SKT

SK TECH CO., LTD.

Certificate of Compliance

Test Report No.:	**SKTTRT-060526-017**		
NVLAP CODE:	**200220-0**		
Applicant:	**OptiPlus, Inc.**		
Applicant Address:	1112 Seonil Technopia B'd. 440 Sangdaewon dong, Jungwon gu, Seongnam city, Gyeonggi do, 462-726 Korea		
Manufacturer:	**OptiPlus, Inc.**		
Manufacturer Address:	1112 Seonil Technopia B'd. 440 Sangdaewon dong, Jungwon gu, Seongnam city, Gyeonggi do, 462-726 Korea		
Device Under Test:	**Digital Audio FM Transmitter Adapter System (FM Transmitter, Audio Converter)**		
FCC ID: **IC:**	**R39-DFS1000T** **6470A-DFS1000T**	**Model No.:**	**DFS1000T** **DFS1000R ****
Receipt No.:	SKTEU06-0214	**Date of receipt:**	April 13, 2006
Date of Issue:	May 26, 2006		
Location of Testing:	**SK TECH CO., LTD.** 820-2, Wolmoon-Ri, Wabu-Up, Namyangju-Si, Kyunggi-Do, Korea		
Test Procedure:	**ANSI C63.4, RSS-Gen Issue 1**		
Test Specification:	**47CFR Part 15 Rules, RSS-210 Issue 6**		
FCC Equipment Class: **IC Equipment Category:**	**DXX - Part 15 Low Power Communication Device Transmitter** **RSS-210 Issue 6: Category I Equipment, Annex 2.8**		
Test Result:	The above-mentioned device has been tested and passed.		

Tested & Reported by: *Jong-Soo, Yoon*

2006.05.26

Signature *Date*

Approved by: *Jae-Kyung, Bae*

2006.05.26

Signature *Date*

Other Aspects:	**Certification procedure is required to FM Transmitter, Model DFS1000T. However, this report covers the measurement results for Audio Converter, Model DFS1000R, as a Class B digital device**
Abbreviations:	**· OK, Pass = passed · Fail = failed · N/A = not applicable**

☞
- **This test report is not permitted to copy partly without our permission.**
- **This test result is dependent on only equipment to be used.**
- **This test result is based on a single evaluation of one sample of the above mentioned.**
- **This test report must not be used to claim product endorsement by NVLAP or any agency of the U.S Government.**
- **We certify that this test report has been based on the measurement standards that is traceable to the national or International standards.**

NVLAP®

NVLAP Lab. Code: 200220-0

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1. GENERAL

These tests were performed using the test procedure outlined in ANSI C63.4, 2003 for intentional radiators, and in accordance with the limits set forth in FCC Part 15.239 for Low Power Communication Device Transmitter. The EUT (Equipment Under Test) has been shown to be capable of compliance with the applicable technical standards.

We attest to the accuracy of data. All measurements reported herein were performed by SK Tech Co., Ltd. and were made under Chief Engineer's supervision.
We assume full responsibility for the completeness of these measurements and vouch for the qualifications of all persons taking them.

2. TEST SITE

SK TECH Co., Ltd.

2.1 Location

820-2, Wolmoon Ri, Wabu-Up, Namyangju-Si, Kyunggi-Do, Korea

This test site is in compliance with ISO/IEC 17025 for general requirements for the competence of testing and calibration laboratories.
This laboratory is accredited by NVLAP for NVLAP Lab. Code: 200220-0 and DATech for DAR-Registration No.: DAT-P-076197-01

2.2 List of Test and Measurement Instruments

Description	Manufacturer	Model #	Serial #	
Spectrum Analyzer	Agilent	E4405B	US40520856	☒
EMC Spectrum Analyzer	Agilent	E7405A	US40240203	☒
EMI Test Receiver	Rohde&Schwarz	ESIB40	100277	☒
EMI Test Receiver	Rohde&Schwarz	ESVS10	825120/008	
EMI Test Receiver	Rohde&Schwarz	ESVS10	834468/013	
EMI Test Receiver	Rohde&Schwarz	ESHS10	835871/002	
EMI Test Receiver	Rohde&Schwarz	ESHS10	862970/019	☒
Artificial Mains Network	Rohde&Schwarz	ESH3-Z5	836679/018	☒
Pre-amplifier	HP	8447F	3113A05153	☒
Pre-amplifier	MITEQ	AFS44	1116321	
Pre-amplifier	MITEQ	AFS44	1116322	
Power Meter	Agilent	E4418B	US39402179	
Power Sensor	HP	8485A	3318A13916	
Oscilloscope	Agilent	54820A	US40240160	
Diode detector	Agilent	8473C	1882A03173	
VHF Precision Dipole Antenna (TX/RX)	Schwarzbeck	VHAP	1014 / 1015	
UHF Precision Dipole Antenna (TX/RX)	Schwarzbeck	UHAP	989 / 990	
Loop Antenna	Schwarzbeck	HFH2-Z2	863048/019	
TRILOG Broadband Antenna	Schwarzbeck	VULB9160	3141	☒
Biconical Antenna	Schwarzbeck	VHA9103	2265	☒
Log-Periodic Antenna	Schwarzbeck	UHALP9107	1819	☒
Horn Antenna	AH Systems	SAS-200/571	304	
Horn Antenna	EMCO	3115	00040723	
Horn Antenna	EMCO	3115	00056768	
Vector Signal Generator	Agilent	E4438C	MY42080359	
PSG analog signal generator	Agilent	E8257D-520	MY45141255	
DC Power Supply	HP	6634A	2926A-01078	
DC Power Supply	HP	6268B	2542A-07856	
Digital Multimeter	HP	HP3458A	2328A14389	
PCS Interface	HP	83236B	3711J00881	
CDMA Mobile Test Set	HP	8924C	US35360253	
Hygro/Thermo Graph	SATO	PC-5000TRH-II	-	☒
Temperature/Humidity Chamber	All Three	ATH-50M	20030425	
Function/Arbitrary Waveform Generator	Agilent	33220A	MY44005753	☒

2.3 Test Date

Date of Application : April 13, 2006

Date of Test : April 18, 2006 ~ May 25, 2006

2.4 Test Environment

See each test item's description.

3. DESCRIPTION OF THE EQUIPMENT UNDER TEST

The EUT is a FM transmitter and a part of the system installed in trains. The system consists of two parts; one Audio Converter (Model DFS1000R) and FM transmitter (Model DFS1000T). The product specification described herein was obtained from product data sheet or user's manual.

3.1 Rating and Physical Characteristics

	Digital Audio FM Transmitter Adapter System	
Product Name	Audio Converter **	**FM Transmitter**
Model Name	DFS1000R	**DFS1000T**
Intended Use	Analog to digital converter	FM transmitter for broadcasting
Power source	90 - 260 VAC	90 - 260 VAC
Local Oscillator or X-Tal	12.888 MHz	7.6 MHz
Transmit Frequency	-	88.1 MHz and 88.5 MHz, simultaneously transmitting at two frequencies
Antenna Type	-	Standard BNC cable, 10 m long, shielding removed about 1 m
Type of Modulation	-	FM
External Ports	Analog stereo INPUT Digital Serial Audio OUTPUT (×2)	Digital Serial Audio INPUT Digital Serial Audio OUTPUT Antenna connector (×4, BNC type)

***** This report covers the measurement results for Model DFS1000R as a Class B digital device.***

3.2 Equipment Modifications

None

3.3 Submitted Documents

Block diagram

Schematic diagram

Part List

PCB Layout

User manual

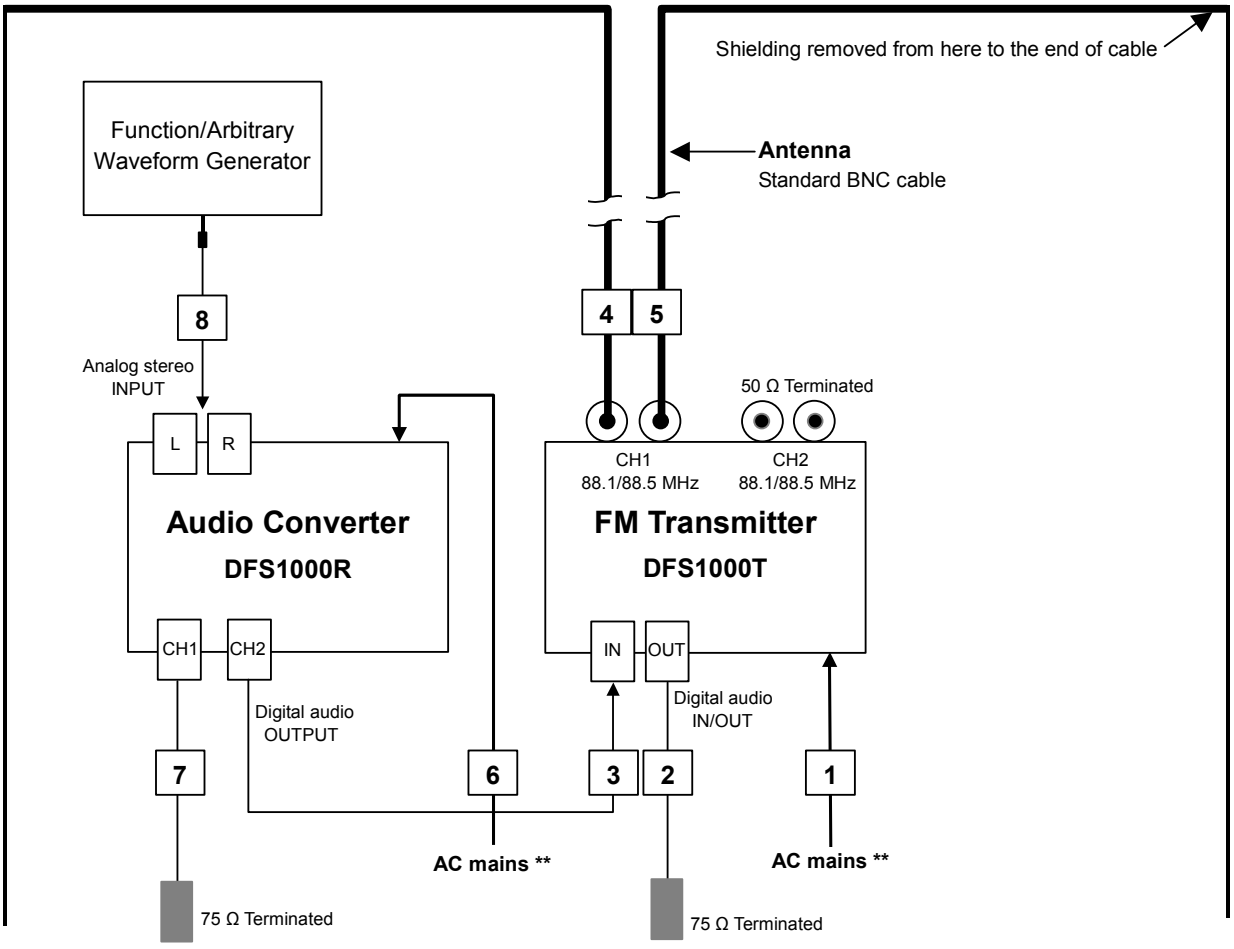
4. MEASUREMENT CONDITIONS

4.1 Description of test configuration

The EUT, FM Transmitter model DFS1000T, was configured for testing in a typical fashion.

The EUT is not a stand-alone device. The digital audio signals from the Audio Converter model DFS1000R were fed to the input terminal of the FM Transmitter.

The EUT transmitted FM modulated signals simultaneously at the operating frequencies of 88.1 MHz and 88.5 MHz once the EUT powered.



** For conducted emission measurements, both tested.

4.2 List of Peripherals

Equipment Type	Manufacturer	Model	S/N
Function/Arbitrary Waveform Generator	Agilent	33220A	MY44005753

4.3 Type of Used Cables

#	START		END		Cable	
	Name	I/O Port	Name	I/O Port	Length	Shielded
1	FM Transmitter	AC power IN	AC Mains	-	1.5 m	YES
2	FM Transmitter	Digital audio OUT	Termination	-	5 m	YES
3	FM Transmitter	Digital audio IN	Audio Converter	Audio OUT	4 m	YES
4	FM Transmitter	ANT (88.1 MHz)	Antenna cable	-	10 m	YES (9m) / No (1m)
5	FM Transmitter	ANT (88.5 MHz)	Antenna cable	-	10 m	YES (9m) / No (1m)
6	Audio Converter	AC power IN	AC Mains	-	1.5 m	YES
7	Audio Converter	Digital audio OUT	Termination	-	5 m	YES
8	Audio Converter	Analog audio IN	Function generator	Signal OUT	1.2 m	NO

4.4 Uncertainty

Measurement Item	Combined Standard Uncertainty Uc	Expanded Uncertainty U = KUc (K = 2)
Radiated disturbance	± 2.30 dB	±4.60 dB
Conducted disturbance	± 1.96 dB	±3.92 dB

5. TEST AND MEASUREMENTS

Summary of Test Results

Requirement	CFR 47 Section	RSS Standards	Report Section	Test Result
Antenna Requirement	15.203	RSS-Gen, 7.1.4	5.1	PASS
Conducted Emissions	15.207(a)	RSS-Gen, 7.2.2	5.2	PASS
Occupied bandwidth	15.239(a) 15.215(c)	RSS-210, A2.8 RSS-Gen, 4.4.1	5.3	PASS
Field Strength (Fundamental)	15.239(b)	RSS-210, A2.8	5.4	PASS
Radiated Spurious Emissions	15.239(c), 15.209(a)	RSS-210, A2.8 RSS-210, Table 2	5.4	PASS

5.1 ANTENNA REQUIREMENT

5.1.1 Regulation

FCC 47CFR15 – 15.203

An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this Section. The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited. This requirement does not apply to carrier current devices or to devices operated under the provisions of Sections 15.211, 15.213, 15.217, 15.219, or 15.221. Further, this requirement does not apply to intentional radiators that must be professionally installed, such as perimeter protection systems and some field disturbance sensors, or to other intentional radiators which, in accordance with Section 15.31(d), must be measured at the installation site. However, the installer shall be responsible for ensuring that the proper antenna is employed so that the limits in this Part are not exceeded.

RSS-Gen, Issue 1 - 7.1.4

A transmitter can only be sold or operated with antennas with which it was certified. A transmitter may be certified with multiple antenna types. An antenna type comprises antennas having similar in-band and out-of-band radiation patterns. Testing shall be performed using the highest-gain antenna of each combination of transmitter and antenna type for which certification is being sought, with the transmitter output power set at the maximum level. Any antenna of the same type and having equal or lesser gain as an antenna that had been successfully tested for certification with the transmitter, will also be considered certified with the transmitter, and may be used and marketed with the transmitter. The manufacturer shall include with the application for certification a list of acceptable antenna types to be used with the transmitter.

5.1.2 Result: PASS

The transmitter uses a standard BNC antenna connector. However the transmitter and antenna should be professionally installed. See operational description document.

5.2 CONDUCTED EMISSIONS

5.2.1 Regulation

According to §15.207(a), for an intentional radiator that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies, within the band 150 kHz to 30 MHz, shall not exceed the limits in the following table, as measured using a 50μH/50Ω line impedance stabilization network (LISN). Compliance with the provisions of this paragraph shall be based on the measurement of the radio frequency voltage between each power line and ground at the power terminal. The lower limit applies at the boundary between the frequency ranges.

Frequency of emission (MHz)	Conducted limit (dBμV)	
	Qausi-peak	Average
0.15 – 0.5	66 to 56 *	56 to 46 *
0.5 – 5	56	46
5 – 30	60	50

* Decreases with the logarithm of the frequency.

According to §15.107(a), for unintentional device, except for Class A digital devices, line conducted emission limits are the same as the above table.

5.2.2 Test Procedure

1. The EUT was placed on a wooden table of size, 1 m by 1.5 m, raised 80 cm in which is located 40 cm away from the vertical wall and 1.5m away from the side wall of the shielded room.
2. Each current-carrying conductor of the EUT power cord was individually connected through a 50Ω/50μH LISN, which is an input transducer to a Spectrum Analyzer or an EMI/Field Intensity Meter, to the input power source.
3. Exploratory measurements were made to identify the frequency of the emission that had the highest amplitude relative to the limit by operating the EUT in a range of typical modes of operation, cable position, and with a typical system equipment configuration and arrangement. Based on the exploratory tests of the EUT, the one EUT cable configuration and arrangement and mode of operation that had produced the emission with the highest amplitude relative to the limit was selected for the final measurement.
4. The final test on all current-carrying conductors of all of the power cords to the equipment that comprises the EUT (but not the cords associated with other non-EUT equipment is the system) was then performed over the frequency range of 0.15 MHz to 30 MHz.
5. The measurements were made with the detector set to PEAK amplitude within a bandwidth of 10 kHz or to QUASI-PEAK and AVERAGE within a bandwidth of 9 kHz. The EUT was in transmitting mode during the measurements.

5.2.3 Test Results: PASS

Table 1: Measured values of the Conducted Emissions (Model DFS1000T)

Frequency [MHz]	Reading [dBµV]	L / N	CF [dB]	CL [dB]	Actual [dBµV]	Limit [dBµV]	Margin [dB]
QUASI-PEAK DATA							
0.195	39.66	N	0.12	0.02	39.80	63.82	24.02
0.260	38.08	L	0.13	0.02	38.23	61.43	23.20
0.325	36.56	L	0.13	0.04	36.73	59.58	22.85
0.395	35.45	L	0.13	0.04	35.62	57.96	22.34
0.460	35.07	L	0.13	0.04	35.24	56.69	21.45
0.525	35.05	L	0.13	0.04	35.22	56.00	20.78
0.590	35.74	L	0.13	0.04	35.91	56.00	20.09
0.655	39.25	L	0.14	0.05	39.44	56.00	16.56
1.535	31.98	N	0.14	0.07	32.19	56.00	23.81
5.085	27.70	N	0.21	0.16	28.07	60.00	31.93
13.670	31.60	N	0.51	0.27	32.38	60.00	27.62
AVERAGE DATA							
0.195	37.02	L	0.13	0.02	37.17	53.82	16.65
0.260	36.85	L	0.13	0.02	37.00	51.43	14.43
0.325	35.29	L	0.13	0.04	35.46	49.58	14.12
0.395	34.21	L	0.13	0.04	34.38	47.96	13.58
0.460	33.84	L	0.13	0.04	34.01	46.69	12.68
0.525	33.84	L	0.13	0.04	34.01	46.00	11.99
0.590	34.42	L	0.13	0.04	34.59	46.00	11.41
0.655	37.91	L	0.14	0.05	38.10	46.00	7.90
1.535	26.25	N	0.14	0.07	26.46	46.00	19.54
5.085	23.06	N	0.21	0.16	23.43	50.00	26.57
13.670	22.90	N	0.51	0.27	23.68	50.00	26.32

Margin (dB) = Limit – Actual
[Actual = Reading + CF + CL]
L/N = LINE / NEUTRAL
CF/CL = Correction Factor and Cable Loss

NOTE: The frequency range was scanned from 150 kHz to 30 MHz. All emissions not reported were more than 20 dB below the specified limit.

Table 2: Measured values of the Conducted Emissions (Model DFS1000R)

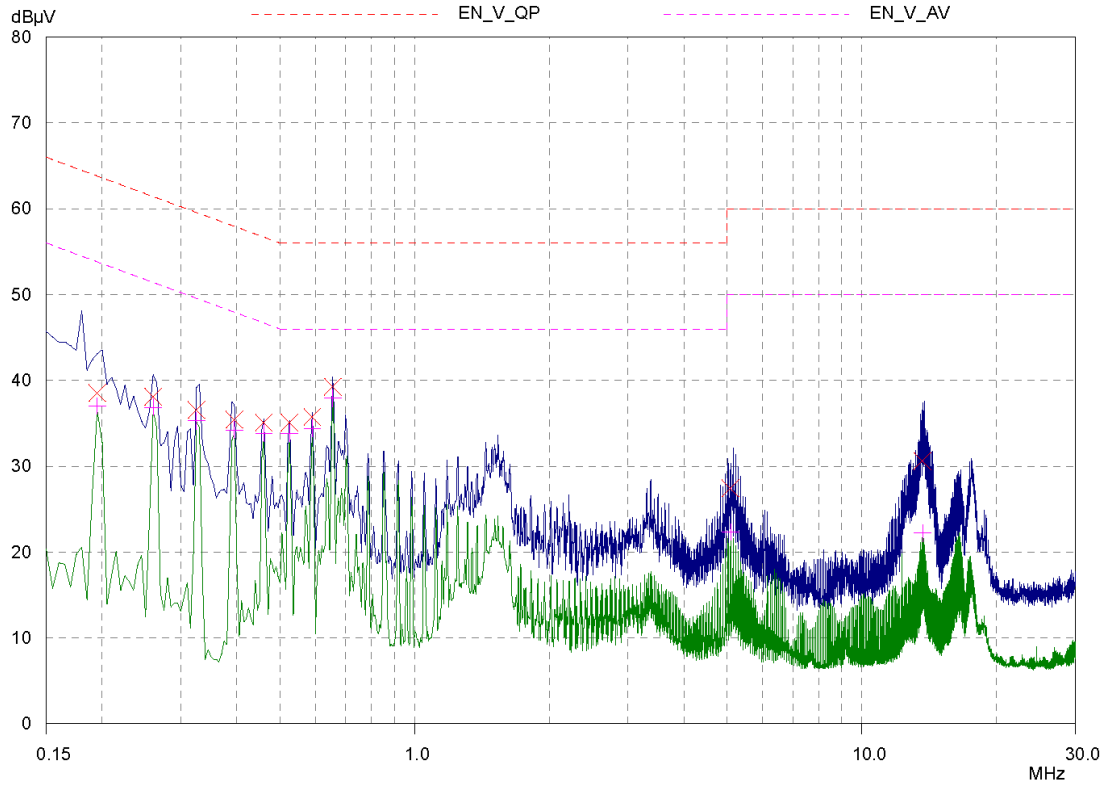
Frequency [MHz]	Reading [dBμV]	L / N	CF [dB]	CL [dB]	Actual [dBμV]	Limit [dBμV]	Margin [dB]
QUASI-PEAK DATA							
0.195	37.43	N	0.12	0.02	37.57	63.82	26.25
0.260	35.90	N	0.12	0.02	36.04	61.43	25.39
0.325	32.91	N	0.12	0.04	33.07	59.58	26.51
0.39	31.69	N	0.12	0.04	31.85	58.06	26.21
0.455	29.85	N	0.12	0.04	30.01	56.78	26.77
0.52	30.61	L	0.13	0.04	30.78	56.00	25.22
0.585	33.37	L	0.13	0.04	33.54	56.00	22.46
0.645	32.35	L	0.14	0.05	32.54	56.00	23.46
0.715	24.98	L	0.14	0.05	25.17	56.00	30.83
1.750	28.48	L	0.15	0.07	28.70	56.00	27.30
2.975	23.45	N	0.15	0.11	23.71	56.00	32.29
3.715	21.81	N	0.15	0.11	22.07	56.00	33.93
5.945	20.17	N	0.21	0.16	20.54	60.00	39.46
AVERAGE DATA							
0.195	33.90	N	0.12	0.02	34.04	53.82	19.78
0.260	32.77	N	0.12	0.02	32.91	51.43	18.52
0.325	30.79	N	0.12	0.04	30.95	49.58	18.63
0.390	28.60	N	0.12	0.04	28.76	48.06	19.30
0.455	28.19	N	0.12	0.04	28.35	46.78	18.43
0.52	29.77	N	0.12	0.04	29.93	46.00	16.07
0.585	30.58	L	0.13	0.04	30.75	46.00	15.25
0.645	29.53	L	0.14	0.05	29.72	46.00	16.28
0.715	20.79	L	0.14	0.05	20.98	46.00	25.02
1.750	20.12	L	0.15	0.07	20.34	46.00	25.66
2.975	21.94	N	0.15	0.11	22.20	46.00	23.80
3.715	20.62	N	0.15	0.11	20.88	46.00	25.12
5.945	18.36	N	0.21	0.16	18.73	50.00	31.27

Margin (dB) = Limit – Actual
[Actual = Reading + CF + CL]
L/N = LINE / NEUTRAL
CF/CL = Correction Factor and Cable Loss

NOTE: The frequency range was scanned from 150 kHz to 30 MHz. All emissions not reported were more than 20 dB below the specified limit.

Figure 1. Plot of the Conducted Emissions (Model DFS1000T)

Line – PE



Neutral – PE

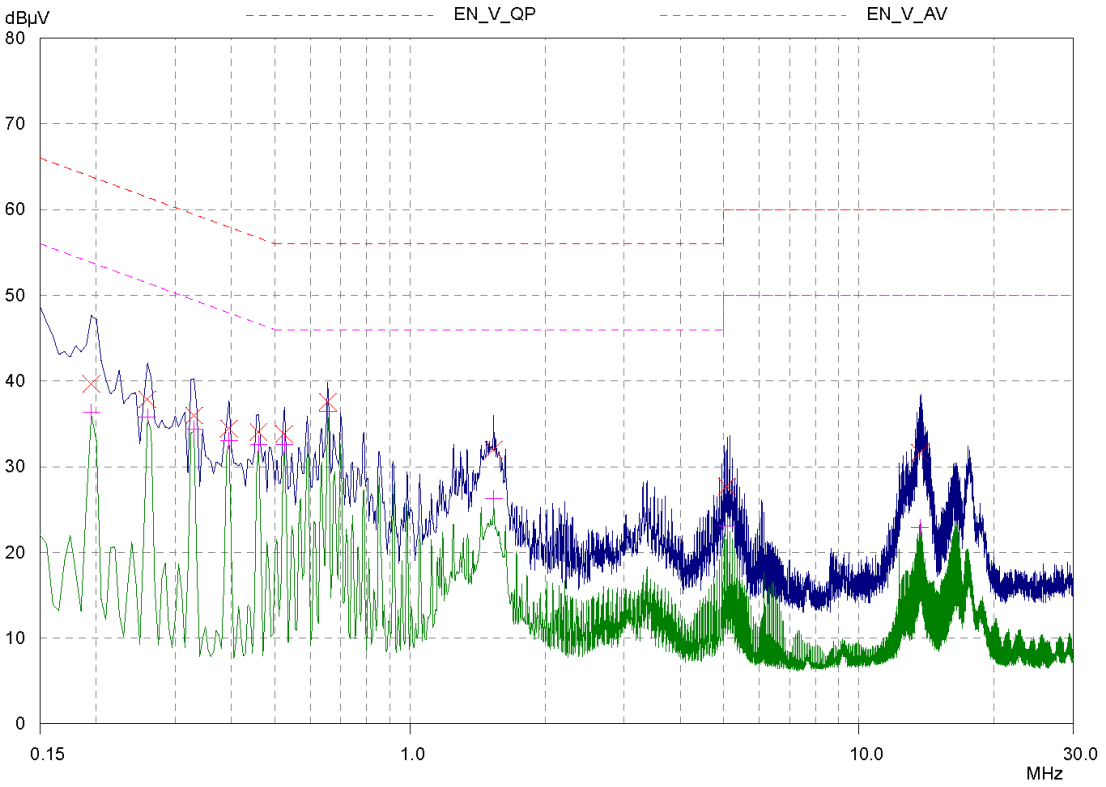
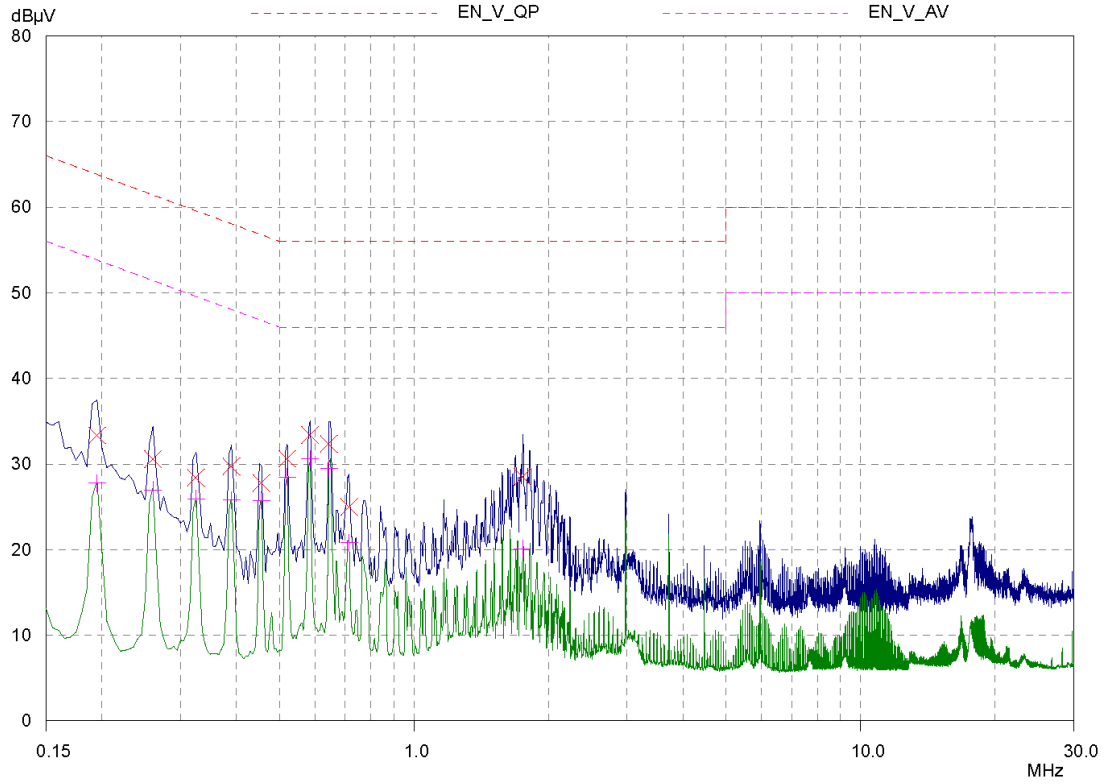
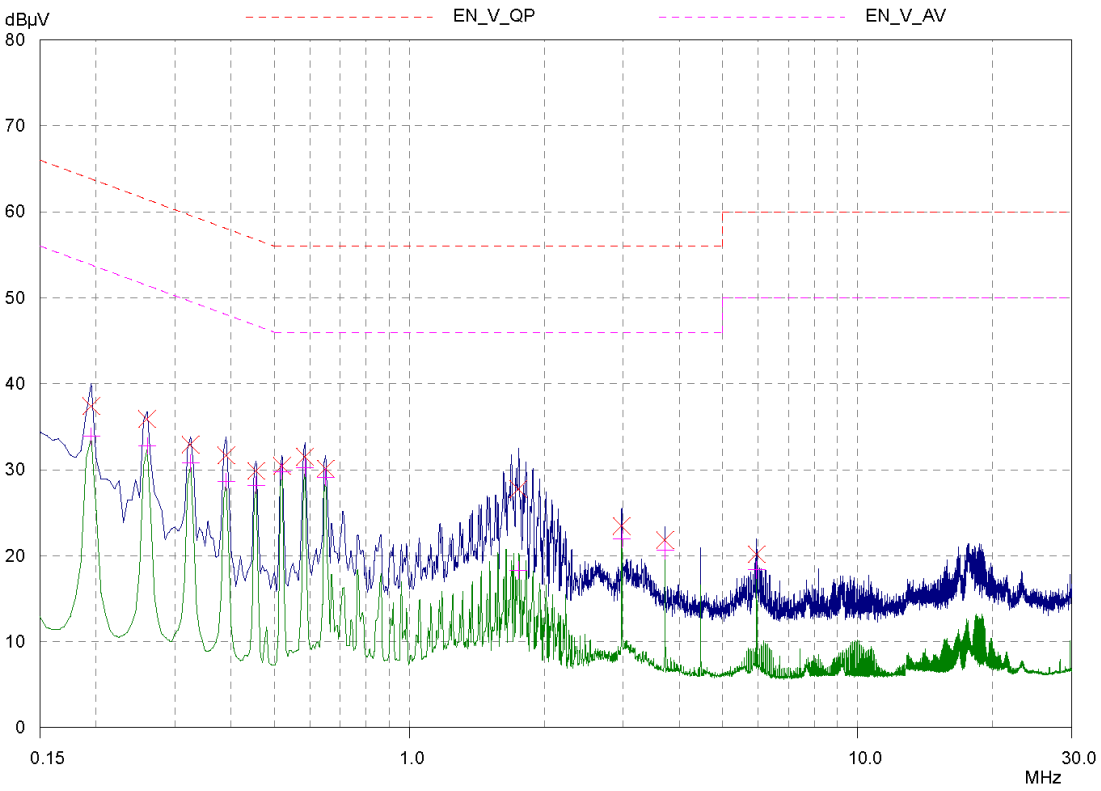


Figure 2. Plot of the Conducted Emissions (Model DFS1000R)

Line – PE



Neutral – PE



5.3 OCCUPIED BANDWIDTH

5.3.1 Regulation

FCC 47CFR15 – 15.239(a)

Emissions from the intentional radiator shall be confined within a band 200 kHz wide centered on the operating frequency. The 200 kHz band shall lie wholly within the frequency range of 88-108 MHz.

RSS-210, Issue 6 – A2.8

The occupied bandwidth shall not exceed 200 kHz.

5.3.2 Test Procedure

1. Connect the antenna port of the EUT to RF input on the spectrum analyzer.
2. Set the SPAN to capture all products of the modulation process, including the emission skirts.
3. Set the RBW to as close to 1% of the selected span as is possible without being below 1%.
4. Set the DETECTOR to sample where practical.
   [REMARK: the function of the PEAK HOLD was used, Sweep Count = 300 & Single]
5. Measure the 99% occupied bandwidth.
6. Repeat until all the rest channels are investigated.

Modulating signal: 1 kHz, maximum-rated input: 1 Vrms

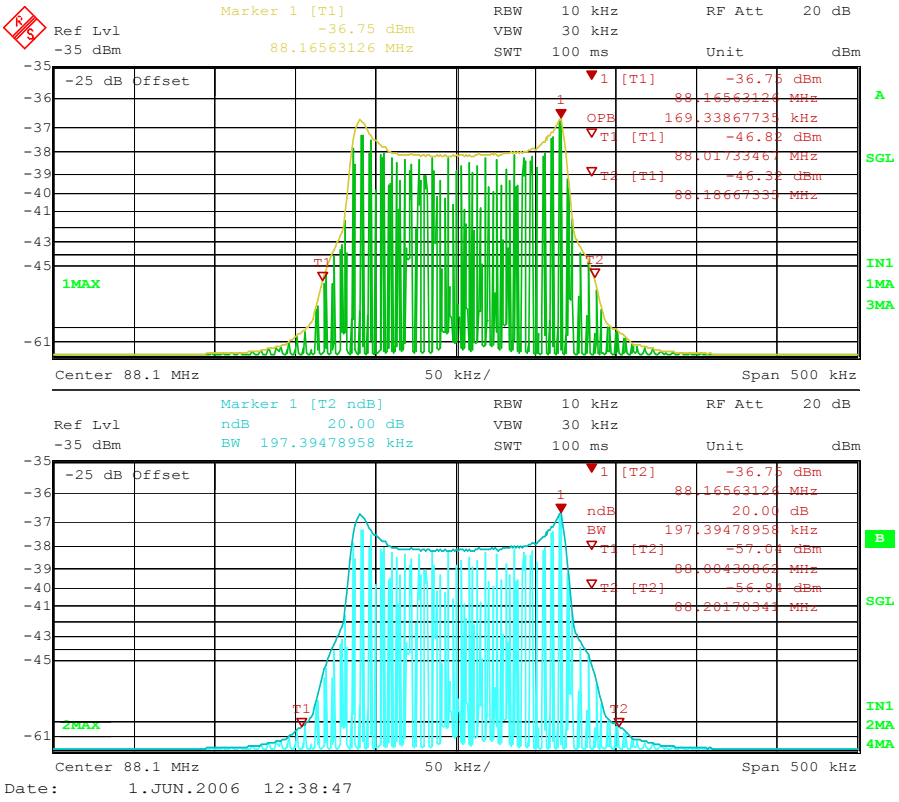
5.3.3 Test Results: PASS

Table 3: Measured values of the Occupied bandwidth

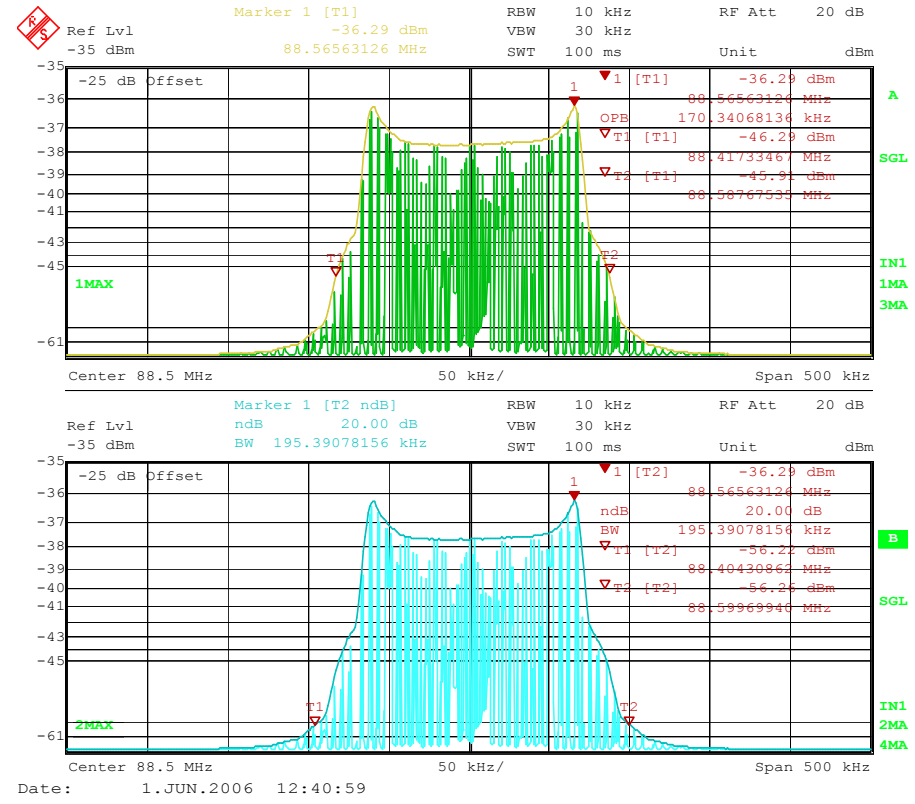
Center frequency (MHz)	Limit (kHz)	Measured occupied bandwidth (kHz)	
		99 % OBW	20dB BW
88.1	200	169.34	197.39
88.5	200	170.34	195.39

Figure 3: Plot of the Occupied bandwidth

Measured at the 88.1 MHz antenna port



Measured at the 88.5 MHz antenna port



5.4 RADIATED EMISSIONS

5.4.1 Regulation

FCC 47CFR15 – 15.239(b)
The field strength of any emissions within the permitted 200 kHz band shall not exceed 250 microvolts/meter at 3 meters. The emission limit in this paragraph is based on measurement instrumentation employing an average detector. The provisions in Section 15.35 for limiting peak emissions apply.

RSS-210, Issue 6 – A2.8
The field strength shall comply with the following:
(1) not exceeding 250 microvolts/m measured at 3 metres with an averaging meter (equivalent to 19 nW e.i.r.p.). Any type of modulation (and carrier frequencies within the 88-108 MHz band) may be used for this category; or
(2) not exceeding 100 microvolts/m measured at 30 metres (equivalent to 1000 μV/m measured at 3 metres, equivalent to 300 nW e.i.r.p.) only if the modulation is FM and the carrier frequencies are chosen from the following set: 88.1; 88.3; 88.5; 107.7; 107.9 MHz (i.e. spaced every 200 kHz).

Fundamental frequency (MHz)	Field strength of fundamental (μV/m @ 3m)	Field strength of fundamental (dB μV/m @ 3m)
88-108	250	48.0

FCC 47CFR15 – 15.239(c)
(c) The field strength of any emissions radiated on any frequency outside of the specified 200 kHz band shall not exceed the general radiated emission limits in Section 15.209.

RSS-210, Issue 6 – A2.8
Outside this 200 kHz band (as well as outside the band 88-108 MHz), Table 2 limits apply.

Frequency (MHz)	Field strength (μV/m @ 3m)	Field strength (dB μV/m @ 3m)
30–88	100	40.0
88–216	150	43.5
216–960	200	46.0
Above 960	500	54.0

** The emission limits shown in the above table are based on measurement instrumentation employing a CISPR quasi-peak detector and above 1000 MHz are based on the average value of measured emissions.

According to §15.109(a), for an unintentional device, except for Class A digital devices, the field strength of radiated emissions from unintentional radiators at a distance of 3 meters shall not exceed the above table.

5.4.2 Test Procedure

1. The preliminary radiated measurements were performed to determine the frequency producing the maximum emissions in an anechoic chamber at a distance of 3 meters.
2. The EUT was placed on the top of the 0.8-meter height, 1 × 1.5 meter non-metallic table. To find the maximum emission levels, the height of a measuring antenna was changed and the turntable was rotated 360˚.
3. The antenna polarization was also changed from vertical to horizontal. The spectrum was scanned from 30 to 1000 MHz using the TRILOG broadband antenna, and from 1000 MHz to 18000 MHz using the horn antenna.
4. To obtain the final measurement data, the EUT was arranged on a turntable situated on a 4 × 4 meter at the Open Area Test Site. The EUT was tested at a distance 3 meters.
5. Each frequency found during preliminary measurements was re-examined and investigated. The test-receiver system was set up to average, peak, and quasi-peak detector function with specified bandwidth.
6. The presence of ambient signals was verified by turning the EUT off. In case an ambient signal was detected, the measurement bandwidth was reduced temporarily and verification was made that an additional adjacent peak did not exist. This ensures that the ambient signal does not hide any emissions from the EUT.
7. The EUT was operated in transmitting mode. The measurements were performed while transmitting 88.1 MHz and 88.5 MHz.

5.4.3 Test Results: PASS

Table 4: Measured values of the Field strength

Frequency [MHz]	Receiver Bandwidth [kHz]	Pol. (V/H)	Antenna Height [m]	Table Angle [°]	Reading [dB(μV)]	Amp Gain [dB]	AF / CL [dB(1/m)]	Actual [dB(μV/m)]	Limit [dB(μV/m)]	Margin [dB]
Emissions AVERAGE DATA 15.239(b) Bands										
88.10	120	H	1.81	292	63.4	28.0	7.9/0.8	44.1	48.0	3.9
88.50	120	H	2.00	73	65.7	28.0	8.2/0.8	46.7	48.0	1.3
Emissions PEAK DATA 15.239(b) Bands										
88.10	120	H	1.81	292	65.5	28.0	7.9/0.8	46.2	68.0	21.8
88.50	120	H	2.00	73	67.4	28.0	8.2/0.8	48.4	68.0	19.6
Emissions Quasi-peak DATA 15.209; general radiated emissions										
73.73	120	H	2.65	30	45.6	28.4	5.9/0.6	23.7	40.0	16.3
193.40	120	H	1.00	270	44.9	27.4	16.0/1.3	34.8	43.5	8.7
273.41	120	H	1.24	311	35.8	27.0	18.1/1.5	28.4	46.0	17.6
279.58	120	H	1.20	36	37.9	26.9	18.3/1.5	30.8	46.0	15.2
353.28	120	H	1.00	188	37.4	27.3	17.0/1.6	28.7	46.0	17.3
359.46	120	H	1.00	183	39.9	27.3	17.2/1.6	31.4	46.0	14.6
365.60	120	H	1.00	184	40.4	27.4	17.3/1.7	32.0	46.0	14.0
380.93	120	H	1.00	327	46.4	27.6	17.8/1.7	38.3	46.0	7.7
405.52	120	H	1.00	48	50.3	27.8	17.9/1.7	42.1	46.0	3.9
430.09	120	H	1.00	55	51.2	27.9	17.5/1.8	42.6	46.0	3.4
451.60	120	H	1.00	22	36.7	27.7	17.9/1.9	28.8	46.0	17.2
457.75	120	H	1.00	13	41.7	27.7	18.0/1.9	33.9	46.0	12.1
464.10	120	H	1.00	184	35.9	27.8	18.1/1.9	28.1	46.0	17.9
602.12	120	H	1.43	42	43.2	28.5	21.0/2.2	37.9	46.0	8.1

Margin (dB) = Limit – Actual
[Actual = Reading – Amp Gain + AF + CL]
1. H = Horizontal, V = Vertical Polarization
2. AF/CL = Antenna Factor and Cable Loss

NOTE: The spectrum was scanned from 30 MHz to 1 GHz. All emissions not reported were more than 20 dB below the specified limit or in the noise floor.