

# 7. Radiated Spurious Emission

# 7.1. Test Equipment

The following test equipments are used during the test:

Radiated Emission / CB1 (Above 1GHz)

Instrument	Manufacturer	Model No.	Serial No	Next Cal. Date
Bilog Antenna	SCHAFFNER	CBL6112B	2895	2012/08/14
Double Ridged Guide	Schwarzback	BBHA 9120D	743	2012/02/24
Horn Antenna				
Pre-Amplifier	MITEQ	AMF-4D-00518	888003	2012/12/05
		0-24-10P		
Pre-Amplifier	QuieTek	AP-025C	CHM-0706049	2012/03/10
Spectrum Analyzer	Agilent	E4440A	MY46187335	2013/01/08
Coaxial Cable	Huber+Suhner	Sucoflex 102	25623/2	2012/03/21
	AG			

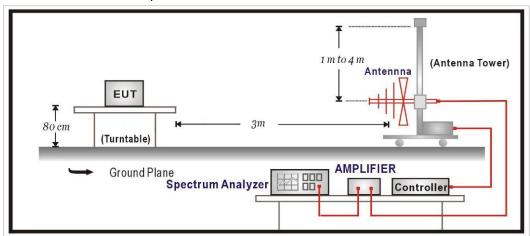
Note: 1. All equipments that need to calibrate are with calibration period of 1 year.

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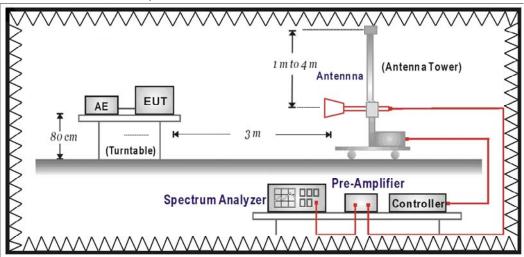


# 7.2. Test Setup

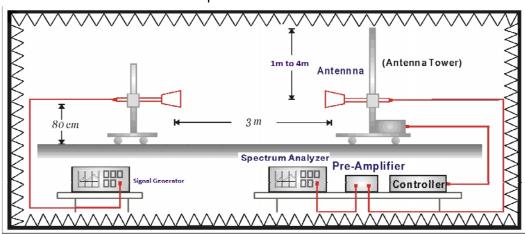
Under 1GHz Test Setup:



Above 1GHz Test Setup: RF Radiated Measurement:



Substitution Measurement Setup:





#### 7.3. Limits

The power of any emission outside a licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, by at least 43 + 10 log (P) dB. Compliance with this provision is based on the use of measurement instrumentation employing a resolution bandwidth of 1 MHz or less, but at least one percent of the emission bandwidth of the fundamental emission of the transmitter, provided the measured energy is integrated over a 1 MHz bandwidth.

#### 7.4. Test Procedure

For measuring E.I.R.P peak power, EUT was placed on the turn-table which was rotated around 360 degrees to search the maximum radiation power and receiver antenna was rotated vertical and horizontal polarization to find the maximum polarization radiated power.

The EUT is replaced by a horn antenna connected to a signal generator tuned to the frequency of emission and level of signal generator adjusted to same level of emission. Both horizontal and vertical polarization of the antenna are set on measurement.

On any frequency, the limits shown are based on measuring equipment employing a peak detector function. The resolution bandwidth of spectrum analyzer is 1MHz. and video bandwidth is 3MHz.

The radiated E.I.R.P power was calculated via the Correct factor, Reading Level, and Antenna gain as follows:

E.I.R.P = Reading Level + Correct Factor = S.G. - Cable Loss + Antenna Gain

# 7.5. Uncertainty

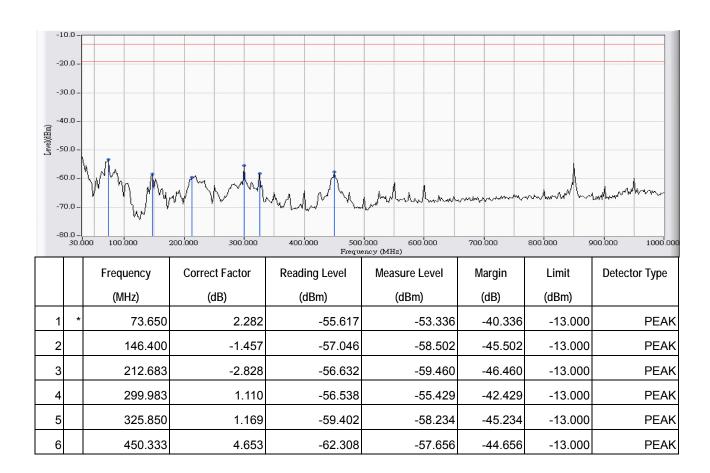
The measurement uncertainty 30MHz~1GHz as ±3.19dB 1GHz~27GHz as ±3.9dB



#### 7.6. Test Result

# 30 MHz - 1 GHz Spurious:

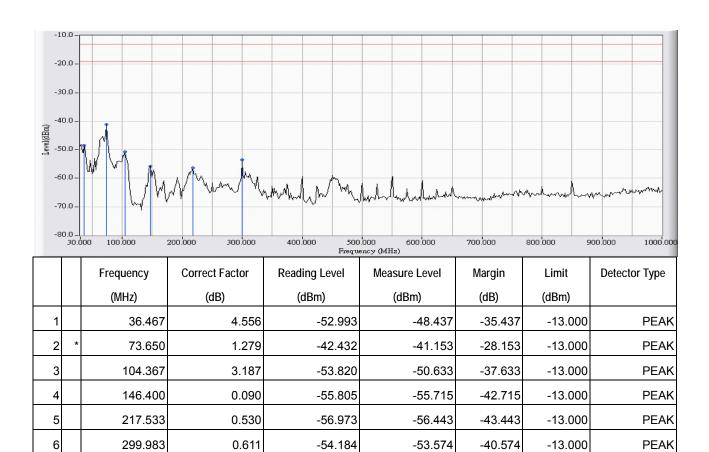
Site : CB1	Time : 2011/12/28 - 22:27
Limit : PART27(WiMAX)_00M_PK	Margin : 6
Probe : CB1_CE_Sub_30-1G-1_0901 - HORIZONTAL	Power : AC 120V/60Hz
EUT : CPE 3.65GHz Outdoor	Note : Mode 1: Transmit (5MHz
	BW_QPSK1/2)_3662.5MHz



- 1. All Reading Levels are Peak value.
- 2. " \* ", means this data is the worst emission level.
- 3. Measurement Level = Reading Level + Correct Factor.



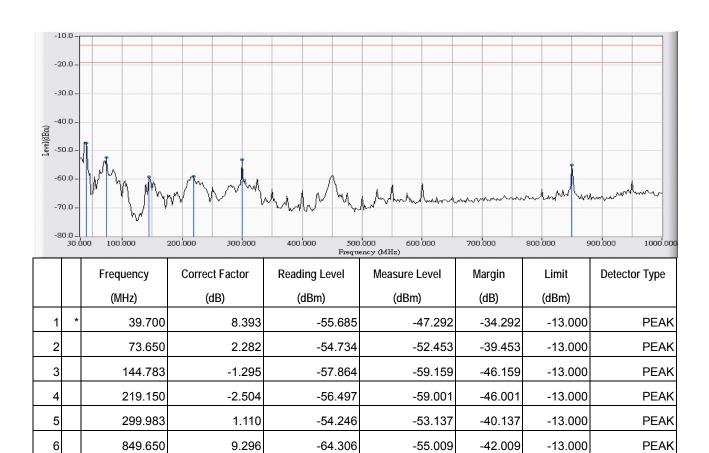
Site : CB1	Time : 2011/12/28 - 22:27
Limit : PART27(WiMAX)_00M_PK	Margin : 6
Probe : CB1_CE_Sub_30-1G-1_0901 - VERTICAL	Power : AC 120V/60Hz
EUT : CPE 3.65GHz Outdoor	Note : Mode 1: Transmit (5MHz BW_QPSK1/2)
	_3662.5MHz



- 1. All Reading Levels are Peak value.
- 2. " \* ", means this data is the worst emission level.
- 3. Measurement Level = Reading Level + Correct Factor.



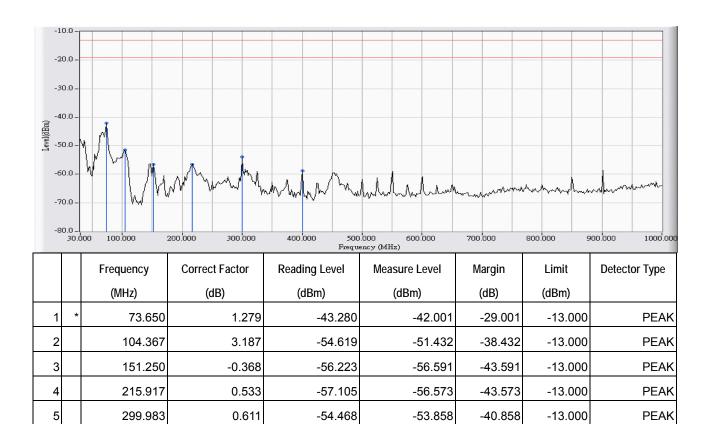
Site : CB1	Time : 2011/12/28 - 22:28
Limit : PART27(WiMAX)_00M_PK	Margin : 6
Probe : CB1_CE_Sub_30-1G-1_0901 - HORIZONTAL	Power : AC 120V/60Hz
EUT : CPE 3.65GHz Outdoor	Note : Mode 2: Transmit (5MHz BW_16QAM1/2)
	_3662.5MHz



- 1. All Reading Levels are Peak value.
- 2. " \* ", means this data is the worst emission level.
- 3. Measurement Level = Reading Level + Correct Factor.



Site : CB1	Time : 2011/12/28 - 22:28
Limit : PART27(WiMAX)_00M_PK	Margin : 6
Probe : CB1_CE_Sub_30-1G-1_0901 - VERTICAL	Power : AC 120V/60Hz
EUT : CPE 3.65GHz Outdoor	Note : Mode 2: Transmit (5MHz BW_16QAM1/2)
	_3662.5MHz



-64.036

-58.782

-45.782

-13.000

PEAK

# Note:

6

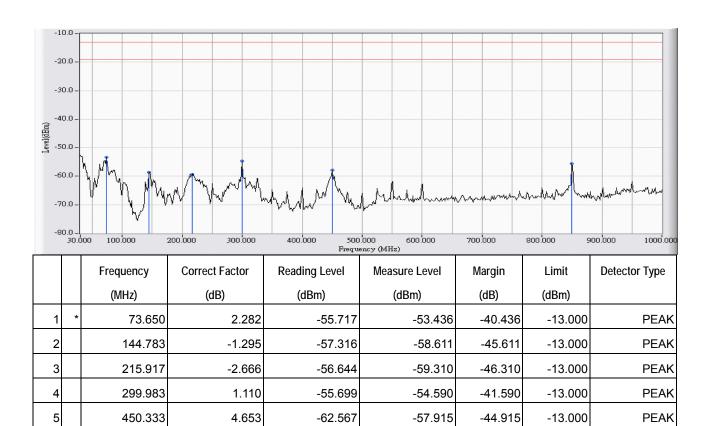
1. All Reading Levels are Peak value.

400.217

- 2. " \* ", means this data is the worst emission level.
- 3. Measurement Level = Reading Level + Correct Factor.



Site : CB1	Time : 2011/12/28 - 22:28
Limit : PART27(WiMAX)_00M_PK	Margin : 6
Probe : CB1_CE_Sub_30-1G-1_0901 - HORIZONTAL	Power : AC 120V/60Hz
EUT : CPE 3.65GHz Outdoor	Note : Mode 3: Transmit (5MHz BW_64QAM2/3)
	_3662.5MHz



-64.906

-55.609

-42.609

-13.000

PEAK

# Note:

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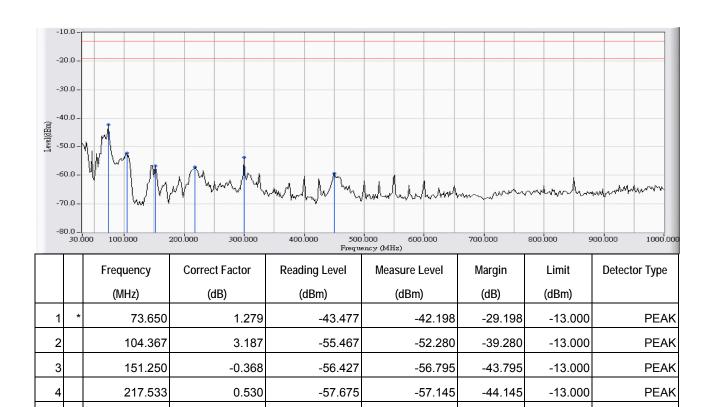
1. All Reading Levels are Peak value.

849.650

- 2. " \* ", means this data is the worst emission level.
- 3. Measurement Level = Reading Level + Correct Factor.



Site : CB1	Time : 2011/12/28 - 22:28
Limit : PART27(WiMAX)_00M_PK	Margin : 6
Probe : CB1_CE_Sub_30-1G-1_0901 - VERTICAL	Power : AC 120V/60Hz
EUT : CPE 3.65GHz Outdoor	Note : Mode 3: Transmit (5MHz BW_64QAM2/3)
	_3662.5MHz



-54.385

-64.336

-53.775

-59.299

-40.775

-46.299

-13.000

-13.000

**PEAK** 

PEAK

# Note:

5

6

1. All Reading Levels are Peak value.

299.983

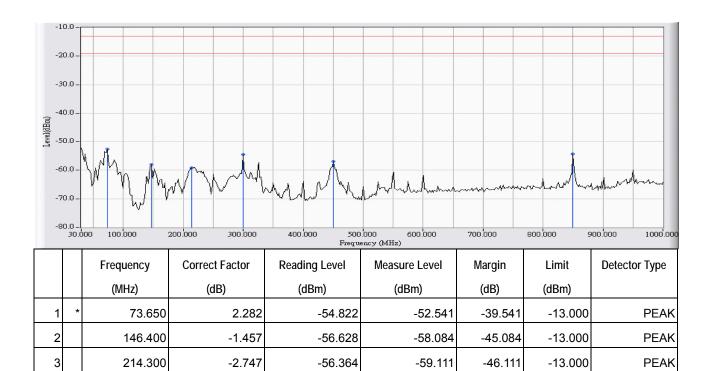
450.333

- 2. " \* ", means this data is the worst emission level.
- 3. Measurement Level = Reading Level + Correct Factor.

0.611



Site : CB1	Time : 2011/12/28 - 22:29
Limit : PART27(WiMAX)_00M_PK	Margin : 6
Probe : CB1_CE_Sub_30-1G-1_0901 - HORIZONTAL	Power : AC 120V/60Hz
EUT : CPE 3.65GHz Outdoor	Note : Mode 4: Transmit (7MHz BW_QPSK1/2)
	_3662.5MHz



-55.541

-61.535

-63.637

-54.432

-56.883

-54.340

-41.432

-43.883

-41.340

-13.000

-13.000

-13.000

**PEAK** 

**PEAK** 

PEAK

# Note:

4

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1. All Reading Levels are Peak value.

299.983

450.333

849.650

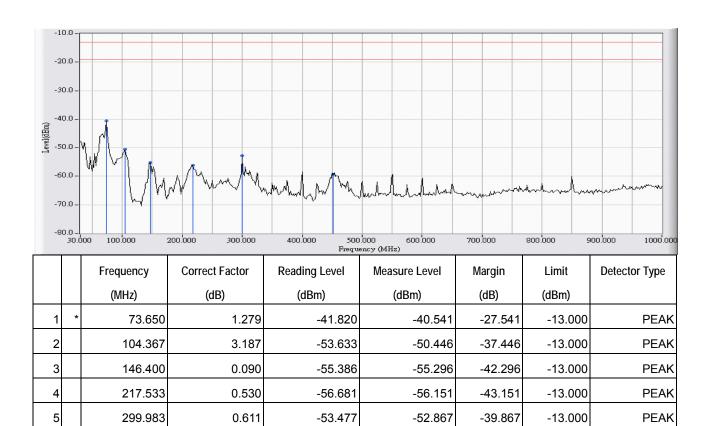
- 2. " \* ", means this data is the worst emission level.
- 3. Measurement Level = Reading Level + Correct Factor.

1.110

4.653



Site : CB1	Time : 2011/12/28 - 22:29
Limit : PART27(WiMAX)_00M_PK	Margin : 6
Probe : CB1_CE_Sub_30-1G-1_0901 - VERTICAL	Power : AC 120V/60Hz
EUT : CPE 3.65GHz Outdoor	Note : Mode 4: Transmit (7MHz BW_QPSK1/2)
	_3662.5MHz



-64.468

-59.347

-46.347

-13.000

PEAK

# Note:

6

1. All Reading Levels are Peak value.

451.950

- 2. " \* ", means this data is the worst emission level.
- 3. Measurement Level = Reading Level + Correct Factor.

-13.000

-13.000

**PEAK** 

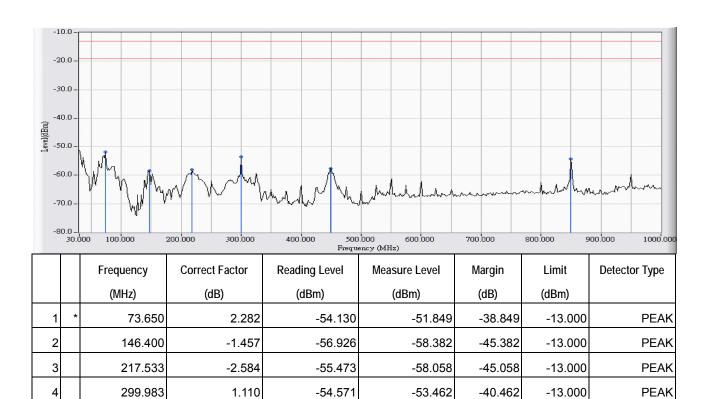
PEAK

-44.646

-41.204



Site : CB1	Time : 2011/12/28 - 22:30
Limit : PART27(WiMAX)_00M_PK	Margin : 6
Probe : CB1_CE_Sub_30-1G-1_0901 - HORIZONTAL	Power : AC 120V/60Hz
EUT : CPE 3.65GHz Outdoor	Note : Mode 5: Transmit (7MHz BW_16QAM1/2)
	_3662.5MHz



-62.271

-63.501

-57.646

-54.204

# Note:

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6

1. All Reading Levels are Peak value.

448.717

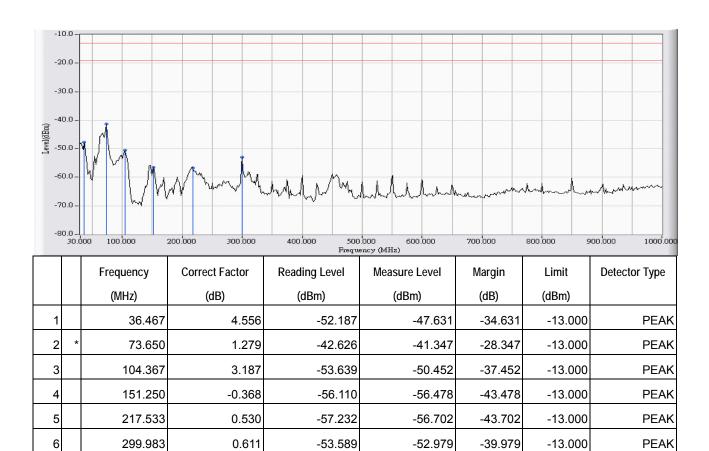
849.650

- 2. " \* ", means this data is the worst emission level.
- 3. Measurement Level = Reading Level + Correct Factor.

4.625



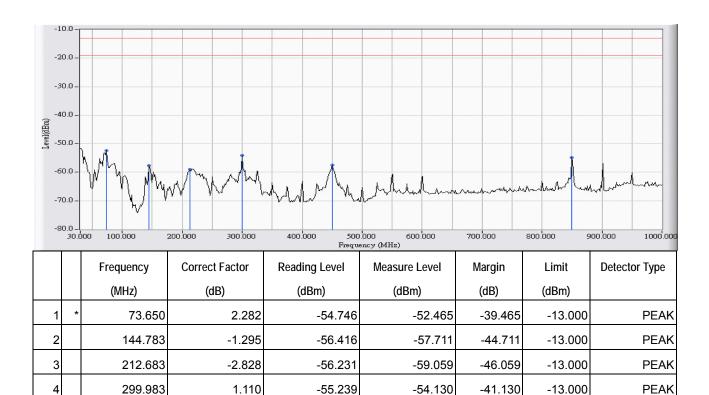
Site : CB1	Time : 2011/12/28 - 22:30
Limit : PART27(WiMAX)_00M_PK	Margin : 6
Probe : CB1_CE_Sub_30-1G-1_0901 - VERTICAL	Power : AC 120V/60Hz
EUT : CPE 3.65GHz Outdoor	Note : Mode 5: Transmit (7MHz BW_16QAM1/2)
	_3662.5MHz



- 1. All Reading Levels are Peak value.
- 2. " \* ", means this data is the worst emission level.
- 3. Measurement Level = Reading Level + Correct Factor.



Site : CB1	Time : 2011/12/28 - 22:30
Limit : PART27(WiMAX)_00M_PK	Margin : 6
Probe : CB1_CE_Sub_30-1G-1_0901 - HORIZONTAL	Power : AC 120V/60Hz
EUT : CPE 3.65GHz Outdoor	Note : Mode 6: Transmit (7MHz BW_64QAM2/3)
	_3662.5MHz



-62.059

-64.169

-57.407

-54.872

-44.407

-41.872

-13.000

-13.000

**PEAK** 

PEAK

# Note:

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6

1. All Reading Levels are Peak value.

450.333

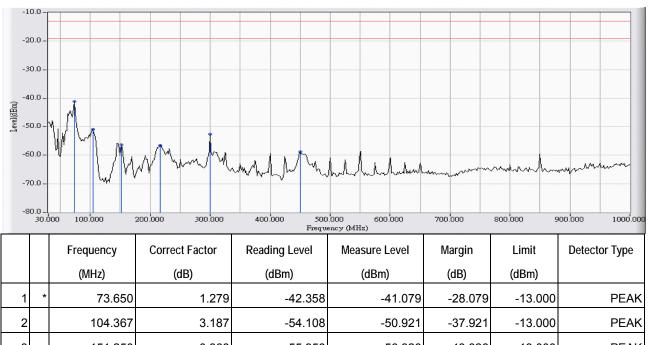
849.650

- 2. " \* ", means this data is the worst emission level.
- 3. Measurement Level = Reading Level + Correct Factor.

4.653



Site : CB1	Time : 2011/12/28 - 22:30
Limit : PART27(WiMAX)_00M_PK	Margin : 6
Probe : CB1_CE_Sub_30-1G-1_0901 - VERTICAL	Power : AC 120V/60Hz
EUT : CPE 3.65GHz Outdoor	Note : Mode 6: Transmit (7MHz BW_64QAM2/3)
	_3662.5MHz



					· ·		٠.
	(MHz)	(dB)	(dBm)	(dBm)	(dB)	(dBm)	
1	* 73.650	1.279	-42.358	-41.079	-28.079	-13.000	PEAK
2	104.367	3.187	-54.108	-50.921	-37.921	-13.000	PEAK
3	151.250	-0.368	-55.958	-56.326	-43.326	-13.000	PEAK
4	215.917	0.533	-56.995	-56.463	-43.463	-13.000	PEAK
5	299.983	0.611	-53.188	-52.578	-39.578	-13.000	PEAK
6	450.333	5.038	-63.894	-58.857	-45.857	-13.000	PEAK

- 1. All Reading Levels are Peak value.
- 2. " \* ", means this data is the worst emission level.
- 3. Measurement Level = Reading Level + Correct Factor.

-13.000

-13.000

**PEAK** 

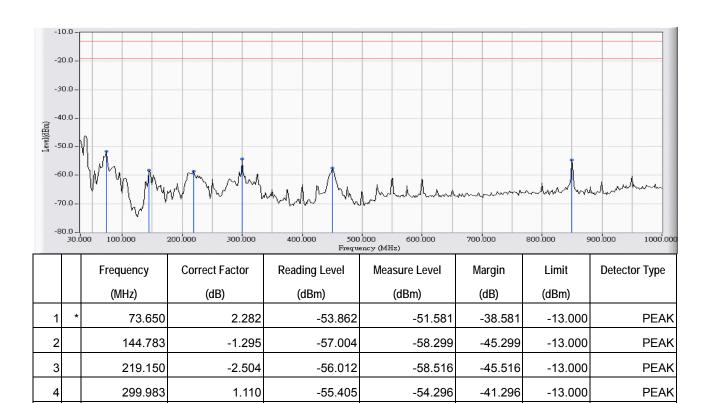
PEAK

-44.566

-41.624



Site : CB1	Time : 2011/12/28 - 22:30
Limit : PART27(WiMAX)_00M_PK	Margin : 6
Probe : CB1_CE_Sub_30-1G-1_0901 - HORIZONTAL	Power : AC 120V/60Hz
EUT : CPE 3.65GHz Outdoor	Note : Mode 7: Transmit (10MHz BW_QPSK1/2)
	_3662.5MHz



-62.218

-63.921

-57.566

-54.624

# Note:

5

6

1. All Reading Levels are Peak value.

450.333

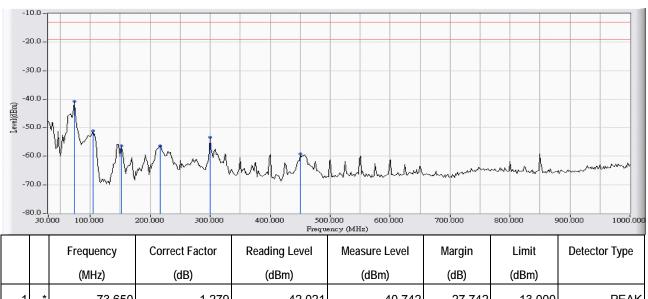
849.650

- 2. " \* ", means this data is the worst emission level.
- 3. Measurement Level = Reading Level + Correct Factor.

4.653



Site : CB1	Time : 2011/12/28 - 22:30
Limit : PART27(WiMAX)_00M_PK	Margin : 6
Probe : CB1_CE_Sub_30-1G-1_0901 - VERTICAL	Power : AC 120V/60Hz
EUT : CPE 3.65GHz Outdoor	Note : Mode 7: Transmit (10MHz BW_QPSK1/2)
	_3662.5MHz

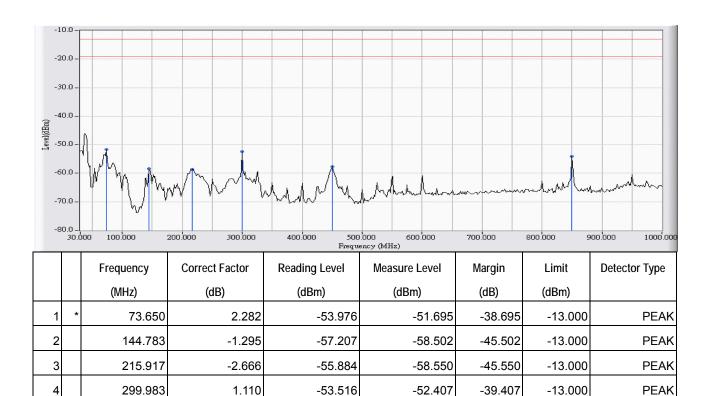


		Frequency	Correct Factor	Reading Level	Measure Level	Margin	Limit	Detector Type
		(MHz)	(dB)	(dBm)	(dBm)	(dB)	(dBm)	
1	*	73.650	1.279	-42.021	-40.742	-27.742	-13.000	PEAK
2		104.367	3.187	-54.216	-51.029	-38.029	-13.000	PEAK
3		151.250	-0.368	-56.033	-56.401	-43.401	-13.000	PEAK
4		215.917	0.533	-56.793	-56.261	-43.261	-13.000	PEAK
5		299.983	0.611	-53.898	-53.288	-40.288	-13.000	PEAK
6		450.333	5.038	-64.233	-59.196	-46.196	-13.000	PEAK

- 1. All Reading Levels are Peak value.
- 2. " \* ", means this data is the worst emission level.
- 3. Measurement Level = Reading Level + Correct Factor.



Site : CB1	Time : 2011/12/28 - 22:30
Limit : PART27(WiMAX)_00M_PK	Margin : 6
Probe : CB1_CE_Sub_30-1G-1_0901 - HORIZONTAL	Power : AC 120V/60Hz
EUT : CPE 3.65GHz Outdoor	Note : Mode 8: Transmit (10MHz BW_16QAM1/2)
	_3662.5MHz



-62.267

-63.445

-57.615

-54.148

-44.615

-41.148

-13.000

-13.000

**PEAK** 

PEAK

# Note:

5

6

1. All Reading Levels are Peak value.

450.333

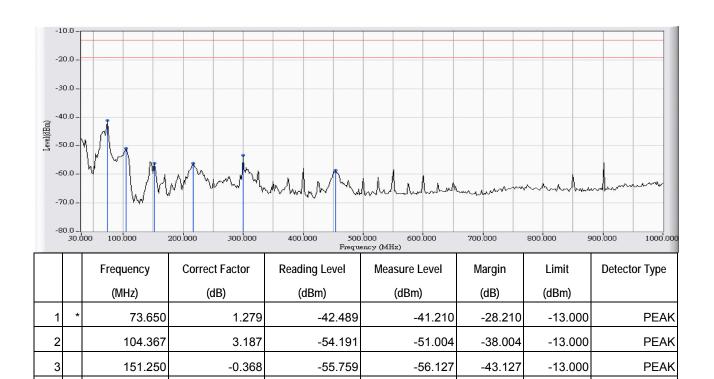
849.650

- 2. " \* ", means this data is the worst emission level.
- 3. Measurement Level = Reading Level + Correct Factor.

4.653



Site : CB1	Time : 2011/12/28 - 22:30
Limit : PART27(WiMAX)_00M_PK	Margin: 6
Probe : CB1_CE_Sub_30-1G-1_0901 - VERTICAL	Power : AC 120V/60Hz
EUT : CPE 3.65GHz Outdoor	Note : Mode 8: Transmit (10MHz BW_16QAM1/2)
	_3662.5MHz



-56.631

-54.039

-63.818

-56.099

-53.429

-58.613

-43.099

-40.429

-45.613

-13.000

-13.000

-13.000

**PEAK** 

**PEAK** 

PEAK

# Note:

4

5

6

1. All Reading Levels are Peak value.

215.917

299.983

453.567

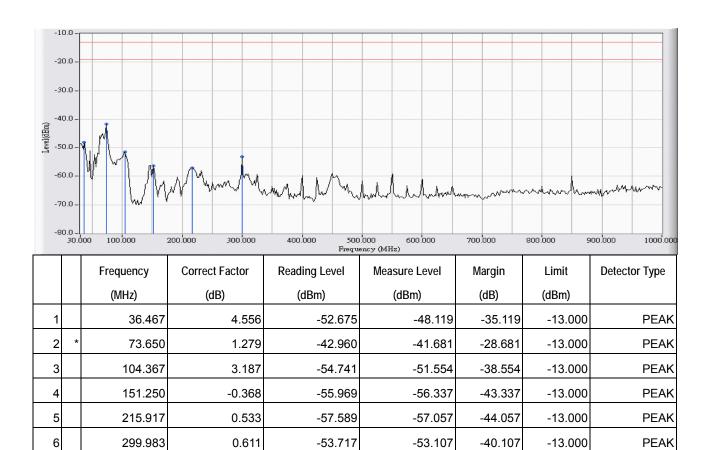
- 2. " \* ", means this data is the worst emission level.
- 3. Measurement Level = Reading Level + Correct Factor.

0.533

0.611



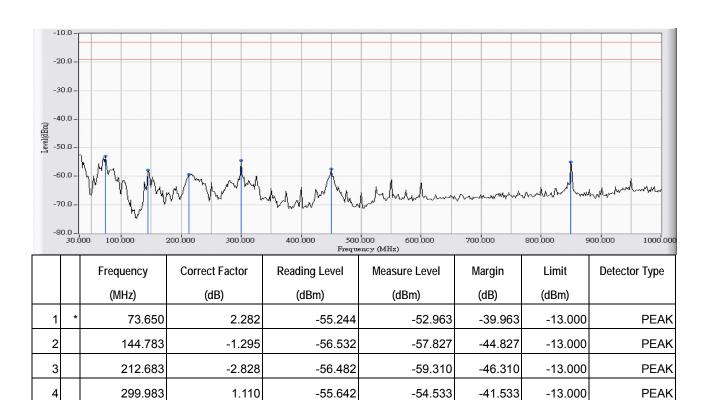
Site : CB1	Time : 2011/12/28 - 22:31
Limit : PART27(WiMAX)_00M_PK	Margin : 6
Probe : CB1_CE_Sub_30-1G-1_0901 - VERTICAL	Power : AC 120V/60Hz
EUT : CPE 3.65GHz Outdoor	Note : Mode 9: Transmit (10MHz BW_64QAM2/3)
	_3662.5MHz



- 1. All Reading Levels are Peak value.
- 2. " \* ", means this data is the worst emission level.
- 3. Measurement Level = Reading Level + Correct Factor.



Site : CB1	Time : 2011/12/28 - 22:31
Limit : PART27(WiMAX)_00M_PK	Margin : 6
Probe : CB1_CE_Sub_30-1G-1_0901 - HORIZONTAL	Power : AC 120V/60Hz
EUT : CPE 3.65GHz Outdoor	Note : Mode 9: Transmit (10MHz BW_64QAM2/3)
	_3662.5MHz



-62.195

-64.285

-57.543

-54.988

-44.543

-41.988

-13.000

-13.000

**PEAK** 

PEAK

# Note:

5

6

1. All Reading Levels are Peak value.

450.333

849.650

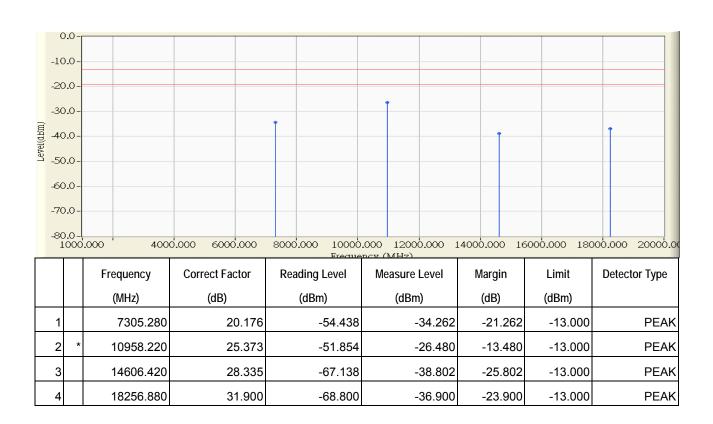
- 2. " \* ", means this data is the worst emission level.
- 3. Measurement Level = Reading Level + Correct Factor.

4.653



# **Harmonic & Spurious:**

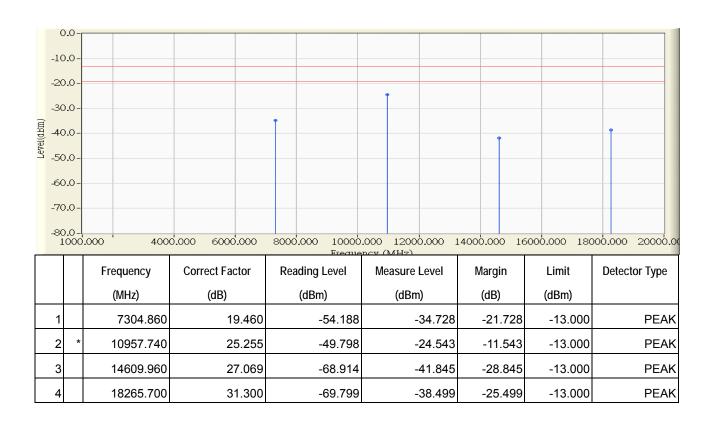
Site : CB1	Time : 2011/11/23 - 16:55
Limit : PART27(WiMAX)_00M_PK	Margin : 6
Probe : CB1_CE_Sub_1-18G(2011-08) - HORIZONTAL	Power : AC 120V/60Hz
EUT : CPE 3.65GHz Outdoor	Note : Mode 1: Transmit (5MHz BW_QPSK1/2)
	_3652.5MHz



- 1. All Reading Levels are Peak value.
- 2. " \* ", means this data is the worst emission level.
- 3. Measurement Level = Reading Level + Correct Factor.



Site : CB1	Time : 2011/11/23 - 16:58
Limit : PART27(WiMAX)_00M_PK	Margin : 6
Probe : CB1_CE_Sub_1-18G(2011-08) - VERTICAL	Power : AC 120V/60Hz
EUT : CPE 3.65GHz Outdoor	Note : Mode 1: Transmit (5MHz BW_QPSK1/2)
	_3652.5MHz



- 1. All Reading Levels are Peak value.
- 2. " \* ", means this data is the worst emission level.
- 3. Measurement Level = Reading Level + Correct Factor.



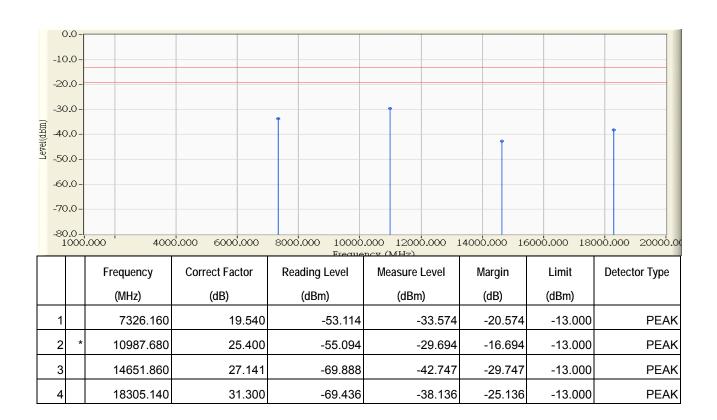
Site : CB1	Time : 2011/11/23 - 17:01
Limit : PART27(WiMAX)_00M_PK	Margin : 6
Probe : CB1_CE_Sub_1-18G(2011-08) - HORIZONTAL	Power : AC 120V/60Hz
EUT : CPE 3.65GHz Outdoor	Note : Mode 1: Transmit (5MHz BW_QPSK1/2)
	_3662.5MHz



- 1. All Reading Levels are Peak value.
- 2. " \* ", means this data is the worst emission level.
- 3. Measurement Level = Reading Level + Correct Factor.



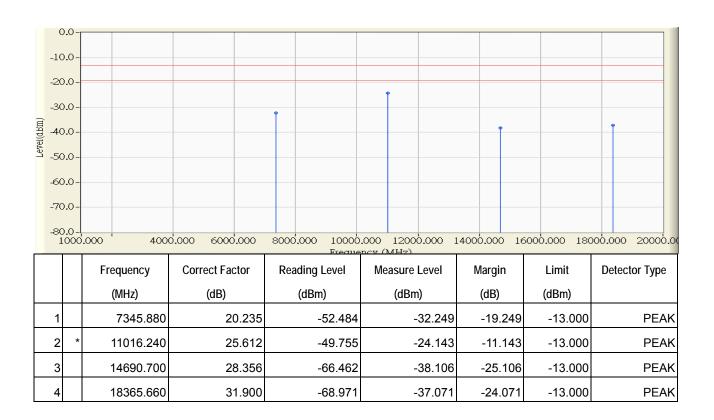
Site : CB1	Time : 2011/11/23 - 17:03
Limit : PART27(WiMAX)_00M_PK	Margin : 6
Probe : CB1_CE_Sub_1-18G(2011-08) - VERTICAL	Power : AC 120V/60Hz
EUT : CPE 3.65GHz Outdoor	Note : Mode 1: Transmit (5MHz BW_QPSK1/2)
	_3662.5MHz



- 1. All Reading Levels are Peak value.
- 2. " \* ", means this data is the worst emission level.
- 3. Measurement Level = Reading Level + Correct Factor.



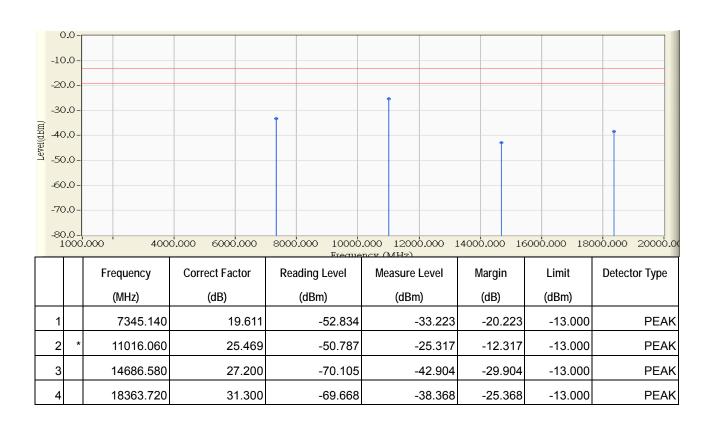
Site : CB1	Time : 2011/11/23 - 17:07
Limit : PART27(WiMAX)_00M_PK	Margin : 6
Probe : CB1_CE_Sub_1-18G(2011-08) - HORIZONTAL	Power : AC 120V/60Hz
EUT : CPE 3.65GHz Outdoor	Note : Mode 1: Transmit (5MHz BW_QPSK1/2)
	_3672.5MHz



- 1. All Reading Levels are Peak value.
- 2. " \* ", means this data is the worst emission level.
- 3. Measurement Level = Reading Level + Correct Factor.



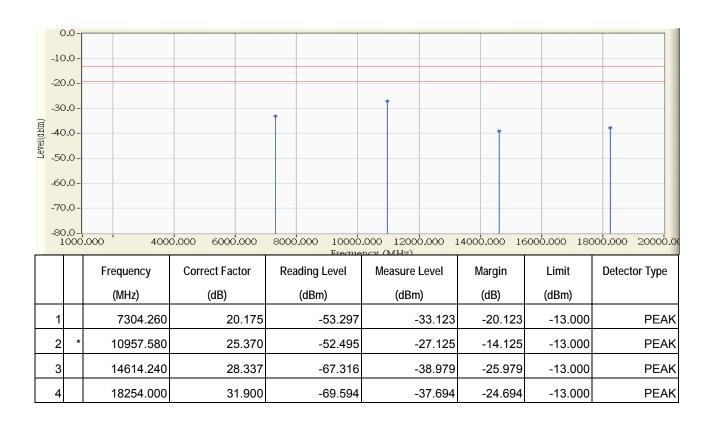
Site : CB1	Time : 2011/11/23 - 17:09
Limit : PART27(WiMAX)_00M_PK	Margin : 6
Probe : CB1_CE_Sub_1-18G(2011-08) - VERTICAL	Power : AC 120V/60Hz
EUT : CPE 3.65GHz Outdoor	Note : Mode 1: Transmit (5MHz BW_QPSK1/2)
	_3672.5MHz



- 1. All Reading Levels are Peak value.
- 2. " \* ", means this data is the worst emission level.
- 3. Measurement Level = Reading Level + Correct Factor.



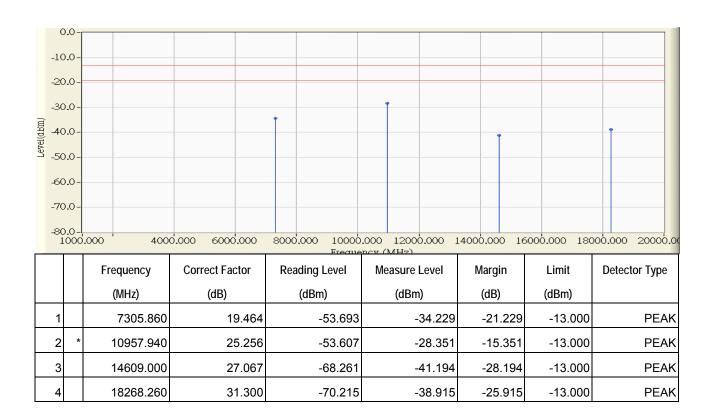
Site : CB1	Time : 2011/11/23 - 17:12
Limit : PART27(WiMAX)_00M_PK	Margin : 6
Probe : CB1_CE_Sub_1-18G(2011-08) - HORIZONTAL	Power : AC 120V/60Hz
EUT : CPE 3.65GHz Outdoor	Note : Mode 2: Transmit (5MHz BW_16QAM1/2)
	_3652.5MHz



- 1. All Reading Levels are Peak value.
- 2. " \* ", means this data is the worst emission level.
- 3. Measurement Level = Reading Level + Correct Factor.



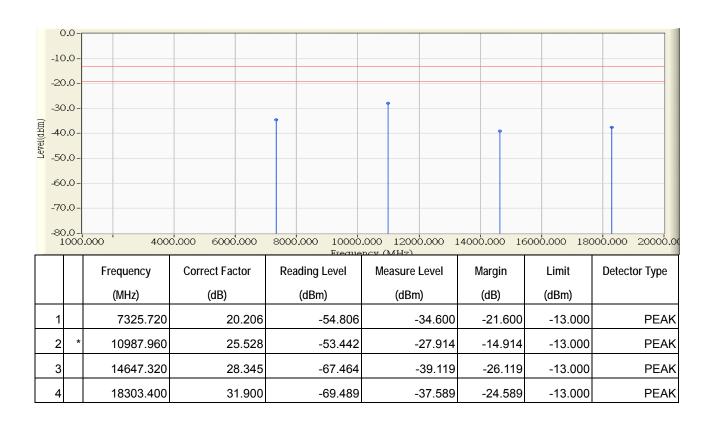
Site : CB1	Time : 2011/11/23 - 17:14
Limit : PART27(WiMAX)_00M_PK	Margin : 6
Probe : CB1_CE_Sub_1-18G(2011-08) - VERTICAL	Power : AC 120V/60Hz
EUT : CPE 3.65GHz Outdoor	Note : Mode 2: Transmit (5MHz BW_16QAM1/2)
	_3652.5MHz



- 1. All Reading Levels are Peak value.
- 2. " \* ", means this data is the worst emission level.
- 3. Measurement Level = Reading Level + Correct Factor.



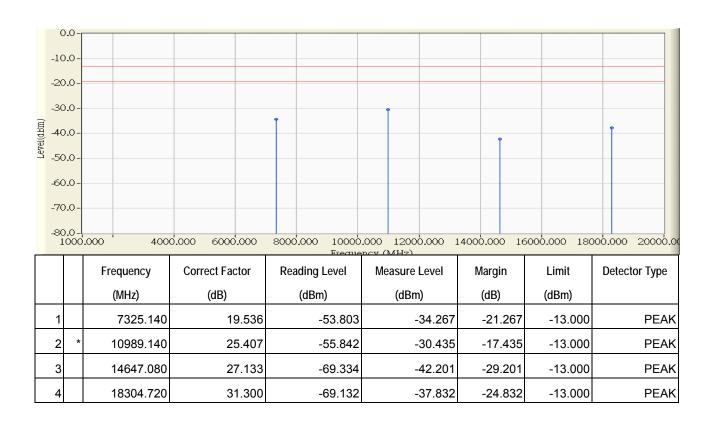
Site : CB1	Time : 2011/11/23 - 17:18
Limit : PART27(WiMAX)_00M_PK	Margin : 6
Probe : CB1_CE_Sub_1-18G(2011-08) - HORIZONTAL	Power : AC 120V/60Hz
EUT : CPE 3.65GHz Outdoor	Note : Mode 2: Transmit (5MHz BW_16QAM1/2)
	_3662.5MHz



- 1. All Reading Levels are Peak value.
- 2. " \* ", means this data is the worst emission level.
- 3. Measurement Level = Reading Level + Correct Factor.



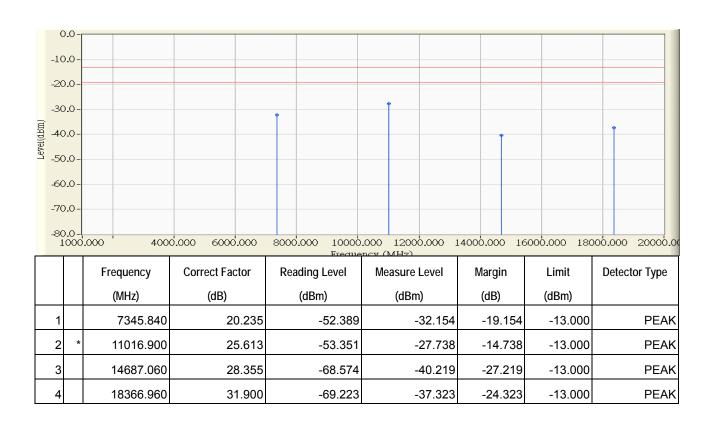
Site : CB1	Time : 2011/11/23 - 17:20
Limit : PART27(WiMAX)_00M_PK	Margin : 6
Probe : CB1_CE_Sub_1-18G(2011-08) - VERTICAL	Power : AC 120V/60Hz
EUT : CPE 3.65GHz Outdoor	Note : Mode 2: Transmit (5MHz BW_16QAM1/2)
	_3662.5MHz



- 1. All Reading Levels are Peak value.
- 2. " \* ", means this data is the worst emission level.
- 3. Measurement Level = Reading Level + Correct Factor.



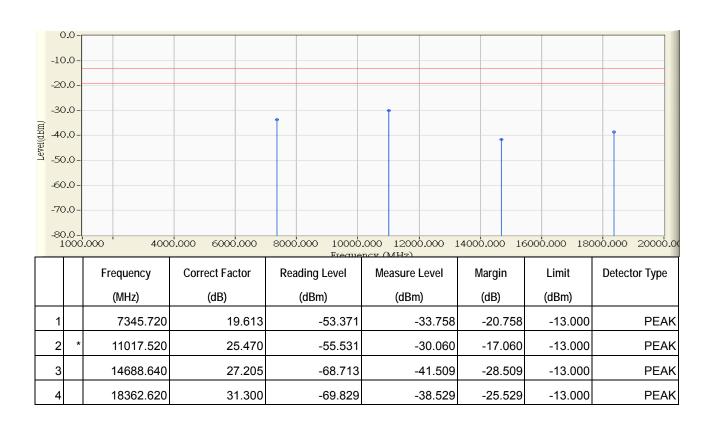
Site : CB1	Time : 2011/11/23 - 17:22
Limit : PART27(WiMAX)_00M_PK	Margin : 6
Probe : CB1_CE_Sub_1-18G(2011-08) - HORIZONTAL	Power : AC 120V/60Hz
EUT : CPE 3.65GHz Outdoor	Note : Mode 2: Transmit (5MHz BW_16QAM1/2)
	_3672.5MHz



- 1. All Reading Levels are Peak value.
- 2. " \* ", means this data is the worst emission level.
- 3. Measurement Level = Reading Level + Correct Factor.



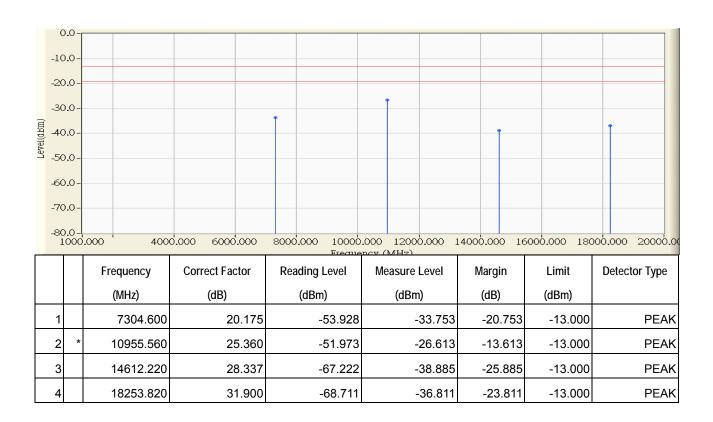
Site : CB1	Time : 2011/11/23 - 17:24
Limit : PART27(WiMAX)_00M_PK	Margin : 6
Probe : CB1_CE_Sub_1-18G(2011-08) - VERTICAL	Power : AC 120V/60Hz
EUT : CPE 3.65GHz Outdoor	Note : Mode 2: Transmit (5MHz BW_16QAM1/2)
	_3672.5MHz



- 1. All Reading Levels are Peak value.
- 2. " \* ", means this data is the worst emission level.
- 3. Measurement Level = Reading Level + Correct Factor.



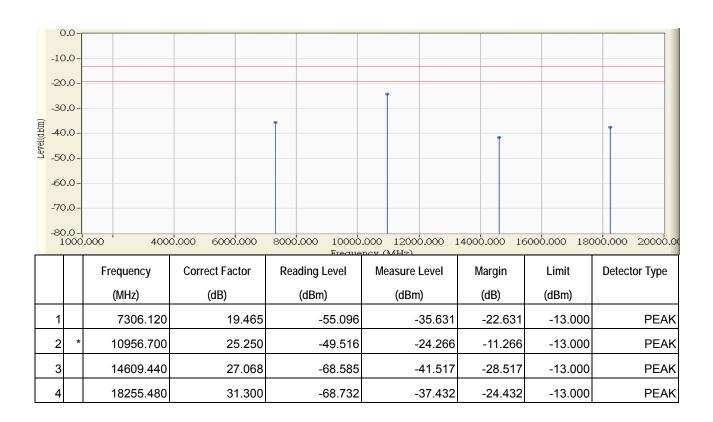
Site : CB1	Time : 2011/11/23 - 17:27
Limit : PART27(WiMAX)_00M_PK	Margin : 6
Probe : CB1_CE_Sub_1-18G(2011-08) - HORIZONTAL	Power : AC 120V/60Hz
EUT : CPE 3.65GHz Outdoor	Note : Mode 3: Transmit (5MHz BW_64QAM2/3)
	_3652.5MHz



- 1. All Reading Levels are Peak value.
- 2. " \* ", means this data is the worst emission level.
- 3. Measurement Level = Reading Level + Correct Factor.



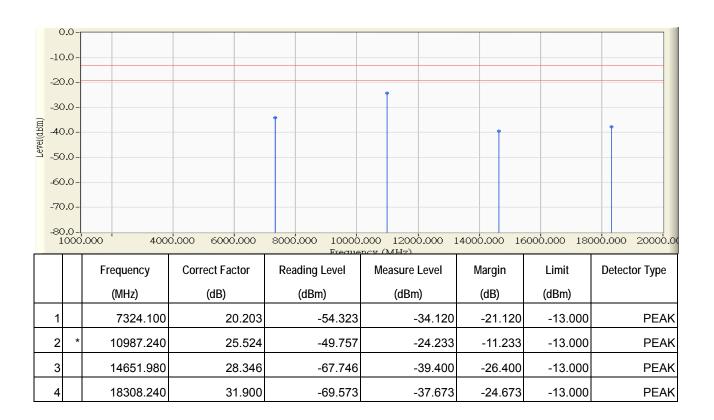
Site : CB1	Time : 2011/11/23 - 17:29
Limit : PART27(WiMAX)_00M_PK	Margin : 6
Probe : CB1_CE_Sub_1-18G(2011-08) - VERTICAL	Power : AC 120V/60Hz
EUT : CPE 3.65GHz Outdoor	Note : Mode 3: Transmit (5MHz BW_64QAM2/3)
	_3652.5MHz



- 1. All Reading Levels are Peak value.
- 2. " \* ", means this data is the worst emission level.
- 3. Measurement Level = Reading Level + Correct Factor.



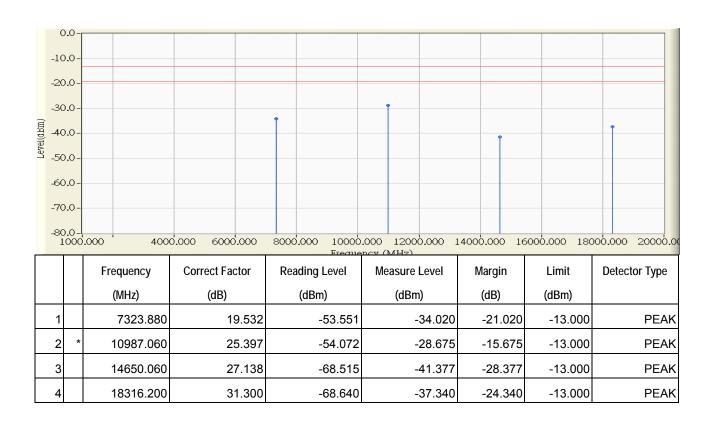
Site : CB1	Time : 2011/11/23 - 17:32
Limit : PART27(WiMAX)_00M_PK	Margin : 6
Probe : CB1_CE_Sub_1-18G(2011-08) - HORIZONTAL	Power : AC 120V/60Hz
EUT : CPE 3.65GHz Outdoor	Note : Mode 3: Transmit (5MHz BW_64QAM2/3)
	_3662.5MHz



- 1. All Reading Levels are Peak value.
- 2. " \* ", means this data is the worst emission level.
- 3. Measurement Level = Reading Level + Correct Factor.



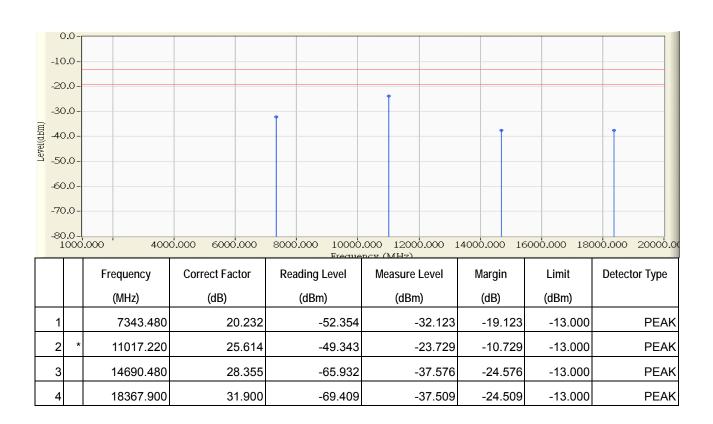
Site : CB1	Time : 2011/11/23 - 17:35
Limit : PART27(WiMAX)_00M_PK	Margin : 6
Probe : CB1_CE_Sub_1-18G(2011-08) - VERTICAL	Power : AC 120V/60Hz
EUT : CPE 3.65GHz Outdoor	Note : Mode 3: Transmit (5MHz BW_64QAM2/3)
	_3662.5MHz



- 1. All Reading Levels are Peak value.
- 2. " \* ", means this data is the worst emission level.
- 3. Measurement Level = Reading Level + Correct Factor.



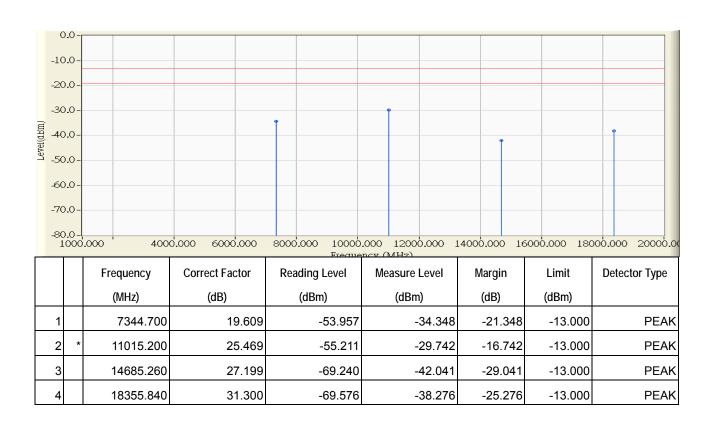
Site : CB1	Time : 2011/11/23 - 17:37
Limit : PART27(WiMAX)_00M_PK	Margin : 6
Probe : CB1_CE_Sub_1-18G(2011-08) - HORIZONTAL	Power : AC 120V/60Hz
EUT : CPE 3.65GHz Outdoor	Note : Mode 3: Transmit (5MHz BW_64QAM2/3)
	_3672.5MHz



- 1. All Reading Levels are Peak value.
- 2. " \* ", means this data is the worst emission level.
- 3. Measurement Level = Reading Level + Correct Factor.



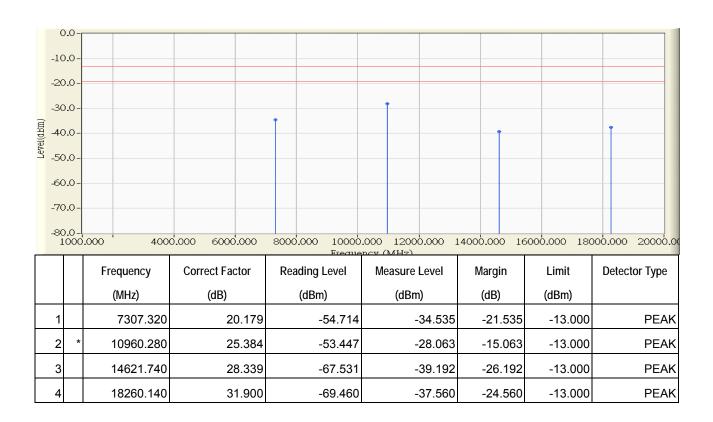
Site : CB1	Time : 2011/11/23 - 17:40
Limit : PART27(WiMAX)_00M_PK	Margin : 6
Probe : CB1_CE_Sub_1-18G(2011-08) - VERTICAL	Power : AC 120V/60Hz
EUT : CPE 3.65GHz Outdoor	Note : Mode 3: Transmit (5MHz BW_64QAM2/3)
	_3672.5MHz



- 1. All Reading Levels are Peak value.
- 2. " \* ", means this data is the worst emission level.
- 3. Measurement Level = Reading Level + Correct Factor.



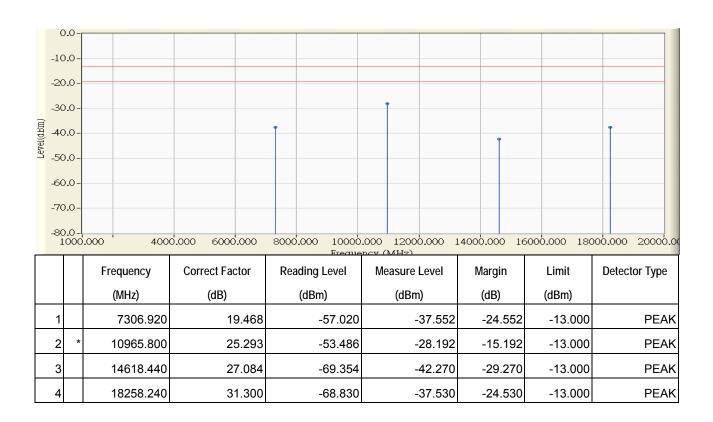
Site : CB1	Time : 2011/11/23 - 14:39
Limit : PART27(WiMAX)_00M_PK	Margin : 6
Probe : CB1_CE_Sub_1-18G(2011-08) - HORIZONTAL	Power : AC 120V/60Hz
EUT : CPE 3.65GHz Outdoor	Note : Mode 4: Transmit (7MHz BW_QPSK1/2)
	_3653.5MHz



- 1. All Reading Levels are Peak value.
- 2. " \* ", means this data is the worst emission level.
- 3. Measurement Level = Reading Level + Correct Factor.



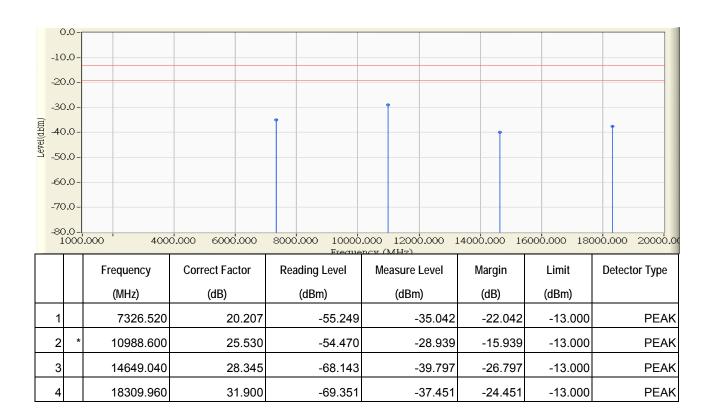
Site : CB1	Time : 2011/11/23 - 14:54
Limit : PART27(WiMAX)_00M_PK	Margin : 6
Probe : CB1_CE_Sub_1-18G(2011-08) - VERTICAL	Power : AC 120V/60Hz
EUT : CPE 3.65GHz Outdoor	Note : Mode 4: Transmit (7MHz BW_QPSK1/2)
	_3653.5MHz



- 1. All Reading Levels are Peak value.
- 2. " \* ", means this data is the worst emission level.
- 3. Measurement Level = Reading Level + Correct Factor.



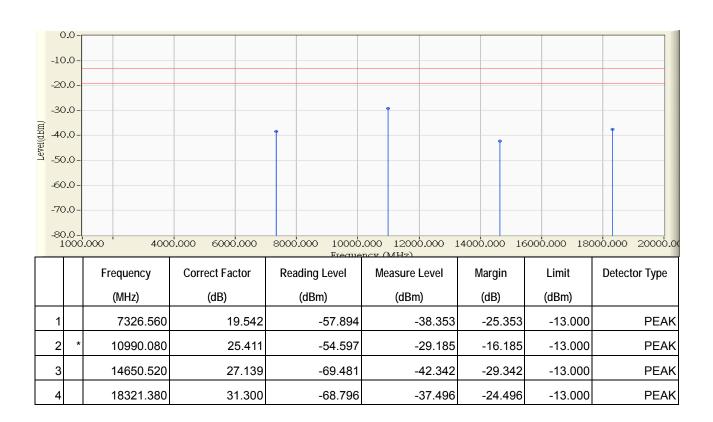
Site : CB1	Time : 2011/11/23 - 15:02
Limit : PART27(WiMAX)_00M_PK	Margin : 6
Probe : CB1_CE_Sub_1-18G(2011-08) - HORIZONTAL	Power : AC 120V/60Hz
EUT : CPE 3.65GHz Outdoor	Note : Mode 4: Transmit (7MHz BW_QPSK1/2)
	_3662.5MHz



- 1. All Reading Levels are Peak value.
- 2. " \* ", means this data is the worst emission level.
- 3. Measurement Level = Reading Level + Correct Factor.



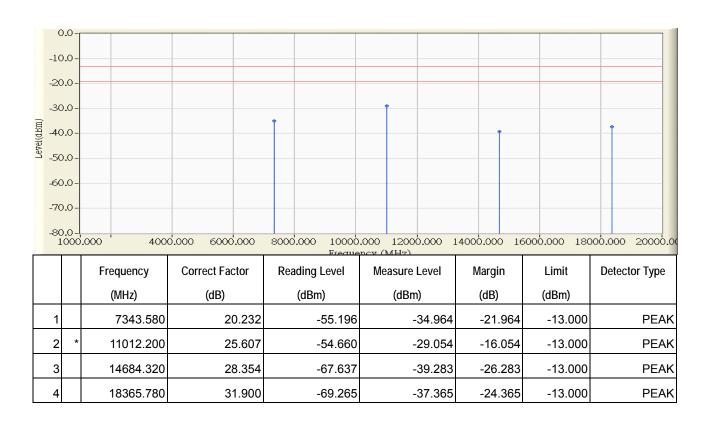
Site : CB1	Time : 2011/11/23 - 15:07
Limit : PART27(WiMAX)_00M_PK	Margin : 6
Probe : CB1_CE_Sub_1-18G(2011-08) - VERTICAL	Power : AC 120V/60Hz
EUT : CPE 3.65GHz Outdoor	Note : Mode 4: Transmit (7MHz BW_QPSK1/2)
	_3662.5MHz



- 1. All Reading Levels are Peak value.
- 2. " \* ", means this data is the worst emission level.
- 3. Measurement Level = Reading Level + Correct Factor.



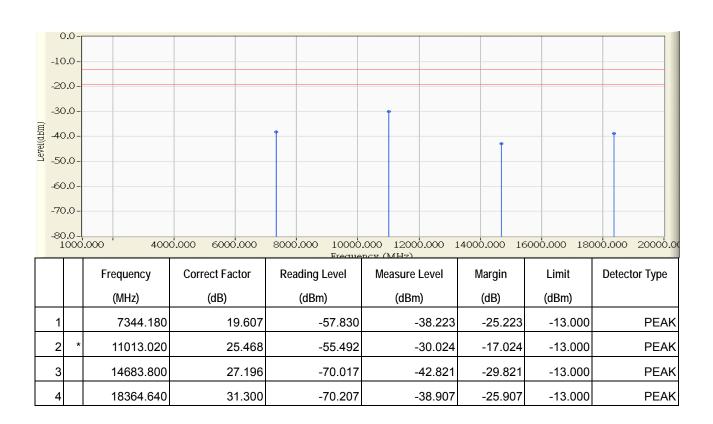
Site : CB1	Time : 2011/11/23 - 15:15
Limit : PART27(WiMAX)_00M_PK	Margin : 6
Probe : CB1_CE_Sub_1-18G(2011-08) - HORIZONTAL	Power : AC 120V/60Hz
EUT : CPE 3.65GHz Outdoor	Note : Mode 4: Transmit (7MHz BW_QPSK1/2)
	_3671.5MHz



- 1. All Reading Levels are Peak value.
- 2. " \* ", means this data is the worst emission level.
- 3. Measurement Level = Reading Level + Correct Factor.



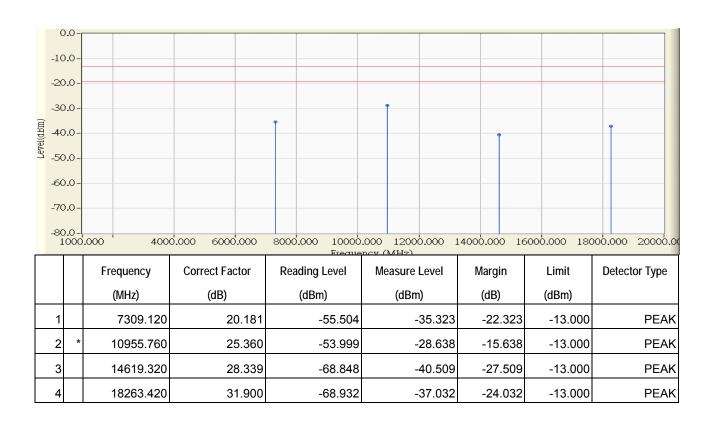
Site : CB1	Time : 2011/11/23 - 15:19
Limit : PART27(WiMAX)_00M_PK	Margin : 6
Probe : CB1_CE_Sub_1-18G(2011-08) - VERTICAL	Power : AC 120V/60Hz
EUT : CPE 3.65GHz Outdoor	Note : Mode 4: Transmit (7MHz BW_QPSK1/2)
	_3671.5MHz



- 1. All Reading Levels are Peak value.
- 2. " \* ", means this data is the worst emission level.
- 3. Measurement Level = Reading Level + Correct Factor.



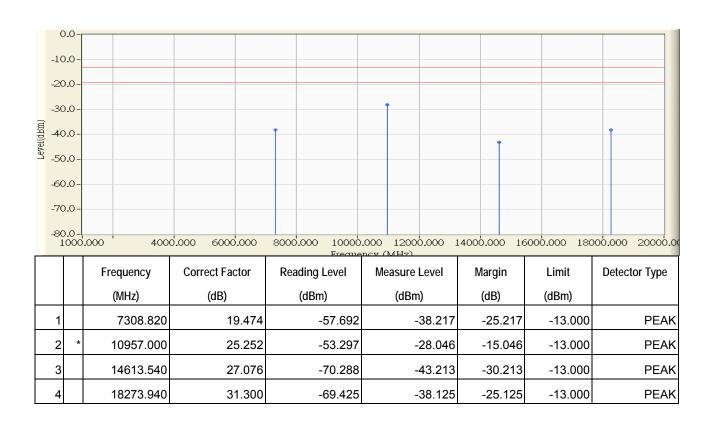
Site : CB1	Time : 2011/11/23 - 15:24
Limit : PART27(WiMAX)_00M_PK	Margin : 6
Probe : CB1_CE_Sub_1-18G(2011-08) - HORIZONTAL	Power : AC 120V/60Hz
EUT : CPE 3.65GHz Outdoor	Note : Mode 5: Transmit (7MHz BW_16QAM1/2)
	_3653.5MHz



- 1. All Reading Levels are Peak value.
- 2. " \* ", means this data is the worst emission level.
- 3. Measurement Level = Reading Level + Correct Factor.



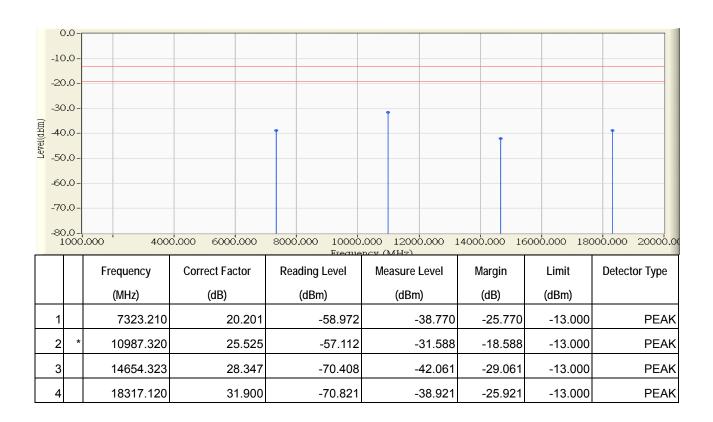
Site : CB1	Time : 2011/11/23 - 15:26
Limit : PART27(WiMAX)_00M_PK	Margin : 6
Probe : CB1_CE_Sub_1-18G(2011-08) - VERTICAL	Power : AC 120V/60Hz
EUT : CPE 3.65GHz Outdoor	Note : Mode 5: Transmit (7MHz BW_16QAM1/2)
	_3653.5MHz



- 1. All Reading Levels are Peak value.
- 2. " \* ", means this data is the worst emission level.
- 3. Measurement Level = Reading Level + Correct Factor.



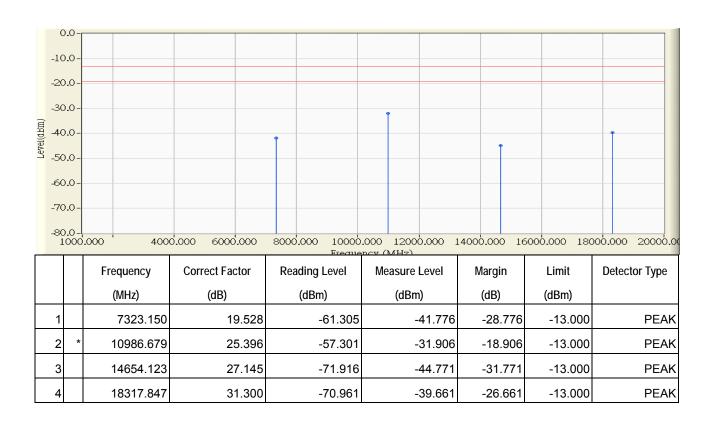
Site : CB1	Time : 2011/11/23 - 15:34
Limit : PART27(WiMAX)_00M_PK	Margin : 6
Probe : CB1_CE_Sub_1-18G(2011-08) - HORIZONTAL	Power : AC 120V/60Hz
EUT : CPE 3.65GHz Outdoor	Note : Mode 5: Transmit (7MHz BW_16QAM1/2)
	_3662.5MHz



- 1. All Reading Levels are Peak value.
- 2. " \* ", means this data is the worst emission level.
- 3. Measurement Level = Reading Level + Correct Factor.



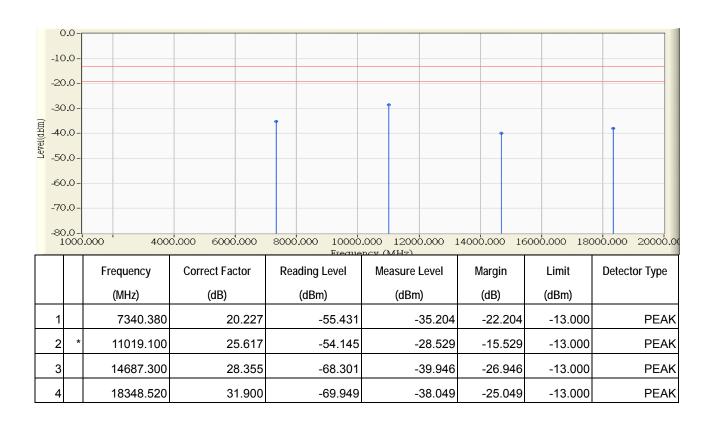
Site : CB1	Time : 2011/11/23 - 15:37
Limit : PART27(WiMAX)_00M_PK	Margin : 6
Probe : CB1_CE_Sub_1-18G(2011-08) - VERTICAL	Power : AC 120V/60Hz
EUT : CPE 3.65GHz Outdoor	Note : Mode 5: Transmit (7MHz BW_16QAM1/2)
	_3662.5MHz



- 1. All Reading Levels are Peak value.
- 2. " \* ", means this data is the worst emission level.
- 3. Measurement Level = Reading Level + Correct Factor.



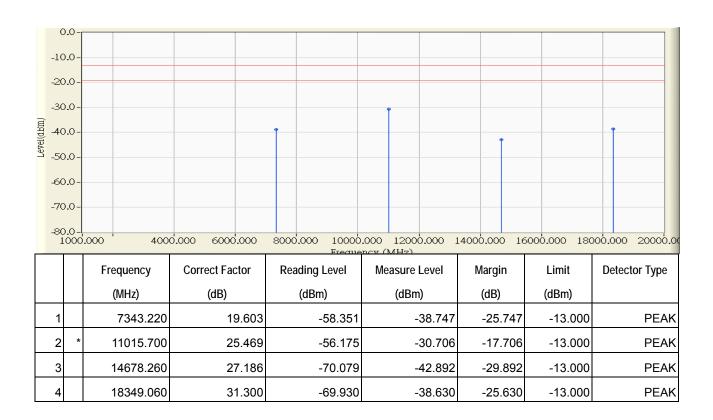
Site : CB1	Time : 2011/11/23 - 15:39
Limit : PART27(WiMAX)_00M_PK	Margin : 6
Probe : CB1_CE_Sub_1-18G(2011-08) - HORIZONTAL	Power : AC 120V/60Hz
EUT : CPE 3.65GHz Outdoor	Note : Mode 5: Transmit (7MHz BW_16QAM1/2)
	_3671.5MHz



- 1. All Reading Levels are Peak value.
- 2. " \* ", means this data is the worst emission level.
- 3. Measurement Level = Reading Level + Correct Factor.



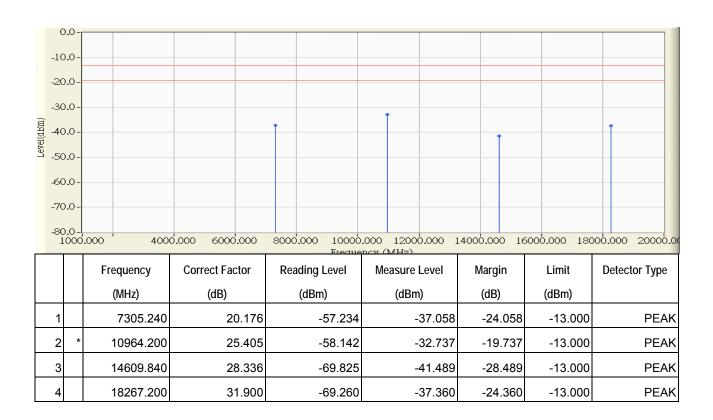
Site : CB1	Time : 2011/11/23 - 15:41
Limit : PART27(WiMAX)_00M_PK	Margin : 6
Probe : CB1_CE_Sub_1-18G(2011-08) - VERTICAL	Power : AC 120V/60Hz
EUT : CPE 3.65GHz Outdoor	Note : Mode 5: Transmit (7MHz BW_16QAM1/2)
	_3671.5MHz



- 1. All Reading Levels are Peak value.
- 2. " \* ", means this data is the worst emission level.
- 3. Measurement Level = Reading Level + Correct Factor.



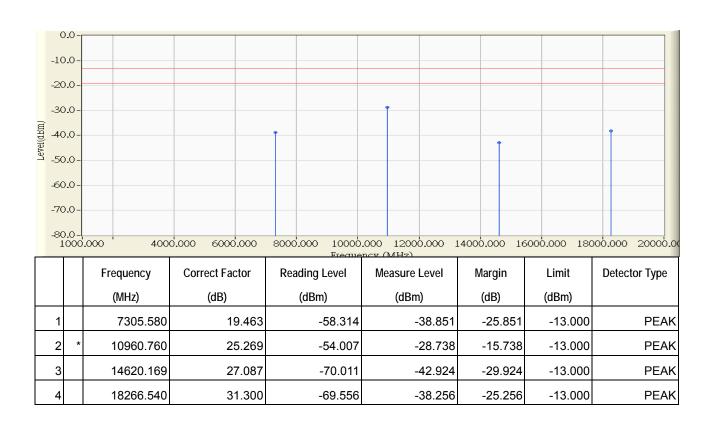
Site : CB1	Time : 2011/11/23 - 15:44
Limit : PART27(WiMAX)_00M_PK	Margin : 6
Probe : CB1_CE_Sub_1-18G(2011-08) - HORIZONTAL	Power : AC 120V/60Hz
EUT : CPE 3.65GHz Outdoor	Note : Mode 6: Transmit (7MHz BW_64QAM2/3)
	_3653.5MHz



- 1. All Reading Levels are Peak value.
- 2. " \* ", means this data is the worst emission level.
- 3. Measurement Level = Reading Level + Correct Factor.



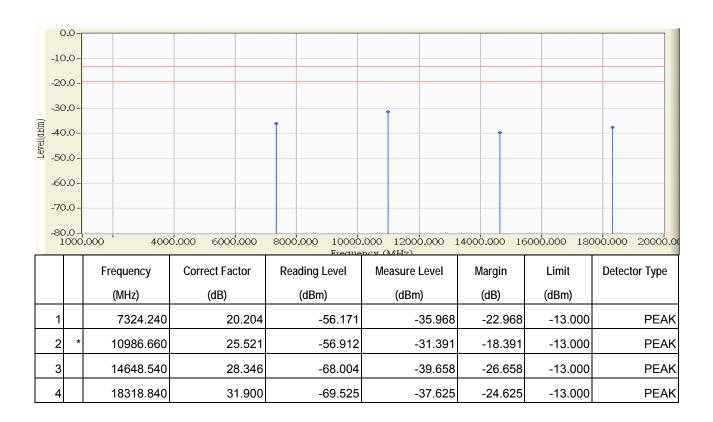
Site : CB1	Time : 2011/11/23 - 15:50
Limit : PART27(WiMAX)_00M_PK	Margin : 6
Probe : CB1_CE_Sub_1-18G(2011-08) - VERTICAL	Power : AC 120V/60Hz
EUT : CPE 3.65GHz Outdoor	Note : Mode 6: Transmit (7MHz BW_64QAM2/3)
	_3653.5MHz



- 1. All Reading Levels are Peak value.
- 2. " \* ", means this data is the worst emission level.
- 3. Measurement Level = Reading Level + Correct Factor.



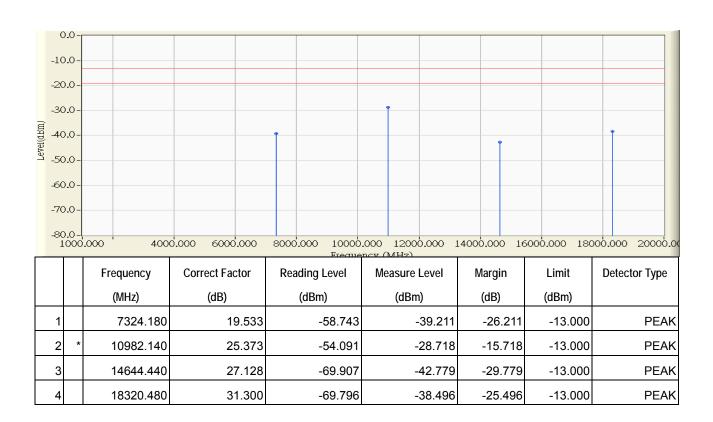
Site : CB1	Time : 2011/11/23 - 15:54
Limit : PART27(WiMAX)_00M_PK	Margin : 6
Probe : CB1_CE_Sub_1-18G(2011-08) - HORIZONTAL	Power : AC 120V/60Hz
EUT : CPE 3.65GHz Outdoor	Note : Mode 6: Transmit (7MHz BW_64QAM2/3)
	_3662.5MHz



- 1. All Reading Levels are Peak value.
- 2. " \* ", means this data is the worst emission level.
- 3. Measurement Level = Reading Level + Correct Factor.



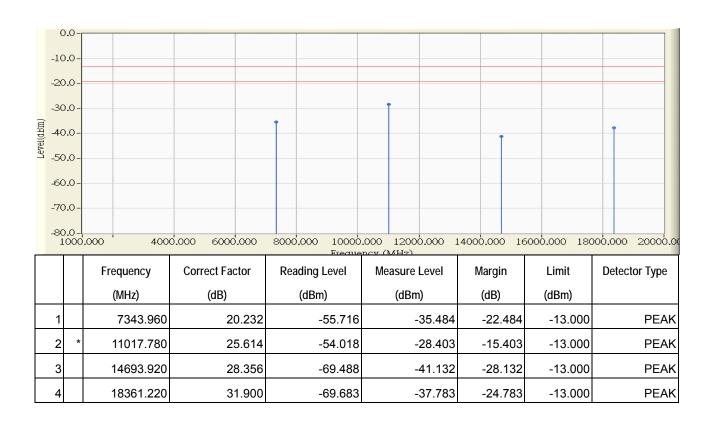
Site : CB1	Time : 2011/11/23 - 15:56
Limit : PART27(WiMAX)_00M_PK	Margin: 6
Probe : CB1_CE_Sub_1-18G(2011-08) - VERTICAL	Power : AC 120V/60Hz
EUT : CPE 3.65GHz Outdoor	Note : Mode 6: Transmit (7MHz BW_64QAM2/3)
	_3662.5MHz



- 1. All Reading Levels are Peak value.
- 2. " \* ", means this data is the worst emission level.
- 3. Measurement Level = Reading Level + Correct Factor.



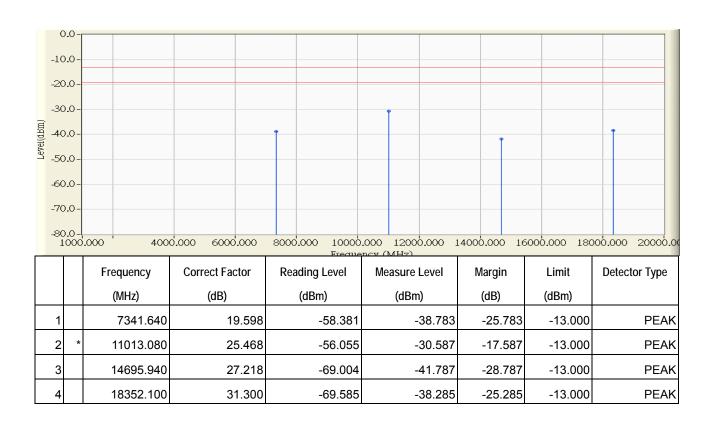
Site : CB1	Time : 2011/11/23 - 15:59
Limit : PART27(WiMAX)_00M_PK	Margin : 6
Probe : CB1_CE_Sub_1-18G(2011-08) - HORIZONTAL	Power : AC 120V/60Hz
EUT : CPE 3.65GHz Outdoor	Note : Mode 6: Transmit (7MHz BW_64QAM2/3)
	_3671.5MHz



- 1. All Reading Levels are Peak value.
- 2. " \* ", means this data is the worst emission level.
- 3. Measurement Level = Reading Level + Correct Factor.



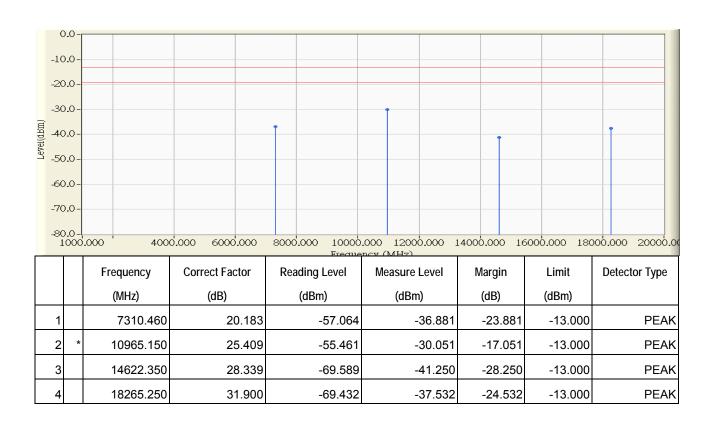
Site : CB1	Time : 2011/11/23 - 16:01
Limit : PART27(WiMAX)_00M_PK	Margin : 6
Probe : CB1_CE_Sub_1-18G(2011-08) - VERTICAL	Power : AC 120V/60Hz
EUT : CPE 3.65GHz Outdoor	Note : Mode 6: Transmit (7MHz BW_64QAM2/3)
	_3671.5MHz



- 1. All Reading Levels are Peak value.
- 2. " \* ", means this data is the worst emission level.
- 3. Measurement Level = Reading Level + Correct Factor.



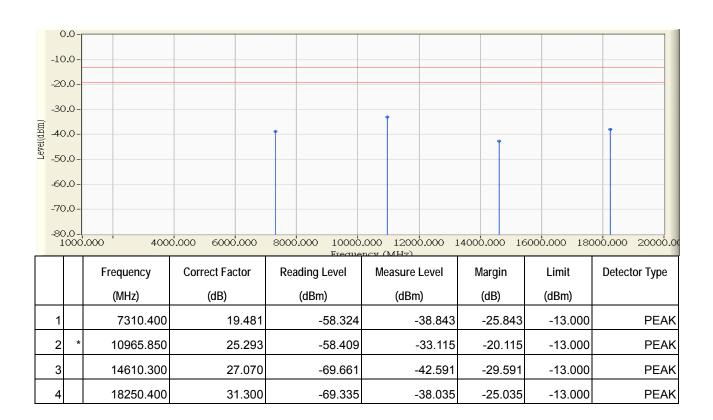
Site : CB1	Time : 2011/11/23 - 16:04
Limit : PART27(WiMAX)_00M_PK	Margin : 6
Probe : CB1_CE_Sub_1-18G(2011-08) - HORIZONTAL	Power : AC 120V/60Hz
EUT : CPE 3.65GHz Outdoor	Note : Mode 7: Transmit (10MHz BW_QPSK1/2)
	_3655MHz



- 1. All Reading Levels are Peak value.
- 2. " \* ", means this data is the worst emission level.
- 3. Measurement Level = Reading Level + Correct Factor.



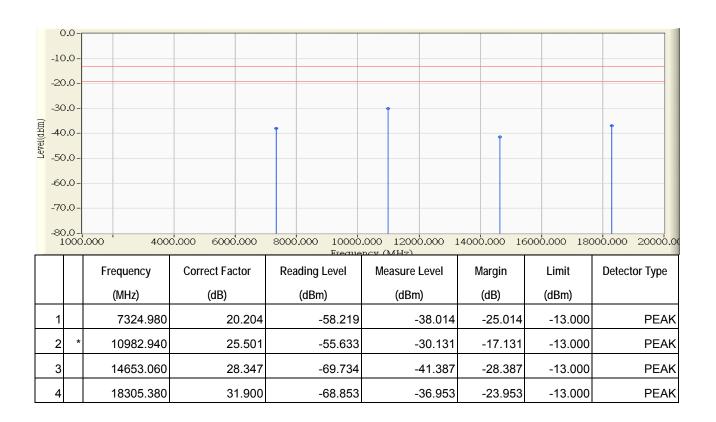
Site : CB1	Time : 2011/11/23 - 16:06
Limit : PART27(WiMAX)_00M_PK	Margin : 6
Probe : CB1_CE_Sub_1-18G(2011-08) - VERTICAL	Power : AC 120V/60Hz
EUT : CPE 3.65GHz Outdoor	Note : Mode 7: Transmit (10MHz BW_QPSK1/2)
	_3655MHz



- 1. All Reading Levels are Peak value.
- 2. " \* ", means this data is the worst emission level.
- 3. Measurement Level = Reading Level + Correct Factor.



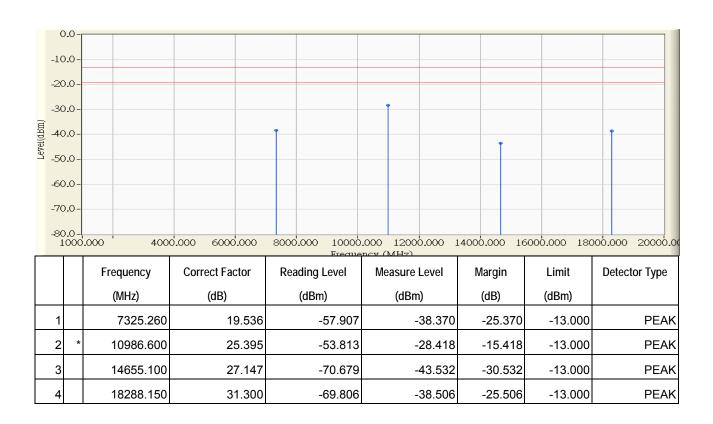
Site : CB1	Time : 2011/11/23 - 16:10
Limit : PART27(WiMAX)_00M_PK	Margin : 6
Probe : CB1_CE_Sub_1-18G(2011-08) - HORIZONTAL	Power : AC 120V/60Hz
EUT : CPE 3.65GHz Outdoor	Note : Mode 7: Transmit (10MHz BW_QPSK1/2)
	_3662.5MHz



- 1. All Reading Levels are Peak value.
- 2. " \* ", means this data is the worst emission level.
- 3. Measurement Level = Reading Level + Correct Factor.



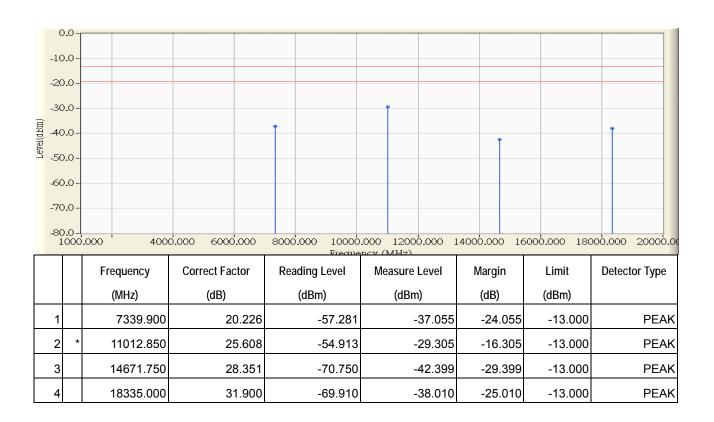
Site : CB1	Time : 2011/11/23 - 16:11
Limit : PART27(WiMAX)_00M_PK	Margin : 6
Probe : CB1_CE_Sub_1-18G(2011-08) - VERTICAL	Power : AC 120V/60Hz
EUT : CPE 3.65GHz Outdoor	Note : Mode 7: Transmit (10MHz BW_QPSK1/2)
	_3662.5MHz



- 1. All Reading Levels are Peak value.
- 2. " \* ", means this data is the worst emission level.
- 3. Measurement Level = Reading Level + Correct Factor.



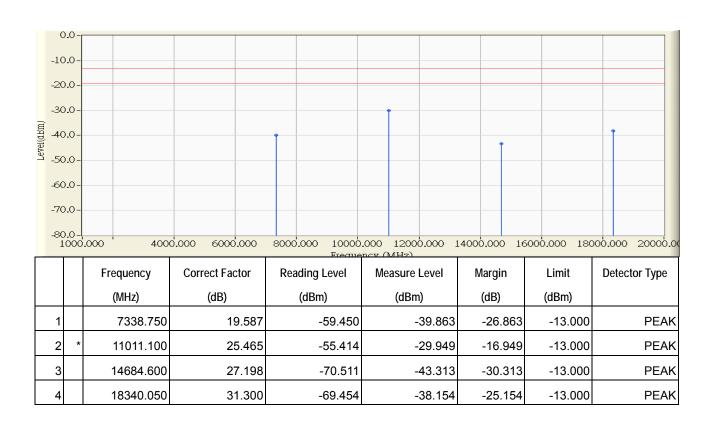
Site : CB1	Time : 2011/11/23 - 16:14
Limit : PART27(WiMAX)_00M_PK	Margin : 6
Probe : CB1_CE_Sub_1-18G(2011-08) - HORIZONTAL	Power : AC 120V/60Hz
EUT : CPE 3.65GHz Outdoor	Note : Mode 7: Transmit (10MHz BW_QPSK1/2)
	_3670MHz



- 1. All Reading Levels are Peak value.
- 2. " \* ", means this data is the worst emission level.
- 3. Measurement Level = Reading Level + Correct Factor.



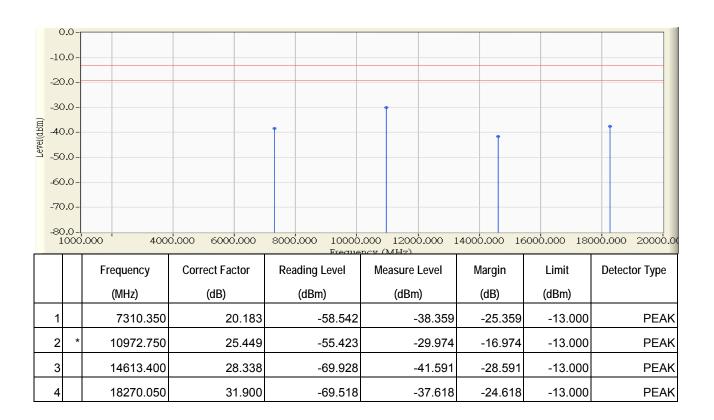
Site : CB1	Time : 2011/11/23 - 16:16
Limit : PART27(WiMAX)_00M_PK	Margin : 6
Probe : CB1_CE_Sub_1-18G(2011-08) - VERTICAL	Power : AC 120V/60Hz
EUT : CPE 3.65GHz Outdoor	Note : Mode 7: Transmit (10MHz BW_QPSK1/2)
	_3670MHz



- 1. All Reading Levels are Peak value.
- 2. " \* ", means this data is the worst emission level.
- 3. Measurement Level = Reading Level + Correct Factor.



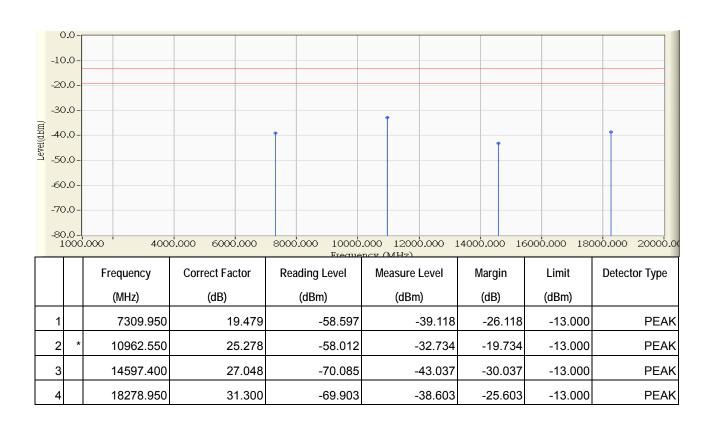
Site : CB1	Time : 2011/11/23 - 16:21
Limit : PART27(WiMAX)_00M_PK	Margin : 6
Probe : CB1_CE_Sub_1-18G(2011-08) - HORIZONTAL	Power : AC 120V/60Hz
EUT : CPE 3.65GHz Outdoor	Note : Mode 8: Transmit (10MHz BW_16QAM1/2)
	_3655MHz



- 1. All Reading Levels are Peak value.
- 2. " \* ", means this data is the worst emission level.
- 3. Measurement Level = Reading Level + Correct Factor.



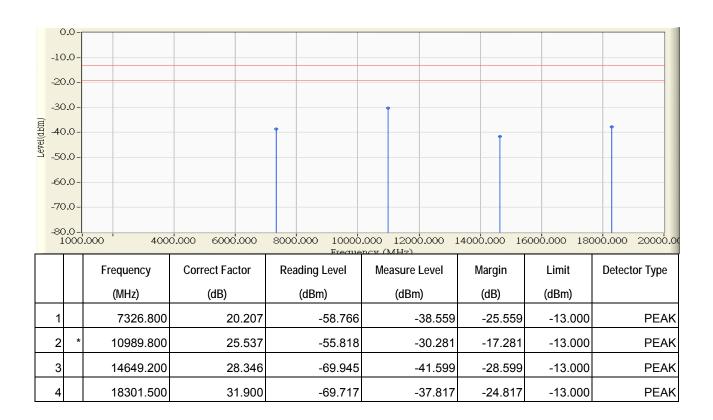
Site : CB1	Time : 2011/11/23 - 16:23
Limit : PART27(WiMAX)_00M_PK	Margin : 6
Probe : CB1_CE_Sub_1-18G(2011-08) - VERTICAL	Power : AC 120V/60Hz
EUT : CPE 3.65GHz Outdoor	Note : Mode 8: Transmit (10MHz BW_16QAM1/2)
	_3655MHz



- 1. All Reading Levels are Peak value.
- 2. " \* ", means this data is the worst emission level.
- 3. Measurement Level = Reading Level + Correct Factor.



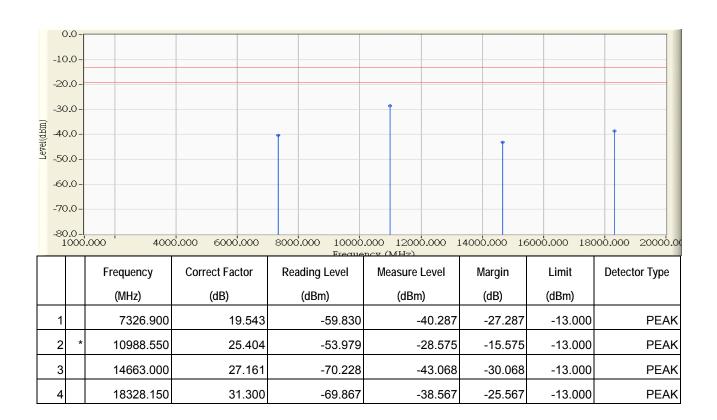
Site : CB1	Time : 2011/11/23 - 16:26
Limit : PART27(WiMAX)_00M_PK	Margin : 6
Probe : CB1_CE_Sub_1-18G(2011-08) - HORIZONTAL	Power : AC 120V/60Hz
EUT : CPE 3.65GHz Outdoor	Note : Mode 8: Transmit (10MHz BW_16QAM1/2)
	_3662.5MHz



- 1. All Reading Levels are Peak value.
- 2. " \* ", means this data is the worst emission level.
- 3. Measurement Level = Reading Level + Correct Factor.



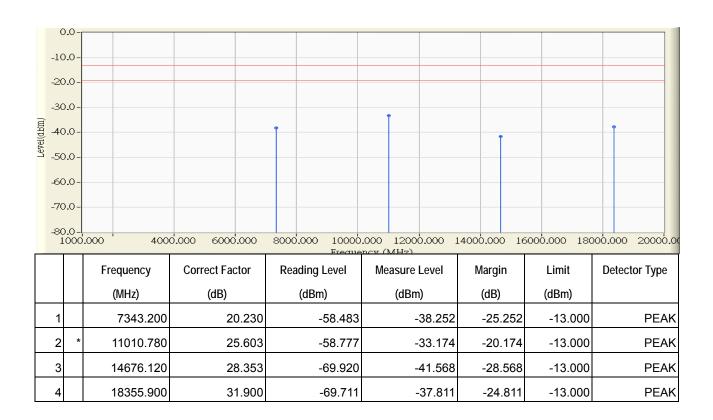
Site : CB1	Time : 2011/11/23 - 16:27
Limit : PART27(WiMAX)_00M_PK	Margin : 6
Probe : CB1_CE_Sub_1-18G(2011-08) - VERTICAL	Power : AC 120V/60Hz
EUT : CPE 3.65GHz Outdoor	Note : Mode 8: Transmit (10MHz BW_16QAM1/2)
	_3662.5MHz



- 1. All Reading Levels are Peak value.
- 2. " \* ", means this data is the worst emission level.
- 3. Measurement Level = Reading Level + Correct Factor.



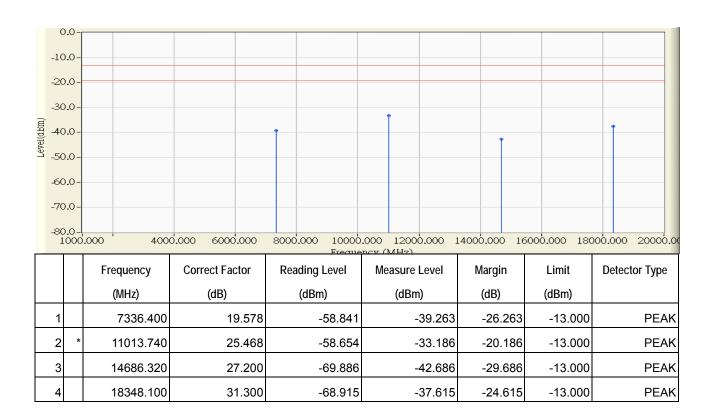
Site : CB1	Time : 2011/11/23 - 16:30
Limit : PART27(WiMAX)_00M_PK	Margin : 6
Probe : CB1_CE_Sub_1-18G(2011-08) - HORIZONTAL	Power : AC 120V/60Hz
EUT : CPE 3.65GHz Outdoor	Note : Mode 8: Transmit (10MHz BW_16QAM1/2)
	_3670MHz



- 1. All Reading Levels are Peak value.
- 2. " \* ", means this data is the worst emission level.
- 3. Measurement Level = Reading Level + Correct Factor.



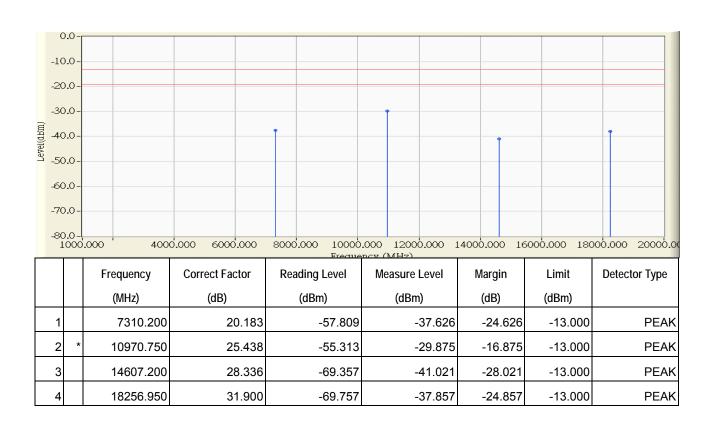
Site : CB1	Time : 2011/11/23 - 16:32
Limit : PART27(WiMAX)_00M_PK	Margin : 6
Probe : CB1_CE_Sub_1-18G(2011-08) - VERTICAL	Power : AC 120V/60Hz
EUT : CPE 3.65GHz Outdoor	Note : Mode 8: Transmit (10MHz BW_16QAM1/2)
	_3670MHz



- 1. All Reading Levels are Peak value.
- 2. " \* ", means this data is the worst emission level.
- 3. Measurement Level = Reading Level + Correct Factor.



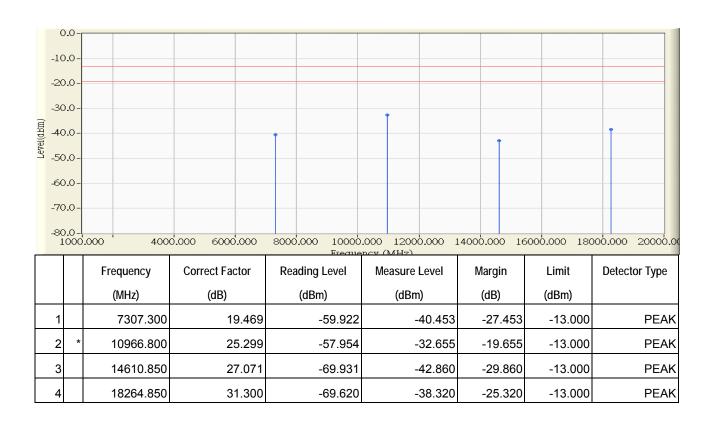
Site : CB1	Time : 2011/11/23 - 16:36
Limit : PART27(WiMAX)_00M_PK	Margin : 6
Probe : CB1_CE_Sub_1-18G(2011-08) - HORIZONTAL	Power : AC 120V/60Hz
EUT : CPE 3.65GHz Outdoor	Note : Mode 9: Transmit (10MHz BW_64QAM2/3)
	_3655MHz



- 1. All Reading Levels are Peak value.
- 2. " \* ", means this data is the worst emission level.
- 3. Measurement Level = Reading Level + Correct Factor.



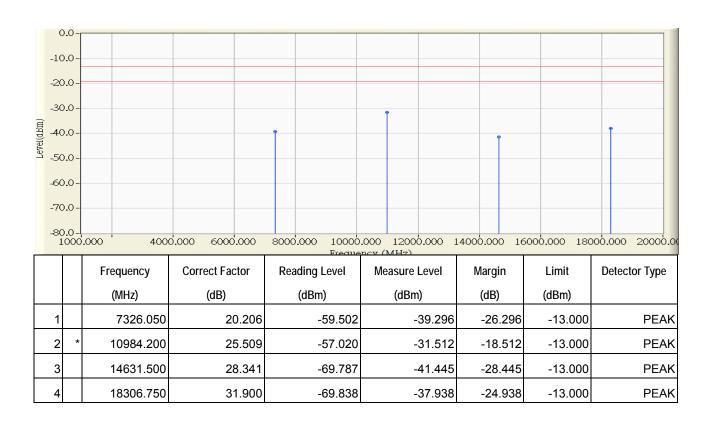
Site : CB1	Time : 2011/11/23 - 16:37
Limit : PART27(WiMAX)_00M_PK	Margin : 6
Probe : CB1_CE_Sub_1-18G(2011-08) - VERTICAL	Power : AC 120V/60Hz
EUT : CPE 3.65GHz Outdoor	Note : Mode 9: Transmit (10MHz BW_64QAM2/3)
	_3655MHz



- 1. All Reading Levels are Peak value.
- 2. " \* ", means this data is the worst emission level.
- 3. Measurement Level = Reading Level + Correct Factor.



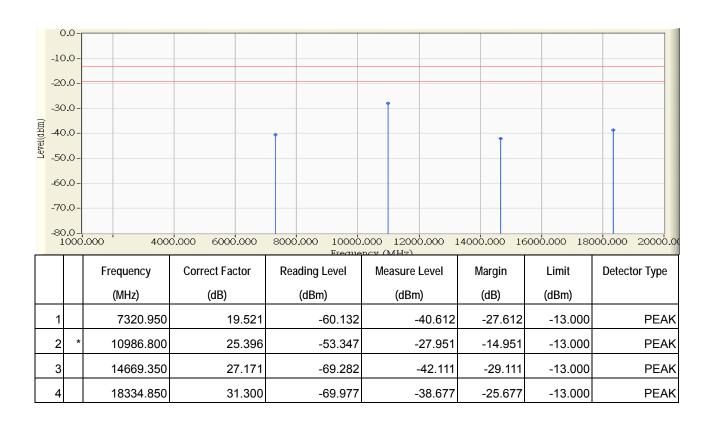
Site : CB1	Time : 2011/11/23 - 16:40
Limit : PART27(WiMAX)_00M_PK	Margin : 6
Probe : CB1_CE_Sub_1-18G(2011-08) - HORIZONTAL	Power : AC 120V/60Hz
EUT : CPE 3.65GHz Outdoor	Note : Mode 9: Transmit (10MHz BW_64QAM2/3)
	_3662.5MHz



- 1. All Reading Levels are Peak value.
- 2. " \* ", means this data is the worst emission level.
- 3. Measurement Level = Reading Level + Correct Factor.



Site : CB1	Time : 2011/11/23 - 16:43
Limit : PART27(WiMAX)_00M_PK	Margin : 6
Probe : CB1_CE_Sub_1-18G(2011-08) - VERTICAL	Power : AC 120V/60Hz
EUT : CPE 3.65GHz Outdoor	Note : Mode 9: Transmit (10MHz BW_64QAM2/3)
	_3662.5MHz

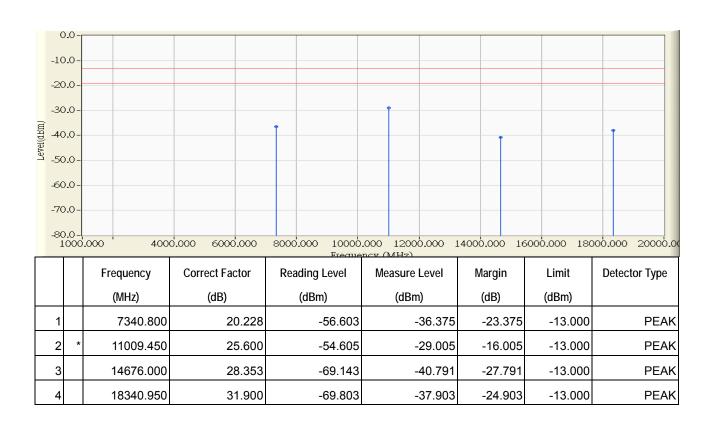


#### Note:

- 1. All Reading Levels are Peak value.
- 2. " \* ", means this data is the worst emission level.
- 3. Measurement Level = Reading Level + Correct Factor.



Site : CB1	Time : 2011/11/23 - 16:45
Limit : PART27(WiMAX)_00M_PK	Margin : 6
Probe : CB1_CE_Sub_1-18G(2011-08) - HORIZONTAL	Power : AC 120V/60Hz
EUT : CPE 3.65GHz Outdoor	Note : Mode 9: Transmit (10MHz BW_64QAM2/3)
	_3670MHz

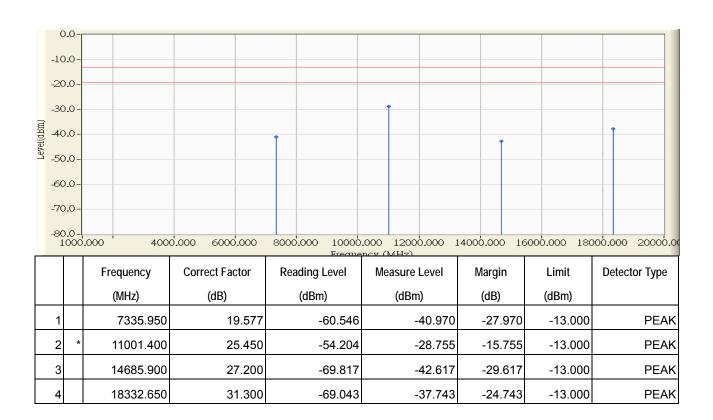


#### Note:

- 1. All Reading Levels are Peak value.
- 2. " \* ", means this data is the worst emission level.
- 3. Measurement Level = Reading Level + Correct Factor.



Site : CB1	Time : 2011/11/23 - 16:47
Limit : PART27(WiMAX)_00M_PK	Margin : 6
Probe : CB1_CE_Sub_1-18G(2011-08) - VERTICAL	Power : AC 120V/60Hz
EUT : CPE 3.65GHz Outdoor	Note : Mode 9: Transmit (10MHz BW_64QAM2/3)
	2-3_3670MHz



#### Note:

- 1. All Reading Levels are Peak value.
- 2. " \* ", means this data is the worst emission level.
- 3. Measurement Level = Reading Level + Correct Factor.



### 8. Frequency Stability Over Temperatures Variation

### 8.1. Test Equipment

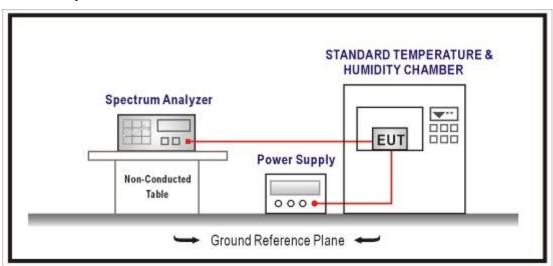
The following test equipments are used during the test:

#### Frequency Stability Over Temperatures Variation/ SR7

Instrument	Manufacturer	Model No.	Serial No	Next Cal. Date
Spectrum Analyzer	Agilent	N9010A	US47140172	2012/07/13
Standard				
Temperature &	WIT	TH-1S-B	1082101	2012/01/30
Humidity Chamber				

Note: 1. All equipments that need to calibrate are with calibration period of 1 year.

## 8.2. Test Setup



#### 8.3. Limits

The frequency stability shall be measured with variation of ambient temperature as follows: From -30° to +50° centigrade for all equipment. Frequency measurements shall be made at the extremes of the specified temperature range and at intervals of not more than 10° centigrade through the range.

#### 8.4. Test Procedure

Power must be turned off when changing from one temperature to another. Power warm up is at least 15 min and power applied should perform before recording frequency error. The temperature range step is 10 degrees in this test items. All temperature levels shall be holding the  $\pm~0.5^{\circ}$ C during the measurement testing. The each temperature step shall be at least 0.5 hours, consider the EUT could be test under the stability condition.



# 8.5. Test Specification:

FCC CFR Title 47 Part 90 Subpart Z, KDB 965270

# 8.6. Uncertainty

The measurement uncertainty is defined as ±100KHz

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## 8.7. Test Result

Product	CPE 3.65GHz Outdoor	CPE 3.65GHz Outdoor			
Test Item	Frequency Stability Over Te	Frequency Stability Over Temperatures Variation			
Test Mode	Carrier Signal_5MHz	Carrier Signal 5MHz			
Date of Test	2011/12/30	Test Site	SR7		

Centre Frequency: 3652.5 MHz

Temperature Interval (°C)	AC Voltage (V)	Frequency (MHz)	Deviation (ppm)	Result
-30		3652.4950	-1.3689	Pass
-20		3652.4950	-1.3689	Pass
-10		3652.4950	-1.3689	Pass
0	120	3652.4950	-1.3689	Pass
20	120	3652.4950	-1.3689	Pass
30		3652.4950	-1.3689	Pass
40		3652.4950	-1.3689	Pass
50		3652.4950	-1.3689	Pass

Centre Frequency: 3662.5 MHz

Temperature Interval (°C)	AC Voltage (V)	Frequency (MHz)	Deviation (ppm)	Result
-30		3662.4950	-1.3652	Pass
-20		3662.4950	-1.3652	Pass
-10		3662.4950	-1.3652	Pass
0	120	3662.4950	-1.3652	Pass
20	120	3662.4950	-1.3652	Pass
30		3662.4950	-1.3652	Pass
40		3662.4950	-1.3652	Pass
50		3662.4950	-1.3652	Pass

Centre Frequency: 3672.5 MHz

Temperature Interval (°C)	AC Voltage (V)	Frequency (MHz)	Deviation (ppm)	Result
-30		3672.4950	-1.3615	Pass
-20		3672.4950	-1.3615	Pass
-10		3672.4950	-1.3615	Pass
0	120	3672.4950	-1.3615	Pass
20	120	3672.4950	-1.3615	Pass
30		3672.4950	-1.3615	Pass
40		3672.4950	-1.3615	Pass
50		3672.4950	-1.3615	Pass

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Product	CPE 3.65GHz Outdoor			
Test Item	Frequency Stability Over Tempera	atures Variation		
Test Mode	Carrier Signal_7MHz			
Date of Test	2011/12/30	Test Site	SR7	

Centre Frequency: 3653.5 MHz

	<u>,                                      </u>			
Temperature Interval (°C)	AC Voltage (V)	Frequency (MHz)	Deviation (ppm)	Result
-30		3653.4950	-1.3686	Pass
-20		3653.4950	-1.3686	Pass
-10		3653.4950	-1.3686	Pass
0	400	3653.4950	-1.3686	Pass
20	120	3653.4950	-1.3686	Pass
30		3653.4950	-1.3686	Pass
40		3653.4950	-1.3686	Pass
50		3653.4950	-1.3686	Pass

Centre Frequency: 3662.5 MHz

Temperature Interval (°C)	AC Voltage (V)	Frequency (MHz)	Deviation (ppm)	Result
-30		3662.4950	-1.3652	Pass
-20		3662.4950	-1.3652	Pass
-10		3662.4950	-1.3652	Pass
0	400	3662.4950	-1.3652	Pass
20	120	3662.4950	-1.3652	Pass
30		3662.4950	-1.3652	Pass
40		3662.4950	-1.3652	Pass
50		3662.4950	-1.3652	Pass

**Centre Frequency: 3671.5 MHz** 

Temperature Interval (°C)	AC Voltage (V)	Frequency (MHz)	Deviation (ppm)	Result
-30		3671.4950	-1.3618	Pass
-20		3671.4950	-1.3618	Pass
-10		3671.4950	-1.3618	Pass
0	400	3671.4950	-1.3618	Pass
20	120	3671.4950	-1.3618	Pass
30		3671.4950	-1.3618	Pass
40		3671.4950	-1.3618	Pass
50		3671.4950	-1.3618	Pass

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Product	CPE 3.65GHz Outdoor		
Test Item	Frequency Stability Over	Temperatures Variation	
Test Mode	Carrier Signal_10MHz		
Date of Test	2011/12/30	Test Site	SR7

# Centre Frequency: 3655.0 MHz

Temperature Interval (°C)	AC Voltage (V)	Frequency (MHz)	Deviation (ppm)	Result
-30		3654.9950	-1.3680	Pass
-20		3654.9950	-1.3680	Pass
-10		3654.9950	-1.3680	Pass
0	120	3654.9950	-1.3680	Pass
20		3654.9950	-1.3680	Pass
30		3654.9950	-1.3680	Pass
40		3654.9950	-1.3680	Pass
50		3654.9900	-2.7360	Pass

## Centre Frequency: 3662.5 MHz

	<i>,</i>			
Temperature Interval (°C)	AC Voltage (V)	Frequency (MHz)	Deviation (ppm)	Result
-30		3662.4950	-1.3652	Pass
-20		3662.4950	-1.3652	Pass
-10		3662.4950	-1.3652	Pass
0	120	3662.4950	-1.3652	Pass
20		3662.4950	-1.3652	Pass
30		3662.4950	-1.3652	Pass
40		3662.4950	-1.3652	Pass
50	]	3662.4900	-2.7304	Pass

#### Centre Frequency: 3670.0 MHz

Ochtre i requency. 3070.0 minz				
Temperature Interval (°C)	AC Voltage (V)	Frequency (MHz)	Deviation (ppm)	Result
-30		3669.9950	-1.3624	Pass
-20		3669.9950	-1.3624	Pass
-10		3669.9900	-2.7248	Pass
0	400	3669.9950	-1.3624	Pass
20	120	3669.9950	-1.3624	Pass
30		3669.9950	-1.3624	Pass
40		3669.9950	-1.3624	Pass
50		3669.9950	-1.3624	Pass

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## 9. Frequency Stability Over Voltage Variation

### 9.1. Test Equipment

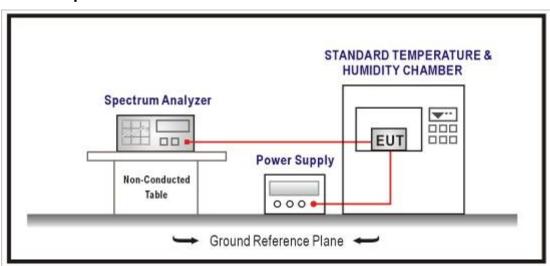
The following test equipments are used during the test:

#### Frequency Stability Over Temperatures Variation/ SR7

Instrument	Manufacturer	Model No.	Serial No	Next Cal. Date
Spectrum Analyzer	Agilent	N9010A	US47140172	2012/07/13
Standard				
Temperature &	WIT	TH-1S-B	1082101	2012/01/30
Humidity Chamber				

Note: 1. all equipments that need to calibrate are with calibration period of 1 year.

### 9.2. Test Setup



#### 9.3. Limits

The frequency stability shall be measured with variation of primary supply voltage as follows:

- (1) Vary primary supply voltage from 85 to 115 percent of the nominal value for other than hand carried battery equipment.
- (2) For hand carried, battery powered equipment, reduce primary supply voltage to the battery operating end point which shall be specified by the manufacturer.
- (3) The supply voltage shall be measured at the input to the cable normally provided with the equipment, or at the power supply terminals if cables are not normally provided. Effects on frequency of transmitter keying (except for broadcast transmitters) and any heating element cycling at the nominal supply voltage and at each extreme also shall be shown.



#### 9.4. Test Procedure

Power must be removed when changing from one voltage to another voltage. Power warm up is at least 15 min and power applied should perform before recording frequency error.

EUT is connected the external power supply to control the AC input power. The various Volts set from the minimum 102 Volts to 138 Volts. Each step shall be record the frequency error rate.

## 9.5. Test Specification:

FCC CFR Title 47 Part 90 Subpart Z, KDB 965270

## 9.6. Uncertainty

The measurement uncertainty is defined as ±100KHz.

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## 9.7. Test Result

Product	CPE 3.65GHz Outdoor		
Test Item	Frequency Stability Over Voltage Variation	on	
Test Mode	Carrier Signal 5MHz		
Date of Test	2011/12/30	Test Site	SR7

Centre Frequency: 3652.5 MHz

Temperature Interval (°C)	AC Voltage (V)	Frequency (MHz)	Deviation (ppm)	Result
	102	3652.4950	-1.3689	Pass
20	120	3652.4950	-1.3689	Pass
	138	3652.4950	-1.3689	Pass

Centre Frequency: 3662.5 MHz

Temperature Interval (°C)	AC Voltage (V)	Frequency (MHz)	Deviation (ppm)	Result
	102	3662.4950	-1.3652	Pass
20	120	3662.4950	-1.3652	Pass
	138	3662.4950	-1.3652	Pass

Centre Frequency: 3672.5 MHz

Temperature Interval (°C)	AC Voltage (V)	Frequency (MHz)	Deviation (ppm)	Result
	102	3672.4950	-1.3615	Pass
20	120	3672.4950	-1.3615	Pass
	138	3672.4950	-1.3615	Pass

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Product	CPE 3.65GHz Outdoor		
Test Item	Frequency Stability Ove	r Voltage Variation	
Test Mode	Carrier Signal_7MHz		
Date of Test	2011/12/30	Test Site	SR7

# Centre Frequency: 3653.5 MHz

Temperature Interval (°C)	AC Voltage (V)	Frequency (MHz)	Deviation (ppm)	Result
	102	3653.4950	-1.3686	Pass
20	120	3653.4950	-1.3686	Pass
	138	3653.4950	-1.3686	Pass

# Centre Frequency: 3662.5 MHz

Temperature Interval (°C)	AC Voltage (V)	Frequency (MHz)	Deviation (ppm)	Result
	102	3662.4950	-1.3652	Pass
20	120	3662.4950	-1.3652	Pass
	138	3662.4950	-1.3652	Pass

# Centre Frequency: 3671.5 MHz

Temperature Interval (°C)	AC Voltage (V)	Frequency (MHz)	Deviation (ppm)	Result
	102	3671.4950	-1.3618	Pass
20	120	3671.4950	-1.3618	Pass
	138	3671.4950	-1.3618	Pass

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Product	CPE 3.65GHz Outdoor		
Test Item	Frequency Stability Over Voltage Variation		
Test Mode	Carrier Signal_10MHz		
Date of Test	2011/12/30	Test Site	SR7

# Centre Frequency: 3655.0 MHz

Temperature Interval (°C)	AC Voltage (V)	Frequency (MHz)	Deviation (ppm)	Result
	102	3654.9950	-1.3680	Pass
20	120	3654.9950	-1.3680	Pass
	138	3654.9950	-1.3680	Pass

### Centre Frequency: 3662.5 MHz

Temperature Interval (°C)	AC Voltage (V)	C Voltage (V) Frequency (MHz) Deviation (ppm)		Result
, ,	102	3662.4950	-1.3652	Pass
20	120	3662.4950	-1.3652	Pass
	138	3662.4950	-1.3652	Pass

# Centre Frequency: 3670.0 MHz

Temperature Interval (°C)	AC Voltage (V)	Frequency (MHz)	Deviation (ppm)	Result
	102	3669.9950	-1.3624	Pass
20	120	3669.9950	-1.3624	Pass
	138	3669.9950	-1.3624	Pass

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