CKC LABORATORIES, INC. Testing the Future

ADDENDUM TO XCEEDID TEST REPORT FC08-022

FOR THE

SMART CARD READER, XF1560P & XF1560CS4

FCC PART 15 SUBPART B SECTIONS 15.107 & 15.109 CLASS B, SUBPART C SECTIONS 15.207, 15.209 & 15.225 AND RSS-210 ISSUE 7

TESTING

DATE OF ISSUE: JUNE 25, 2008

PREPARED FOR:

XceedID
500 Golden Ridge Road, Bldg. 1
Golden, CO 80401

W.O. No.: 87587

PREPARED BY:

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

Date of test: February 14-25, 2008

Report No.: FC08-022A

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ADMINISTRATIVE INFORMATION

DATE OF TEST: February 14-25, 2008

DATE OF RECEIPT: February 14, 2008

REPRESENTATIVE: Mike Conlin

MANUFACTURER:
XceedID
500 Golden Ridge Road, Bldg. 1
Golden, CO 80401

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

TEST METHOD: ANSI C63.4 (2003), RSS-210 Issue 7 and RSS-GEN Issue 2

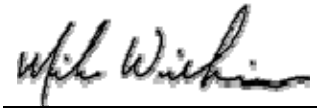
PURPOSE OF TEST:
Original Report: To perform the testing of the Smart Card Reader, XF1560P & XF1560CS4 with the requirements for FCC Part 15 Subpart B Sections 15.107 & 15.109 Class B, Subpart C Sections 15.207, 15.209 & 15.225 and RSS-210 devices.
Addendum A: To revise page 5 of the test report to correct the 15.109 frequency range tested to 30-1000MHz with no new testing.

APPROVALS

QUALITY ASSURANCE:

Steve Behm, Director of Engineering Services

TEST PERSONNEL:



Mike Wilkinson, EMC Engineer/Lab Manager

SUMMARY OF RESULTS

Test	Specification/Method	Results
Voltage Variations	FCC Part 15.31(e)	Pass
Conducted Emissions	FCC Part 15 Subpart B Section 15.107 Class B/15.207	Pass
Radiated Emissions	FCC Part 15 Subpart B Section 15.109 Class B	Pass
Field Strength of Spurious Emissions	FCC Part 15 Subpart C Section 15.209	Pass
Emissions Mask	FCC Part 15 Subpart C Section 15.225	Pass
Field Strength of Fundamental	FCC Part 15 Subpart C Section 15.225(a)	Pass
Frequency Stability	FCC Part 15 Subpart C Section 15.225(e)	Pass
99% Bandwidth	RSS-210/RSS-GEN	Pass

CONDITIONS DURING TESTING

No modifications to the EUT were necessary during testing.

FCC 15.31(e) Voltage Variations
Power variations per FCC15.31(e) was performed on EUT with no variation in output power noted.

FCC 15.31(m) Number Of Channels
This device was tested on two channels.

FCC 15.33(a) Frequency Ranges Tested
15.107/15.207 Conducted Emissions: 150 kHz – 30 MHz
15.109 Radiated Emissions: 30 MHz – 1000 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	30MHz	9 kHz
RADIATED EMISSIONS	9 kHz	150 kHz	200 Hz
RADIATED EMISSIONS	150 kHz	30MHz	9 kHz
RADIATED EMISSIONS	30MHz	1000 MHz	120 kHz

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 13.56MHz.

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.

EQUIPMENT UNDER TEST

Smart Card Reader
Manuf: XceedID
Model: XF1560P
Serial: 0022

Smart Card Reader
Manuf: XceedID
Model: XF1560CS4
Serial: 0020

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

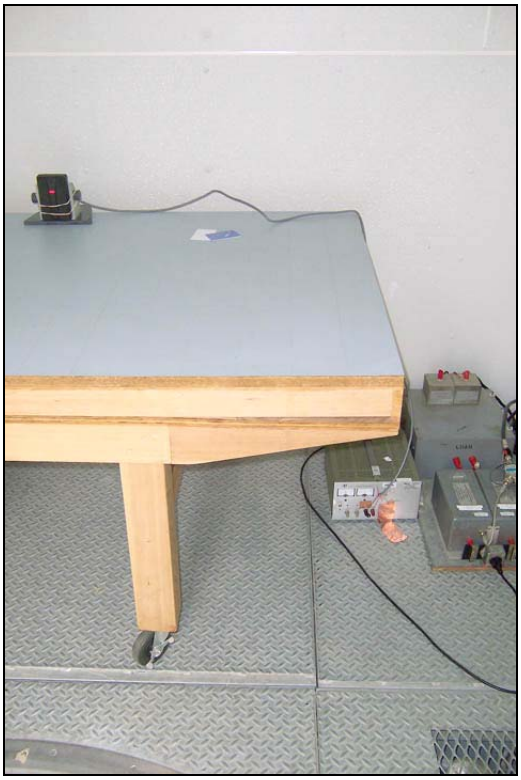
When the true peak values exceeded or were within 2 dB of the specification limit, quasi-peak measurements were taken using the quasi-peak detector.

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 15.107/15.207 CONDUCTED EMISSIONS

Test Setup Photos



Test Data Sheets

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

Customer: **XceedID**
Specification: **FCC 15.107B/15.207 - AVE**
Work Order #: **87587** Date: 2/19/2008
Test Type: **Conducted Emissions** Time: 14:31:20
Equipment: **Smart Card Reader** Sequence#: 35
Manufacturer: XceedID Tested By: Mike Wilkinson
Model: XF1560P 120V 60Hz
S/N: 0022

***Test Equipment*:**

Function	S/N	Calibration Date	Cal Due Date	Asset #
Agilent E4446A SA	US44300407	01/03/2007	01/03/2009	02660
Oscillioscope	US37340242	07/27/2007	07/27/2009	02713
150kHz HP Filter TTE	G7754	01/22/2008	01/22/2010	02608
Internal LISN Cable	N/A	03/23/2007	03/23/2009	CAB-SITED-INT-LISN
LISN, 8028-50-TS-24-BNC	8379276, 280	05/07/2007	05/07/2009	1248 & 1249

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

Function	Manufacturer	Model #	S/N
Smart Card Reader*	XceedID	XF1560P	0022

Support Devices:

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

Test Conditions / Notes:

FCC 15.107(a) Class B/15.207. EUT is a proximity reader operating at 13.56MHz. The EUT is transmitting continuously. The equipment is powered via 12VDC power supply. Digital output operation verified before and after each test with the O-Scope. Frequency Range Investigated: 150kHz to 30MHz. Temperature: 22ºC, Relative Humidity: 40%. SA RES BW =9kHz, VID BW = 9kHz.

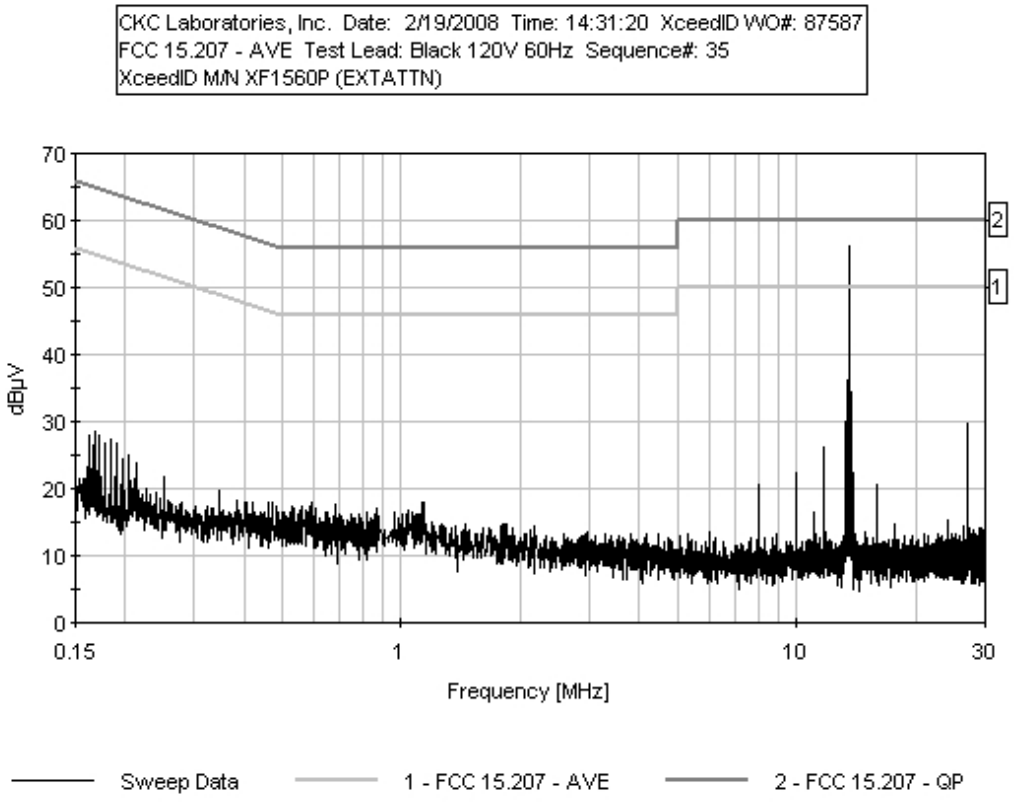
Transducer Legend:

T1=CAB-SITED INT 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 Ave	13.559M	32.4	+10.9	+0.2	+0.8		+0.0	44.3	50.0	-5.7	Black
^	13.559M	44.4	+10.9	+0.2	+0.8		+0.0	56.3	50.0	+6.3	Black
3	27.120M	18.2	+11.0	+0.2	+1.3		+0.0	30.7	50.0	-19.3	Black
4	9.974M	13.7	+10.8	+0.2	+0.5		+0.0	25.2	50.0	-24.8	Black

5	162.000k	14.3	+11.7	+1.7	+0.2	+0.0	27.9	55.4	-27.5	Black
6	8.007M	9.3	+10.8	+0.1	+0.4	+0.0	20.6	50.0	-29.4	Black
7	11.230M	7.1	+10.8	+0.2	+0.6	+0.0	18.7	50.0	-31.3	Black



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

Customer: **XceedID**
Specification: **FCC 15.107B/15.207 - AVE**
Work Order #: **87587** Date: 2/19/2008
Test Type: **Conducted Emissions** Time: 14:36:23
Equipment: **Smart Card Reader** Sequence#: 36
Manufacturer: XceedID Tested By: Mike Wilkinson
Model: XF1560P 120V 60Hz
S/N: 0022

***Test Equipment*:**

Function	S/N	Calibration Date	Cal Due Date	Asset #
Agilent E4446A SA	US44300407	01/03/2007	01/03/2009	02660
Oscillioscope	US37340242	07/27/2007	07/27/2009	02713
150kHz HP Filter TTE	G7754	01/22/2008	01/22/2010	02608
Internal LISN Cable	N/A	03/23/2007	03/23/2009	CAB-SITED-INT-LISN
LISN, 8028-50-TS-24-BNC	8379276, 280	05/07/2007	05/07/2009	1248 & 1249

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

Function	Manufacturer	Model #	S/N
Smart Card Reader*	XceedID	XF1560P	0022

Support Devices:

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

Test Conditions / Notes:

FCC 15.107(a) Class B/15.207. EUT is a proximity reader operating at 13.56MHz. The EUT is transmitting continuously. The equipment is powered via 12VDC power supply. Digital output operation verified before and after each test with the O-Scope. Frequency Range Investigated: 150kHz to 30MHz. Temperature: 22ºC, Relative Humidity: 40%. SA RES BW =9kHz, VID BW = 9kHz.

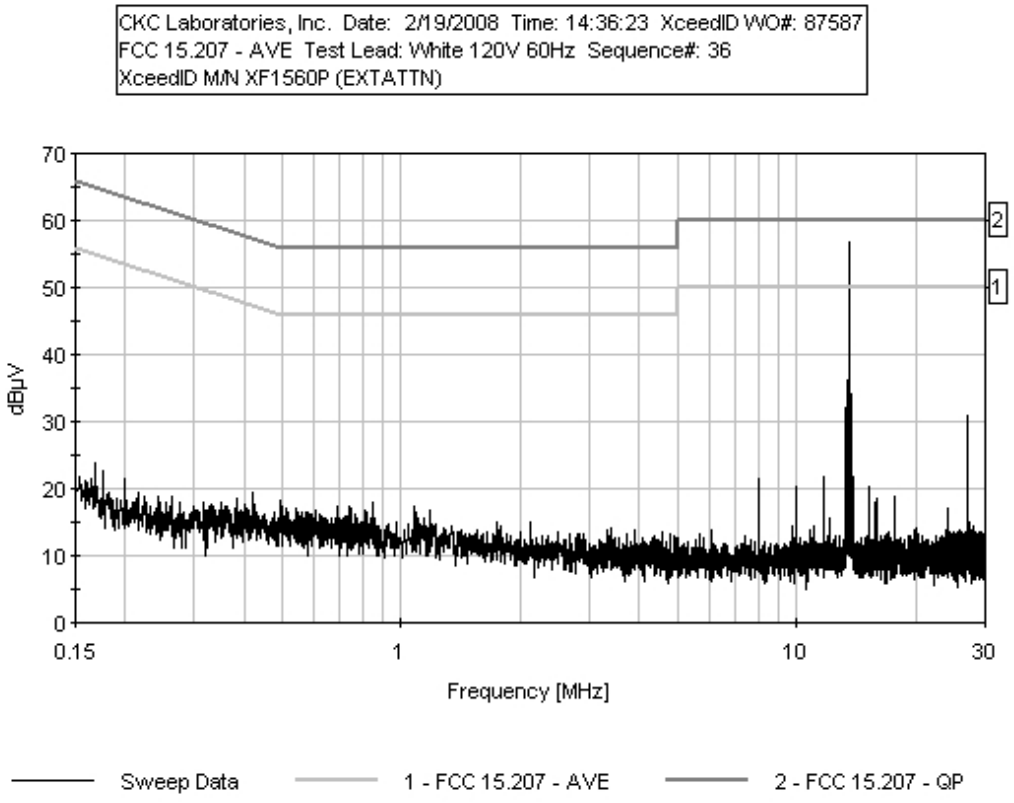
Transducer Legend:

T1=CAB-SITED INT 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 Ave	13.560M	31.9	+10.9	+0.2	+1.2		+0.0	44.2	50.0	-5.8	White
^	13.560M	44.5	+10.9	+0.2	+1.2		+0.0	56.8	50.0	+6.8	White
3	27.122M	18.0	+11.0	+0.2	+1.6		+0.0	30.8	50.0	-19.2	White
4	11.763M	16.4	+10.9	+0.2	+1.0		+0.0	28.5	50.0	-21.5	White
5	9.974M	15.1	+10.8	+0.2	+0.8		+0.0	26.9	50.0	-23.1	White

6	1.027M	8.3	+11.8	+0.2	+0.2	+0.0	20.5	46.0	-25.5	White
7	186.000k	15.9	+11.7	+0.4	+0.1	+0.0	28.1	54.2	-26.1	White
8	7.995M	9.4	+10.8	+0.1	+0.8	+0.0	21.1	50.0	-28.9	White



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

Customer: **XceedID**
Specification: **FCC 15.107B/15.207 - AVE**
Work Order #: **87587** Date: 2/20/2008
Test Type: **Conducted Emissions** Time: 08:39:24
Equipment: **Smart Card Reader** Sequence#: 38
Manufacturer: XceedID Tested By: Mike Wilkinson
Model: XF1560CS4 120V 60Hz
S/N: 0020

***Test Equipment*:**

Function	S/N	Calibration Date	Cal Due Date	Asset #
Agilent E4446A SA	US44300407	01/03/2007	01/03/2009	02660
Oscillioscope	US37340242	07/27/2007	07/27/2009	02713
150kHz HP Filter TTE	G7754	01/22/2008	01/22/2010	02608
Internal LISN Cable	N/A	03/23/2007	03/23/2009	CAB-SITED-INT-LISN
LISN, 8028-50-TS-24-BNC	8379276, 280	05/07/2007	05/07/2009	1248 & 1249

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

Function	Manufacturer	Model #	S/N
Smart Card Reader*	XceedID	XF1560CS4	0020

Support Devices:

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

Test Conditions / Notes:

FCC 15.107(a) Class B/15.207. EUT is a proximity reader operating at 13.56MHz. The EUT is transmitting continuously. The equipment is powered via 12VDC power supply. Digital output operation verified before and after each test with the O-Scope. Frequency Range Investigated: 150kHz to 30MHz. Temperature: 22ºC, Relative Humidity: 40%. SA RES BW =9kHz, VID BW = 9kHz.

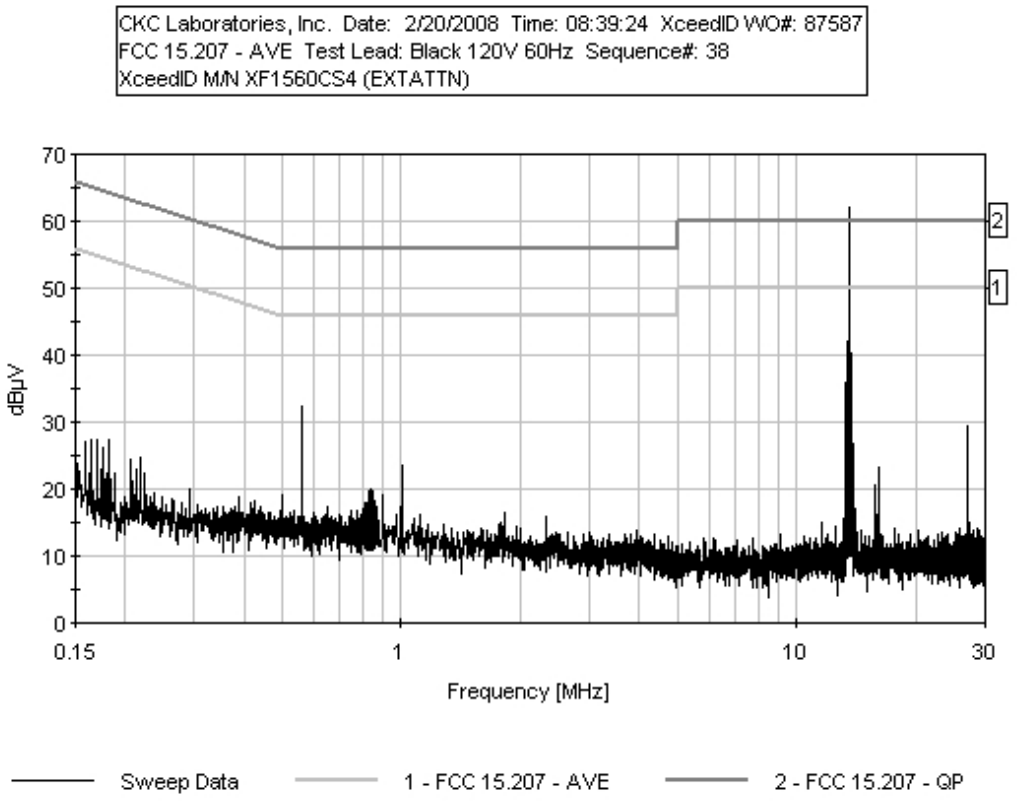
Transducer Legend:

T1=CAB-SITED INT 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	13.560M	50.2	+10.9	+0.2	+0.8		+0.0	62.1	50.0 Carrier Emissions with antenna attached	+12.1	Black
2	13.540M	19.0	+10.9	+0.2	+0.8		+0.0	30.9	50.0 Carrier Emissions with dummy load	-19.1	Black
3	27.122M	17.3	+11.0	+0.2	+1.3		+0.0	29.8	50.0	-20.2	Black
4	1.833M	9.4	+11.5	+0.2	+0.2		+0.0	21.3	46.0	-24.7	Black

5	11.538M	13.3	+10.8	+0.2	+0.6	+0.0	24.9	50.0	-25.1	Black
6	968.000k	8.0	+11.8	+0.2	+0.2	+0.0	20.2	46.0	-25.8	Black
7	162.000k	11.9	+11.7	+1.7	+0.2	+0.0	25.5	55.4	-29.9	Black
8	8.101M	5.0	+10.8	+0.1	+0.4	+0.0	16.3	50.0	-33.7	Black



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

Customer: **XceedID**
Specification: **FCC 15.107B/15.207 - AVE**
Work Order #: **87587** Date: 2/19/2008
Test Type: **Conducted Emissions** Time: 14:59:59
Equipment: **Smart Card Reader** Sequence#: 37
Manufacturer: XceedID Tested By: Mike Wilkinson
Model: XF1560CS4 120V 60Hz
S/N: 0020

***Test Equipment*:**

Function	S/N	Calibration Date	Cal Due Date	Asset #
Agilent E4446A SA	US44300407	01/03/2007	01/03/2009	02660
Oscillioscope	US37340242	07/27/2007	07/27/2009	02713
150kHz HP Filter TTE	G7754	01/22/2008	01/22/2010	02608
Internal LISN Cable	N/A	03/23/2007	03/23/2009	CAB-SITED-INT-LISN
LISN, 8028-50-TS-24-BNC	8379276, 280	05/07/2007	05/07/2009	1248 & 1249

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

Function	Manufacturer	Model #	S/N
Smart Card Reader*	XceedID	XF1560CS4	0020

Support Devices:

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

Test Conditions / Notes:

FCC 15.107(a) Class B/15.207. EUT is a proximity reader operating at 13.56MHz. The EUT is transmitting continuously. The equipment is powered via 12VDC power supply. Digital output operation verified before and after each test with the O-Scope. Frequency Range Investigated: 150kHz to 30MHz. Temperature: 22ºC, Relative Humidity: 40%. SA RES BW =9kHz, VID BW = 9kHz.

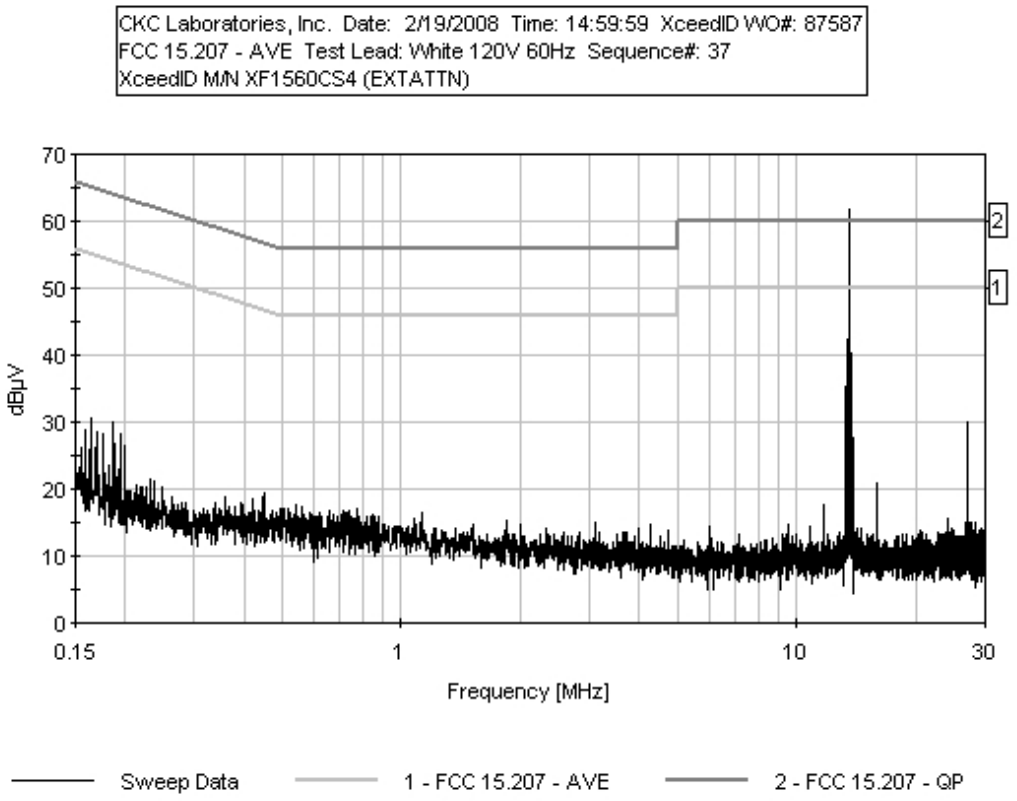
Transducer Legend:

T1=CAB-SITED INT 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	49.5	+10.9	+0.2	+1.2		+0.0	61.8	50.0 Carrier Emissions with antenna attached	+11.8	White
2	13.560M	19.6	+10.9	+0.2	+1.2		+0.0	31.9	50.0 Carrier Emissions with dummy load	-18.1	White
3	27.120M	18.5	+11.0	+0.2	+1.6		+0.0	31.3	50.0	-18.7	White
4	197.000k	18.0	+11.8	+0.2	+0.1		+0.0	30.1	53.7	-23.6	White

5	1.039M	8.0	+11.8	+0.2	+0.2	+0.0	20.2	46.0	-25.8	White
6	4.452M	8.2	+11.0	+0.1	+0.4	+0.0	19.7	46.0	-26.3	White
7	11.775M	9.5	+10.9	+0.2	+1.0	+0.0	21.6	50.0	-28.4	White
8	7.023M	3.2	+10.9	+0.1	+0.7	+0.0	14.9	50.0	-35.1	White



FCC 15.109 RADIATED EMISSIONS

Test Setup Photos

Test Data Sheets

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

Customer: **XceedID**
Specification: **15.109 CLASS B**
Work Order #: **87587** Date: 2/15/2008
Test Type: **Radiated Scan** Time: 08:14:53
Equipment: **Smart Card Reader** Sequence#: 10
Manufacturer: XceedID Tested By: Mike Wilkinson
Model: XF1560P
S/N: 0022

***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
10M SITE CBL MAST CBL	N/A	03/23/2007	03/23/2009	CAB-SITED10M
Oscillioscope	US37340242	07/27/2007	07/27/2009	02713

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

Function	Manufacturer	Model #	S/N
Smart Card Reader*	XceedID	XF1560P	0022

Support Devices:

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

Test Conditions / Notes:

EUT is a proximity reader operating at 13.56MHz. The EUT is transmitting continuously. The equipment is powered via 12VDC power supply. Digital output operation verified before and after each test with the O-Scope. Frequency Range Investigated: 30-1000MHz. Temperature: 22ºC, Relative Humidity: 40%. SA RES BW = 120kHz, VID BW = 360kHz.

Transducer Legend:

T1=AMP AN00099 T2=ANT AN01991 25-1000MHz
T3=CAB-SITED10M-9k-1G

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	384.016M	30.0	-27.1	+15.5	+6.2		+10.0	34.6	46.0	-11.4	Horiz
2	383.975M	29.7	-27.1	+15.5	+6.2		+10.0	34.3	46.0	-11.7	Vert
3	320.019M	31.3	-26.5	+14.0	+5.5		+10.0	34.3	46.0	-11.7	Horiz
4	255.991M	32.5	-26.4	+12.6	+5.1		+10.0	33.8	46.0	-12.2	Horiz
5	128.000M	32.5	-27.0	+11.7	+3.3		+10.0	30.5	43.5	-13.0	Vert

6	64.029M	35.3	-27.2	+6.5	+2.2	+10.0	26.8	40.0	-13.2	Vert
7	192.002M	33.9	-26.7	+9.1	+4.0	+10.0	30.3	43.5	-13.2	Vert
8	320.001M	29.5	-26.5	+14.0	+5.5	+10.0	32.5	46.0	-13.5	Vert
9	191.991M	30.8	-26.7	+9.1	+4.0	+10.0	27.2	43.5	-16.3	Horiz
10	216.004M	30.9	-26.6	+10.3	+4.4	+10.0	29.0	46.0	-17.0	Vert
11	160.000M	28.4	-26.9	+10.7	+3.7	+10.0	25.9	43.5	-17.6	Vert
12	304.004M	25.7	-26.4	+13.5	+5.5	+10.0	28.3	46.0	-17.7	Vert
13	200.002M	29.2	-26.7	+9.1	+4.1	+10.0	25.7	43.5	-17.8	Vert
14	199.991M	28.9	-26.7	+9.1	+4.1	+10.0	25.4	43.5	-18.1	Horiz

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

Customer: **XceedID**
Specification: **15.109 CLASS B**
Work Order #: **87587** Date: 2/15/2008
Test Type: **Radiated Scan** Time: 09:39:08
Equipment: **Smart Card Reader** Sequence#: 12
Manufacturer: XceedID Tested By: Mike Wilkinson
Model: XF1560CS4
S/N: 0020

***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
10M SITE CBL MAST CBL	N/A	03/23/2007	03/23/2009	CAB-SITED10M
Oscillioscope	US37340242	07/27/2007	07/27/2009	02713

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

Function	Manufacturer	Model #	S/N
Smart Card Reader*	XceedID	XF1560CS4	0020

Support Devices:

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

Test Conditions / Notes:

EUT is a proximity reader operating at 13.56MHz. The EUT is transmitting continuously. The equipment is powered via 12VDC power supply. Digital output operation verified before and after each test with the O-Scope. Frequency Range Investigated: 30-1000MHz. Temperature: 22ºC, Relative Humidity: 40%. SA RES BW = 120kHz, VID BW = 360kHz.

Transducer Legend:

T1=AMP AN00099 T2=ANT AN01991 25-1000MHz
T3=CAB-SITED10M-9k-1G

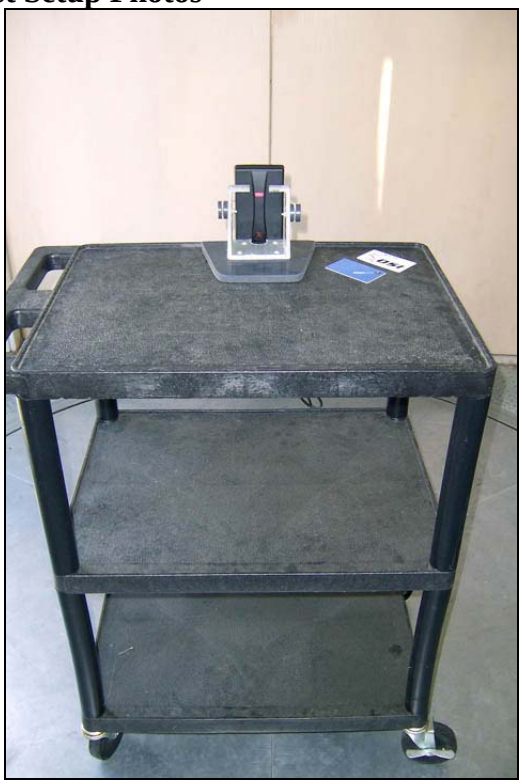
Measurement Data: Reading listed by margin. Test Distance: 10 Meters

#	Freq MHz	Rdng dBµV	T1 dB	T2 dB	T3 dB	dB	Dist Table	Corr dBµV/m	Spec dBµV/m	Margin dB	Polar Ant
1	48.001M QP	40.1	-27.1	+10.1	+1.9		+10.0	35.0	40.0	-5.0	Vert
2	112.006M	37.8	-27.0	+11.0	+3.1		+10.0	34.9	43.5	-8.6	Vert
3	256.023M	32.7	-26.4	+12.6	+5.1		+10.0	34.0	46.0	-12.0	Vert
4	120.006M	32.9	-27.0	+11.6	+3.2		+10.0	30.7	43.5	-12.8	Vert
5	192.006M	34.2	-26.7	+9.1	+4.0		+10.0	30.6	43.5	-12.9	Vert
6	319.974M	29.5	-26.5	+14.0	+5.5		+10.0	32.5	46.0	-13.5	Horiz

7	64.006M	34.8	-27.2	+6.5	+2.2	+10.0	26.3	40.0	-13.7	Vert
8	320.023M	28.4	-26.5	+14.0	+5.5	+10.0	31.4	46.0	-14.6	Vert
9	263.974M	29.3	-26.4	+12.8	+5.2	+10.0	30.9	46.0	-15.1	Horiz
10	304.023M	27.4	-26.4	+13.5	+5.5	+10.0	30.0	46.0	-16.0	Vert
11	128.006M	29.1	-27.0	+11.7	+3.3	+10.0	27.1	43.5	-16.4	Vert
12	200.006M	28.3	-26.7	+9.1	+4.1	+10.0	24.8	43.5	-18.7	Vert
13	144.023M	26.5	-26.9	+11.4	+3.5	+10.0	24.5	43.5	-19.0	Horiz
14	144.006M	26.3	-26.9	+11.4	+3.5	+10.0	24.3	43.5	-19.2	Vert
15	192.023M	27.0	-26.7	+9.1	+4.0	+10.0	23.4	43.5	-20.1	Horiz
16	216.023M	26.3	-26.6	+10.3	+4.4	+10.0	24.4	46.0	-21.6	Horiz

FCC 15.209 RADIATED EMISSIONS

Test Setup Photos



Test Data Sheets

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

Customer: **XceedID**
Specification: **FCC 15.209**
Work Order #: **87587** Date: 2/15/2008
Test Type: **Radiated Scan** Time: 14:03:55
Equipment: **Smart Card Reader** Sequence#: 15
Manufacturer: XceedID Tested By: Mike Wilkinson
Model: XF1560P
S/N: 0022

***Test Equipment*:**

Function	S/N	Calibration Date	Cal Due Date	Asset #
Agilent E4446A SA	US44300407	01/03/2007	01/03/2009	02660
EMCO Loop Antenna	1074	05/01/2007	05/01/2009	00226
10M SITE CBL MAST CBL	N/A	03/23/2007	03/23/2009	CAB-SITED10M
Oscillioscope	US37340242	07/27/2007	07/27/2009	02713

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

Function	Manufacturer	Model #	S/N
Smart Card Reader*	XceedID	XF1560P	0022

Support Devices:

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

Test Conditions / Notes:

EUT is a proximity reader operating at 13.56MHz. The EUT is transmitting continuously. The equipment is powered via 12VDC power supply. Digital output operation verified before and after each test with the O-Scope. Frequency Range Investigated: 9kHz to 30MHz. Temperature: 22ºC, Relative Humidity: 40%. SA RES BW = 9kHz, VID BW = 27kHz.

Transducer Legend:

T1=CAB-SITED10M-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	15.4	+1.4	+7.1			-19.0	4.9	29.5	-24.6	Horiz
2	27.121M	11.0	+1.4	+7.1			-19.0	0.5	29.5	-29.0	Vert

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

Customer: **XceedID**
Specification: **FCC 15.209**
Work Order #: **87587** Date: 2/15/2008
Test Type: **Radiated Scan** Time: 07:44:11
Equipment: **Smart Card Reader** Sequence#: 9
Manufacturer: XceedID Tested By: Mike Wilkinson
Model: XF1560P
S/N: 0022

***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
10M SITE CBL MAST CBL	N/A	03/23/2007	03/23/2009	CAB-SITED10M
Oscillioscope	US37340242	07/27/2007	07/27/2009	02713

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

Function	Manufacturer	Model #	S/N
Smart Card Reader*	XceedID	XF1560P	0022

Support Devices:

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

Test Conditions / Notes:

EUT is a proximity reader operating at 13.56MHz. The EUT is transmitting continuously. The equipment is powered via 12VDC power supply. Digital output operation verified before and after each test with the O-Scope. Frequency Range Investigated: 30-1000MHz. Temperature: 22ºC, Relative Humidity: 40%. SA RES BW = 120kHz, VID BW = 360kHz.

Transducer Legend:

T1=AMP AN00099	T2=ANT AN01991 25-1000MHz
T3=CAB-SITED10M-9k-1G	

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	40.683M QP	41.1	-27.2	+14.0	+1.7		+10.0	39.6	40.0	-0.4	Vert
2	488.138M	30.2	-27.7	+18.0	+7.2		+10.0	37.7	46.0	-8.3	Vert
3	176.285M	37.7	-26.8	+9.3	+3.9		+10.0	34.1	43.5	-9.4	Vert
4	40.671M	31.8	-27.2	+14.0	+1.7		+10.0	30.3	40.0	-9.7	Horiz
5	216.966M	38.1	-26.6	+10.3	+4.4		+10.0	36.2	46.0	-9.8	Vert
6	54.242M	36.8	-27.1	+8.2	+2.0		+10.0	29.9	40.0	-10.1	Vert

7	393.262M	29.4	-27.2	+15.8	+6.3	+10.0	34.3	46.0	-11.7	Horiz
8	406.813M	28.8	-27.3	+16.1	+6.5	+10.0	34.1	46.0	-11.9	Vert
9	216.972M	36.0	-26.6	+10.3	+4.4	+10.0	34.1	46.0	-11.9	Horiz
10	149.164M	33.3	-26.9	+11.1	+3.6	+10.0	31.1	43.5	-12.4	Vert
11	474.615M	25.2	-27.6	+17.7	+7.1	+10.0	32.4	46.0	-13.6	Vert
12	461.054M	25.5	-27.5	+17.4	+6.9	+10.0	32.3	46.0	-13.7	Vert
13	393.252M	26.1	-27.2	+15.8	+6.3	+10.0	31.0	46.0	-15.0	Vert
14	203.406M	29.6	-26.7	+9.4	+4.2	+10.0	26.5	43.5	-17.0	Vert
15	203.374M	29.3	-26.7	+9.4	+4.2	+10.0	26.2	43.5	-17.3	Horiz
16	230.527M	26.1	-26.5	+11.3	+4.7	+10.0	25.6	46.0	-20.4	Vert

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

Customer: **XceedID**
Specification: **FCC 15.209**
Work Order #: **87587** Date: 2/15/2008
Test Type: **Radiated Scan** Time: 10:21:19
Equipment: **Smart Card Reader** Sequence#: 13
Manufacturer: XceedID Tested By: Mike Wilkinson
Model: XF1560CS4
S/N: 0020

***Test Equipment*:**

Function	S/N	Calibration Date	Cal Due Date	Asset #
Agilent E4446A SA	US44300407	01/03/2007	01/03/2009	02660
EMCO Loop Antenna	1074	05/01/2007	05/01/2009	00226
10M SITE CBL MAST CBL	N/A	03/23/2007	03/23/2009	CAB-SITED10M
Oscillioscope	US37340242	07/27/2007	07/27/2009	02713

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

Function	Manufacturer	Model #	S/N
Smart Card Reader*	XceedID	XF1560CS4	0020

Support Devices:

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

Test Conditions / Notes:

EUT is a proximity reader operating at 13.56MHz. The EUT is transmitting continuously. The equipment is powered via 12VDC power supply. Digital output operation verified before and after each test with the O-Scope. Frequency Range Investigated: 9kHz to 30MHz. Temperature: 22ºC, Relative Humidity: 40%. SA RES BW = 9kHz, VID BW = 27kHz.

Transducer Legend:

T1=CAB-SITED10M-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	27.123M	14.2	+1.4	+7.1			-19.0	3.7	29.5	-25.8	Horiz
2	27.124M	10.2	+1.4	+7.1			-19.0	-0.3	29.5	-29.8	Vert

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

Customer: **XceedID**
Specification: **FCC 15.209**
Work Order #: **87587** Date: 2/15/2008
Test Type: **Radiated Scan** Time: 08:57:00
Equipment: **Smart Card Reader** Sequence#: 11
Manufacturer: XceedID Tested By: Mike Wilkinson
Model: XF1560CS4
S/N: 0020

***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
10M SITE CBL MAST CBL	N/A	03/23/2007	03/23/2009	CAB-SITED10M
Oscillioscope	US37340242	07/27/2007	07/27/2009	02713

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

Function	Manufacturer	Model #	S/N
Smart Card Reader*	XceedID	XF1560CS4	0020

Support Devices:

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

Test Conditions / Notes:

EUT is a proximity reader operating at 13.56MHz. The EUT is transmitting continuously. The equipment is powered via 12VDC power supply. Digital output operation verified before and after each test with the O-Scope. Frequency Range Investigated: 30-1000MHz. Temperature: 22ºC, Relative Humidity: 40%. SA RES BW = 120kHz, VID BW = 360kHz.

Transducer Legend:

T1=AMP AN00099 T2=ANT AN01991 25-1000MHz
T3=CAB-SITED10M-9k-1G

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	40.684M QP	37.1	-27.2	+14.0	+1.7		+10.0	35.6	40.0	-4.4	Vert
2	54.237M QP	39.9	-27.1	+8.2	+2.0		+10.0	33.0	40.0	-7.0	Vert
3	176.275M	38.7	-26.8	+9.3	+3.9		+10.0	35.1	43.5	-8.4	Vert
4	474.606M	29.7	-27.6	+17.7	+7.1		+10.0	36.9	46.0	-9.1	Vert
5	474.606M	29.7	-27.6	+17.7	+7.1		+10.0	36.9	46.0	-9.1	Horiz
6	366.126M	32.7	-26.9	+15.1	+5.9		+10.0	36.8	46.0	-9.2	Horiz

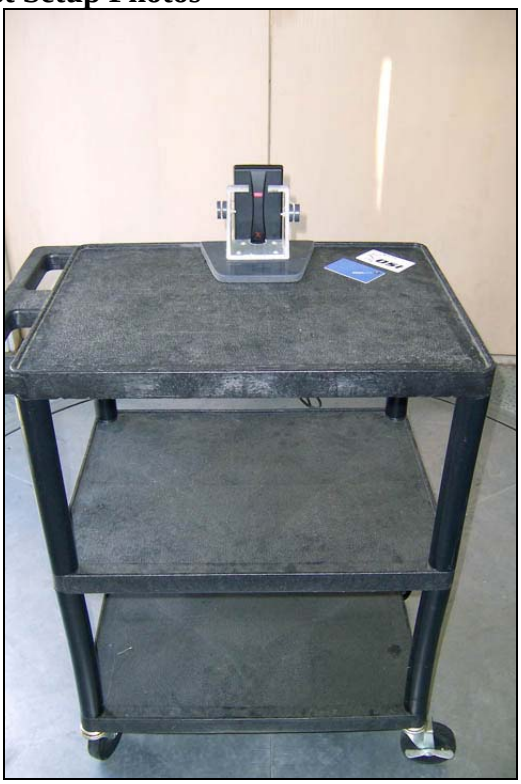
7	610.195M QP	25.6	-28.0	+19.8	+8.4	+10.0	35.8	46.0	-10.2	Horiz
8	366.143M	31.4	-26.9	+15.1	+5.9	+10.0	35.5	46.0	-10.5	Vert
9	379.671M	28.9	-27.1	+15.4	+6.1	+10.0	33.3	46.0	-12.7	Horiz
10	203.387M	33.7	-26.7	+9.4	+4.2	+10.0	30.6	43.5	-12.9	Vert
11	339.006M	29.1	-26.6	+14.5	+5.6	+10.0	32.6	46.0	-13.4	Horiz
12	54.246M	31.6	-27.1	+8.2	+2.0	+10.0	24.7	40.0	-15.3	Horiz
13	67.795M	31.8	-27.1	+6.3	+2.3	+10.0	23.3	40.0	-16.7	Vert
14	122.035M	28.9	-27.0	+11.6	+3.3	+10.0	26.8	43.5	-16.7	Vert
15	216.947M	29.4	-26.6	+10.3	+4.4	+10.0	27.5	46.0	-18.5	Vert
16	216.966M	27.1	-26.6	+10.3	+4.4	+10.0	25.2	46.0	-20.8	Horiz

FCC 15.225 EMISSIONS MASK

Test Equipment

Function	S/N	Calibration Date	Cal Due Date	Asset #
Agilent E4446A SA	US44300407	01/03/2007	01/03/2009	02660
EMCO Loop Antenna	1074	05/01/2007	05/01/2009	00226
10M SITE CBL MAST CBL	N/A	03/23/2007	03/23/2009	CAB-SITED10M

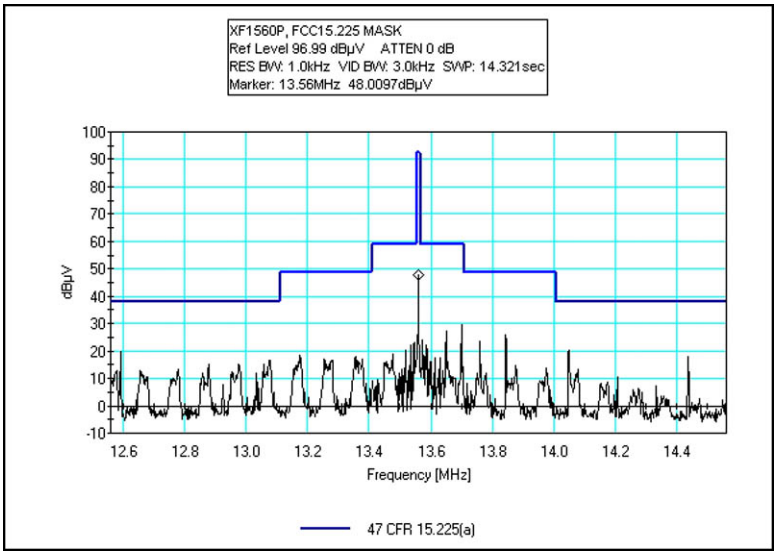
Test Setup Photos



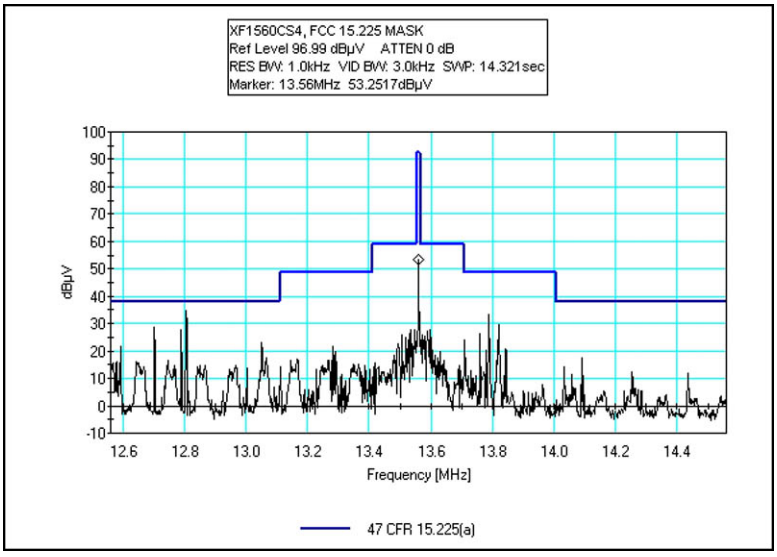
Test Conditions

EUT is a proximity reader operating at 13.56MHz. The EUT is transmitting continuously. The equipment is powered via 12VDC power supply. Digital output operation verified before and after each test with the O-Scope. Temperature: 22ºC, Relative Humidity: 40%.

Test Data



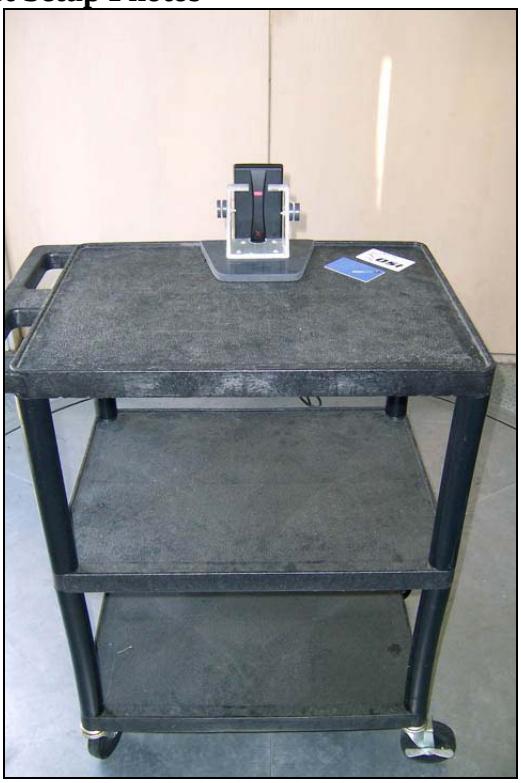
FX1560P



XF1560CS4

FCC 15.225(a) FIELD STRENGTH OF FUNDAMENTAL

Test Setup Photos



Test Data Sheets

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

Customer: **XceedID**
Specification: **47 CFR 15.225(a)**
Work Order #: **87587** Date: 2/15/2008
Test Type: **Radiated Scan** Time: 14:40:28
Equipment: **Smart Card Reader** Sequence#: 16
Manufacturer: XceedID Tested By: Mike Wilkinson
Model: XF1560P
S/N: 0022

***Test Equipment*:**

Function	S/N	Calibration Date	Cal Due Date	Asset #
Agilent E4446A SA	US44300407	01/03/2007	01/03/2009	02660
EMCO Loop Antenna	1074	05/01/2007	05/01/2009	00226
10M SITE CBL MAST CBL	N/A	03/23/2007	03/23/2009	CAB-SITED10M
Oscillioscope	US37340242	07/27/2007	07/27/2009	02713

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

Function	Manufacturer	Model #	S/N
Smart Card Reader*	XceedID	XF1560P	0022

Support Devices:

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

Test Conditions / Notes:

EUT is a proximity reader operating at 13.56MHz. The EUT is transmitting continuously. The equipment is powered via 12VDC power supply. Digital output operation verified before and after each test with the O-Scope. Frequency Range Investigated: Carrier. Temperature: 22ºC, Relative Humidity: 40%. SA RES BW = 9kHz, VID BW = 27kHz

Transducer Legend:

T1=CAB-SITED10M-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	50.5	+1.0	+9.6			-19.0	42.1	84.0	-41.9	Vert
2	13.561M	41.8	+1.0	+9.6			-19.0	33.4	84.0	-50.6	Horiz

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

Customer: **XceedID**
Specification: **47 CFR 15.225(a)**
Work Order #: **87587** Date: 2/15/2008
Test Type: **Radiated Scan** Time: 12:46:00
Equipment: **Smart Card Reader** Sequence#: 14
Manufacturer: XceedID Tested By: Mike Wilkinson
Model: XF1560CS4
S/N: 0020

***Test Equipment*:**

Function	S/N	Calibration Date	Cal Due Date	Asset #
Agilent E4446A SA	US44300407	01/03/2007	01/03/2009	02660
EMCO Loop Antenna	1074	05/01/2007	05/01/2009	00226
10M SITE CBL MAST CBL	N/A	03/23/2007	03/23/2009	CAB-SITED10M
Oscillioscope	US37340242	07/27/2007	07/27/2009	02713

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

Function	Manufacturer	Model #	S/N
Smart Card Reader*	XceedID	XF1560CS4	0020

Support Devices:

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

Test Conditions / Notes:

EUT is a proximity reader operating at 13.56MHz. The EUT is transmitting continuously. The equipment is powered via 12VDC power supply. Digital output operation verified before and after each test with the O-Scope. Frequency Range Investigated: Carrier. Temperature: 22ºC, Relative Humidity: 40%. SA RES BW = 9kHz, VID BW = 27kHz.

Transducer Legend:

T1=CAB-SITED10M-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	13.560M	56.5	+1.0	+9.6			-19.0	48.1	84.0	-35.9	Vert
2	13.560M	53.8	+1.0	+9.6			-19.0	45.4	84.0	-38.6	Horiz

FCC 15.225(e) FREQUENCY STABILITY

Test Equipment

Function	S/N	Cal Date	Cal Due	Asset #
Agilent E4446A SA	US44300407	1/3/2007	1/3/2009	2660
EMCO Loop Antenna	1074	5/1/2007	5/1/2009	226
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	7/19/20	762
DVM Fluke 70	55230270	4/12/2006	4/12/2008	P00756

Test Conditions

Equipment is placed inside of a temperature chamber. EUT power is provided via bench supply. Power variations per FCC 15.31(e) was performed on each EUT with no variation in output power noted.

Test Setup Photos

Test Data

Customer: XceedID
WO#: 87587
Date: 25-Feb-08
Test Engineer: Mike Wilkinson

Operating Voltage: 12.00 **VDC**
Frequency Limit: 0.01 **%**

Temperature Variations

Channel Frequency:		XF1560CS4 13.560000	Dev. (MHz)	XF1560P 13.560000	Dev. (MHz)
Temp (C)	Voltage				
-30	12.00				
-20	12.00	13.56032	0.00031	13.56037	0.00036
-10	12.00	13.56035	0.00035	13.56038	0.00038
0	12.00	13.56033	0.00033	13.56040	0.00040
10	12.00	13.56035	0.00035	13.56035	0.00035
20	12.00	13.56031	0.00031	13.56035	0.00035
30	12.00	13.56032	0.00032	13.56035	0.00035
40	12.00	13.56025	0.00025	13.56030	0.00030
50	12.00	13.56019	0.00019	13.56026	0.00026

Voltage Variations (±15%)

20	10.20	13.56028	0.00028	13.56039	0.00039
20	12.00	13.56031	0.00031	13.56035	0.00035
20	13.80	13.56040	0.00040	13.56033	0.00033

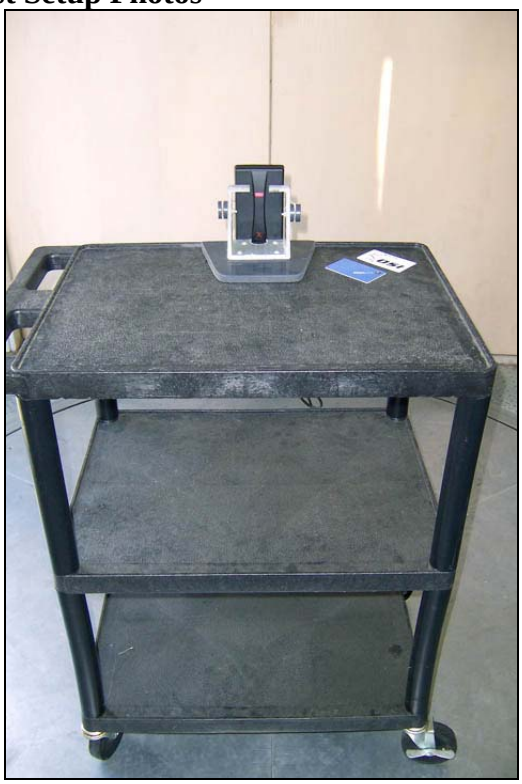
Max Deviation (MHz)			**0.00040**		**0.00040**
Max Deviation (%)			**0.00295**		**0.00295**
			PASS		**PASS**

RSS-GEN 99% BANDWIDTH

Test Equipment

Function	S/N	Calibration Date	Cal Due Date	Asset #
Agilent E4446A SA	US44300407	01/03/2007	01/03/2009	02660
EMCO Loop Antenna	1074	05/01/2007	05/01/2009	00226
10M SITE CBL MAST CBL	N/A	03/23/2007	03/23/2009	CAB-SITED10M

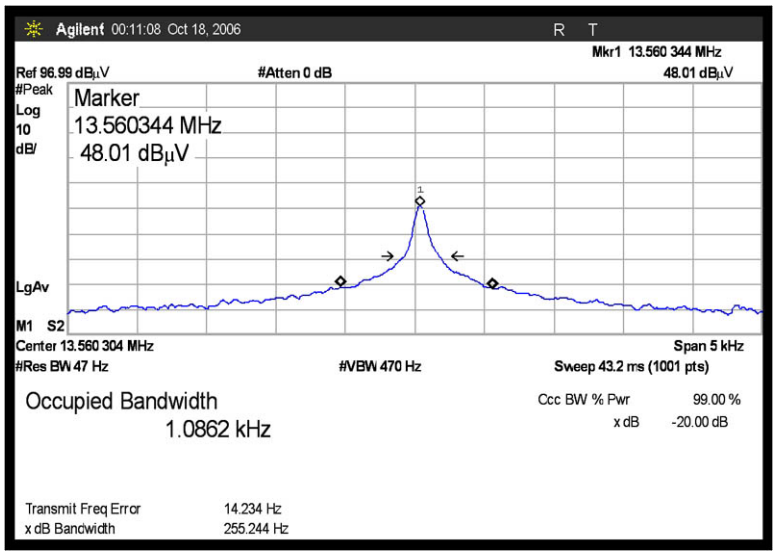
Test Setup Photos



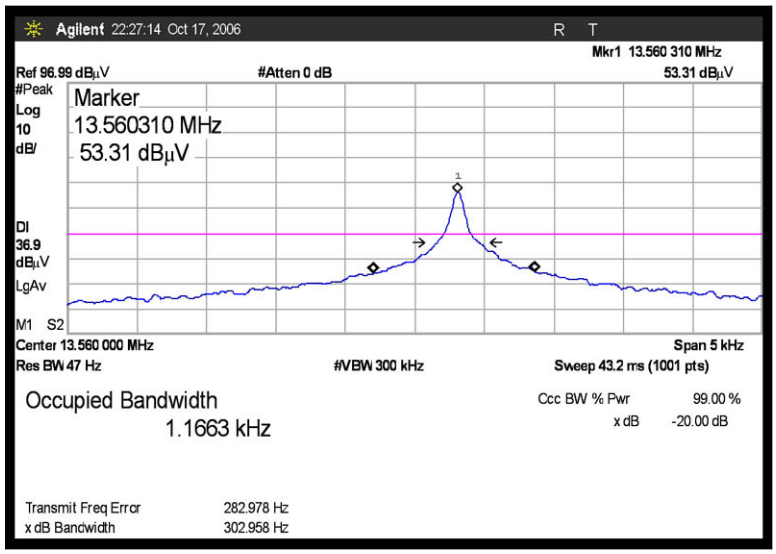
Test Conditions

EUT is a proximity reader operating at 13.56MHz. The EUT is transmitting continuously. The equipment is powered via 12VDC power supply. Digital output operation verified before and after each test with the O-Scope. Temperature: 22ºC, Relative Humidity: 40%.

Plots



FX1560P



XF1560CS4