XCEEDID TEST REPORT

FOR THE

SMART CARD READERS, XF2210S(T725S), XF2210W(T725W), XF2200W(T720W) & XF2200S(T720S)

FCC PART 15 SUBPART C SECTIONS 15.225, 15.207 & 15.209

TESTING

DATE OF ISSUE: AUGUST 14, 2007

PREPARED FOR:

XceedID
112 N. Rubey Drive, Suite 100
Golden, CO 80403

P.O. No.: 62745
W.O. No.: 86828

PREPARED BY:

Mary Ellen Clayton
CKC Laboratories, Inc.
5046 Sierra Pines Drive
Mariposa, CA 95338

Date of test: August 6-10, 2007

Report No.: FC07-061

TABLE OF CONTENTS

ADMINISTRATIVE INFORMATION

DATE OF TEST: August 6-10, 2007

DATE OF RECEIPT: August 6, 2007

REPRESENTATIVE: Mike Conlin

MANUFACTURER:
XceedID
112 N. Rubey Drive, Suite 100
Golden, CO 80403

TEST LOCATION:
CKC Laboratories, Inc.
5046 Sierra Pines Drive
Mariposa, CA 95338

TEST METHOD: ANSI C63.4 (2003)

PURPOSE OF TEST: To perform the testing of the Smart Card Readers, XF2210S(T725S), XF2210W(T725W), XF2200W(T720W) & XF2200S(T720S) with the requirements for FCC Part 15 Subpart C Sections 15.225, 15.207 & 15.209 devices.

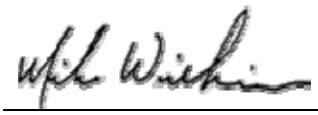
APPROVALS

Steve Behm, Director of Engineering Services

QUALITY ASSURANCE:

Joyce Walker, Quality Assurance Administrative Manager

TEST PERSONNEL:



Mike Wilkinson, EMC Engineer/Lab Manager

FCC TO CANADA STANDARD CORRELATION MATRIX

Canadian Standard	Canadian Section	FCC Standard	FCC Section	Test Description
RSS GEN	7.1.4	47CFR	15.203	Antenna Connector Requirements
RSS GEN	7.2.1	47CFR	15.35(c)	Pulsed Operation
RSS GEN	7.2.2	47CFR	15.207	AC Mains Conducted Emissions Requirement
RSS 210	2.1	47CFR	15.215(c)	Frequency Stability Recommendation
RSS 210	2.2	47CFR	15.205	Restricted Bands of Operation
RSS 210	2.6	47CFR	15.209	General Radiated Emissions Requirement
RSS 210	A2.6	47CFR	15.225(a-c)	Fundamental and Emissions Mask Requirements
RSS 210	A2.6	NA	NA	±150kHz to ±450kHz Emissions Requirement
RSS 210	A2.6	47CFR	15.225(d)	Out of band emissions
RSS 210	A2.6	47CFR	15.225(e)	Carrier Stability
	IC 3082A-1		784962	Site File No.

CONDITIONS DURING TESTING

Cable is XceedID ferrited version with an added ferrite (Fair-Rite p/n 2643625202).

FCC 15.31(m) Number Of Channels
This device operates on a single channel.

FCC 15.33(a) Frequency Ranges Tested
15.109 Radiated Emissions: 30 MHz – 1000 MHz
15.207 Conducted Emissions: 150 kHz – 30 MHz
15.209 Radiated Emissions: 9 kHz – 1000 MHz
15.225 Radiated Emissions: Carrier

FCC SECTION 15.35: ANALYZER BANDWIDTH SETTINGS PER FREQUENCY RANGE			
TEST	BEGINNING FREQUENCY	ENDING FREQUENCY	BANDWIDTH SETTING
CONDUCTED EMISSIONS	150 kHz	30 MHz	9 kHz
RADIATED EMISSIONS	9 kHz	150 kHz	200 Hz
RADIATED EMISSIONS	150 kHz	30 MHz	9 kHz
RADIATED EMISSIONS	30 MHz	1000 MHz	120 kHz
RADIATED EMISSIONS	1000 MHz	>1 GHz	1 MHz

FCC 15.203 Antenna Requirements
The antenna is an integral part of the EUT and is non-removable; therefore the EUT complies with Section 15.203 of the FCC rules.

EUT Operating Frequency
The EUT was operating at 13.56 MHz.

Temperature And Humidity During Testing
The temperature during testing was within +15°C and + 35°C.
The relative humidity was between 20% and 75%.

EQUIPMENT UNDER TEST (EUT) DESCRIPTION

The customer declares the EUT tested by CKC Laboratories was representative of a production unit. A description of the models follows:

1. XF2200W(T720W) – No keyboard and Wiegand output
2. XF2200S(T720S) – No keyboard and RS 485 output
3. XF2210W(T725W) – Keyboard and Wiegand output
4. XF2210S(T725S) – Keyboard and RS 485 output

The following models have been fully tested by CKC Laboratories: **XF2200W(T720W) & XF2210S(T725S)**

The manufacturer states that the following additional models are identical electrically to the ones which were tested, or any differences between them do not affect their EMC characteristics, and therefore they meet the level of testing equivalent to the tested models, even though only partial testing was performed on these models: **XF2200S(T720S) & XF2210W(T725W)**

EQUIPMENT UNDER TEST

Smart Card Reader
Manuf: XceedID
Model: XF2200S(T720S)
Serial: 5
FCC ID: pending

Smart Card Reader
Manuf: XceedID
Model: XF2210S(T725S)
Serial: 5
FCC ID: pending

Smart Card Reader
Manuf: XceedID
Model: XF2200W(T720W)
Serial: 5
FCC ID: pending

Smart Card Reader
Manuf: XceedID
Model: XF2210W(T725W)
Serial: 5
FCC ID: pending

PERIPHERAL DEVICES

The EUT was tested with the following peripheral device(s):

Power Supply
Manuf: Topward
Model: TPS-4000
Serial: 918520

REPORT OF EMISSIONS MEASUREMENTS

TESTING PARAMETERS

The cables were routed consistent with the typical application by varying the configuration of the test sample. Interface cables were connected to the available ports of the test unit. The effect of varying the position of the cables was investigated to find the configuration that produced maximum emissions. Cables were of the type and length specified in the individual requirements. The length of cable that produced maximum emissions was selected.

The equipment under test (EUT) was set up in a manner that represented its normal use, as shown in the setup photographs. Any special conditions required for the EUT to operate normally are identified in the comments that accompany the emissions tables.

The emissions data was taken with a spectrum analyzer or receiver. Incorporating the applicable correction factors for distance, antenna, cable loss and amplifier gain, the data was reduced as shown in the table below. The corrected data was then compared to the applicable emission limits. Preliminary and final measurements were taken in order to ensure that all emissions from the EUT were found and maximized.

CORRECTION FACTORS

The basic spectrum analyzer reading was converted using correction factors as shown in the highest emissions readings in the tables. For radiated emissions in dBµV/m, the spectrum analyzer reading in dBµV was corrected by using the following formula. This reading was then compared to the applicable specification limit.

SAMPLE CALCULATIONS		
	Meter reading	(dBµV)
+	Antenna Factor	(dB)
+	Cable Loss	(dB)
-	Distance Correction	(dB)
-	Preamplifier Gain	(dB)
=	Corrected Reading	(dBµV/m)

TEST INSTRUMENTATION AND ANALYZER SETTINGS

The test instrumentation and equipment listed were used to collect the emissions data. A spectrum analyzer or receiver was used for all measurements. The following table shows the measuring equipment bandwidth settings that were used in designated frequency bands. For testing emissions, an appropriate reference level and a vertical scale size of 10 dB per division were used. When conducted emissions testing was performed, a 10 dB external attenuator was used with internal offset correction in the analyzer.

SPECTRUM ANALYZER/RECEIVER DETECTOR FUNCTIONS

The notes that accompany the measurements contained in the emissions tables indicate the type of detector function used to obtain the given readings. Unless otherwise noted, all readings were made in the "Peak" mode. Whenever a "Quasi-Peak" or "Average" reading is listed as one of the highest readings, this is indicated as a "QP" or an "Ave" on the appropriate rows of the data sheets. The following paragraphs describe in more detail the detector functions and when they were used to obtain the emissions data.

Peak

In this mode, the spectrum analyzer/receiver readings were recorded all emissions at their peak value as the frequency band selected was scanned. By combining this function with another feature of the measuring device called "peak hold," the measuring device had the ability to measure transients or low duty cycle transient emission peak levels. In this mode the measuring device made a slow scan across the frequency band selected and measured the peak emission value found at each frequency across the band.

Quasi-Peak

When the true peak values exceeded or were within 2 dB of the specification limit, quasi-peak measurements were taken using the quasi-peak detector.

Average

For certain frequencies, average measurements may be made using the spectrum analyzer/receiver. To make these measurements, the test engineer reduces the video bandwidth on the measuring device until the modulation of the signal is filtered out. At this point the measuring device is set into the linear mode and the scan time is reduced.

FCC 15.109 RADIATED EMISSIONS
All models were tested to ensure compliance for this section.

Test Setup Photos

XF2210S-W

XF2210S-W

XF2200S-W

XF2200S-W

Test Data Sheets

Test Location: CKC Laboratories •4933 Sierra Pines Dr. • Mariposa, CA 95338 • 1-800-500-4EMC (4362)

Customer: **XceedID**
Specification: **15.109 CLASS B**
Work Order #: **86828** Date: 8/7/2007
Test Type: **Maximized Emissions** Time: 10:58:07
Equipment: **Smart Card Reader** Sequence#: 2
Manufacturer: XceedID Tested By: Mike Wilkinson
Model: XF2210W(T725W)
S/N: 5

***Test Equipment*:**

Function	S/N	Calibration Date	Cal Due Date	Asset #
Agilent E4446A SA	US44300407	01/03/2007	01/03/2009	02660
HP 8447D Preamp	1937A02604	03/14/2007	03/14/2009	00099
Chase CBL6111C Bilog	2456	12/30/2006	12/30/2008	01991

***Equipment Under Test* (* = EUT):**

Function	Manufacturer	Model #	S/N
Smart Card Reader*	XceedID	XF2210W(T725W)	5

Support Devices:

Function	Manufacturer	Model #	S/N
Power Supply	Topward	TPS-4000	918520

Test Conditions / Notes:

EUT is a RFID reader operating on a frequency of 13.56MHz. EUT is mounted on a vertical support structure, simulating normal installation. DC power is provided via support power supply. Power supply is bonded to ground plane. Cable is XceedID ferrited version with an added ferrite (Fair-Rite p/n 2643625202). Frequency range of investigation: 30-1000MHz. Temperature: 22.5ºC, Relative Humidity: 38%.

Transducer Legend:

T1=Cable - Site D 10m 9k-1G T2=AMP AN00099
T3=ANT AN01991 25-1000MHz

Measurement Data: Reading listed by margin. Test Distance: 10 Meters

#	Freq MHz	Rdng dBµV	T1 dB	T2 dB	T3 dB	dB	Dist Table	Corr dBµV/m	Spec dBµV/m	Margin dB	Polar Ant
1	48.005M	38.3	+1.9	-27.1	+10.1		+10.0	33.2	40.0	-6.8	Vert
2	32.011M QP	29.1	+1.5	-27.2	+18.0		+10.0	31.4	40.0	-8.6	Vert
3	32.005M	28.2	+1.5	-27.2	+18.0		+10.0	30.5	40.0	-9.5	Horiz
4	192.005M	37.1	+4.0	-26.7	+9.1		+10.0	33.5	43.5	-10.0	Vert
5	384.005M	30.0	+6.2	-27.1	+15.5		+10.0	34.6	46.0	-11.4	Vert

6	40.005M	29.3	+1.7	-27.2	+14.5	+10.0	28.3	40.0	-11.7	Horiz
7	383.980M	29.1	+6.2	-27.1	+15.5	+10.0	33.7	46.0	-12.3	Horiz
8	64.005M	32.6	+2.2	-27.2	+6.5	+10.0	24.1	40.0	-15.9	Vert
9	191.980M	30.8	+4.0	-26.7	+9.1	+10.0	27.2	43.5	-16.3	Horiz
10	256.005M	28.3	+5.1	-26.4	+12.6	+10.0	29.6	46.0	-16.4	Vert
11	199.980M	29.8	+4.1	-26.7	+9.1	+10.0	26.3	43.5	-17.2	Horiz
12	112.005M	28.3	+3.1	-27.0	+11.0	+10.0	25.4	43.5	-18.1	Vert
13	64.045M	29.2	+2.2	-27.2	+6.5	+10.0	20.7	40.0	-19.3	Horiz

Test Location: CKC Laboratories •4933 Sierra Pines Dr. • Mariposa, CA 95338 • 1-800-500-4EMC (4362)

Customer: **XceedID**
Specification: **15.109 CLASS B**
Work Order #: **86828** Date: 8/7/2007
Test Type: **Maximized Emissions** Time: 10:13:33
Equipment: **Smart Card Reader** Sequence#: 4
Manufacturer: XceedID Tested By: Mike Wilkinson
Model: XF2210S(T725S)
S/N: 5

***Test Equipment*:**

Function	S/N	Calibration Date	Cal Due Date	Asset #
Agilent E4446A SA	US44300407	01/03/2007	01/03/2009	02660
HP 8447D Preamp	1937A02604	03/14/2007	03/14/2009	00099
Chase CBL6111C Bilog	2456	12/30/2006	12/30/2008	01991

***Equipment Under Test* (* = EUT):**

Function	Manufacturer	Model #	S/N
Smart Card Reader*	XceedID	XF2210S(T725S)	5

Support Devices:

Function	Manufacturer	Model #	S/N
Power Supply	Topward	TPS-4000	918520

Test Conditions / Notes:

EUT is a RFID reader operating on a frequency of 13.56MHz. EUT is mounted on a vertical support structure, simulating normal installation. DC power is provided via support power supply. Power supply is bonded to ground plane. Cable is XceedID ferrited version with an added ferrite (Fair-Rite p/n 2643625202). Frequency range of investigation: 30-1000MHz. Temperature: 22.5ºC, Relative Humidity: 38%.

Transducer Legend:

T1=Cable - Site D 10m 9k-1G T2=AMP AN00099
T3=ANT AN01991 25-1000MHz

Measurement Data: Reading listed by margin. Test Distance: 10 Meters

#	Freq MHz	Rdng dBµV	T1 dB	T2 dB	T3 dB	dB	Dist Table	Corr dBµV/m	Spec dBµV/m	Margin dB	Polar Ant
1	32.013M	30.6	+1.5	-27.2	+18.0		+10.0	32.9	40.0	-7.1	Vert
2	63.977M	38.6	+2.2	-27.2	+6.6		+10.0	30.2	40.0	-9.8	Vert
3	384.010M	31.2	+6.2	-27.1	+15.5		+10.0	35.8	46.0	-10.2	Horiz
4	32.010M	27.0	+1.5	-27.2	+18.0		+10.0	29.3	40.0	-10.7	Horiz
5	384.023M	30.7	+6.2	-27.1	+15.5		+10.0	35.3	46.0	-10.7	Vert
6	335.988M	28.1	+5.6	-26.6	+14.4		+10.0	31.5	46.0	-14.5	Vert

7	127.990M	30.9	+3.3	-27.0	+11.7	+10.0	28.9	43.5	-14.6	Vert
8	191.990M	31.4	+4.0	-26.7	+9.1	+10.0	27.8	43.5	-15.7	Vert
9	64.010M	32.3	+2.2	-27.2	+6.5	+10.0	23.8	40.0	-16.2	Horiz
10	255.988M	27.9	+5.1	-26.4	+12.6	+10.0	29.2	46.0	-16.8	Vert
11	111.990M	28.4	+3.1	-27.0	+11.0	+10.0	25.5	43.5	-18.0	Vert
12	192.010M	26.4	+4.0	-26.7	+9.1	+10.0	22.8	43.5	-20.8	Horiz

Test Location: CKC Laboratories •4933 Sierra Pines Dr. • Mariposa, CA 95338 • 1-800-500-4EMC (4362)

Customer: **XceedID**
Specification: **15.109 CLASS B**
Work Order #: **86828** Date: 8/7/2007
Test Type: **Maximized Emissions** Time: 13:23:41
Equipment: **Smart Card Reader** Sequence#: 8
Manufacturer: XceedID Tested By: Mike Wilkinson
Model: XF2200W(T720W)
S/N: 5

***Test Equipment*:**

Function	S/N	Calibration Date	Cal Due Date	Asset #
Agilent E4446A SA	US44300407	01/03/2007	01/03/2009	02660
HP 8447D Preamp	1937A02604	03/14/2007	03/14/2009	00099
Chase CBL6111C Bilog	2456	12/30/2006	12/30/2008	01991

***Equipment Under Test* (* = EUT):**

Function	Manufacturer	Model #	S/N
Smart Card Reader*	XceedID	XF2200W(T720W)	5

Support Devices:

Function	Manufacturer	Model #	S/N
Power Supply	Topward	TPS-4000	918520

Test Conditions / Notes:

EUT is a RFID reader operating on a frequency of 13.56MHz. EUT is mounted on a vertical support structure, simulating normal installation. DC power is provided via support power supply. Power supply is bonded to ground plane. Cable is XceedID ferrited version with an added ferrite (Fair-Rite p/n 2643625202). Frequency range of investigation: 30-1000MHz. Temperature: 22.5ºC, Relative Humidity: 38%.

Transducer Legend:

T1=Cable - Site D 10m 9k-1G T2=AMP AN00099
T3=ANT AN01991 25-1000MHz

Measurement Data: Reading listed by margin. Test Distance: 10 Meters

#	Freq MHz	Rdng dBµV	T1 dB	T2 dB	T3 dB	dB	Dist Table	Corr dBµV/m	Spec dBµV/m	Margin dB	Polar Ant
1	32.002M	29.5	+1.5	-27.2	+18.0		+10.0	31.8	40.0	-8.2	Horiz
2	48.004M	36.7	+1.9	-27.1	+10.1		+10.0	31.6	40.0	-8.4	Vert
3	32.007M QP	29.2	+1.5	-27.2	+18.0		+10.0	31.5	40.0	-8.5	Vert
4	192.002M	37.4	+4.0	-26.7	+9.1		+10.0	33.8	43.5	-9.7	Vert
5	480.002M	27.5	+7.1	-27.6	+17.8		+10.0	34.8	46.0	-11.2	Horiz
6	384.002M	30.0	+6.2	-27.1	+15.5		+10.0	34.6	46.0	-11.4	Vert

7	384.002M	29.2	+6.2	-27.1	+15.5	+10.0	33.8	46.0	-12.2	Horiz
8	256.002M	31.6	+5.1	-26.4	+12.6	+10.0	32.9	46.0	-13.1	Vert
9	368.002M	27.9	+5.9	-26.9	+15.2	+10.0	32.1	46.0	-13.9	Horiz
10	112.004M	30.8	+3.1	-27.0	+11.0	+10.0	27.9	43.5	-15.6	Vert
11	64.004M	32.4	+2.2	-27.2	+6.5	+10.0	23.9	40.0	-16.1	Vert
12	208.002M	29.7	+4.3	-26.6	+9.7	+10.0	27.1	43.5	-16.4	Vert
13	200.002M	30.3	+4.1	-26.7	+9.1	+10.0	26.8	43.5	-16.7	Horiz
14	64.002M	31.3	+2.2	-27.2	+6.5	+10.0	22.8	40.0	-17.2	Horiz
15	192.002M	29.4	+4.0	-26.7	+9.1	+10.0	25.8	43.5	-17.7	Horiz
16	128.004M	27.5	+3.3	-27.0	+11.7	+10.0	25.5	43.5	-18.0	Vert

Test Location: CKC Laboratories •4933 Sierra Pines Dr. • Mariposa, CA 95338 • 1-800-500-4EMC (4362)

Customer: **XceedID**
Specification: **15.109 CLASS B**
Work Order #: **86828** Date: 8/7/2007
Test Type: **Maximized Emissions** Time: 11:49:44
Equipment: **Smart Card Reader** Sequence#: 6
Manufacturer: XceedID Tested By: Mike Wilkinson
Model: XF2200S(T720S)
S/N: 5

***Test Equipment*:**

Function	S/N	Calibration Date	Cal Due Date	Asset #
Agilent E4446A SA	US44300407	01/03/2007	01/03/2009	02660
HP 8447D Preamp	1937A02604	03/14/2007	03/14/2009	00099
Chase CBL6111C Bilog	2456	12/30/2006	12/30/2008	01991

***Equipment Under Test* (* = EUT):**

Function	Manufacturer	Model #	S/N
Smart Card Reader*	XceedID	XF2200S(T720S)	5

Support Devices:

Function	Manufacturer	Model #	S/N
Power Supply	Topward	TPS-4000	918520

Test Conditions / Notes:

EUT is a RFID reader operating on a frequency of 13.56MHz. EUT is mounted on a vertical support structure, simulating normal installation. DC power is provided via support power supply. Power supply is bonded to ground plane. Cable is XceedID ferrited version with an added ferrite (Fair-Rite p/n 2643625202). Frequency range of investigation: 30-1000MHz. Temperature: 22.5ºC, Relative Humidity: 38%.

Transducer Legend:

T1=Cable - Site D 10m 9k-1G T2=AMP AN00099
T3=ANT AN01991 25-1000MHz

Measurement Data: Reading listed by margin. Test Distance: 10 Meters

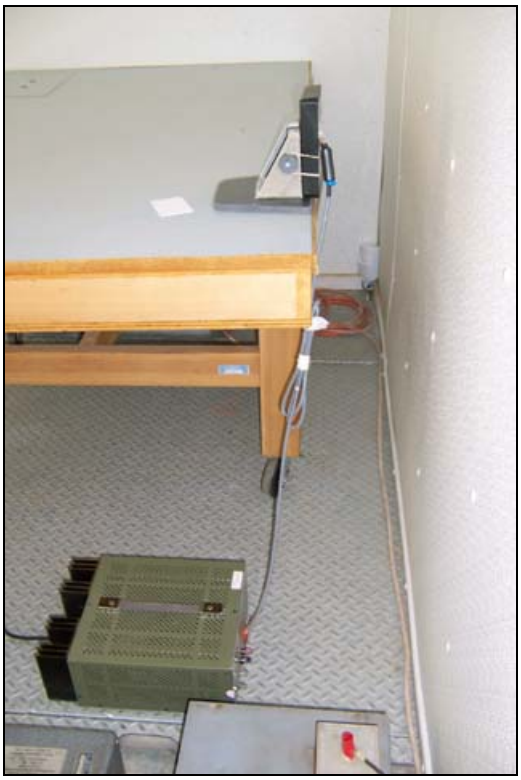
#	Freq MHz	Rdng dBµV	T1 dB	T2 dB	T3 dB	dB	Dist Table	Corr dBµV/m	Spec dBµV/m	Margin dB	Polar Ant
1	48.011M	37.6	+1.9	-27.1	+10.1		+10.0	32.5	40.0	-7.5	Vert
2	32.011M	27.9	+1.5	-27.2	+18.0		+10.0	30.2	40.0	-9.8	Horiz
3	32.007M QP	26.5	+1.5	-27.2	+18.0		+10.0	28.8	40.0	-11.2	Vert
4	448.013M	28.1	+6.8	-27.5	+17.1		+10.0	34.5	46.0	-11.5	Horiz
5	384.013M	29.5	+6.2	-27.1	+15.5		+10.0	34.1	46.0	-11.9	Vert
6	191.986M	34.8	+4.0	-26.7	+9.1		+10.0	31.2	43.5	-12.3	Vert

7	384.013M	29.0	+6.2	-27.1	+15.5	+10.0	33.6	46.0	-12.4	Horiz
8	160.010M	32.5	+3.7	-26.9	+10.7	+10.0	30.0	43.5	-13.5	Horiz
9	64.011M	34.7	+2.2	-27.2	+6.5	+10.0	26.2	40.0	-13.8	Vert
10	128.025M	31.2	+3.3	-27.0	+11.7	+10.0	29.2	43.5	-14.3	Vert
11	256.013M	30.0	+5.1	-26.4	+12.6	+10.0	31.3	46.0	-14.8	Vert
12	200.008M	30.4	+4.1	-26.7	+9.1	+10.0	26.9	43.5	-16.6	Horiz
13	64.010M	31.6	+2.2	-27.2	+6.5	+10.0	23.1	40.0	-16.9	Horiz

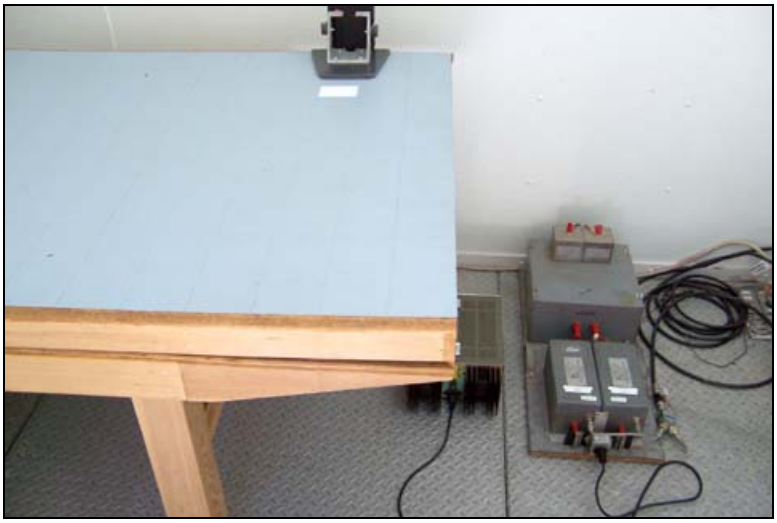
FCC 15.207 CONDUCTED EMISSIONS

Test Setup Photos

XF2210S-W



XF2210S-W



XF2200S-W

XF2200S-W

Test Data Sheets

Test Location: CKC Laboratories •4933 Sierra Pines Dr. • Mariposa, CA 95338 • 1-800-500-4EMC (4362)

Customer:	**XceedID**		
Specification:	**FCC 15.207/15.107 - AVE**		
Work Order #:	**86828**	Date:	8/7/2007
Test Type:	**Conducted Emissions**	Time:	14:54:32
Equipment:	**Smart Card Reader**	Sequence#:	9
Manufacturer:	XceedID	Tested By:	Mike Wilkinson
Model:	XF2210S(T725S)		120V 60Hz
S/N:	5		

***Test Equipment*:**

Function	S/N	Calibration Date	Cal Due Date	Asset #
HP 8593EM SA	3624A00159	03/23/2007	03/23/2009	02111
LISN, 8028-50-TS-24-BNC	8379276, 280	05/07/2007	05/07/2009	1248 & 1249
150kHz HP Filter TTE	G7754	03/09/2006	03/09/2008	02608

***Equipment Under Test* (* = EUT):**

Function	Manufacturer	Model #	S/N
Smart Card Reader*	XceedID	XF2210S(T725S)	5

Support Devices:

Function	Manufacturer	Model #	S/N
Power Supply	Topward	TPS-4000	918520

Test Conditions / Notes:

EUT is a RFID reader operating on a frequency of 13.56MHz. EUT is mounted on a vertical support structure, simulating normal installation. DC power is provided via support power supply. Power supply is bonded to ground plane. Cable is XceedID ferrited version with an added ferrite (Fair-Rite p/n 2643625202). For the carrier (13.56MHz only) measurement, the integral antenna was replaced with a load of characteristic impedance. Frequency range of investigation: 150 kHz to 30 MHz. Temperature: 22.5ºC, Relative Humidity: 38%.

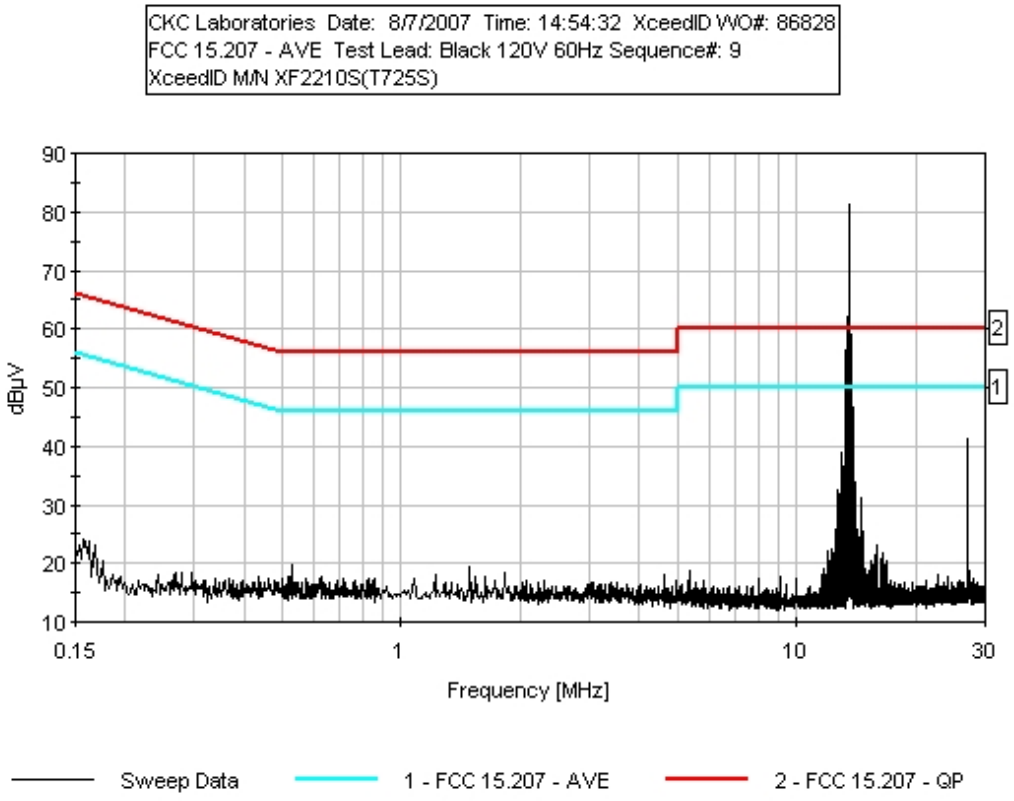
Transducer Legend:

T1=Cable - Site D LISN 100k-30M	T2=Filter 150kHz HP AN02608
T3=LISN -280 - BK	

Measurement Data: Reading listed by margin. Test Lead: Black

#	Freq MHz	Rdng dBµV	T1 dB	T2 dB	T3 dB	dB	Dist Table	Corr dBµV	Spec dBµV	Margin dB	Polar Ant
1	13.561M	69.5	+10.9	+0.1	+0.8		+0.0	81.3	50.0 Carrier with integral antenna	+31.3	Black
2	27.121M	28.8	+11.0	+0.1	+1.3		+0.0	41.2	50.0	-8.8	Black
3	534.600k	7.1	+11.9	+0.3	+0.2		+0.0	19.5	46.0	-26.5	Black
4	15.720M	11.1	+10.8	+0.1	+1.0		+0.0	23.0	50.0	-27.0	Black

5	4.375M	6.8	+11.0	+0.1	+0.3	+0.0	18.2	46.0	-27.8	Black
6	13.561M	10.3	+10.9	+0.1	+0.8	+0.0	22.1	50.0 Carrier with load	-27.9	Black
7	957.500k	5.3	+11.8	+0.2	+0.2	+0.0	17.5	46.0	-28.5	Black
8	409.300k	6.6	+12.0	+0.2	+0.2	+0.0	19.0	47.7	-28.7	Black
9	158.500k	11.0	+11.6	+2.1	+0.2	+0.0	24.9	55.5	-30.6	Black
10	8.657M	5.8	+10.8	+0.1	+0.4	+0.0	17.1	50.0	-32.9	Black



Test Location: CKC Laboratories •4933 Sierra Pines Dr. • Mariposa, CA 95338 • 1-800-500-4EMC (4362)

Customer: **XceedID**
Specification: **FCC 15.207/15.107 - AVE**
Work Order #: **86828** Date: 8/7/2007
Test Type: **Conducted Emissions** Time: 14:50:50
Equipment: **Smart Card Reader** Sequence#: 10
Manufacturer: XceedID Tested By: Mike Wilkinson
Model: XF2210S(T725S) 120V 60Hz
S/N: 5

***Test Equipment*:**

Function	S/N	Calibration Date	Cal Due Date	Asset #
HP 8593EM SA	3624A00159	03/23/2007	03/23/2009	02111
LISN, 8028-50-TS-24-BNC	8379276, 280	05/07/2007	05/07/2009	1248 & 1249
150kHz HP Filter TTE	G7754	03/09/2006	03/09/2008	02608

***Equipment Under Test* (* = EUT):**

Function	Manufacturer	Model #	S/N
Smart Card Reader*	XceedID	XF2210S(T725S)	5

Support Devices:

Function	Manufacturer	Model #	S/N
Power Supply	Topward	TPS-4000	918520

Test Conditions / Notes:

EUT is a RFID reader operating on a frequency of 13.56MHz. EUT is mounted on a vertical support structure, simulating normal installation. DC power is provided via support power supply. Power supply is bonded to ground plane. Cable is XceedID ferrited version with an added ferrite (Fair-Rite p/n 2643625202). For the carrier (13.56MHz only) measurement, the integral antenna was replaced with a load of characteristic impedance. Frequency range of investigation: 150 kHz to 30 MHz. Temperature: 22.5ºC, Relative Humidity: 38%.

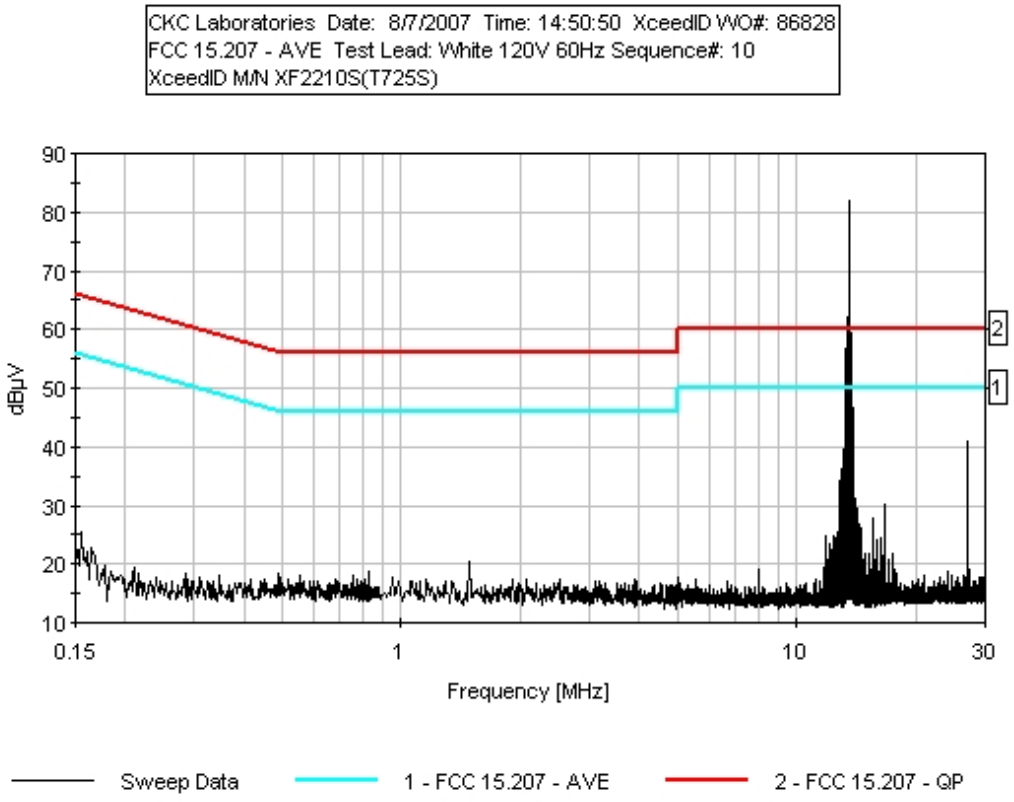
Transducer Legend:

T1=Cable - Site D LISN 100k-30M T2=Filter 150kHz HP AN02608
T3=LISN -276 - WT

Measurement Data: Reading listed by margin. Test Lead: White

#	Freq MHz	Rdng dBµV	T1 dB	T2 dB	T3 dB	dB	Dist Table	Corr dBµV	Spec dBµV	Margin dB	Polar Ant
1	13.559M	69.6	+10.9	+0.1	+1.2		+0.0	81.8	50.0 Carrier with integral antenna	+31.8	White
2	27.121M	28.7	+11.0	+0.1	+1.6		+0.0	41.4	50.0	-8.6	White
3	13.561M	11.8	+10.9	+0.1	+1.2		+0.0	24.0	50.0 Carrier with load	-26.0	White
4	919.300k	6.7	+11.8	+0.2	+0.2		+0.0	18.9	46.0	-27.1	White
5	4.353M	7.1	+11.0	+0.1	+0.4		+0.0	18.6	46.0	-27.4	White
6	477.300k	5.6	+11.9	+0.3	+0.2		+0.0	18.0	46.4	-28.4	White

7	16.880M	9.1	+10.8	+0.1	+1.4	+0.0	21.4	50.0	-28.6	White
8	7.998M	6.6	+10.8	+0.1	+0.8	+0.0	18.3	50.0	-31.7	White
9	5.815M	6.4	+10.9	+0.1	+0.6	+0.0	18.0	50.0	-32.0	White
10	171.300k	10.4	+11.7	+0.7	+0.1	+0.0	22.9	54.9	-32.0	White
11	228.600k	6.9	+11.8	+0.2	+0.1	+0.0	19.0	52.5	-33.5	White



Test Location: CKC Laboratories •4933 Sierra Pines Dr. • Mariposa, CA 95338 • 1-800-500-4EMC (4362)

Customer: **XceedID**
Specification: **FCC 15.207/15.107 - AVE**
Work Order #: **86828** Date: 8/7/2007
Test Type: **Conducted Emissions** Time: 15:22:42
Equipment: **Smart Card Reader** Sequence#: 12
Manufacturer: XceedID Tested By: Mike Wilkinson
Model: XF2200W(T720W) 120V 60Hz
S/N: 5

***Test Equipment*:**

Function	S/N	Calibration Date	Cal Due Date	Asset #
HP 8593EM SA	3624A00159	03/23/2007	03/23/2009	02111
LISN, 8028-50-TS-24-BNC	8379276, 280	05/07/2007	05/07/2009	1248 & 1249
150kHz HP Filter TTE	G7754	03/09/2006	03/09/2008	02608

***Equipment Under Test* (* = EUT):**

Function	Manufacturer	Model #	S/N
Smart Card Reader*	XceedID	XF2200W(T720W)	5

Support Devices:

Function	Manufacturer	Model #	S/N
Power Supply	Topward	TPS-4000	918520

Test Conditions / Notes:

EUT is a RFID reader operating on a frequency of 13.56MHz. EUT is mounted on a vertical support structure, simulating normal installation. DC power is provided via support power supply. Power supply is bonded to ground plane. Cable is XceedID ferrited version with an added ferrite (Fair-Rite p/n 2643625202). For the carrier (13.56MHz only) measurement, the integral antenna was replaced with a load of characteristic impedance. Frequency range of investigation: 150 kHz to 30 MHz. Temperature: 22.5ºC, Relative Humidity: 38%.

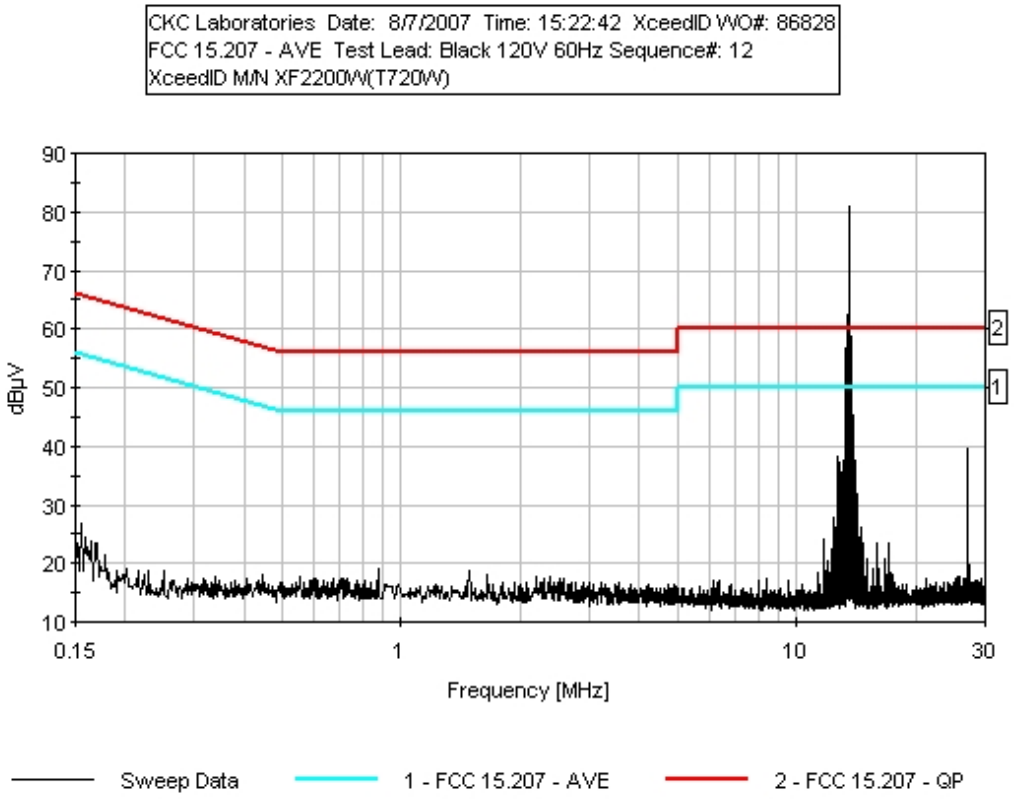
Transducer Legend:

T1=Cable - Site D LISN 100k-30M T2=Filter 150kHz HP AN02608
T3=LISN -280 - BK

Measurement Data: Reading listed by margin. Test Lead: Black

#	Freq MHz	Rdng dBµV	T1 dB	T2 dB	T3 dB	dB	Dist Table	Corr dBµV	Spec dBµV	Margin dB	Polar Ant
1	13.561M	69.0	+10.9	+0.1	+0.8		+0.0	80.8	50.0	+30.8	Black
									Carrier with integral antenna		
2	27.122M	25.8	+11.0	+0.1	+1.3		+0.0	38.2	50.0	-11.8	Black
3	987.100k	7.3	+11.8	+0.2	+0.2		+0.0	19.5	46.0	-26.5	Black
4	637.300k	6.8	+11.8	+0.3	+0.2		+0.0	19.1	46.0	-26.9	Black
5	4.353M	7.5	+11.0	+0.1	+0.3		+0.0	18.9	46.0	-27.1	Black
6	13.560M	10.4	+10.9	+0.1	+0.8		+0.0	22.2	50.0	-27.8	Black
									Carrier with load		

7	4.083M	6.5	+11.0	+0.1	+0.3	+0.0	17.9	46.0	-28.1	Black
8	384.000k	6.5	+12.0	+0.1	+0.2	+0.0	18.8	48.2	-29.4	Black
9	167.000k	12.4	+11.7	+1.1	+0.2	+0.0	25.4	55.1	-29.7	Black
10	16.010M	7.2	+10.8	+0.1	+1.0	+0.0	19.1	50.0	-30.9	Black
11	16.880M	6.4	+10.8	+0.1	+1.0	+0.0	18.3	50.0	-31.7	Black
12	7.998M	4.9	+10.8	+0.1	+0.4	+0.0	16.2	50.0	-33.8	Black
13	228.600k	6.4	+11.8	+0.2	+0.2	+0.0	18.6	52.5	-33.9	Black



Test Location: CKC Laboratories •4933 Sierra Pines Dr. • Mariposa, CA 95338 • 1-800-500-4EMC (4362)

Customer: **XceedID**
Specification: **FCC 15.207/15.107 - AVE**
Work Order #: **86828** Date: 8/7/2007
Test Type: **Conducted Emissions** Time: 15:24:22
Equipment: **Smart Card Reader** Sequence#: 11
Manufacturer: XceedID Tested By: Mike Wilkinson
Model: XF2200W(T720W) 120V 60Hz
S/N: 5

***Test Equipment*:**

Function	S/N	Calibration Date	Cal Due Date	Asset #
HP 8593EM SA	3624A00159	03/23/2007	03/23/2009	02111
LISN, 8028-50-TS-24-BNC	8379276, 280	05/07/2007	05/07/2009	1248 & 1249
150kHz HP Filter TTE	G7754	03/09/2006	03/09/2008	02608

***Equipment Under Test* (* = EUT):**

Function	Manufacturer	Model #	S/N
Smart Card Reader*	XceedID	XF2200W(T720W)	5

Support Devices:

Function	Manufacturer	Model #	S/N
Power Supply	Topward	TPS-4000	918520

Test Conditions / Notes:

EUT is a RFID reader operating on a frequency of 13.56MHz. EUT is mounted on a vertical support structure, simulating normal installation. DC power is provided via support power supply. Power supply is bonded to ground plane. Cable is XceedID ferrited version with an added ferrite (Fair-Rite p/n 2643625202). For the carrier (13.56MHz only) measurement, the integral antenna was replaced with a load of characteristic impedance. Frequency range of investigation: 150 kHz to 30 MHz. Temperature: 22.5ºC, Relative Humidity: 38%.

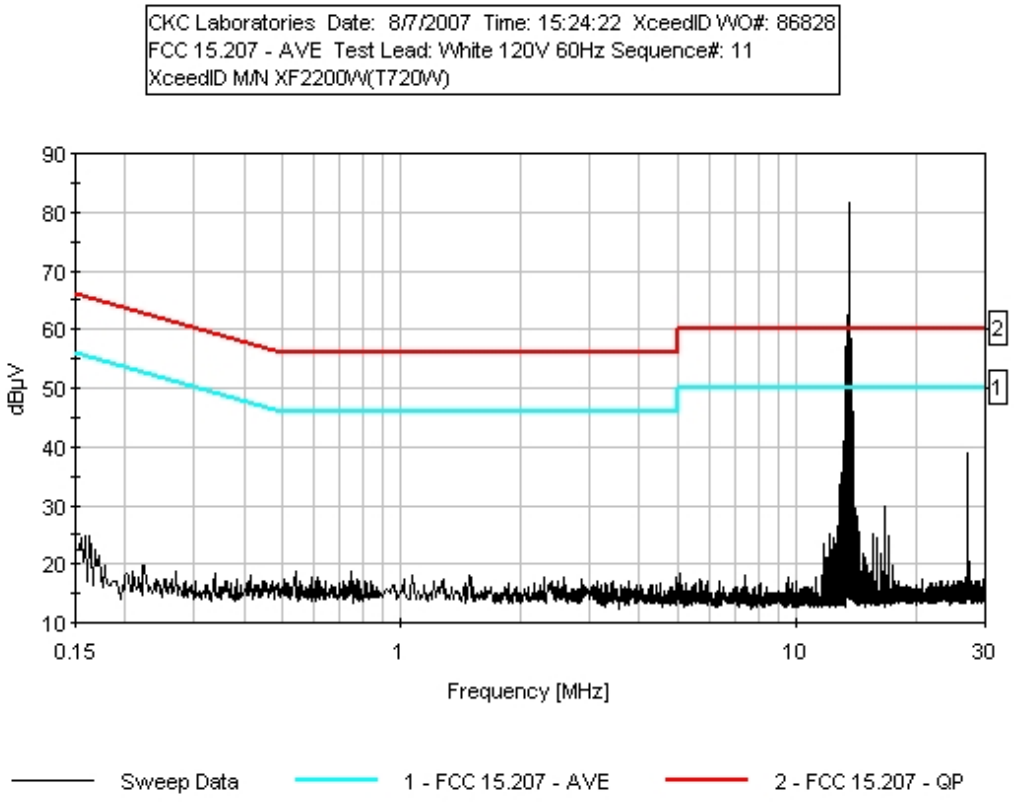
Transducer Legend:

T1=Cable - Site D LISN 100k-30M T2=Filter 150kHz HP AN02608
T3=LISN -276 - WT

Measurement Data: Reading listed by margin. Test Lead: White

#	Freq MHz	Rdng dBµV	T1 dB	T2 dB	T3 dB	dB	Dist Table	Corr dBµV	Spec dBµV	Margin dB	Polar Ant
1	13.561M	69.5	+10.9	+0.1	+1.2		+0.0	81.7	50.0 Carrier with integral antenna	+31.7	White
2	27.120M	26.2	+11.0	+0.1	+1.6		+0.0	38.9	50.0	-11.1	White
3	4.353M	9.1	+11.0	+0.1	+0.4		+0.0	20.6	46.0	-25.4	White
4	13.560M	12.0	+10.9	+0.1	+1.2		+0.0	24.2	50.0 Carrier with load	-25.8	White
5	717.400k	6.6	+11.8	+0.3	+0.1		+0.0	18.8	46.0	-27.2	White
6	921.400k	6.4	+11.8	+0.2	+0.2		+0.0	18.6	46.0	-27.4	White

7	626.000k	5.8	+11.8	+0.3	+0.1	+0.0	18.0	46.0	-28.0	White
8	16.050M	7.3	+10.8	+0.1	+1.3	+0.0	19.4	50.0	-30.6	White
9	162.800k	10.7	+11.7	+1.6	+0.1	+0.0	24.1	55.3	-31.2	White
10	264.800k	6.8	+11.9	+0.2	+0.0	+0.0	18.9	51.3	-32.4	White
11	8.065M	4.5	+10.8	+0.1	+0.8	+0.0	16.1	50.0	-33.9	White



FCC 15.209 RADIATED EMISSIONS

Test Setup Photos

XF2210S-W

XF2210S-W

XF2200S-W

XF2200S-W

Test Data Sheets

Test Location: CKC Laboratories •4933 Sierra Pines Dr. • Mariposa, CA 95338 • 1-800-500-4EMC (4362)

Customer: **XceedID**
Specification: **FCC 15.209**
Work Order #: **86828** Date: 8/8/2007
Test Type: **Maximized Emissions** Time: 08:04:29
Equipment: **Smart Card Reader** Sequence#: 18
Manufacturer: XceedID Tested By: Mike Wilkinson
Model: XF2210S(T725S)
S/N: 5

***Test Equipment*:**

Function	S/N	Calibration Date	Cal Due Date	Asset #
HP 8593EM SA	3624A00154	03/23/2007	03/23/2009	02111
EMCO Loop Antenna	1074	05/01/2007	05/01/2009	00226

***Equipment Under Test* (* = EUT):**

Function	Manufacturer	Model #	S/N
Smart Card Reader*	XceedID	XF2210S(T725S)	5

Support Devices:

Function	Manufacturer	Model #	S/N
Power Supply	Topward	TPS-4000	918520

Test Conditions / Notes:

EUT is a RFID reader operating on a frequency of 13.56MHz. EUT is mounted on a vertical support structure, simulating normal installation. DC power is provided via support power supply. Power supply is bonded to ground plane. Cable is XceedID ferrited version with an added ferrite (Fair-Rite p/n 2643625202). Frequency range of investigation: 9 kHz to 30 MHz. Temperature: 22.5ºC, Relative Humidity: 38%.

Transducer Legend:

T1=Cable - Site D 10m 9k-1G	T2=Mag Loop - AN 00226 - 9kHz-30M

Measurement Data: Reading listed by margin. Test Distance: 10 Meters

#	Freq MHz	Rdng dBµV	T1 dB	T2 dB	dB	dB	Dist Table	Corr dBµV/m	Spec dBµV/m	Margin dB	Polar Ant
1	27.121M	28.3	+1.4	+7.1			-19.0	17.8	29.5	-11.7	Horiz
2	27.121M	15.7	+1.4	+7.1			-19.0	5.2	29.5	-24.3	Vert

Test Location: CKC Laboratories •4933 Sierra Pines Dr. • Mariposa, CA 95338 • 1-800-500-4EMC (4362)

Customer: **XceedID**
Specification: **FCC 15.209**
Work Order #: **86828** Date: 8/8/2007
Test Type: **Maximized Emissions** Time: 09:54:39
Equipment: **Smart Card Reader** Sequence#: 20
Manufacturer: XceedID Tested By: Mike Wilkinson
Model: XF2200W(T720W)
S/N: 5

***Test Equipment*:**

Function	S/N	Calibration Date	Cal Due Date	Asset #
HP 8593EM SA	3624A00154	03/23/2007	03/23/2009	02111
EMCO Loop Antenna	1074	05/01/2007	05/01/2009	00226

***Equipment Under Test* (* = EUT):**

Function	Manufacturer	Model #	S/N
Smart Card Reader*	XceedID	XF2200W(T720W)	5

Support Devices:

Function	Manufacturer	Model #	S/N
Power Supply	Topward	TPS-4000	918520

Test Conditions / Notes:

EUT is a RFID reader operating on a frequency of 13.56MHz. EUT is mounted on a vertical support structure, simulating normal installation. DC power is provided via support power supply. Power supply is bonded to ground plane. Cable is XceedID ferrited version with an added ferrite (Fair-Rite p/n 2643625202). Frequency range of investigation: 9 kHz to 30 MHz. Temperature: 22.5ºC, Relative Humidity: 38%.

Transducer Legend:

T1=Cable - Site D 10m 9k-1G	T2=Mag Loop - AN 00226 - 9kHz-30M

Measurement Data: Reading listed by margin. Test Distance: 10 Meters

#	Freq MHz	Rdng dBµV	T1 dB	T2 dB	dB	dB	Dist Table	Corr dBµV/m	Spec dBµV/m	Margin dB	Polar Ant
1	27.121M	24.8	+1.4	+7.1			-19.0	14.3	29.5	-15.2	Horiz
2	27.122M	13.7	+1.4	+7.1			-19.0	3.2	29.5	-26.3	Vert

All models were tested to ensure compliance for this section.

Test Location: CKC Laboratories •4933 Sierra Pines Dr. • Mariposa, CA 95338 • 1-800-500-4EMC (4362)

Customer: **XceedID**
Specification: **FCC 15.209**
Work Order #: **86828** Date: 8/7/2007
Test Type: **Maximized Emissions** Time: 09:41:38
Equipment: **Smart Card Reader** Sequence#: 3
Manufacturer: XceedID Tested By: Mike Wilkinson
Model: XF2210S(T725S)
S/N: 5

***Test Equipment*:**

Function	S/N	Calibration Date	Cal Due Date	Asset #
Agilent E4446A SA	US44300407	01/03/2007	01/03/2009	02660
HP 8447D Preamp	1937A02604	03/14/2007	03/14/2009	00099
Chase CBL6111C Bilog	2456	12/30/2006	12/30/2008	01991

***Equipment Under Test* (* = EUT):**

Function	Manufacturer	Model #	S/N
Smart Card Reader*	XceedID	XF2210S(T725S)	5

Support Devices:

Function	Manufacturer	Model #	S/N
Power Supply	Topward	TPS-4000	918520

Test Conditions / Notes:

EUT is a RFID reader operating on a frequency of 13.56MHz. EUT is mounted on a vertical support structure, simulating normal installation. DC power is provided via support power supply. Power supply is bonded to ground plane. Cable is XceedID ferrited version with an added ferrite (Fair-Rite p/n 2643625202). Frequency range of investigation: 30-1000MHz. Temperature: 22.5ºC, Relative Humidity: 38%.

Transducer Legend:

T1=Cable - Site D 10m 9k-1G T2=AMP AN00099
T3=ANT AN01991 25-1000MHz

Measurement Data: Reading listed by margin. Test Distance: 10 Meters

#	Freq MHz	Rdng dBµV	T1 dB	T2 dB	T3 dB	dB	Dist Table	Corr dBµV/m	Spec dBµV/m	Margin dB	Polar Ant
1	40.691M QP	39.7	+1.7	-27.2	+14.0		+10.0	38.2	40.0	-1.8	Vert
2	393.269M	33.8	+6.3	-27.2	+15.8		+10.0	38.7	46.0	-7.3	Vert
3	406.829M	32.8	+6.5	-27.3	+16.1		+10.0	38.1	46.0	-7.9	Vert
4	40.694M	33.1	+1.7	-27.2	+14.0		+10.0	31.6	40.0	-8.4	Horiz
5	54.260M	36.8	+2.0	-27.1	+8.2		+10.0	29.9	40.0	-10.1	Vert

6	393.233M	30.7	+6.3	-27.2	+15.8	+10.0	35.6	46.0	-10.4	Horiz
7	447.509M	28.9	+6.8	-27.5	+17.1	+10.0	35.3	46.0	-10.7	Vert
8	366.132M	30.8	+5.9	-26.9	+15.1	+10.0	34.9	46.0	-11.1	Horiz
9	488.189M	26.5	+7.2	-27.7	+18.0	+10.0	34.0	46.0	-12.0	Vert
10	366.111M	29.7	+5.9	-26.9	+15.1	+10.0	33.8	46.0	-12.2	Vert
11	352.554M	29.8	+5.6	-26.7	+14.8	+10.0	33.5	46.0	-12.5	Vert
12	176.300M	33.7	+3.9	-26.8	+9.3	+10.0	30.1	43.5	-13.4	Vert
13	284.781M	28.5	+5.4	-26.4	+13.1	+10.0	30.6	46.0	-15.4	Vert
14	54.254M	30.3	+2.0	-27.1	+8.2	+10.0	23.4	40.0	-16.6	Horiz
15	257.660M	27.8	+5.1	-26.4	+12.6	+10.0	29.1	46.0	-16.9	Vert
16	216.980M	31.0	+4.4	-26.6	+10.3	+10.0	29.1	46.0	-16.9	Vert
17	203.420M	29.7	+4.2	-26.7	+9.4	+10.0	26.6	43.5	-16.9	Vert
18	67.820M	31.6	+2.3	-27.1	+6.3	+10.0	23.1	40.0	-16.9	Vert
19	230.540M	29.0	+4.7	-26.5	+11.3	+10.0	28.5	46.0	-17.5	Vert
20	217.005M	29.6	+4.4	-26.6	+10.3	+10.0	27.7	46.0	-18.3	Horiz

Test Location: CKC Laboratories •4933 Sierra Pines Dr. • Mariposa, CA 95338 • 1-800-500-4EMC (4362)

Customer: **XceedID**
Specification: **FCC 15.209**
Work Order #: **86828** Date: 8/7/2007
Test Type: **Maximized Emissions** Time: 10:41:35
Equipment: **Smart Card Reader** Sequence#: 1
Manufacturer: XceedID Tested By: Mike Wilkinson
Model: XF2210W(T725W)
S/N: 5

***Test Equipment*:**

Function	S/N	Calibration Date	Cal Due Date	Asset #
Agilent E4446A SA	US44300407	01/03/2007	01/03/2009	02660
HP 8447D Preamp	1937A02604	03/14/2007	03/14/2009	00099
Chase CBL6111C Bilog	2456	12/30/2006	12/30/2008	01991

***Equipment Under Test* (* = EUT):**

Function	Manufacturer	Model #	S/N
Smart Card Reader*	XceedID	XF2210W(T725W)	5

Support Devices:

Function	Manufacturer	Model #	S/N
Power Supply	Topward	TPS-4000	918520

Test Conditions / Notes:

EUT is a RFID reader operating on a frequency of 13.56MHz. EUT is mounted on a vertical support structure, simulating normal installation. DC power is provided via support power supply. Power supply is bonded to ground plane. Cable is XceedID ferrited version with an added ferrite (Fair-Rite p/n 2643625202). Frequency range of investigation: 30-1000MHz. Temperature: 22.5ºC, Relative Humidity: 38%.

Transducer Legend:

T1=Cable - Site D 10m 9k-1G T2=AMP AN00099
T3=ANT AN01991 25-1000MHz

Measurement Data: Reading listed by margin. Test Distance: 10 Meters

#	Freq MHz	Rdng dBµV	T1 dB	T2 dB	T3 dB	dB	Dist Table	Corr dBµV/m	Spec dBµV/m	Margin dB	Polar Ant
1	40.691M QP	35.5	+1.7	-27.2	+14.0		+10.0	34.0	40.0	-6.0	Vert
2	379.699M	34.0	+6.1	-27.1	+15.4		+10.0	38.4	46.0	-7.6	Horiz
3	393.245M	32.5	+6.3	-27.2	+15.8		+10.0	37.4	46.0	-8.6	Horiz
4	393.257M	32.3	+6.3	-27.2	+15.8		+10.0	37.2	46.0	-8.8	Vert
5	420.366M	31.1	+6.6	-27.4	+16.4		+10.0	36.7	46.0	-9.3	Vert
6	40.702M	32.1	+1.7	-27.2	+14.0		+10.0	30.6	40.0	-9.4	Horiz
7	447.531M	30.0	+6.8	-27.5	+17.1		+10.0	36.4	46.0	-9.6	Vert

8	406.806M	31.1	+6.5	-27.3	+16.1	+10.0	36.4	46.0	-9.6	Vert
9	379.680M	31.2	+6.1	-27.1	+15.4	+10.0	35.6	46.0	-10.4	Vert
10	352.572M	31.6	+5.6	-26.7	+14.8	+10.0	35.3	46.0	-10.7	Horiz
11	54.262M	35.9	+2.0	-27.1	+8.2	+10.0	29.0	40.0	-11.0	Vert
12	366.120M	27.8	+5.9	-26.9	+15.1	+10.0	31.9	46.0	-14.1	Vert
13	271.232M	29.9	+5.3	-26.4	+12.9	+10.0	31.7	46.0	-14.3	Vert
14	257.662M	28.5	+5.1	-26.4	+12.6	+10.0	29.8	46.0	-16.2	Vert
15	67.812M	29.8	+2.3	-27.1	+6.3	+10.0	21.3	40.0	-18.7	Horiz
16	216.972M	27.3	+4.4	-26.6	+10.3	+10.0	25.4	46.0	-20.6	Horiz

Test Location: CKC Laboratories •4933 Sierra Pines Dr. • Mariposa, CA 95338 • 1-800-500-4EMC (4362)

Customer: **XceedID**
Specification: **FCC 15.209**
Work Order #: **86828** Date: 8/7/2007
Test Type: **Maximized Emissions** Time: 12:43:21
Equipment: **Smart Card Reader** Sequence#: 7
Manufacturer: XceedID Tested By: Mike Wilkinson
Model: XF2200W(T720W)
S/N: 5

***Test Equipment*:**

Function	S/N	Calibration Date	Cal Due Date	Asset #
Agilent E4446A SA	US44300407	01/03/2007	01/03/2009	02660
HP 8447D Preamp	1937A02604	03/14/2007	03/14/2009	00099
Chase CBL6111C Bilog	2456	12/30/2006	12/30/2008	01991

***Equipment Under Test* (* = EUT):**

Function	Manufacturer	Model #	S/N
Smart Card Reader*	XceedID	XF2200W(T720W)	5

Support Devices:

Function	Manufacturer	Model #	S/N
Power Supply	Topward	TPS-4000	918520

Test Conditions / Notes:

EUT is a RFID reader operating on a frequency of 13.56MHz. EUT is mounted on a vertical support structure, simulating normal installation. DC power is provided via support power supply. Power supply is bonded to ground plane. Cable is XceedID ferrited version with an added ferrite (Fair-Rite p/n 2643625202). Frequency range of investigation: 30-1000MHz. Temperature: 22.5ºC, Relative Humidity: 38%.

Transducer Legend:

T1=Cable - Site D 10m 9k-1G T2=AMP AN00099
T3=ANT AN01991 25-1000MHz

Measurement Data: Reading listed by margin. Test Distance: 10 Meters

#	Freq MHz	Rdng dBµV	T1 dB	T2 dB	T3 dB	dB	Dist Table	Corr dBµV/m	Spec dBµV/m	Margin dB	Polar Ant
1	40.682M QP	35.0	+1.7	-27.2	+14.0		+10.0	33.5	40.0	-6.5	Vert
2	610.195M	28.9	+8.4	-28.0	+19.8		+10.0	39.1	46.0	-6.9	Horiz
3	406.824M	33.4	+6.5	-27.3	+16.1		+10.0	38.7	46.0	-7.3	Vert
4	433.915M	31.5	+6.7	-27.4	+16.7		+10.0	37.5	46.0	-8.5	Vert
5	555.955M	27.5	+8.2	-27.9	+19.1		+10.0	36.9	46.0	-9.1	Horiz
6	352.576M	32.8	+5.6	-26.7	+14.8		+10.0	36.5	46.0	-9.5	Horiz

7	379.675M	31.4	+6.1	-27.1	+15.4	+10.0	35.8	46.0	-10.2	Horiz
8	189.855M	36.6	+4.0	-26.7	+9.1	+10.0	33.0	43.5	-10.5	Vert
9	379.695M	30.8	+6.1	-27.1	+15.4	+10.0	35.2	46.0	-10.8	Vert
10	54.255M	35.8	+2.0	-27.1	+8.2	+10.0	28.9	40.0	-11.1	Vert
11	393.255M	29.7	+6.3	-27.2	+15.8	+10.0	34.6	46.0	-11.4	Vert
12	325.456M	31.3	+5.6	-26.6	+14.1	+10.0	34.4	46.0	-11.6	Horiz
13	40.695M	29.4	+1.7	-27.2	+14.0	+10.0	27.9	40.0	-12.1	Horiz
14	461.035M	26.0	+6.9	-27.5	+17.4	+10.0	32.8	46.0	-13.2	Horiz
15	298.336M	29.9	+5.5	-26.4	+13.4	+10.0	32.4	46.0	-13.6	Horiz
16	216.975M	33.4	+4.4	-26.6	+10.3	+10.0	31.5	46.0	-14.5	Vert
17	352.575M	27.7	+5.6	-26.7	+14.8	+10.0	31.4	46.0	-14.6	Vert
18	393.235M	25.6	+6.3	-27.2	+15.8	+10.0	30.5	46.0	-15.5	Horiz
19	271.215M	27.7	+5.3	-26.4	+12.9	+10.0	29.4	46.0	-16.6	Vert
20	135.615M	28.9	+3.4	-27.0	+11.6	+10.0	26.9	43.5	-16.6	Vert
21	54.244M	30.0	+2.0	-27.1	+8.2	+10.0	23.1	40.0	-16.9	Horiz
22	203.415M	29.0	+4.2	-26.7	+9.4	+10.0	25.9	43.5	-17.6	Vert
23	216.964M	30.2	+4.4	-26.6	+10.3	+10.0	28.3	46.0	-17.7	Horiz
24	67.804M	29.3	+2.3	-27.1	+6.3	+10.0	20.8	40.0	-19.2	Horiz

Test Location: CKC Laboratories •4933 Sierra Pines Dr. • Mariposa, CA 95338 • 1-800-500-4EMC (4362)

Customer: **XceedID**
Specification: **FCC 15.209**
Work Order #: **86828** Date: 8/7/2007
Test Type: **Maximized Emissions** Time: 11:32:17
Equipment: **Smart Card Reader** Sequence#: 5
Manufacturer: XceedID Tested By: Mike Wilkinson
Model: XF2200S(T720S)
S/N: 5

***Test Equipment*:**

Function	S/N	Calibration Date	Cal Due Date	Asset #
Agilent E4446A SA	US44300407	01/03/2007	01/03/2009	02660
HP 8447D Preamp	1937A02604	03/14/2007	03/14/2009	00099
Chase CBL6111C Bilog	2456	12/30/2006	12/30/2008	01991

***Equipment Under Test* (* = EUT):**

Function	Manufacturer	Model #	S/N
Smart Card Reader*	XceedID	XF2200S(T720S)	5

Support Devices:

Function	Manufacturer	Model #	S/N
Power Supply	Topward	TPS-4000	918520

Test Conditions / Notes:

EUT is a RFID reader operating on a frequency of 13.56MHz. EUT is mounted on a vertical support structure, simulating normal installation. DC power is provided via support power supply. Power supply is bonded to ground plane. Cable is XceedID ferrited version with an added ferrite (Fair-Rite p/n 2643625202). Frequency range of investigation: 30-1000MHz. Temperature: 22.5ºC, Relative Humidity: 38%.

Transducer Legend:

T1=Cable - Site D 10m 9k-1G T2=AMP AN00099
T3=ANT AN01991 25-1000MHz

Measurement Data: Reading listed by margin. Test Distance: 10 Meters

#	Freq MHz	Rdng dBµV	T1 dB	T2 dB	T3 dB	dB	Dist Table	Corr dBµV/m	Spec dBµV/m	Margin dB	Polar Ant
1	40.692M QP	36.2	+1.7	-27.2	+14.0		+10.0	34.7	40.0	-5.3	Vert
2	556.017M	30.0	+8.2	-27.9	+19.1		+10.0	39.4	46.0	-6.6	Horiz
3	528.852M	29.0	+7.8	-27.8	+18.7		+10.0	37.7	46.0	-8.3	Horiz
4	474.603M	30.0	+7.1	-27.6	+17.7		+10.0	37.2	46.0	-8.8	Horiz
5	406.824M	31.2	+6.5	-27.3	+16.1		+10.0	36.4	46.0	-9.6	Vert
6	379.691M	31.5	+6.1	-27.1	+15.4		+10.0	35.9	46.0	-10.1	Horiz
7	40.685M	31.3	+1.7	-27.2	+14.0		+10.0	29.8	40.0	-10.2	Horiz

8	379.704M	31.1	+6.1	-27.1	+15.4	+10.0	35.5	46.0	-10.5	Vert
9	189.845M	36.6	+4.0	-26.7	+9.1	+10.0	33.0	43.5	-10.5	Vert
10	325.469M	32.0	+5.6	-26.6	+14.1	+10.0	35.1	46.0	-10.9	Horiz
11	393.264M	30.0	+6.3	-27.2	+15.8	+10.0	34.9	46.0	-11.1	Vert
12	54.245M	34.9	+2.0	-27.1	+8.2	+10.0	28.0	40.0	-12.0	Vert
13	366.131M	28.6	+5.9	-26.9	+15.1	+10.0	32.7	46.0	-13.3	Horiz
14	433.944M	26.6	+6.7	-27.4	+16.7	+10.0	32.6	46.0	-13.4	Vert
15	352.573M	28.6	+5.6	-26.7	+14.8	+10.0	32.3	46.0	-13.7	Vert
16	271.227M	29.4	+5.3	-26.4	+12.9	+10.0	31.2	46.0	-14.8	Vert
17	135.605M	30.3	+3.4	-27.0	+11.6	+10.0	28.3	43.5	-15.2	Vert
18	203.428M	30.5	+4.2	-26.7	+9.4	+10.0	27.4	43.5	-16.1	Vert
19	216.988M	30.5	+4.4	-26.6	+10.3	+10.0	28.6	46.0	-17.4	Vert
20	216.971M	30.0	+4.4	-26.6	+10.3	+10.0	28.1	46.0	-17.9	Horiz
21	67.805M	29.8	+2.3	-27.1	+6.3	+10.0	21.3	40.0	-18.7	Vert
22	67.811M	29.2	+2.3	-27.1	+6.3	+10.0	20.7	40.0	-19.3	Horiz
23	162.725M	26.3	+3.8	-26.8	+10.4	+10.0	23.7	43.5	-19.8	Vert

FCC 15.225 RADIATED EMISSIONS

Test Setup Photos

XF2210S-W

XF2210S-W

XF2200S-W

XF2200S-W

Test Data Sheets

Test Location: CKC Laboratories •4933 Sierra Pines Dr. • Mariposa, CA 95338 • 1-800-500-4EMC (4362)

Customer: **XceedID**
Specification: **47 CFR 15.225 Mask**
Work Order #: **86828** Date: 8/8/2007
Test Type: **Maximized Emissions** Time: 07:02:02
Equipment: **Smart Card Reader** Sequence#: 17
Manufacturer: XceedID Tested By: Mike Wilkinson
Model: XF2210S(T725S)
S/N: 5

***Test Equipment*:**

Function	S/N	Calibration Date	Cal Due Date	Asset #
HP 8593EM SA	3624A00154	03/23/2007	03/23/2009	02111
EMCO Loop Antenna	1074	05/01/2007	05/01/2009	00226

***Equipment Under Test* (* = EUT):**

Function	Manufacturer	Model #	S/N
Smart Card Reader*	XceedID	XF2210S(T725S)	5

Support Devices:

Function	Manufacturer	Model #	S/N
Power Supply	Topward	TPS-4000	918520

Test Conditions / Notes:

EUT is a RFID reader operating on a frequency of 13.56MHz. EUT is mounted on a vertical support structure, simulating normal installation. DC power is provided via support power supply. Power supply is bonded to ground plane. Cable is XceedID ferrited version with an added ferrite (Fair-Rite p/n 2643625202). Frequency range of investigation: Carrier. Temperature: 22.5ºC, Relative Humidity: 38%.

Transducer Legend:

T1=Cable - Site D 10m 9k-1G	T2=Mag Loop - AN 00226 - 9kHz-30M

Measurement Data: Reading listed by margin. Test Distance: 10 Meters

#	Freq MHz	Rdng dBµV	T1 dB	T2 dB	dB	dB	Dist Table	Corr dBµV/m	Spec dBµV/m	Margin dB	Polar Ant
1	13.561M	58.0	+1.0	+9.6			-19.0	49.6	84.0	-34.4	Horiz
2	13.561M	56.0	+1.0	+9.6			-19.0	47.6	84.0	-36.4	Vert

Test Location: CKC Laboratories •4933 Sierra Pines Dr. • Mariposa, CA 95338 • 1-800-500-4EMC (4362)

Customer: **XceedID**
Specification: **47 CFR 15.225 Mask**
Work Order #: **86828** Date: 8/8/2007
Test Type: **Maximized Emissions** Time: 09:14:25
Equipment: **Smart Card Reader** Sequence#: 19
Manufacturer: XceedID Tested By: Mike Wilkinson
Model: XF2200W(T720W)
S/N: 5

***Test Equipment*:**

Function	S/N	Calibration Date	Cal Due Date	Asset #
HP 8593EM SA	3624A00154	03/23/2007	03/23/2009	02111
EMCO Loop Antenna	1074	05/01/2007	05/01/2009	00226

***Equipment Under Test* (* = EUT):**

Function	Manufacturer	Model #	S/N
Smart Card Reader*	XceedID	XF2200W(T720W)	5

Support Devices:

Function	Manufacturer	Model #	S/N
Power Supply	Topward	TPS-4000	918520

Test Conditions / Notes:

EUT is a RFID reader operating on a frequency of 13.56MHz. EUT is mounted on a vertical support structure, simulating normal installation. DC power is provided via support power supply. Power supply is bonded to ground plane. Cable is XceedID ferrited version with an added ferrite (Fair-Rite p/n 2643625202). Frequency range of investigation: Carrier. Temperature: 22.5ºC, Relative Humidity: 38%.

Transducer Legend:

T1=Cable - Site D 10m 9k-1G	T2=Mag Loop - AN 00226 - 9kHz-30M

Measurement Data: Reading listed by margin. Test Distance: 10 Meters

#	Freq MHz	Rdng dBµV	T1 dB	T2 dB	dB	dB	Dist Table	Corr dBµV/m	Spec dBµV/m	Margin dB	Polar Ant
1	13.561M	57.8	+1.0	+9.6			-19.0	49.4	84.0	-34.6	Horiz
2	13.561M	55.7	+1.0	+9.6			-19.0	47.3	84.0	-36.7	Vert

OCCUPIED BANDWIDTH

Test Equipment

Function	S/N	Calibration Date	Cal Due Date	Asset #
HP 8593EM SA	3624A00154	03/23/2007	03/23/2009	02111
EMCO Loop Antenna	1074	05/01/2007	05/01/2009	00226

Test Conditions: EUT is a RFID reader operating on a frequency of 13.56MHz. EUT is mounted on a vertical support structure, simulating normal installation. DC power is provided via support power supply. Power supply is bonded to ground plane. Cable is XceedID ferrited version with an added ferrite (Fair-Rite p/n 2643625202).

Test Setup Photos

XF2210S-W

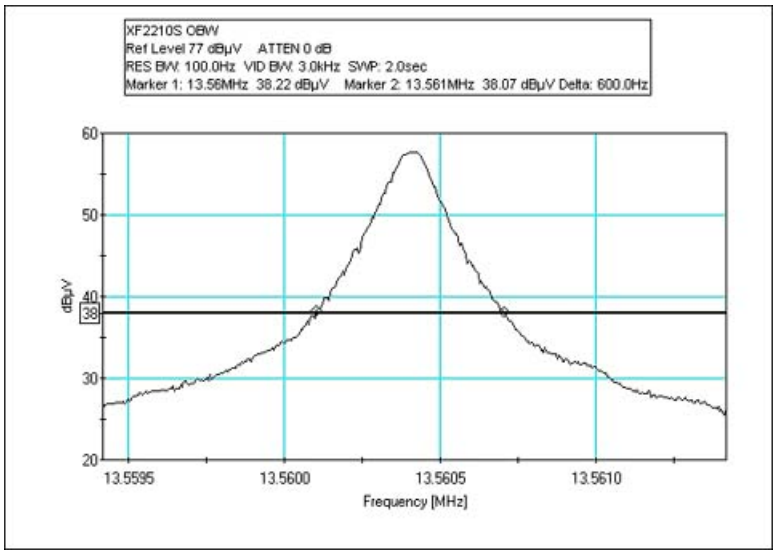
XF2210S-W

XF2200S-W

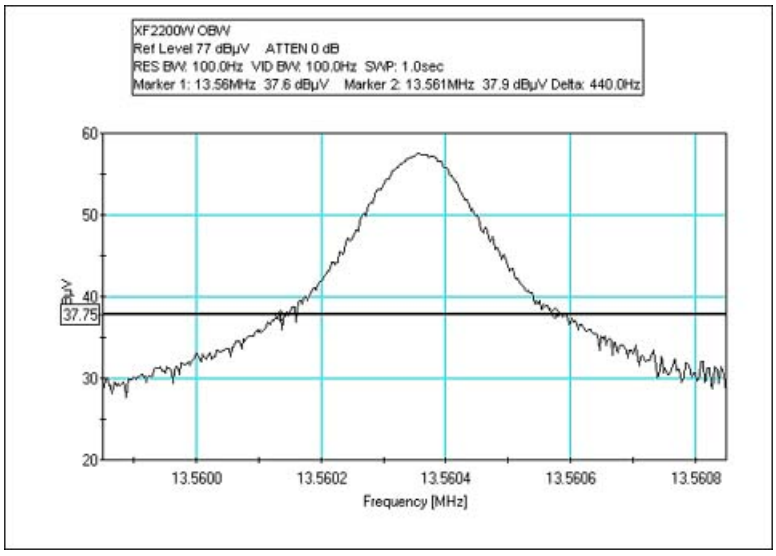
XF2200S-W

Plots

OCCUPIED BANDWIDTH XF2210S



OCCUPIED BANDWIDTH XF2200W



EMISSIONS MASK

Test Equipment

Function	S/N	Calibration Date	Cal Due Date	Asset #
HP 8593EM SA	3624A00154	03/23/2007	03/23/2009	02111
EMCO Loop Antenna	1074	05/01/2007	05/01/2009	00226

Test Conditions: EUT is a RFID reader operating on a frequency of 13.56MHz. EUT is mounted on a vertical support structure, simulating normal installation. DC power is provided via support power supply. Power supply is bonded to ground plane. Cable is XceedID ferrited version with an added ferrite (Fair-Rite p/n 2643625202).

Test Setup Photos

XF2210S-W

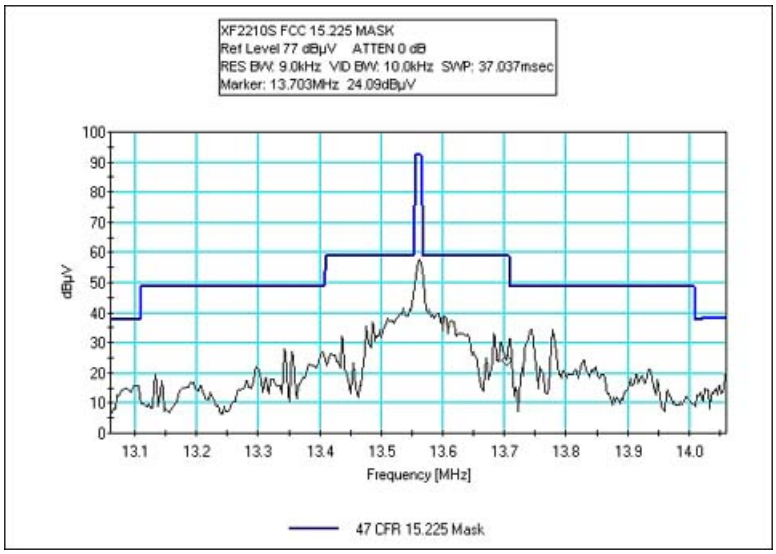
XF2210S-W

XF2200S-W

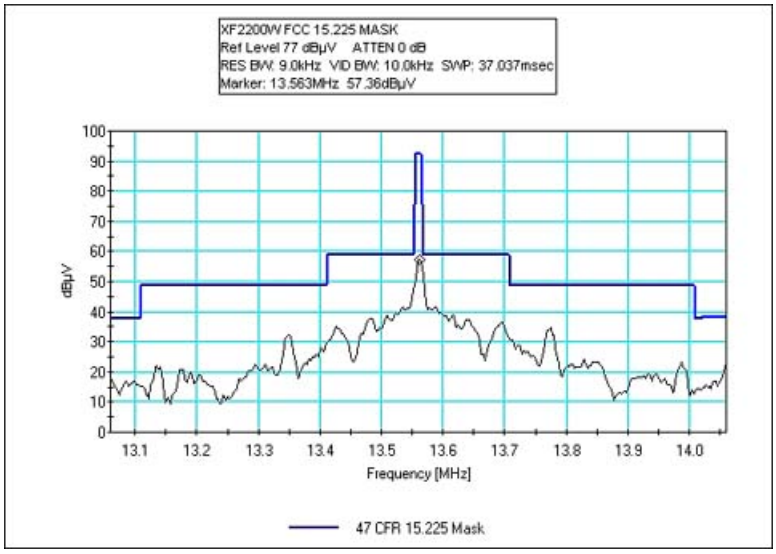
XF2200S-W

Plots

FCC 15.225 EMISSIONS MASK XF2210S



FCC 15.225 EMISSIONS MASK XF2200W



FREQUENCY STABILITY

Test Equipment

Function	S/N	Calibration Date	Cal Due Date	Asset #
Agilent E4446A SA	US44300407	1/3/2007	1/3/2009	2660
Solar Loop Sensor	N/A	3/4/2007	3/4/2009	170
Thermotron Temperature Chamber	11899	12/21/2006	12/21/2008	1879
HP 6205C Dual DC Power Supply	2228A01775	7/19/2007	7/19/2009	762
Fluke DMM	55230270	4/12/2006	4/12/2008	756

Test Setup Photos

Test Conditions: Equipment is placed inside of a temperature chamber. EUT power is provided via bench supply. Power variations are performed while monitoring with a digital voltage meter. SA RBW & VBW =100 Hz

Test Data

Customer:		XceedID
WO#:		86828
Date:		10-Aug-07
Test Engineer:		Mike Wilkinson

Device Model #: XF2200W(T720W) & XF2210S(T725S)
Operating Voltage: 12.00 **VDC**
Frequency Limit: 0.01 **%**

Temperature Variations

		XF2200W(T720W)	Dev. (MHz)	XF2210S(T725S)	Dev. (MHz)
Channel Frequency:		**13.560350**		**13.560355**	
Temp (C)	Voltage				
-30	12.00				
-20	12.00	13.560303	0.00005	13.560410	0.00005
-10	12.00	13.560310	0.00004	13.560400	0.00005
0	12.00	13.560325	0.00002	13.560375	0.00002
10	12.00	13.560330	0.00002	13.560367	0.00001
20	12.00	13.560350	0.00000	13.560355	0.00000
30	12.00	13.560355	0.00000	13.560360	0.00000
40	12.00	13.560360	0.00001	13.560395	0.00004
50	12.00	13.560360	0.00001	13.560405	0.00005

Voltage Variations (±15%)

20	10.2	13.560320	0.00003	13.560200	0.00015
20	12.00	13.560350	0.00000	13.560355	0.00000
20	13.8	13.560310	0.00004	13.560250	0.00010

Max Deviation (MHz)	**0.00005**		**0.00015**
Max Deviation (%)	**0.00035**		**0.00111**
	PASS		**PASS**