	30.0	9.000	N	-28.7	58.7
0.622500	19.1	9.000	N	-36.9	56.0
1.509000	17.5	9.000	N	-38.5	56.0
1.680000	22.4	9.000	N	-33.6	56.0
1.864500	18.6	9.000	N	-37.4	56.0
9.258000	26.0	9.000	N	-34.0	60.0
9.415500	25.8	9.000	N	-34.2	60.0
9.474000	26.1	9.000	N	-33.9	60.0
9.537000	26.5	9.000	N	-33.5	60.0
9.672000	27.6	9.000	N	-32.4	60.0
9.735000	28.9	9.000	N	-31.1	60.0
9.946500	26.7	9.000	N	-33.3	60.0
10.194000	24.8	9.000	N	-35.2	60.0

Frequency (MHz)	Average (dBµV)	Bandwidth (kHz)	Line	Margin (dB)	Limit (dBµV)
0.276000	22.3	9.000	N	-28.6	50.9
0.366000	18.8	9.000	N	-29.8	48.6

BUREAU VERITAS HONG KONG LIMITED – Kowloon Bay Office
1/F Pacific Trade Centre,
2 Kai Hing Road, Kowloon Bay,
Kowloon,HONG KONG
Tel: +852 2331 0888
Fax: +852 2331 0889
www.cps.bureauveritas.com

TEST REPORT No: (5217)009-0707

Radiated Emissions (9kHz – 40GHz)

Test Requirement:	FCC Part 15 Section 15.209
Test Method:	ANSI C63.10
Test Date(s):	2017-01-26
Temperature:	20.0 °C
Humidity:	63.0 %
Atmospheric Pressure:	100.7 kPa
Mode of Operation:	On mode & Transmission mode
Tested Voltage:	120Va.c., 60Hz

Limits for Radiated Emissions [FCC 47 CFR 15.209]:

Frequency Range [MHz]	Quasi-Peak Limits [μV/m]	Measurement Distance m
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30	30	30
30-88	100	3
88-216	150	3
216-960	200	3
Above960	500	3

Measurement Data

Test Result of (On mode): PASS

Detection mode: Quasi-Peak

Frequency	Polarity (H/V)	Field Strength	Limit	Margin (dB)
Emissions detected are more than 20 dB below the limit line(s) in 9kHz to 30MHz				

Note: Field Strength includes Antenna Factor and Cable Loss.

Receiver setting: RBW = 200Hz
VBW = 200Hz

TEST REPORT No: (5217)009-0707

Measurement Data

Test Result of (On mode): PASS

Detection mode: Quasi-Peak

Frequency (MHz)	Polarity (H/V)	Field Strength at 3m (dBµV/m)	Limit at 3m (dBµV/m)	Margin (dB)
109.84	H	24.5	43.5	-19.0
124.24	H	25.1	43.5	-18.4
160.20	H	26.4	43.5	-17.1
185.64	H	26.8	43.5	-16.7
214.80	H	27.1	43.5	-16.4
287.60	H	30.5	46.0	-15.5

Frequency (MHz)	Polarity (H/V)	Field Strength at 3m (dBµV/m)	Limit at 3m (dBµV/m)	Margin (dB)
109.84	V	24.7	43.5	-18.8
124.24	V	29.9	43.5	-13.6
160.20	V	30.2	43.5	-13.3
185.64	V	28.1	43.5	-15.4
214.80	V	26.0	43.5	-17.5
287.60	V	28.5	46.0	-17.5

Note: Field Strength includes Antenna Factor and Cable Loss.

Receiver setting: RBW = 120KHz
VBW = 120KHz

BUREAU VERITAS HONG KONG LIMITED – Kowloon Bay Office
1/F Pacific Trade Centre,
2 Kai Hing Road, Kowloon Bay,
Kowloon,HONG KONG
Tel: +852 2331 0888
Fax: +852 2331 0889
www.cps.bureauveritas.com

TEST REPORT No: (5217)009-0707

Measurement Data: DH5

Test Result of (Transmission mode, Lowest frequency): PASS

Frequency (MHz)	Polarity (H/V)	Antenna Factor & Cable Loss (dB/m)	Duty-cycle correction (dB)	Field Strength at 3m – Peak (dBµV/m)	Limit at 3m – Peak (dBµV/m)	Margin - Peak (dB)	Field Strength at 3m – Average (dBµV/m)	Limit at 3m – Average (dBµV/m)	Margin - Average (dB)
2393.00	H	-4.0	-24.3	52.0	74.0	-22.0	**27.7	54.0	-26.3
4804.00	H	3.4	-24.3	57.0	74.0	-17.0	**32.7	54.0	-21.3
7206.00	H	11.9	-24.3	42.5	74.0	-31.5	**18.2	54.0	-35.8
9608.00	H	14.1	-24.3	40.9	74.0	-33.1	**16.6	54.0	-37.4
12010.00	H	18.6	-24.3	44.1	74.0	-29.9	**19.8	54.0	-34.2
14412.00	H	25.6	-24.3	46.5	74.0	-27.5	**22.2	54.0	-31.8
16814.00	H	22.3	-24.3	43.6	74.0	-30.4	**19.3	54.0	-34.7
19216.00	H	46.7	-24.3	51.9	74.0	-22.1	**27.6	54.0	-26.4
21618.00	H	46.9	-24.3	50.0	74.0	-24.0	**25.7	54.0	-28.3
24020.00	H	48.0	-24.3	51.3	74.0	-22.7	**27.0	54.0	-27.0
26422.00	H	48.5	-24.3	52.3	74.0	-21.7	**28.0	54.0	-26.0

For pulse modulated devices and using measuring equipment employing a peak detection mode, properly adjusted for such factor as pulse desensitisation.
**Duty Cycle Correction = 20Log(0.06086) = -24.3dB.

Note: Field Strength includes Antenna Factor and Cable Loss.
Receiver setting: RBW = 1MHz
VBW = 1MHz

BUREAU VERITAS HONG KONG LIMITED – Kowloon Bay Office
1/F Pacific Trade Centre,
2 Kai Hing Road, Kowloon Bay,
Kowloon,HONG KONG
Tel: +852 2331 0888
Fax: +852 2331 0889
www.cps.bureauveritas.com

TEST REPORT No: (5217)009-0707

Measurement Data: DH5

Test Result of (Transmission mode, Lowest frequency): PASS

Frequency (MHz)	Polarity (H/V)	Antenna Factor & Cable Loss (dB/m)	Duty-cycle correction (dB)	Field Strength at 3m – Peak (dBµV/m)	Limit at 3m – Peak (dBµV/m)	Margin - Peak (dB)	Field Strength at 3m – Average (dBµV/m)	Limit at 3m – Average (dBµV/m)	Margin - Average (dB)
2393.00	V	-4.0	-24.3	60.2	74.0	-13.8	**35.9	54.0	-18.1
4804.00	V	3.4	-24.3	53.8	74.0	-20.2	**29.5	54.0	-24.5
7206.00	V	11.9	-24.3	42.9	74.0	-31.1	**18.6	54.0	-35.4
9608.00	V	14.1	-24.3	42.0	74.0	-32.0	**17.7	54.0	-36.3
12010.00	V	18.6	-24.3	44.5	74.0	-29.5	**20.2	54.0	-33.8
14412.00	V	25.6	-24.3	45.3	74.0	-28.7	**21.0	54.0	-33.0
16814.00	V	22.3	-24.3	45.0	74.0	-29.0	**20.7	54.0	-33.3
19216.00	V	46.7	-24.3	51.6	74.0	-22.4	**27.3	54.0	-26.7
21618.00	V	46.9	-24.3	49.0	74.0	-25.0	**24.7	54.0	-29.3
24020.00	V	48.0	-24.3	51.8	74.0	-22.2	**27.5	54.0	-26.5
26422.00	V	48.5	-24.3	53.3	74.0	-20.7	**29.0	54.0	-25.0

For pulse modulated devices and using measuring equipment employing a peak detection mode, properly adjusted for such factor as pulse desensitisation.
**Duty Cycle Correction = 20Log(0.06086) = -24.3dB.

Note: Field Strength includes Antenna Factor and Cable Loss.
Receiver setting: RBW = 1MHz
VBW = 1MHz

TEST REPORT No: (5217)009-0707

Measurement Data: DH5

Test Result of (Transmission mode, Middle frequency): PASS

Frequency (MHz)	Polarity (H/V)	Antenna Factor & Cable Loss (dB/m)	Duty-cycle correction (dB)	Field Strength at 3m – Peak (dBµV/m)	Limit at 3m – Peak (dBµV/m)	Margin - Peak (dB)	Field Strength at 3m – Average (dBµV/m)	Limit at 3m – Average (dBµV/m)	Margin - Average (dB)
4882.00	H	3.4	-24.3	58.1	74.0	-15.9	**33.8	54.0	-20.2
7323.00	H	11.9	-24.3	41.6	74.0	-32.4	**17.3	54.0	-36.7
9764.00	H	14.4	-24.3	43.5	74.0	-30.5	**19.2	54.0	-34.8
12205.00	H	18.5	-24.3	44.0	74.0	-30.0	**19.7	54.0	-34.3
14646.00	H	27.9	-24.3	45.8	74.0	-28.2	**21.5	54.0	-32.5
17087.00	H	24.9	-24.3	45.2	74.0	-28.8	**20.9	54.0	-33.1
19528.00	H	46.7	-24.3	51.0	74.0	-23.0	**26.7	54.0	-27.3
21969.00	H	47.3	-24.3	50.3	74.0	-23.7	**26.0	54.0	-28.0
24410.00	H	48.2	-24.3	51.2	74.0	-22.8	**26.9	54.0	-27.1
26851.00	H	48.5	-24.3	52.8	74.0	-21.2	**28.5	54.0	-25.5

For pulse modulated devices and using measuring equipment employing a peak detection mode, properly adjusted for such factor as pulse desensitisation.
**Duty Cycle Correction = 20Log(0.06086) = -24.3dB.

Note: Field Strength includes Antenna Factor and Cable Loss.
Receiver setting: RBW = 1MHz
VBW = 1MHz

BUREAU VERITAS HONG KONG LIMITED – Kowloon Bay Office
1/F Pacific Trade Centre,
2 Kai Hing Road, Kowloon Bay,
Kowloon,HONG KONG
Tel: +852 2331 0888
Fax: +852 2331 0889
www.cps.bureauveritas.com

TEST REPORT No: (5217)009-0707

Measurement Data: DH5

Test Result of (Transmission mode, Middle frequency): PASS

Frequency (MHz)	Polarity (H/V)	Antenna Factor & Cable Loss (dB/m)	Duty-cycle correction (dB)	Field Strength at 3m – Peak (dBµV/m)	Limit at 3m – Peak (dBµV/m)	Margin - Peak (dB)	Field Strength at 3m – Average (dBµV/m)	Limit at 3m – Average (dBµV/m)	Margin - Average (dB)
4882.00	V	3.4	-24.3	56.5	74.0	-17.5	**32.2	54.0	-21.8
7323.00	V	11.9	-24.3	42.2	74.0	-31.8	**17.9	54.0	-36.1
9764.00	V	14.4	-24.3	43.5	74.0	-30.5	**19.2	54.0	-34.8
12205.00	V	18.5	-24.3	43.9	74.0	-30.1	**19.6	54.0	-34.4
14646.00	V	27.9	-24.3	45.2	74.0	-28.8	**20.9	54.0	-33.1
17087.00	V	24.9	-24.3	46.3	74.0	-27.7	**22.0	54.0	-32.0
19528.00	V	46.7	-24.3	51.6	74.0	-22.4	**27.3	54.0	-26.7
21969.00	V	47.3	-24.3	49.8	74.0	-24.2	**25.5	54.0	-28.5
24410.00	V	48.2	-24.3	51.3	74.0	-22.7	**27.0	54.0	-27.0
26851.00	V	48.5	-24.3	53.6	74.0	-20.4	**29.3	54.0	-24.7

For pulse modulated devices and using measuring equipment employing a peak detection mode, properly adjusted for such factor as pulse desensitisation.
**Duty Cycle Correction = 20Log(0.06086) = -24.3dB.

Note: Field Strength includes Antenna Factor and Cable Loss.
Receiver setting: RBW = 1MHz
VBW = 1MHz

BUREAU VERITAS HONG KONG LIMITED – Kowloon Bay Office
1/F Pacific Trade Centre,
2 Kai Hing Road, Kowloon Bay,
Kowloon,HONG KONG
Tel: +852 2331 0888
Fax: +852 2331 0889
www.cps.bureauveritas.com

TEST REPORT No: (5217)009-0707

Measurement Data: DH5

Test Result of (Transmission mode, Highest frequency): PASS

Frequency (MHz)	Polarity (H/V)	Antenna Factor & Cable Loss (dB/m)	Duty-cycle correction (dB)	Field Strength at 3m – Peak (dBµV/m)	Limit at 3m – Peak (dBµV/m)	Margin - Peak (dB)	Field Strength at 3m – Average (dBµV/m)	Limit at 3m – Average (dBµV/m)	Margin - Average (dB)
2483.50	H	-4.0	-24.3	49.4	74.0	-24.6	**25.1	54.0	-28.9
4960.00	H	3.5	-24.3	60.8	74.0	-13.2	**36.5	54.0	-17.5
7440.00	H	11.9	-24.3	40.2	74.0	-33.8	**15.9	54.0	-38.1
9920.00	H	14.5	-24.3	40.8	74.0	-33.2	**16.5	54.0	-37.5
12400.00	H	18.2	-24.3	42.5	74.0	-31.5	**18.2	54.0	-35.8
14880.00	H	27.3	-24.3	47.4	74.0	-26.6	**23.1	54.0	-30.9
17360.00	H	26.3	-24.3	45.6	74.0	-28.4	**21.3	54.0	-32.7
19840.00	H	46.8	-24.3	47.4	74.0	-26.6	**23.1	54.0	-30.9
22320.00	H	47.3	-24.3	49.2	74.0	-24.8	**24.9	54.0	-29.1
24800.00	H	48.2	-24.3	51.8	74.0	-22.2	**27.5	54.0	-26.5
27280.00	H	48.7	-24.3	53.6	74.0	-20.4	**29.3	54.0	-24.7

For pulse modulated devices and using measuring equipment employing a peak detection mode, properly adjusted for such factor as pulse desensitisation.
**Duty Cycle Correction = 20Log(0.06086) = -24.3dB.

Note: Field Strength includes Antenna Factor and Cable Loss.
Receiver setting: RBW = 1MHz
VBW = 1MHz

TEST REPORT No: (5217)009-0707

Measurement Data: DH5

Test Result of (Transmission mode, Highest frequency): PASS

Frequency (MHz)	Polarity (H/V)	Antenna Factor & Cable Loss (dB/m)	Duty-cycle correction (dB)	Field Strength at 3m – Peak (dBµV/m)	Limit at 3m – Peak (dBµV/m)	Margin - Peak (dB)	Field Strength at 3m – Average (dBµV/m)	Limit at 3m – Average (dBµV/m)	Margin - Average (dB)
2483.50	V	-4.0	-24.3	50.1	74.0	-23.9	**25.8	54.0	-28.2
4960.00	V	3.5	-24.3	58.3	74.0	-15.7	**34.0	54.0	-20.0
7440.00	V	11.9	-24.3	41.6	74.0	-32.4	**17.3	54.0	-36.7
9920.00	V	14.5	-24.3	41.4	74.0	-32.6	**17.1	54.0	-36.9
12400.00	V	18.2	-24.3	43.5	74.0	-30.5	**19.2	54.0	-34.8
14880.00	V	27.3	-24.3	46.6	74.0	-27.4	**22.3	54.0	-31.7
17360.00	V	26.3	-24.3	45.9	74.0	-28.1	**21.6	54.0	-32.4
19840.00	V	46.8	-24.3	48.0	74.0	-26.0	**23.7	54.0	-30.3
22320.00	V	47.3	-24.3	51.2	74.0	-22.8	**26.9	54.0	-27.1
24800.00	V	48.2	-24.3	52.9	74.0	-21.1	**28.6	54.0	-25.4
27280.00	V	48.7	-24.3	53.2	74.0	-20.8	**28.9	54.0	-25.1

For pulse modulated devices and using measuring equipment employing a peak detection mode, properly adjusted for such factor as pulse desensitisation.
**Duty Cycle Correction = 20Log(0.06086) = -24.3dB.

Note: Field Strength includes Antenna Factor and Cable Loss.
Receiver setting: RBW = 1MHz
VBW = 1MHz

BUREAU VERITAS HONG KONG LIMITED – Kowloon Bay Office
1/F Pacific Trade Centre,
2 Kai Hing Road, Kowloon Bay,
Kowloon,HONG KONG
Tel: +852 2331 0888
Fax: +852 2331 0889
www.cps.bureauveritas.com

TEST REPORT No: (5217)009-0707

Measurement Data: 2DH5

Test Result of (Transmission mode, Lowest frequency): PASS

Frequency (MHz)	Polarity (H/V)	Antenna Factor & Cable Loss (dB/m)	Duty-cycle correction (dB)	Field Strength at 3m – Peak (dBµV/m)	Limit at 3m – Peak (dBµV/m)	Margin - Peak (dB)	Field Strength at 3m – Average (dBµV/m)	Limit at 3m – Average (dBµV/m)	Margin - Average (dB)
2393.00	H	-4.0	-24.3	50.8	74.0	-23.2	**26.5	54.0	-27.5
4804.00	H	3.4	-24.3	56.2	74.0	-17.8	**31.9	54.0	-22.1
7206.00	H	11.9	-24.3	42.3	74.0	-31.7	**18.0	54.0	-36.0
9608.00	H	14.1	-24.3	40.7	74.0	-33.3	**16.4	54.0	-37.6
12010.00	H	18.6	-24.3	44.2	74.0	-29.8	**19.9	54.0	-34.1
14412.00	H	25.6	-24.3	46.8	74.0	-27.2	**22.5	54.0	-31.5
16814.00	H	22.3	-24.3	43.8	74.0	-30.2	**19.5	54.0	-34.5
19216.00	H	46.7	-24.3	51.8	74.0	-22.2	**27.5	54.0	-26.5
21618.00	H	46.9	-24.3	49.8	74.0	-24.2	**25.5	54.0	-28.5
24020.00	H	48.0	-24.3	51.1	74.0	-22.9	**26.8	54.0	-27.2
26422.00	H	48.5	-24.3	52.9	74.0	-21.1	**28.6	54.0	-25.4

For pulse modulated devices and using measuring equipment employing a peak detection mode, properly adjusted for such factor as pulse desensitisation.
**Duty Cycle Correction = 20Log(0.06086) = -24.3dB.

Note: Field Strength includes Antenna Factor and Cable Loss.
Receiver setting: RBW = 1MHz
VBW = 1MHz

TEST REPORT No: (5217)009-0707

Measurement Data: 2DH5

Test Result of (Transmission mode, Lowest frequency): PASS

Frequency (MHz)	Polarity (H/V)	Antenna Factor & Cable Loss (dB/m)	Duty-cycle correction (dB)	Field Strength at 3m – Peak (dBµV/m)	Limit at 3m – Peak (dBµV/m)	Margin - Peak (dB)	Field Strength at 3m – Average (dBµV/m)	Limit at 3m – Average (dBµV/m)	Margin - Average (dB)
2393.00	V	-4.0	-24.3	58.9	74.0	-15.1	**34.6	54.0	-19.4
4804.00	V	3.4	-24.3	53.1	74.0	-20.9	**28.8	54.0	-25.2
7206.00	V	11.9	-24.3	42.6	74.0	-31.4	**18.3	54.0	-35.7
9608.00	V	14.1	-24.3	42.2	74.0	-31.8	**17.9	54.0	-36.1
12010.00	V	18.6	-24.3	44.1	74.0	-29.9	**19.8	54.0	-34.2
14412.00	V	25.6	-24.3	46.0	74.0	-28.0	**21.7	54.0	-32.3
16814.00	V	22.3	-24.3	45.4	74.0	-28.6	**21.1	54.0	-32.9
19216.00	V	46.7	-24.3	51.7	74.0	-22.3	**27.4	54.0	-26.6
21618.00	V	46.9	-24.3	48.6	74.0	-25.4	**24.3	54.0	-29.7
24020.00	V	48.0	-24.3	52.0	74.0	-22.0	**27.7	54.0	-26.3
26422.00	V	48.5	-24.3	53.6	74.0	-20.4	**29.3	54.0	-24.7

For pulse modulated devices and using measuring equipment employing a peak detection mode, properly adjusted for such factor as pulse desensitisation.
**Duty Cycle Correction = 20Log(0.06086) = -24.3dB.

Note: Field Strength includes Antenna Factor and Cable Loss.
Receiver setting: RBW = 1MHz
VBW = 1MHz

BUREAU VERITAS HONG KONG LIMITED – Kowloon Bay Office
1/F Pacific Trade Centre,
2 Kai Hing Road, Kowloon Bay,
Kowloon,HONG KONG
Tel: +852 2331 0888
Fax: +852 2331 0889
www.cps.bureauveritas.com

TEST REPORT No: (5217)009-0707

Measurement Data: 2DH5

Test Result of (Transmission mode, Middle frequency): PASS

Frequency (MHz)	Polarity (H/V)	Antenna Factor & Cable Loss (dB/m)	Duty-cycle correction (dB)	Field Strength at 3m – Peak (dBµV/m)	Limit at 3m – Peak (dBµV/m)	Margin - Peak (dB)	Field Strength at 3m – Average (dBµV/m)	Limit at 3m – Average (dBµV/m)	Margin - Average (dB)
4882.00	H	3.4	-24.3	56.7	74.0	-17.3	**32.4	54.0	-21.6
7323.00	H	11.9	-24.3	41.3	74.0	-32.7	**17.0	54.0	-37.0
9764.00	H	14.4	-24.3	42.7	74.0	-31.3	**18.4	54.0	-35.6
12205.00	H	18.5	-24.3	44.1	74.0	-29.9	**19.8	54.0	-34.2
14646.00	H	27.9	-24.3	46.0	74.0	-28.0	**21.7	54.0	-32.3
17087.00	H	24.9	-24.3	44.3	74.0	-29.7	**20.0	54.0	-34.0
19528.00	H	46.7	-24.3	51.7	74.0	-22.3	**27.4	54.0	-26.6
21969.00	H	47.3	-24.3	49.6	74.0	-24.4	**25.3	54.0	-28.7
24410.00	H	48.2	-24.3	51.3	74.0	-22.7	**27.0	54.0	-27.0
26851.00	H	48.5	-24.3	52.2	74.0	-21.8	**27.9	54.0	-26.1

For pulse modulated devices and using measuring equipment employing a peak detection mode, properly adjusted for such factor as pulse desensitisation.
**Duty Cycle Correction = 20Log(0.06086) = -24.3dB.

Note: Field Strength includes Antenna Factor and Cable Loss.
Receiver setting: RBW = 1MHz
VBW = 1MHz

BUREAU VERITAS HONG KONG LIMITED – Kowloon Bay Office
1/F Pacific Trade Centre,
2 Kai Hing Road, Kowloon Bay,
Kowloon,HONG KONG
Tel: +852 2331 0888
Fax: +852 2331 0889
www.cps.bureauveritas.com

TEST REPORT No: (5217)009-0707

Measurement Data: 2DH5

Test Result of (Transmission mode, Middle frequency): PASS

Frequency (MHz)	Polarity (H/V)	Antenna Factor & Cable Loss (dB/m)	Duty-cycle correction (dB)	Field Strength at 3m – Peak (dBµV/m)	Limit at 3m – Peak (dBµV/m)	Margin - Peak (dB)	Field Strength at 3m – Average (dBµV/m)	Limit at 3m – Average (dBµV/m)	Margin - Average (dB)
4882.00	V	3.4	-24.3	54.4	74.0	-19.6	**30.1	54.0	-23.9
7323.00	V	11.9	-24.3	42.1	74.0	-31.9	**17.8	54.0	-36.2
9764.00	V	14.4	-24.3	42.3	74.0	-31.7	**18.0	54.0	-36.0
12205.00	V	18.5	-24.3	43.7	74.0	-30.3	**19.4	54.0	-34.6
14646.00	V	27.9	-24.3	47.5	74.0	-26.5	**23.2	54.0	-30.8
17087.00	V	24.9	-24.3	45.0	74.0	-29.0	**20.7	54.0	-33.3
19528.00	V	46.7	-24.3	51.5	74.0	-22.5	**27.2	54.0	-26.8
21969.00	V	47.3	-24.3	49.3	74.0	-24.7	**25.0	54.0	-29.0
24410.00	V	48.2	-24.3	51.4	74.0	-22.6	**27.1	54.0	-26.9
26851.00	V	48.5	-24.3	54.4	74.0	-19.6	**30.1	54.0	-23.9

For pulse modulated devices and using measuring equipment employing a peak detection mode, properly adjusted for such factor as pulse desensitisation.
**Duty Cycle Correction = 20Log(0.06086) = -24.3dB.

Note: Field Strength includes Antenna Factor and Cable Loss.
Receiver setting: RBW = 1MHz
VBW = 1MHz

BUREAU VERITAS HONG KONG LIMITED – Kowloon Bay Office
1/F Pacific Trade Centre,
2 Kai Hing Road, Kowloon Bay,
Kowloon,HONG KONG
Tel: +852 2331 0888
Fax: +852 2331 0889
www.cps.bureauveritas.com

TEST REPORT No: (5217)009-0707

Measurement Data: 2DH5

Test Result of (Transmission mode, Highest frequency): PASS

Frequency (MHz)	Polarity (H/V)	Antenna Factor & Cable Loss (dB/m)	Duty-cycle correction (dB)	Field Strength at 3m – Peak (dBµV/m)	Limit at 3m – Peak (dBµV/m)	Margin - Peak (dB)	Field Strength at 3m – Average (dBµV/m)	Limit at 3m – Average (dBµV/m)	Margin - Average (dB)
2483.50	H	-4.0	-24.3	48.5	74.0	-25.5	**24.2	54.0	-29.8
4960.00	H	3.5	-24.3	59.2	74.0	-14.8	**34.9	54.0	-19.1
7440.00	H	11.9	-24.3	40.7	74.0	-33.3	**16.4	54.0	-37.6
9920.00	H	14.5	-24.3	40.7	74.0	-33.3	**16.4	54.0	-37.6
12400.00	H	18.2	-24.3	43.2	74.0	-30.8	**18.9	54.0	-35.1
14880.00	H	27.3	-24.3	47.3	74.0	-26.7	**23.0	54.0	-31.0
17360.00	H	26.3	-24.3	45.3	74.0	-28.7	**21.0	54.0	-33.0
19840.00	H	46.8	-24.3	47.1	74.0	-26.9	**22.8	54.0	-31.2
22320.00	H	47.3	-24.3	49.9	74.0	-24.1	**25.6	54.0	-28.4
24800.00	H	48.2	-24.3	52.1	74.0	-21.9	**27.8	54.0	-26.2
27280.00	H	48.7	-24.3	55.0	74.0	-19.0	**30.7	54.0	-23.3

For pulse modulated devices and using measuring equipment employing a peak detection mode, properly adjusted for such factor as pulse desensitisation.
**Duty Cycle Correction = 20Log(0.06086) = -24.3dB.

Note: Field Strength includes Antenna Factor and Cable Loss.
Receiver setting: RBW = 1MHz
VBW = 1MHz

TEST REPORT No: (5217)009-0707

Measurement Data: 2DH5

Test Result of (Transmission mode, Highest frequency): PASS

Frequency (MHz)	Polarity (H/V)	Antenna Factor & Cable Loss (dB/m)	Duty-cycle correction (dB)	Field Strength at 3m – Peak (dBµV/m)	Limit at 3m – Peak (dBµV/m)	Margin - Peak (dB)	Field Strength at 3m – Average (dBµV/m)	Limit at 3m – Average (dBµV/m)	Margin - Average (dB)
2483.50	V	-4.0	-24.3	49.3	74.0	-24.7	**25.0	54.0	-29.0
4960.00	V	3.5	-24.3	57.2	74.0	-16.8	**32.9	54.0	-21.1
7440.00	V	11.9	-24.3	41.4	74.0	-32.6	**17.1	54.0	-36.9
9920.00	V	14.5	-24.3	41.3	74.0	-32.7	**17.0	54.0	-37.0
12400.00	V	18.2	-24.3	43.4	74.0	-30.6	**19.1	54.0	-34.9
14880.00	V	27.3	-24.3	46.3	74.0	-27.7	**22.0	54.0	-32.0
17360.00	V	26.3	-24.3	45.7	74.0	-28.3	**21.4	54.0	-32.6
19840.00	V	46.8	-24.3	47.6	74.0	-26.4	**23.3	54.0	-30.7
22320.00	V	47.3	-24.3	50.9	74.0	-23.1	**26.6	54.0	-27.4
24800.00	V	48.2	-24.3	52.4	74.0	-21.6	**28.1	54.0	-25.9
27280.00	V	48.7	-24.3	53.6	74.0	-20.4	**29.3	54.0	-24.7

For pulse modulated devices and using measuring equipment employing a peak detection mode, properly adjusted for such factor as pulse desensitisation.
**Duty Cycle Correction = 20Log(0.06086) = -24.3dB.

Note: Field Strength includes Antenna Factor and Cable Loss.
Receiver setting: RBW = 1MHz
VBW = 1MHz

TEST REPORT No: (5217)009-0707

Measurement Data: 3DH5

Test Result of (Transmission mode, Lowest frequency): PASS

Frequency (MHz)	Polarity (H/V)	Antenna Factor & Cable Loss (dB/m)	Duty-cycle correction (dB)	Field Strength at 3m – Peak (dBµV/m)	Limit at 3m – Peak (dBµV/m)	Margin - Peak (dB)	Field Strength at 3m – Average (dBµV/m)	Limit at 3m – Average (dBµV/m)	Margin - Average (dB)
2393.00	H	-4.0	-24.3	51.1	74.0	-22.9	**26.8	54.0	-27.2
4804.00	H	3.4	-24.3	56.4	74.0	-17.6	**32.1	54.0	-21.9
7206.00	H	11.9	-24.3	42.1	74.0	-31.9	**17.8	54.0	-36.2
9608.00	H	14.1	-24.3	41.5	74.0	-32.5	**17.2	54.0	-36.8
12010.00	H	18.6	-24.3	43.6	74.0	-30.4	**19.3	54.0	-34.7
14412.00	H	25.6	-24.3	45.8	74.0	-28.2	**21.5	54.0	-32.5
16814.00	H	22.3	-24.3	44.1	74.0	-29.9	**19.8	54.0	-34.2
19216.00	H	46.7	-24.3	50.6	74.0	-23.4	**26.3	54.0	-27.7
21618.00	H	46.9	-24.3	49.4	74.0	-24.6	**25.1	54.0	-28.9
24020.00	H	48.0	-24.3	51.2	74.0	-22.8	**26.9	54.0	-27.1
26422.00	H	48.5	-24.3	53.0	74.0	-21.0	**28.7	54.0	-25.3

For pulse modulated devices and using measuring equipment employing a peak detection mode, properly adjusted for such factor as pulse desensitisation.
**Duty Cycle Correction = 20Log(0.06086) = -24.3dB.

Note: Field Strength includes Antenna Factor and Cable Loss.
Receiver setting: RBW = 1MHz
VBW = 1MHz

BUREAU VERITAS HONG KONG LIMITED – Kowloon Bay Office
1/F Pacific Trade Centre,
2 Kai Hing Road, Kowloon Bay,
Kowloon,HONG KONG
Tel: +852 2331 0888
Fax: +852 2331 0889
www.cps.bureauveritas.com

TEST REPORT No: (5217)009-0707

Measurement Data: 3DH5

Test Result of (Transmission mode, Lowest frequency): PASS

Frequency (MHz)	Polarity (H/V)	Antenna Factor & Cable Loss (dB/m)	Duty-cycle correction (dB)	Field Strength at 3m – Peak (dBµV/m)	Limit at 3m – Peak (dBµV/m)	Margin - Peak (dB)	Field Strength at 3m – Average (dBµV/m)	Limit at 3m – Average (dBµV/m)	Margin - Average (dB)
2393.00	V	-4.0	-24.3	59.5	74.0	-14.5	**35.2	54.0	-18.8
4804.00	V	3.4	-24.3	53.7	74.0	-20.3	**29.4	54.0	-24.6
7206.00	V	11.9	-24.3	42.3	74.0	-31.7	**18.0	54.0	-36.0
9608.00	V	14.1	-24.3	42.0	74.0	-32.0	**17.7	54.0	-36.3
12010.00	V	18.6	-24.3	44.0	74.0	-30.0	**19.7	54.0	-34.3
14412.00	V	25.6	-24.3	45.9	74.0	-28.1	**21.6	54.0	-32.4
16814.00	V	22.3	-24.3	45.3	74.0	-28.7	**21.0	54.0	-33.0
19216.00	V	46.7	-24.3	51.2	74.0	-22.8	**26.9	54.0	-27.1
21618.00	V	46.9	-24.3	49.0	74.0	-25.0	**24.7	54.0	-29.3
24020.00	V	48.0	-24.3	52.5	74.0	-21.5	**28.2	54.0	-25.8
26422.00	V	48.5	-24.3	53.8	74.0	-20.2	**29.5	54.0	-24.5

For pulse modulated devices and using measuring equipment employing a peak detection mode, properly adjusted for such factor as pulse desensitisation.
**Duty Cycle Correction = 20Log(0.06086) = -24.3dB.

Note: Field Strength includes Antenna Factor and Cable Loss.
Receiver setting: RBW = 1MHz
VBW = 1MHz

TEST REPORT No: (5217)009-0707

Measurement Data: 3DH5

Test Result of (Transmission mode, Middle frequency): PASS

Frequency (MHz)	Polarity (H/V)	Antenna Factor & Cable Loss (dB/m)	Duty-cycle correction (dB)	Field Strength at 3m – Peak (dBµV/m)	Limit at 3m – Peak (dBµV/m)	Margin - Peak (dB)	Field Strength at 3m – Average (dBµV/m)	Limit at 3m – Average (dBµV/m)	Margin - Average (dB)
4882.00	H	3.4	-24.3	57.3	74.0	-16.7	**33.0	54.0	-21.0
7323.00	H	11.9	-24.3	41.0	74.0	-33.0	**16.7	54.0	-37.3
9764.00	H	14.4	-24.3	42.2	74.0	-31.8	**17.9	54.0	-36.1
12205.00	H	18.5	-24.3	43.8	74.0	-30.2	**19.5	54.0	-34.5
14646.00	H	27.9	-24.3	45.8	74.0	-28.2	**21.5	54.0	-32.5
17087.00	H	24.9	-24.3	44.9	74.0	-29.1	**20.6	54.0	-33.4
19528.00	H	46.7	-24.3	51.5	74.0	-22.5	**27.2	54.0	-26.8
21969.00	H	47.3	-24.3	49.8	74.0	-24.2	**25.5	54.0	-28.5
24410.00	H	48.2	-24.3	51.6	74.0	-22.4	**27.3	54.0	-26.7
26851.00	H	48.5	-24.3	52.3	74.0	-21.7	**28.0	54.0	-26.0

For pulse modulated devices and using measuring equipment employing a peak detection mode, properly adjusted for such factor as pulse desensitisation.
**Duty Cycle Correction = 20Log(0.06086) = -24.3dB.

Note: Field Strength includes Antenna Factor and Cable Loss.
Receiver setting: RBW = 1MHz
VBW = 1MHz

BUREAU VERITAS HONG KONG LIMITED – Kowloon Bay Office
1/F Pacific Trade Centre,
2 Kai Hing Road, Kowloon Bay,
Kowloon,HONG KONG
Tel: +852 2331 0888
Fax: +852 2331 0889
www.cps.bureauveritas.com

TEST REPORT No: (5217)009-0707

Measurement Data: 3DH5

Test Result of (Transmission mode, Middle frequency): PASS

Frequency (MHz)	Polarity (H/V)	Antenna Factor & Cable Loss (dB/m)	Duty-cycle correction (dB)	Field Strength at 3m – Peak (dBµV/m)	Limit at 3m – Peak (dBµV/m)	Margin - Peak (dB)	Field Strength at 3m – Average (dBµV/m)	Limit at 3m – Average (dBµV/m)	Margin - Average (dB)
4882.00	V	3.4	-24.3	55.0	74.0	-19.0	**30.7	54.0	-23.3
7323.00	V	11.9	-24.3	42.3	74.0	-31.7	**18.0	54.0	-36.0
9764.00	V	14.4	-24.3	42.5	74.0	-31.5	**18.2	54.0	-35.8
12205.00	V	18.5	-24.3	43.6	74.0	-30.4	**19.3	54.0	-34.7
14646.00	V	27.9	-24.3	47.0	74.0	-27.0	**22.7	54.0	-31.3
17087.00	V	24.9	-24.3	45.4	74.0	-28.6	**21.1	54.0	-32.9
19528.00	V	46.7	-24.3	51.0	74.0	-23.0	**26.7	54.0	-27.3
21969.00	V	47.3	-24.3	49.2	74.0	-24.8	**24.9	54.0	-29.1
24410.00	V	48.2	-24.3	51.6	74.0	-22.4	**27.3	54.0	-26.7
26851.00	V	48.5	-24.3	55.0	74.0	-19.0	**30.7	54.0	-23.3

For pulse modulated devices and using measuring equipment employing a peak detection mode, properly adjusted for such factor as pulse desensitisation.
**Duty Cycle Correction = 20Log(0.06086) = -24.3dB.

Note: Field Strength includes Antenna Factor and Cable Loss.
Receiver setting: RBW = 1MHz
VBW = 1MHz

BUREAU VERITAS HONG KONG LIMITED – Kowloon Bay Office
1/F Pacific Trade Centre,
2 Kai Hing Road, Kowloon Bay,
Kowloon,HONG KONG
Tel: +852 2331 0888
Fax: +852 2331 0889
www.cps.bureauveritas.com

TEST REPORT No: (5217)009-0707

Measurement Data: 3DH5

Test Result of (Transmission mode, Highest frequency): PASS

Frequency (MHz)	Polarity (H/V)	Antenna Factor & Cable Loss (dB/m)	Duty-cycle correction (dB)	Field Strength at 3m – Peak (dBµV/m)	Limit at 3m – Peak (dBµV/m)	Margin - Peak (dB)	Field Strength at 3m – Average (dBµV/m)	Limit at 3m – Average (dBµV/m)	Margin - Average (dB)
2483.50	H	-4.0	-24.3	49.2	74.0	-24.8	**24.9	54.0	-29.1
4960.00	H	3.5	-24.3	59.6	74.0	-14.4	**35.3	54.0	-18.7
7440.00	H	11.9	-24.3	41.0	74.0	-33.0	**16.7	54.0	-37.3
9920.00	H	14.5	-24.3	41.2	74.0	-32.8	**16.9	54.0	-37.1
12400.00	H	18.2	-24.3	42.5	74.0	-31.5	**18.2	54.0	-35.8
14880.00	H	27.3	-24.3	46.4	74.0	-27.6	**22.1	54.0	-31.9
17360.00	H	26.3	-24.3	45.1	74.0	-28.9	**20.8	54.0	-33.2
19840.00	H	46.8	-24.3	48.0	74.0	-26.0	**23.7	54.0	-30.3
22320.00	H	47.3	-24.3	49.6	74.0	-24.4	**25.3	54.0	-28.7
24800.00	H	48.2	-24.3	52.5	74.0	-21.5	**28.2	54.0	-25.8
27280.00	H	48.7	-24.3	53.8	74.0	-20.2	**29.5	54.0	-24.5

For pulse modulated devices and using measuring equipment employing a peak detection mode, properly adjusted for such factor as pulse desensitisation.
**Duty Cycle Correction = 20Log(0.06086) = -24.3dB.

Note: Field Strength includes Antenna Factor and Cable Loss.
Receiver setting: RBW = 1MHz
VBW = 1MHz

BUREAU VERITAS HONG KONG LIMITED – Kowloon Bay Office
1/F Pacific Trade Centre,
2 Kai Hing Road, Kowloon Bay,
Kowloon,HONG KONG
Tel: +852 2331 0888
Fax: +852 2331 0889
www.cps.bureauveritas.com

TEST REPORT No: (5217)009-0707

Measurement Data: 3DH5

Test Result of (Transmission mode, Highest frequency): PASS

Frequency (MHz)	Polarity (H/V)	Antenna Factor & Cable Loss (dB/m)	Duty-cycle correction (dB)	Field Strength at 3m – Peak (dBµV/m)	Limit at 3m – Peak (dBµV/m)	Margin - Peak (dB)	Field Strength at 3m – Average (dBµV/m)	Limit at 3m – Average (dBµV/m)	Margin - Average (dB)
2483.50	V	-4.0	-24.3	49.7	74.0	-24.3	**25.4	54.0	-28.6
4960.00	V	3.5	-24.3	57.6	74.0	-16.4	**33.3	54.0	-20.7
7440.00	V	11.9	-24.3	41.5	74.0	-32.5	**17.2	54.0	-36.8
9920.00	V	14.5	-24.3	41.8	74.0	-32.2	**17.5	54.0	-36.5
12400.00	V	18.2	-24.3	42.9	74.0	-31.1	**18.6	54.0	-35.4
14880.00	V	27.3	-24.3	46.3	74.0	-27.7	**22.0	54.0	-32.0
17360.00	V	26.3	-24.3	45.4	74.0	-28.6	**21.1	54.0	-32.9
19840.00	V	46.8	-24.3	47.2	74.0	-26.8	**22.9	54.0	-31.1
22320.00	V	47.3	-24.3	51.0	74.0	-23.0	**26.7	54.0	-27.3
24800.00	V	48.2	-24.3	52.5	74.0	-21.5	**28.2	54.0	-25.8
27280.00	V	48.7	-24.3	54.1	74.0	-19.9	**29.8	54.0	-24.2

For pulse modulated devices and using measuring equipment employing a peak detection mode, properly adjusted for such factor as pulse desensitisation.
**Duty Cycle Correction = 20Log(0.06086) = -24.3dB.

Note: Field Strength includes Antenna Factor and Cable Loss.
Receiver setting: RBW = 1MHz
VBW = 1MHz

BUREAU VERITAS HONG KONG LIMITED – Kowloon Bay Office
1/F Pacific Trade Centre,
2 Kai Hing Road, Kowloon Bay,
Kowloon,HONG KONG
Tel: +852 2331 0888
Fax: +852 2331 0889
www.cps.bureauveritas.com

TEST REPORT No: (5217)009-0707

Band-edge Measurement

Test Requirement:	FCC 47 CFR 15.247
Test Method:	ANSI C63.10 Clause 11.13
Test Date(s):	2017-02-21
Temperature:	20.0 °C
Humidity:	63.0 %
Atmospheric Pressure:	100.7 kPa
Mode of Operation:	Transmission mode
Tested Voltage:	120Va.c., 60Hz

Test Limits:

In any 100kHz bandwidth outside the frequency band in which the spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement. Attenuation below the general limits specified in Section 15.209(a) is not required.

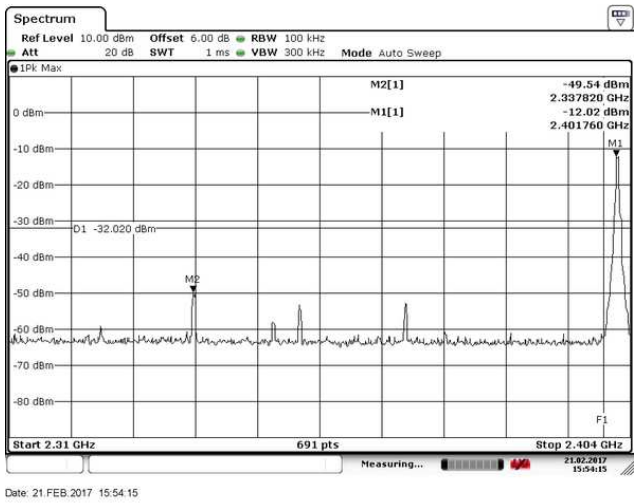
BUREAU VERITAS HONG KONG LIMITED – Kowloon Bay Office
1/F Pacific Trade Centre,
2 Kai Hing Road, Kowloon Bay,
Kowloon,HONG KONG
Tel: +852 2331 0888
Fax: +852 2331 0889
www.cps.bureauveritas.com

TEST REPORT No: (5217)009-0707

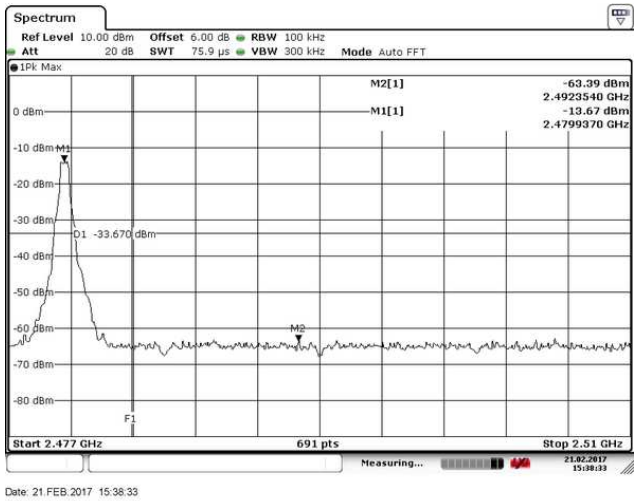
Measurement Data: DH5

Test Result of (Transmission mode, Hopping off): PASS

Frequency [MHz]	Radiated Emission Attenuated below the Fundamental [dB]
2401.760	-37.52



Frequency [MHz]	Radiated Emission Attenuated below the Fundamental [dB]
2479.937	-49.72



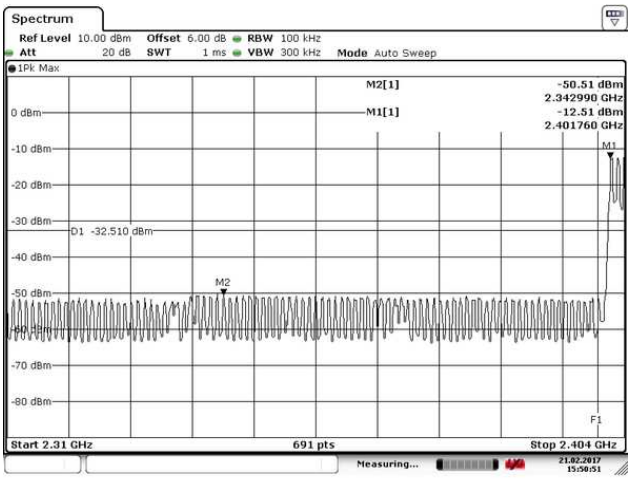
BUREAU VERITAS HONG KONG LIMITED – Kowloon Bay Office
1/F Pacific Trade Centre,
2 Kai Hing Road, Kowloon Bay,
Kowloon,HONG KONG
Tel: +852 2331 0888
Fax: +852 2331 0889
www.cps.bureauveritas.com

TEST REPORT No: (5217)009-0707

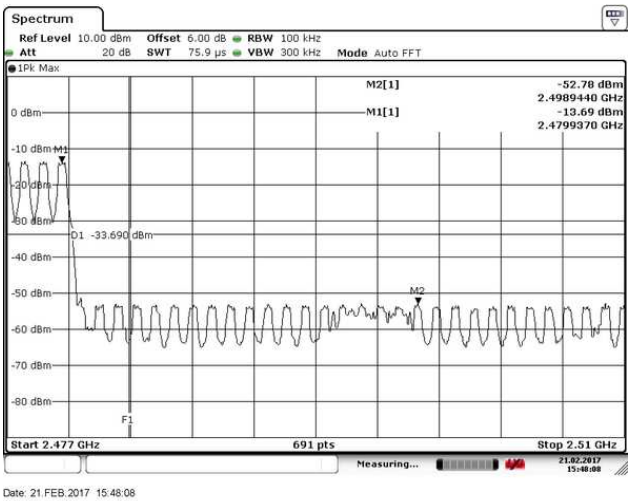
Measurement Data: DH5

Test Result of (Transmission mode, Hopping on): PASS

Frequency [MHz]	Radiated Emission Attenuated below the Fundamental [dB]
2401.760	-38.00



Frequency [MHz]	Radiated Emission Attenuated below the Fundamental [dB]
2479.937	-39.09

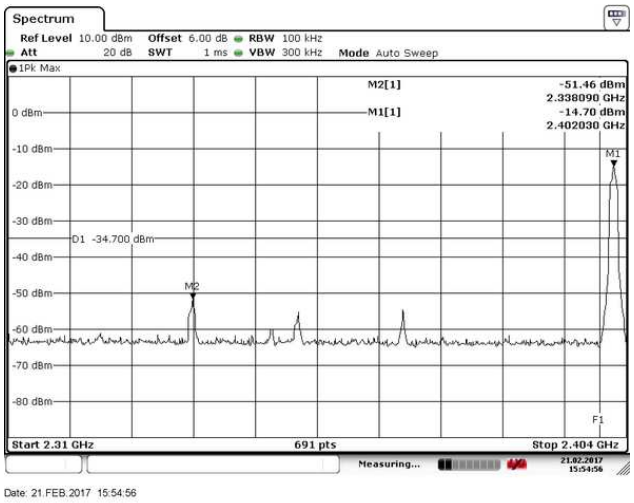


TEST REPORT No: (5217)009-0707

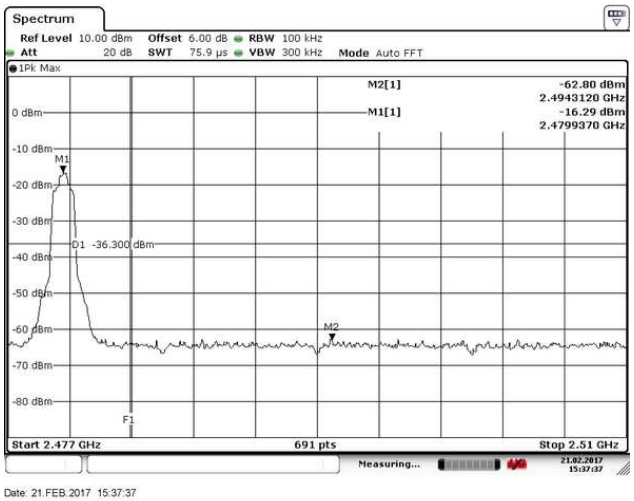
Measurement Data: 2DH5

Test Result of (Transmission mode, Hopping off): PASS

Frequency [MHz]	Radiated Emission Attenuated below the Fundamental [dB]
2402.030	-36.76



Frequency [MHz]	Radiated Emission Attenuated below the Fundamental [dB]
2479.937	-46.51

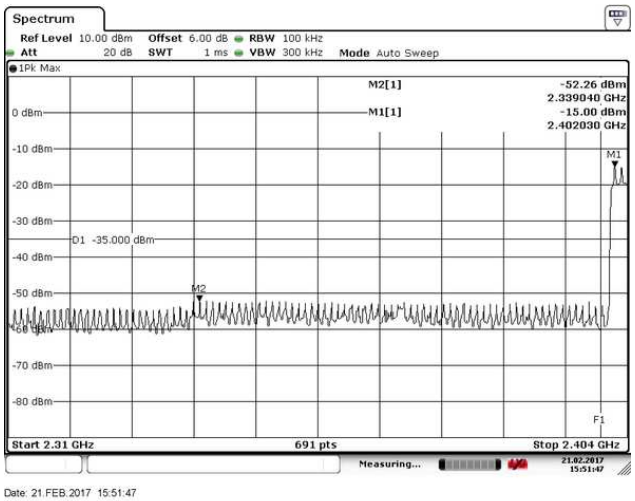


TEST REPORT No: (5217)009-0707

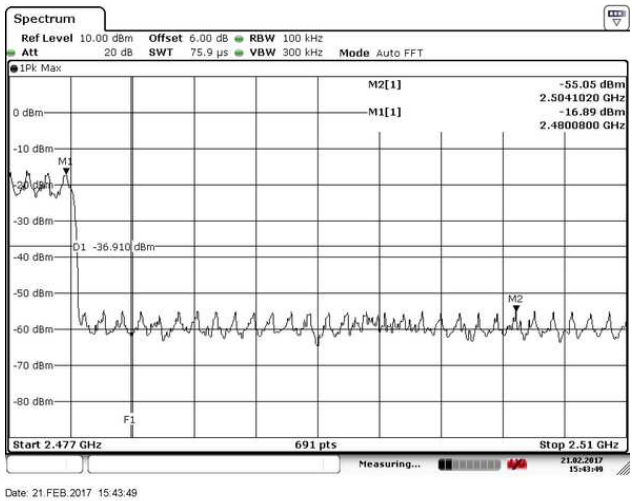
Measurement Data: 2DH5

Test Result of (Transmission mode, Hopping on): PASS

Frequency [MHz]	Radiated Emission Attenuated below the Fundamental [dB]
2402.030	-37.26



Frequency [MHz]	Radiated Emission Attenuated below the Fundamental [dB]
2480.800	-38.16



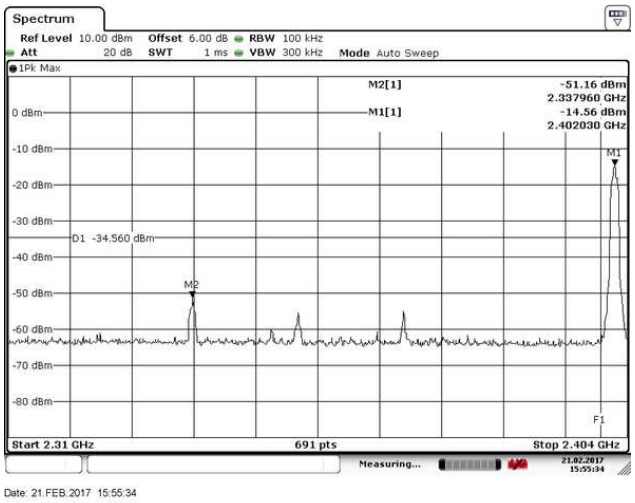
BUREAU VERITAS HONG KONG LIMITED – Kowloon Bay Office
1/F Pacific Trade Centre,
2 Kai Hing Road, Kowloon Bay,
Kowloon,HONG KONG
Tel: +852 2331 0888
Fax: +852 2331 0889
www.cps.bureauveritas.com

TEST REPORT No: (5217)009-0707

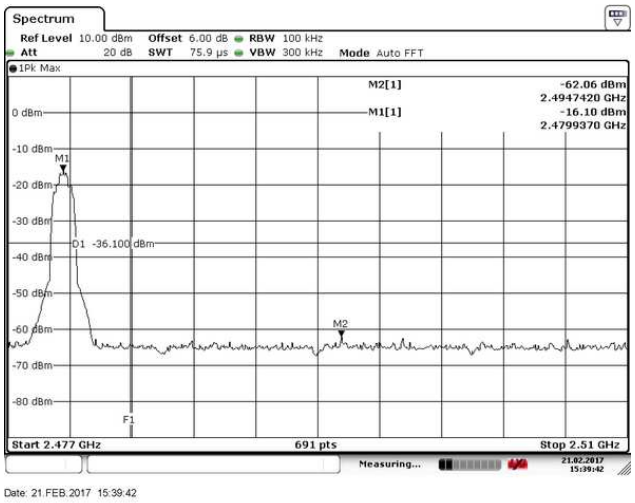
Measurement Data: 3DH5

Test Result of (Transmission mode, Hopping off): PASS

Frequency [MHz]	Radiated Emission Attenuated below the Fundamental [dB]
2402.030	-36.60



Frequency [MHz]	Radiated Emission Attenuated below the Fundamental [dB]
2479.937	-45.96



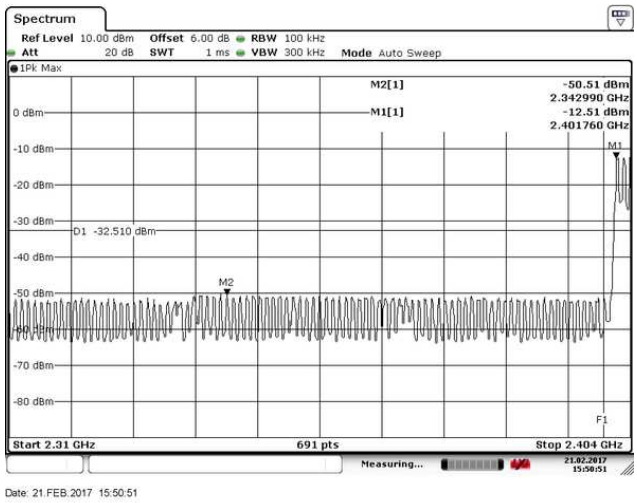
BUREAU VERITAS HONG KONG LIMITED – Kowloon Bay Office
1/F Pacific Trade Centre,
2 Kai Hing Road, Kowloon Bay,
Kowloon,HONG KONG
Tel: +852 2331 0888
Fax: +852 2331 0889
www.cps.bureauveritas.com

TEST REPORT No: (5217)009-0707

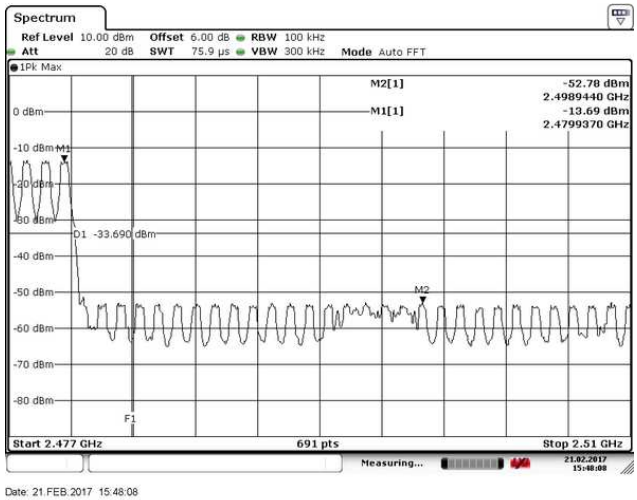
Measurement Data: 3DH5

Test Result of (Transmission mode, Hopping on): PASS

Frequency [MHz]	Radiated Emission Attenuated below the Fundamental [dB]
2401.760	-38.00



Frequency [MHz]	Radiated Emission Attenuated below the Fundamental [dB]
2479.937	-39.09



TEST REPORT No: (5217)009-0707

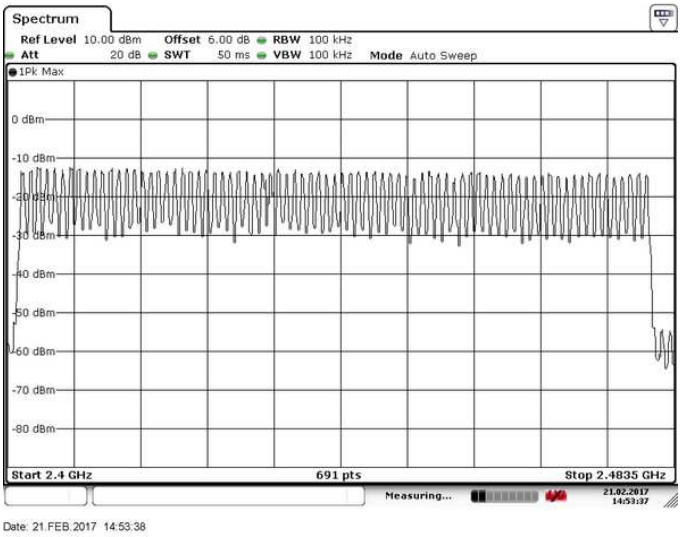
Number of Hopping Frequency

Test Requirement:	FCC 47 CFR 15.247
Test Method:	ANSI C63.10 Clause 7.8
Test Date(s):	2017-02-21
Temperature:	20.0 °C
Humidity:	63.0 %
Atmospheric Pressure:	100.7 kPa
Mode of Operation:	Transmission mode
Tested Voltage:	120Va.c., 60Hz

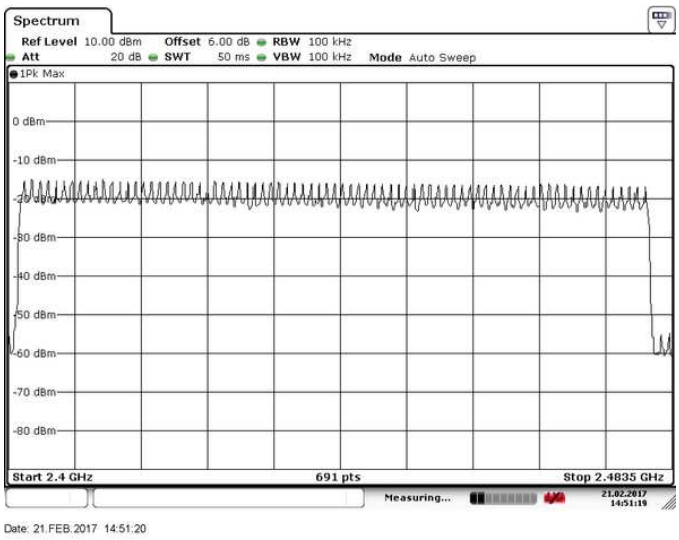
Test Setup:
Refer to Maximum Peak Conducted Power Measurement

Limit of Number of Hopping Frequency:
Frequency hopping system in the 2400-2483.5 MHz band shall use at least 75 non-overlapping hopping channels

Measurement Data: DH5
Number of Hopping Channels: 79

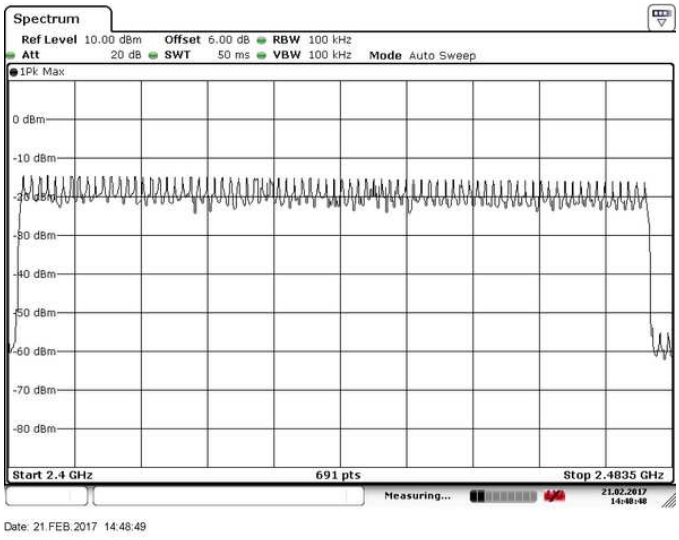


Measurement Data: 2DH5
Number of Hopping Channels: 79



Date: 21.FEB.2017 14:51:20

Measurement Data: 3DH5
Number of Hopping Channels: 79



Date: 21.FEB.2017 14:48:49

BUREAU VERITAS HONG KONG LIMITED – Kowloon Bay Office
1/F Pacific Trade Centre,
2 Kai Hing Road, Kowloon Bay,
Kowloon,HONG KONG
Tel: +852 2331 0888
Fax: +852 2331 0889
www.cps.bureauveritas.com

TEST REPORT No: (5217)009-0707

Hopping Channel Separation

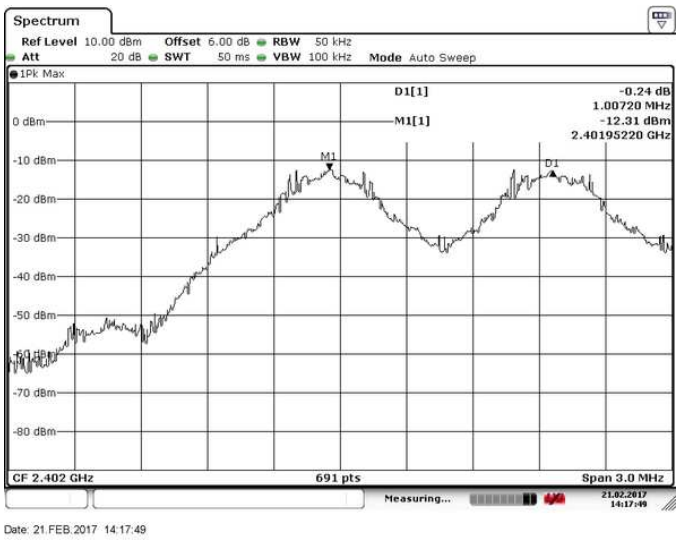
Test Requirement:	FCC 47 CFR 15.247
Test Method:	ANSI C63.10 Clause 7.8
Test Date(s):	2017-02-21
Temperature:	20.0 °C
Humidity:	63.0 %
Atmospheric Pressure:	100.7 kPa
Mode of Operation:	Transmission mode
Tested Voltage:	120Va.c., 60Hz

Test Requirement:
Output power ≥ 125mW: Frequency hopping system shall have hopping channel carrier frequency separated by a minimum of 25kHz or the 20dB bandwidth of the hopping channel, whichever is greater.
Output power < 125mW: Frequency hopping system shall have hopping channel carrier frequency separated by a minimum of 25kHz or two-thirds of the 20dB bandwidth of the hopping channel, whichever is greater.

Test Setup:
Refer to Maximum Peak Conducted Power Measurement

Measurement Data: DH5

Fundamental Frequency [MHz]	Frequency Separation [kHz]	Limits* (2/3 of 20dB bandwidth)	Result
2402	1007.20	590.46	PASS



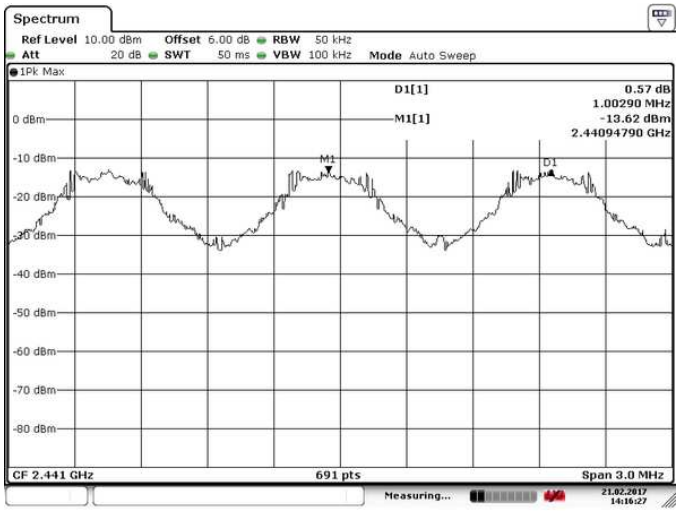
*Remark: Output power < 125mW

BUREAU VERITAS HONG KONG LIMITED – Kowloon Bay Office
1/F Pacific Trade Centre,
2 Kai Hing Road, Kowloon Bay,
Kowloon,HONG KONG
Tel: +852 2331 0888
Fax: +852 2331 0889
www.cps.bureauveritas.com

TEST REPORT No: (5217)009-0707

Measurement Data: DH5

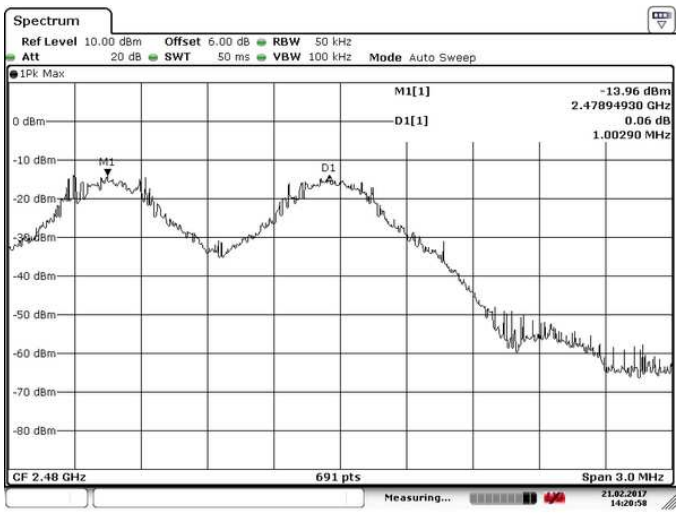
Fundamental Frequency [MHz]	Frequency Separation [kHz]	Limits* (2/3 of 20dB bandwidth)	Result
2441	1002.90	587.53	PASS



Date: 21.FEB.2017 14:16:27

Measurement Data: DH5

Fundamental Frequency [MHz]	Frequency Separation [kHz]	Limits* (2/3 of 20dB bandwidth)	Result
2480	1002.90	561.53	PASS



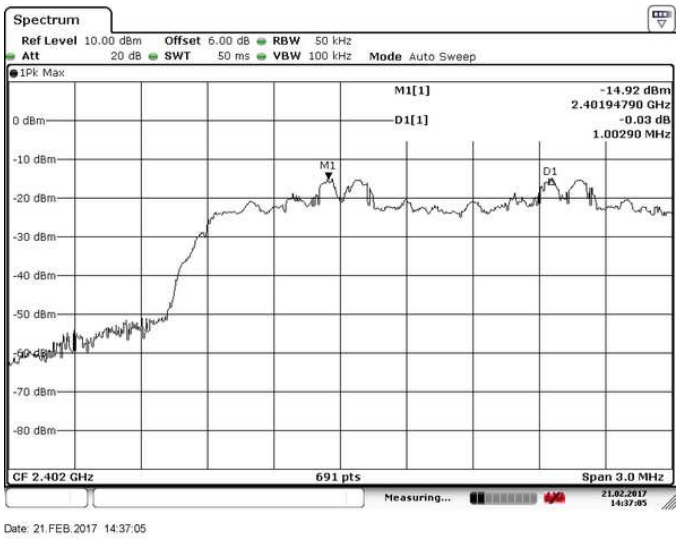
Date: 21.FEB.2017 14:20:58

*Remark: Output power < 125mW

BUREAU VERITAS HONG KONG LIMITED – Kowloon Bay Office
1/F Pacific Trade Centre,
2 Kai Hing Road, Kowloon Bay,
Kowloon,HONG KONG
Tel: +852 2331 0888
Fax: +852 2331 0889
www.cps.bureauveritas.com

Measurement Data: 2DH5

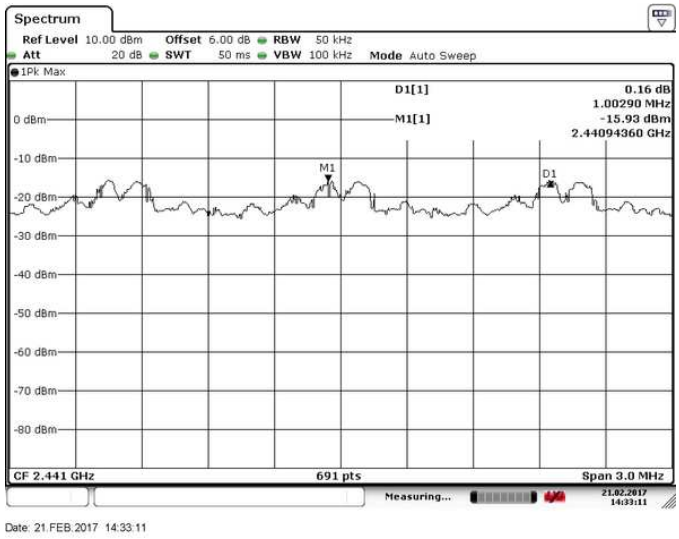
Fundamental Frequency [MHz]	Frequency Separation [kHz]	Limits* (2/3 of 20dB bandwidth)	Result
2402	1007.90	836.46	PASS



Date: 21.FEB.2017 14:37:05

Measurement Data: 2DH5

Fundamental Frequency [MHz]	Frequency Separation [kHz]	Limits* (2/3 of 20dB bandwidth)	Result
2441	1002.90	839.33	PASS



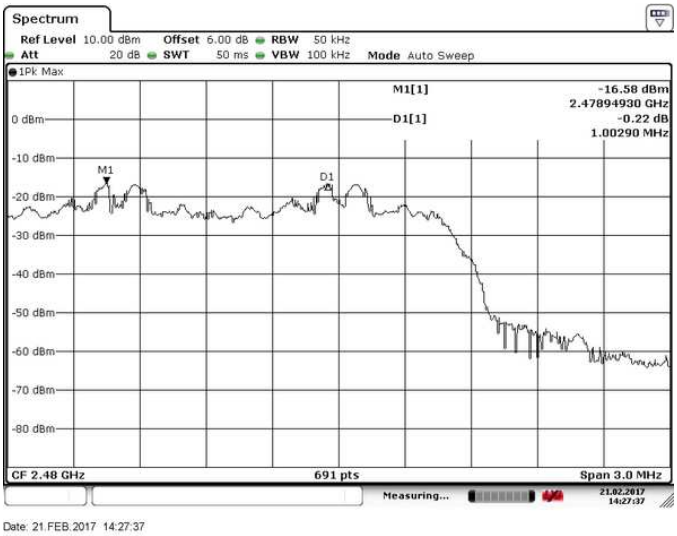
Date: 21.FEB.2017 14:33:11

*Remark: Output power < 125mW

BUREAU VERITAS HONG KONG LIMITED – Kowloon Bay Office
1/F Pacific Trade Centre,
2 Kai Hing Road, Kowloon Bay,
Kowloon,HONG KONG
Tel: +852 2331 0888
Fax: +852 2331 0889
www.cps.bureauveritas.com

Measurement Data: 2DH5

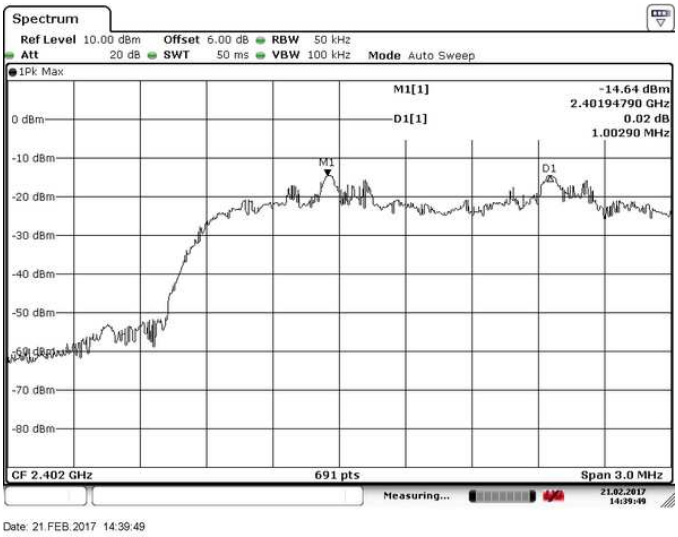
Fundamental Frequency [MHz]	Frequency Separation [kHz]	Limits* (2/3 of 20dB bandwidth)	Result
2480	1002.90	836.46	PASS



Date: 21.FEB.2017 14:27:37

Measurement Data: 3DH5

Fundamental Frequency [MHz]	Frequency Separation [kHz]	Limits* (2/3 of 20dB bandwidth)	Result
2402	1002.90	813.33	PASS



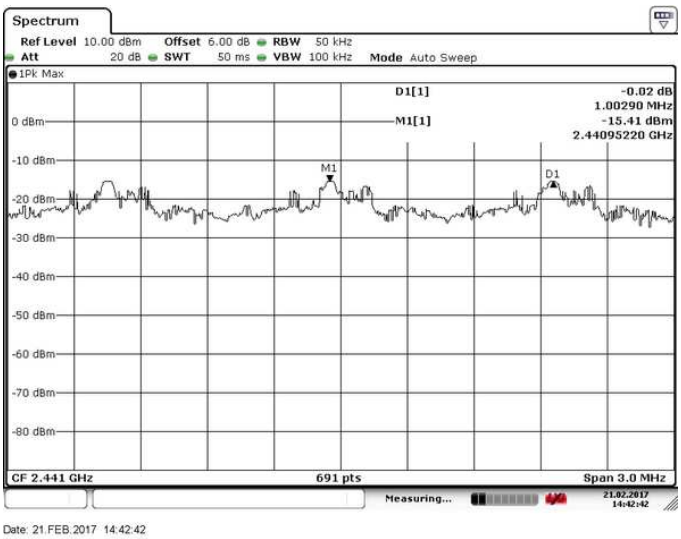
Date: 21.FEB.2017 14:39:49

*Remark: Output power < 125mW

BUREAU VERITAS HONG KONG LIMITED – Kowloon Bay Office
1/F Pacific Trade Centre,
2 Kai Hing Road, Kowloon Bay,
Kowloon,HONG KONG
Tel: +852 2331 0888
Fax: +852 2331 0889
www.cps.bureauveritas.com

Measurement Data: 3DH5

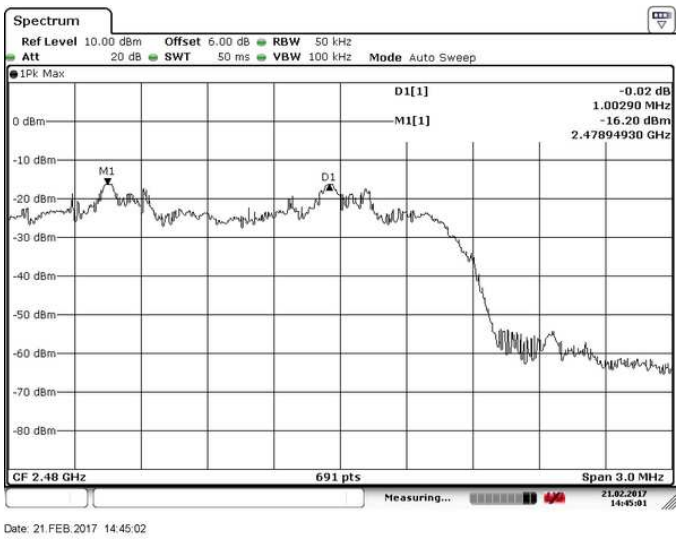
Fundamental Frequency [MHz]	Frequency Separation [kHz]	Limits* (2/3 of 20dB bandwidth)	Result
2441	1002.90	839.33	PASS



Date: 21.FEB.2017 14:42:42

Measurement Data: 3DH5

Fundamental Frequency [MHz]	Frequency Separation [kHz]	Limits* (2/3 of 20dB bandwidth)	Result
2480	1002.90	810.40	PASS



Date: 21.FEB.2017 14:45:02

*Remark: Output power < 125mW

BUREAU VERITAS HONG KONG LIMITED – Kowloon Bay Office
1/F Pacific Trade Centre,
2 Kai Hing Road, Kowloon Bay,
Kowloon,HONG KONG
Tel: +852 2331 0888
Fax: +852 2331 0889
www.cps.bureauveritas.com

TEST REPORT No: (5217)009-0707

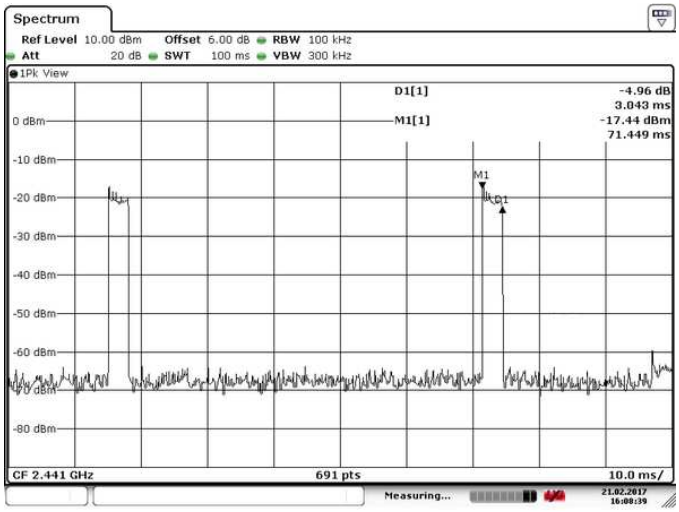
Time of Occupancy (Dwell Time)

Test Requirement:	FCC 47 CFR 15.247
Test Method:	ANSI C63.10 Clause 7.8
Test Date(s):	2017-02-21
Temperature:	20.0 °C
Humidity:	63.0 %
Atmospheric Pressure:	100.7 kPa
Mode of Operation:	Transmission mode
Tested Voltage:	120Va.c., 60Hz

Test Requirement:
Frequency hopping system in the 2400-2483.5MHz band shall use at least 15 channels. The average time of occupancy on any channel shall not be greater than 0.4 seconds within a period of 0.4 seconds multiplied by the number of hopping channels employed. Frequency hopping systems may avoid or suppress transmissions on a particular hopping frequency provided that a minimum of 15 channels are used.

Test Setup:
Refer to Maximum Peak Conducted Power Measurement

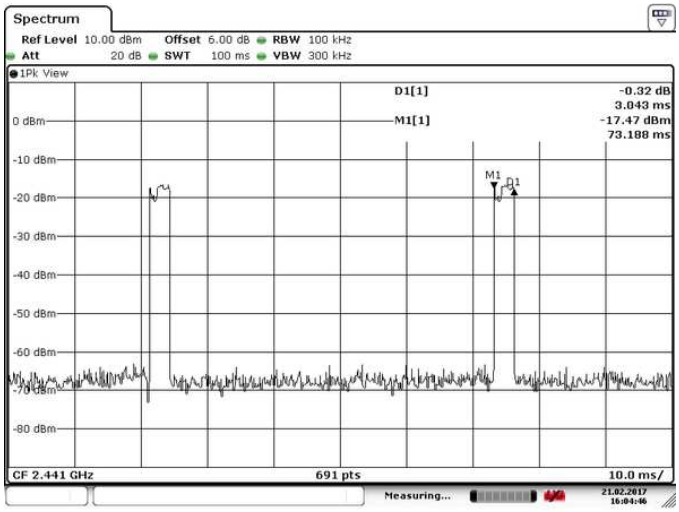
Measurement Data: DH5



Date: 21.FEB.2017 16:08:39

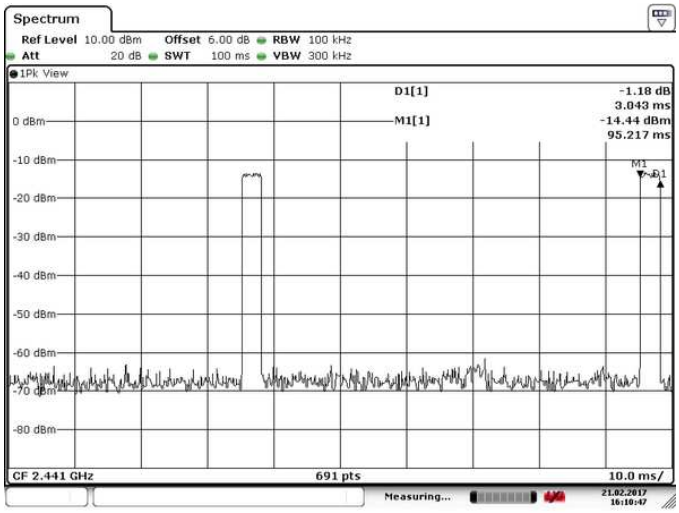
BUREAU VERITAS HONG KONG LIMITED – Kowloon Bay Office
1/F Pacific Trade Centre,
2 Kai Hing Road, Kowloon Bay,
Kowloon,HONG KONG
Tel: +852 2331 0888
Fax: +852 2331 0889
www.cps.bureauveritas.com

Measurement Data: 2DH5



Date: 21.FEB.2017 16:04:47

Measurement Data: 3DH5



Date: 21.FEB.2017 16:10:48

Result:

The Dwell Time = Burst Width * Total Hops. The detailed calculations are showed as follows:
The duration for dwell time calculation: 0.4 [s] * hopping number = 0.4 [s] * 79 [ch] = 31.6 [s*ch];
The burst width, which is directly measured, refers to the duration on one channel hop.
The maximum number of hopping channels in 31.6s for DH5=1600 / 6 / 79 *31.6=106.67

Mode	Reading (ms)	Total Hops	Test Result (ms)	Limit (ms)	Result
DH5	3.043	106.67	324.59	< 400	PASS
2DH5	3.043	106.67	324.59	< 400	PASS
3DH5	3.043	106.67	324.59	< 400	PASS

BUREAU VERITAS HONG KONG LIMITED – Kowloon Bay Office
1/F Pacific Trade Centre,
2 Kai Hing Road, Kowloon Bay,
Kowloon,HONG KONG
Tel: +852 2331 0888
Fax: +852 2331 0889
www.cps.bureauveritas.com

TEST REPORT No: (5217)009-0707

20dB Bandwidth measurement

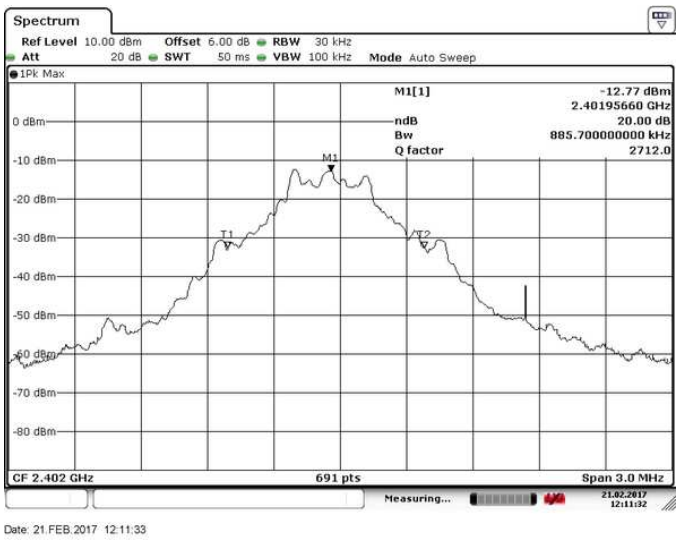
Test Requirement:	FCC 47 CFR 15.247
Test Method:	ANSI C63.10 Clause 6.9
Test Date(s):	2017-02-21
Temperature:	20.0 °C
Humidity:	63.0 %
Atmospheric Pressure:	100.7 kPa
Mode of Operation:	Transmission mode
Tested Voltage:	120Va.c., 60Hz

Test Method:
The bandwidth is measured at an amplitude level reduced from the reference level by a specified radio. The reference level is the level of the highest amplitude signal observed from the transmitter at the fundamental frequency. Once the reference level is established, the equipment is conditioned with typical modulating signal to produce the wrost-case (i.e. the widest) bandwidth.

Test Setup:
Refer to Maximum Peak Conducted Power Measurement

Measurement Data: DH5

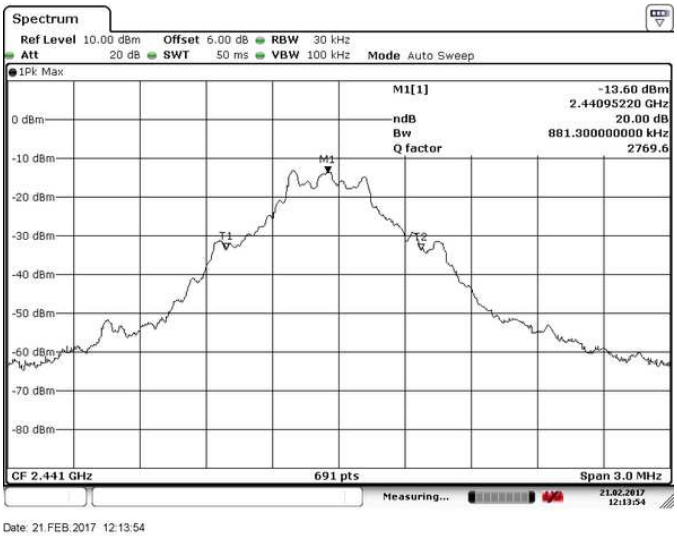
Fundamental Frequency [MHz]	20 dB Bandwidth [MHz]	FCC Limits
2402	885.70	--



BUREAU VERITAS HONG KONG LIMITED – Kowloon Bay Office
1/F Pacific Trade Centre,
2 Kai Hing Road, Kowloon Bay,
Kowloon,HONG KONG
Tel: +852 2331 0888
Fax: +852 2331 0889
www.cps.bureauveritas.com

Measurement Data: DH5

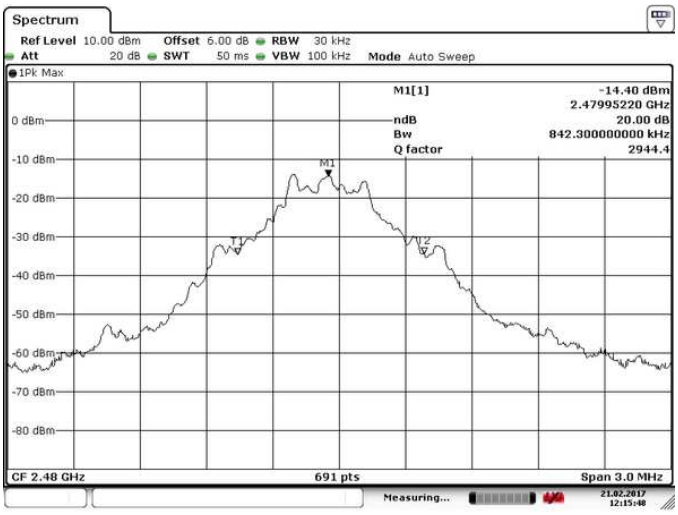
Fundamental Frequency [MHz]	20 dB Bandwidth [MHz]	FCC Limits
2441	881.30	--



Date: 21.FEB.2017 12:13:54

Measurement Data: DH5

Fundamental Frequency [MHz]	20 dB Bandwidth [MHz]	FCC Limits
2480	842.30	--

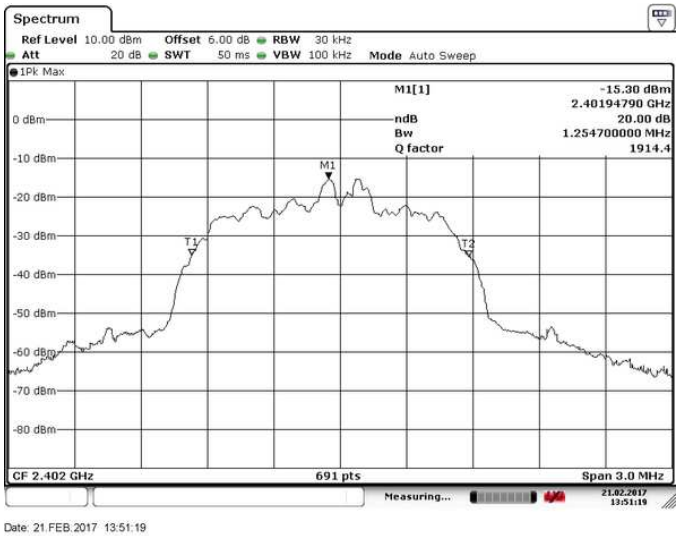


Date: 21.FEB.2017 12:15:48

BUREAU VERITAS HONG KONG LIMITED – Kowloon Bay Office
1/F Pacific Trade Centre,
2 Kai Hing Road, Kowloon Bay,
Kowloon,HONG KONG
Tel: +852 2331 0888
Fax: +852 2331 0889
www.cps.bureauveritas.com

Measurement Data: 2DH5

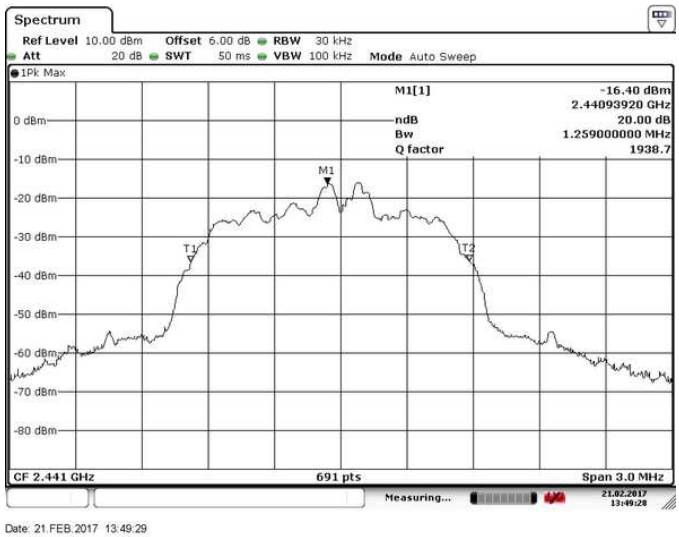
Fundamental Frequency [MHz]	20 dB Bandwidth [MHz]	FCC Limits
2402	1254.70	--



Date: 21.FEB.2017 13:51:19

Measurement Data: 2DH5

Fundamental Frequency [MHz]	20 dB Bandwidth [MHz]	FCC Limits
2441	1259.00	--

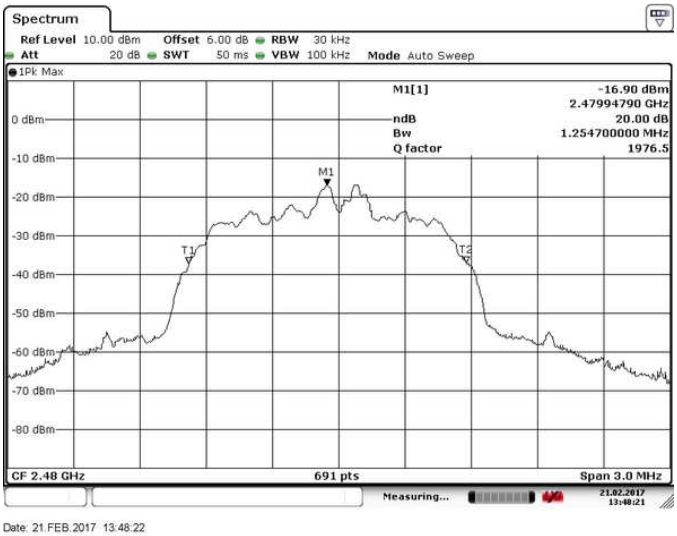


Date: 21.FEB.2017 13:49:29

BUREAU VERITAS HONG KONG LIMITED – Kowloon Bay Office
1/F Pacific Trade Centre,
2 Kai Hing Road, Kowloon Bay,
Kowloon,HONG KONG
Tel: +852 2331 0888
Fax: +852 2331 0889
www.cps.bureauveritas.com

Measurement Data: 2DH5

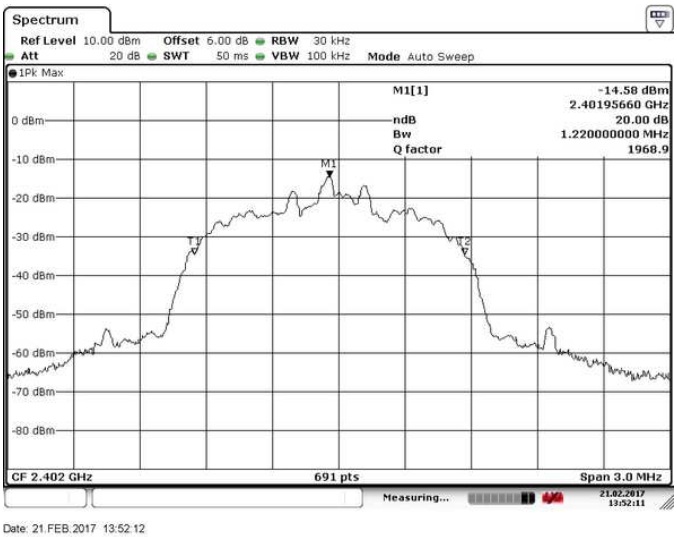
Fundamental Frequency [MHz]	20 dB Bandwidth [MHz]	FCC Limits
2480	1254.70	--



Date: 21.FEB.2017 13:48:22

Measurement Data: 3DH5

Fundamental Frequency [MHz]	20 dB Bandwidth [MHz]	FCC Limits
2402	1220.00	--

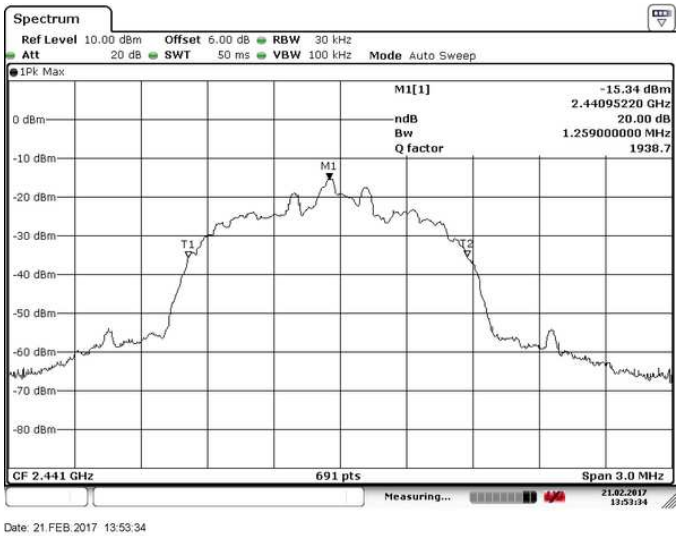


Date: 21.FEB.2017 13:52:12

BUREAU VERITAS HONG KONG LIMITED – Kowloon Bay Office
1/F Pacific Trade Centre,
2 Kai Hing Road, Kowloon Bay,
Kowloon,HONG KONG
Tel: +852 2331 0888
Fax: +852 2331 0889
www.cps.bureauveritas.com

Measurement Data: 3DH5

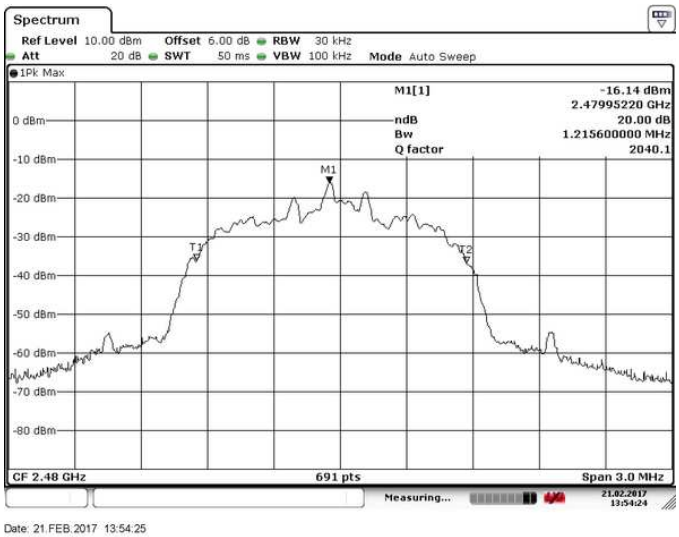
Fundamental Frequency [MHz]	20 dB Bandwidth [MHz]	FCC Limits
2441	1259.00	--



Date: 21.FEB.2017 13:53:34

Measurement Data: 3DH5

Fundamental Frequency [MHz]	20 dB Bandwidth [MHz]	FCC Limits
2480	1215.60	--



Date: 21.FEB.2017 13:54:25

BUREAU VERITAS HONG KONG LIMITED – Kowloon Bay Office
1/F Pacific Trade Centre,
2 Kai Hing Road, Kowloon Bay,
Kowloon,HONG KONG
Tel: +852 2331 0888
Fax: +852 2331 0889
www.cps.bureauveritas.com

Duty Cycle Correction During 100msec:

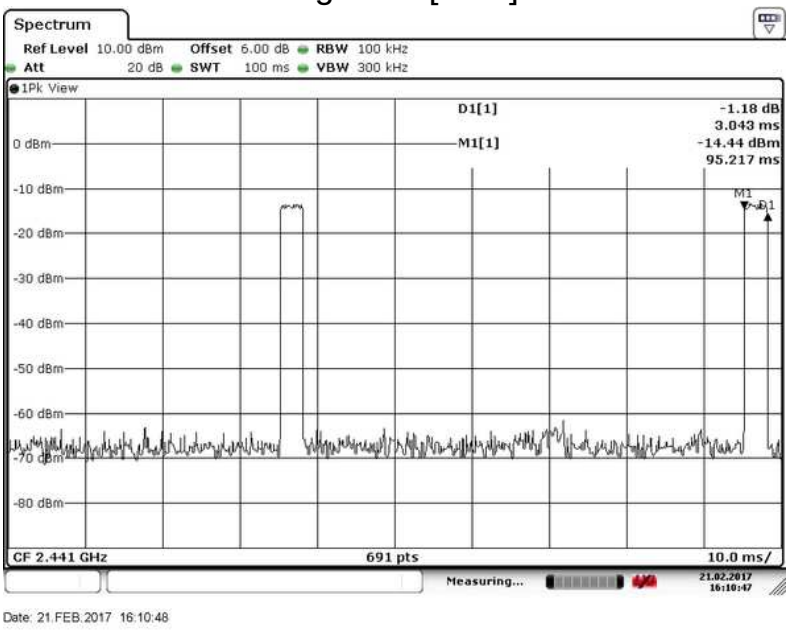
Each function key sends a different series of characters, but each packet period (100msec) never exceeds a series of 2 (3.043msec) pulses. Assuming any combination of short or long pulses may be obtained due to encoding the worst case transmit duty cycle would be considered 2 x (3.043msec) per 100msec = 6.086% duty cycle. Figure A to C show the characteristics of the pulse train for one of these functions

Remarks:

Duty Cycle Correction = 20Log(0.06086) = -24.3dB

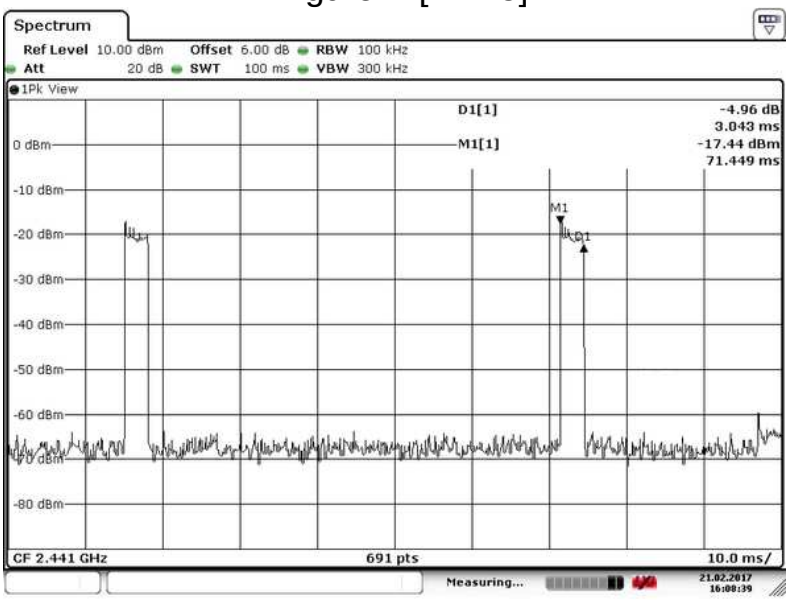
The following figures [Figure A to C] show the characteristics of the pulse train for one of these functions.

Figure A [DH5]



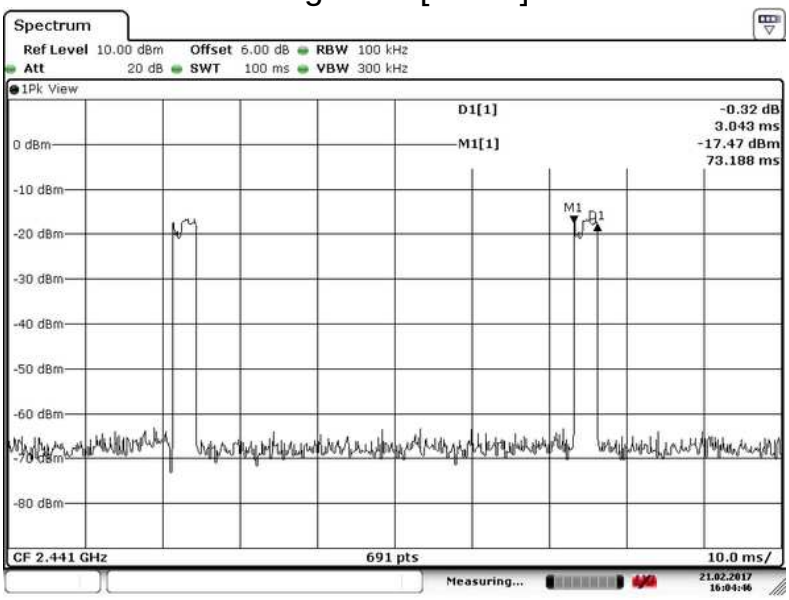
Measurement Data :

Figure B [2DH5]



Date: 21.FEB.2017 16:08:39

Figure C [3DH5]



Date: 21.FEB.2017 16:04:47

BUREAU VERITAS HONG KONG LIMITED – Kowloon Bay Office
1/F Pacific Trade Centre,
2 Kai Hing Road, Kowloon Bay,
Kowloon,HONG KONG
Tel: +852 2331 0888
Fax: +852 2331 0889
www.cps.bureauveritas.com

TEST REPORT No: (5217)009-0707

Photographs of EUT

Front View of the product

Rear View of the product

Top View of the product

Bottom View of the product

Side View of the product

Side View of the product

Adaptor

BUREAU VERITAS HONG KONG LIMITED – Kowloon Bay Office
1/F Pacific Trade Centre,
2 Kai Hing Road, Kowloon Bay,
Kowloon,HONG KONG
Tel: +852 2331 0888
Fax: +852 2331 0889
www.cps.bureauveritas.com

TEST REPORT No: (5217)009-0707

Photographs of EUT

Internal View of the product

Internal View of the product

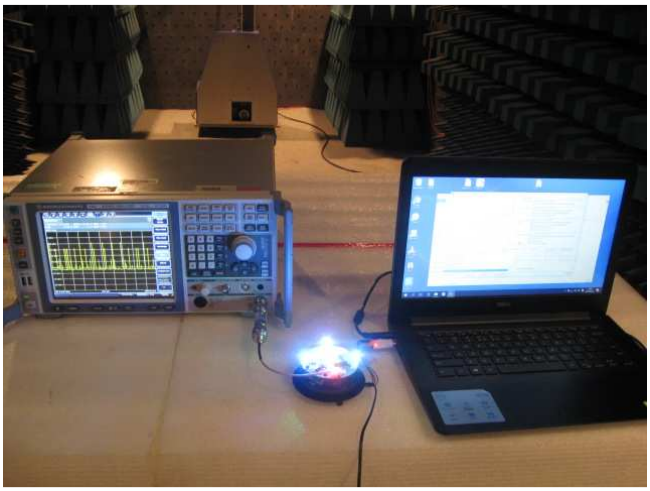
Inner Circuit Top View

Inner Circuit Bottom View

Antenna

BUREAU VERITAS HONG KONG LIMITED – Kowloon Bay Office
1/F Pacific Trade Centre,
2 Kai Hing Road, Kowloon Bay,
Kowloon,HONG KONG
Tel: +852 2331 0888
Fax: +852 2331 0889
www.cps.bureauveritas.com

Measurement of Maximum Peak Conducted Output Power Test Set Up



Measurement of Conducted Emissions Test Set Up

BUREAU VERITAS HONG KONG LIMITED – Kowloon Bay Office
1/F Pacific Trade Centre,
2 Kai Hing Road, Kowloon Bay,
Kowloon,HONG KONG
Tel: +852 2331 0888
Fax: +852 2331 0889
www.cps.bureauveritas.com

Measurement of Radiated Emissions Test Set Up

******* End of Report *******

BUREAU VERITAS HONG KONG LIMITED – Kowloon Bay Office
1/F Pacific Trade Centre,
2 Kai Hing Road, Kowloon Bay,
Kowloon,HONG KONG
Tel: +852 2331 0888
Fax: +852 2331 0889
www.cps.bureauveritas.com