Report No.: DREFCC1510-0368

Total 29 pages

EMC TEST REPORT

Test item

: Handheld Digital Trunking Scanner

Model No.

: PRO-668

Order No.

: DTNC1509-04769

Date of receipt

: 2015-09-23

Test duration

: 2015-09-30 ~ 2015-10-12

Date of Issue

: 2015-10-15

Applicant

: The Whistler Group, Inc.

168 Ayer Road, Littleton, MA 01460, USA

Test laboratory

: DT&C Co., Ltd.

42, Yurim-ro, 154beon-gil, Cheoin-gu, Yongin-si, Gyeonggi-do, Korea 449-935

Test specification

: ANSI C 63.4:2009

FCC Part 15 Subpart B (Scanning receiver)

Test environment

: Temperature : (21 ~ 22) °C,

Humidity: (49 ~ 59) % R.H.

Test result

: X Comply

☐ Not Comply

The test results presented in this test report are limited only to the sample supplied by applicant and the use of this test report is inhibited other than its purpose.

This test report shall not be reproduced except in full, without the written approval of Dt&C Co., Ltd.

Tested by:

Reviewed by:

Engineer DaeHwa Eun Technical Manager YoungKyu Shin

PRESIDENT OF DT&C Co., Ltd.



CONTENTS

1. General Remarks	3
2. Test Laboratory	3
3. General Information of EUT	4
4. Test Summary	5
4.1 Applied standards and test results	5
4.2 Test environment and conditions	5
4.3 Test result Summary	5
5. Test Set-up and operation mode	6
5.1 Principle of Configuration Selection	6
5.2 Test Operation Mode	6
5.3 Support Equipment Used	6
6. Test Results : Emission	7
6.1 Conducted Disturbance	7
6.2 Radiated Disturbance	10
6.3 Antenna Power Conduction	24
Appendix 1	26
List of Test and Measurement Instruments	26
Appendix 2	28
Report Revision History	28
Appendix 3	29
Changed Part List	29

Report No.: DREFCC1510-0368

Total 29 pages

1. General Remarks

This report contains the result of tests performed by:

Dt&C Co., Ltd.

Address: 42, Yurim-ro, 154beon-gil, Cheoin-gu, Yongin-si, Gyeonggi-do, Korea 449-935

http://www.dtnc.net

Tel: +82-31-321-2664 Fax: +82-31-321-1664

2. Test Laboratory

Dt&C Co., Ltd. has been accredited / filed / authorized by the agencies listed in the following table;

Certificate	Nation	Agency	Code	Mark
Accreditation	Korea	KOLAS	393	ISO/IEC 17025
	USA	FCC	KR0034 101842 678747, 596748, 804488, 165783	Accredited 2.948 Listed
Sita Filing	Canada	IC	5740A-1 5740A-2	Registered
Site Filing	Japan	VCCI	C-1427 R-1364, R-3385, R-4076, R-4180, T-1442, G-338, G754, G-815	Registered
O a differentia	Korea	КС	KR0034	Designation
Certification	Germany	TUV	CARAT 13 11 86721 001	ISO/IEC 17025

Quality control in the testing laboratory is implemented as per ISO/IEC 17025 which is the "General requirements for the competent of calibration and testing laboratory".

3. General Information of EUT

Kind of Equipment	Handheld Digital Trunking Scanner
Model No.	PRO-668
Add Model No	WS1080, WS1088
Serial No	None
FCC ID	HSXSC10
Supplied Power for Test	DC 5 V, 500 mA
Applicant	The Whistler Group, Inc.
Applicant	168 Ayer Road, Littleton, MA 01460, USA
	RDX, Inc
Manufacturer	307 Daeryung Techno Twon 3, 115 Gasan Digital 2-ro, Guemcheon-
	gu, Seoul, Korea
Footony	Radix Telecom Phils., Industries Inc.
Factory	P-IMES Bldg.2. Block 16, Phase IV Peza Rosario Cavite, Philippines

Related Submittal(s) / Grant(s)
Refer to Appendix 3 (Changed Part List)

Dt&C

Report No.: DREFCC1510-0368 Total 29 pages

4. Test Summary

4.1 Applied standards and test results

Test Items	Applied Standards	Results
Conducted Disturbance	ANSI C63.4:2009	С
Radiated Disturbance	ANSI C63.4:2009	С
Antenna Power Conduction	ANSI C63.4:2009	С
C=Comply N/C=Not Comply	y N/T=Not Tested N/A=Not Applicable	

The data in this test report are traceable to the national or international standards.

4.2 Test environment and conditions

Test Items	Test date (YYYY-MM-DD)	Temp (°C)	Humidity (% R.H.)
Conducted Disturbance	2015-09-30	22	49
Radiated Disturbance	2015-10-01	21	59
Antenna Power Conduction	2015-10-12	21	51

4.3 Test result Summary

(1) Conducted Emission

Frequency	Phase	Result	Detector	Limit	Margin
[MHz]	Filase	[dBµV]	Detector	[dBµV]	[dB]
0.16931	L	44.8	Quasi-Peak	65.0	20.2

(2) Radiated Emission

Frequency	Pol.	Result	Detector	Limit	Margin
[MHz]	1 01.	[dB(µV/m)]	Detector	[dB(µV/m)]	[dB]
718.714	Н	37.7	Quasi-Peak	46.0	8.3

Report No.: DREFCC1510-0368

Total 29 pages

5. Test Set-up and operation mode

5.1 Principle of Configuration Selection

Emission: The equipment under test (EUT) was configured to measure its highest possible radiation level. The test modes were adapted accordingly in reference to the instructions for use.

5.2 Test Operation Mode

- MODE 1: The EUT was set to constantly scan all bands.
- MODE 2: The EUT was set to connect USB cable to the notebook PC for receiving data and status.

5.3 Support Equipment Used

					CAI	BLE		Back	FCC									
Unit	Model No.	Serial No.	Manufacturer	Connect type	Length (m)	shield	With Ferrite	shell	ID									
Notebook	4230S	CNII 120025CC	HP	POWER	1.8	Non-shield	V	Plastic	DOC									
PC	42305	CNU20935GG	CNU20935GG	CN020933GG	CNO20933GG	01102093300	01102093300	C14020933GG	CN020933GG	CN020933GG	CNU20933GG	пР	USB	0.5	Shield	^	Plastic	DOC
Notebook	Series	WD007044D47070	LITE-ON	POWER	1.8	Non-shield	>	Plastic	DOC									
PC Adaptor	PPP009L-E	WBGST0A1R1T2TC	TECHNOLOGY	POWER	1.8	Non-shield	^	Plastic	ВОС									
Headset	COV-903	N/A	COSY	STEREO	2.0	Non-shield	Х	Plastic	DOC									

Report No.: DREFCC1510-0368

Total 29 pages

6. Test Results: Emission

6.1 Conducted Disturbance

6.1.1 Measurement Procedure

In the range of 0.15 MHz to 30 MHz, the conducted disturbance was measured and set-up was made accordance with **ANSI C63.4.**

If the EUT is table top equipment, it was placed on a wooden table with a height of 0.8 m above the reference ground plane and 0.4 m from the conducting wall of the shielded room.

Also if the EUT is floor-standing equipment, it was placed on a non-conducted support with a height up to 0.15 m above the reference ground plane.

Connect the EUT's power source lines to the PC power through the LISN. All the other peripherals are connected to the 2nd LISN, if any.

Unused measuring port of the LISN was resistively terminated by 50 ohm terminator.

The measuring port of the LISN for EUT was connected to spectrum analyzer.

Using conducted emission test software, the emissions were scanned with peak detector mode.

After scanning over the frequency range, suspected emissions were selected to perform final measurement. When performing final measurement, the receiver was used which has Quasi-Peak detector and Average detector.

By varying the configuration of the test sample and the cable routing it was attempted to maximize the emission.

For further description of the configuration refer to the picture of the test set-up.

6.1.2 Limit for Conducted Disturbance

(1) Conducted disturbance at mains ports.

	Limits dB(μV)			
Frequency range (MHz)	Quasi-peak		Average	
(141112)	Class A	Class B	Class A	Class B
0.15 to 0.50	79	66 to 56	66	56 to 46
0.50 to 5	72	56	60	46
5 to 30	73	60	60	50
All ATELL POLICE COLORS OF A				

Note 1 The lower limit shall apply at the transition frequencies.

Note 2 The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.5 MHz.

Note) 1. Emission Level = Reading Value + Correction Factor.

- 2. Correction Factor = Cable Loss + Insertion Loss of LISN
- 3. Margin = Limit Emission level

Report No.: DREFCC1510-0368

Total 29 pages

Test Result

MODE 2

Results of Conducted Emission

Date: 2015-09-30 DTNC

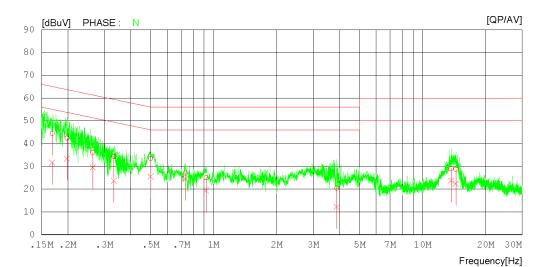
Order No. DTNC1509-04769 Model No. PRO-668 Serial No. Test Condition 2

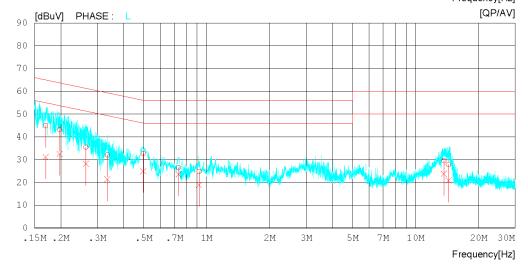
Referrence No. Power Supply Temp/Humi.

120 V 60 Hz 22 'C 49 % R.H.

Operator

LIMIT : CISPR22_B QP CISPR22_B AV





Report No.: DREFCC1510-0368

Total 29 pages

Results of Conducted Emission

Date: 2015-09-30 DTNC

Order No.

: DTNC1509-04769 : PRO-668 Referrence No. Model No. Serial No. Test Condition Power Supply Temp/Humi. Operator 120 V 60 Hz 22 'C 49 % R.H.

Memo

LIMIT : CISPR22_B QP CISPR22_B AV

1 0.16850 34.3 21.5 10.1 44.4 31.6 65.0 55.0 20.6 23.4 N 2 0.19843 32.3 23.3 10.1 42.4 33.4 63.7 53.7 21.3 20.3 N 3 0.26335 26.0 19.5 10.1 36.1 29.6 61.3 51.3 25.2 21.7 N 4 0.33285 24.2 13.6 10.1 34.3 23.7 59.4 49.4 25.1 25.7 N 5 0.49875 23.3 15.4 10.1 33.4 25.5 56.0 46.0 22.6 20.5 N	
6 0.73129 17.0 14.4 10.1 27.1 24.5 56.0 46.0 28.9 21.5 N 7 0.91981 14.9 9.3 10.1 25.0 19.4 56.0 46.0 31.0 26.6 N 8 3.87600 10.3 1.9 10.2 20.5 12.1 56.0 46.0 35.5 33.9 N 9 13.72020 18.5 13.2 10.6 29.1 23.8 60.0 50.0 30.9 26.2 N 10 14.41720 18.0 11.7 10.6 28.6 22.3 60.0 50.0 31.4 27.7 N 11 0.16931 34.7 20.9 10.1 44.8 31.0 65.0 55.0 20.2 24.0 L 12 0.19785 33.1 22.4 10.1 43.2 32.5 63.7 53.7 20.5 21.2 L 13 0.26434 25.4 18.1 10.1 35.5 28.2 61.3 51.3 25.8 23.1 L 14 0.33430 21.9 11.2 10.1 32.0 21.3 59.3 49.3 27.3 28.0 L 15 0.49764 22.6 14.8 10.1 32.7 24.9 56.0 46.0 23.3 21.1 L 16 0.73269 16.4 13.4 10.1 26.5 23.5 56.0 46.0 23.3 21.1 L 17 0.91877 14.7 8.7 10.1 24.8 18.8 56.0 46.0 31.2 27.2 L	

Report No.: DREFCC1510-0368

Total 29 pages

6.2 Radiated Disturbance

6.2.1 Measurement Procedure

The radiated disturbance was measured and set-up was made accordance with ANSI C63.4.

If the EUT is tabletop equipment, it was placed on a wooden table with a height of 0.8 m above the reference ground plane and 3 m or 10 m away from the interference receiving antenna in the **10m semi-anechoic chamber.**

Also if the EUT is floor-standing equipment, it was placed on a non-conducted support with a height up to 0.15 m above the reference ground plane.

Rotate the EUT from (0 - 360)° and position the receiving antenna at heights from (1 - 4) m above the reference ground plane continuously to determine associated with higher emission levels and record them.

The measurement was made in both the vertical and horizontal polarization, and the maximum value is presented in the report.

For below 1 GHz frequency range, Quasi-Peak detector with 120 kHz RBW was used.

Peak detector with 1 MHz RBW and 1 MHz VBW were used for above 1 GHz frequency range, also used linear average detector with defined in CISPR 16-1-1.

For further description of the configuration refer to the picture of the test set-up.

Report No.: DREFCC1510-0368

Total 29 pages

6.2.2 Limit for Radiated Disturbance

- The test frequency range of Radiated Disturbance measurements are listed below.

Highest frequency generated or used in the device or on which the device operates or tunes (MHz)	Upper frequency of measurement range (MHz)
Below 108	1 000
108 – 500	2 000
500 – 1 000	5 000
Above 1 000	5 th harmonic of the highest frequency or 40 GHz, whichever is lower

(1) Limit for Radiated Emission below 1 000 MHz

Frequency range (MHz)	Class A Equipment (10 m distance) Quasi-peak (dBµV/m)	Class B Equipment (3 m distance) Quasi-peak (dBµV/m)
30 to 88	39.1	40
88 to 216	43.5	43.5
216 to 960	46.4	46
960 to 1 000	49.5	54

Note 1 The lower limit shall apply at the transition frequency.

Note 2 Additional provisions may be required for cases where interference occurs.

Note 3 According to 15.109(g), as an alternative to the radiated emission limit shown above, digital devices may be shown to comply with the standards(CISPR), Pub. 22 shown as below.

Frequency range	Class A Equipment (10 m distance)	Class B Equipment (10 m distance)
(MHz)	Quasi-peak (dBµV/m)	Quasi-peak (dΒμV/m)
30 to 230	40	30
230 to 1 000	47	37

(2) Limits for Radiated Emission above 1 000 MHz at a measuring distance of 3 m

Frequency	Class A E	quipment	Class B Equipment		
(GHz)	Peak (dBµV/m)	Average (dBµV/m)	Peak (dBµV/m)	Average (dBµV/m)	
1 to 40	80	60	74	54	

Note)1. Emission Level = Reading Value + loss - gain + Ant Factor

- 2. Margin = Limit Emission level
- 3. Loss = Cable loss, Gain = Amp gain, Ant Factor = Antenna Factor

Test Result

< 30 MHz ~ 1 GHz $_$ MODE 1 >

RADIATED EMISSION

Date: 2015-10-01

Order No. Model No.

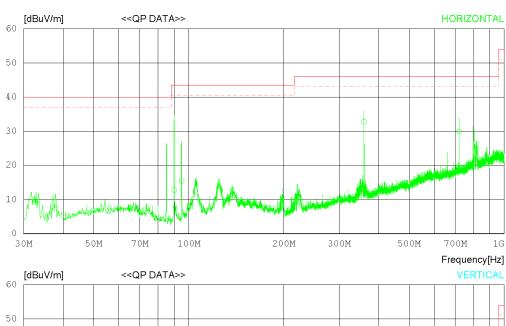
Serial No. Test Condition 1

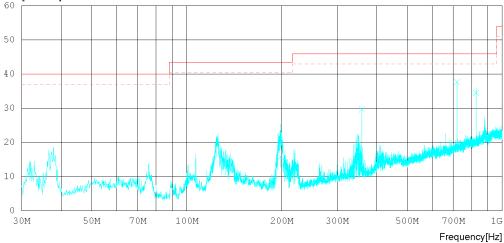
DTNC1509-04769 Reference No. Power Supply Temp/Humi Operator PRO-668

120 V 60 Hz

21 'C 59 % R.H.

LIMIT : FCC Part15 Subpart.B Class B (3m) MARGIN: 3 dB





Report No.: DREFCC1510-0368

Total 29 pages

RADIATED EMISSION

Date: 2015-10-01

Order No. Model No. Serial No. Test Condition DTNC1509-04769 PRO-668

Reference No. Power Supply Temp/Humi Operator

120 V 60 Hz 21 'C 59 % R.H.

LIMIT : FCC Part15 Subpart.B Class B (3m) MARGIN: 3 dB

1

N	o. FREQ	READING	ANT	LOSS	GAIN	RESULT	LIMIT	MARGIN	ANTENNA	TABLE
	[MHz]	QP [dBuV]	FACTOR [dB]	[dB]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	[cm]	[DEG]
	- Horizon	cal								
1 2 3 4	359.358	31.2 32.9 42.8 32.0	7.4 8.2 14.6 21.3	0.8 0.9 1.7 2.7	26.0 26.0 26.3 26.3	5 15.4 3 32.8	43.5 43.5 46.0 46.0	30.7 28.1 13.2 16.1	201 300 100 100	17 359 135 276
	- Vertical	L								
6 7	198.445 359.359 718.714 826.305	31.3 39.7 39.8 35.0	9.9 14.6 21.3 22.7	1.2 1.7 2.7 3.0	26.5 26.3 26.3	3 29.7 1 37.7	43.5 46.0 46.0	27.6 16.3 8.3 11.5	100 125 125 100	134 164 251 356

Total 29 pages

< (1 ~ 6) GHz _ Peak _ MODE 1 >

RADIATED EMISSION

Date: 2015-10-01

 Order No.
 : DTNC1509-04769
 Reference No.
 : PRO-668

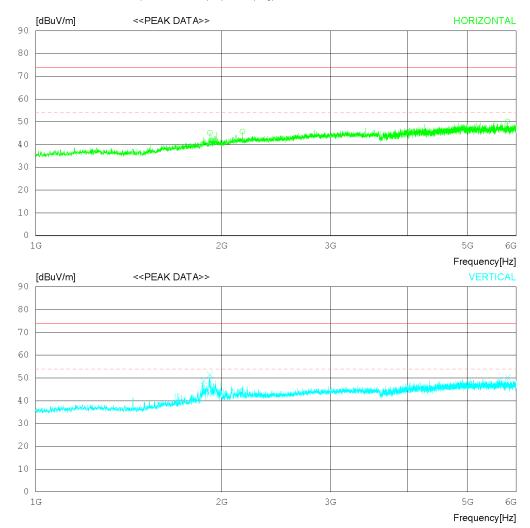
 Model No.
 : PRO-668
 Power Supply
 : 120 V
 60 Hz

 Serial No.
 : Temp/Humi
 : 21 'C
 59 % R.H.

 Test Condition
 : 1
 Operator
 :

Memo :

LIMIT : FCC Part15 Subpart.B Class B (3m) - 18G(Peak) FCC Part15 Subpart.B Class B (3m) - 18G(Avg)



Report No.: DREFCC1510-0368

Total 29 pages

RADIATED EMISSION

Date: 2015-10-01

Order No. Model No. Serial No.

DTNC1509-04769 PRO-668

Reference No. Power Supply Temp/Humi

120 V 60 Hz 21 'C 59 % R.H.

Test Condition

1

Operator

LIMIT : FCC Part15 Subpart.B Class B (3m) - 18G(Peak) FCC Part15 Subpart.B Class B (3m) - 18G(Avg)

No.	FREQ	READING PEAK	ANT FACTOR	LOSS	GAIN	RESULT	LIMIT	MARGIN	ANTENNA	TABLE
	[MHz]	[dBuV]	[dB]	[dB]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	[cm]	[DEG]
	Horizont	al								
1	1915.00	0 57.2	31.3	4.7	48.0	45.2	74.0	28.8	100	9
2	2161.87	5 55.9	32.2	5.2	47.6	45.7	74.0	28.3	100	1
3	5808.12	5 54.7	35.2	6.9	46.7	50.1	74.0	23.9	100	1
	Vertical	L								
4	1872.50	0 61.0	31.0	4.6	47.9	48.7	74.0	25.3	100	294
5	1915.62	5 63.5	31.3	4.7	48.0	51.5	74.0	22.5	100	294
6	5814.37	5 54.8	35.2	6.9	46.7	50.2	74.0	23.8	100	230

Total 29 pages

< (1 ~ 6) GHz _ Average _ MODE 1 >

RADIATED EMISSION

Date: 2015-10-01

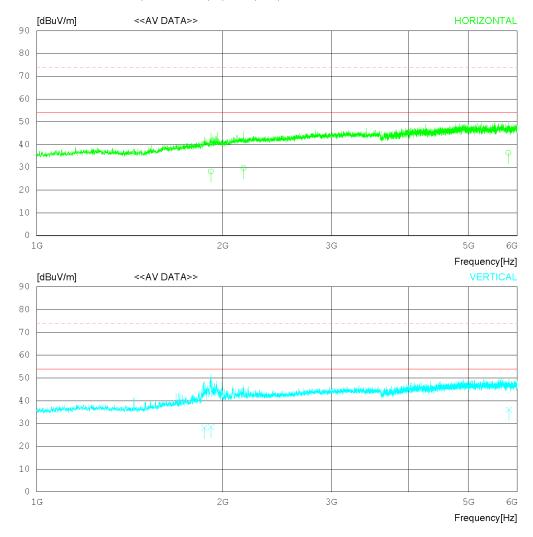
 Order No.
 : DTNC1509-04769
 Reference No.
 : PRO-668
 Power Supply
 : 120 V
 60 Hz

 Serial No.
 : Temp/Humi
 : 21 'C
 59 % R.H.

 Test Condition
 : 1
 Operator
 : 59 % R.H.

Memo :

LIMIT : FCC Part15 Subpart.B Class B (3m) - 18G(Avg) FCC Part15 Subpart.B Class B (3m) - 18G(Peak)



Report No.: DREFCC1510-0368

Total 29 pages

RADIATED EMISSION

Date: 2015-10-01

Order No. Model No. Serial No. : DTNC1509-04769 : PRO-668 : Reference No. Power Supply Temp/Humi

Operator

120 V 60 Hz 21 'C 59 % R.H.

Test Condition :

LIMIT : FCC Part15 Subpart.B Class B (3m) - 18G(Avg) FCC Part15 Subpart.B Class B (3m) - 18G(Peak)

No	. FREQ	READING	ANT	LOSS	GAIN	RESULT	LIMIT	MARGIN	ANTENNA	TABLE
	[MHz]	AV [dBuV]	FACTOR [dB]	[dB]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	[cm]	[DEG]
 	Horizont	al								
2	1914.793 2162.218 5803.500	40.2 39.9 41.0	31.3 32.2 35.2	4.7 5.2 6.9	48.0 47.0 46.7	5 29.7	54.0 54.0 54.0	25.8 24.3 17.6	100 100 100	75 196 290
 	Vertical									
5	1869.881 1915.625 5814.375	40.5 40.5 40.7	31.0 31.3 35.2	4.6 4.7 6.9	47.9 48.0 46.7	28.5	54.0 54.0 54.0	25.8 25.5 17.9	100 100 100	135 294 224

Total 29 pages

< 30 MHz ~ 1 GHz $_$ MODE 2 >

RADIATED EMISSION

Date: 2015-10-01

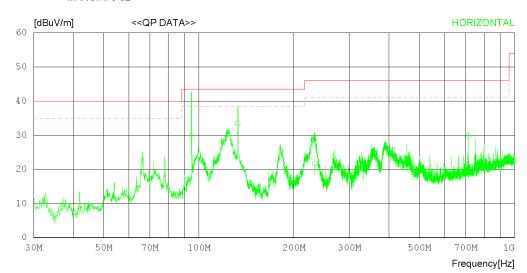
Order No. Model No. Serial No. **Test Condition** DTNC1509-04769 PRO-668

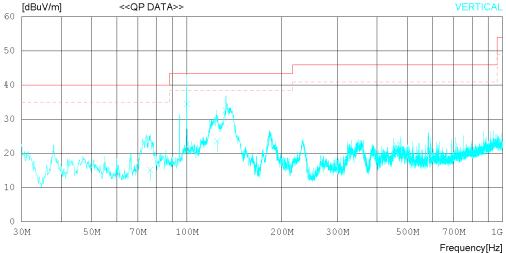
Reference No. Power Supply Temp/Humi Operator

120 V 60 Hz 21 'C 59 % R.H.

Memo

LIMIT : FCC Part15 Subpart.B Class B (3m) MARGIN: 5 dB





Report No.: DREFCC1510-0368

Total 29 pages

RADIATED EMISSION

Date: 2015-10-01

Order No. Model No. Serial No. Test Condition

DTNC1509-04769 PRO-668

Reference No. Power Supply Temp/Humi Operator

120 V 60 Hz 21 'C 59 % R.H.

LIMIT : FCC Part15 Subpart.B Class B (3m) MARGIN: 5 dB

No	. FREQ	READING	ANT	LOSS	GAIN	RESULT	LIMIT	MARGIN	ANTENNA	TABLE
	[MHz]	QP [dBuV]	FACTOR [dB]	[dB]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	[cm]	[DEG]
	Horizont	al								
3	94.989 132.697 232.604 714.245	47.2 46.9 35.7 32.1	8.2 12.2 11.0 21.2	0.9 1.0 1.4 2.6	26.0 26.0 26.4 26.3	6 33.5 4 21.7	43.5 43.5 46.0 46.0	13.8 10.0 24.3 16.2	200 200 200 100	0 358 0 339
	Vertica:	L								
	76.560 99.960 124.650 132.939	32.1 51.2 37.5 46.0	8.9 9.0 11.7 12.2	0.8 0.9 1.0	26.0 26.0 26.0	6 34.5 6 23.6	40.0 43.5 43.5 43.5	24.8 9.0 19.9 10.9	100 100 100 100	358 358 277 358

Total 29 pages

< (1 ~ 6) GHz _ Peak _ MODE 2 >

RADIATED EMISSION

Date: 2015-10-01

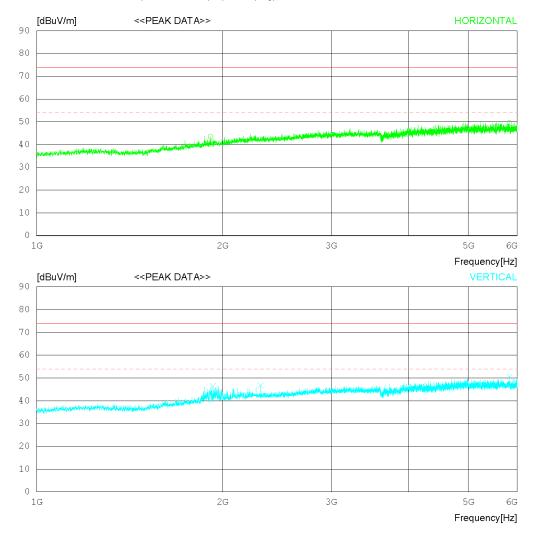
Order No. Model No. Serial No. Test Condition DTNC1509-04769 PRO-668 Reference No. Power Supply Temp/Humi Operator

120 V 60 Hz 21 'C 59 % R.H.

Memo

LIMIT : FCC Part15 Subpart.B Class B (3m) - 18G(Peak) FCC Part15 Subpart.B Class B (3m) - 18G(Avg)

2



Report No.: DREFCC1510-0368

Total 29 pages

RADIATED EMISSION

Date: 2015-10-01

Order No. Model No. Serial No.

DTNC1509-04769 PRO-668

Reference No. Power Supply Temp/Humi

120 V 60 Hz 21 'C 59 % R.H.

Test Condition

Operator

LIMIT : FCC Part15 Subpart.B Class B (3m) - 18G(Peak) FCC Part15 Subpart.B Class B (3m) - 18G(Avg)

No.	FREQ	READING	ANT	LOSS	GAIN	RESULT	LIMIT	MARGIN	ANTENNA	TABLE
	[MHz]	PEAK [dBuV]	FACTOR [dB]	[dB]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	[cm]	[DEG]
	Horizont	al								
1 2	1912.50 5825.62			4.7 6.9	48.0 46.7	43.5 49.5	74.0 74.0	30.5 24.5	100 100	108 50
	Vertical									
3 4 5	1928.75 2306.25 5833.75	0 56.7	31.4 32.3 35.3	4.7 5.4 6.7	48.0 47.7 46.7	46.4 46.7 50.6	74.0 74.0 74.0	27.6 27.3 23.4	100 100 100	358 135 0

Total 29 pages

< (1 ~ 6) GHz _ Average _ MODE 2 >

RADIATED EMISSION

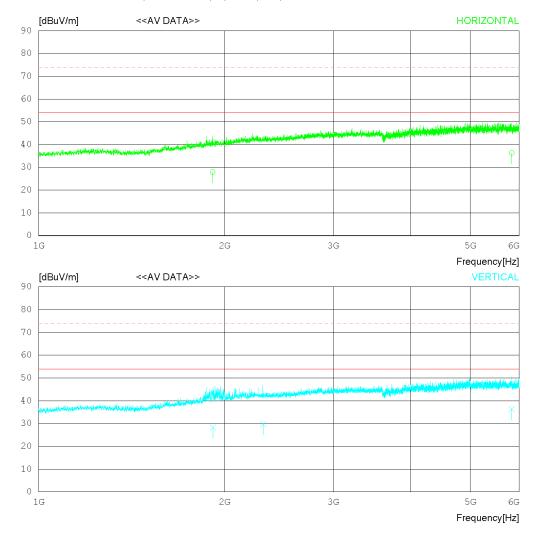
Date: 2015-10-01

Order No. Model No. Serial No. Test Condition DTNC1509-04769 PRO-668 Reference No. Power Supply Temp/Humi Operator

120 V 60 Hz 21 'C 59 % R.H.

Memo

LIMIT : FCC Part15 Subpart.B Class B (3m) - 18G(Avg) FCC Part15 Subpart.B Class B (3m) - 18G(Peak)



Report No.: DREFCC1510-0368

Total 29 pages

RADIATED EMISSION

Date: 2015-10-01

Order No. Model No. Serial No.

DTNC1509-04769 PRO-668

Reference No. Power Supply Temp/Humi

120 V 60 Hz 21 'C 59 % R.H.

Test Condition

Operator

LIMIT : FCC Part15 Subpart.B Class B (3m) - 18G(Avg) FCC Part15 Subpart.B Class B (3m) - 18G(Peak)

No	. FREQ	READING	ANT	LOSS	GAIN	RESULT	LIMIT	MARGIN	ANTENNA	TABLE
	[MHz]	AV [dBuV]	FACTOR [dB]	[dB]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	[cm]	[DEG]
	Horizont	al								
_	1912.500 5833.300		31.3 35.3	4.7 6.8	48.0 46.7		54.0 54.0	26.0 17.7	100 100	234 105
	Vertical									
4	1916.000 2309.528 5833.750	39.7	31.3 32.3 35.3	4.7 5.4 6.7	48.0 47.7	7 29.7	54.0 54.0 54.0	25.8 24.3 17.8	100 100 100	112 130 169

Report No.: DREFCC1510-0368

Total 29 pages

6.3 Antenna Power Conduction

6.3.1 Measurement Procedure

Power on the receive antenna terminals was to be determined by measurement of the voltage present at these terminals.

Antenna conducted power measurements was performed with the EUT antenna terminals connected directly to measuring instrument using a impedance-Matching network to connect the measurement Instrument to the antenna terminals of the EUT.

The losses in decibels in impedance-matching network and cables was added to the measured values in dBµV.

The measurements were repeated with the receiver tuned to a frequency until all of frequencies had been successively measured.

Power in the receive antenna terminals in the ratio of V^2/R , where V is the loss-corrected voltage measured at the antenna terminals, and R is the impedance of the measuring instrument.

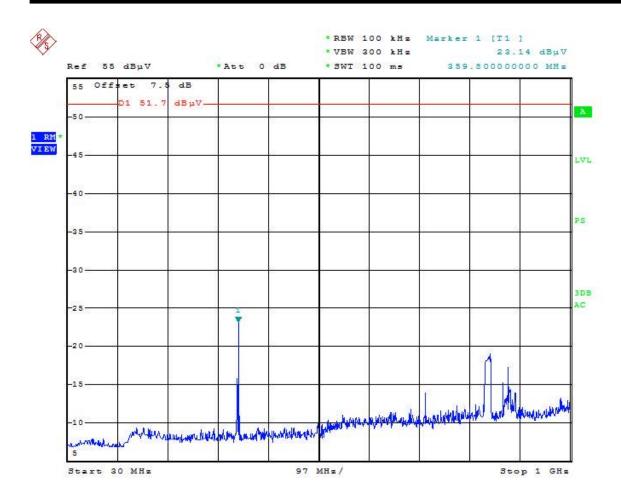
6.3.2 Limit for Antenna Power Conduction

- Limit : **2nW(51.7 dBμV)**

Report No.: DREFCC1510-0368

Total 29 pages

Test Result



FCC ID: HSXSC10 Report No.: DREFCC1510-0368 Total 29 pages

Appendix 1

List of Test and Measurement Instruments

Report No.: DREFCC1510-0368

Total 29 pages

To facilitate inclusion on each page of the test equipment used for related tests, each item of test equipment is identified by the Test Laboratory.

1. Conducted Disturbance

Name of Instrument		Model No.	Manufacturer	Serial No.	Cal. Date	Next Cal. Date
	MEASUREMENT SOFTWARE	EMI-C VER. 2.00.0143	TSJ	N/A	N/A	N/A
	SPECTRUM ANALYZER	8591E	H/P	3649A05889	N/A	N/A
	ARTIFICIAL MAINS NETWORK	PMM L2-16B	NARDA S.T.S. / PMM	000WX20305	2015.06.26	2016.06.26
	LISN	KNW-407	KYORITSU	8-317-8	2015.01.07	2016.01.07
	50 OHM TERMINATOR	CT-01	TME	N/A	2015.01.06	2016.01.06
\boxtimes	EMI TEST RECEIVER	ESCI7	ROHDE & SCHWARZ	100910	2015.02.25	2016.02.25
\boxtimes	LISN	ESH2-Z5	ROHDE & SCHWARZ	828739/006	2015.09.10	2016.09.10
\boxtimes	PULSE LIMITER	ESH3-Z2	ROHDE & SCHWARZ	101334	2015.01.07	2016.01.07
	50 OHM TERMINATOR	CT-01	TME	N/A	2015.01.06	2016.01.06

2. Radiated Disturbance

N	ame of Instrument	Model No.	Manufacturer	Serial No.	Cal. Date	Next Cal. Date
\boxtimes	MEASUREMENT SOFTWARE	EMI-R VER. 2.00.0121	TSJ	N/A	N/A	N/A
\boxtimes	EMI TEST RECEIVER	ESU	ROHDE & SCHWARZ	100538	2015.02.06	2016.02.06
\boxtimes	TRILOG BROADBAND TEST- ANTENNA	VULB9160	SCHWARZBECK	9160-3362	2014.07.31	2016.07.31
\boxtimes	LOW NOISE PRE AMPLIFIER	MLA-100K01-B01-26	TSJ	1252741	2015.02.25	2016.02.25
\boxtimes	HORN ANTENNA	3117	ETS-LINDGREN	00152093	2014.01.30	2016.01.30
\boxtimes	PREAMPLIFIER	MLA-100M18-B01-42	TSJ	1872271	2015.05.26	2016.05.26
	EMI TEST RECEIVER	ESCI	ROHDE & SCHWARZ	100364	2015.02.25	2016.02.25
	AMPLIFIER	MLA-100K01-B01-26	TSJ	1252741	2015.02.25	2016.02.25

3. Antenna Power Conduction

Name of Instrument		Model No.	Manufacturer	Serial No.	Cal. Date	Next Cal. Date
\boxtimes	EMI TEST RECEIVER	ESCI	ROHDE & SCHWARZ	100364	2015.02.25	2016.02.25
	SPLITTER	ZFRSC-42	MINI CIRCUITS	SF624000603	2015.06.26	2016.06.26

FCC ID: HSXSC10 Report No.: DREFCC1510-0368 Total 29 pages

Appendix 2

Report Revision History

Revision	Description	Revised By	Revision
Date	Description	ixevised by	Reviewed By
None	Original	N/A	N/A

FCC ID: HSXSC10 Report No.: DREFCC1510-0368 Total 29 pages

Appendix 3

Changed Part List

Castian	PRO-668/WS1080				
Section	Ref.no	Description		Part No.	
Mechanical PL	5	Cable, FPC		7088510009	
		1			
LOGIC PCB TOP ASS'Y	CN303	CONNECTOR	2343-5-1*2	2343-01XXXNXXMU0X	
	CN305	CONNECTOR	FFC	04 6238 010410846+	
	R502	RES CHIP	(0402)220 ohm 1/16W +/-	MCD01M7DI221	
	R503	RES CHIP	(0402)220 ohm 1/16W +/-		
			(0.102)220 0.1111 2/2011 1/		
	LED502	CHIP LED	(RANK GB3-HB4)	LS-SP190DBW91-5	
	LED503	CHIP LED	(RANK GB3-HB4)	LS-SP190DBW91-5	
KEY TOP ASS'Y					
	SWR501	CHIP TACT SWITCH		SKRBACE010	
	SWR502	CHIP TACT SWITCH		SKRBACE010	
	SWR503	CHIP TACT SWITCH		SKRBACE010	
	SWR504	CHIP TACT SWITCH		SKRBACE010	
	SWR505	CHIP TACT SWITCH		SKRBACE010	
	SWR506	CHIP TACT SWITCH		SKRBACE010	
	SWR507	CHIP TACT SWITCH		SKRBACE010	
	SWR508	CHIP TACT SWITCH		SKRBACE010	
	SWR509	CHIP TACT SWITCH		SKRBACE010	
	SWR510	CHIP TACT SWITCH		SKRBACE010	

	WS1088				
Ref.no	Description	n	Part No.	Remarks	
2	FFC 14PIN	KEY and LOGIC	CJ-14N*20*0.5*P7	CHANGED	
C406		(0402) 47pF 50V +/-5%	GRM1555C1H470J(A01D/Z01D)	ADD	
C407		(0402) 47pF 50V +/-5%	GRM1555C1H470J(A01D/Z01D)	ADD	
C408		(0402) 47pF 50V +/-5%	GRM1555C1H470J(A01D/Z01D)	ADD	
C409		(0402) 47pF 50V +/-5%	GRM1555C1H470J(A01D/Z01D)	ADD	
CN303	CONNECT		CJ-2502-DG-02P	CHANGED	
CN305	CONNECT	FFC	04 6299 614 020 846+	CHANGED	
R441	RES CHIP	(0402) 1K ohm 1/16W +/-5	MCR01MZPJ102	ADD	
R442	RES CHIP	(0402) 1K ohm 1/16W +/-5	MCR01MZPJ102	ADD	
R443	RES CHIP	(0402) 1K ohm 1/16W +/-5	MCR01MZPJ102	ADD	
R444	RES CHIP	(0402) 1K ohm 1/16W +/-5	MCR01MZPJ102	ADD	
				DELETE	
				DELETE	
R507	RES CHIP	(0402)220 ohm 1/16W +/-5	MCR01MZPJ221	ADD	
R508	RES CHIP	(0402)220 ohm 1/16W +/-5	MCR01MZPJ221	ADD	
R509	RES CHIP	(0402)220 ohm 1/16W +/-5	MCR01MZPJ221	ADD	
R510	RES CHIP	(0402)220 ohm 1/16W +/-5	MCR01MZPJ221	ADD	
				DELETE	
				DELETE	
LED507	CHIP LED	(RANK GB3-HB4)	LS-SP190DBW91-5	ADD	
LED508	CHIP LED	(RANK GB3-HB4)	LS-SP190DBW91-5	ADD	
LED509	CHIP LED	(RANK GB3-HB4)	LS-SP190DBW91-5	ADD	
LED510	CHIP LED	(RANK GB3-HB4)	LS-SP190DBW91-5	ADD	
				DELETE	
	_				