

## FCC Part 22H&24E Test Report

Product Name: 3G Cellular Alarm Communicator

Trade Name : DSC

Model No. : 3G9080

FCC ID : F53173G9080

IC : 160A-3G9080

Applicant: DIGITAL SECURITY CONTROLS, A DIV. OF TYCO

SAFETY PRODUCTS CANAD LTD.

Address : 3301 Langstaff Rd., Concord, ON L4K4L2 Canada

Date of Receipt: May 16, 2017

Issued Date : Jun. 06, 2017

Report No. : 1750379R-HPUSP17V00

Report Version: V4.0





The test results relate only to the samples tested.

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## Test Report Certification

Issued Date: Jun. 06, 2017

Report No.: 1750379R-HPUSP17V00



Product Name : 3G Cellular Alarm Communicator

Applicant : DIGITAL SECURITY CONTROLS, A DIV. OF TYCO SAFETY

PRODUCTS CANAD LTD.

Address : 3301 Langstaff Rd., Concord, ON L4K4L2 Canada

Manufacturer : DIGITAL SECURITY CONTROLS, A DIV. OF TYCO SAFETY

PRODUCTS CANAD LTD.

Address : 3301 Langstaff Rd., Concord, ON L4K4L2 Canada

Model No. : 3G9080

FCC ID : F53173G9080 IC : 160A-3G9080

EUT Voltage : DC 24V
Testing Voltage : DC 24V
Trade Name : DSC

Applicable Standard : FCC CFR Title 47 Part 2, ANSI/TIA-603-D

FCC Part 22 Subpart H, FCC Part 24 Subpart E

Industry Canada RSS-132, Issue 3 Industry Canada RSS-133, Issue 6

ANSI/TIA-603-D-2010 RSS Gen Issue 4

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Test Result : Complied

Documented By : Lyla Yang

(Lyla Yang / Engineering Adm. Assistant)

Tested By :

( Max Chang / Engineer )

Approved By :

(Roy Wang / Director)



#### **Laboratory Information**

We, **DEKRA Testing and Certification Co., Ltd.**, are an independent RF consultancy that was established the whole facility in our laboratories. The test facility has been accredited/accepted (audited or listed) by the following related bodies in compliance with ISO 17025 specified testing scopes:

Taiwan R.O.C. : TAF, Accreditation Number: 3024

USA : FCC, Registration Number: 834100

IC, Submission No: 181665

Canada : IC Registration Number: 22397-1 / 22397-2 / 22397-3

The related certificate for our laboratories about the test site and management system can be downloaded from DEKRA Testing and Certification Co., Ltd. Web Site:

http://www.dekra.com.tw/english/about/certificates.aspx?bval=5

The address and introduction of DEKRA Testing and Certification Co., Ltd. laboratories can be founded in our Web site: http://www.dekra.com.tw/index\_en.aspx

If you have any comments, Please don't hesitate to contact us. Our test sites as below:

- 3 No.372-2, Sec. 4, Zhongxing Rd., Zhudong Township, Hsinchu County 31061, Taiwan TEL: +886-3-582-8001 / FAX: +886-3-582-8958 E-Mail: info.tw@dekra.com



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## **Revision History**

Report No.	Version	Description	Issued Date
1750379R-HPUSP17V00	V4.0	Initial issue of report	Jun. 06, 2017



#### 1. General Information

### 1.1. EUT Description

Product Name	3G Cellular Alarm Communicator		
Model No.	3G9080		
Trade Name	DSC		
Tx Frequency Range/	GSM 850: 824.2-848.8 MHz		
Channel number	GSM 1900: 1850.2-1909.8 MHz		
	WCDMA Band 2: 1852.4-1907.6 MHz		
	WCDMA Band 5: 826.4-846.6 MHz		
Rx Frequency Range/	GSM 850: 869.2-893.8 MHz		
Channel number	GSM 1900: 1930.2-1989.8 MHz		
	WCDMA Band 2: 1932.4-1987.6 MHz		
	WCDMA Band 5: 871.4-891.6 MHz		
Type of Modulation	GPRS: GMSK; EGPRS: GMSK / 8PSK		
	WCDMA: QPSK (Uplink); HSDPA: QPSK (Uplink)		
HW Version	V1.0		
SW Version	UA716 Rev.02		
IMEI No.	352431086949279		

Antenna Information			
Product Name/Model No.	AnteTec Technologies/ 1010250805		
Antenna Type	Dipole Antenna		
Antenna Gain	850MHz: 1.53 dBi		
	1900MHz: 2.07 dBi		

#### Note:

This 3G Cellular Alarm Communicator included GSM 850, DCS 1900, WCDMA Band 2 and WCDMA Band 5 transmitting and receiving function.



#### 1.2. Mode of Operation

DEKRA has verified the construction and function in typical operation. All the test modes were carried out with the EUT in normal operation, which was shown in this test report and defined as:

Test Mode
Mode 1: GPRS 850_Link
Mode 2: GPRS 1900_Link
Mode 3: EGPRS 850_Link
Mode 4: EGPRS 1900_Link
Mode 5: WCDMA Band 5_Link
Mode 6: WCDMA Band 5_HSUPA_Link
Mode 7: WCDMA Band 5_HSDPA_Link
Mode 8: WCDMA Band 2_Link
Mode 9: WCDMA Band 2_HSUPA_Link
Mode 10: WCDMA Band 2_HSDPA_Link

#### Note:

- 1. Regards to the frequency band operation: the lowest, middle and highest frequency of channel were selected to perform the test, then shown on this report.
- The maximum power level of GSM or GPRS mode for GMSK link, EDGE mode for 8PSK link, (The maximum power of GPRS and EGPRS of all multi-slot modes are GPRS-1slot and EGP RS-1slot.) RMC 12.2Kbps Mode for WCDMA band 5 & 2, only these modes were used for all tests.

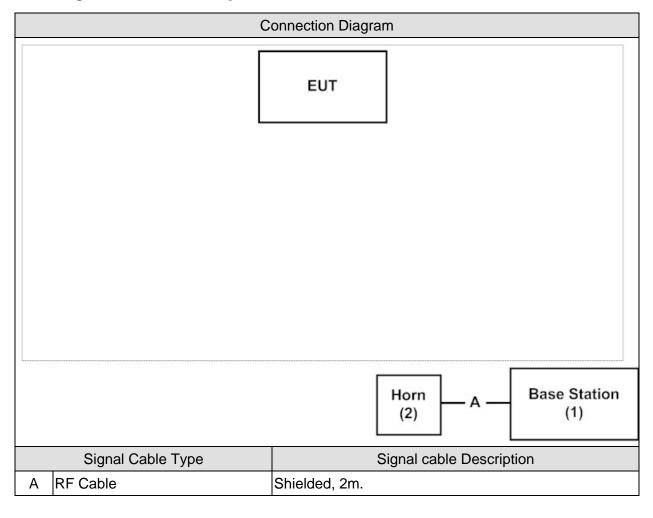


### 1.3. Tested System Details

The types for all equipment, plus descriptions of all cables used in the tested system (including inserted cards) are:

Product		Manufacturer	Model No.	Serial No.	Power Cord
1	Base Station	JRC	NJZ-2000	ET00477	
2	Horn	SCHWARZBECK	BBHA9120D	01656	

#### 1.4. Configuration of Tested System



#### 1.5. EUT Exercise Software

1	Setup the EUT and simulators as shown on 1.7.
2	Turn on the power of all equipment. Horn link with base station.
3	The EUT link with base station and it will continue receive the signal from WCDMA function.
4	Repeat the above procedure.



## 2. Technical Test

#### 2.1. Summary of Test Result

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Deviations from the test standards as below description:

#### For GPRS850/EGPRS850/WCDMA Band5

#### (FCC Part 22 Subpart H, Industry Canada RSS-132, Issue 3, Industry Canada RSS-GEN)

Performed Item	FCC Rule	IC Rule	Limit	Result
	§2.1033	§5.4		
Maximum Output Power	§2.1046		< 7 Watts	Pass
	§22.913			
Equivalent Isotropic	§22.913	§5.4	< 7 Watts	Pass
Radiated Power			< 7 vvalis	F d 5 5
Occupied Bandwidth	§2.1049	RSS-GEN §4.2	N/A	Pass
Conducted Band Edge Emissions	§22.917	§5.5	< -13dBm	Pass
Field Strength of	§2.1053	§5.5	< -13dBm	Pass
Spurious Radiation	§§22.917		< - 13ubili	Fd55
Frequency Stability Under	§2.1055	§5.3	4 2 F nnm	Pass
Temperature & Voltage Variations	§22.335		< 2.5 ppm	F 488

#### For GPRS1900/EGPRS1900/WCDMA Band2

#### (FCC Part 24 Subpart E, Industry Canada RSS-133, Issue 6, Industry Canada RSS-GEN)

<del>`</del>				
Performed Item	FCC Rule	IC Rule	Limit	Result
	§2.1033	§6.4		
Maximum Output Power	§2.1046		< 2 Watts	Pass
	§24.232			
Equivalent Isotropic	§24.232	§6,4	< 2 Watts	Door
Radiated Power				Pass
Occupied Bandwidth	§2.1049	RSS-GEN §4.2	N/A	Pass
Conducted Band Edge Emissions	§27.238	§6.5	< -13dBm	Pass
Field Strength of	§2.1053	§6.5	< -13dBm	Door
Spurious Radiation	§24.238			Pass
Frequency Stability Under	§2.1055	§6.3	4 2 E nnm	Door
Temperature & Voltage Variations	§24.235		< 2.5 ppm	Pass

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#### 2.2. Test Environment

Items	Required (IEC 68-1)	Actual
Temperature (°C)	15-35	23
Humidity (%RH)	25-75	52
Barometric pressure (mbar)	860-1060	950-1000

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# 3. Maximum Output Power, Effective Isotropic Radiated Power and Effective Radiated Power Measurement

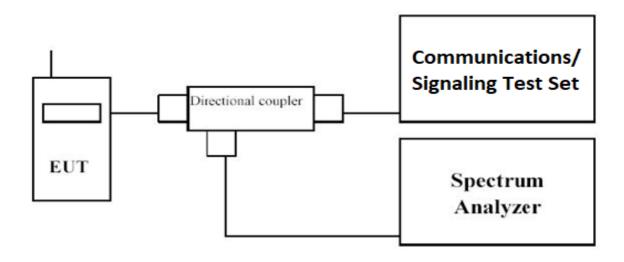
### 3.1. Test Equipment

Maximum Conducted Output Power / SR10-H

Instrument	Manufacturer	Type No.	Serial No	Cali. Due Date
Multisystem UE Tester	Japan radio	NJZ-2000	ET00477	2017/09/19
Directional coupler	Agilent	778D	20402	2017/10/06
Signal & Spectrum Analyzer	R&S	FSV40	101049	2018/01/05
Power Meter	Anritsu	ML2496A	1602004	2018/01/19

### 3.2. Test Setup

Conducted Output Power:





#### 3.3. Test Procedure

#### **Conducted Power Measurement:**

- a) The RF output of the transmitter was connected to base station simulator.
- b) The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement..
- c) Set EUT at maximum average power by base station simulator.
- d) Measure lowest, middle, and highest channels for each bandwidth and different modulation.

Effective Isotropic Radiated Power= Conducted Power(dBm) + Antenna Gain(dBi)

Effective Radiated Power= Conducted Power(dBm) + Antenna Gain(dBi)-2.15dB

#### 3.4. Uncertainty

The measurement uncertainty is defined as  $\pm$  1.2dB.



#### 3.5. Test Result

Product	3G Cellular Alarm Communicator		
Test Item	Maximum Output Power, EIRP, ERP		
Test Mode	Mode1: GPRS 850_Link		
Date of Test	2017/05/22	Test Site	SR10-H

Frequency (MHz)	Modulation	Conducted Power (Average) dBm	Antenna Gain (dBi)	ERP (dBm)	Limit (dBm)	Margin (dB)
824.2		31.93		31.31		-7.14
836.6	GPRS	32.41	1.53	31.79	38.45	-6.66
848.8		33.09		32.47		-5.98

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Product	3G Cellular Alarm Communicator		
Test Item	Maximum Output Power, EIRP, ERP		
Test Mode	Mode 2: GPRS 1900_Link		
Date of Test	2017/05/22	Test Site	SR10-H

Frequency (MHz)	Modulation	Conducted Power (Average) dBm	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1850.2		29.53		31.60		-1.40
1880	GPRS	29.45	2.07	31.52	33.00	-1.48
1909.8		29.38		31.45		-1.55



Product	3G Cellular Alarm Communicator		
Test Item	Maximum Output Power, EIRP, ERP		
Test Mode	Mode 3: EGPRS 850_Link		
Date of Test	2017/05/22	Test Site	SR10-H

Frequency (MHz)	Modulation	Conducted Power (Average) dBm	Antenna Gain (dBi)	ERP (dBm)	Limit (dBm)	Margin (dB)
824.2		26.37		25.75		-12.70
836.6	EGPRS	26.82	1.53	26.20	38.45	-12.25
848.8		26.75		26.13		-12.32



Product	3G Cellular Alarm Communicator		
Test Item	Maximum Output Power, EIRP, ERP		
Test Mode	Mode 4: EGPRS 1900_Link		
Date of Test	2017/05/22	Test Site	SR10-H

Frequency (MHz)	Modulation	Conducted Power (Average) dBm	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1850.2		25.75		27.82		-5.18
1880	EGPRS	25.74	2.07	27.81	33.00	-5.19
1909.8		25.72		27.79		-5.21



Product	3G Cellular Alarm Communicator		
Test Item	Maximum Output Power, EIRP, ERP		
Test Mode	Mode 5: WCDMA Band 5_Link		
Date of Test	2017/05/22	Test Site	SR10-H

Frequency (MHz)	Modulation	Conducted Power (Average) dBm	Antenna Gain (dBi)	ERP (dBm)	Limit (dBm)	Margin (dB)
826.4		22.89		22.27		-16.18
836.4	WCDMA	23.49	1.53	22.87	38.45	-15.58
846.6		23.95		23.33		-15.12



Product	3G Cellular Alarm Communicator		
Test Item	Maximum Output Power, EIRP, ERP		
Test Mode	Mode 6: WCDMA Band 5_HSUPA_Link		
Date of Test	2017/05/22	Test Site	SR10-H

Frequency (MHz)	Modulation	Conducted Power (Average) dBm	Antenna Gain (dBi)	ERP (dBm)	Limit (dBm)	Margin (dB)
826.4		23.18		22.56		-15.89
836.4	HSUPA	23.60	1.53	22.98	38.45	-15.47
846.6		23.56		22.94		-15.51



Product	3G Cellular Alarm Communicator			
Test Item	Maximum Output Power, EIRP, ERP			
Test Mode	Mode 7: WCDMA Band 5_HSDPA_Link			
Date of Test	2017/05/22	Test Site	SR10-H	

Frequency (MHz)	Modulation	Conducted Power (Average) dBm	Antenna Gain (dBi)	ERP (dBm)	Limit (dBm)	Margin (dB)
826.4		22.64		22.02		-16.43
836.4	HSDPA	23.13	1.53	22.51	38.45	-15.94
846.6		23.38		22.76		-15.69



Product	3G Cellular Alarm Communicator		
Test Item	Maximum Output Power, EIRP, ERP		
Test Mode	Mode 8: WCDMA Band 2_Link		
Date of Test	2017/05/22	Test Site	SR10-H

Frequency (MHz)	Modulation	Conducted Power (Average) dBm	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1852.4		23.24		25.31		-7.69
1880	WCDMA	21.83	2.07	23.90	33.00	-9.11
1907.6		20.96		23.03		-9.97



Product	3G Cellular Alarm Communicator			
Test Item	Maximum Output Power, EIRP, ERP			
Test Mode	Mode 9: WCDMA Band 2_HSUPA_Link			
Date of Test	2017/05/22	Test Site	SR10-H	

Frequency (MHz)	Modulation	Conducted Power (Average) dBm	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1852.4		23.68		25.75		-7.25
1880	HSUPA	22.49	2.07	24.56	33.00	-8.44
1907.6		21.37		23.44		-9.56



Product	3G Cellular Alarm Communicator		
Test Item	Maximum Output Power, EIRP, ERP		
Test Mode	Mode 10: WCDMA Band 2_HSDPA_Link		
Date of Test	2017/05/22	Test Site	SR10-H

Frequency (MHz)	Modulation	Conducted Power (Average) dBm	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1852.4		23.57		25.64		-7.36
1880	HSDPA	22.37	2.07	24.44	33.00	-8.56
1907.6		21.41		23.48		-9.52



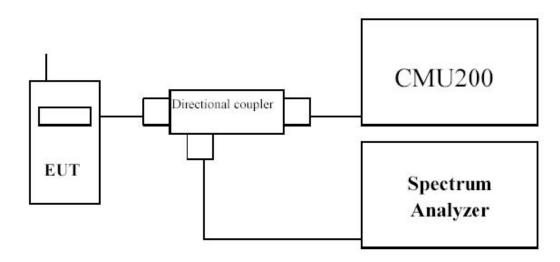
#### 4. Occupied Bandwidth

#### 4.1. Test Equipment

Occupied Bandwidth / SR10-H

Instrument	Manufacturer	Type No.	Serial No	Cali. Due Date
Signal & Spectrum Analyzer	R&S	FSVA40	101455	2017/11/27
Multisystem UE Tester	Japan radio	NJZ-2000	ET00477	2017/09/19
Directional coupler	Agilent	778D	20402	2017/10/06

#### 4.2. Test Setup



#### 4.3. Test Procedure

- 1. The EUT was connected to Spectrum Analyzer and Base Station via power divider.
- 2. The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement.
- 3. The 99% occupied bandwidth and 26 dB bandwidth of the low & middle & high channel for the highest RF powers were measured.

#### 4.4. Uncertainty

The measurement uncertainty is defined as  $\pm$  10 Hz

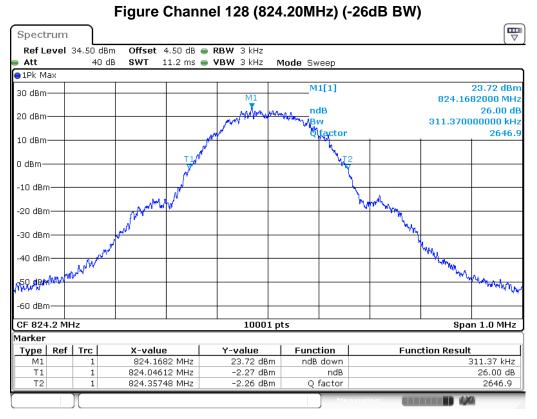


#### 4.5. Test Result

Product	3G Cellular Alarm Communicator		
Test Item	Occupied Bandwidth		
Test Mode	Mode 1: GPRS 850_Link		
Date of Test	2017/05/25	Test Site	SR10-H

Frequency (MHz)	-26dB BW Measure Level (MHz)	99% BW Measure Level (MHz)	Limit (MHz)
824.2	0.311	0.243	N/A
836.6	0.291	0.241	N/A
848.8	0.316	0.243	N/A



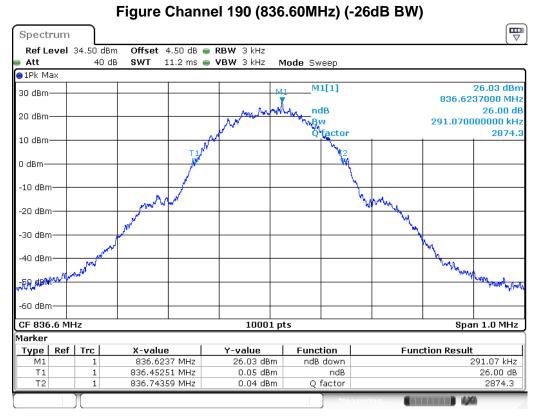


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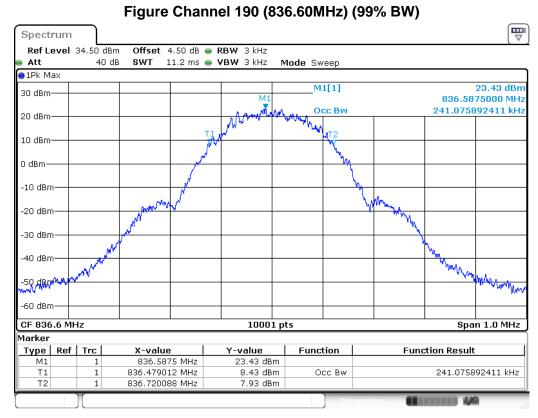
#### Figure Channel 128 (824.20MHz) (99% BW) Spectrum Ref Level 34.50 dBm Offset 4.50 dB ● RBW 3 kHz Att 40 dB 11.2 ms 🌘 **VBW** 3 kHz Mode Sweep ●1Pk Max M1[1] 23.99 dBm 30 dBm-824.1866000 MHz Occ Bw 242.675732427 kHz 20 dBm 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm -50,d**&**M -60 dBm CF 824.2 MHz 10001 pts Span 1.0 MHz Marker Type | Ref | Trc Y-value Function **Function Result** X-value 824.1866 MHz 23.99 dBm Т1 824.078412 MHz 7.71 dBm Occ Bw 242.675732427 kHz Т2 824.321088 MHz 8.36 dBm

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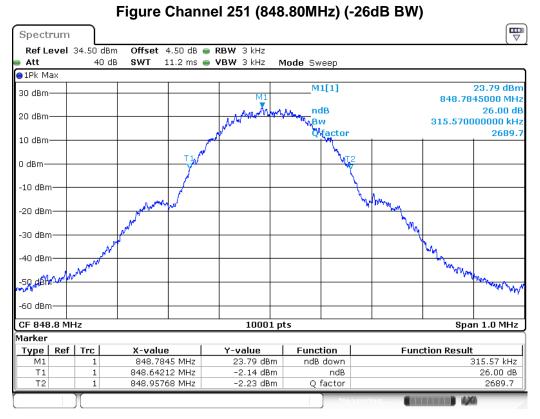


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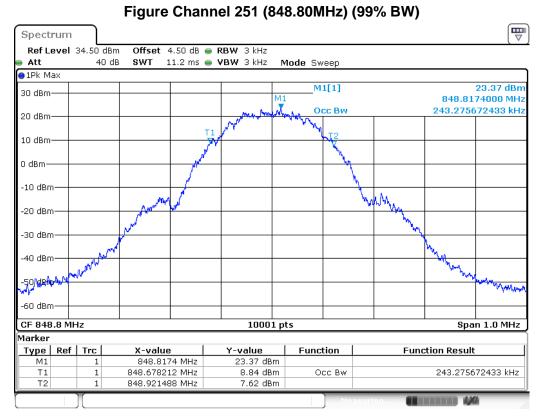


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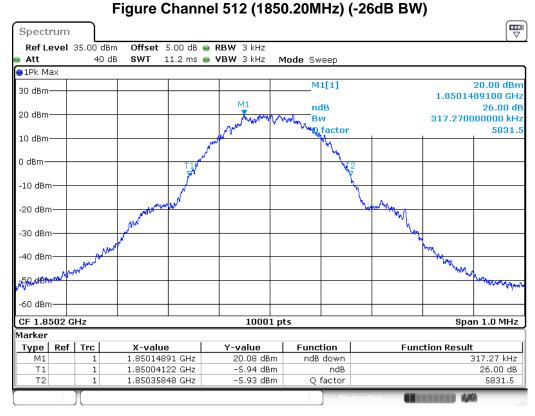
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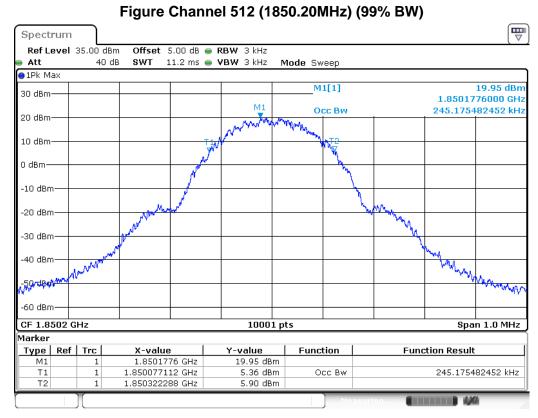
Product	3G Cellular Alarm Communicator		
Test Item	Occupied Bandwidth		
Test Mode	Mode 2: GPRS 1900_Link		
Date of Test	2017/05/25	Test Site	SR10-H

Frequency (MHz)	-26dB BW Measure Level (MHz)	99% BW Measure Level (MHz)	Limit (MHz)
1850.2	0.317	0.245	N/A
1880.0	0.312	0.245	N/A
1909.8	0.315	0.244	N/A



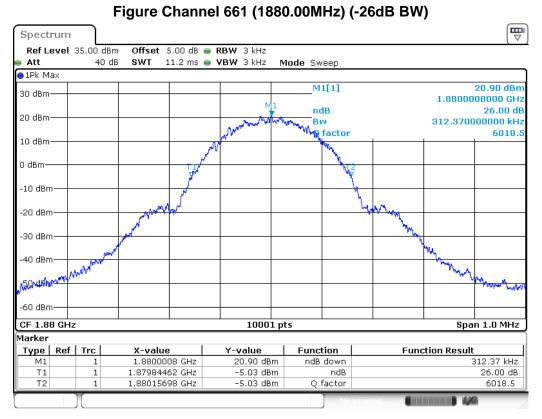


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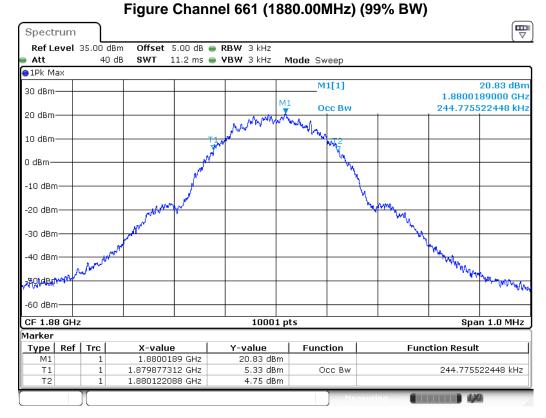


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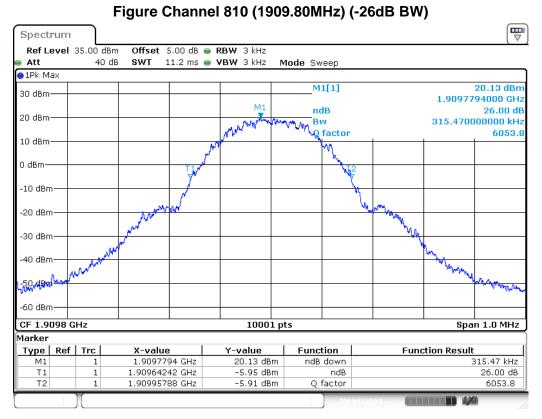




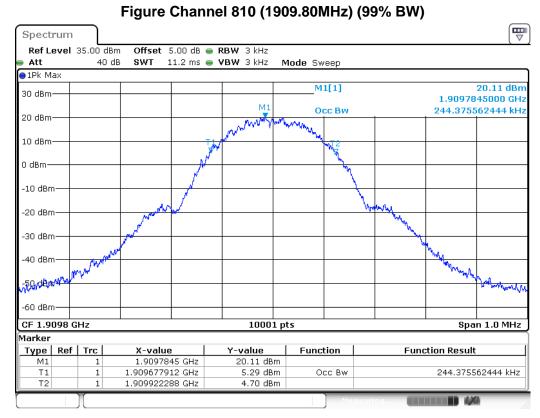
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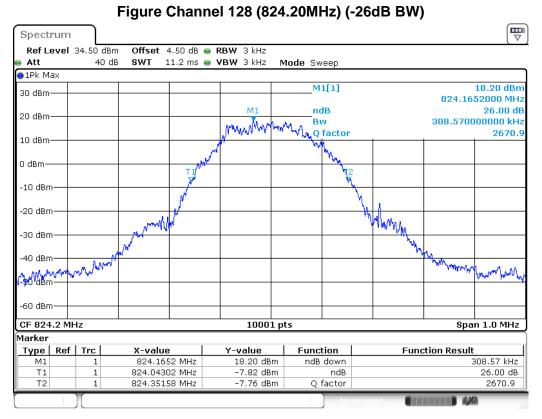
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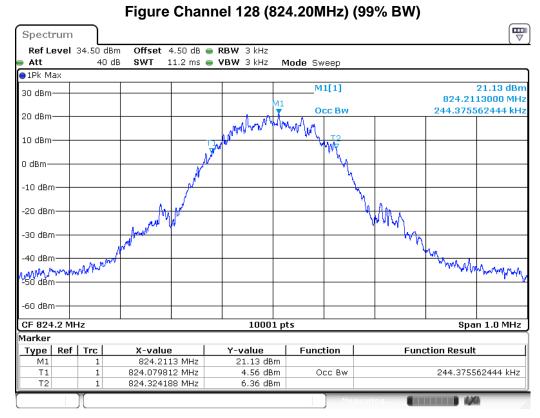
Product	3G Cellular Alarm Communicator		
Test Item	Occupied Bandwidth		
Test Mode	Mode 3: EGPRS 850_Link		
Date of Test	2017/05/25	Test Site	SR10-H

Frequency (MHz)	-26dB BW Measure Level (MHz)	99% BW Measure Level (MHz)	Limit (MHz)
824.2	0.309	0.244	N/A
836.6	0.292	0.247	N/A
848.8	0.312	0.248	N/A



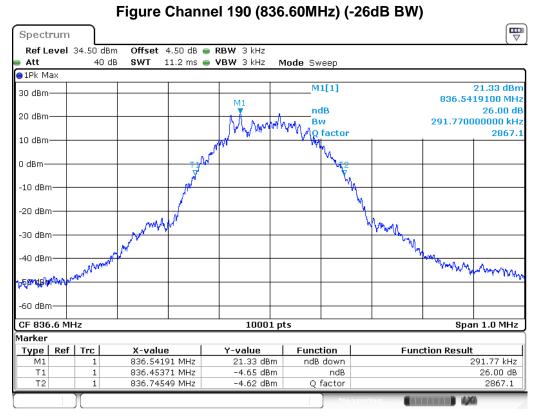


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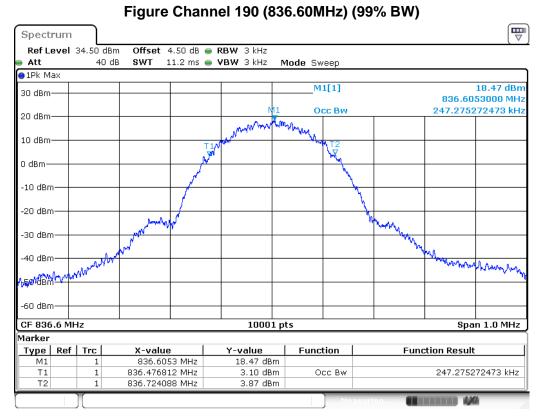


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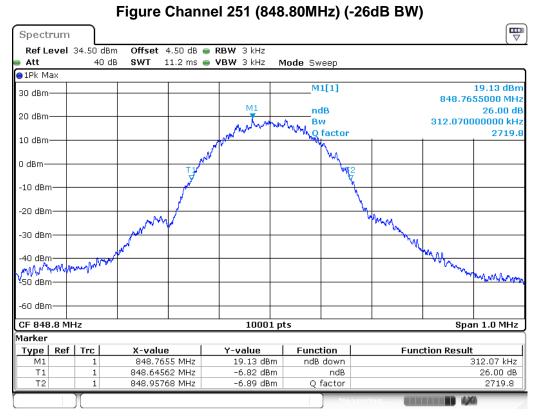


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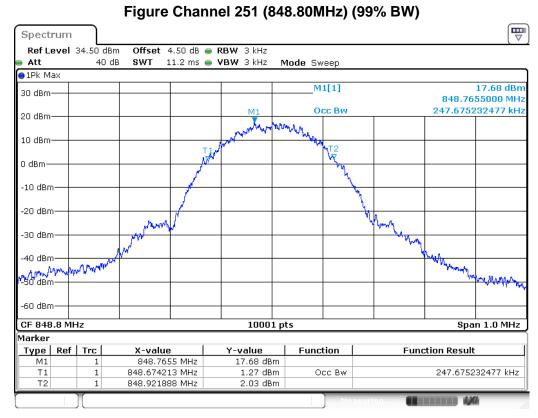


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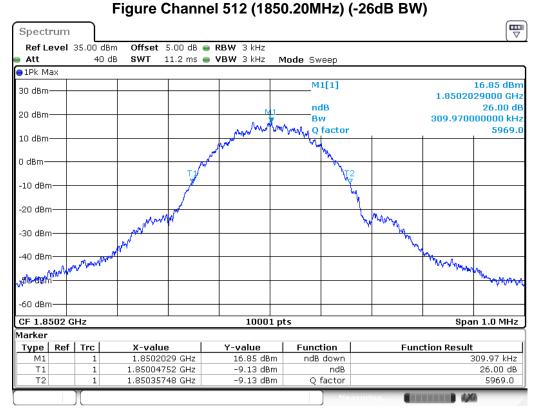
Date: 25 M AY .2017 17:50:31



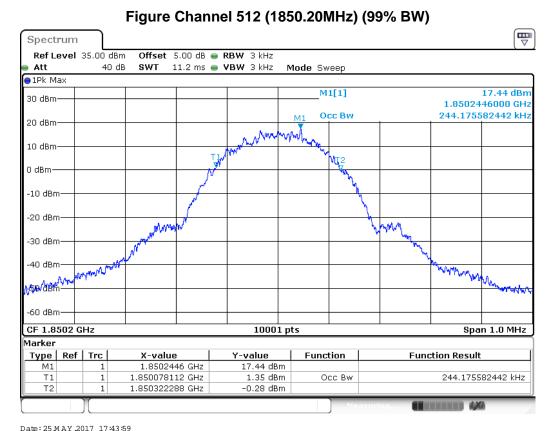
Product	3G Cellular Alarm Communicator		
Test Item	Occupied Bandwidth		
Test Mode	Mode 4: EGPRS 1900_Link		
Date of Test	2017/05/25	Test Site	SR10-H

Frequency (MHz)	-26dB BW Measure Level (MHz)	99% BW Measure Level (MHz)	Limit (MHz)
1850.2	0.310	0.244	N/A
1880.0	0.302	0.246	N/A
1909.8	0.311	0.249	N/A



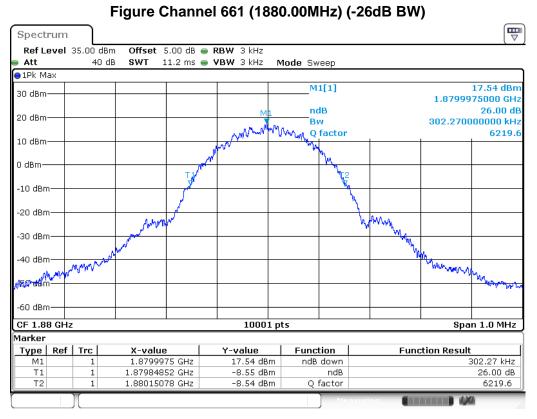


Date: 25 M AY .2017 17:34:34

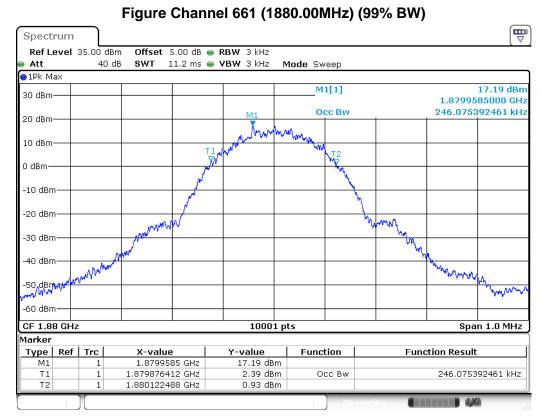


Date: 25 MAY 2017 17:43:59



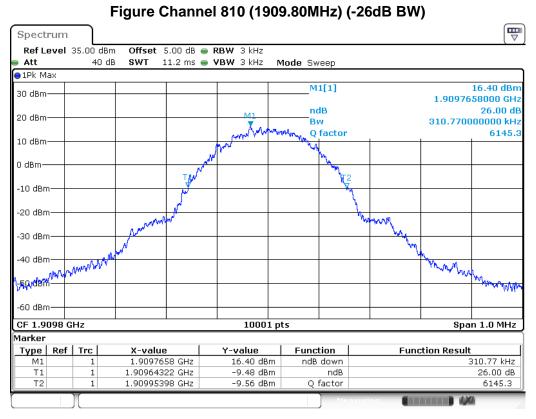


Date: 25 M AY .2017 17:33:12

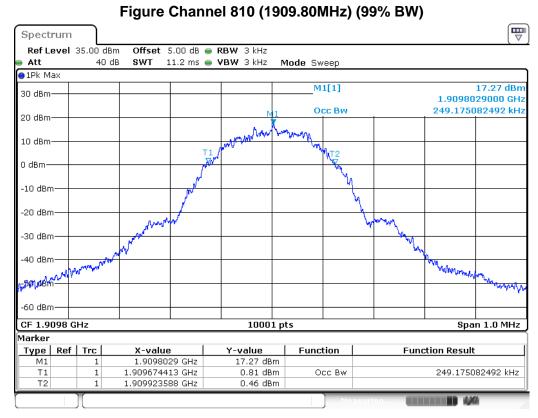


Date: 25 M AY .2017 17:42:42





Date: 25 M AY .2017 17:31:54



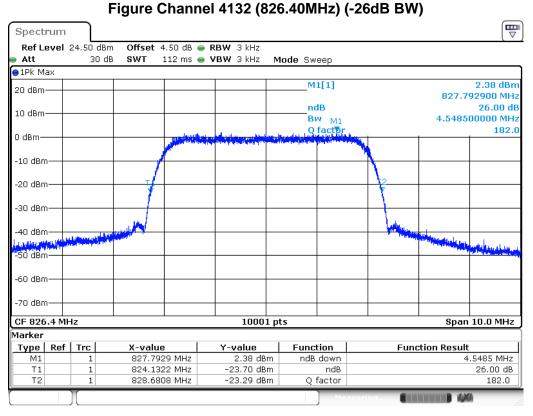
Date: 25 M AY .2017 17:41:35



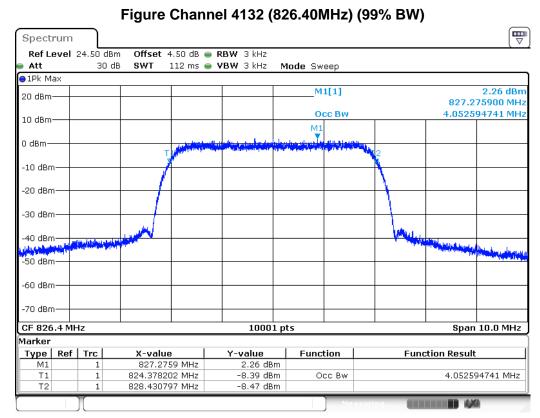
Product	3G Cellular Alarm Communicator		
Test Item	Occupied Bandwidth		
Test Mode	Mode 5: WCDMA Band 5_Link		
Date of Test	2017/05/25	Test Site	SR10-H

Frequency (MHz)	-26dB BW Measure Level (MHz)	99% BW Measure Level (MHz)	Limit (MHz)
824.2	4.549	4.053	N/A
836.6	4.529	4.038	N/A
848.8	4.513	4.053	N/A



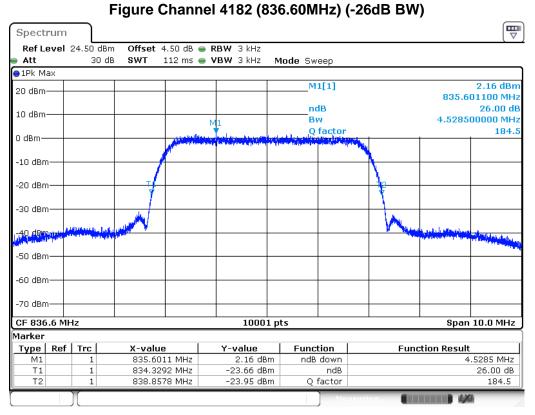


Date: 25 M AY .2017 14:21:40

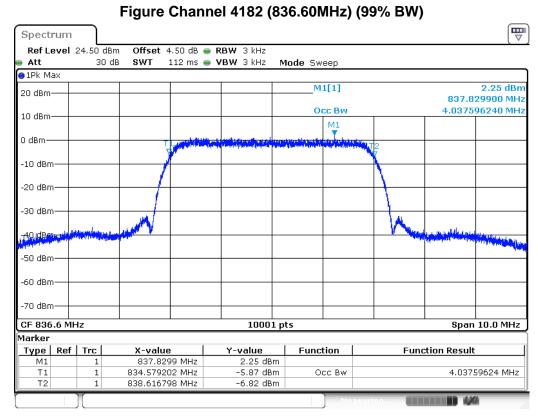


Date: 25 M AY .2017 13:42:38



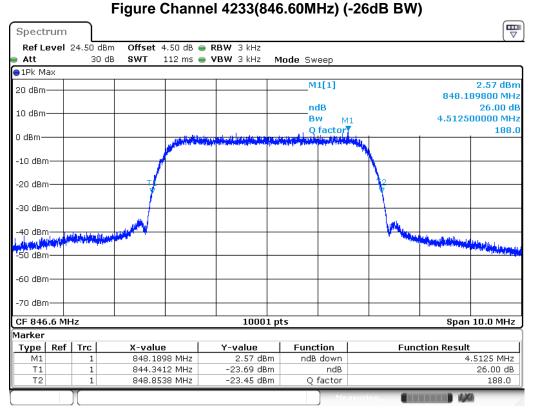


Date: 25 M AY .2017 14:20:30

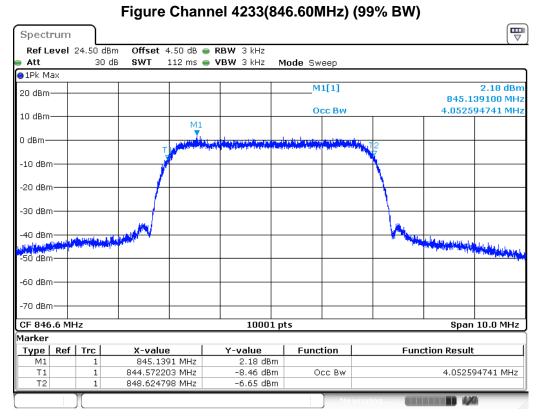


Date: 25 M AY .2017 13:44:16





Date: 25 M AY .2017 14:18:42



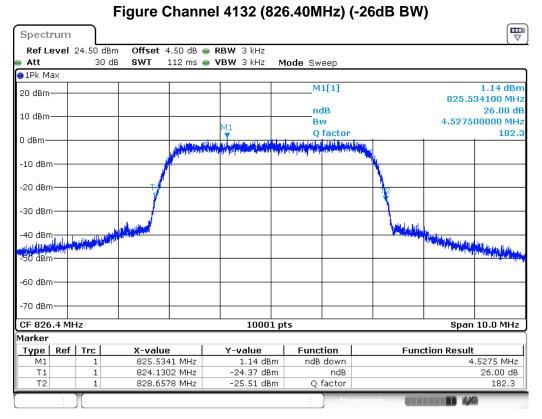
Date: 25 M AY .2017 13:45:14



Product	3G Cellular Alarm Communicator			
Test Item	Occupied Bandwidth			
Test Mode	Mode 6: WCDMA Band 5_HSUPA_Link			
Date of Test	2017/05/25	Test Site	SR10-H	

Frequency (MHz)	-26dB BW Measure Level (MHz)	99% BW Measure Level (MHz)	Limit (MHz)
824.2	4.528	4.061	N/A
836.6	4.486	4.047	N/A
848.8	4.495	4.055	N/A



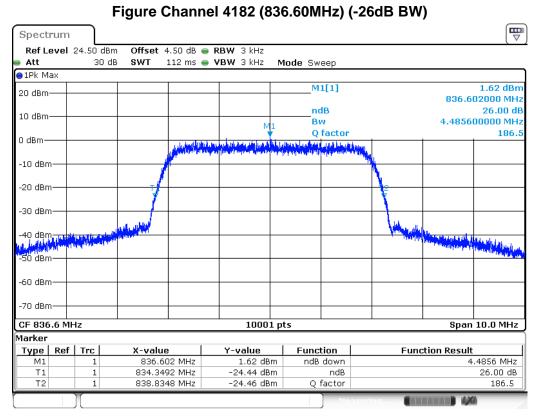


Date: 25 M AY .2017 14:11:23

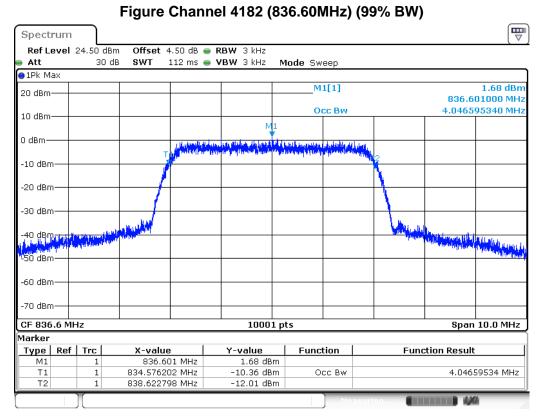
#### Figure Channel 4132 (826.40MHz) (99% BW) Spectrum Ref Level 24.50 dBm Offset 4.50 dB 🍅 RBW 3 kHz Att 30 dB 112 ms 🍅 **VBW** 3 kHz Mode Sweep ●1Pk Max M1[1] 1.16 dBm 20 dBm-825.399100 MHz Occ Bw 4.060593941 MHz 10 dBm· 0 dBm -10 dBm -20 dBm -30 dBm A Control of the Cont 40 SZ 50 dBm -60 dBm -70 dBm-CF 826.4 MHz 10001 pts Span 10.0 MHz Marker Type | Ref | Trc Y-value Function **Function Result** X-value 825.3991 MHz 1.16 dBm Т1 824.371203 MHz -10.03 dBm Occ Bw 4.060593941 MHz Т2 828.431797 MHz -9.55 dBm

Date: 25 M AY .2017 13:49:31



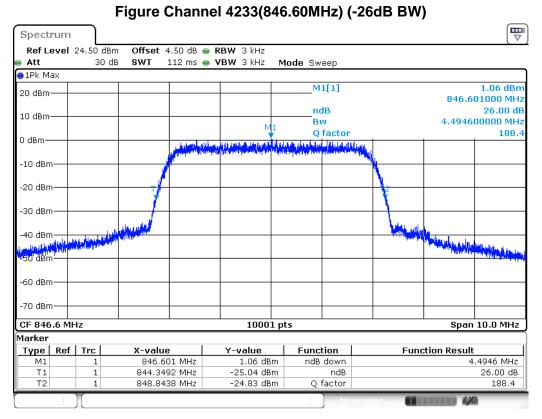


Date: 25 M AY .2017 14:12:49

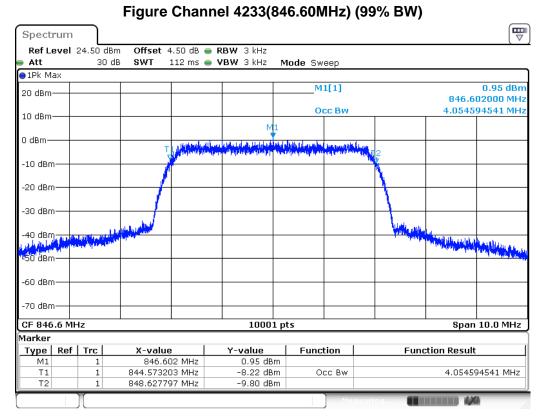


Date: 25 M AY .2017 13:48:24





Date: 25 M AY .2017 14:17:20



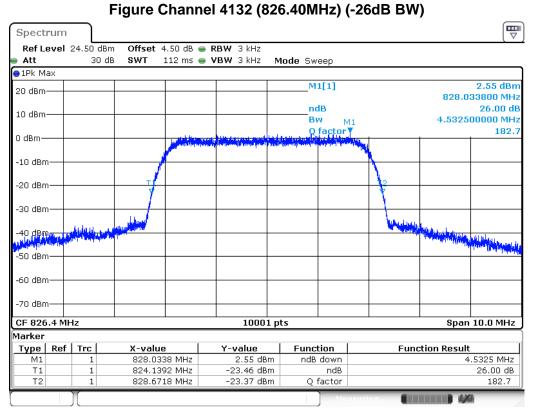
Date: 25 M AY .2017 13:46:56



Product	3G Cellular Alarm Communicator			
Test Item	Occupied Bandwidth			
Test Mode	Mode 7: WCDMA Band 5_HSDPA_Link			
Date of Test	2017/05/25	Test Site	SR10-H	

Frequency (MHz)	-26dB BW Measure Level (MHz)	99% BW Measure Level (MHz)	Limit (MHz)
824.2	4.533	4.050	N/A
836.6	4.503	4.049	N/A
848.8	4.520	4.044	N/A



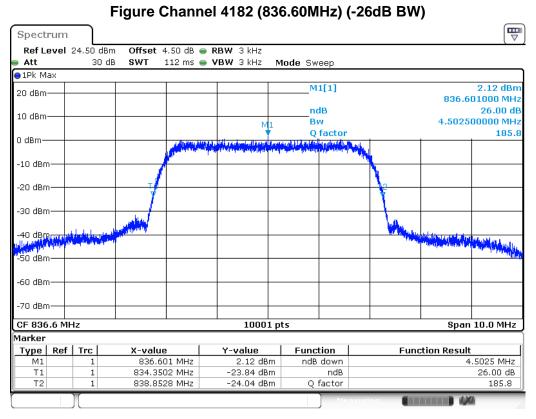


Date: 25 M AY .2017 14:09:25

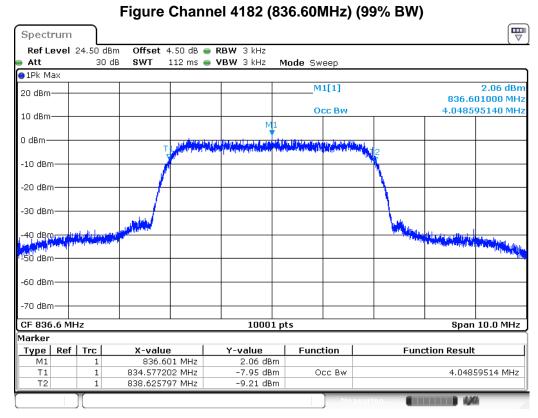
#### Figure Channel 4132 (826.40MHz) (99% BW) Spectrum Ref Level 24.50 dBm Offset 4.50 dB 🍅 RBW 3 kHz Att 30 dB 112 ms 🍅 **VBW** 3 kHz Mode Sweep ●1Pk Max M1[1] 2.45 dBm 20 dBm-826.401000 MHz Occ Bw 4.049595040 MHz 10 dBm· 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm -50 dBm -60 dBm -70 dBm-CF 826.4 MHz 10001 pts Span 10.0 MHz Marker Type | Ref | Trc | Y-value Function **Function Result** X-value 826.401 MHz 2.45 dBm 824.383202 MHz Т1 -8.97 dBm Occ Bw 4.04959504 MHz Т2 828.432797 MHz -7.73 dBm

Date: 25.MAY.2017 13:50:58



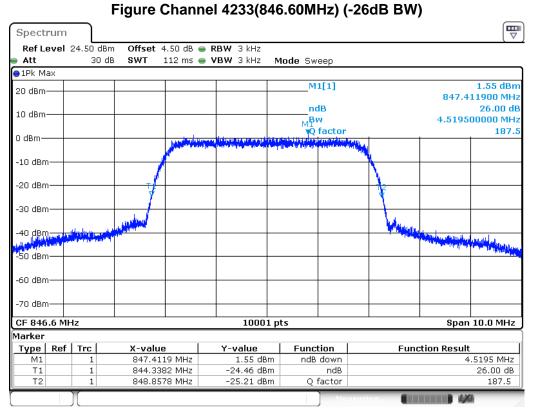


Date: 25 M AY .2017 14:05:05



Date: 25 M AY .2017 13:51:56





Date: 25 M AY .2017 14:03:46

### Figure Channel 4233(846.60MHz) (99% BW) Spectrum Ref Level 24.50 dBm Offset 4.50 dB 🖷 RBW 3 kHz Att 30 dB 112 ms 🅌 **VBW** 3 kHz Mode Sweep ●1Pk Max M1[1] 1.85 dBm 20 dBm 846.601000 MHz Occ Bw 4.043595640 MHz 10 dBm· 0 dBm--10 dBm -20 dBm -30 dBm 40 dBm -50 dBm -60 dBm -70 dBm-CF 846.6 MHz 10001 pts Span 10.0 MHz Marker Type | Ref | Trc | X-value Y-value Function **Function Result** 1.85 dBm 846.601 MHz 844.577202 MHz -8.63 dBm Occ Bw 4.04359564 MHz Т2 848.620798 MHz -9.16 dBm

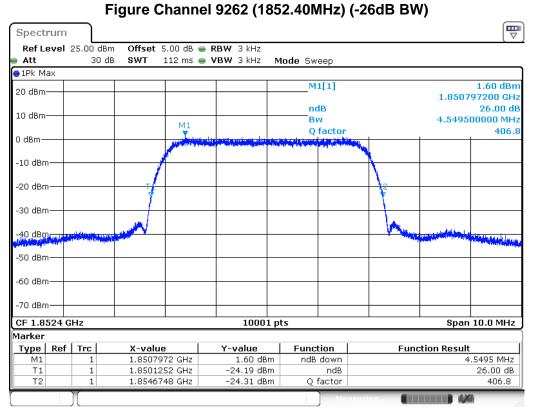
Date: 25 M AY .2017 13:53:15



Product	3G Cellular Alarm Communicator		
Test Item	Occupied Bandwidth		
Test Mode	Mode 8: WCDMA Band 2_Link		
Date of Test	2017/05/25	Test Site	SR10-H

Frequency (MHz)	-26dB BW Measure Level (MHz)	99% BW Measure Level (MHz)	Limit (MHz)
1850.2	4.550	4.047	N/A
1880.0	4.526	4.046	N/A
1909.8	4.534	4.056	N/A



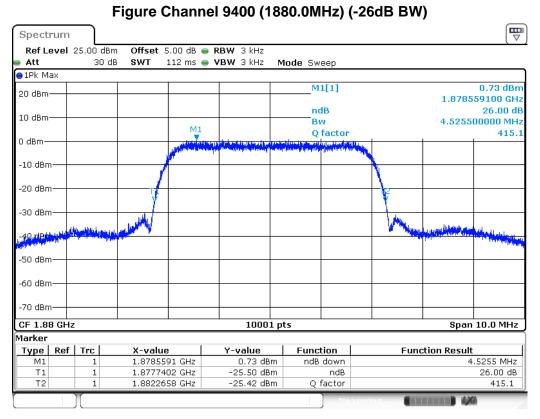


Date: 25 M AY .2017 16:17:27

### Figure Channel 9262 (1852.40MHz) (99% BW) Spectrum Ref Level 25.00 dBm Offset 5.00 dB 🍅 RBW 3 kHz 30 dB 112 ms 🅌 **VBW** 3 kHz Mode Sweep ●1Pk Max M1[1] 1.43 dBm 20 dBm-1.852263000 GHz Occ Bw 4.046595340 MHz 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm -50 dBm -60 dBm -70 dBm-CF 1.8524 GHz 10001 pts Span 10.0 MHz Marker Туре Ref | Trc X-value Y-value Function **Function Result** 1.43 dBm 1.852263 GHz 1.8503752 GHz -6.87 dBm Occ Bw 4.04659534 MHz Т2 1.8544218 GHz -9.48 dBm

Date: 25 M AY .2017 16:43:37



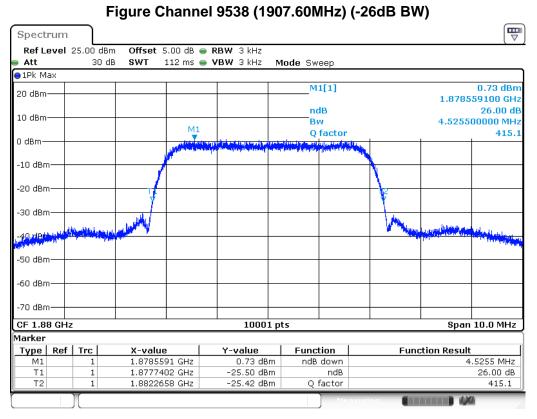


Date: 25 M AY .2017 16:18:32

### Figure Channel 9400 (1880.0MHz) (99% BW) Spectrum Ref Level 25.00 dBm Offset 5.00 dB 🍅 RBW 3 kHz 30 dB 112 ms 🅌 **VBW** 3 kHz Mode Sweep ●1Pk Max M1[1] 1.81 dBm 20 dBm-1.881477900 GHz Occ Bw 4.045595440 MHz 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm 40 dB -50 dBm -60 dBm -70 dBm-CF 1.88 GHz 10001 pts Span 10.0 MHz Marker Type | Ref | Trc | X-value Y-value Function **Function Result** 1.8814779 GHz 1.81 dBm 1.8779762 GHz -7.55 dBm Occ Bw 4.04559544 MHz Т2 1.8820218 GHz -9.26 dBm

Date: 25 M AY .2017 16:44:32





Date: 25 M AY .2017 16:18:32

#### Figure Channel 9538 (1907.60MHz) (99% BW) Spectrum Ref Level 25.00 dBm Offset 5.00 dB RBW 3 kHz Att 30 dB SWT 112 ms VBW 3 kHz Mode Sweep ●1Pk Max 1.09 dBm M1[1] 20 dBm 1.906205100 GHz 4.055594441 MHz Occ Bw 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm 40 dBm -50 dBm -60 dBm -70 dBm Span 10.0 MHz 10001 pts CF 1.9076 GHz Marker Function Type | Ref | Trc Y-value **Function Result** X-value 1.9062051 GHz 1.09 dBm M1 9.77 dBm 1.9055722 GHz Occ Bw 4.055594441 MHz Т2 1.9096278 GHz -8.32 dBm

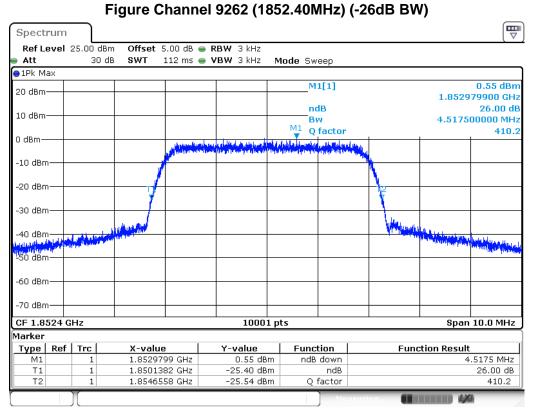
Date: 25 M AY .2017 16:45:46



Product	3G Cellular Alarm Communicator			
Test Item	Occupied Bandwidth			
Test Mode	Mode 9: WCDMA Band 2_HSUPA_Link			
Date of Test	2017/05/25	Test Site	SR10-H	

Frequency (MHz)	-26dB BW Measure Level (MHz)	99% BW Measure Level (MHz)	Limit (MHz)
1850.2	4.518	4.049	N/A
1880.0	4.517	4.054	N/A
1909.8	4.501	4.055	N/A



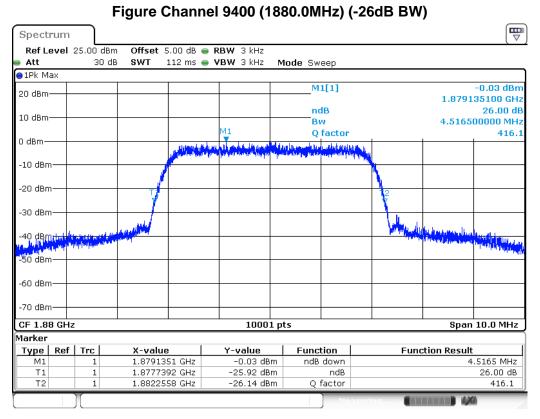


Date: 25 M AY .2017 16:31:39

#### Figure Channel 9262 (1852.40MHz) (99% BW) Spectrum Ref Level 25.00 dBm Offset 5.00 dB 🍅 RBW 3 kHz 30 dB 112 ms 🅌 **VBW** 3 kHz Mode Sweep ●1Pk Max M1[1] 0.71 dBm 20 dBm-1.852402000 GHz Occ Bw 4.048595140 MHz 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm--su dBm--60 dBm -70 dBm-CF 1.8524 GHz 10001 pts Span 10.0 MHz Marker Туре Ref | Trc X-value Y-value Function **Function Result** 1.852402 GHz 0.71 dBm 1.8503762 GHz -11.42 dBm Occ Bw 4.04859514 MHz Т2 1.8544248 GHz -10.10 dBm

Date: 25 M AY .2017 16:33:19



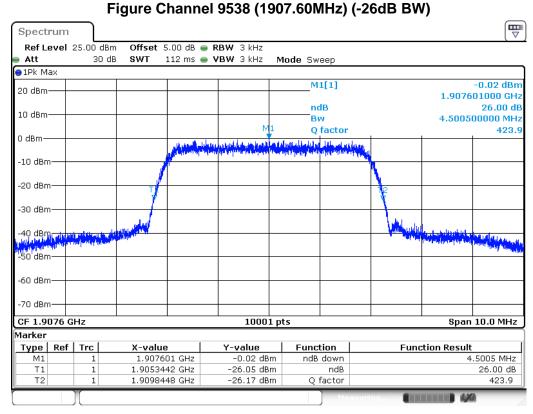


Date: 25 M AY .2017 16:28:09

#### Figure Channel 9400 (1880.0MHz) (99% BW) Spectrum Ref Level 25.00 dBm Offset 5.00 dB 🍅 RBW 3 kHz Att 30 dB 112 ms 🅌 **VBW** 3 kHz Mode Sweep ●1Pk Max M1[1] 0.41 dBm 20 dBm-1.880001000 GHz Occ Bw 4.053594641 MHz 10 dBm 0 dBm ويهدوا وبالباطيمية لمستخلف ويهيقا فالمالية فالإيبان فارخف أستوط والمتواطية -10 dBm -20 dBm -30 dBm -40 dBm -50 dBm -60 dBm -70 dBm-CF 1.88 GHz 10001 pts Span 10.0 MHz Marker Type | Ref | Trc | X-value Y-value Function **Function Result** 1.880001 GHz 0.41 dBm 1.8779732 GHz -9.12 dBm Occ Bw 4.053594641 MHz Т2 1.8820268 GHz -9.69 dBm

Date: 25 M AY .2017 16:34:59





Date: 25 M AY .2017 16:25:22

#### Figure Channel 9538 (1907.60MHz) (99% BW) Spectrum Ref Level 25.00 dBm Offset 5.00 dB RBW 3 kHz 30 dB SWT 112 ms VBW 3 kHz Att Mode Sweep ●1Pk Max 0.19 dBm M1[1] 20 dBm-1.907603000 GHz 4.054594541 MHz Occ Bw 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm--50 dBm -60 dBm -70 dBm 10001 pts CF 1.9076 GHz Span 10.0 MHz Marker Function Type | Ref | Trc Y-value **Function Result** X-value 1.907603 GHz 0.19 dBm M1 -10.27 dBm 1.9055762 GHz Occ Bw 4.054594541 MHz Т2 1.9096308 GHz -10.10 dBm

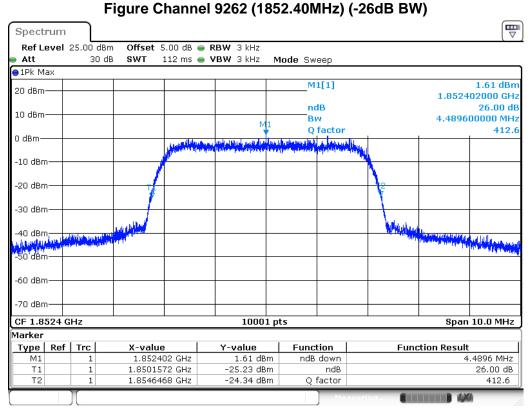
Date: 25 M AY .2017 16:36:58



Product	3G Cellular Alarm Communicator		
Test Item	Occupied Bandwidth		
Test Mode	Mode 10: WCDMA Band 2_HSDPA_Link		
Date of Test	2017/05/25	Test Site	SR10-H

Frequency (MHz)	-26dB BW Measure Level (MHz)	99% BW Measure Level (MHz)	Limit (MHz)
1850.2	4.490	4.048	N/A
1880.0	4.532	4.047	N/A
1909.8	4.525	4.053	N/A



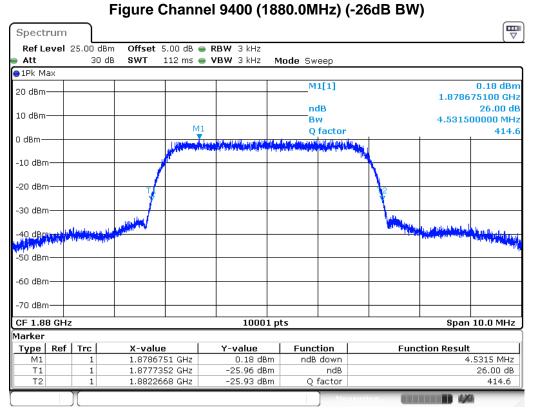


Date: 25 M AY .2017 16:20:48

#### Figure Channel 9262 (1852.40MHz) (99% BW) Spectrum Ref Level 25.00 dBm Offset 5.00 dB 🍅 RBW 3 kHz Att 30 dB SWT 112 ms 🅌 **VBW** 3 kHz Mode Sweep ●1Pk Max M1[1] 1.13 dBm 20 dBm-1.852402000 GHz Occ Bw 4.047595240 MHz 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm--50 dBm--60 dBm -70 dBm-CF 1.8524 GHz 10001 pts Span 10.0 MHz Marker Туре Ref | Trc X-value Y-value Function **Function Result** 1.13 dBm 1.852402 GHz 1.8503772 GHz -8.77 dBm Occ Bw 4.04759524 MHz Т2 1.8544248 GHz -9.17 dBm

Date: 25 M AY .2017 16:41:40



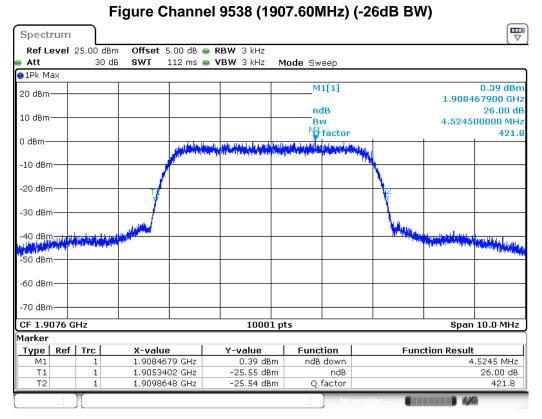


Date: 25 M AY .2017 16:22:36

### Figure Channel 9400 (1880.0MHz) (99% BW) Spectrum Ref Level 25.00 dBm Offset 5.00 dB 🍅 RBW 3 kHz 30 dB 112 ms 🅌 **VBW** 3 kHz Mode Sweep ●1Pk Max M1[1] 1.05 dBm 20 dBm-1.880001000 GHz Occ Bw 4.046595340 MHz 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm -40 d<u>Bm</u>--50 dBm -70 dBm-CF 1.88 GHz 10001 pts Span 10.0 MHz Marker Type | Ref | Trc | X-value Y-value Function **Function Result** 1.880001 GHz 1.05 dBm 1.8779812 GHz -9.53 dBm Occ Bw 4.04659534 MHz Т2 1.8820278 GHz -7.48 dBm

Date: 25 M AY .2017 16:40:25





Date: 25 M AY .2017 16:24:12

#### Figure Channel 9538 (1907.60MHz) (99% BW) Spectrum Ref Level 25.00 dBm Offset 5.00 dB RBW 3 kHz Att 30 dB SWT 112 ms VBW 3 kHz Mode Sweep ●1Pk Max 1.05 dBm M1[1] 20 dBm-1.907601000 GHz 4.052594741 MHz Occ Bw 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm 40 dBm -50 dBm -60 dBm -70 dBm 10001 pts Span 10.0 MHz CF 1.9076 GHz Marker Function Type | Ref | Trc Y-value **Function Result** X-value 1.05 dBm 1.907601 GHz M1 1.9055742 GHz -7.47 dBm Occ Bw 4.052594741 MHz Т2 1.9096268 GHz -9.59 dBm

Date: 25 M AY .2017 16:38:15



### 5. Spurious Emission At Antenna Terminals (+/- 1MHz)

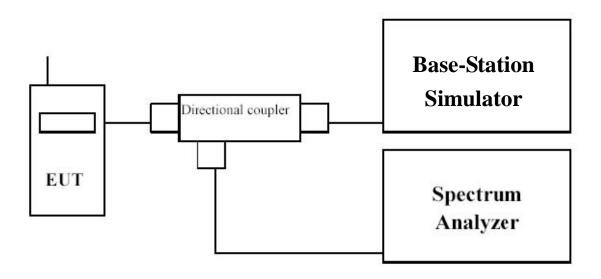
# 5.1. Test Equipment

Spurious Emission At Antenna Terminals (+/- 1MHz) / SR10-H

Instrument	Manufacturer	Type No.	Serial No	Cali. Due Date
Signal & Spectrum Analyzer	R&S	FSVA40	101455	2017/11/27
Multisystem UE Tester	Japan radio	NJZ-2000	ET00477	2017/09/19
Directional coupler	Agilent	778D	20402	2017/10/06

Note: All equipment upon which need to be calibrated are with calibration period of 1 year.

### 5.2. Test Setup



# 5.3. Test Procedure

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10log(P) dB.

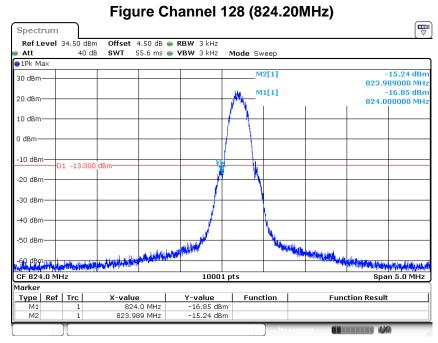
### 5.4. Uncertainty

In the 1MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed to measure the out of band Emissions.

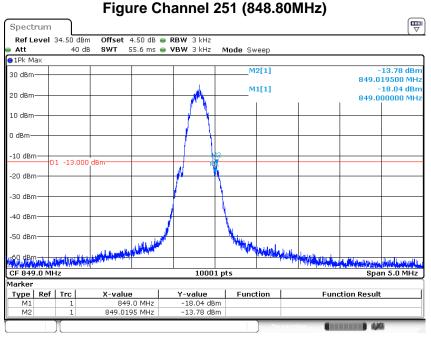


### 5.5. Test Result

Product	3G Cellular Alarm Communicator		
Test Item	Spurious Emission At Antenna Terminals (+/- 1MHz)		
Test Mode	Mode 1: GPRS 850_Link		
Date of Test	2017/05/25	Test Site	SR10-H



Date: 25 M AY .2017 18:11:00

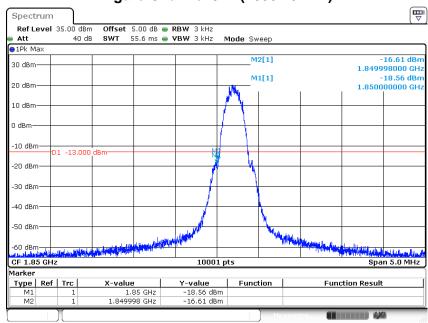


Date: 25 M AY .2017 18:08:45



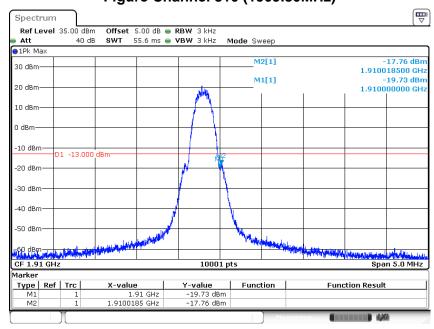
Product	3G Cellular Alarm Communicator		
Test Item	Spurious Emission At Antenna Terminals (+/- 1MHz)		
Test Mode	Mode 2: GPRS 1900_Link		
Date of Test	2017/05/25	Test Site	SR10-H

# Figure Channel 512 (1850.20MHz)



Date: 25 M AY .2017 17:20:18

# Figure Channel 810 (1909.80MHz)

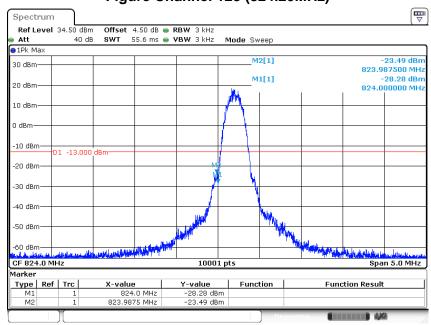


Date: 25 M AY .2017 17:18:31



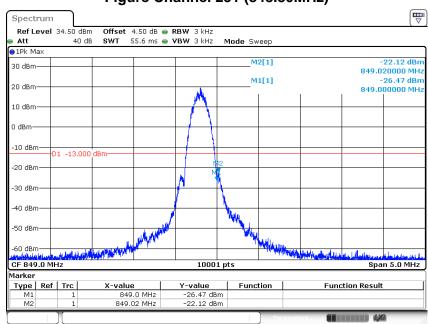
Product	3G Cellular Alarm Communicator		
Test Item	Spurious Emission At Antenna Terminals (+/- 1MHz)		
Test Mode	Mode 3: EGPRS 850_Link		
Date of Test	2017/05/25	Test Site	SR10-H

# Figure Channel 128 (824.20MHz)



Date: 25 M AY .2017 18:04:27

### Figure Channel 251 (848.80MHz)

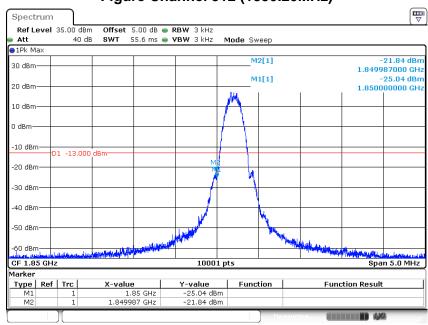


Date: 25 M AY .2017 18:05:58



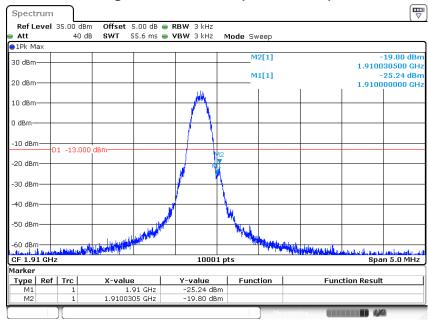
Product	3G Cellular Alarm Communicator		
Test Item	Spurious Emission At Antenna Terminals (+/- 1MHz)		
Test Mode	Mode 4: EGPRS 1900_Link		
Date of Test	2017/05/25	Test Site	SR10-H

# Figure Channel 512 (1850.20MHz)



Date: 25 M AY .2017 17:38:05

### Figure Channel 810 (1909.80MHz)

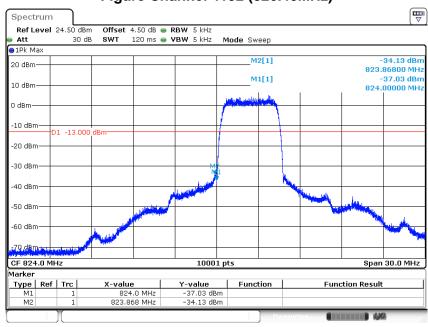


Date: 25 M AY .2017 17:39:58



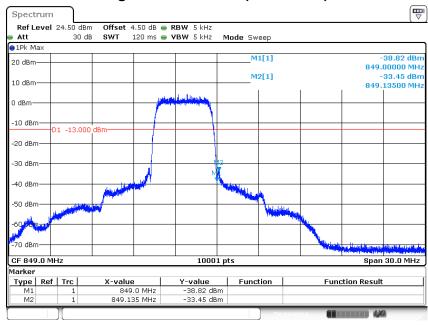
Product	3G Cellular Alarm Communicator		
Test Item	Spurious Emission At Antenna Terminals (+/- 1MHz)		
Test Mode	Mode 5: WCDMA Band 5_Link		
Date of Test	2017/05/25 Test Site SR10-H		

### Figure Channel 4132 (826.40MHz)



Date: 25 M AY 2017 14:43:32

# Figure Channel 251 (846.60MHz)

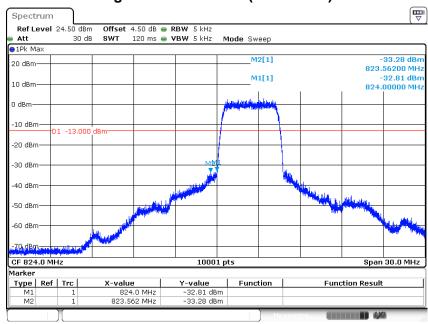


Date: 25 M AY .2017 14:42:02



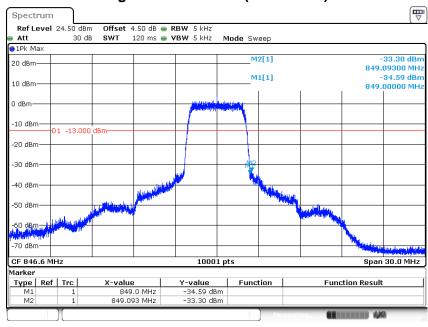
Product	3G Cellular Alarm Communicator		
Test Item	Spurious Emission At Antenna Terminals (+/- 1MHz)		
Test Mode	Mode 6: WCDMA Band 5_HSUPA_Link		
Date of Test	2017/05/25	Test Site	SR10-H

### Figure Channel 4132 (826.40MHz)



Date: 25 M AY .2017 14:45:24

# Figure Channel 251 (846.60MHz)

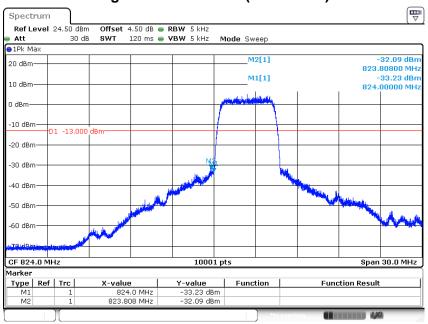


Date: 25 M AY .2017 14:46:52



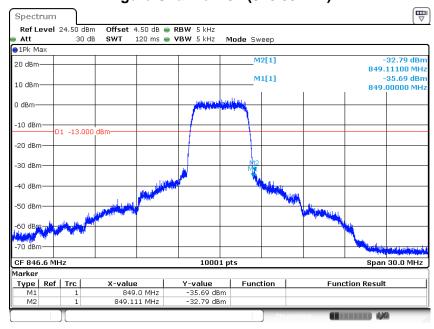
Product	3G Cellular Alarm Communicator		
Test Item	Spurious Emission At Antenna Terminals (+/- 1MHz)		
Test Mode	Mode 7: WCDMA Band 5_HSDPA_Link		
Date of Test	2017/05/25	Test Site	SR10-H

### Figure Channel 4132 (826.40MHz)



Date: 25 M AY .2017 15:17:42

# Figure Channel 251 (846.60MHz)

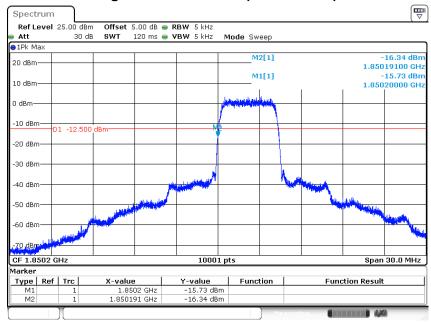


Date: 25 M AY .2017 14:48:34



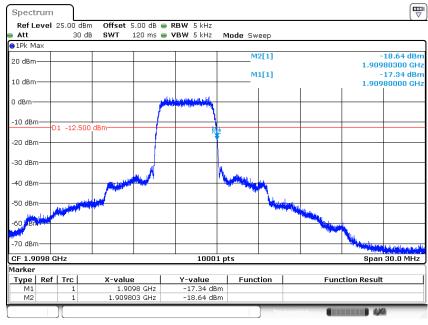
Product	3G Cellular Alarm Communicator		
Test Item	Spurious Emission At Antenna Terminals (+/- 1MHz)		
Test Mode	Mode 8: WCDMA Band 2_Link		
Date of Test	2017/05/25	Test Site	SR10-H

# **Figure Channel 9262 (1852.40MHz)**



Date: 25 M AY .2017 16:00:42

### **Figure Channel 9538 (1907.60MHz)**

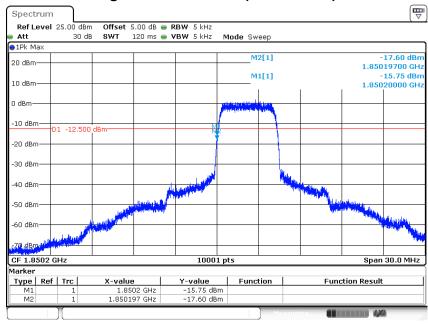


Date: 25 M AY .2017 16:02:09



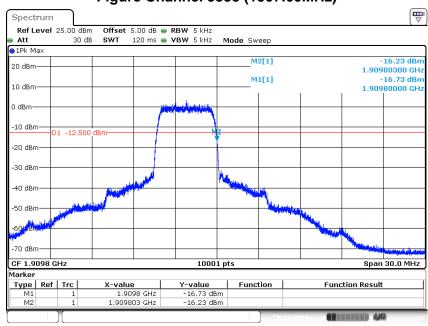
Product	3G Cellular Alarm Communicator		
Test Item	Spurious Emission At Antenna Terminals (+/- 1MHz)		
Test Mode	Mode 9: WCDMA Band 2_HSUPA_Link		
Date of Test	2017/05/25	Test Site	SR10-H

# **Figure Channel 9262 (1852.40MHz)**



Date: 25 M AY .2017 15:44:38

### **Figure Channel 9538 (1907.60MHz)**

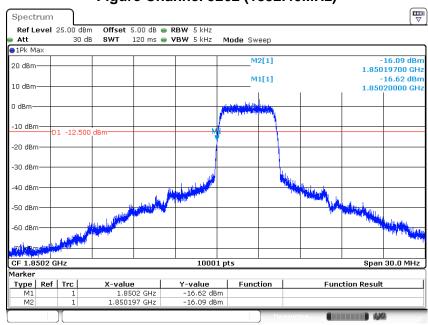


Date: 25 M AY .2017 15:56:45



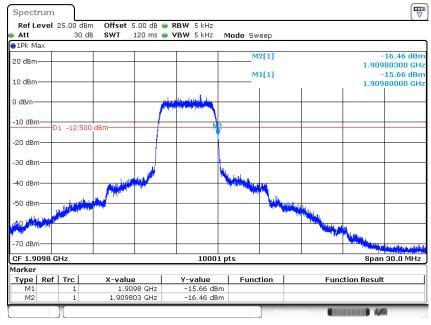
Product	3G Cellular Alarm Communicator		
Test Item	Spurious Emission At Antenna Terminals (+/- 1MHz)		
Test Mode	Mode 10: WCDMA Band 2_HSDPA_Link		
Date of Test	2017/05/25	Test Site	SR10-H

# **Figure Channel 9262 (1852.40MHz)**



Date: 25 M AY .2017 15:59:28

### **Figure Channel 9538 (1907.60MHz)**



Date: 25 M AY .2017 15:58:24



# 6. Spurious Emission

# 6.1. Test Equipment

Conducted Emission / SR10-H

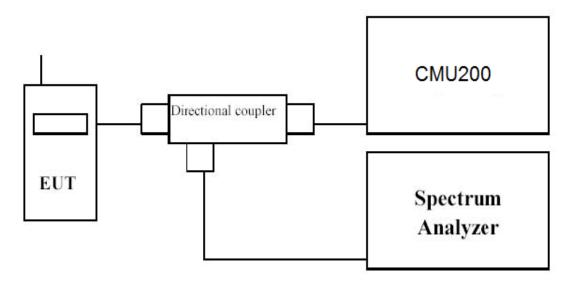
Instrument	Manufacturer	Type No.	Serial No	Cali. Due Date
Signal & Spectrum Analyzer	R&S	FSVA40	101455	2017/11/27
Multisystem UE Tester	Japan radio	NJZ-2000	ET00477	2017/09/19
Directional coupler	Agilent	778D	20402	2017/10/06

# Radiated Spurious Emission / CB4-H

Instrument	Manufacturer	Type No.	Serial No	Cali. Due Date
Test Receiver	R&S	ESCS 30	836858/022	2018/01/14
Multisystem UE Tester	Japan radio	NJZ-2000	ET00477	2017/09/19
Signal & Spectrum Analyzer	R&S	FSVA40	101455	2017/11/27
Pre-Amplifier	DEKRA	AP-025C	CHM-0706049	2017/12/18
Bilog Antenna	Schaffner	CBL6112B	2797	2017/08/14
Pre-Amplifier	EMCI	EMC0031835	980233	2018/02/02
Horn Antenna	Schwarzbeck	BBHA 9120	D639	2017/06/29

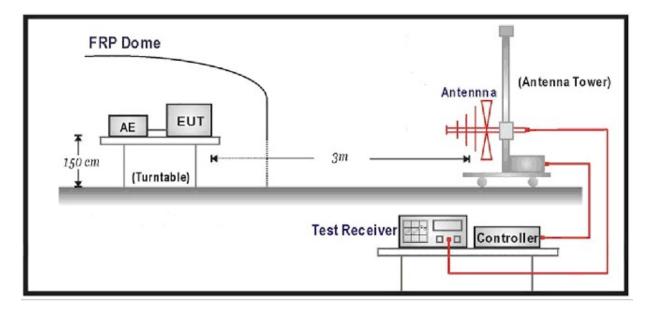
# 6.2. Test Setup

Conducted Spurious Measurement: below 1GHz

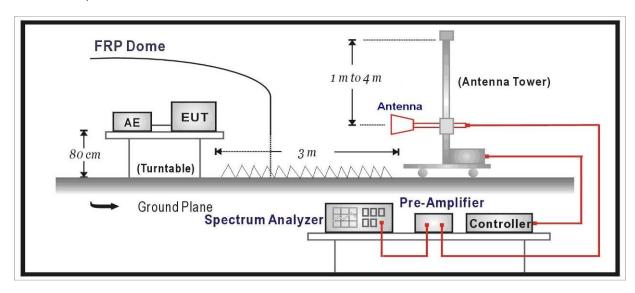




# Radiated Spurious Measurement: below 1GHz



### Radiated Spurious Measurement: above 1GHz





#### 6.3. Test Procedure

#### **Conducted Spurious Measurement:**

- a) Place the EUT on a bench and set it in transmitting mode.
- b) Connect a low loss RF cable from the antenna port to a spectrum analyzer and CMU200 by a Directional Couple.
- c) EUT Communicate with CMU200, then select a channel for testing.
- d) Add a correction factor to the display of spectrum, and then test.
- e) The resolution bandwidth of the spectrum analyzer was set at 1 MHz, sufficient scans were taken to show the out of band Emission if any up to 10<sup>th</sup> harmonic.

#### **Radiated Spurious Measurement:**

- f) The EUT was placed on a rotatable wooden table with 1.5 meter above ground.
- g) The EUT was set 3 meters from the receiving antenna, which was mounted on the antenna tower.
- h) The table was rotated 360 degrees to determine the position of the highest spurious emission.
- i) The height of the receiving antenna is varied between one meter and four meters to search the maximum spurious emission for both horizontal and vertical polarizations.
- j) Make the measurement with the spectrum analyzer's RBW = 1MHz, VBW = 1MHz, Sweep 500ms, Taking the record of maximum spurious emission.
- k) A horn antenna was substituted in place of the EUT and was driven by a signal generator.
- Tune the output power of signal generator to the same emission level with EUT maximum spurious emission.
- m) Taking the record of output power at antenna port
- n) Repeat step 7 to step 8 for another polarization.
- o) EIRP = SG Cable loss + Antenna Gain

#### 6.4. Uncertainty

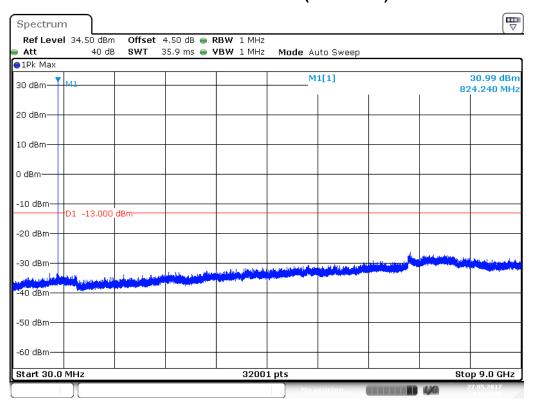
The measurement uncertainty is defined as 3.2 dB for Radiated Power Measurement.



### 6.5. Test Result

Product	3G Cellular Alarm Communicator			
Test Item	Conducted Spurious Emission			
Test Mode	Mode 1: GPRS 850_Link			
Date of Test	2017/05/27	Test Site	SR10-H	

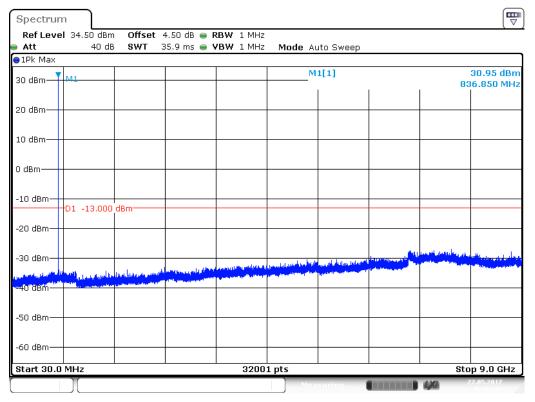
# Low Channel 128 (824.20MHz)



Date: 27 M AY .2017 01:59:59

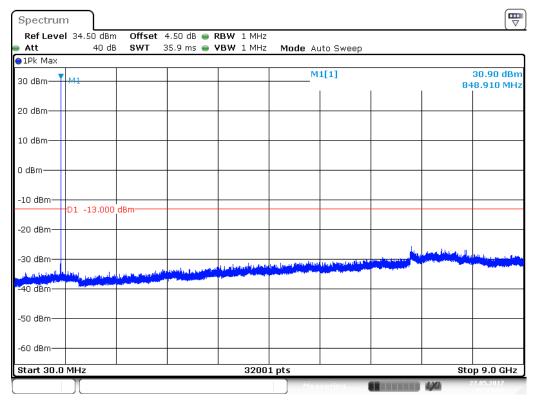


### Mid Channel 190 (836.60MHz)



Date: 27 M AY .2017 02:01:39

# High Channel 251 (848.80MHz)

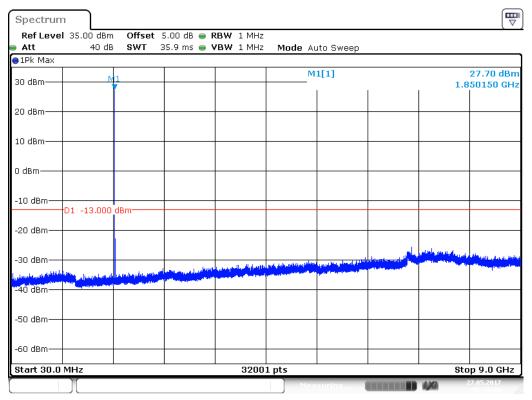


Date: 27 M AY .2017 02:05:00



Product	3G Cellular Alarm Communicator		
Test Item	Conducted Spurious Emission		
Test Mode	Mode 2: GPRS 1900_Link		
Date of Test	2017/05/27	Test Site	SR10-H

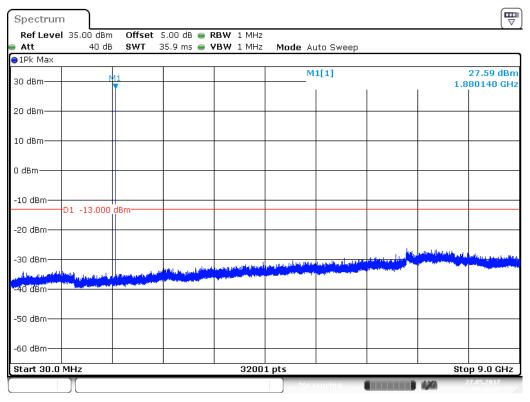
# Low Channel 512 (1850.20MHz)



Date: 27 M AY .2017 02:38:29

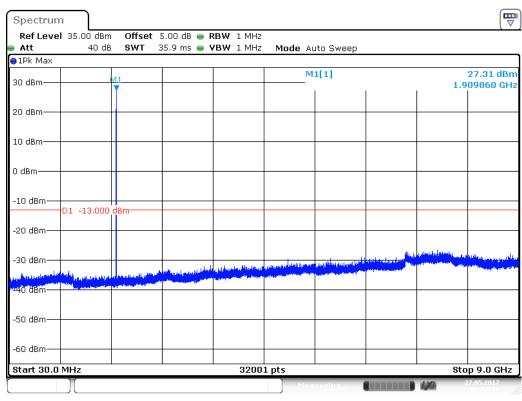


# Mid Channel 661 (1880.00MHz)



Date: 27 MAY .2017 02:36:18

### High Channel 810 (1909.80MHz)

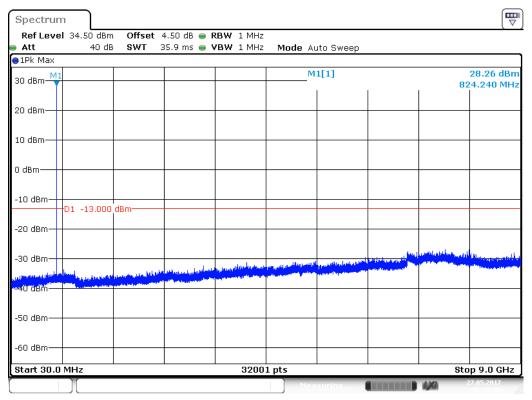


Date: 27 M AY .2017 02:34:58



Product	3G Cellular Alarm Communicator		
Test Item	Conducted Spurious Emission		
Test Mode	Mode 3: EGPRS 850_Link		
Date of Test	2017/05/27	Test Site	SR10-H

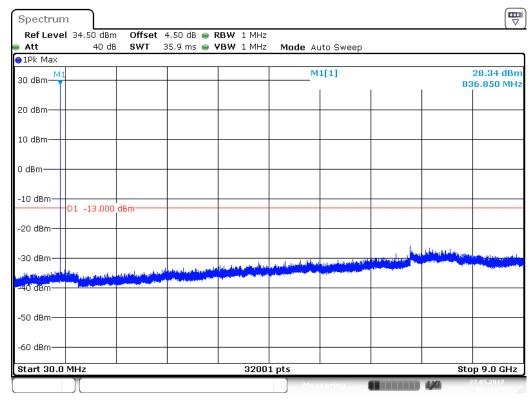
# Low Channel 128 (824.20MHz)



Date: 27 M AY .2017 02:12:51

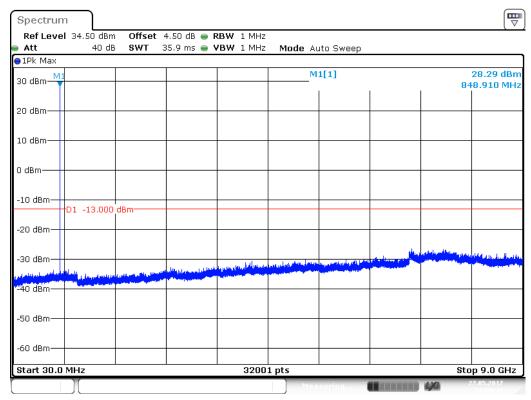


### Mid Channel 190 (836.60MHz)



Date: 27 M AY .2017 02:11:29

# **High Channel 251 (848.80MHz)**

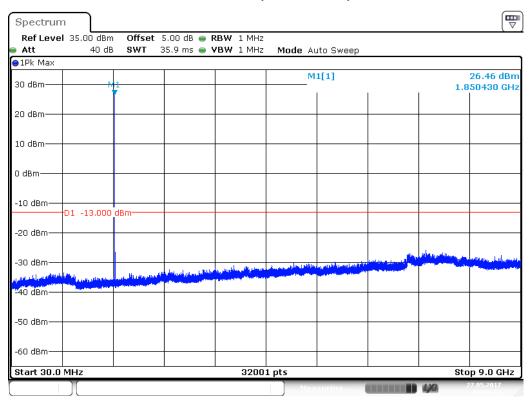


Date: 27 M AY .2017 02:09:31



Product	3G Cellular Alarm Communicator		
Test Item	Conducted Spurious Emission		
Test Mode	Mode 4: EGPRS 1900_Link		
Date of Test	2017/05/27	Test Site	SR10-H

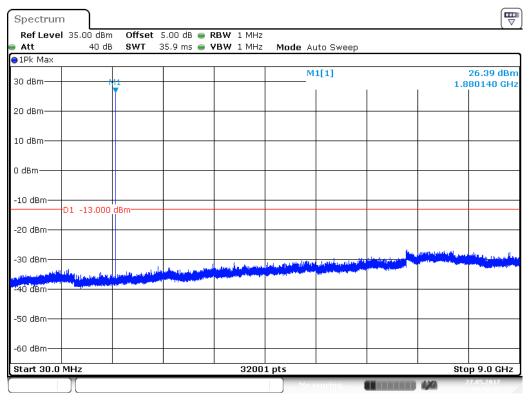
# Low Channel 512 (1850.20MHz)



Date: 27 M AY .2017 02:40:53

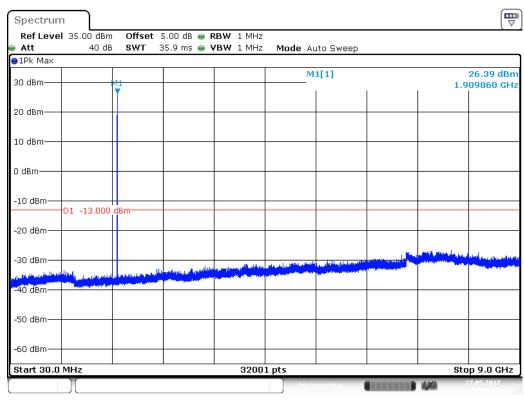


# Mid Channel 661 (1880.00MHz)



Date: 27 M AY .2017 02:42:28

### High Channel 810 (1909.80MHz)

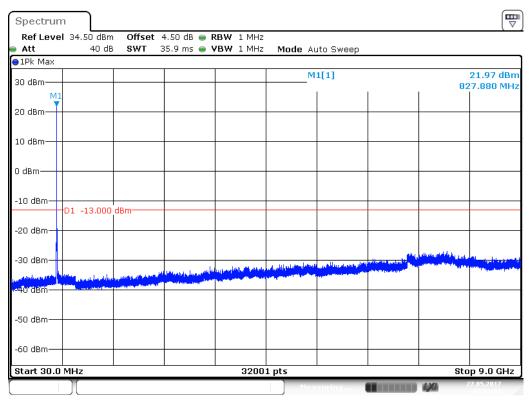


Date: 27 M AY .2017 02:44:15



Product	3G Cellular Alarm Communicator		
Test Item	Conducted Spurious Emission		
Test Mode	Mode 5: WCDMA Band 5_Link		
Date of Test	2017/05/27	Test Site	SR10-H

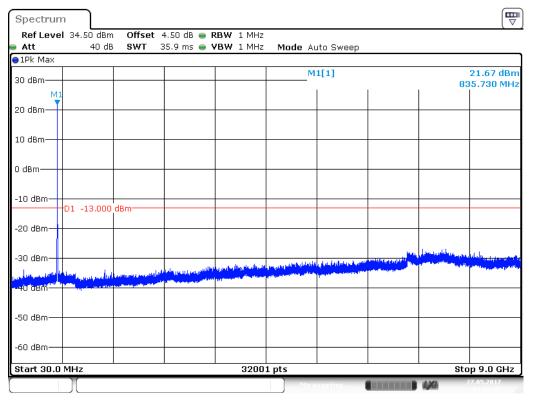
# Low Channel 4132 (826.40MHz)



Date: 27 M AY .2017 03:01:08

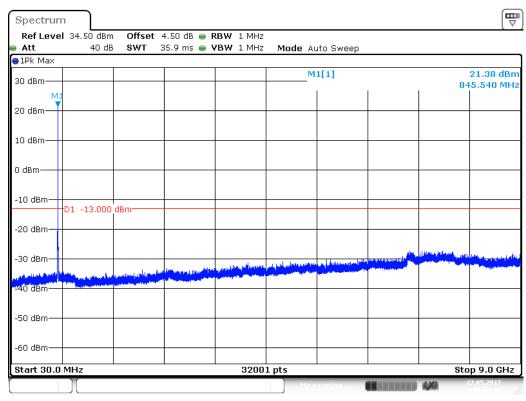


### Mid Channel 4182(836.60MHz)



Date: 27 M AY .2017 03:02:22

### **High Channel 4233(846.60MHz)**

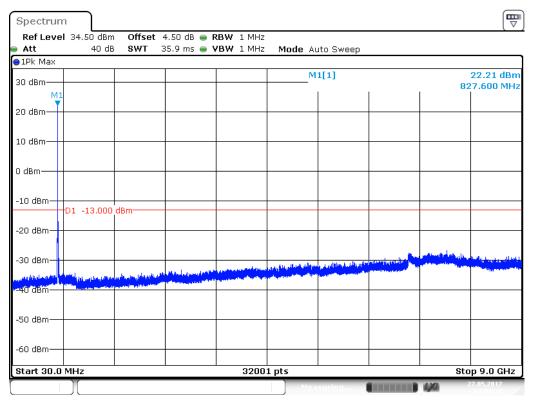


Date: 27 M AY .2017 03:04:19



Product	3G Cellular Alarm Communicator		
Test Item	Conducted Spurious Emission		
Test Mode	Mode 6: WCDMA Band 5_HSUPA_Link		
Date of Test	2017/05/27	Test Site	SR10-H

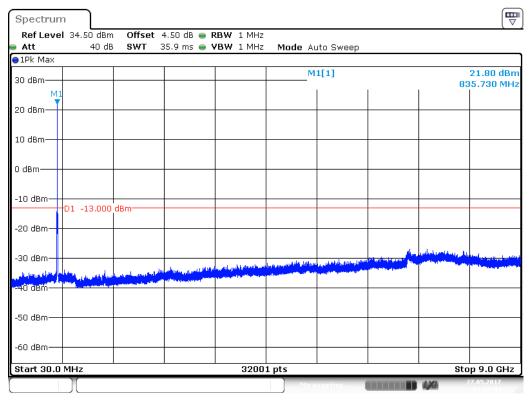
# Low Channel 4132 (826.40MHz)



Date: 27 M AY .2017 03:09:18

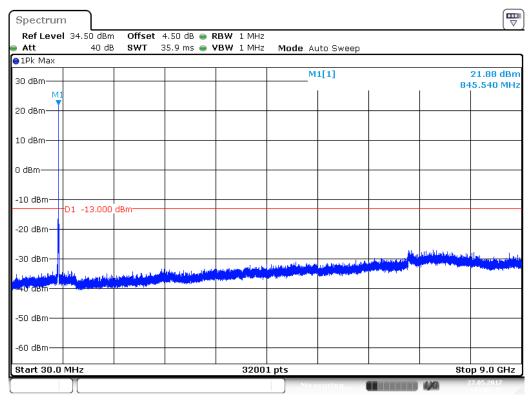


### Mid Channel 4182 (836.60MHz)



Date: 27 M AY .2017 03:07:44

### High Channel 4233 (846.60MHz)

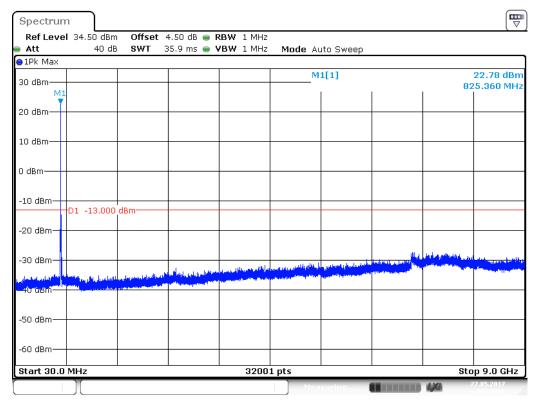


Date: 27 M AY .2017 03:05:38



Product	3G Cellular Alarm Communicator		
Test Item	Conducted Spurious Emission		
Test Mode	Mode 7: WCDMA Band 5_HSDPA_Link		
Date of Test	2017/05/27	Test Site	SR10-H

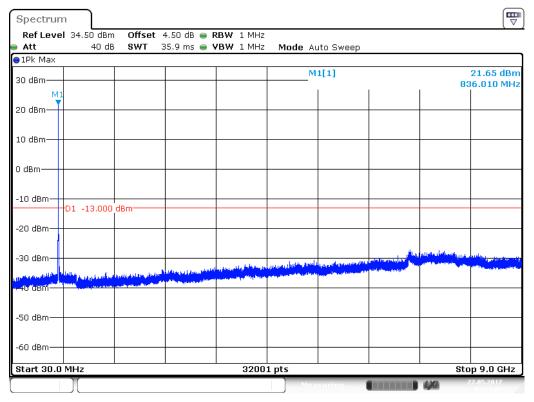
# Low Channel 4132 (826.40MHz)



Date: 27 M AY .2017 03:20:06

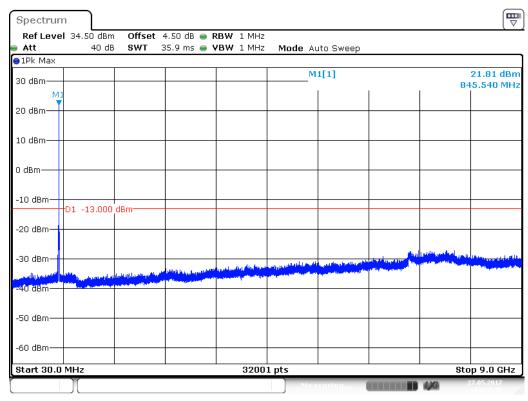


### Mid Channel 4182 (836.60MHz)



Date: 27 M AY .2017 03:21:06

### High Channel 4233 (846.60MHz)

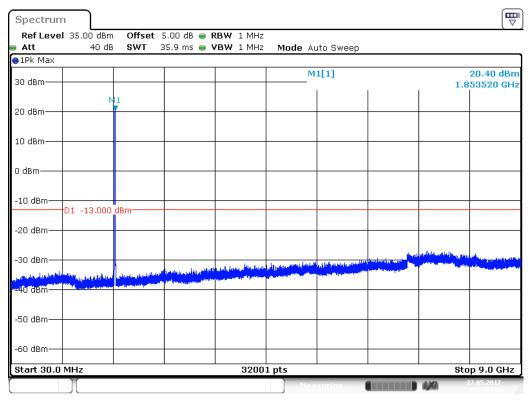


Date: 27 M AY .2017 03:22:40



Product	3G Cellular Alarm Communicator			
Test Item	Conducted Spurious Emission			
Test Mode	Mode 8: WCDMA Band 2_Link			
Date of Test	017/05/27 Test Site SR10-H			

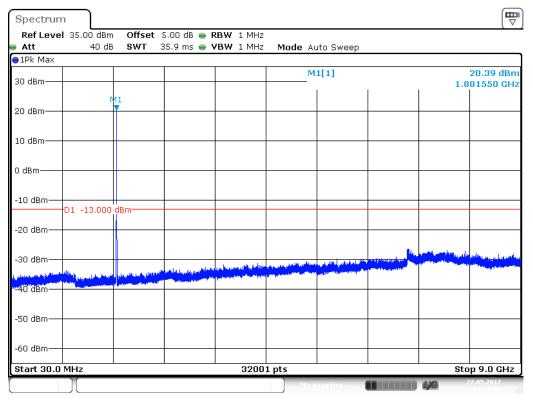
# Low Channel 9262 (1852.40MHz)



Date: 27 M AY .2017 02:56:31

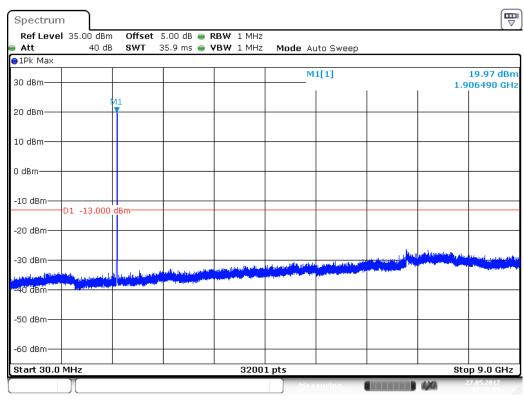


# Mid Channel 9400 (1880.00MHz)



Date: 27 M AY .2017 02:57:51

### High Channel 9538 (1907.60MHz)

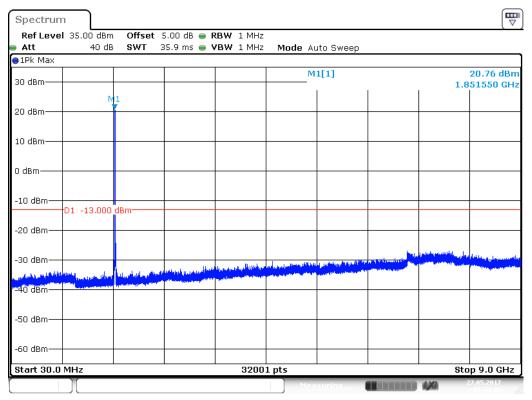


Date: 27 M AY .2017 02:59:05



Product	3G Cellular Alarm Communicator			
Test Item	Conducted Spurious Emission			
Test Mode	Mode 9: WCDMA Band 2_HSUPA_Link			
Date of Test	2017/05/27	Test Site	SR10-H	

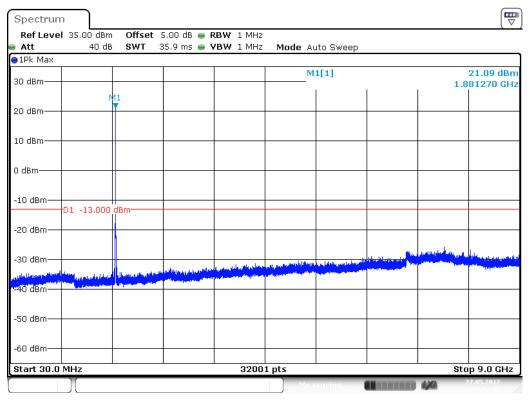
# Low Channel 9262 (1852.40MHz)



Date: 27 M AY .2017 03:14:05

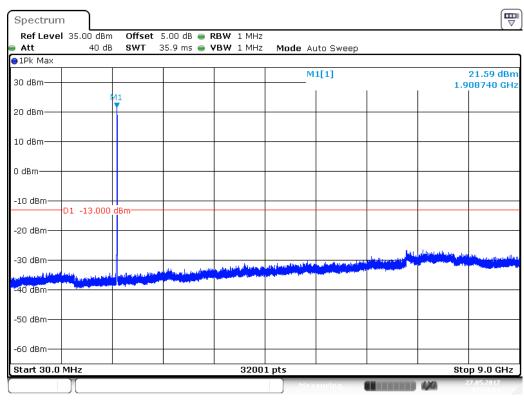


# Mid Channel 9400 (1880.00MHz)



Date: 27 M AY .2017 03:12:45

### High Channel 9538 (1907.60MHz)

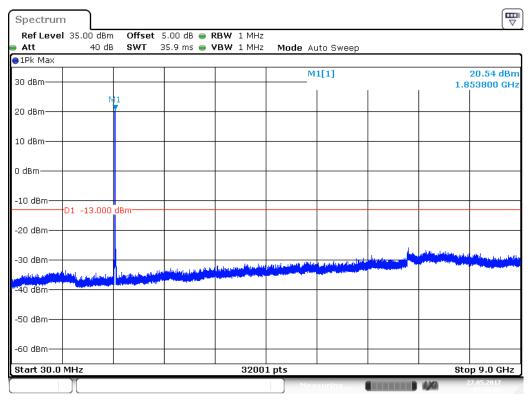


Date: 27 M AY .2017 03:11:14



Product	3G Cellular Alarm Communicator		
Test Item	Conducted Spurious Emission		
Test Mode	Mode 10: WCDMA Band 2_HSDPA_Link		
Date of Test	2017/05/27	Test Site	SR10-H

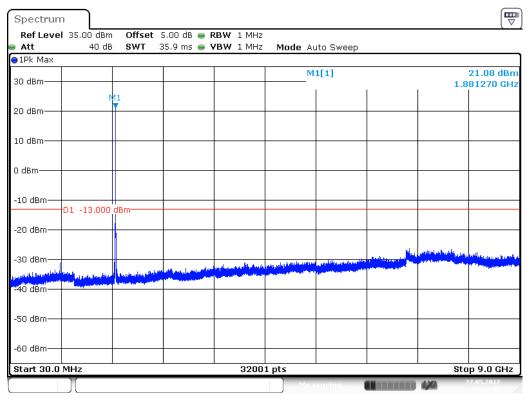
# Low Channel 9262 (1852.40MHz)



Date: 27 M AY .2017 03:16:02

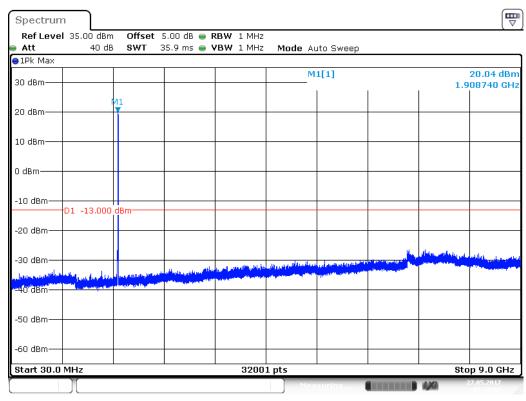


# Mid Channel 9400 (1880.00MHz)



Date: 27 M AY .2017 03:17:53

### High Channel 9538 (1907.60MHz)

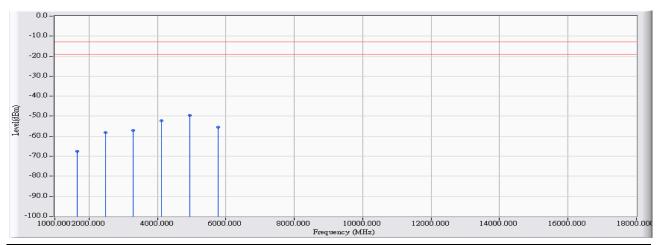


Date: 27 M AY .2017 03:18:57



### **Harmonic & Spurious:**

Site : CB4-H	Time : 2017/05/26
Limit : FCC_Part22/24_00M_00M_PK	Margin : 6
Probe : CB4-H_CE_Sub_B432_1-18GHz_3M_1116 -	Power : DC 24V
HORIZONTAL	
EUT : 3G Cellular Alarm Communicator	Note : Mode 1: GPRS 850_Link_824.2MHz

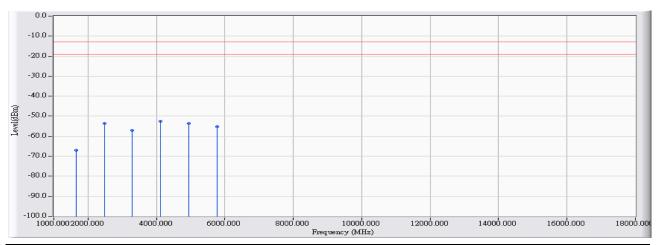


		Frequency	Correct Factor	Reading Level	Measure Level	Margin	Limit	Detector Type
		(MHz)	(dB)	(dBm)	(dBm)	(dB)	(dBm)	
1		1648.400	2.526	-70.180	-67.655	-54.655	-13.000	PEAK
2		2472.600	7.434	-65.560	-58.127	-45.127	-13.000	PEAK
3		3296.800	10.254	-67.490	-57.237	-44.237	-13.000	PEAK
4		4121.000	12.098	-64.460	-52.362	-39.362	-13.000	PEAK
5	*	4945.200	15.801	-65.470	-49.669	-36.669	-13.000	PEAK
6		5769.400	15.316	-70.680	-55.363	-42.363	-13.000	PEAK

- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 1MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "\*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The Emission above 18GHz were not included is because their levels are too low.



Site : CB4-H	Time : 2017/05/26
Limit : FCC_Part22/24_00M_00M_PK	Margin : 6
Probe : CB4-H_CE_Sub_B432_1-18GHz_3M_1116 -	Power : DC 24V
VERTICAL	
EUT : 3G Cellular Alarm Communicator	Note : Mode 1: GPRS 850_Link_824.2MHz

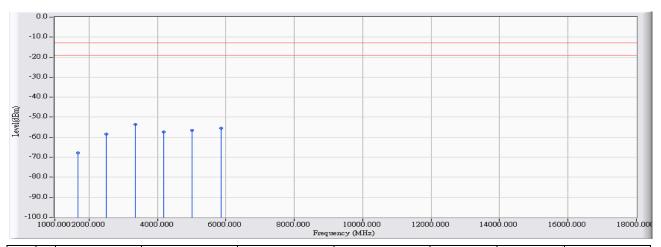


		Frequency	Correct Factor	Reading Level	Measure Level	Margin	Limit	Detector Type
		(MHz)	(dB)	(dBm)	(dBm)	(dB)	(dBm)	
1		1648.400	3.046	-70.040	-66.995	-53.995	-13.000	PEAK
2		2472.600	7.770	-61.260	-53.491	-40.491	-13.000	PEAK
3		3296.800	10.836	-67.920	-57.085	-44.085	-13.000	PEAK
4	*	4121.000	12.965	-65.420	-52.455	-39.455	-13.000	PEAK
5		4945.200	16.320	-69.820	-53.500	-40.500	-13.000	PEAK
6		5769.400	15.150	-70.380	-55.230	-42.230	-13.000	PEAK

- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 1MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "\*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The Emission above 18GHz were not included is because their levels are too low.



Site : CB4-H	Time: 2017/05/26
Limit : FCC_Part22/24_00M_00M_PK	Margin : 6
Probe : CB4-H_CE_Sub_B432_1-18GHz_3M_1116 -	Power : DC 24V
HORIZONTAL	
EUT : 3G Cellular Alarm Communicator	Note: Mode 1: GPRS 850 Link 836.6MHz

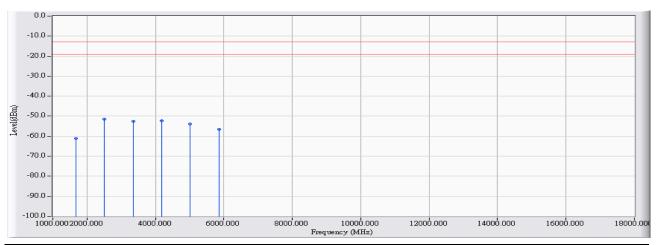


		Frequency	Correct Factor	Reading Level	Measure Level	Margin	Limit	Detector Type
		(MHz)	(dB)	(dBm)	(dBm)	(dB)	(dBm)	
1		1673.200	2.482	-70.350	-67.867	-54.867	-13.000	PEAK
2		2509.800	7.420	-65.750	-58.330	-45.330	-13.000	PEAK
3	*	3346.400	10.371	-64.120	-53.748	-40.748	-13.000	PEAK
4		4183.000	12.197	-69.680	-57.483	-44.483	-13.000	PEAK
5		5019.600	13.621	-70.180	-56.558	-43.558	-13.000	PEAK
6		5856.200	15.687	-71.260	-55.574	-42.574	-13.000	PEAK

- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 1MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "\*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The Emission above 18GHz were not included is because their levels are too low.



Site : CB4-H	Time : 2017/05/26
Limit : FCC_Part22/24_00M_00M_PK	Margin : 6
Probe : CB4-H_CE_Sub_B432_1-18GHz_3M_1116 -	Power : DC 24V
VERTICAL	
EUT : 3G Cellular Alarm Communicator	Note: Mode 1: GPRS 850 Link 836.6MHz

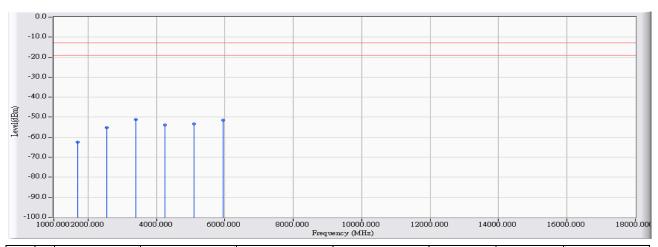


		Frequency	Correct Factor	Reading Level	Measure Level	Margin	Limit	Detector Type
		(MHz)	(dB)	(dBm)	(dBm)	(dB)	(dBm)	
1		1673.200	3.047	-64.150	-61.102	-48.102	-13.000	PEAK
2	*	2509.800	7.809	-59.330	-51.521	-38.521	-13.000	PEAK
3		3346.400	11.012	-63.630	-52.617	-39.617	-13.000	PEAK
4		4183.000	13.147	-65.540	-52.393	-39.393	-13.000	PEAK
5		5019.600	13.260	-67.100	-53.839	-40.839	-13.000	PEAK
6		5856.200	15.515	-72.120	-56.605	-43.605	-13.000	PEAK

- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 1MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "\*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The Emission above 18GHz were not included is because their levels are too low.



Site : CB4-H	Time: 2017/05/26
Limit : FCC_Part22/24_00M_00M_PK	Margin : 6
Probe : CB4-H_CE_Sub_B432_1-18GHz_3M_1116 -	Power : DC 24V
HORIZONTAL	
EUT : 3G Cellular Alarm Communicator	Note: Mode 1: GPRS 850 Link 848.8MHz

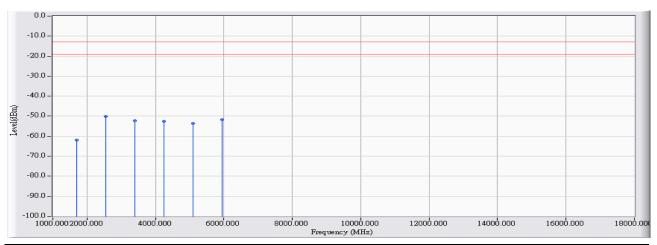


		Frequency	Correct Factor	Reading Level	Measure Level	Margin	Limit	Detector Type
		(MHz)	(dB)	(dBm)	(dBm)	(dB)	(dBm)	
1		1697.600	2.441	-65.030	-62.589	-49.589	-13.000	PEAK
2		2546.400	7.535	-62.840	-55.304	-42.304	-13.000	PEAK
3	*	3395.200	10.488	-61.680	-51.192	-38.192	-13.000	PEAK
4		4244.000	12.291	-66.290	-54.000	-41.000	-13.000	PEAK
5		5092.800	13.701	-67.160	-53.459	-40.459	-13.000	PEAK
6		5941.600	16.050	-67.650	-51.600	-38.600	-13.000	PEAK

- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 1MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "\*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The Emission above 18GHz were not included is because their levels are too low.



Site : CB4-H	Time : 2017/05/26
Limit : FCC_Part22/24_00M_00M_PK	Margin : 6
Probe : CB4-H_CE_Sub_B432_1-18GHz_3M_1116 -	Power : DC 24V
VERTICAL	
EUT : 3G Cellular Alarm Communicator	Note: Mode 1: GPRS 850 Link 848.8MHz

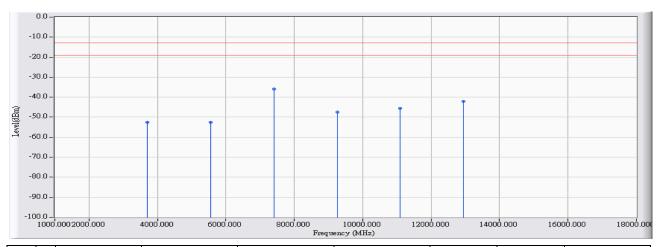


		Frequency	Correct Factor	Reading Level	Measure Level	Margin	Limit	Detector Type
		(MHz)	(dB)	(dBm)	(dBm)	(dB)	(dBm)	
1		1697.600	3.051	-64.930	-61.879	-48.879	-13.000	PEAK
2	*	2546.400	7.911	-57.940	-50.029	-37.029	-13.000	PEAK
3		3395.200	11.187	-63.560	-52.373	-39.373	-13.000	PEAK
4		4244.000	13.322	-65.900	-52.579	-39.579	-13.000	PEAK
5		5092.800	13.372	-66.900	-53.529	-40.529	-13.000	PEAK
6		5941.600	15.873	-67.570	-51.697	-38.697	-13.000	PEAK

- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 1MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "\*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The Emission above 18GHz were not included is because their levels are too low.



Site : CB4-H	Time : 2017/05/26
Limit : FCC_Part22/24_00M_00M_PK	Margin : 6
Probe : CB4-H_CE_Sub_B432_1-18GHz_3M_1116 -	Power : DC 24V
HORIZONTAL	
EUT : 3G Cellular Alarm Communicator	Note : Mode 2: GPRS 1900_Link_1850.2MHz

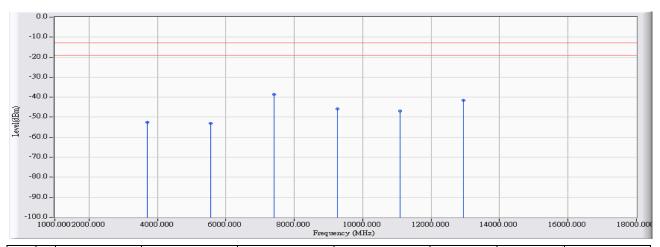


		Frequency	Correct Factor	Reading Level	Measure Level	Margin	Limit	Detector Type
		(MHz)	(dB)	(dBm)	(dBm)	(dB)	(dBm)	
1		3700.400	11.325	-63.840	-52.515	-39.515	-13.000	PEAK
2		5550.600	14.326	-66.910	-52.583	-39.583	-13.000	PEAK
3	*	7400.800	21.575	-57.580	-36.005	-23.005	-13.000	PEAK
4		9251.000	24.772	-72.260	-47.487	-34.487	-13.000	PEAK
5		11101.200	27.845	-73.460	-45.614	-32.614	-13.000	PEAK
6		12951.400	31.526	-73.620	-42.095	-29.095	-13.000	PEAK

- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 1MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "\*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The Emission above 18GHz were not included is because their levels are too low.



Site : CB4-H	Time : 2017/05/26
Limit : FCC_Part22/24_00M_00M_PK	Margin : 6
Probe : CB4-H_CE_Sub_B432_1-18GHz_3M_1116 -	Power : DC 24V
VERTICAL	
EUT : 3G Cellular Alarm Communicator	Note : Mode 2: GPRS 1900_Link_1850.2MHz

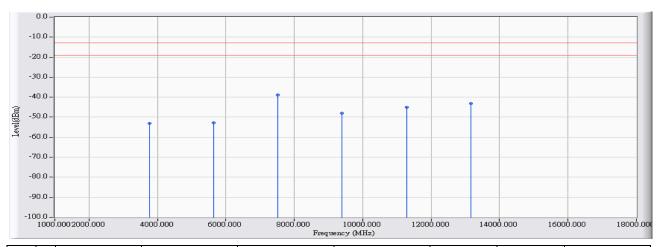


		Frequency	Correct Factor	Reading Level	Measure Level	Margin	Limit	Detector Type
		(MHz)	(dB)	(dBm)	(dBm)	(dB)	(dBm)	
1		3700.400	12.126	-64.760	-52.634	-39.634	-13.000	PEAK
2		5550.600	14.173	-67.310	-53.137	-40.137	-13.000	PEAK
3	*	7400.800	21.360	-59.900	-38.540	-25.540	-13.000	PEAK
4		9251.000	26.029	-71.840	-45.811	-32.811	-13.000	PEAK
5		11101.200	26.719	-73.650	-46.931	-33.931	-13.000	PEAK
6		12951.400	32.729	-74.180	-41.451	-28.451	-13.000	PEAK

- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 1MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "\*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The Emission above 18GHz were not included is because their levels are too low.



Site : CB4-H	Time: 2017/05/26
Limit : FCC_Part22/24_00M_00M_PK	Margin : 6
Probe : CB4-H_CE_Sub_B432_1-18GHz_3M_1116 -	Power : DC 24V
HORIZONTAL	
EUT : 3G Cellular Alarm Communicator	Note: Mode 2: GPRS 1900_Link_1880MHz

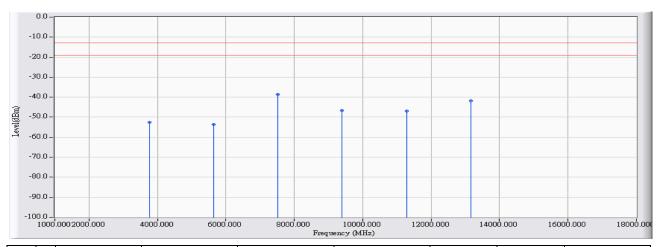


		Frequency	Correct Factor	Reading Level	Measure Level	Margin	Limit	Detector Type
		(MHz)	(dB)	(dBm)	(dBm)	(dB)	(dBm)	
1		3760.000	11.489	-64.570	-53.082	-40.082	-13.000	PEAK
2		5640.000	14.733	-67.480	-52.747	-39.747	-13.000	PEAK
3	*	7520.000	21.729	-60.730	-39.001	-26.001	-13.000	PEAK
4		9400.000	24.813	-72.680	-47.866	-34.866	-13.000	PEAK
5		11280.000	28.021	-72.980	-44.958	-31.958	-13.000	PEAK
6		13160.000	31.455	-74.540	-43.085	-30.085	-13.000	PEAK

- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 1MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "\*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The Emission above 18GHz were not included is because their levels are too low.



Site : CB4-H	Time : 2017/05/26
Limit : FCC_Part22/24_00M_00M_PK	Margin : 6
Probe : CB4-H_CE_Sub_B432_1-18GHz_3M_1116 -	Power : DC 24V
VERTICAL	
EUT : 3G Cellular Alarm Communicator	Note : Mode 2: GPRS 1900_Link_1880MHz

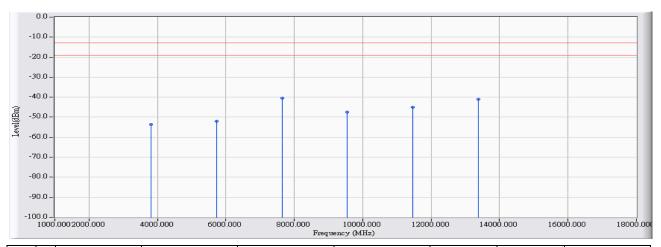


		Frequency	Correct Factor	Reading Level	Measure Level	Margin	Limit	Detector Type
		(MHz)	(dB)	(dBm)	(dBm)	(dB)	(dBm)	
1		3760.000	12.281	-64.960	-52.680	-39.680	-13.000	PEAK
2		5640.000	14.575	-68.070	-53.495	-40.495	-13.000	PEAK
3	*	7520.000	21.815	-60.380	-38.566	-25.566	-13.000	PEAK
4		9400.000	26.275	-72.810	-46.534	-33.534	-13.000	PEAK
5		11280.000	27.395	-74.290	-46.894	-33.894	-13.000	PEAK
6		13160.000	32.775	-74.670	-41.895	-28.895	-13.000	PEAK

- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 1MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "\*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The Emission above 18GHz were not included is because their levels are too low.



Site : CB4-H	Time: 2017/05/26
Limit : FCC_Part22/24_00M_00M_PK	Margin : 6
Probe : CB4-H_CE_Sub_B432_1-18GHz_3M_1116 -	Power : DC 24V
HORIZONTAL	
EUT : 3G Cellular Alarm Communicator	Note : Mode 2: GPRS 1900_Link_1909.8MHz

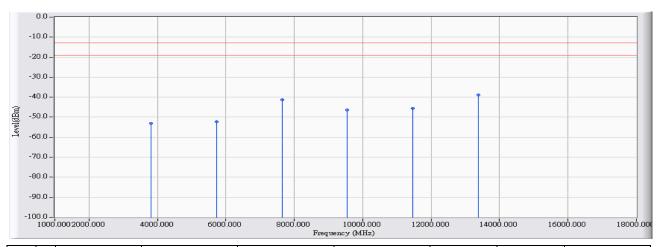


		Frequency	Correct Factor	Reading Level	Measure Level	Margin	Limit	Detector Type
		(MHz)	(dB)	(dBm)	(dBm)	(dB)	(dBm)	
1		3819.600	11.595	-65.280	-53.686	-40.686	-13.000	PEAK
2		5729.400	15.140	-67.270	-52.130	-39.130	-13.000	PEAK
3	*	7639.200	22.230	-62.660	-40.430	-27.430	-13.000	PEAK
4		9549.000	25.003	-72.410	-47.407	-34.407	-13.000	PEAK
5		11458.800	28.602	-73.740	-45.138	-32.138	-13.000	PEAK
6		13368.600	31.812	-72.920	-41.108	-28.108	-13.000	PEAK

- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 1MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "\*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The Emission above 18GHz were not included is because their levels are too low.



Site : CB4-H	Time : 2017/05/26
Limit : FCC_Part22/24_00M_00M_PK	Margin : 6
Probe : CB4-H_CE_Sub_B432_1-18GHz_3M_1116 -	Power : DC 24V
VERTICAL	
EUT : 3G Cellular Alarm Communicator	Note : Mode 2: GPRS 1900_Link_1909.8MHz

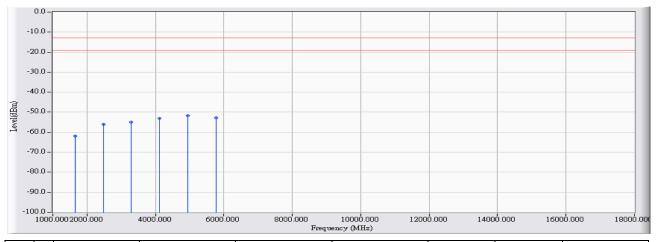


		Frequency	Correct Factor	Reading Level	Measure Level	Margin	Limit	Detector Type
		(MHz)	(dB)	(dBm)	(dBm)	(dB)	(dBm)	
1		3819.600	12.365	-65.480	-53.115	-40.115	-13.000	PEAK
2		5729.400	14.977	-67.310	-52.333	-39.333	-13.000	PEAK
3		7639.200	22.110	-63.390	-41.280	-28.280	-13.000	PEAK
4		9549.000	26.522	-73.000	-46.478	-33.478	-13.000	PEAK
5		11458.800	28.476	-73.960	-45.484	-32.484	-13.000	PEAK
6	*	13368.800	33.353	-72.330	-38.976	-25.976	-13.000	PEAK

- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 1MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "\*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The Emission above 18GHz were not included is because their levels are too low.



Site : CB4-H	Time : 2017/05/26
Limit : FCC_Part22/24_00M_00M_PK	Margin : 6
Probe : CB4-H_CE_Sub_B432_1-18GHz_3M_1116 -	Power : DC 24V
HORIZONTAL	
EUT : 3G Cellular Alarm Communicator	Note : Mode 3: EGPRS 850_Link_824.2MHz

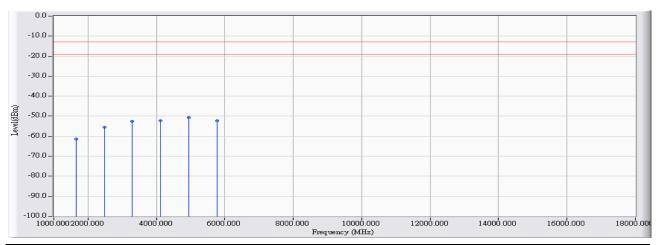


		Frequency	Correct Factor	Reading Level	Measure Level	Margin	Limit	Detector Type
		(MHz)	(dB)	(dBm)	(dBm)	(dB)	(dBm)	
1		1648.400	2.526	-64.540	-62.015	-49.015	-13.000	PEAK
2		2472.600	7.434	-63.410	-55.977	-42.977	-13.000	PEAK
3		3296.800	10.254	-65.170	-54.917	-41.917	-13.000	PEAK
4		4121.000	12.098	-65.090	-52.992	-39.992	-13.000	PEAK
5	*	4945.200	15.801	-67.630	-51.829	-38.829	-13.000	PEAK
6		5769.400	15.316	-68.200	-52.883	-39.883	-13.000	PEAK

- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 1MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "\*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The Emission above 18GHz were not included is because their levels are too low.



Site : CB4-H	Time : 2017/05/26
Limit : FCC_Part22/24_00M_00M_PK	Margin : 6
Probe : CB4-H_CE_Sub_B432_1-18GHz_3M_1116 -	Power : DC 24V
VERTICAL	
EUT : 3G Cellular Alarm Communicator	Note: Mode 3: EGPRS 850 Link 824.2MHz

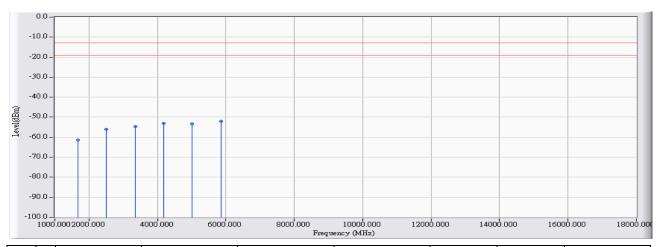


		Frequency	Correct Factor	Reading Level	Measure Level	Margin	Limit	Detector Type
		(MHz)	(dB)	(dBm)	(dBm)	(dB)	(dBm)	
1		1648.400	3.046	-64.560	-61.515	-48.515	-13.000	PEAK
2		2472.600	7.770	-63.210	-55.441	-42.441	-13.000	PEAK
3		3296.800	10.836	-63.330	-52.495	-39.495	-13.000	PEAK
4		4121.000	12.965	-65.180	-52.215	-39.215	-13.000	PEAK
5	*	4945.200	16.320	-67.100	-50.780	-37.780	-13.000	PEAK
6		5769.400	15.150	-67.560	-52.410	-39.410	-13.000	PEAK

- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 1MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "\*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The Emission above 18GHz were not included is because their levels are too low.



Site : CB4-H	Time: 2017/05/26
Limit : FCC_Part22/24_00M_00M_PK	Margin : 6
Probe : CB4-H_CE_Sub_B432_1-18GHz_3M_1116 -	Power : DC 24V
HORIZONTAL	
EUT : 3G Cellular Alarm Communicator	Note: Mode 3: EGPRS 850 Link 836.6MHz

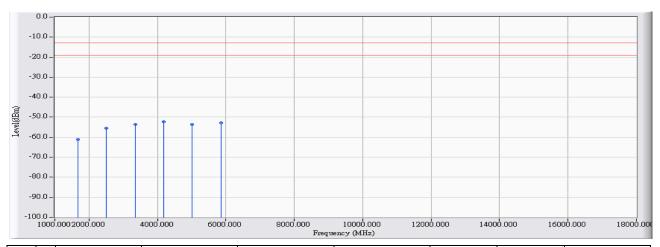


		Frequency	Correct Factor	Reading Level	Measure Level	Margin	Limit	Detector Type
		(MHz)	(dB)	(dBm)	(dBm)	(dB)	(dBm)	
1		1673.200	2.482	-63.780	-61.297	-48.297	-13.000	PEAK
2		2509.800	7.420	-63.330	-55.910	-42.910	-13.000	PEAK
3		3346.400	10.371	-64.990	-54.618	-41.618	-13.000	PEAK
4		4183.000	12.197	-65.330	-53.133	-40.133	-13.000	PEAK
5		5019.600	13.621	-66.850	-53.228	-40.228	-13.000	PEAK
6	*	5856.200	15.687	-67.780	-52.094	-39.094	-13.000	PEAK

- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 1MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "\*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The Emission above 18GHz were not included is because their levels are too low.



Site : CB4-H	Time: 2017/05/26
Limit : FCC_Part22/24_00M_00M_PK	Margin : 6
Probe : CB4-H_CE_Sub_B432_1-18GHz_3M_1116 -	Power : DC 24V
VERTICAL	
EUT : 3G Cellular Alarm Communicator	Note: Mode 3: EGPRS 850 Link 836.6MHz

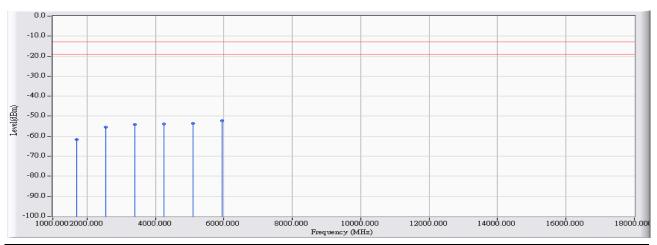


		Frequency	Correct Factor	Reading Level	Measure Level	Margin	Limit	Detector Type
		(MHz)	(dB)	(dBm)	(dBm)	(dB)	(dBm)	
1		1673.200	3.047	-64.230	-61.182	-48.182	-13.000	PEAK
2		2509.800	7.809	-63.260	-55.451	-42.451	-13.000	PEAK
3		3346.400	11.012	-64.760	-53.747	-40.747	-13.000	PEAK
4	*	4183.000	13.147	-65.440	-52.293	-39.293	-13.000	PEAK
5		5019.600	13.260	-66.750	-53.489	-40.489	-13.000	PEAK
6		5856.200	15.515	-68.440	-52.925	-39.925	-13.000	

- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 1MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "\*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
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Site : CB4-H	Time: 2017/05/26
Limit : FCC_Part22/24_00M_00M_PK	Margin : 6
Probe : CB4-H_CE_Sub_B432_1-18GHz_3M_1116 -	Power : DC 24V
HORIZONTAL	
EUT : 3G Cellular Alarm Communicator	Note: Mode 3: EGPRS 850 Link 848.8MHz

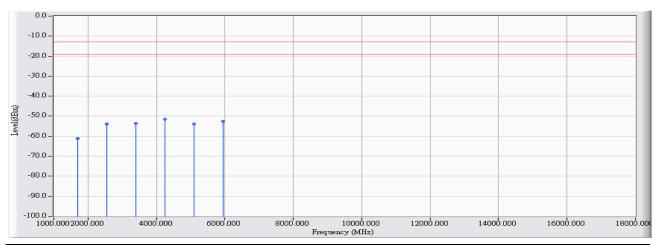


		Frequency	Correct Factor	Reading Level	Measure Level	Margin	Limit	Detector Type
		(MHz)	(dB)	(dBm)	(dBm)	(dB)	(dBm)	
1		1697.600	2.441	-64.140	-61.699	-48.699	-13.000	PEAK
2		2546.400	7.535	-62.960	-55.424	-42.424	-13.000	PEAK
3		3395.200	10.488	-64.750	-54.262	-41.262	-13.000	PEAK
4		4244.000	12.291	-66.080	-53.790	-40.790	-13.000	PEAK
5		5092.800	13.701	-67.210	-53.509	-40.509	-13.000	PEAK
6	*	5941.600	16.050	-68.350	-52.300	-39.300	-13.000	PEAK

- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 1MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "\*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The Emission above 18GHz were not included is because their levels are too low.



Site : CB4-H	Time : 2017/05/26
Limit : FCC_Part22/24_00M_00M_PK	Margin : 6
Probe : CB4-H_CE_Sub_B432_1-18GHz_3M_1116 -	Power : DC 24V
VERTICAL	
EUT : 3G Cellular Alarm Communicator	Note : Mode 3: EGPRS 850_Link_848.8MHz

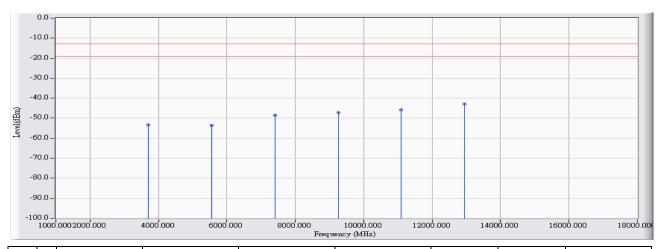


		Frequency	Correct Factor	Reading Level	Measure Level	Margin	Limit	Detector Type
		(MHz)	(dB)	(dBm)	(dBm)	(dB)	(dBm)	
1		1697.600	3.051	-64.280	-61.229	-48.229	-13.000	PEAK
2		2546.400	7.911	-61.870	-53.959	-40.959	-13.000	PEAK
3		3395.200	11.187	-64.880	-53.693	-40.693	-13.000	PEAK
4	*	4244.000	13.322	-64.810	-51.489	-38.489	-13.000	PEAK
5		5092.800	13.372	-67.320	-53.949	-40.949	-13.000	PEAK
6		5941.600	15.873	-68.290	-52.417	-39.417	-13.000	PEAK

- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 1MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "\*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The Emission above 18GHz were not included is because their levels are too low.



Site : CB4-H	Time : 2017/05/26
Limit : FCC_Part22/24_00M_00M_PK	Margin : 6
Probe : CB4-H_CE_Sub_B432_1-18GHz_3M_1116 -	Power : DC 24V
HORIZONTAL	
EUT : 3G Cellular Alarm Communicator	Note : Mode 4: EGPRS 1900_Link_1850.2MHz

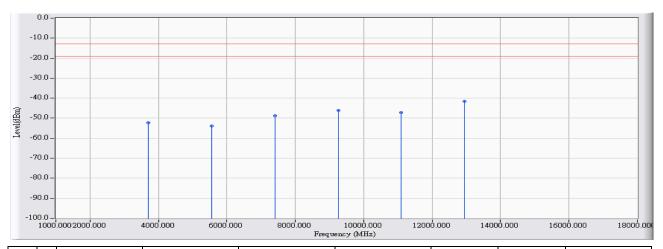


		Frequency	Correct Factor	Reading Level	Measure Level	Margin	Limit	Detector Type
		(MHz)	(dB)	(dBm)	(dBm)	(dB)	(dBm)	
1		3700.400	11.325	-64.790	-53.465	-40.465	-13.000	PEAK
2		5550.600	14.326	-67.900	-53.573	-40.573	-13.000	PEAK
3		7400.800	21.575	-70.100	-48.525	-35.525	-13.000	PEAK
4		9251.000	24.772	-71.880	-47.107	-34.107	-13.000	PEAK
5		11101.200	27.845	-73.620	-45.774	-32.774	-13.000	PEAK
6	*	12951.400	31.526	-74.290	-42.765	-29.765	-13.000	PEAK

- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 1MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "\*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The Emission above 18GHz were not included is because their levels are too low.



Site : CB4-H	Time : 2017/05/26
Limit : FCC_Part22/24_00M_00M_PK	Margin: 6
Probe : CB4-H_CE_Sub_B432_1-18GHz_3M_1116 -	Power : DC 24V
VERTICAL	
EUT : 3G Cellular Alarm Communicator	Note : Mode 4: EGPRS 1900_Link_1850.2MHz

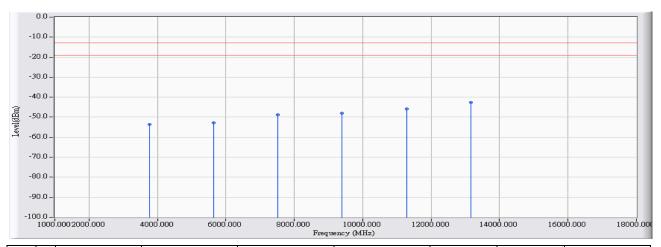


		Frequency	Correct Factor	Reading Level	Measure Level	Margin	Limit	Detector Type
		(MHz)	(dB)	(dBm)	(dBm)	(dB)	(dBm)	
1		3700.400	12.126	-64.460	-52.334	-39.334	-13.000	PEAK
2		5550.600	14.173	-67.980	-53.807	-40.807	-13.000	PEAK
3		7400.800	21.360	-70.230	-48.870	-35.870	-13.000	PEAK
4		9251.000	26.029	-72.180	-46.151	-33.151	-13.000	PEAK
5		11101.200	26.719	-73.890	-47.171	-34.171	-13.000	PEAK
6	*	12951.400	32.729	-74.250	-41.521	-28.521	-13.000	PEAK

- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 1MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "\*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The Emission above 18GHz were not included is because their levels are too low.



Site : CB4-H	Time : 2017/05/26
Limit : FCC_Part22/24_00M_00M_PK	Margin : 6
Probe : CB4-H_CE_Sub_B432_1-18GHz_3M_1116 -	Power : DC 24V
HORIZONTAL	
EUT : 3G Cellular Alarm Communicator	Note : Mode 4: EGPRS 1900 Link_1880MHz

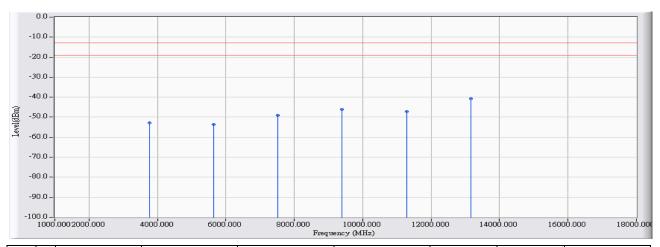


		Frequency	Correct Factor	Reading Level	Measure Level	Margin	Limit	Detector Type
		(MHz)	(dB)	(dBm)	(dBm)	(dB)	(dBm)	
1		3760.000	11.489	-65.000	-53.512	-40.512	-13.000	PEAK
2		5640.000	14.733	-67.550	-52.817	-39.817	-13.000	PEAK
3		7520.000	21.729	-70.570	-48.841	-35.841	-13.000	PEAK
4		9400.000	24.813	-72.830	-48.016	-35.016	-13.000	PEAK
5		11280.000	28.021	-73.800	-45.778	-32.778	-13.000	PEAK
6	*	13160.000	31.455	-73.970	-42.515	-29.515	-13.000	

- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 1MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "\*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The Emission above 18GHz were not included is because their levels are too low.



Site : CB4-H	Time : 2017/05/26
Limit : FCC_Part22/24_00M_00M_PK	Margin : 6
Probe : CB4-H_CE_Sub_B432_1-18GHz_3M_1116 -	Power : DC 24V
VERTICAL	
EUT : 3G Cellular Alarm Communicator	Note : Mode 4: EGPRS 1900 Link_1880MHz

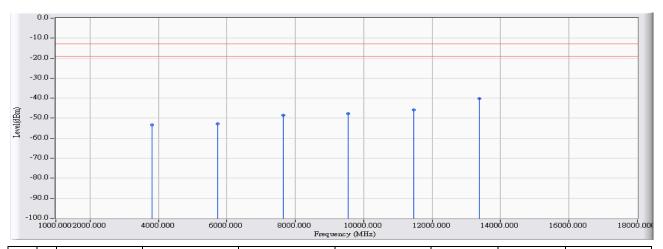


		Frequency	Correct Factor	Reading Level	Measure Level	Margin	Limit	Detector Type
		(MHz)	(dB)	(dBm)	(dBm)	(dB)	(dBm)	
1		3760.000	12.281	-65.220	-52.940	-39.940	-13.000	PEAK
2		5640.000	14.575	-68.250	-53.675	-40.675	-13.000	PEAK
3		7520.000	21.815	-70.920	-49.106	-36.106	-13.000	PEAK
4		9400.000	26.275	-72.520	-46.244	-33.244	-13.000	PEAK
5		11280.000	27.395	-74.480	-47.084	-34.084	-13.000	PEAK
6	*	13160.000	32.775	-73.600	-40.825	-27.825	-13.000	PEAK

- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 1MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "\*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The Emission above 18GHz were not included is because their levels are too low.



Site : CB4-H	Time : 2017/05/26
Limit : FCC_Part22/24_00M_00M_PK	Margin : 6
Probe : CB4-H_CE_Sub_B432_1-18GHz_3M_1116 -	Power : DC 24V
HORIZONTAL	
EUT : 3G Cellular Alarm Communicator	Note : Mode 4: EGPRS 1900_Link_1909.8MHz

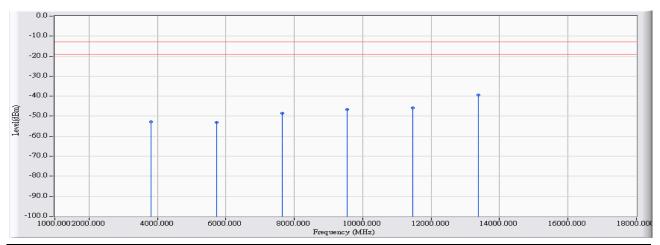


		Frequency	Correct Factor	Reading Level	Measure Level	Margin	Limit	Detector Type
		(MHz)	(dB)	(dBm)	(dBm)	(dB)	(dBm)	
1		3819.600	11.595	-64.910	-53.316	-40.316	-13.000	PEAK
2		5729.400	15.140	-67.860	-52.720	-39.720	-13.000	PEAK
3		7639.200	22.230	-70.630	-48.400	-35.400	-13.000	PEAK
4		9549.000	25.003	-72.820	-47.817	-34.817	-13.000	PEAK
5		11458.800	28.602	-74.360	-45.758	-32.758	-13.000	PEAK
6	*	13368.600	31.812	-72.140	-40.328	-27.328	-13.000	PEAK

- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 1MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "\*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The Emission above 18GHz were not included is because their levels are too low.



Site : CB4-H	Time : 2017/05/26
Limit : FCC_Part22/24_00M_00M_PK	Margin: 6
Probe : CB4-H_CE_Sub_B432_1-18GHz_3M_1116 -	Power : DC 24V
VERTICAL	
EUT : 3G Cellular Alarm Communicator	Note : Mode 4: EGPRS 1900_Link_1909.8MHz

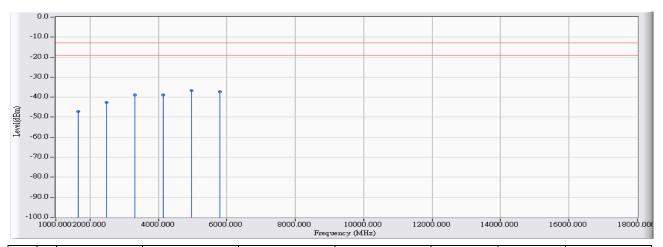


		Frequency	Correct Factor	Reading Level	Measure Level	Margin	Limit	Detector Type
		(MHz)	(dB)	(dBm)	(dBm)	(dB)	(dBm)	
1		3819.600	12.365	-65.060	-52.695	-39.695	-13.000	PEAK
2		5729.400	14.977	-67.990	-53.013	-40.013	-13.000	PEAK
3		7639.200	22.110	-70.660	-48.550	-35.550	-13.000	PEAK
4		9549.000	26.522	-73.270	-46.748	-33.748	-13.000	PEAK
5		11458.800	28.476	-74.210	-45.734	-32.734	-13.000	PEAK
6	*	13368.600	33.353	-72.820	-39.467	-26.467	-13.000	PEAK

- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 1MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "\*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The Emission above 18GHz were not included is because their levels are too low.



Site : CB4-H	Time : 2017/05/23
Limit : FCC_Part22/24_00M_00M_PK	Margin : 6
Probe : CB4-H_CE_Sub_B432_1-18GHz_3M_1116 -	Power : DC 24V
HORIZONTAL	
EUT : 3G Cellular Alarm Communicator	Note : Mode 5: WCDMA Band 5_Link_826.4MHz

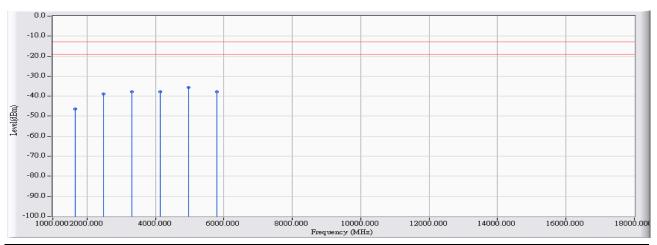


		Frequency	Correct Factor	Reading Level	Measure Level	Margin	Limit	Detector Type
		(MHz)	(dB)	(dBm)	(dBm)	(dB)	(dBm)	
1		1652.800	10.110	-57.220	-47.111	-34.111	-13.000	PEAK
2		2479.200	14.993	-57.510	-42.517	-29.517	-13.000	PEAK
3		3305.600	17.669	-56.580	-38.911	-25.911	-13.000	PEAK
4		4132.000	19.358	-58.360	-39.002	-26.002	-13.000	PEAK
5	*	4958.400	22.667	-59.430	-36.763	-23.763	-13.000	
6		5784.800	22.228	-59.420	-37.193	-24.193	-13.000	

- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 1MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "\*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The Emission above 18GHz were not included is because their levels are too low.



Site : CB4-H	Time : 2017/05/23
Limit : FCC_Part22/24_00M_00M_PK	Margin : 6
Probe : CB4-H_CE_Sub_B432_1-18GHz_3M_1116 -	Power : DC 24V
VERTICAL	
EUT : 3G Cellular Alarm Communicator	Note : Mode 5: WCDMA Band 5 Link 826.4MHz

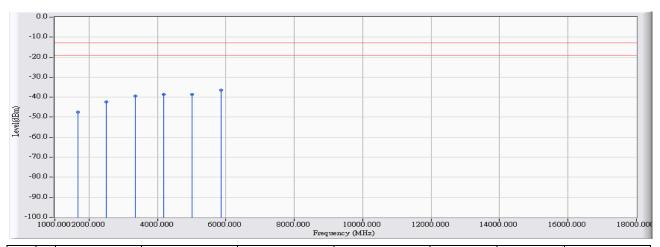


		Frequency	Correct Factor	Reading Level	Measure Level	Margin	Limit	Detector Type
		(MHz)	(dB)	(dBm)	(dBm)	(dB)	(dBm)	
1		1652.800	10.638	-57.050	-46.413	-33.413	-13.000	PEAK
2		2479.200	15.344	-54.320	-38.977	-25.977	-13.000	PEAK
3		3305.600	18.262	-56.070	-37.809	-24.809	-13.000	PEAK
4		4132.000	20.240	-58.140	-37.901	-24.901	-13.000	PEAK
5	*	4958.400	23.171	-58.920	-35.749	-22.749	-13.000	PEAK
6		5784.800	22.061	-59.740	-37.680	-24.680	-13.000	PEAK

- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 1MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "\*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The Emission above 18GHz were not included is because their levels are too low.



Site : CB4-H	Time: 2017/05/23
Limit : FCC_Part22/24_00M_00M_PK	Margin : 6
Probe : CB4-H_CE_Sub_B432_1-18GHz_3M_1116 -	Power : DC 24V
HORIZONTAL	
EUT : 3G Cellular Alarm Communicator	Note: Mode 5: WCDMA Band 5 Link 836.6MHz

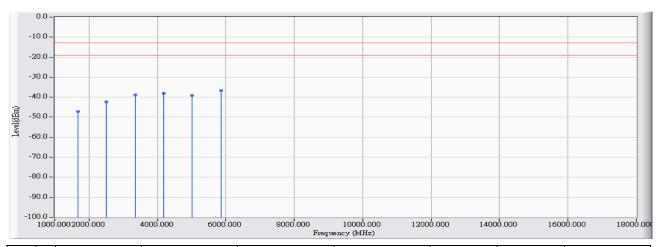


		Frequency	Correct Factor	Reading Level	Measure Level	Margin	Limit	Detector Type
		(MHz)	(dB)	(dBm)	(dBm)	(dB)	(dBm)	
1		1673.200	10.076	-57.510	-47.434	-34.434	-13.000	PEAK
2		2509.800	14.963	-57.390	-42.427	-29.427	-13.000	PEAK
3		3346.400	17.758	-57.230	-39.471	-26.471	-13.000	PEAK
4		4183.000	19.427	-57.930	-38.503	-25.503	-13.000	PEAK
5		5019.600	20.436	-58.910	-38.473	-25.473	-13.000	PEAK
6	*	5856.200	22.512	-58.940	-36.429	-23.429	-13.000	PEAK

- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 1MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "\*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The Emission above 18GHz were not included is because their levels are too low.



Site : CB4-H	Time : 2017/05/23
Limit : FCC_Part22/24_00M_00M_PK	Margin : 6
Probe : CB4-H_CE_Sub_B432_1-18GHz_3M_1116 -	Power : DC 24V
VERTICAL	
EUT : 3G Cellular Alarm Communicator	Note : Mode 5: WCDMA Band 5_Link_836.6MHz

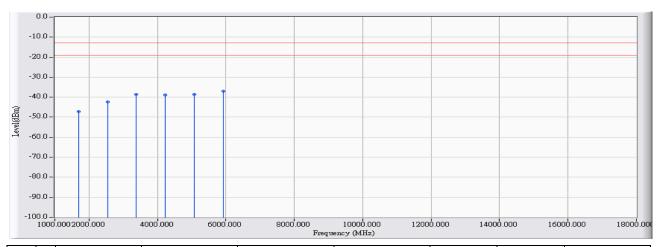


		Frequency	Correct Factor	Reading Level	Measure Level	Margin	Limit	Detector Type
		(MHz)	(dB)	(dBm)	(dBm)	(dB)	(dBm)	
1		1673.200	10.641	-57.860	-47.218	-34.218	-13.000	PEAK
2		2509.800	15.352	-57.810	-42.458	-29.458	-13.000	PEAK
3		3346.400	18.399	-57.300	-38.900	-25.900	-13.000	PEAK
4		4183.000	20.377	-58.480	-38.103	-25.103	-13.000	PEAK
5		5019.600	20.075	-59.160	-39.085	-26.085	-13.000	PEAK
6	*	5856.200	22.340	-59.060	-36.720	-23.720	-13.000	PEAK

- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 1MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "\*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The Emission above 18GHz were not included is because their levels are too low.



Site : CB4-H	Time: 2017/05/23
Limit : FCC_Part22/24_00M_00M_PK	Margin : 6
Probe : CB4-H_CE_Sub_B432_1-18GHz_3M_1116 -	Power : DC 24V
HORIZONTAL	
EUT : 3G Cellular Alarm Communicator	Note: Mode 5: WCDMA Band 5 Link 846.6MHz

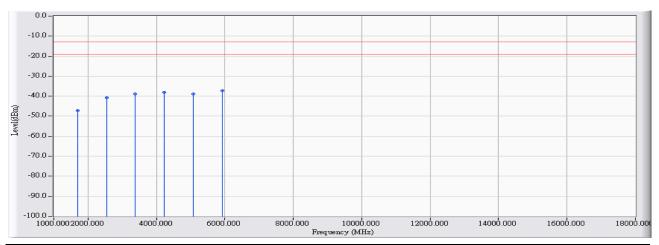


		Frequency	Correct Factor	Reading Level	Measure Level	Margin	Limit	Detector Type
		(MHz)	(dB)	(dBm)	(dBm)	(dB)	(dBm)	
1		1693.200	10.044	-57.320	-47.276	-34.276	-13.000	PEAK
2		2539.800	15.048	-57.390	-42.342	-29.342	-13.000	PEAK
3		3386.400	17.848	-56.390	-38.543	-25.543	-13.000	PEAK
4		4233.000	19.492	-58.450	-38.958	-25.958	-13.000	PEAK
5		5079.600	20.514	-59.050	-38.535	-25.535	-13.000	PEAK
6	*	5926.200	22.789	-59.780	-36.990	-23.990	-13.000	PEAK

- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 1MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "\*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The Emission above 18GHz were not included is because their levels are too low.



Site : CB4-H	Time : 2017/05/23
Limit : FCC_Part22/24_00M_00M_PK	Margin : 6
Probe : CB4-H_CE_Sub_B432_1-18GHz_3M_1116 -	Power : DC 24V
VERTICAL	
EUT : 3G Cellular Alarm Communicator	Note : Mode 5: WCDMA Band 5 Link 846.6MHz

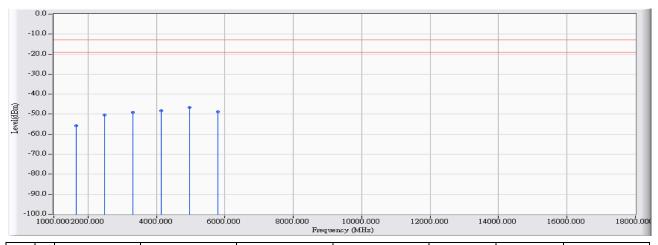


		Frequency	Correct Factor	Reading Level	Measure Level	Margin	Limit	Detector Type
		(MHz)	(dB)	(dBm)	(dBm)	(dB)	(dBm)	
1		1693.200	10.646	-57.960	-47.314	-34.314	-13.000	PEAK
2		2539.800	15.427	-56.220	-40.793	-27.793	-13.000	PEAK
3		3386.400	18.536	-57.520	-38.984	-25.984	-13.000	PEAK
4		4233.000	20.508	-58.660	-38.152	-25.152	-13.000	PEAK
5		5079.600	20.180	-59.030	-38.850	-25.850	-13.000	PEAK
6	*	5926.200	22.614	-59.930	-37.316	-24.316	-13.000	PEAK

- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 1MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "\*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The Emission above 18GHz were not included is because their levels are too low.



Site : CB4-H	Time : 2017/05/23
Limit : FCC_Part22/24_00M_00M_PK	Margin : 6
Probe : CB4-H_CE_Sub_B432_1-18GHz_3M_1116 -	Power : DC 24V
HORIZONTAL	
EUT : 3G Cellular Alarm Communicator	Note : Mode 6: WCDMA Band 5 HSUPA Link 826.4MHz

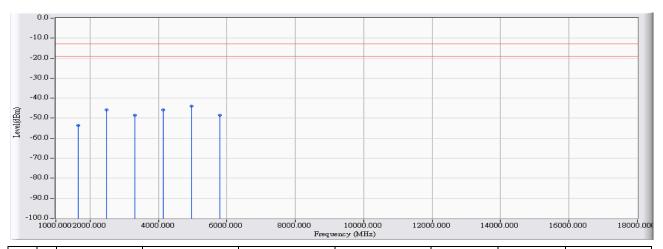


		Frequency	Correct Factor	Reading Level	Measure Level	Margin	Limit	Detector Type
		(MHz)	(dB)	(dBm)	(dBm)	(dB)	(dBm)	
1		1652.800	10.110	-65.830	-55.721	-42.721	-13.000	PEAK
2		2479.200	14.993	-65.370	-50.377	-37.377	-13.000	PEAK
3		3305.600	17.669	-66.680	-49.011	-36.011	-13.000	PEAK
4		4132.000	19.358	-67.650	-48.292	-35.292	-13.000	PEAK
5	*	4958.400	22.667	-69.240	-46.573	-33.573	-13.000	PEAK
6		5784.800	22.228	-71.000	-48.773	-35.773	-13.000	PEAK

- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 1MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "\*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The Emission above 18GHz were not included is because their levels are too low.



Site : CB4-H	Time : 2017/05/31
Limit : FCC_Part22/24_00M_00M_PK	Margin : 6
Probe : CB4-H_CE_Sub_B432_1-18GHz_3M_1116 -	Power : DC 24V
VERTICAL	
EUT : 3G Cellular Alarm Communicator	Note : Mode 6: WCDMA Band 5 HSUPA Link 826.4MHz

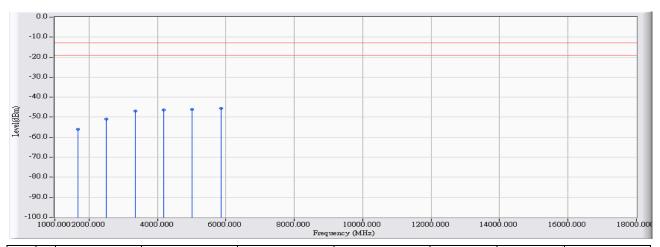


		Frequency	Correct Factor	Reading Level	Measure Level	Margin	Limit	Detector Type
		(MHz)	(dB)	(dBm)	(dBm)	(dB)	(dBm)	
1		1652.800	10.638	-64.180	-53.543	-40.543	-13.000	PEAK
2		2479.200	15.344	-61.120	-45.777	-32.777	-13.000	PEAK
3		3305.600	18.262	-66.680	-48.419	-35.419	-13.000	PEAK
4		4132.000	20.240	-66.190	-45.951	-32.951	-13.000	PEAK
5	*	4958.400	23.171	-67.140	-43.969	-30.969	-13.000	PEAK
6		5784.800	22.061	-70.640	-48.580	-35.580	-13.000	PEAK

- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 1MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "\*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The Emission above 18GHz were not included is because their levels are too low.



Site : CB4-H	Time: 2017/05/31
Limit : FCC_Part22/24_00M_00M_PK	Margin : 6
Probe : CB4-H_CE_Sub_B432_1-18GHz_3M_1116 -	Power : DC 24V
HORIZONTAL	
EUT : 3G Cellular Alarm Communicator	Note: Mode 6: WCDMA Band 5 HSUPA Link 836.6MHz

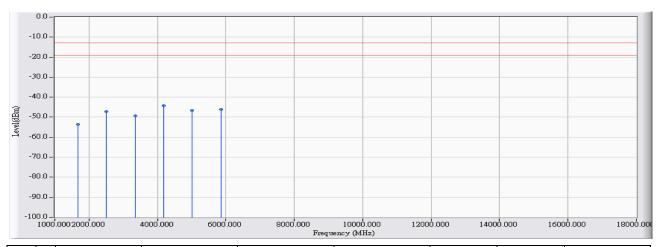


		Frequency	Correct Factor	Reading Level	Measure Level	Margin	Limit	Detector Type
		(MHz)	(dB)	(dBm)	(dBm)	(dB)	(dBm)	
1		1673.200	10.076	-66.130	-56.054	-43.054	-13.000	PEAK
2		2509.800	14.963	-65.970	-51.007	-38.007	-13.000	PEAK
3		3346.400	17.758	-64.660	-46.901	-33.901	-13.000	PEAK
4		4183.000	19.427	-65.760	-46.333	-33.333	-13.000	PEAK
5		5019.600	20.436	-66.500	-46.063	-33.063	-13.000	PEAK
6	*	5856.200	22.512	-68.040	-45.529	-32.529	-13.000	PEAK

- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 1MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "\*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The Emission above 18GHz were not included is because their levels are too low.



Site : CB4-H	Time : 2017/05/31
Limit : FCC_Part22/24_00M_00M_PK	Margin : 6
Probe : CB4-H_CE_Sub_B432_1-18GHz_3M_1116 -	Power : DC 24V
VERTICAL	
EUT : 3G Cellular Alarm Communicator	Note : Mode 6: WCDMA Band 5 HSUPA Link 836.6MHz

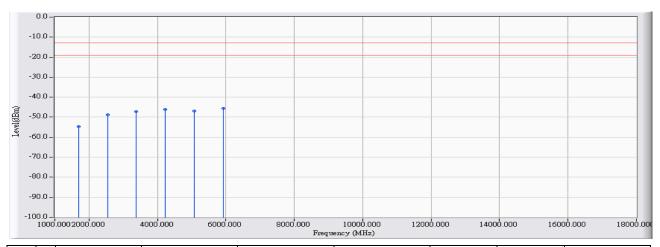


		Frequency	Correct Factor	Reading Level	Measure Level	Margin	Limit	Detector Type
		(MHz)	(dB)	(dBm)	(dBm)	(dB)	(dBm)	
1		1673.200	10.641	-64.220	-53.578	-40.578	-13.000	PEAK
2		2509.800	15.352	-62.460	-47.108	-34.108	-13.000	PEAK
3		3346.400	18.399	-67.760	-49.360	-36.360	-13.000	PEAK
4	*	4183.000	20.377	-64.700	-44.323	-31.323	-13.000	PEAK
5		5019.600	20.075	-66.720	-46.645	-33.645	-13.000	PEAK
6		5856.200				-33.000	-13.000	

- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 1MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "\*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The Emission above 18GHz were not included is because their levels are too low.



Site : CB4-H	Time : 2017/05/31
Limit : FCC_Part22/24_00M_00M_PK	Margin : 6
Probe : CB4-H_CE_Sub_B432_1-18GHz_3M_1116 -	Power : DC 24V
HORIZONTAL	
EUT : 3G Cellular Alarm Communicator	Note : Mode 6: WCDMA Band 5 HSUPA Link 846.6MHz

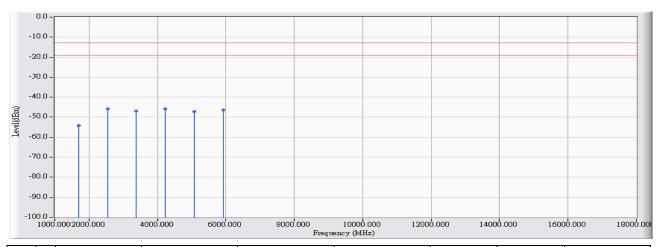


		Frequency	Correct Factor	Reading Level	Measure Level	Margin	Limit	Detector Type
		(MHz)	(dB)	(dBm)	(dBm)	(dB)	(dBm)	
1		1693.200	10.044	-64.620	-54.576	-41.576	-13.000	PEAK
2		2539.800	15.048	-63.880	-48.832	-35.832	-13.000	PEAK
3		3386.400	17.848	-65.070	-47.223	-34.223	-13.000	PEAK
4		4233.000	19.492	-65.510	-46.018	-33.018	-13.000	PEAK
5		5079.600	20.514	-67.370	-46.855	-33.855	-13.000	PEAK
6	*	5926.200	22.789	-68.390	-45.600	-32.600	-13.000	PEAK

- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 1MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "\*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The Emission above 18GHz were not included is because their levels are too low.



Site : CB4-H	Time: 2017/05/31
Limit : FCC_Part22/24_00M_00M_PK	Margin : 6
Probe : CB4-H_CE_Sub_B432_1-18GHz_3M_1116 -	Power : DC 24V
VERTICAL	
EUT : 3G Cellular Alarm Communicator	Note : Mode 6: WCDMA Band 5 HSUPA Link 846.6MHz

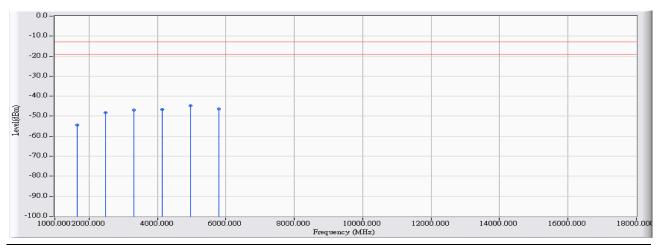


		Frequency	Correct Factor	Reading Level	Measure Level	Margin	Limit	Detector Type
		(MHz)	(dB)	(dBm)	(dBm)	(dB)	(dBm)	
1		1693.200	10.646	-64.780	-54.134	-41.134	-13.000	PEAK
2		2539.800	15.427	-61.330	-45.903	-32.903	-13.000	PEAK
3		3386.400	18.536	-65.420	-46.884	-33.884	-13.000	PEAK
4	*	4233.000	20.508	-66.240	-45.732	-32.732	-13.000	PEAK
5		5079.600	20.180	-67.420	-47.240	-34.240	-13.000	PEAK
6		5926.200			-46.426	-33.426	-13.000	

- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 1MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "\*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The Emission above 18GHz were not included is because their levels are too low.



Site : CB4-H	Time: 2017/05/31
Limit : FCC_Part22/24_00M_00M_PK	Margin : 6
Probe : CB4-H_CE_Sub_B432_1-18GHz_3M_1116 -	Power : DC 24V
HORIZONTAL	
EUT : 3G Cellular Alarm Communicator	Note: Mode 7: WCDMA Band 5 HSDPA Link 826.4MHz

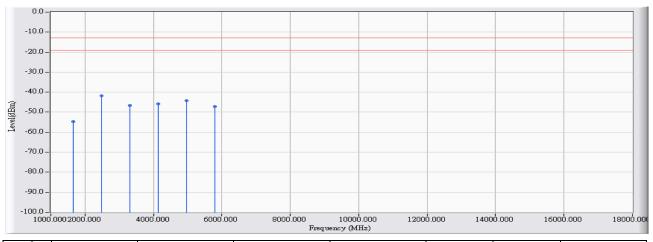


		Frequency	Correct Factor	Reading Level	Measure Level	Margin	Limit	Detector Type
		(MHz)	(dB)	(dBm)	(dBm)	(dB)	(dBm)	
1		1652.800	10.110	-64.610	-54.501	-41.501	-13.000	PEAK
2		2479.200	14.993	-63.340	-48.347	-35.347	-13.000	PEAK
3		3305.600	17.669	-64.480	-46.811	-33.811	-13.000	PEAK
4		4132.000	19.358	-66.010	-46.652	-33.652	-13.000	PEAK
5	*	4958.400	22.667	-67.320	-44.653	-31.653	-13.000	PEAK
6		5784.800	22.228	-68.600	-46.373	-33.373	-13.000	PEAK

- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 1MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "\*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The Emission above 18GHz were not included is because their levels are too low.



Site : CB4-H	Time : 2017/05/31
Limit : FCC_Part22/24_00M_00M_PK	Margin : 6
Probe : CB4-H_CE_Sub_B432_1-18GHz_3M_1116 -	Power : DC 24V
VERTICAL	
EUT : 3G Cellular Alarm Communicator	Note: Mode 7: WCDMA Band 5 HSDPA Link 826.4MHz

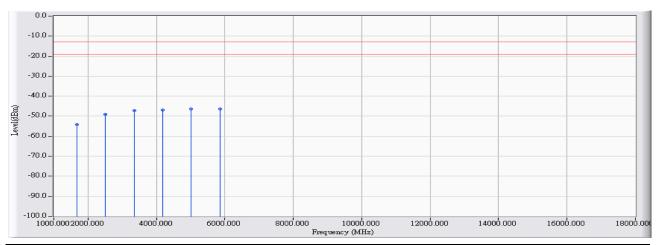


		Frequency	Correct Factor	Reading Level	Measure Level	Margin	Limit	Detector Type
		(MHz)	(dB)	(dBm)	(dBm)	(dB)	(dBm)	
1		1652.800	10.638	-65.360	-54.723	-41.723	-13.000	PEAK
2	*	2479.200	15.344	-57.240	-41.897	-28.897	-13.000	PEAK
3		3305.600	18.262	-65.010	-46.749	-33.749	-13.000	PEAK
4		4132.000	20.240	-66.120	-45.881	-32.881	-13.000	PEAK
5		4958.400	23.171	-67.280	-44.109	-31.109	-13.000	PEAK
6		5784.800	22.061	-69.270	-47.210	-34.210	-13.000	PEAK

- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 1MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "\*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The Emission above 18GHz were not included is because their levels are too low.



Site : CB4-H	Time : 2017/05/31
Limit : FCC_Part22/24_00M_00M_PK	Margin : 6
Probe : CB4-H_CE_Sub_B432_1-18GHz_3M_1116 -	Power : DC 24V
HORIZONTAL	
EUT : 3G Cellular Alarm Communicator	Note: Mode 7: WCDMA Band 5 HSDPA Link 836.6MHz

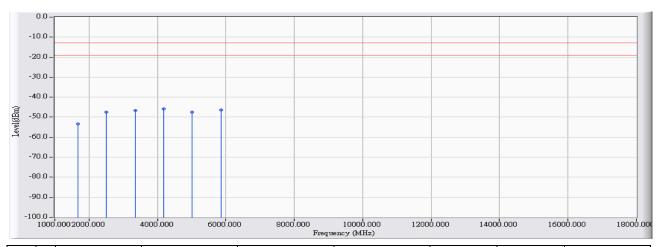


		Frequency	Correct Factor	Reading Level	Measure Level	Margin	Limit	Detector Type
		(MHz)	(dB)	(dBm)	(dBm)	(dB)	(dBm)	
1		1673.200	10.076	-64.350	-54.274	-41.274	-13.000	PEAK
2		2509.800	14.963	-63.940	-48.977	-35.977	-13.000	PEAK
3		3346.400	17.758	-64.920	-47.161	-34.161	-13.000	PEAK
4		4183.000	19.427	-66.450	-47.023	-34.023	-13.000	PEAK
5	*	5019.600	20.436	-66.790	-46.353	-33.353	-13.000	PEAK
6		5856.200	22.512	-68.900	-46.389	-33.389	-13.000	PEAK

- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 1MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "\*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The Emission above 18GHz were not included is because their levels are too low.



Site : CB4-H	Time : 2017/05/31
Limit : FCC_Part22/24_00M_00M_PK	Margin : 6
Probe : CB4-H_CE_Sub_B432_1-18GHz_3M_1116 -	Power : DC 24V
VERTICAL	
EUT : 3G Cellular Alarm Communicator	Note: Mode 7: WCDMA Band 5 HSDPA Link 836.6MHz

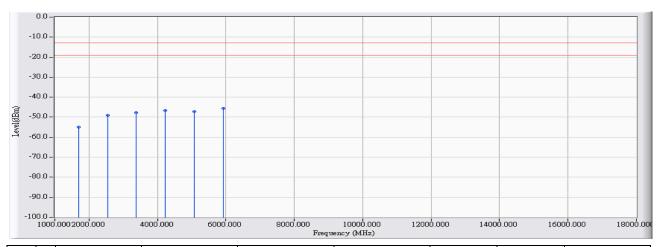


		Frequency	Correct Factor	Reading Level	Measure Level	Margin	Limit	Detector Type
		(MHz)	(dB)	(dBm)	(dBm)	(dB)	(dBm)	
1		1673.200	10.641	-64.050	-53.408	-40.408	-13.000	PEAK
2		2509.800	15.352	-62.780	-47.428	-34.428	-13.000	PEAK
3		3346.400	18.399	-64.930	-46.530	-33.530	-13.000	PEAK
4	*	4183.000	20.377	-66.220	-45.843	-32.843	-13.000	PEAK
5		5019.600	20.075	-67.490	-47.415	-34.415	-13.000	PEAK
6		5856.200			-46.270	-33.270	-13.000	

- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 1MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "\*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The Emission above 18GHz were not included is because their levels are too low.



Site : CB4-H	Time: 2017/05/31
Limit : FCC_Part22/24_00M_00M_PK	Margin : 6
Probe : CB4-H_CE_Sub_B432_1-18GHz_3M_1116 -	Power : DC 24V
HORIZONTAL	
EUT : 3G Cellular Alarm Communicator	Note: Mode 7: WCDMA Band 5 HSDPA Link 846.6MHz

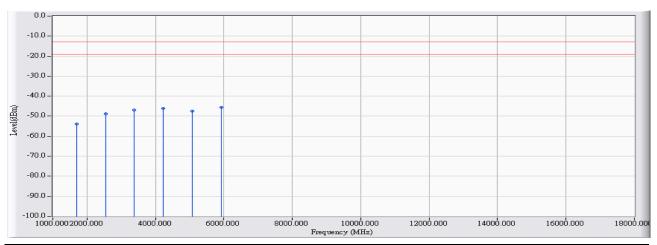


		Frequency	Correct Factor	Reading Level	Measure Level	Margin	Limit	Detector Type
		(MHz)	(dB)	(dBm)	(dBm)	(dB)	(dBm)	
1		1693.200	10.044	-64.880	-54.836	-41.836	-13.000	PEAK
2		2539.800	15.048	-64.000	-48.952	-35.952	-13.000	PEAK
3		3386.400	17.848	-65.670	-47.823	-34.823	-13.000	PEAK
4		4233.000	19.492	-66.170	-46.678	-33.678	-13.000	PEAK
5		5079.600	20.514	-67.770	-47.255	-34.255	-13.000	PEAK
6	*	5926.200	22.789	-68.360	-45.570	-32.570	-13.000	PEAK

- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 1MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "\*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The Emission above 18GHz were not included is because their levels are too low.



Site : CB4-H	Time : 2017/05/31
Limit : FCC_Part22/24_00M_00M_PK	Margin : 6
Probe : CB4-H_CE_Sub_B432_1-18GHz_3M_1116 -	Power : DC 24V
VERTICAL	
EUT : 3G Cellular Alarm Communicator	Note: Mode 7: WCDMA Band 5 HSDPA Link 846.6MHz

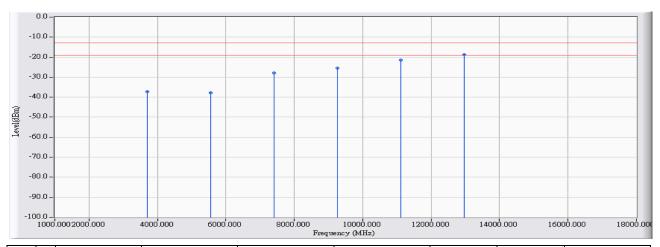


		Frequency	Correct Factor	Reading Level	Measure Level	Margin	Limit	Detector Type
		(MHz)	(dB)	(dBm)	(dBm)	(dB)	(dBm)	
1		1693.200	10.646	-64.530	-53.884	-40.884	-13.000	PEAK
2		2539.800	15.427	-64.310	-48.883	-35.883	-13.000	PEAK
3		3386.400	18.536	-65.550	-47.014	-34.014	-13.000	PEAK
4		4233.000	20.508	-66.560	-46.052	-33.052	-13.000	PEAK
5		5079.600	20.180	-67.700	-47.520	-34.520	-13.000	PEAK
6	*	5926.200	22.614	-68.160	-45.546	-32.546	-13.000	PEAK

- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 1MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "\*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The Emission above 18GHz were not included is because their levels are too low.



Site : CB4-H	Time : 2017/05/23
Limit : FCC_Part22/24_00M_00M_PK	Margin : 6
Probe : CB4-H_CE_Sub_B432_1-18GHz_3M_1116 -	Power : DC 24V
HORIZONTAL	
EUT : 3G Cellular Alarm Communicator	Note: Mode 8: WCDMA Band 2 Link 1852.4MHz

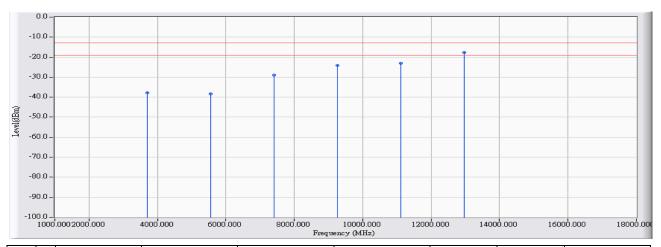


		Frequency	Correct Factor	Reading Level	Measure Level	Margin	Limit	Detector Type
		(MHz)	(dB)	(dBm)	(dBm)	(dB)	(dBm)	
1		3704.800	18.657	-55.870	-37.213	-24.213	-13.000	PEAK
2		5557.200	21.266	-59.200	-37.934	-24.934	-13.000	PEAK
3		7409.600	28.781	-56.560	-27.779	-14.779	-13.000	PEAK
4		9262.000	33.016	-58.400	-25.385	-12.385	-13.000	PEAK
5		11114.400	36.234	-57.660	-21.425	-8.425	-13.000	PEAK
6	*	12966.800	38.618	-57.420	-18.802	-5.802	-13.000	PEAK

- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 1MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "\*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The Emission above 18GHz were not included is because their levels are too low.



Site : CB4-H	Time : 2017/05/23
Limit : FCC_Part22/24_00M_00M_PK	Margin : 6
Probe : CB4-H_CE_Sub_B432_1-18GHz_3M_1116 -	Power : DC 24V
VERTICAL	
EUT : 3G Cellular Alarm Communicator	Note : Mode 8: WCDMA Band 2_Link_1852.4MHz

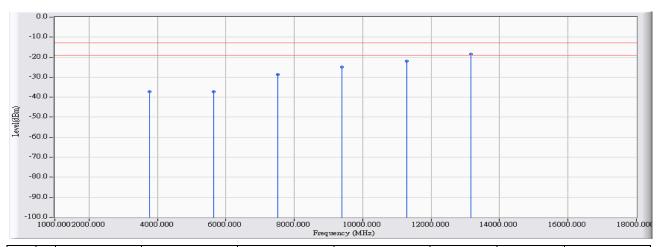


		Frequency	Correct Factor	Reading Level	Measure Level	Margin	Limit	Detector Type
		(MHz)	(dB)	(dBm)	(dBm)	(dB)	(dBm)	
1		3704.800	19.458	-57.200	-37.742	-24.742	-13.000	PEAK
2		5557.200	21.112	-59.410	-38.298	-25.298	-13.000	PEAK
3		7409.600	28.595	-57.570	-28.975	-15.975	-13.000	PEAK
4		9262.000	34.287	-58.290	-24.004	-11.004	-13.000	PEAK
5		11114.400	35.145	-58.260	-23.115	-10.115	-13.000	PEAK
6	*	12966.800	39.804	-57.410	-17.605	-4.605	-13.000	

- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 1MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "\*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The Emission above 18GHz were not included is because their levels are too low.



Site : CB4-H	Time: 2017/05/23
Limit : FCC_Part22/24_00M_00M_PK	Margin : 6
Probe : CB4-H_CE_Sub_B432_1-18GHz_3M_1116 -	Power : DC 24V
HORIZONTAL	
EUT : 3G Cellular Alarm Communicator	Note: Mode 8: WCDMA Band 2 Link 1880MHz

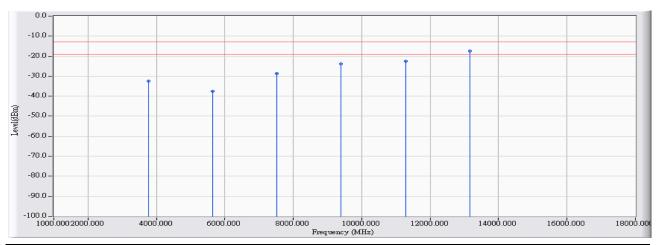


		Frequency	Correct Factor	Reading Level	Measure Level	Margin	Limit	Detector Type
		(MHz)	(dB)	(dBm)	(dBm)	(dB)	(dBm)	
1		3760.000	18.797	-56.040	-37.244	-24.244	-13.000	PEAK
2		5640.000	21.619	-58.820	-37.201	-24.201	-13.000	PEAK
3		7520.000	28.931	-57.690	-28.759	-15.759	-13.000	PEAK
4		9400.000	33.161	-58.040	-24.878	-11.878	-13.000	PEAK
5		11280.000	36.329	-58.310	-21.981	-8.981	-13.000	PEAK
6	*	13160.000	38.672	-57.100	-18.428	-5.428	-13.000	PEAK

- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 1MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "\*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The Emission above 18GHz were not included is because their levels are too low.



Site : CB4-H	Time : 2017/05/23
Limit : FCC_Part22/24_00M_00M_PK	Margin : 6
Probe : CB4-H_CE_Sub_B432_1-18GHz_3M_1116 -	Power : DC 24V
VERTICAL	
EUT : 3G Cellular Alarm Communicator	Note: Mode 8: WCDMA Band 2 Link 1880MHz

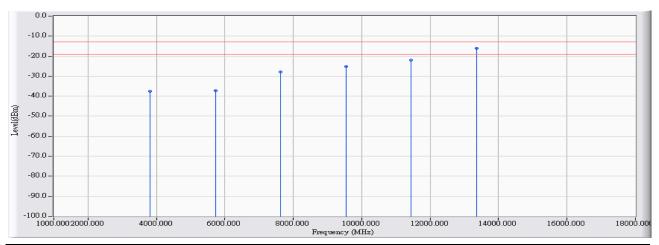


		Frequency	Correct Factor	Reading Level	Measure Level	Margin	Limit	Detector Type
		(MHz)	(dB)	(dBm)	(dBm)	(dB)	(dBm)	
1		3760.000	19.589	-52.080	-32.491	-19.491	-13.000	PEAK
2		5640.000	21.461	-58.890	-37.429	-24.429	-13.000	PEAK
3		7520.000	29.017	-57.730	-28.714	-15.714	-13.000	PEAK
4		9400.000	34.623	-58.590	-23.966	-10.966	-13.000	PEAK
5		11280.000	35.703	-58.130	-22.427	-9.427	-13.000	PEAK
6	*	13160.000	39.992	-57.430	-17.438	-4.438	-13.000	PEAK

- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 1MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "\*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The Emission above 18GHz were not included is because their levels are too low.



Site : CB4-H	Time : 2017/05/23
Limit : FCC_Part22/24_00M_00M_PK	Margin : 6
Probe : CB4-H_CE_Sub_B432_1-18GHz_3M_1116 -	Power : DC 24V
HORIZONTAL	
EUT : 3G Cellular Alarm Communicator	Note : Mode 8: WCDMA Band 2_Link_1907.6MHz

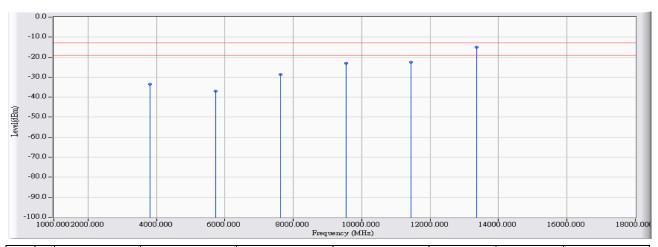


		Frequency	Correct Factor	Reading Level	Measure Level	Margin	Limit	Detector Type
		(MHz)	(dB)	(dBm)	(dBm)	(dB)	(dBm)	
1		3815.200	18.884	-56.410	-37.526	-24.526	-13.000	PEAK
2		5722.800	21.972	-59.200	-37.227	-24.227	-13.000	PEAK
3		7630.400	29.366	-57.260	-27.893	-14.893	-13.000	PEAK
4		9538.000	33.377	-58.520	-25.142	-12.142	-13.000	PEAK
5		11445.600	36.375	-58.380	-22.006	-9.006	-13.000	PEAK
6	*	13353.200	38.844	-54.940	-16.095	-3.095	-13.000	PEAK

- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 1MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "\*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The Emission above 18GHz were not included is because their levels are too low.



Site : CB4-H	Time : 2017/05/23
Limit : FCC_Part22/24_00M_00M_PK	Margin : 6
Probe : CB4-H_CE_Sub_B432_1-18GHz_3M_1116 -	Power : DC 24V
VERTICAL	
EUT : 3G Cellular Alarm Communicator	Note: Mode 8: WCDMA Band 2 Link 1907.6MHz

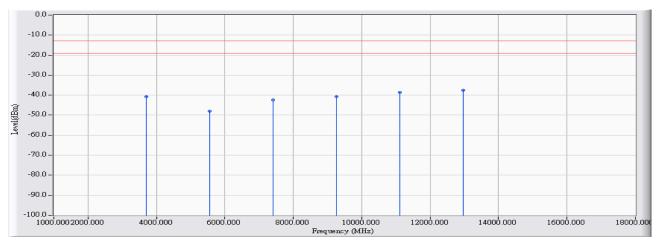


		Frequency	Correct Factor	Reading Level	Measure Level	Margin	Limit	Detector Type
		(MHz)	(dB)	(dBm)	(dBm)	(dB)	(dBm)	
1		3815.200	19.656	-53.280	-33.624	-20.624	-13.000	PEAK
2		5722.800	21.809	-58.890	-37.081	-24.081	-13.000	PEAK
3		7630.400	29.262	-58.010	-28.747	-15.747	-13.000	PEAK
4		9538.000	34.914	-58.100	-23.185	-10.185	-13.000	PEAK
5		11445.600	36.212	-58.810	-22.598	-9.598	-13.000	PEAK
6	*	13353.200	40.368	-55.330	-14.961	-1.961	-13.000	PEAK

- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 1MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "\*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The Emission above 18GHz were not included is because their levels are too low.



Site : CB4-H	Time : 2017/05/31
Limit : FCC_Part22/24_00M_00M_PK	Margin : 6
Probe : CB4-H_CE_Sub_B432_1-18GHz_3M_1116 -	Power : DC 24V
HORIZONTAL	
EUT : 3G Cellular Alarm Communicator	Note : Mode 9: WCDMA Band 2_HSUPA_Link
	_1852.4MHz

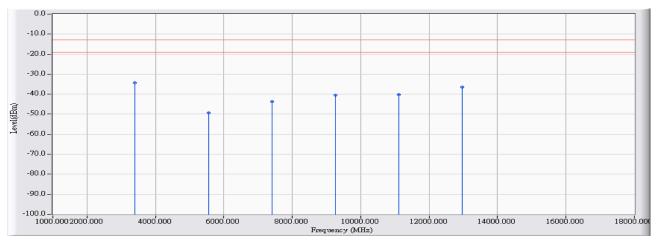


		Frequency	Correct Factor	Reading Level	Measure Level	Margin	Limit	Detector Type
		(MHz)	(dB)	(dBm)	(dBm)	(dB)	(dBm)	
1		3704.800	18.657	-59.510	-40.853	-27.853	-13.000	PEAK
2		5557.200	21.266	-69.170	-47.904	-34.904	-13.000	PEAK
3		7409.600	28.781	-71.090	-42.309	-29.309	-13.000	PEAK
4		9262.000	33.016	-73.710	-40.695	-27.695	-13.000	PEAK
5		11114.400	36.234	-74.930	-38.695	-25.695	-13.000	PEAK
6	*	12966.800	38.618	-76.250	-37.632	-24.632	-13.000	PEAK

- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 1MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "\*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The Emission above 18GHz were not included is because their levels are too low.



Site : CB4-H	Time : 2017/05/31
Limit : FCC_Part22/24_00M_00M_PK	Margin : 6
Probe : CB4-H_CE_Sub_B432_1-18GHz_3M_1116 -	Power : DC 24V
VERTICAL	
EUT : 3G Cellular Alarm Communicator	Note : Mode 9: WCDMA Band 2_HSUPA_Link
	_1852.4MHz

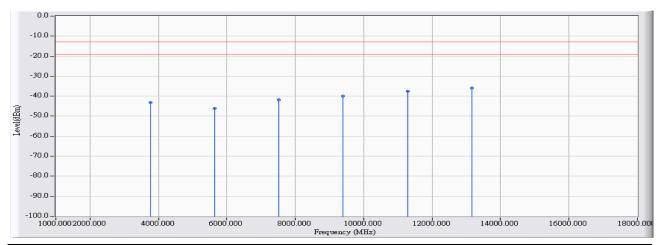


		Frequency	Correct Factor	Reading Level	Measure Level	Margin	Limit	Detector Type
		(MHz)	(dB)	(dBm)	(dBm)	(dB)	(dBm)	
1	*	3407.800	18.607	-52.860	-34.253	-21.253	-13.000	PEAK
2		5557.200	21.112	-70.520	-49.408	-36.408	-13.000	PEAK
3		7409.600	28.595	-72.320	-43.725	-30.725	-13.000	PEAK
4		9262.000	34.287	-74.710	-40.424	-27.424	-13.000	PEAK
5		11114.400	35.145	-75.280	-40.135	-27.135	-13.000	PEAK
6		12966.800	39.804	-76.360	-36.555	-23.555	-13.000	PEAK

- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 1MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "\*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The Emission above 18GHz were not included is because their levels are too low.



Site : CB4-H	Time: 2017/05/31
Limit : FCC_Part22/24_00M_00M_PK	Margin : 6
Probe : CB4-H_CE_Sub_B432_1-18GHz_3M_1116 -	Power : DC 24V
HORIZONTAL	
EUT : 3G Cellular Alarm Communicator	Note: Mode 9: WCDMA Band 2_HSUPA_Link_1880MHz

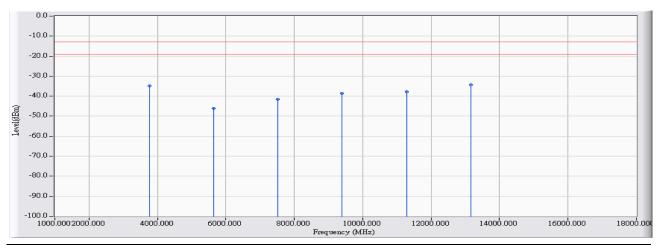


		Frequency	Correct Factor	Reading Level	Measure Level	Margin	Limit	Detector Type
		(MHz)	(dB)	(dBm)	(dBm)	(dB)	(dBm)	
1		3760.000	18.797	-62.090	-43.294	-30.294	-13.000	PEAK
2		5640.000	21.619	-67.830	-46.211	-33.211	-13.000	PEAK
3		7520.000	28.931	-70.730	-41.799	-28.799	-13.000	PEAK
4		9400.000	33.161	-73.020	-39.858	-26.858	-13.000	PEAK
5		11280.000	36.329	-73.890	-37.561	-24.561	-13.000	PEAK
6	*	13160.000	38.672	-74.480	-35.808	-22.808	-13.000	PEAK

- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 1MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "\*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The Emission above 18GHz were not included is because their levels are too low.



Site : CB4-H	Time : 2017/05/31
Limit : FCC_Part22/24_00M_00M_PK	Margin : 6
Probe : CB4-H_CE_Sub_B432_1-18GHz_3M_1116 -	Power : DC 24V
VERTICAL	
EUT : 3G Cellular Alarm Communicator	Note : Mode 9: WCDMA Band 2 HSUPA Link 1880MHz

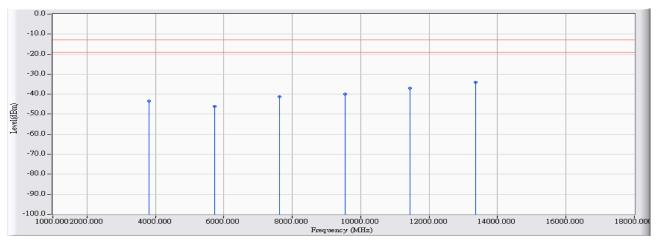


		Frequency	Correct Factor	Reading Level	Measure Level	Margin	Limit	Detector Type
		(MHz)	(dB)	(dBm)	(dBm)	(dB)	(dBm)	
1		3760.000	19.589	-54.470	-34.881	-21.881	-13.000	PEAK
2		5640.000	21.461	-67.500	-46.039	-33.039	-13.000	PEAK
3		7520.000	29.017	-70.500	-41.484	-28.484	-13.000	PEAK
4		9400.000	34.623	-73.230	-38.606	-25.606	-13.000	PEAK
5		11280.000	35.703	-73.470	-37.767	-24.767	-13.000	PEAK
6	*	13160.000	39.992	-74.330	-34.338	-21.338	-13.000	PEAK

- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 1MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "\*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The Emission above 18GHz were not included is because their levels are too low.



Site : CB4-H	Time : 2017/05/31
Limit : FCC_Part22/24_00M_00M_PK	Margin : 6
Probe : CB4-H_CE_Sub_B432_1-18GHz_3M_1116 -	Power : DC 24V
HORIZONTAL	
EUT : 3G Cellular Alarm Communicator	Note : Mode 9: WCDMA Band 2_HSUPA_Link
	_1907.6MHz

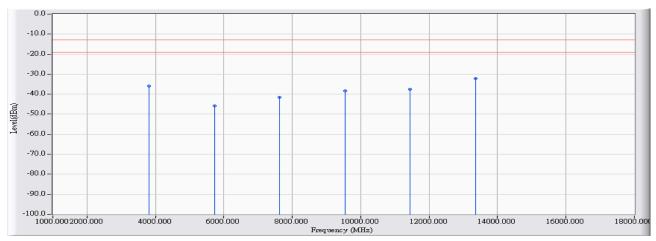


		Frequency	Correct Factor	Reading Level	Measure Level	Margin	Limit	Detector Type
		(MHz)	(dB)	(dBm)	(dBm)	(dB)	(dBm)	
1		3815.200	18.884	-62.440	-43.556	-30.556	-13.000	PEAK
2		5722.800	21.972	-68.040	-46.067	-33.067	-13.000	PEAK
3		7630.400	29.366	-70.690	-41.323	-28.323	-13.000	PEAK
4		9538.000	33.377	-73.230	-39.852	-26.852	-13.000	PEAK
5		11445.600	36.375	-73.330	-36.956	-23.956	-13.000	PEAK
6	*	13353.200	38.844	-72.780	-33.935	-20.935	-13.000	PEAK

- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 1MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "\*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The Emission above 18GHz were not included is because their levels are too low.



Site : CB4-H	Time : 2017/05/31
Limit : FCC_Part22/24_00M_00M_PK	Margin : 6
Probe : CB4-H_CE_Sub_B432_1-18GHz_3M_1116 -	Power : DC 24V
VERTICAL	
EUT : 3G Cellular Alarm Communicator	Note : Mode 9: WCDMA Band 2_HSUPA_Link
	_1907.6MHz

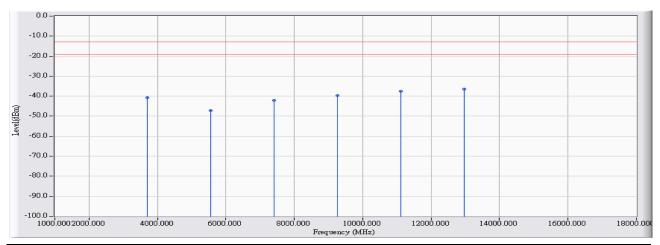


		Frequency	Correct Factor	Reading Level	Measure Level	Margin	Limit	Detector Type
		(MHz)	(dB)	(dBm)	(dBm)	(dB)	(dBm)	
1		3815.200	19.656	-55.580	-35.924	-22.924	-13.000	PEAK
2		5722.800	21.809	-67.750	-45.941	-32.941	-13.000	PEAK
3		7630.400	29.262	-70.900	-41.637	-28.637	-13.000	PEAK
4		9538.000	34.914	-73.350	-38.435	-25.435	-13.000	PEAK
5		11445.600	36.212	-73.700	-37.488	-24.488	-13.000	PEAK
6	*	13353.200	40.368	-72.620	-32.251	-19.251	-13.000	PEAK

- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 1MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "\*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The Emission above 18GHz were not included is because their levels are too low.



Site : CB4-H	Time : 2017/05/31
Limit : FCC_Part22/24_00M_00M_PK	Margin : 6
Probe : CB4-H_CE_Sub_B432_1-18GHz_3M_1116 -	Power : DC 24V
HORIZONTAL	
EUT : 3G Cellular Alarm Communicator	Note : Mode 10: WCDMA Band 2_HSDPA_Link
	_1852.4MHz

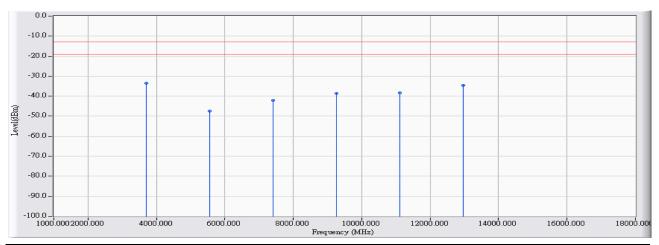


		Frequency	Correct Factor	Reading Level	Measure Level	Margin	Limit	Detector Type
		(MHz)	(dB)	(dBm)	(dBm)	(dB)	(dBm)	
1		3704.800	18.657	-59.370	-40.713	-27.713	-13.000	PEAK
2		5557.200	21.266	-68.530	-47.264	-34.264	-13.000	PEAK
3		7409.600	28.781	-70.790	-42.009	-29.009	-13.000	PEAK
4		9262.000	33.016	-72.660	-39.645	-26.645	-13.000	PEAK
5		11114.400	36.234	-73.870	-37.635	-24.635	-13.000	PEAK
6	*	12966.800	38.618	-75.010	-36.392	-23.392	-13.000	PEAK

- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 1MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "\*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The Emission above 18GHz were not included is because their levels are too low.



Site : CB4-H	Time : 2017/05/31
Limit : FCC_Part22/24_00M_00M_PK	Margin : 6
Probe : CB4-H_CE_Sub_B432_1-18GHz_3M_1116 -	Power : DC 24V
VERTICAL	
EUT : 3G Cellular Alarm Communicator	Note : Mode 10: WCDMA Band 2 HSDPA Link
	1852.4MHz

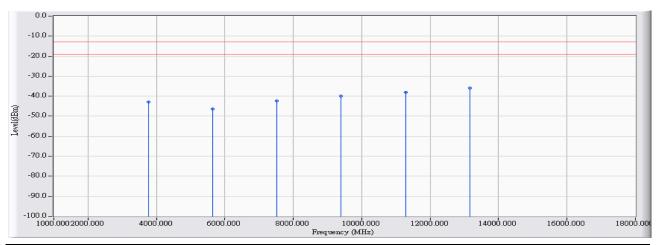


		Frequency	Correct Factor	Reading Level	Measure Level	Margin	Limit	Detector Type
		(MHz)	(dB)	(dBm)	(dBm)	(dB)	(dBm)	
1	*	3704.800	19.458	-53.070	-33.612	-20.612	-13.000	PEAK
2		5557.200	21.112	-68.520	-47.408	-34.408	-13.000	PEAK
3		7409.600	28.595	-70.740	-42.145	-29.145	-13.000	PEAK
4		9262.000	34.287	-72.790	-38.504	-25.504	-13.000	PEAK
5		11114.400	35.145	-73.530	-38.385	-25.385	-13.000	PEAK
6		12966.800	39.804	-74.300	-34.495	-21.495	-13.000	PEAK

- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 1MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "\*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The Emission above 18GHz were not included is because their levels are too low.



Site : CB4-H	Time : 2017/05/31
Limit : FCC_Part22/24_00M_00M_PK	Margin : 6
Probe : CB4-H_CE_Sub_B432_1-18GHz_3M_1116 -	Power : DC 24V
HORIZONTAL	
EUT : 3G Cellular Alarm Communicator	Note : Mode 10: WCDMA Band 2_HSDPA_Link
	_1880MHz

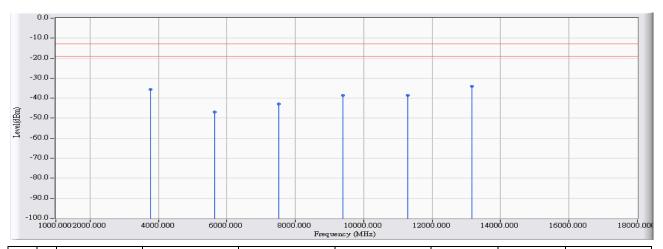


		Frequency	Correct Factor	Reading Level	Measure Level	Margin	Limit	Detector Type
		(MHz)	(dB)	(dBm)	(dBm)	(dB)	(dBm)	
1		3760.000	18.797	-61.710	-42.914	-29.914	-13.000	PEAK
2		5640.000	21.619	-68.050	-46.431	-33.431	-13.000	PEAK
3		7520.000	28.931	-71.370	-42.439	-29.439	-13.000	PEAK
4		9400.000	33.161	-73.050	-39.888	-26.888	-13.000	PEAK
5		11280.000	36.329	-74.350	-38.021	-25.021	-13.000	PEAK
6	*	13160.000	38.672	-74.580	-35.908	-22.908	-13.000	PEAK

- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 1MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "\*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The Emission above 18GHz were not included is because their levels are too low.



Site : CB4-H	Time : 2017/05/31
Limit : FCC_Part22/24_00M_00M_PK	Margin : 6
Probe : CB4-H_CE_Sub_B432_1-18GHz_3M_1116 -	Power : DC 24V
VERTICAL	
EUT : 3G Cellular Alarm Communicator	Note : Mode 10: WCDMA Band 2_HSDPA_Link
	1880MHz

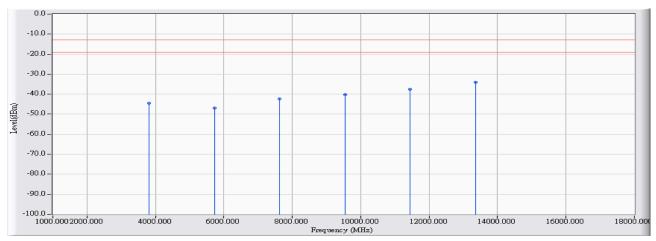


	Frequency	Correct Factor	Reading Level	Measure Level	Margin	Limit	Detector Type
	(MHz)	(dB)	(dBm)	(dBm)	(dB)	(dBm)	
1	3760.000	19.589	-55.140	-35.551	-22.551	-13.000	PEAK
2	5640.000	21.461	-68.370	-46.909	-33.909	-13.000	PEAK
3	7520.000	29.017	-71.820	-42.804	-29.804	-13.000	PEAK
4	9400.000	34.623	-73.320	-38.696	-25.696	-13.000	PEAK
5	11280.000	35.703	-74.420	-38.717	-25.717	-13.000	PEAK
6 *	13160.000	39.992	-74.120	-34.128	-21.128	-13.000	PEAK

- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 1MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "\*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The Emission above 18GHz were not included is because their levels are too low.



Site : CB4-H	Time : 2017/05/31
Limit : FCC_Part22/24_00M_00M_PK	Margin : 6
Probe : CB4-H_CE_Sub_B432_1-18GHz_3M_1116 -	Power : DC 24V
HORIZONTAL	
EUT : 3G Cellular Alarm Communicator	Note : Mode 10: WCDMA Band 2_HSDPA_Link
	_1907.6MHz

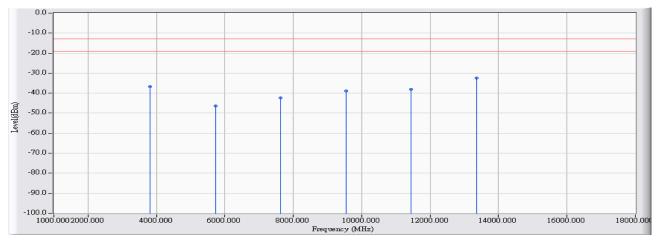


		Frequency	Correct Factor	Reading Level	Measure Level	Margin	Limit	Detector Type
		(MHz)	(dB)	(dBm)	(dBm)	(dB)	(dBm)	
1		3815.200	18.884	-63.340	-44.456	-31.456	-13.000	PEAK
2		5722.800	21.972	-68.800	-46.827	-33.827	-13.000	PEAK
3		7630.000	29.365	-71.640	-42.274	-29.274	-13.000	PEAK
4		9538.000	33.377	-73.610	-40.232	-27.232	-13.000	PEAK
5		11445.600	36.375	-74.020	-37.646	-24.646	-13.000	PEAK
6	*	13353.200	38.844	-73.000	-34.155	-21.155	-13.000	PEAK

- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 1MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "\*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The Emission above 18GHz were not included is because their levels are too low.



Site : CB4-H	Time : 2017/05/31
Limit : FCC_Part22/24_00M_00M_PK	Margin : 6
Probe : CB4-H_CE_Sub_B432_1-18GHz_3M_1116 -	Power : DC 24V
VERTICAL	
EUT : 3G Cellular Alarm Communicator	Note : Mode 10: WCDMA Band 2_HSDPA_Link
	_1907.6MHz



		Frequency	Correct Factor	Reading Level	Measure Level	Margin	Limit	Detector Type
		(MHz)	(dB)	(dBm)	(dBm)	(dB)	(dBm)	
1		3815.200	19.656	-56.320	-36.664	-23.664	-13.000	PEAK
2		5722.800	21.809	-68.260	-46.451	-33.451	-13.000	PEAK
3		7630.400	29.262	-71.640	-42.377	-29.377	-13.000	PEAK
4		9538.000	34.914	-73.690	-38.775	-25.775	-13.000	PEAK
5		11445.600	36.212	-74.190	-37.978	-24.978	-13.000	PEAK
6	*	13353.200	40.368	-72.910	-32.541	-19.541	-13.000	PEAK

- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 1MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "\*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The Emission above 18GHz were not included is because their levels are too low.



## 7. Frequency Stability Under Temperature & Voltage Variations

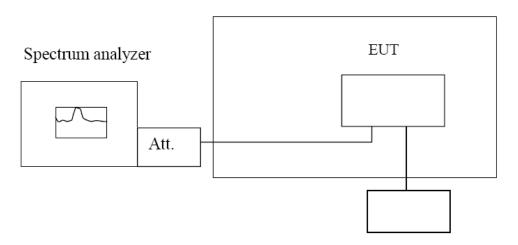
### 7.1. Test Equipment

Frequency Stability Under Temperature & Voltage Variations / SR10-H

Instrument	Manufacturer	Type No.	Serial No	Cali. Due Date
Signal & Spectrum Analyzer	R&S	FSV40	101049	2018/01/22
Temperature & Humidity	WIT	TH-1S-B	1082101	2018/01/18
Chamber				

## 7.2. Test Setup

## Temperature Chamber



Variable Power Supply



#### 7.3. Test Procedure

### **Frequency Stability Under Temperature Variations:**

The equipment under test was connected to an external AC or DC power supply and input rated voltage. RF output was connected to a frequency counter or spectrum analyzer via feed through attenuators. The EUT was placed inside the temperature chamber. Set the spectrum analyzer RBW low enough to obtain the desired frequency resolution and measure EUT  $20^{\circ}$ C operating frequency as reference frequency. Turn EUT off and set the chamber temperature to  $-30^{\circ}$ C. After the temperature stabilized for approximately 30 minutes recorded the frequency. Repeat step measure with  $10^{\circ}$ C increased per stage until the highest temperature of  $+50^{\circ}$ C reached.

### **Frequency Stability Under Voltage Variations:**

Set chamber temperature to  $20^{\circ}$ C. Use a variable AC power supply / DC power source to power the EUT and set the voltage to rated voltage. Set the spectrum analyzer RBW low enough to obtain the desired frequency resolution and recorded the frequency. Reduce the input voltage to specify extreme voltage variation ( $\pm 15\%$ ) and endpoint, record the maximum frequency change.

### 7.4. Uncertainty

The measurement uncertainty is defined as  $\pm$  10 Hz.



### 7.5. Test Result

Product	3G Cellular Alarm Communicator				
Test Item	Frequency Stability Under Temperature & Voltage Variations				
Test Mode	Mode 1: GPRS 850_Link				
Date of Test	2017/05/23 Test Site SR10-H				

### 824.2 MHz

# Frequency Stability under Voltage

DC Voltage (V)	Frequency Error (Hz)	Frequency Error (ppm)	
26.4	10	-0.0118	
24	9	-0.0108	
21.6	11	-0.0130	

## Frequency Stability under Temperature

Temperature	Frequency Error (Hz)	Frequency Error (ppm)
-30	10	-0.0123
-20	9	-0.0114
-10	10	-0.0123
0	9	-0.0113
+10	11	-0.0138
+20	9	-0.0108
+30	14	-0.0166
+40	12	-0.0150
+50	10	-0.0119

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Product	3G Cellular Alarm Communicator				
Test Item	Frequency Stability Under Temperature & Voltage Variations				
Test Mode	Mode 1: GPRS 850_Link				
Date of Test	2017/05/23 Test Site SR10-H				

### 836.6 MHz

# Frequency Stability under Voltage

DC Voltage (V)	Frequency Error (Hz)	Frequency Error (ppm)
26.4	16	-0.0192
24	11	-0.0127
21.6	11	-0.0128

# Frequency Stability under Temperature

Temperature	Frequency Error (Hz)	Frequency Error (ppm)
-30	16	-0.0188
-20	13	-0.0160
-10	-12	0.0143
0	-14	0.0169
+10	15	-0.0180
+20	-11	0.0131
+30	-13	0.0155
+40	10	-0.0123
+50	11	-0.0128

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Product	3G Cellular Alarm Communicator				
Test Item	Frequency Stability Under Temperature & Voltage Variations				
Test Mode	Mode 1: GPRS 850_Link				
Date of Test	2017/05/23 Test Site SR10-H				

### 848.8 MHz

# Frequency Stability under Voltage

DC Voltage (V)	Frequency Error (Hz)	Frequency Error (ppm)
26.4	9	-0.0107
24	-14	0.0164
21.6	-12	0.0141

# Frequency Stability under Temperature

Temperature	Frequency Error (Hz)	Frequency Error (ppm)
-30	11	-0.0128
-20	-14	0.0165
-10	-11	0.0132
0	9	-0.0101
+10	9	-0.0100
+20	-14	0.0164
+30	14	-0.0165
+40	10	-0.0113
+50	13	-0.0156

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Product	3G Cellular Alarm Communicator		
Test Item	Frequency Stability Under Temperature & Voltage Variations		
Test Mode	Mode 2: GPRS 1900_Link		
Date of Test	2017/05/23 Test Site SR10-H		

### 1850.2 MHz

# Frequency Stability under Voltage

DC Voltage (V)	Frequency Error (Hz)	Frequency Error (ppm)
26.4	-16	0.0085
24	-15	0.0079
21.6	18	-0.0099

# Frequency Stability under Temperature

Temperature	Frequency Error (Hz)	Frequency Error (ppm)
-30	21	-0.0112
-20	-18	0.0095
-10	-21	0.0115
0	13	-0.0070
+10	16	-0.0086
+20	-15	0.0079
+30	16	-0.0086
+40	-16	0.0086
+50	18	-0.0096

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Product	3G Cellular Alarm Communicator		
Test Item	Frequency Stability Under Temperature & Voltage Variations		
Test Mode	Mode 2: GPRS 1900_Link		
Date of Test	2017/05/23 Test Site SR10-H		

### 1880.0 MHz

# Frequency Stability under Voltage

DC Voltage (V)	Frequency Error (Hz)	Frequency Error (ppm)
26.4	14	-0.0076
24	17	-0.0091
21.6	-17	0.0089

# Frequency Stability under Temperature

Temperature	Frequency Error (Hz)	Frequency Error (ppm)
-30	-15	0.0079
-20	-27	0.0144
-10	16	-0.0083
0	-24	0.0129
+10	-15	0.0079
+20	17	-0.0091
+30	-15	0.0081
+40	16	-0.0082
+50	-14	0.0077

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Product	3G Cellular Alarm Communicator		
Test Item	Frequency Stability Under Temperature & Voltage Variations		
Test Mode	Mode 2: GPRS 1900_Link		
Date of Test	2017/05/23 Test Site SR10-H		

### 1909.8 MHz

# Frequency Stability under Voltage

DC Voltage (V)	Frequency Error (Hz)	Frequency Error (ppm)
26.4	17	-0.0090
24	15	-0.0078
21.6	-19	0.0097

# Frequency Stability under Temperature

Temperature	Frequency Error (Hz)	Frequency Error (ppm)
-30	14	-0.0071
-20	18	-0.0094
-10	11	-0.0060
0	15	-0.0076
+10	14	-0.0071
+20	15	-0.0078
+30	13	-0.0070
+40	11	-0.0058
+50	22	-0.0113

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Product	3G Cellular Alarm Communicator		
Test Item	Frequency Stability Under Temperature & Voltage Variations		
Test Mode	Mode 5: WCDMA Band 5_Link		
Date of Test	2017/05/23 Test Site SR10-H		

### 826.4 MHz

# Frequency Stability under Voltage

DC Voltage (V)	Frequency Error (Hz)	Frequency Error (ppm)
4.2	11	-0.0130
3.7	24	-0.0293
3.4	35	-0.0424

# Frequency Stability under Temperature

Temperature	Frequency Error (Hz)	Frequency Error (ppm)
-30	16	-0.0188
-20	20	-0.0239
-10	26	-0.0312
0	26	-0.0317
+10	13	-0.0160
+20	24	-0.0293
+30	24	-0.0286
+40	26	-0.0314
+50	18	-0.0220

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Product	3G Cellular Alarm Communicator		
Test Item	Frequency Stability Under Temperature & Voltage Variations		
Test Mode	Mode 5: WCDMA Band 5_Link		
Date of Test	2017/05/23 Test Site SR10-H		

### 836.6 MHz

# Frequency Stability under Voltage

DC Voltage (V)	Frequency Error (Hz)	Frequency Error (ppm)
4.2	24	-0.0286
3.7	-21	0.0250
3.4	-31	0.0367

# Frequency Stability under Temperature

Temperature	Frequency Error (Hz)	Frequency Error (ppm)
-30	-15	0.0178
-20	-27	0.0317
-10	-13	0.0161
0	-19	0.0230
+10	-23	0.0272
+20	-21	0.0250
+30	-27	0.0317
+40	-27	0.0319
+50	-7	0.0088

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Product	3G Cellular Alarm Communicator		
Test Item	Frequency Stability Under Temperature & Voltage Variations		
Test Mode	Mode 5: WCDMA Band 5_Link		
Date of Test	2017/05/23 Test Site SR10-H		

### 846.6 MHz

# Frequency Stability under Voltage

DC Voltage (V)	Frequency Error (Hz)	Frequency Error (ppm)
4.2	16	-0.0194
3.7	-19	0.0230
3.4	-27	0.0321

# Frequency Stability under Temperature

Temperature	Frequency Error (Hz)	Frequency Error (ppm)
-30	-28	0.0331
-20	-28	0.0329
-10	-27	0.0320
0	-26	0.0312
+10	-27	0.0319
+20	-19	0.0230
+30	-27	0.0322
+40	-27	0.0321
+50	-29	0.0346

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Product	3G Cellular Alarm Communicator		
Test Item	Frequency Stability Under Temperature & Voltage Variations		
Test Mode	Mode 8: WCDMA Band 2_Link		
Date of Test	2017/05/23 Test Site SR10-H		

### 1852.4 MHz

# Frequency Stability under Voltage

DC Voltage (V)	Frequency Error (Hz)	Frequency Error (ppm)
4.2	-29	0.0158
3.7	32	-0.0173
3.4	-31	0.0168

# Frequency Stability under Temperature

Temperature	Frequency Error (Hz)	Frequency Error (ppm)
-30	-55	0.0298
-20	-55	0.0296
-10	-54	0.0290
0	-53	0.0286
+10	-53	0.0287
+20	32	-0.0173
+30	-18	0.0095
+40	-20	0.0110
+50	-17	0.0090

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Product	3G Cellular Alarm Communicator		
Test Item	Frequency Stability Under Temperature & Voltage Variations		
Test Mode	Mode 8: WCDMA Band 2_Link		
Date of Test	2017/05/23 Test Site SR10-H		

### 1880.0 MHz

# Frequency Stability under Voltage

DC Voltage (V)	Frequency Error (Hz)	Frequency Error (ppm)
4.2	41	-0.0220
3.7	34	-0.0179
3.4	-53	0.0283

# Frequency Stability under Temperature

Temperature	Frequency Error (Hz)	Frequency Error (ppm)
-30	-26	0.0138
-20	-14	0.0076
-10	-14	0.0074
0	-9	0.0047
+10	-9	0.0047
+20	34	-0.0179
+30	10	-0.0051
+40	10	-0.0055
+50	14	-0.0075

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Product	3G Cellular Alarm Communicator		
Test Item	Frequency Stability Under Temperature & Voltage Variations		
Test Mode	Mode 8: WCDMA Band 2_Link		
Date of Test	2017/05/23	Test Site	SR10-H

### 1907.6 MHz

# Frequency Stability under Voltage

DC Voltage (V)	Frequency Error (Hz)	Frequency Error (ppm)
4.2	-54	0.0284
3.7	-57	0.0301
3.4	-57	0.0296

# Frequency Stability under Temperature

Temperature	Frequency Error (Hz)	Frequency Error (ppm)
-30	-19	0.0101
-20	-9	0.0045
-10	13	-0.0068
0	19	-0.0097
+10	23	-0.0118
+20	-57	0.0301
+30	23	-0.0120
+40	30	-0.0155
+50	32	-0.0168

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