FCC DoC
TEST REPORT

for

VoIP Phone

MODEL: IP 720

Test Report Number:
90227203-D

Issued to:

AltiGen Communications, Inc.
4555 Cushing Parkway, Fremont, CA. 94538

Issued by:

Compliance Certification Services Inc.
Sindian BU.
No.163-1, Jhongsheng Rd., Sindian City,
Taipei County 23151, Taiwan
TEL: 886-2-22170894
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Issued Date: April 9, 2009

Testing Laboratory
1108

ACCREDITED
TESTING CERT #0824.01

Revision History

Rev.		Issue Date		Revisions	Effect Page	Revised By
00		March 20, 2009		Initial Issue	ALL	Eva Fan

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1 TEST RESULT CERTIFICATION

Product:	VoIP Phone
Model:	IP 720
Brand:	ALTIGEN
Applicant:	**AltiGen Communications, Inc.** 4555 Cushing Parkway, Fremont, CA. 94538
Manufacturer:	**BCM Computers Co., Ltd.** 6F-6, No. 66, Sec. 2, Nan-Kan Rd., Lu-Chu Hsiang, Taoyuan Hsien, 338 Taiwan R.O.C.
Tested:	February 25, 2009 ~ March 5, 2009

EMISSION			
Standard	**Item**	**Result**	**Remarks**
FCC 47 CFR Part 15 Subpart B, ICES-003 Issue 4 ANSI C63.4-2003	Conducted (Main Port)	PASS	Meet Class B limit
	Radiated	PASS	Meet Class B limit

Note: *1. The statements of test result on the above are decided by the request of test standard only; the measurement uncertainties are not factored into this compliance determination.*
2. The information of measurement uncertainty is available upon the customer's request.

Deviation from Applicable Standard
None.

The above equipment has been tested by Compliance Certification Services Inc., and found compliance with the requirements set forth in the technical standards mentioned above. The results of testing in this report apply only to the product/system, which was tested. Other similar equipment will not necessarily produce the same results due to production tolerance and measurement uncertainties.

Approved by:

Vince Chiang
Assistant Manager of Sindian BU.

Reviewed by:

Vesta Hsu
Supervisor of report document dept. of Sindian BU.

2 EUT DESCRIPTION

FCC ID Number	TD6ATGN-IP720-09
Product	VoIP Phone
Brand Name	ALTIGEN
Model	IP 720
Applicant	AltiGen Communications, Inc.
Housing material	Plastic
Identify Number	90227203
Received Date	February 27, 2009
EUT Power Rating	5VDC from AC Adaptor
AC Power During Test	120VAC / 60Hz to AC Adaptor
AC Adaptor Manufacturer	GF
AC Adaptor Model Number	GI12-US0520
Power Adaptor Power Rating	IP: 100-240VAC, 50/60Hz; OP: 5VDC
AC Power Cord Type	Shielded, 1.8m (Detachable) to AC Adaptor
DC Power Cord Type	Unshielded, 1.5m (Non-Detachable, with two cores) to AC Adaptor
OSC/Clock Frequencies	13MHz; 8MHz; 25MHz X2; 32.768KHz X2

I/O PORT

I/O PORT TYPES	Q'TY	TESTED WITH
1. USB Port	1	1
2. LAN Port	2	2
3. RJ 11 Port	2	2

Note: *Client consigns only one model sample to test (Model Number: IP 720).*

3 TEST METHODOLOGY

3.1. DECISION OF FINAL TEST MODE

The EUT was tested together with the above additional components, and a configuration, which produced the worst emission levels, was selected and recorded in this report.

The test configuration/ mode is as the following:

Conduction Mode:

1.	**Normal Mode**

Radiation Modes:

1.	**Normal Mode**
2.	**POE Mode**
	POE Mode / 1-5GHz

Conduction: Mode 1

Radiation: Mode 2

3.2. EUT SYSTEM OPERATION

1. All peripherals connect EUT to test.
2. LAN Port:
   Press the start menu, select executive and type ping 192.168.0.6 –t (Server Notebook).
3. POE Port:
   Connect telephone → call "192*168*0*6#" to test EUT.

   Note: *Test program is self-repeating throughout the test.*

4 SETUP OF EQUIPMENT UNDER TEST

4.1. DESCRIPTION OF SUPPORT UNITS

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

Peripherals Devices:

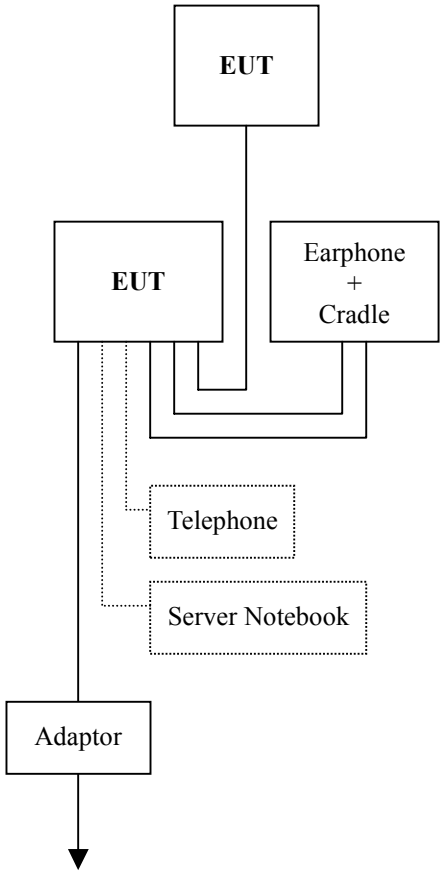
No.	Equipment	Model No.	Serial No.	FCC ID / BSMI ID	Trade Name	Data Cable	Power Cord
1	Earphone + Cradle	CS55	N/A	N/A	PLANTRONICS	RJ 11: Unshielded, 0.5m USB: Unshielded, 0.5m	N/A
2	Telephone	HTT-213	N/A	T90-T139-0	SHIN-KAN-SEN	Unshielded, 20m	Unshielded, 1.8m
3	Server Notebook	2210B	CNV7472KG5	DOC BSMI: R33001	HP	Unshielded, 20m	Unshielded, 1.8m

Note:

1) All the equipment/cables were placed in the worst-case configuration to maximize the emission during the test.

2) Grounding was established in accordance with the manufacturer's requirements and conditions for the intended use.

4.2. CONFIGURATION OF SYSTEM UNDER TEST



5 FACILITIES AND ACCREDITATIONS

5.1. FACILITIES

All measurement facilities used to collect the measurement data are located at CCS Taiwan Sindian BU. at No.163-1, Jhongsheng Rd., Sindian City, Taipei County 23151, Taiwan.

The sites are constructed in conformance with the requirements of ANSI C63.4 and CISPR Publication 22. All receiving equipment conforms to CISPR 16-1-1, CISPR 16-1-2, CISPR 16-1-3, CISPR 16-1-4 and CISPR 16-1-5.

5.2. ACCREDITATIONS

Our laboratories are accredited and approved by the following accreditation body according to ISO/IEC 17025.

Taiwan	TAF
USA	A2LA

The measuring facility of laboratories has been authorized or registered by the following approval agencies.

Canada	Industry Canada
Germany	TUV Rheinland
Japan	VCCI
Taiwan	BSMI
USA	FCC

Copies of granted accreditation certificates are available for downloading from our web site, http://www.ccsemc.com

5.3. MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2:

Measurement	Frequency	Uncertainty
Conducted emissions	0.15MHz~30MHz	± 1.7376
Radiated emissions	30MHz ~ 200MHz	± 3.8992
	200MHz ~1000MHz	± 3.8762

This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

Consistent with industry standard (e.g. CISPR 22: 2006, clause 11, Measurement Uncertainty) determining compliance with the limits shall be base on the results of the compliance measurement. Consequently the measure emissions being less than the maximum allowed emission result in this be a compliant test or passing test.

The acceptable measurement uncertainty value without requiring revision of the compliance statement is base on conducted and radiated emissions being less than U_{CISPR} which is 3.6dB and 5.2dB respectively. CCS values (called U_{Lab} in CISPR 16-4-2) is less than U_{CISPR} as shown in the table above. Therefore, MU need not be considered for compliance.

6 CONDUCTED EMISSION MEASUREMENT

6.1. LIMITS OF CONDUCTED EMISSION MEASUREMENT

FREQUENCY (MHz)	Class A (dBuV)		Class B (dBuV)	
	Quasi-peak	Average	Quasi-peak	Average
0.15 - 0.5	79	66	66 - 56	56 - 46
0.50 - 5.0	73	60	56	46
5.0 - 30.0	73	60	60	50

***NOTE**:*
(1) The lower limit shall apply at the transition frequencies.
(2) The limit decreases in line with the logarithm of the frequency in the range of 0.15 to 0.50 MHz.
(3) All emanations from a class A/B digital device or system, including any network of conductors and apparatus connected thereto, shall not exceed the level of field strengths specified above.

6.2. TEST INSTRUMENTS

Conducted Emission room # A				
Name of Equipment	**Manufacturer**	**Model**	**Serial Number**	**Calibration Due**
TEST RECEIVER	R&S	ESHS20	840455/006	02/12/2010
LISN (EUT)	SCHWARZBECK	NSLK 8127	8127382	12/09/2009
LISN	SOLAR	8012-50-R-24-BNC	8305114	12/09/2009
BNC CABLE	MIYAZAKI	5D-FB	BNC A4	05/12/2009
THERMO-HYGRO METER	TECPEL	DTM-303	No.7	11/24/2009
Test S/W	EMI 32.exe			

***NOTE:** 1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.*
2. N.C.R = No Calibration Request.

6.3. TEST PROCEDURES (please refer to measurement standard or CCS SOP PA-031)

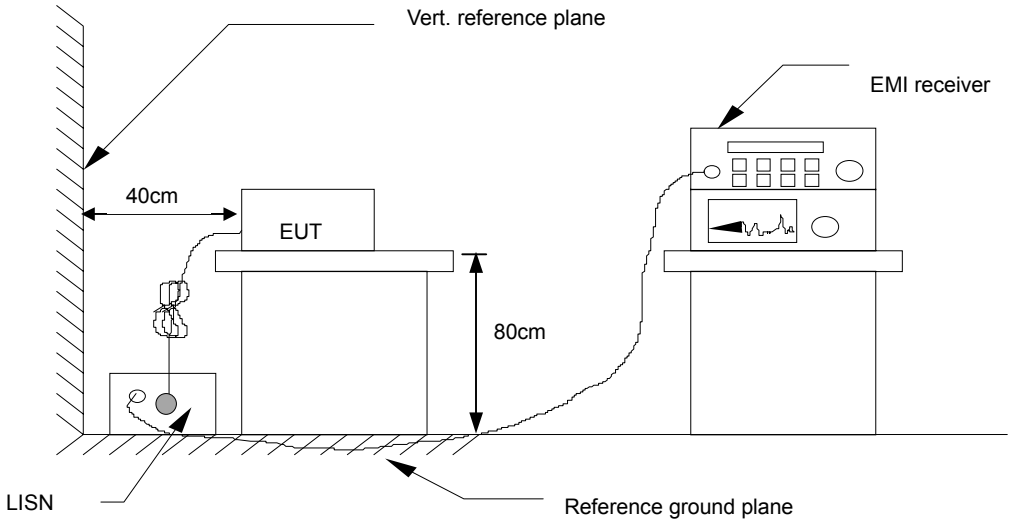
Procedure of Preliminary Test

- The EUT and Support equipment, if needed, was set up as per the test configuration to simulate typical usage per the user's manual. When the EUT is a tabletop system, a wooden table with a height of 0.8 meters is used and is placed on the ground plane as per ANSI C63.4 (see Test Facility for the dimensions of the ground plane used). When the EUT is a floor standing equipment, it is placed on the ground plane, which has a 12 mm non-conductive covering to insulate the EUT from the ground plane.
- All I/O cables were positioned to simulate typical actual usage as per ANSI C63.4.
- The test equipment EUT installed received AC main power, through a Line Impedance Stabilization Network (LISN), which supplied power source and was grounded to the ground plane.
- All support equipment power received from a second LISN.
- The EUT test program was started. Emissions were measured on each current carrying line of the EUT using an EMI Test Receiver connected to the LISN powering the EUT.
- The Receiver scanned from 150kHz to 30MHz for emissions in each of the test modes.
- During the above scans, the emissions were maximized by cable manipulation.
- The test mode(s) described in Item 3.1 were scanned during the preliminary test.
- After the preliminary scan, we found the test mode described in Item 3.1 producing the highest emission level.
- The EUT configuration and cable configuration of the above highest emission levels were recorded for reference of the final test.

Procedure of Final Test

- EUT and support equipment were set up on the test bench as per the configuration with highest emission level in the preliminary test.
- A scan was taken on both power lines, Line 1 and Line 2, recording at least the six highest emissions. Emission frequency and amplitude were recorded into a computer in which correction factors were used to calculate the emission level and compare reading to the applicable limit.
- The test data of the worst-case condition(s) was recorded.

6.4. TEST SETUP



- For the actual test configuration, please refer to the related item – Photographs of the Test Configuration.

6.5. DATA SAMPLE

Freq. (MHz)	Read Level (dBuV)	Factor (dB)	Level (dBuV)	Limit Line (dBuV)	Over Limit (dB)	Remark (P/Q/A)	Line (L1/L2)
x.xx	42.95	0.55	43.50	56	-12.50	Q	L1

Freq. = Emission frequency in MHz
Read Level = Uncorrected Analyzer/Receiver reading
Factor = Insertion loss of LISN + Cable Loss
Level = Read Level + Factor
Limit Line = Limit stated in standard
Over Limit = Reading in reference to limit
P = Peak Reading
Q = Quasi-peak Reading
A = Average Reading
L1 = Hot side
L2 = Neutral side

Calculation Formula

Over Limit (dB) = Level (dBuV) – Limit Line (dBuV)

6.6. TEST RESULTS

Model No.	IP 720	**6dB Bandwidth**	10 KHz
Environmental Conditions	24deg.C, 55% RH, 1010 hPa	**Test Mode**	Mode 1
Tested by	Alee Shen		

(The chart below shows the highest readings taken from the final data.)

Six Highest Conducted Emission Readings							
Frequency Range Investigated				**150 KHz to 30 MHz**			
Freq. (MHz)	Read Level (dBuV)	Factor (dB)	Level (dBuV)	Limit Line (dBuV)	Over Limit (dB)	Remark (P/Q/A)	Line (L1/L2)
0.170	**51.94**	**0.07**	**52.01**	**64.94**	**-12.93**	**P**	**L1**
0.604	**43.96**	**0.09**	**44.05**	**56.00**	**-11.95**	**P**	**L1**
2.513	**46.74**	**0.18**	**46.92**	**56.00**	**-9.08**	**P**	**L1**
2.513	**26.88**	**0.18**	**27.06**	**46.00**	**-18.94**	**A**	**L1**
0.168	**53.38**	**0.08**	**53.46**	**65.08**	**-11.62**	**P**	**L2**
0.567	**42.68**	**0.10**	**42.78**	**56.00**	**-13.22**	**P**	**L2**
2.594	**42.05**	**0.18**	**42.23**	**56.00**	**-13.77**	**P**	**L2**

NOTE: *1. L1 = Line One (Live Line) / L2 = Line Two (Neutral Line)*
2. Those frequencies only show peak emission level because that was below the Average limit, so no need to check average anymore.

7 RADIATED EMISSION MEASUREMENT

7.1. LIMITS OF RADIATED EMISSION MEASUREMENT

FREQUENCY (MHz)	dBuV/m (At 10m)	
	Class A	Class B
30 ~ 230	40	30
230 ~ 1000	47	37

Frequency (MHz)	Class A (dBuV/m) (At 3m)		Class B (dBuV/m) (At 3m)	
	Average	Peak	Average	Peak
Above 1000	60	80	54	74

***NOTE**: (1) The lower limit shall apply at the transition frequencies.*
(2) Emission level (dBuV/m) = 20 log Emission level (uV/m).
(3) 10m to 3m: 20 log (3/10)=-10.4576dB.

7.2. TEST INSTRUMENTS

Open Area Test Site # H				
Name of Equipment	**Manufacturer**	**Model**	**Serial Number**	**Calibration Due**
MEASURE RECEIVER	SCHAFFNER	SCR 3501	412	05/21/2009
SPECTRUM ANALYZER	ADVANTEST	R3132	120900003	No Calibration Required
ANTENNA	SCHAFFNER	CBL 6112B	2801	09/16/2009
AMPLIFIER	HP	8447D	1937A01554	10/12/2009
CABLE	BELDEN	9913	N-TYPE #H4-6	08/22/2009
THERMO-HYGRO METER	TECPEL	DTM-303	080268	05/11/2009
Test S/W	EZ-EMC			
Above 1GHz Used				
SPECTRUM ANALYZER (3Hz-44GHz)	Agilent	E4446A	MY48250064	10/28/2009
ANTENNA (1-18GHz)	EMCO	3115	00022256	01/22/2010
AMPLIFIER (1-18GHz)	HP	8449B	3008A01266	01/19/2010
CABLE (1-18GHz)	JYEBAO	LL142	SMA#RS1	01/19/2010
CABLE (1-18GHz)	HUBER +SUHNER	SUCOFLEX 104	SMA#RS3	01/19/2010
CABLE (1-18GHz)	JYEBAO	LL142	SMA#C1	01/19/2010
Test S/W	EZ-EMC			

***NOTE:** 1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.*
2. N.C.R = No Calibration Request.

7.3. TEST PROCEDURES (please refer to measurement standard or CCS SOP PA-031)

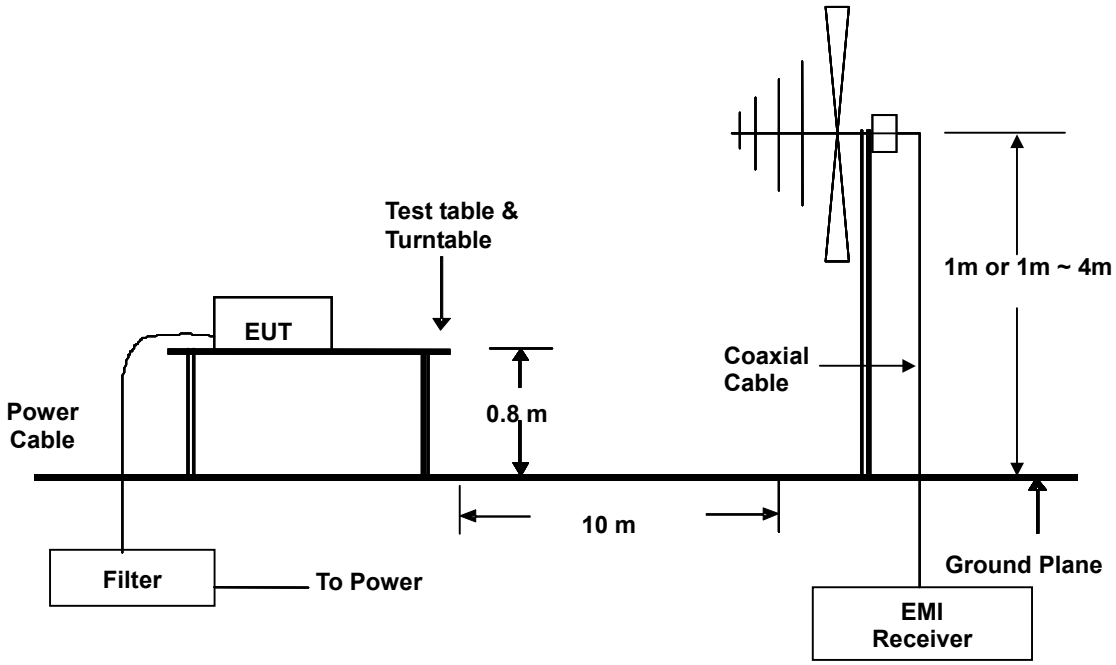
Procedure of Preliminary Test

- The equipment was set up as per the test configuration to simulate typical usage per the user's manual. When the EUT is a tabletop system, a wooden turntable with a height of 0.8 meters is used which is placed on the ground plane. When the EUT is a floor standing equipment, it is placed on the ground plane which has a 12 mm non-conductive covering to insulate the EUT from the ground plane.
- Support equipment, if needed, was placed as per ANSI C63.4.
- All I/O cables were positioned to simulate typical usage as per ANSI C63.4.
- The EUT received AC power source from the outlet socket under the turntable. All support equipment power received from another socket under the turntable.
- The antenna was placed at 10 meter away from the EUT as stated in ANSI C63.4. The antenna connected to the Spectrum Analyzer via a cable and at times a pre-amplifier would be used.
- The Analyzer / Receiver quickly scanned from 30MHz to 5000MHz. The EUT test program was started. Emissions were scanned and measured rotating the EUT to 360 degrees and positioning the antenna 1 to 4 meters above the ground plane, in both the vertical and the horizontal polarization, to maximize the emission reading level.
- The test mode(s) described in Item 3.1 were scanned during the preliminary test:
- After the preliminary scan, we found the test mode described in Item 3.1 producing the highest emission level.
- The EUT and cable configuration, antenna position, polarization and turntable position of the above highest emission level were recorded for the final test.

Procedure of Final Test

- EUT and support equipment were set up on the turntable as per the configuration with highest emission level in the preliminary test.
- The Analyzer / Receiver scanned from 30MHz to 5000MHz. Emissions were scanned and measured rotating the EUT to 360 degrees, varying cable placement and positioning the antenna 1 to 4 meters above the ground plane, in both the vertical and the horizontal polarization, to maximize the emission reading level.
- Recorded at least the six highest emissions. Emission frequency, amplitude, antenna position, polarization and turntable position were recorded into a computer in which correction factors were used to calculate the emission level and compare reading to the applicable limit and only Q.P. reading is presented.
- The test data of the worst-case condition(s) was recorded.

7.4. TEST SETUP



- For the actual test configuration, please refer to the related item – Photographs of the Test Configuration.

7.5. DATA SAMPLE

Below 1GHz

Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector (P/Q/A)	Pol. (H/V)
x.xx	14.0	12.2	26.2	30	-3.8	Q	H

Freq. = Emission frequency in MHz
Reading = Uncorrected Analyzer/Receiver reading
Factor = Antenna Factor + Cable Loss + Attenuator (3/6/10dB) – Amplifier Gain
Result = Reading + Factor
Limit = Limit stated in standard
Margin = Reading in reference to limit
P = Peak Reading
Q = Quasi-peak Reading
A = Average Reading
H = Antenna Polarization: Horizontal
V = Antenna Polarization: Vertical

Calculation Formula

Margin (dB) = Result (dBuV/m) – Limit (dBuV/m)

Above 1GHz

Freq. (MHz)	Reading (dBuV)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector (P/A)	Pol. (H/V)
x.xx	42.95	0.55	43.50	54	-10.50	A	H

Freq. = Emission frequency in MHz
Reading = Uncorrected Analyzer/Receiver reading
Factor = Antenna Factor + Cable Loss - Amplifier Gain
Result = Reading + Factor
Limit = Limit stated in standard
Margin = Result – Limit
P = Peak Reading
A = Average Reading
H = Antenna Polarization: Horizontal
V = Antenna Polarization: Vertical

7.6. TEST RESULTS

Below 1GHz

Model No.	IP 720	**Test Mode**	Mode 2
Environmental Conditions	28deg.C, 76% RH, 1010 hPa	**6dB Bandwidth**	120 KHz
Antenna Pole	Vertical / Horizontal	**Antenna Distance**	10m
Detector Function	Quasi-peak.	**Tested by**	Alee Shen

(The chart below shows the highest readings taken from the final data.)

Six Highest Radiated Emission Readings							
Frequency Range Investigated				**30 MHz to 1000 MHz at 10m**			
Freq. (MHz)	Reading (dBuV)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector (P/Q/A)	Pol. (H/V)
73.7000	**41.60**	**-18.94**	**22.66**	**30.00**	**-7.34**	**Q**	**V**
123.9440	**35.00**	**-13.13**	**21.87**	**30.00**	**-8.13**	**Q**	**V**
125.0050	**36.30**	**-13.17**	**23.13**	**30.00**	**-6.87**	**Q**	**V**
160.2440	**38.00**	**-14.80**	**23.20**	**30.00**	**-6.80**	**Q**	**V**
218.7580	**38.10**	**-15.36**	**22.74**	**30.00**	**-7.26**	**Q**	**V**
627.2440	**32.20**	**-2.91**	**29.29**	**37.00**	**-7.71**	**Q**	**V**

(The chart below shows the highest readings taken from the final data.)

Six Highest Radiated Emission Readings							
Frequency Range Investigated				**30 MHz to 1000 MHz at 10m**			
Freq. (MHz)	Reading (dBuV)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector (P/Q/A)	Pol. (H/V)
160.2340	**42.20**	**-14.80**	**27.40**	**30.00**	**-2.60**	**Q**	**H**
167.8760	**39.70**	**-15.05**	**24.65**	**30.00**	**-5.35**	**Q**	**H**
218.7430	**42.00**	**-15.36**	**26.64**	**30.00**	**-3.36**	**Q**	**H**
787.4900	**34.70**	**-1.24**	**33.46**	**37.00**	**-3.54**	**Q**	**H**
802.2600	**33.10**	**-1.37**	**31.73**	**37.00**	**-5.27**	**Q**	**H**
875.0080	**32.40**	**-0.28**	**32.12**	**37.00**	**-4.88**	**Q**	**H**

REMARKS: *1. 30MHz to 1000MHz test is Applicable CISPR 22 / EN 55022 standard.*
2. The other emission levels were very low against the limit.
3. P= Peak Reading; Q= Quasi-peak Reading; A= Average Reading

Above 1GHz

Model No.	IP 720	**Test Mode**	Mode 2
Environmental Conditions	26°C, 60% RH, 1008mbar	**6dB Bandwidth**	1000 KHz
Antenna Pole	Vertical / Horizontal	**Antenna Distance**	3m
Detector Function	Peak or Average	**Tested by**	Webber Chung

(The chart below shows the highest readings taken from the final data.)

Six Highest Radiated Emission Readings							
Frequency Range Investigated				**1000 MHz to 5000 MHz at 3m**			
Freq. (MHz)	Reading (dBuV)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector (P/A)	Pol. (H/V)
1273.333	**56.86**	**-10.13**	**46.73**	**74.00**	**-27.27**	**P**	**V**
1380.000	**60.82**	**-9.60**	**51.22**	**74.00**	**-22.78**	**P**	**V**
1533.333	**53.12**	**-8.79**	**44.33**	**74.00**	**-29.67**	**P**	**V**
1860.000	**52.10**	**-6.77**	**45.33**	**74.00**	**-28.67**	**P**	**V**
2466.667	**58.18**	**-4.41**	**53.77**	**74.00**	**-20.23**	**P**	**V**
3260.000	**48.05**	**-1.47**	**46.58**	**74.00**	**-27.42**	**P**	**V**

(The chart below shows the highest readings taken from the final data.)

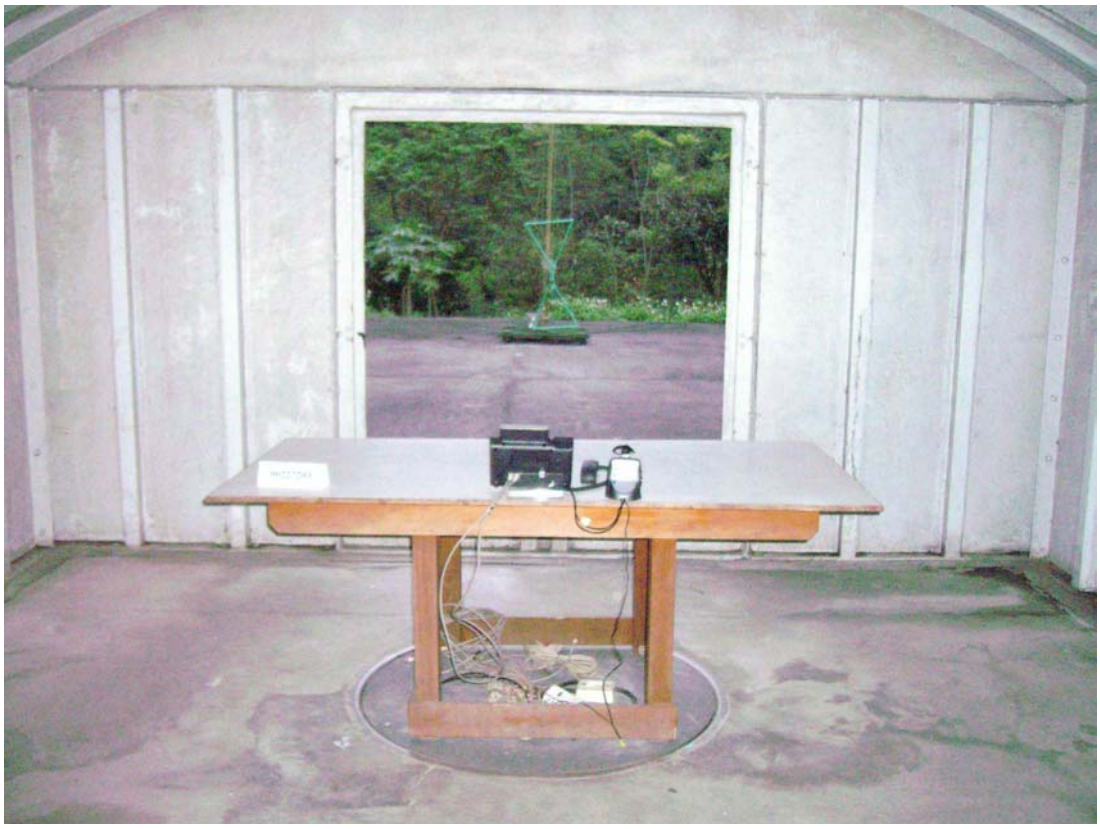
Six Highest Radiated Emission Readings							
Frequency Range Investigated				**1000 MHz to 5000 MHz at 3m**			
Freq. (MHz)	Reading (dBuV)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector (P/A)	Pol. (H/V)
1280.000	**57.12**	**-10.10**	**47.02**	**74.00**	**-26.98**	**P**	**H**
1380.000	**59.84**	**-9.60**	**50.24**	**74.00**	**-23.76**	**P**	**H**
1493.333	**57.82**	**-9.03**	**48.79**	**74.00**	**-25.21**	**P**	**H**
1866.667	**53.15**	**-6.73**	**46.42**	**74.00**	**-27.58**	**P**	**H**
2466.667	**57.61**	**-4.41**	**53.20**	**74.00**	**-20.80**	**P**	**H**
3653.333	**49.38**	**-0.28**	**49.10**	**74.00**	**-24.90**	**P**	**H**

REMARKS: *1. The other emission levels were very low against the limit.*
2. P= Peak Reading; A= Average Reading.

8 PHOTOGRAPHS OF THE TEST CONFIGURATION

CONDUCTED EMISSION TEST

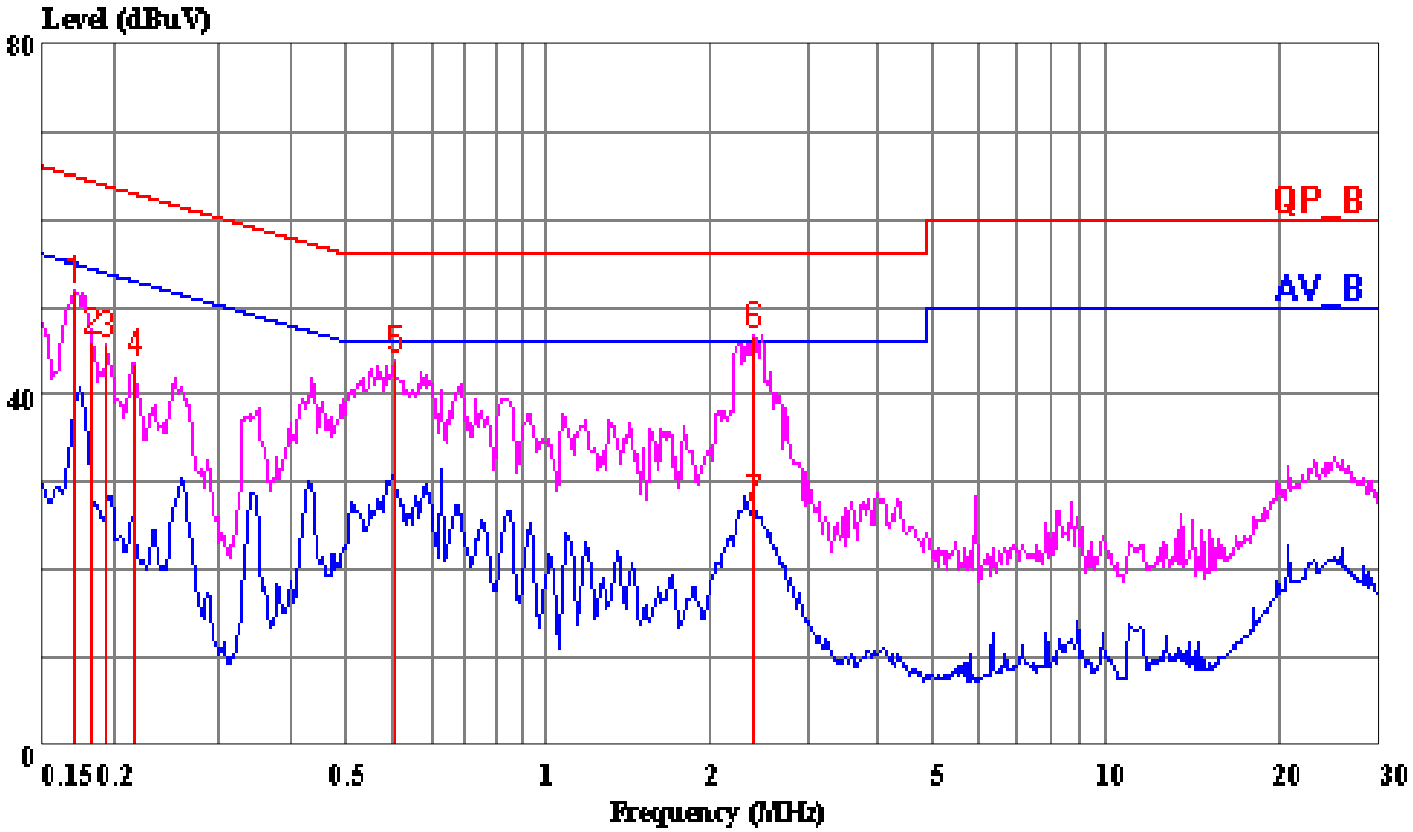
RADIATED EMISSION TEST



COMPLIANCE Engineering Service, Inc.
FCC,VCCI,CISPR,CE
UL,CSA,TUV

No.163-1,Jhongsheng Road,
Sindian City, Taipei County,Taiwan
Tel:02-2217-0894 Fax:02-2217-1029

Data#: 5 File#: 90227203CA.EMI Date: 2009-03-02 Time: 13:17:27



(Conducted A)

Trace: 2 1 Ref Trace:

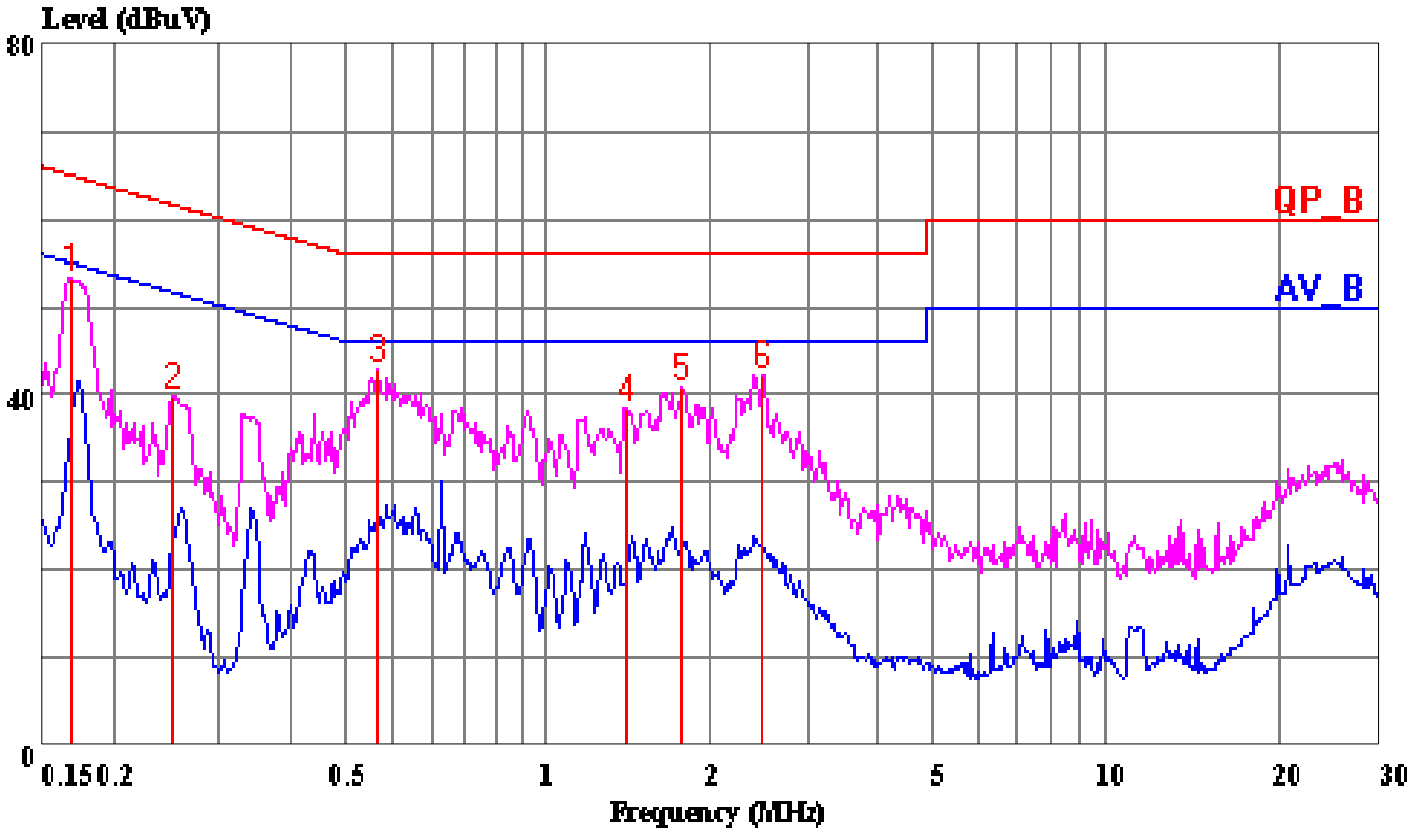
Condition: LINE (Red: Peak; Blue: Average)
Report No. : 90227203
Test Engineer: Alee Shen
Company : AltiGen Communications, Inc.
EUT : IP 720
Test Config : EUT / ALL PERIPHERALS
Type of Test : FCC CLASS B
Mode of Op. : Normal Mode

	Freq	Read Level	Factor	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	
1	0.170	51.94	0.07	52.01	64.94	-12.93	Peak
2	0.182	45.90	0.07	45.97	64.37	-18.40	Peak
3	0.193	45.68	0.07	45.75	63.89	-18.14	Peak
4	0.216	43.59	0.07	43.66	62.96	-19.30	Peak
5	0.604	43.96	0.09	44.05	56.00	-11.95	Peak
6	2.513	46.74	0.18	46.92	56.00	-9.08	Peak
7	2.513	26.88	0.18	27.06	46.00	-18.94	Average

COMPLIANCE Engineering Service, Inc.
FCC,VCCI,CISPR,CE
UL,CSA,TUV

No.163-1,Jhongsheng Road,
Sindian City, Taipei County,Taiwan
Tel:02-2217-0894 Fax:02-2217-1029

Data#: 8 File#: 90227203CA.EMI Date: 2009-03-02 Time: 13:22:39



(Conducted A)

Trace: 7 6 Ref Trace:

Condition: NEUTRAL (Red: Peak; Blue: Average)
Report No. : 90227203
Test Engineer: Alee Shen
Company : AltiGen Communications, Inc.
EUT : IP 720
Test Config : EUT / ALL PERIPHERALS
Type of Test : FCC CLASS B
Mode of Op. : Normal Mode

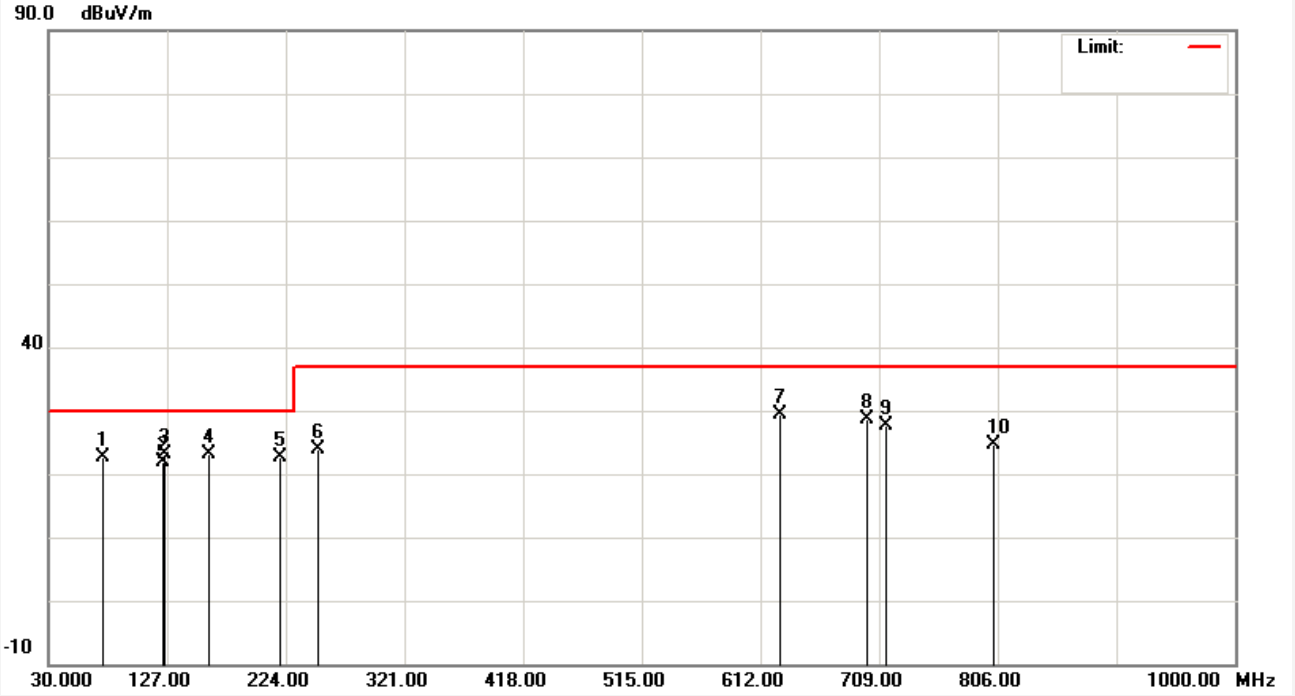
	Freq	Read Level	Factor	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	
1	0.168	53.38	0.08	53.46	65.08	-11.62	Peak
2	0.251	39.62	0.08	39.70	61.73	-22.03	Peak
3	0.567	42.68	0.10	42.78	56.00	-13.22	Peak
4	1.519	38.30	0.13	38.43	56.00	-17.57	Peak
5	1.888	40.70	0.15	40.85	56.00	-15.15	Peak
6	2.594	42.05	0.18	42.23	56.00	-13.77	Peak

程 智 科 技 股 份 有 限 公 司
Compliance Certification Service Inc.
No.163-1,JhongSheng Rd,.Sindian City,Taipei,Taiwan.(Sindian Lab)
Site: OATS #H
Tel:+886-2-2217-0894
Fax:+886-2-2217-1029

Job No.: 90227203
Standard: FCC CLASS B W/ EN 55022 CLASS B LIMIT
Test item: Radiation Test
Temp.(℃)/Hum.(%): 28 ℃ / 76 %
Company: AltiGen Communications, Inc.
Trade Name: ALTIGEN
Model: IP 720

Polarization: Vertical
Power: 120VAC, 60Hz
Date: 2009/2/25
Time: AM 10:11:40
Engineer: Alee Shen
Distance: 10m

Test Mode/Description: POE Mode (Worst)



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Remark
1	73.7000	41.60	-18.94	22.66	30.00	-7.34	QP	
2	123.9440	35.00	-13.13	21.87	30.00	-8.13	QP	
3	125.0050	36.30	-13.17	23.13	30.00	-6.87	QP	
4	160.2440	38.00	-14.80	23.20	30.00	-6.80	QP	
5	218.7580	38.10	-15.36	22.74	30.00	-7.26	QP	
6	250.0030	36.50	-12.60	23.90	37.00	-13.10	QP	
7	627.2440	32.20	-2.91	29.29	37.00	-7.71	QP	
8	699.2560	30.70	-2.06	28.64	37.00	-8.36	QP	
9	714.7300	29.40	-1.67	27.73	37.00	-9.27	QP	
10	802.2570	26.00	-1.37	24.63	37.00	-12.37	QP	

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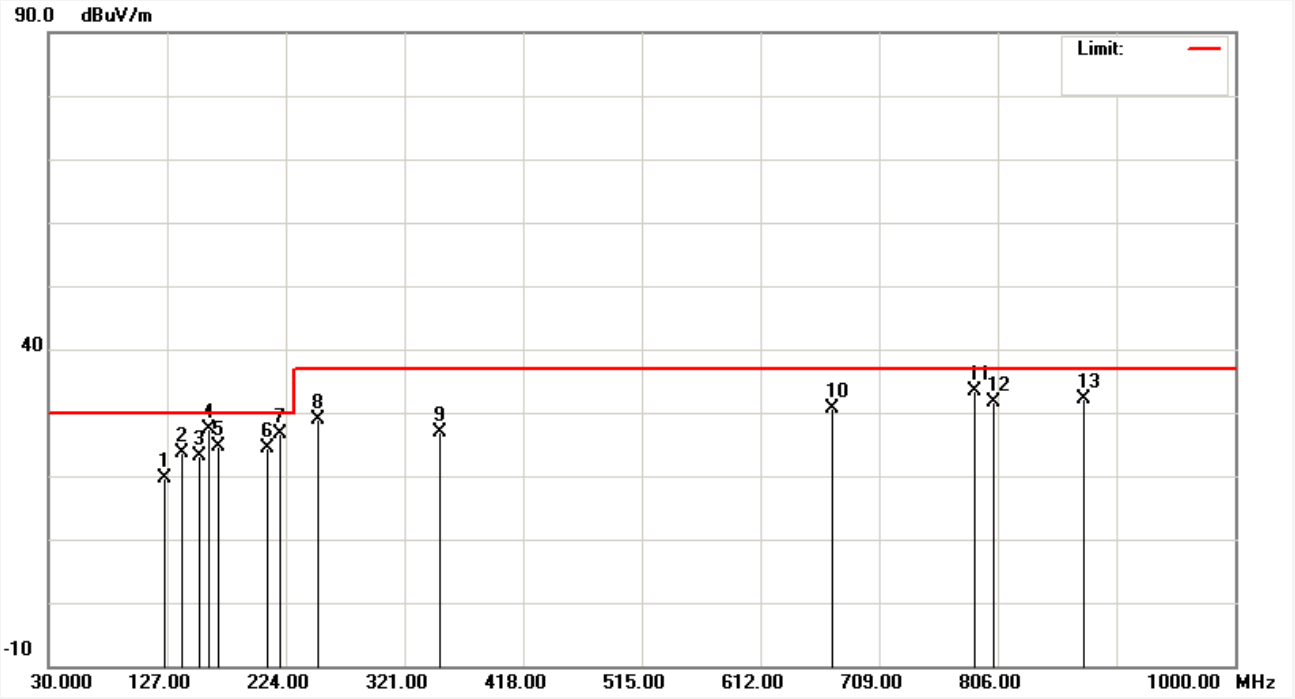
No.163-1,JhongSheng Rd,.Sindian City,Taipei,Taiwan.(Sindian Lab)
Site: OATS #H
Tel:+886-2-2217-0894
Fax:+886-2-2217-1029

Job No.: 90227203
Standard: FCC CLASS B W/ EN 55022 CLASS B LIMIT
Test item: Radiation Test
Temp.(℃)/Hum.(%): 28 ℃ / 76 %
Company: AltiGen Communications, Inc.
Trade Name: ALTICEN
Model: IP 720

Polarization: Horizontal
Power: 120VAC, 60Hz
Date: 2009/2/25
Time: AM 10:45:15
Engineer: Alee Shen
Distance: 10m

Test Mode/Description: POE Mode (Worst)



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Remark
1	125.0070	32.90	-13.17	19.73	30.00	-10.27	QP	
2	138.8880	37.20	-13.60	23.60	30.00	-6.40	QP	
3	153.1150	37.60	-14.39	23.21	30.00	-6.79	QP	
4	160.2340	42.20	-14.80	27.40	30.00	-2.60	QP	
5	167.8760	39.70	-15.05	24.65	30.00	-5.35	QP	
6	208.5800	39.80	-15.40	24.40	30.00	-5.60	QP	
7	218.7430	42.00	-15.36	26.64	30.00	-3.36	QP	
8	249.9960	41.40	-12.61	28.79	37.00	-8.21	QP	
9	349.9940	36.70	-9.90	26.80	37.00	-10.20	QP	
10	671.0020	32.70	-2.12	30.58	37.00	-6.42	QP	
11	787.4900	34.70	-1.24	33.46	37.00	-3.54	QP	
12	802.2600	33.10	-1.37	31.73	37.00	-5.27	QP	
13	875.0080	32.40	-0.28	32.12	37.00	-4.88	QP	