Test Report No.: 31JE0290-SH-01-A
Issued date : July 26, 2011
Revised date : September 5, 2011
FCC ID : WV2611849144431A

APPENDIX 2: Data of EMI test

Peak Output Power (Conducted)

Test place	UL Japan, Inc. Shonan EMC Lab.	No.6 Shielded Room	
Date	June 16, 2011		
Temperature / Humidity	27deg.C , 65%RH		
Engineer	Tatsuya Arai		
Mode	Tx, CDMA, PN9,	worst antenna : TX1	worst mode : 1 Carrier

(Antenna terminal output power)

Ch	Freq. [MHz]	S/A Reading [dBm/MHz]	Cable Loss [dB]	Atten. Loss [dB]	Result [dBm/MHz]	Result [W/MHz]	Limit [dBm/MHz]	Limit [W/MHz]	Margin [dB]
Low	1930.7000	-6.77	2.17	50.14	45.54	35.81	46.15	41.19	0.61
Mid	1962.5000	-6.45	2.18	50.15	45.88	38.73	46.15	41.19	**0.27**
High	1994.3000	-6.67	2.21	50.16	45.70	37.15	46.15	41.19	0.45

Sample Calculation:
Result = Reading + Cable Loss (supplied by customer) + Atten. Loss

(Reference data, (total power))

Ch	Freq. [MHz]	P/M (PK) Reading [dBm]	Cable Loss [dB]	Atten. Loss [dB]	Result [dBm]	Result [W]
Low	1930.7000	-0.49	2.17	50.14	51.82	152.05
Mid	1962.5000	-0.06	2.18	50.15	52.27	168.66
High	1994.3000	-0.56	2.21	50.16	51.81	151.71

(Reference data)

Ch	Freq. [MHz]	P/M (AV) Reading [dBm]	Cable Loss [dB]	Atten. Loss [dB]	Result [dBm]	Result [W]	PAR [dB]
Low	1930.7000	-7.07	2.17	50.14	45.24	33.42	6.58
Mid	1962.5000	-6.91	2.18	50.15	45.42	34.83	6.85
High	1994.3000	-7.08	2.21	50.16	45.29	33.81	6.52

Sample Calculation: *PAR: Peak-to-Average Ratio (= Peak value - Average value)
Result = Reading + Cable Loss (supplied by customer) + Atten. Loss

[Pre check] (total power), (Reference data)
Antenna TX1

Ant.	Number of Carrier	Freq. [MHz]	P/M (PK) Reading [dBm]	Cable Loss [dB]	Atten. Loss [dB]	Result [dBm]	Result [W]
TX1	1	1962.5000	-0.06	2.18	50.15	**52.27**	168.66
TX1	2	1962.5000	-0.07	2.18	50.15	52.26	168.27
TX1	3	1962.5000	-0.09	2.18	50.15	52.24	167.49
TX1	4	1962.5000	-0.07	2.18	50.15	52.26	168.27
TX1	5	1962.5000	-0.10	2.18	50.15	52.23	167.11
TX1	6	1962.5000	-0.10	2.18	50.15	52.23	167.11
TX1	7	1962.5000	-0.11	2.18	50.15	52.22	166.72
TX1	8	1962.5000	-0.11	2.18	50.15	52.22	166.72

Antenna TX2, TX3, TX4

Ant.	Number of Carrier	Freq. [MHz]	P/M (PK) Reading [dBm]	Cable Loss [dB]	Atten. Loss [dB]	Result [dBm]	Result [W]
TX2	1	1962.5000	-0.08	2.18	50.15	52.25	167.88
TX3	1	1962.5000	-0.12	2.18	50.15	52.21	166.34
TX4	1	1962.5000	-0.07	2.18	50.15	52.26	168.27

Sample Calculation:
Result = Reading + Cable Loss (supplied by customer) + Atten. Loss

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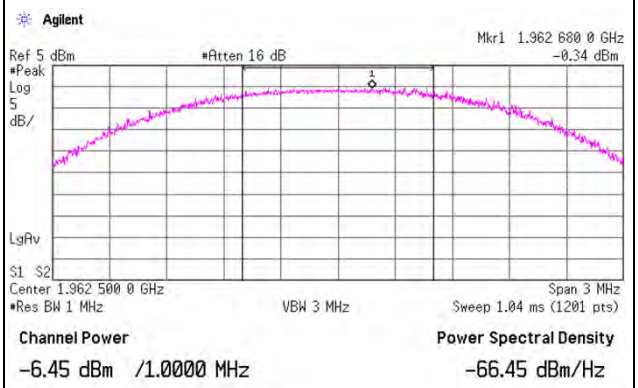
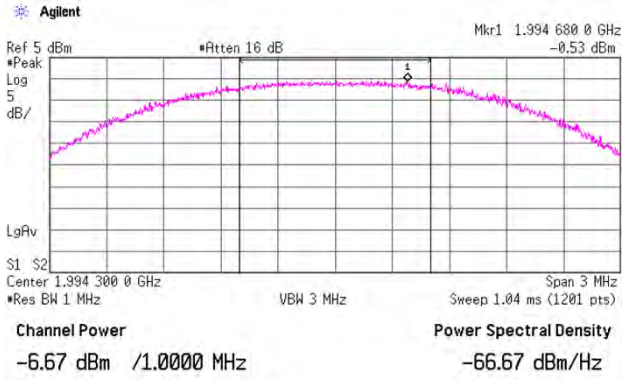
Peak Output Power (Conducted)

Transmitting(1930.7MHz, 1 carrier, TX1)

Transmitting(1962.5MHz, 1 carrier, TX1)



Transmitting(1994.3MHz, 1 carrier, TX1)



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Peak Output Power (Conducted)

Test place	UL Japan, Inc. Shonan EMC Lab.	No.6 Shielded Room		
Date	June 21, 2011			
Temperature / Humidity	23deg.C , 47%RH			
Engineer	Kenichi Adachi			
Mode	Tx, LTE, PN9,	worst antenna :TX2	worst antenna :1.4M, 1carrier	

	Ch	Freq. [MHz]	S/A Reading [dBm/MHz]	Cable Loss [dB]	Atten. Loss [dB]	Result [dBm/MHz]	Result [W/MHz]	Limit [dBm/MHz]	Limit [W/MHz]	Margin [dB]
TX1	Low	1930.7000	-6.76	2.17	50.14	45.55	35.89	46.15	41.19	0.60
	Mid	1962.5000	-6.43	2.18	50.15	45.90	38.90	46.15	41.19	0.25
	High	1994.3000	-6.81	2.21	50.16	45.56	35.97	46.15	41.19	0.59
TX2	Low	1930.7000	-6.66	2.17	50.14	45.65	36.73	46.15	41.19	0.50
	Mid	1962.5000	-6.33	2.18	50.15	46.00	39.81	46.15	41.19	**0.15**
	High	1994.3000	-6.65	2.21	50.16	45.72	37.33	46.15	41.19	0.43
TX3	Low	1930.7000	-6.76	2.17	50.14	45.55	35.89	46.15	41.19	0.60
	Mid	1962.5000	-6.69	2.18	50.15	45.64	36.64	46.15	41.19	0.51
	High	1994.3000	-6.80	2.21	50.16	45.57	36.06	46.15	41.19	0.58
TX4	Low	1930.7000	-6.73	2.17	50.14	45.58	36.14	46.15	41.19	0.57
	Mid	1962.5000	-6.41	2.18	50.15	45.92	39.08	46.15	41.19	0.23
	High	1994.3000	-6.71	2.21	50.16	45.66	36.81	46.15	41.19	0.49

Sample Calculation:
Result = Reading + Cable Loss (supplied by customer) + Atten. Loss

(Reference data, (total power))

	Ch	Freq. [MHz]	P/M (PK) Reading [dBm]	Cable Loss [dB]	Atten. Loss [dB]	Result [dBm]	Result [W]
TX1	Low	1930.7000	0.01	2.17	50.14	52.32	170.61
	Mid	1962.5000	0.40	2.18	50.15	52.73	187.50
	High	1994.3000	0.00	2.21	50.16	52.37	172.58
TX2	Low	1930.7000	0.25	2.17	50.14	52.56	180.30
	Mid	1962.5000	0.63	2.18	50.15	52.96	197.70
	High	1994.3000	0.20	2.21	50.16	52.57	180.72
TX3	Low	1930.7000	-0.13	2.17	50.14	52.18	165.20
	Mid	1962.5000	0.28	2.18	50.15	52.61	182.39
	High	1994.3000	-0.14	2.21	50.16	52.23	167.11
TX4	Low	1930.7000	0.20	2.17	50.14	52.51	178.24
	Mid	1962.5000	0.56	2.18	50.15	52.89	194.54
	High	1994.3000	0.17	2.21	50.16	52.54	179.47

(Reference data)

	Ch	Freq. [MHz]	P/M (AV) Reading [dBm]	Cable Loss [dB]	Atten. Loss [dB]	Result [dBm]	Result [W]	PAR [dB]
TX1	Low	1930.7000	-7.18	2.17	50.14	45.13	32.58	7.19
	Mid	1962.5000	-7.00	2.18	50.15	45.33	34.12	7.40
	High	1994.3000	-7.09	2.21	50.16	45.28	33.73	7.09
TX2	Low	1930.7000	-6.90	2.17	50.14	45.41	34.75	7.15
	Mid	1962.5000	-6.75	2.18	50.15	45.58	36.14	7.38
	High	1994.3000	-6.98	2.21	50.16	45.39	34.59	7.18
TX3	Low	1930.7000	-7.19	2.17	50.14	45.12	32.51	7.06
	Mid	1962.5000	-7.01	2.18	50.15	45.32	34.04	7.29
	High	1994.3000	-7.18	2.21	50.16	45.19	33.04	7.04
TX4	Low	1930.7000	-6.98	2.17	50.14	45.33	34.12	7.18
	Mid	1962.5000	-6.79	2.18	50.15	45.54	35.81	7.35
	High	1994.3000	-7.01	2.21	50.16	45.36	34.36	7.18

Sample Calculation:
Result = Reading + Cable Loss (supplied by customer) + Atten. Loss

*PAR: Peak-to-Average Ratio (= Peak value - Average value)

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Test Report No.: 31JE0290-SH-01-A
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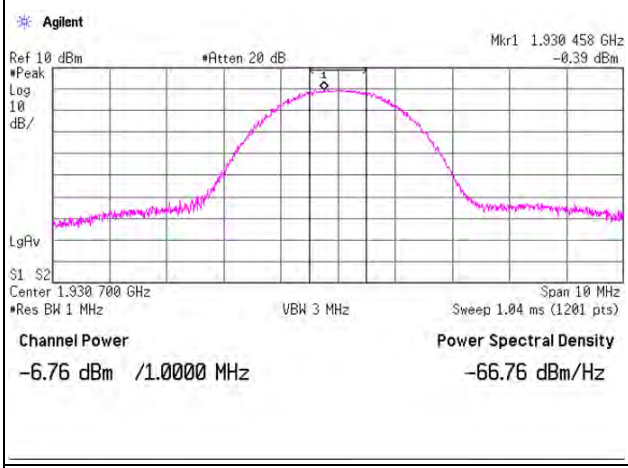
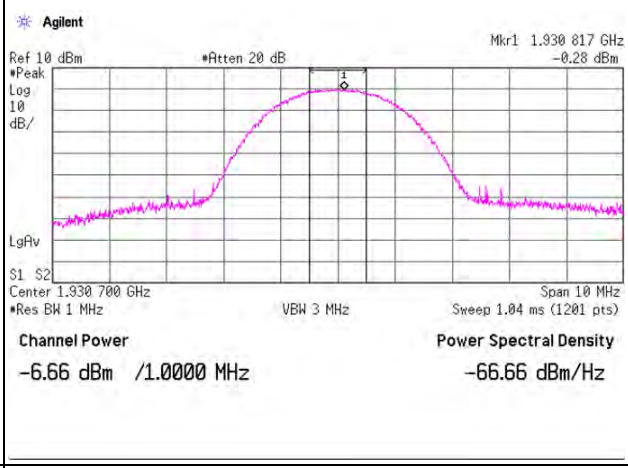
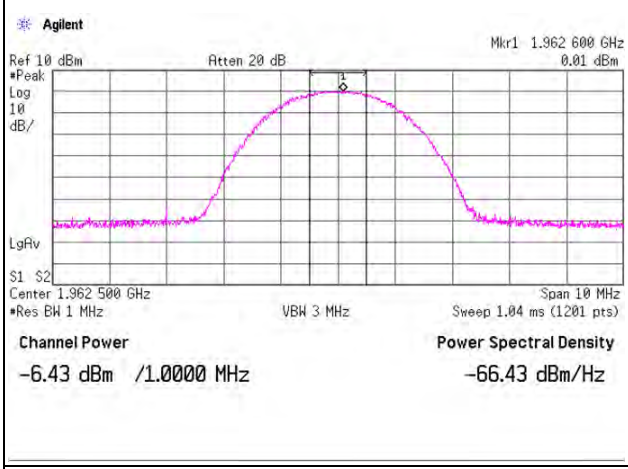
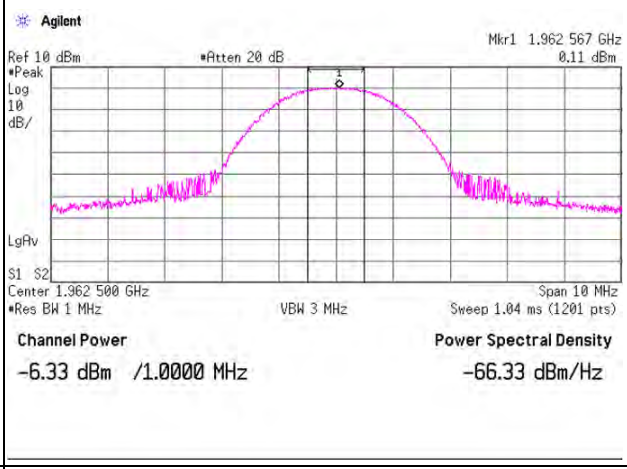
Peak Output Power (Conducted)

Transmitting(1930.7MHz, 1.4M, 1 carrier, TX1)	Transmitting(1930.7MHz, 1.4M, 1 carrier, TX2)
	
Transmitting(1962.5MHz, 1.4M, 1 carrier, TX1)	**Transmitting(1962.5MHz, 1.4M, 1 carrier, TX2)**
	
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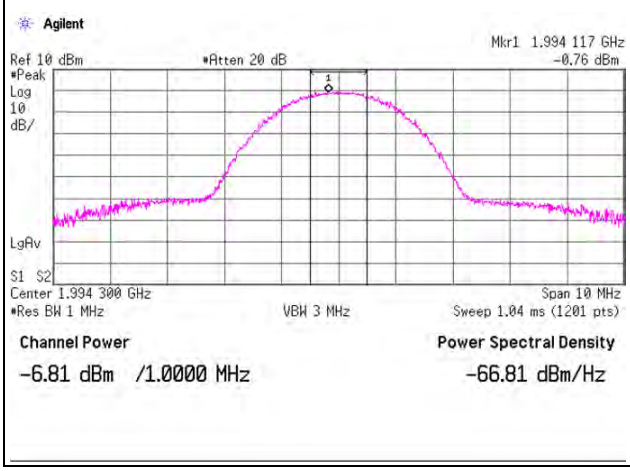	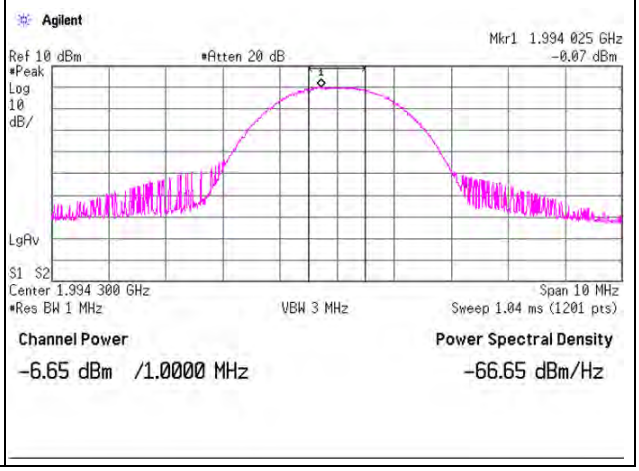

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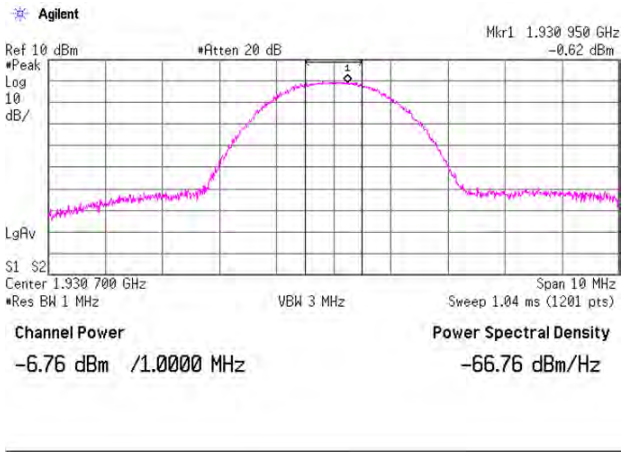
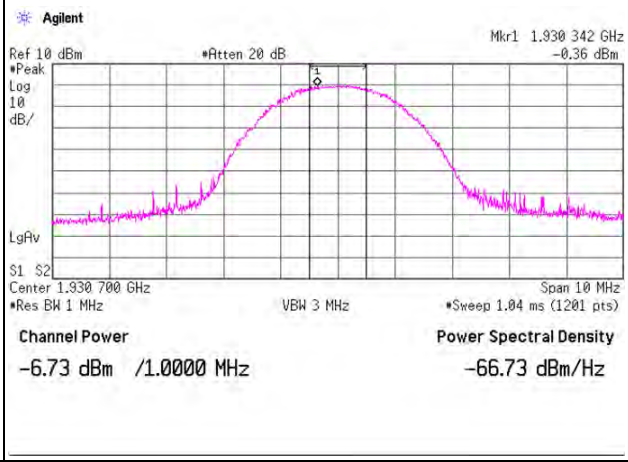
Peak Output Power (Conducted)

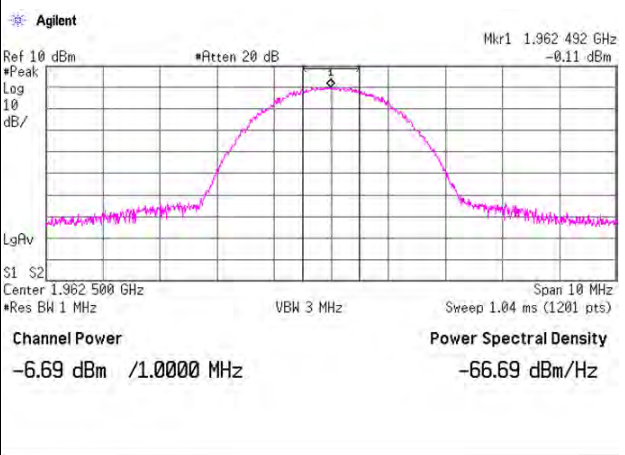
Transmitting(1930.7MHz, 1.4M, 1 carrier, TX3)



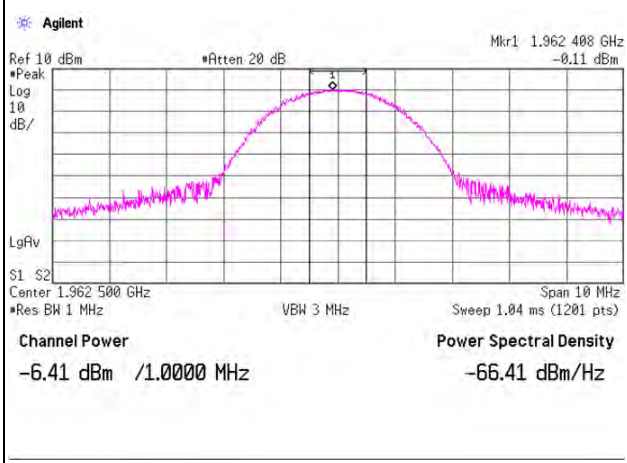
Transmitting(1930.7MHz, 1.4M, 1 carrier, TX4)



Transmitting(1962.5MHz, 1.4M, 1 carrier, TX3)

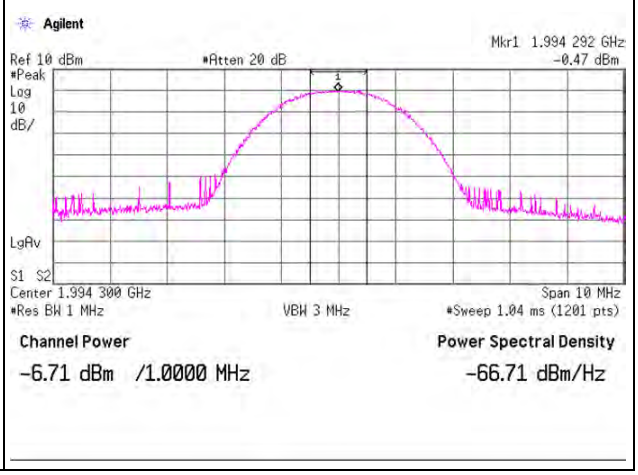


Transmitting(1962.5MHz, 1.4M, 1 carrier, TX4)



Transmitting(1994.3MHz, 1.4M, 1 carrier, TX3)

Transmitting(1994.3MHz, 1.4M, 1 carrier, TX4)



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Peak Output Power (Conducted)

Test place	UL Japan, Inc. Shonan EMC Lab.	No.6 Shielded Room	
Date	June 21, 2011		
Temperature / Humidity	23deg.C , 47%RH		
Engineer	Kenichi Adachi		
Mode	Tx, LTE, PN9,	worst antenna :TX2	worst antenna :1.4M, 1carrier

[Pre check] (total power), (Reference data)

Antenna TX1

	Mode	Freq. [MHz]	P/M (PK) Reading [dBm]	Cable Loss [dB]	Atten. Loss [dB]	Result [dBm]	Result [W]
TX1	1.4M, 1carrier	1962.5000	0.40	2.18	50.15	52.73	187.50
TX1	3M, 1carrier	1962.5000	0.37	2.18	50.15	52.70	186.21
TX1	5M, 1carrier	1962.5000	0.37	2.18	50.15	52.70	186.21
TX1	10M, 1carrier	1962.5000	0.30	2.18	50.15	52.63	183.23
TX1	15M, 1carrier	1962.5000	0.29	2.18	50.15	52.62	182.81
TX1	20M, 1carrier	1962.5000	0.27	2.18	50.15	52.60	181.97

Antenna TX2

	Mode	Freq. [MHz]	P/M (PK) Reading [dBm]	Cable Loss [dB]	Atten. Loss [dB]	Result [dBm]	Result [W]
TX2	1.4M, 1carrier	1962.5000	0.63	2.18	50.15	**52.96**	197.70
TX2	3M, 1carrier	1962.5000	0.61	2.18	50.15	52.94	196.79
TX2	5M, 1carrier	1962.5000	0.59	2.18	50.15	52.92	195.88
TX2	10M, 1carrier	1962.5000	0.55	2.18	50.15	52.88	194.09
TX2	15M, 1carrier	1962.5000	0.47	2.18	50.15	52.80	190.55
TX2	20M, 1carrier	1962.5000	0.45	2.18	50.15	52.78	189.67

Antenna TX3

	Mode	Freq. [MHz]	P/M (PK) Reading [dBm]	Cable Loss [dB]	Atten. Loss [dB]	Result [dBm]	Result [W]
TX3	1.4M, 1carrier	1962.5000	0.28	2.18	50.15	52.61	182.39
TX3	3M, 1carrier	1962.5000	0.27	2.18	50.15	52.60	181.97
TX3	5M, 1carrier	1962.5000	0.27	2.18	50.15	52.60	181.97
TX3	10M, 1carrier	1962.5000	0.17	2.18	50.15	52.50	177.83
TX3	15M, 1carrier	1962.5000	0.18	2.18	50.15	52.51	178.24
TX3	20M, 1carrier	1962.5000	0.21	2.18	50.15	52.54	179.47

Antenna TX4

	Mode	Freq. [MHz]	P/M (PK) Reading [dBm]	Cable Loss [dB]	Atten. Loss [dB]	Result [dBm]	Result [W]
TX4	1.4M, 1carrier	1962.5000	0.56	2.18	50.15	52.89	194.54
TX4	3M, 1carrier	1962.5000	0.53	2.18	50.15	52.86	193.20
TX4	5M, 1carrier	1962.5000	0.47	2.18	50.15	52.80	190.55
TX4	10M, 1carrier	1962.5000	0.43	2.18	50.15	52.76	188.80
TX4	15M, 1carrier	1962.5000	0.42	2.18	50.15	52.75	188.36
TX4	20M, 1carrier	1962.5000	0.42	2.18	50.15	52.75	188.36

Sample Calculation:
Result = Reading + Cable Loss (supplied by customer) + Atten. Loss

* The output power were measured by 1 port transmission, because it was no difference between 1port transmission and 2port concurrent transmission.

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Peak Output Power (Conducted)

Test place	UL Japan, Inc. Shonan EMC Lab.	No.5 Shielded Room	
Date	June 24, 2011		
Temperature / Humidity	27deg.C , 58%RH		
Engineer	Kenichi Adachi		
Mode	Tx, LTE, PN9,	worst antenna :TX2	worst antenna :1.4M, 2carrier

[Pre check] (total power), (Reference data)

Antenna TX1

	Mode	Freq. (*1) [MHz]	P/M (PK) Reading [dBm]	Cable Loss [dB]	Atten. Loss [dB]	Result [dBm]	Result [W]
TX1	1.4M, 2carrier	1962.5, 1963.9	0.29	2.18	50.15	52.62	182.81
TX1	3M, 2carrier	1962.5, 1965.5	0.24	2.18	50.15	52.57	180.72
TX1	5M, 2carrier	1962.5, 1967.5	0.22	2.18	50.15	52.55	179.89
TX1	10M, 2carrier	1962.5, 1972.5	0.17	2.18	50.15	52.50	177.83

Antenna TX2

	Mode	Freq. [MHz]	P/M (PK) Reading [dBm]	Cable Loss [dB]	Atten. Loss [dB]	Result [dBm]	Result [W]
TX2	1.4M, 2carrier	1962.5, 1963.9	0.45	2.18	50.15	**52.78**	189.67
TX2	3M, 2carrier	1962.5, 1965.5	0.40	2.18	50.15	52.73	187.50
TX2	5M, 2carrier	1962.5, 1967.5	0.37	2.18	50.15	52.70	186.21
TX2	10M, 2carrier	1962.5, 1972.5	0.31	2.18	50.15	52.64	183.65

Antenna TX3

	Mode	Freq. [MHz]	P/M (PK) Reading [dBm]	Cable Loss [dB]	Atten. Loss [dB]	Result [dBm]	Result [W]
TX3	1.4M, 2carrier	1962.5, 1963.9	0.26	2.18	50.15	52.59	181.55
TX3	3M, 2carrier	1962.5, 1965.5	0.22	2.18	50.15	52.55	179.89
TX3	5M, 2carrier	1962.5, 1967.5	0.20	2.18	50.15	52.53	179.06
TX3	10M, 2carrier	1962.5, 1972.5	0.16	2.18	50.15	52.49	177.42

Antenna TX4

	Mode	Freq. [MHz]	P/M (PK) Reading [dBm]	Cable Loss [dB]	Atten. Loss [dB]	Result [dBm]	Result [W]
TX4	1.4M, 2carrier	1962.5, 1963.9	0.43	2.18	50.15	52.76	188.80
TX4	3M, 2carrier	1962.5, 1965.5	0.40	2.18	50.15	52.73	187.50
TX4	5M, 2carrier	1962.5, 1967.5	0.36	2.18	50.15	52.69	185.78
TX4	10M, 2carrier	1962.5, 1972.5	0.32	2.18	50.15	52.65	184.08

Sample Calculation:
Result = Reading + Cable Loss (supplied by customer) + Atten. Loss

* The output power were measured by 1 port transmission, because it was no difference between 1port transmission and 2port concurrent transmission.

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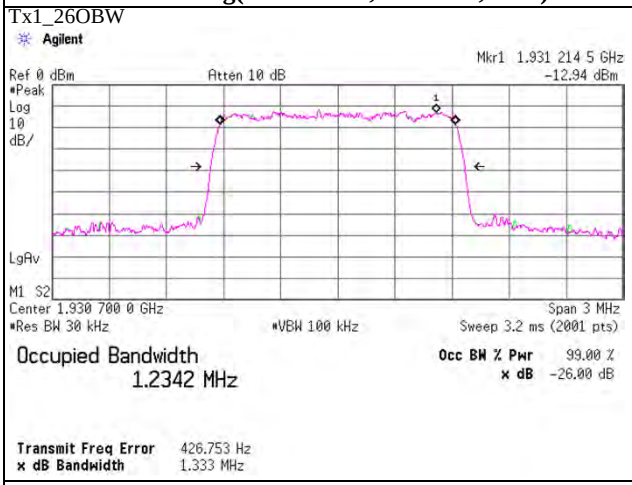
-26dB Bandwidth

Test place	UL Japan, Inc. Shonan EMC Lab.	No.6 Shielded Room
Date	June 22, 2011	
Temperature / Humidity	26deg.C , 58%RH	
Engineer	Kenichi Adachi	
Mode	Tx, CDMA, PN9	worst antenna : TX1

Freq. [MHz]	-26dB Bandwidth [MHz]
1930.7000	1.333
1962.5000	1.335
1994.3000	1.333

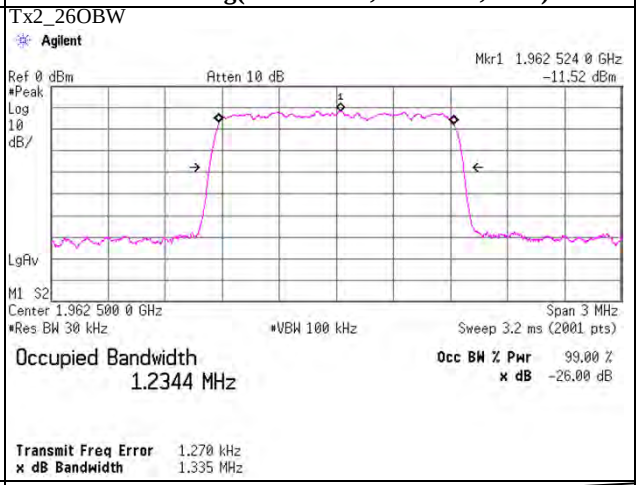
Transmitting(1930.7MHz, 1 carrier, TX1)

Tx1_26OBW



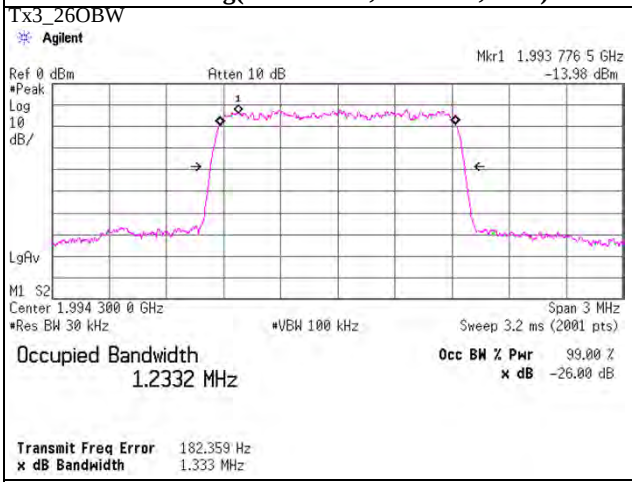
Transmitting(1962.5MHz, 1 carrier, TX1)

Tx2_26OBW



Transmitting(1994.3MHz, 1 carrier, TX1)

Tx3_26OBW



Test Report No.: 31JE0290-SH-01-A
Issued date : July 26, 2011

FCC ID : WV2611849144431A

-26dB Bandwidth

Test place	UL Japan, Inc. Shonan EMC Lab.	No.6 Shielded Room
Date	June 22, 2011	
Temperature / Humidity	26deg.C , 58%RH	
Engineer	Kenichi Adachi	
Mode	Tx, CDMA, PN9	worst antenna : TX1

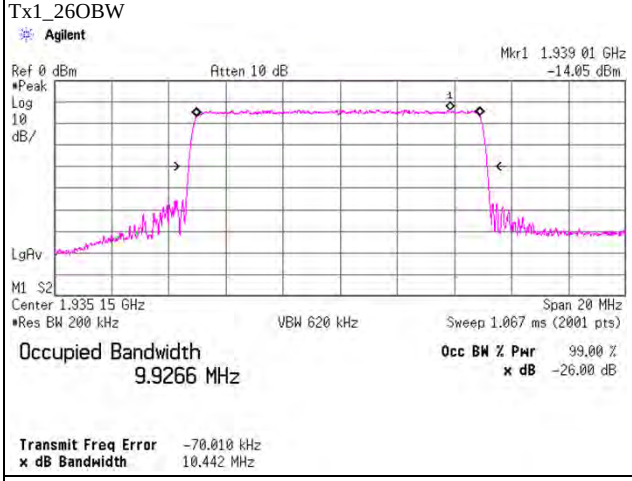
(Reference)

Freq. [MHz]	-26dB Bandwidth [MHz]
1935.0000	10.442
1962.5000	10.449
1990.0000	10.432

(Reference)

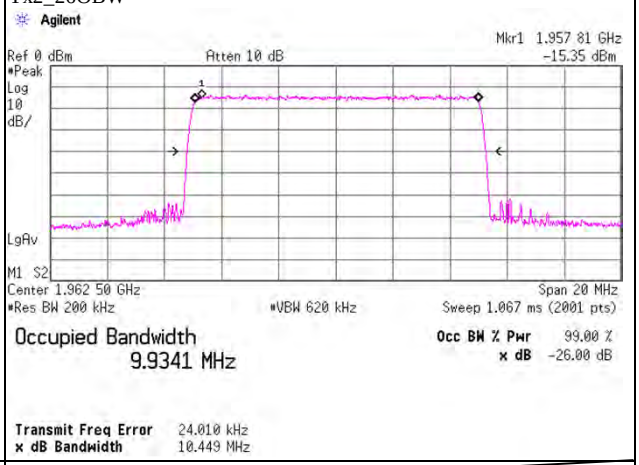
Transmitting(1930.7MHz, 8 carrier, TX1)

Tx1_26OBW



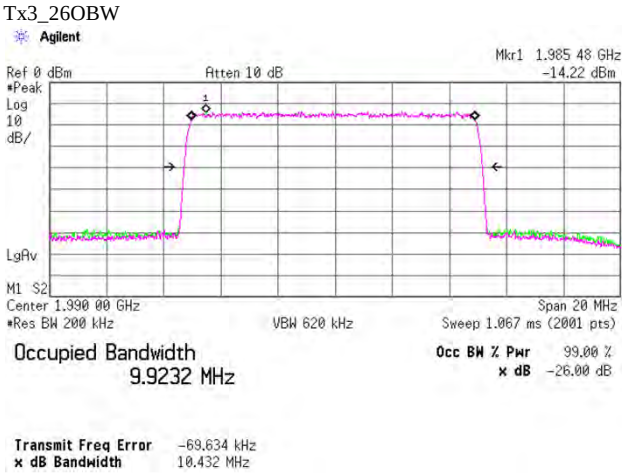
Transmitting(1962.5MHz, 8 carrier, TX1)

Tx2_26OBW



Transmitting(1994.3MHz, 8 carrier, TX1)

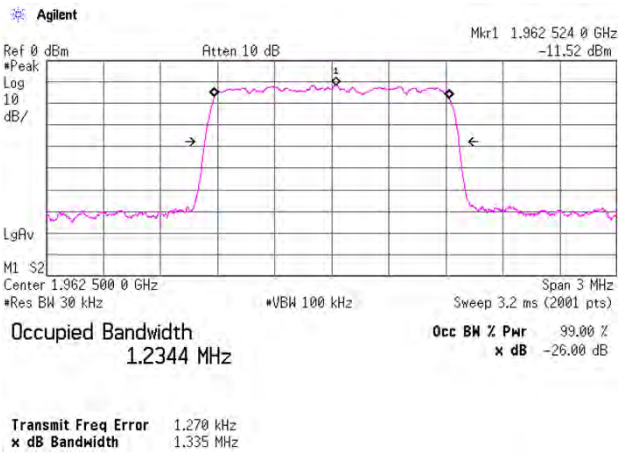
Tx3_26OBW



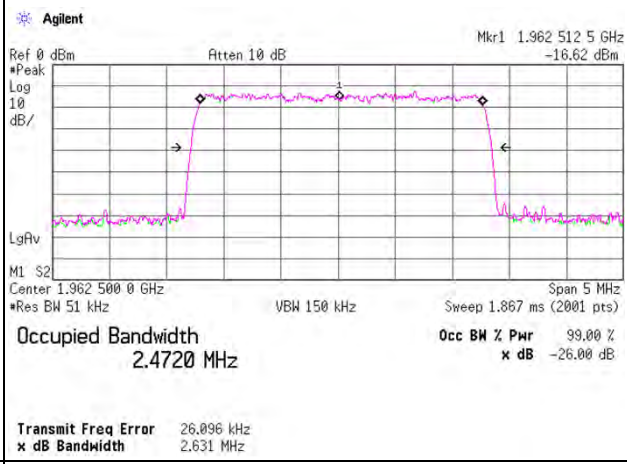
-26dB Bandwidth

(Reference)

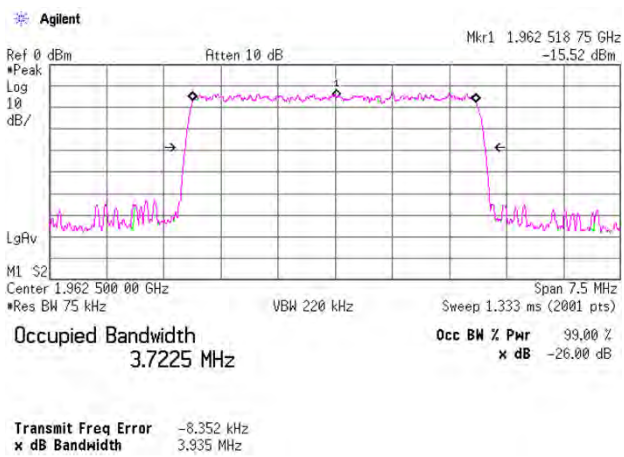
Transmitting(1962.5MHz, 1 carrier, TX1)



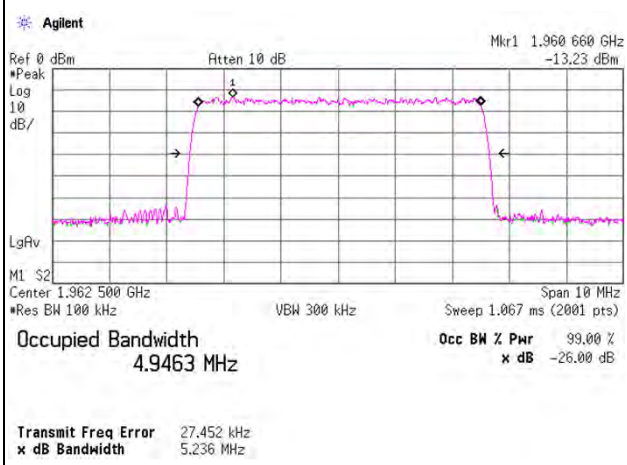
Transmitting(1962.5MHz, 2 carrier, TX1)



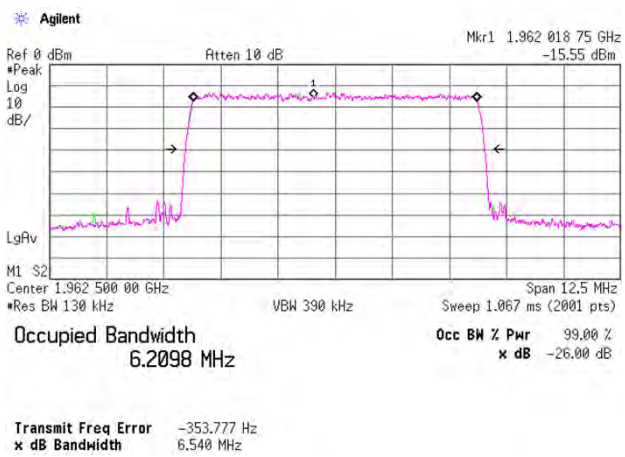
Transmitting(1962.5MHz, 3 carrier, TX1)



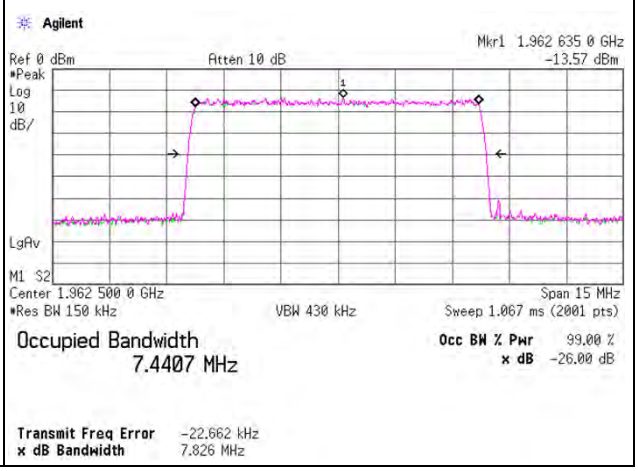
Transmitting(1962.5MHz, 4 carrier, TX1)



Transmitting(1962.5MHz, 5 carrier, TX1)



Transmitting(1962.5MHz, 6 carrier, TX1)



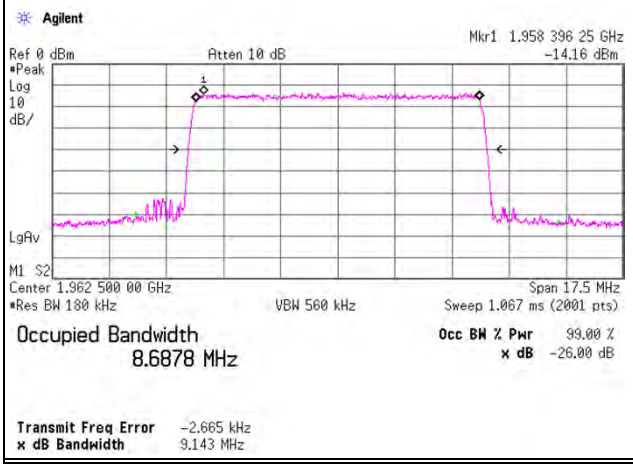
Test Report No.: 31JE0290-SH-01-A
Issued date : July 26, 2011

FCC ID : WV2611849144431A

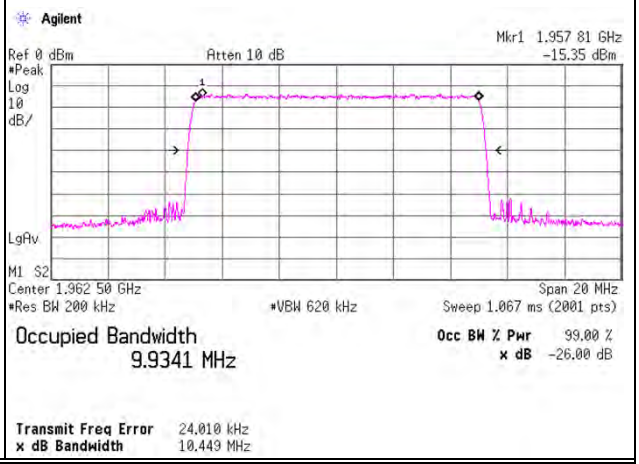
-26dB Bandwidth

(Reference)

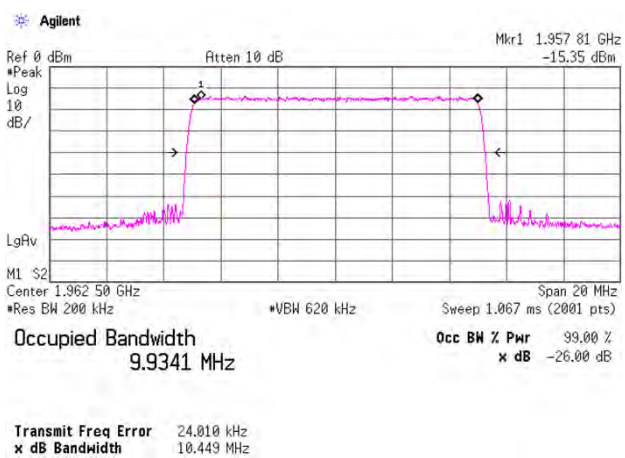
Transmitting(1962.5MHz, 7 carrier, TX1)



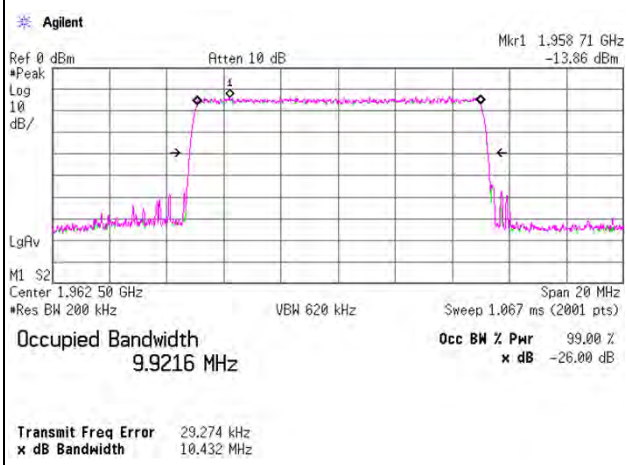
Transmitting(1962.5MHz, 8 carrier, TX1)



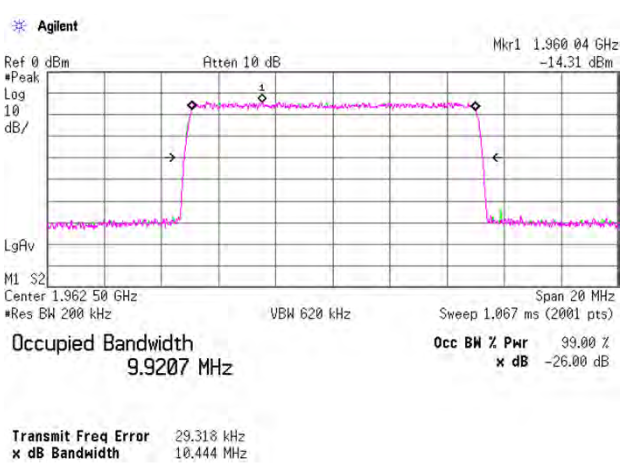
Transmitting(1962.5MHz, 8 carrier, TX1)



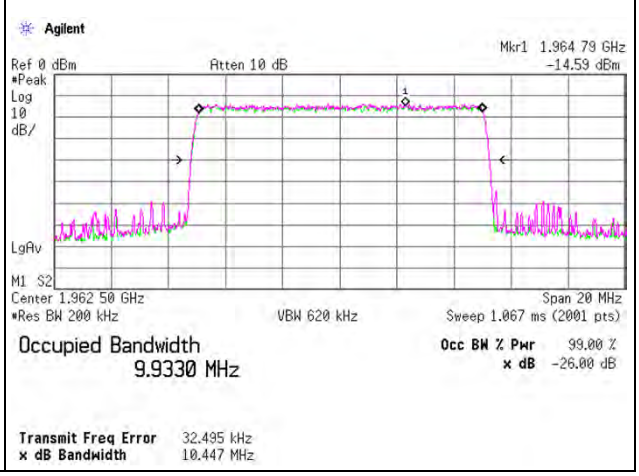
Transmitting(1962.5MHz, 8 carrier, TX2)



Transmitting(1962.5MHz, 8 carrier, TX3)



Transmitting(1962.5MHz, 8 carrier, TX4)



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Facsimile : +81 463 50 6401

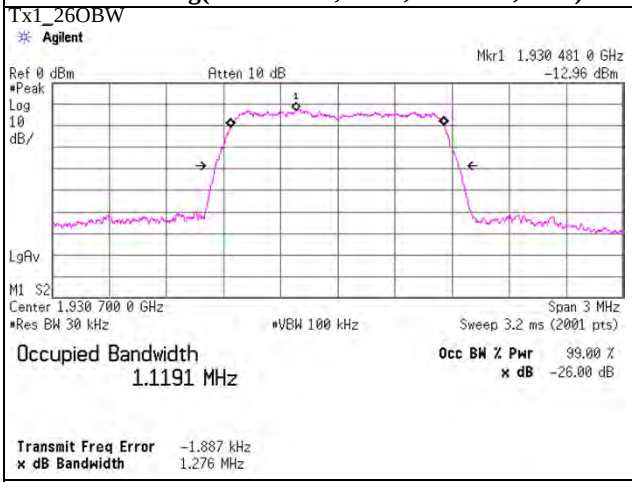
-26dB Bandwidth

Test place	UL Japan, Inc. Shonan EMC Lab.	No.6 Shielded Room	
Date	June 22, 2011		
Temperature / Humidity	26deg.C , 58%RH		
Engineer	Kenichi Adachi		
Mode	Tx, LTE, PN9	worst antenna :TX2	worst antenna :1.4M, 1carrier

Freq. [MHz]	-26dB Bandwidth [MHz]
1930.7000	1.276
1962.5000	1.278
1994.3000	1.275

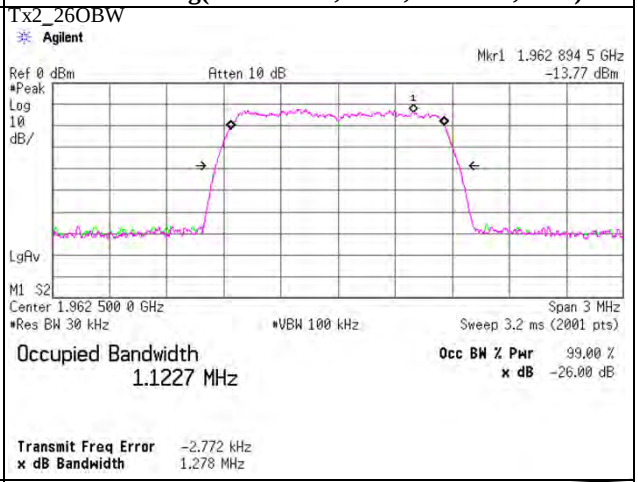
Transmitting(1930.7MHz, 1.4M, 1 carrier, TX2)

Tx1_26OBW



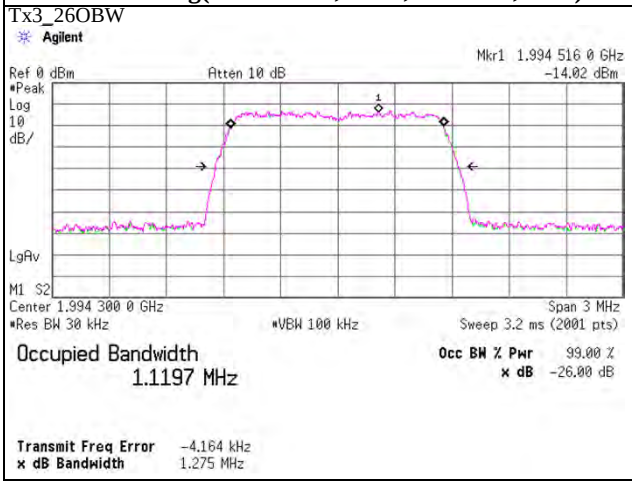
Transmitting(1962.5MHz, 1.4M, 1 carrier, TX2)

Tx2_26OBW



Transmitting(1994.3MHz, 1.4M, 1 carrier, TX2)

Tx3_26OBW



Test Report No.: 31JE0290-SH-01-A
Issued date : July 26, 2011

FCC ID : WV2611849144431A

-26dB Bandwidth

Test place	UL Japan, Inc. Shonan EMC Lab.	No.6 Shielded Room	
Date	June 22, 2011		
Temperature / Humidity	26deg.C , 58%RH		
Engineer	Kenichi Adachi		
Mode	Tx, LTE, PN9	worst antenna :TX2	worst antenna :1.4M, 1carrier

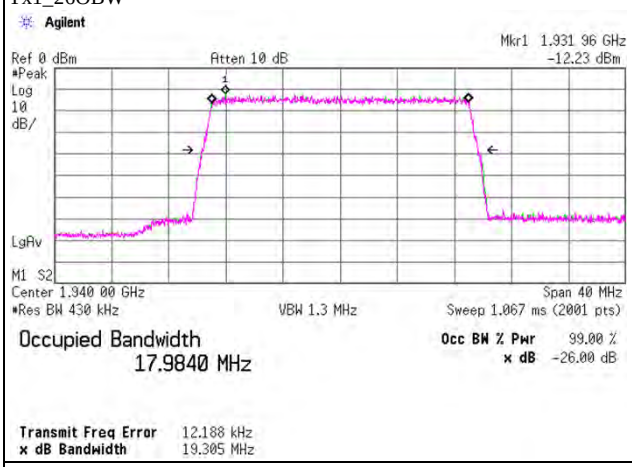
(Reference)

Freq. [MHz]	-26dB Bandwidth [MHz]
1930.7000	19.305
1962.5000	19.458
1994.3000	19.269

(Reference)

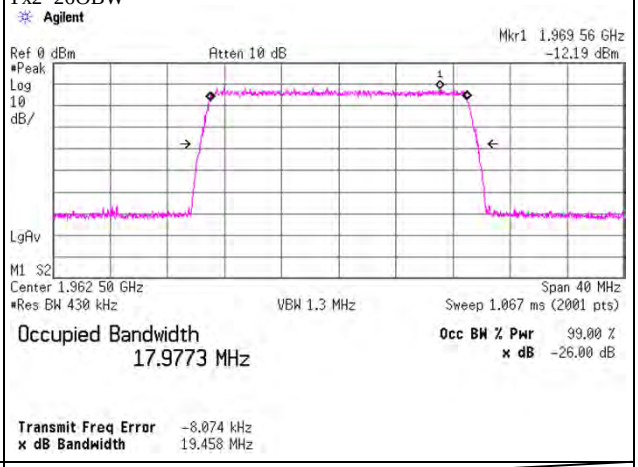
Transmitting(1930.7MHz, 20M, 1 carrier, TX2)

Tx1_26OBW



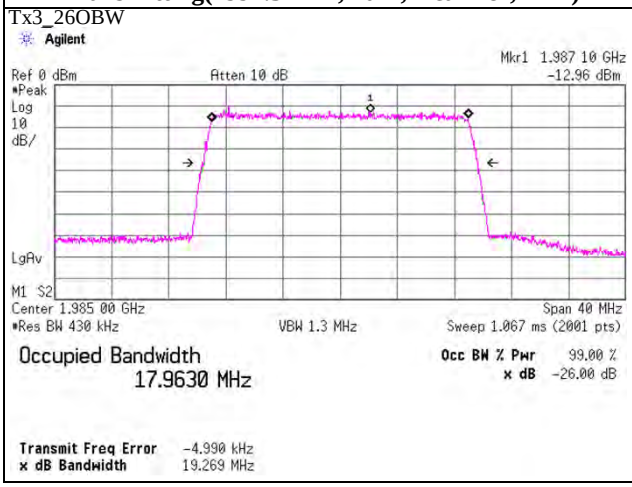
Transmitting(1962.5MHz, 20M, 1 carrier, TX2)

Tx2_26OBW



Transmitting(1994.3MHz, 20M, 1 carrier, TX2)

Tx3_26OBW



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-26dB Bandwidth

Test place	UL Japan, Inc. Shonan EMC Lab.	No.5 Shielded Room	
Date	June 24, 2011		
Temperature / Humidity	27deg.C , 58%RH		
Engineer	Kenichi Adachi		
Mode	Tx, LTE, PN9	worst antenna :TX2	worst antenna :1.4M, 1carrier

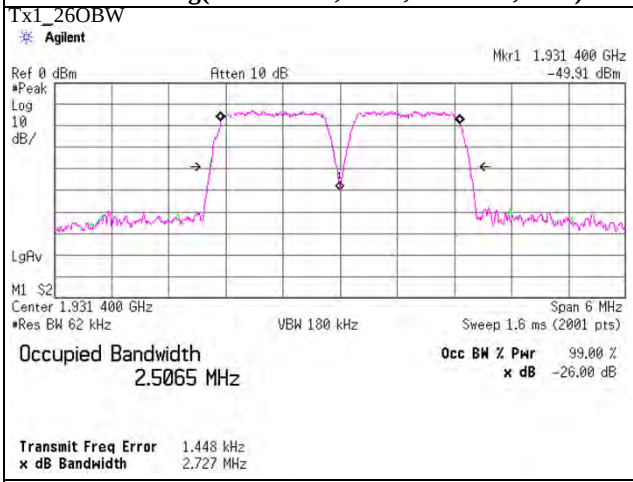
(Reference)

Freq. [MHz]	-26dB Bandwidth [MHz]
1930.7000	2.727
1962.5000	2.710
1994.3000	2.737

(Reference)

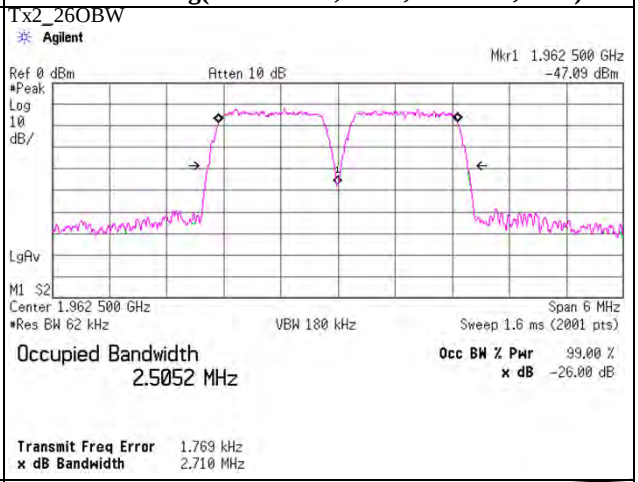
Transmitting(1930.7MHz, 1.4M, 2 carrier, TX2)

Tx1_26OBW



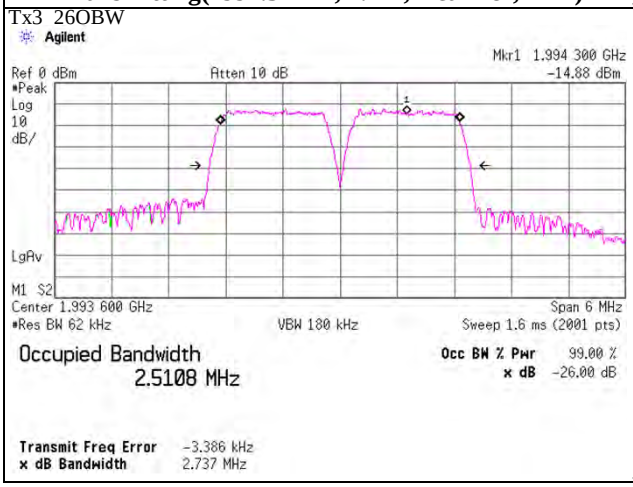
Transmitting(1962.5MHz, 1.4M, 2 carrier, TX2)

Tx2_26OBW



Transmitting(1994.3MHz, 1.4M, 2 carrier, TX2)

Tx3 26OBW



-26dB Bandwidth

Test place	UL Japan, Inc. Shonan EMC Lab.	No.5 Shielded Room	
Date	June 24, 2011		
Temperature / Humidity	27deg.C , 58%RH		
Engineer	Kenichi Adachi		
Mode	Tx, LTE, PN9	worst antenna :TX2	worst antenna :1.4M, 1carrier

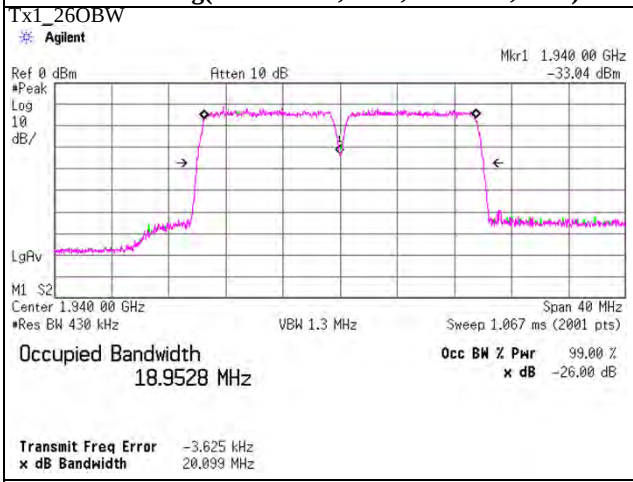
(Reference)

Freq. [MHz]	-26dB Bandwidth [MHz]
1930.7000	20.099
1962.5000	20.009
1994.3000	19.942

(Reference)

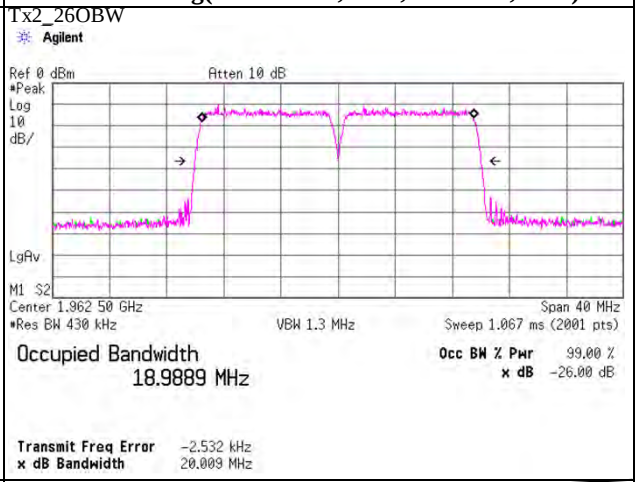
Transmitting(1930.7MHz, 10M, 2 carrier, TX2)

Tx1_26OBW



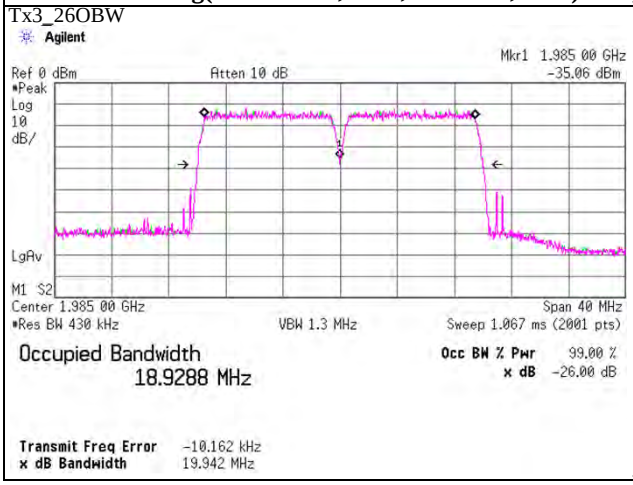
Transmitting(1962.5MHz, 10M, 2 carrier, TX2)

Tx2_26OBW



Transmitting(1994.3MHz, 10M, 2 carrier, TX2)

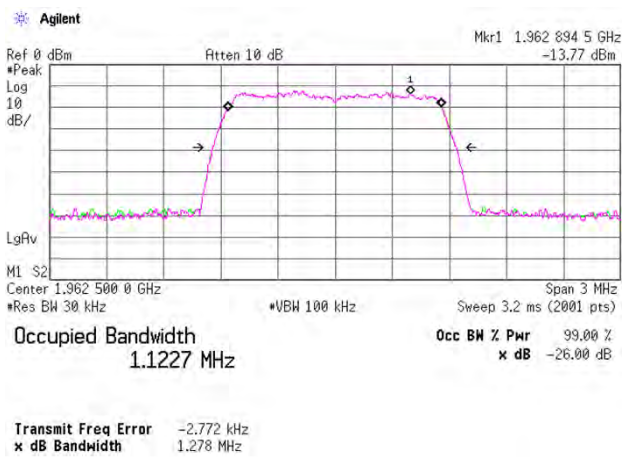
Tx3_26OBW



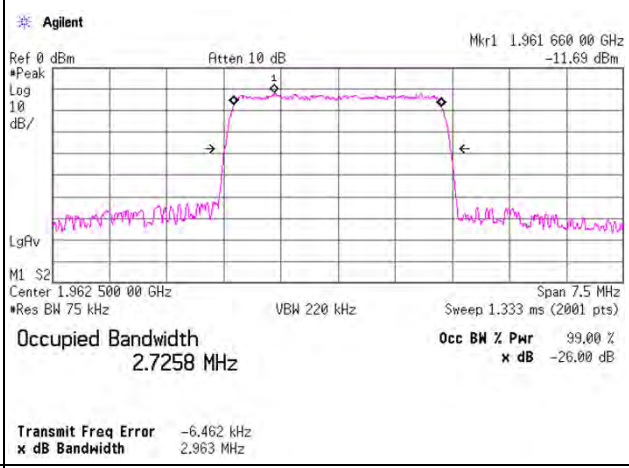
-26dB Bandwidth

(Reference)

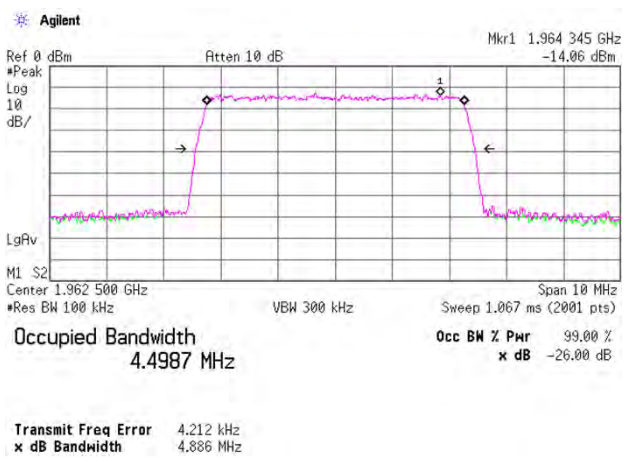
Transmitting(1962.5MHz, 1.4M, 1 carrier, TX2)



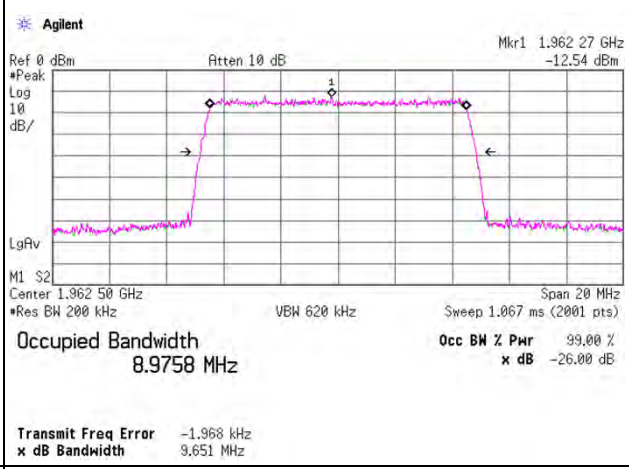
Transmitting(1962.5MHz, 3M, 1 carrier, TX2)



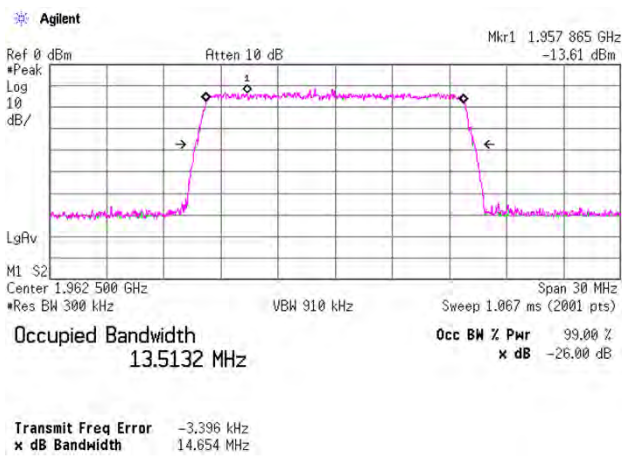
Transmitting(1962.5MHz, 5M, 1 carrier, TX2)



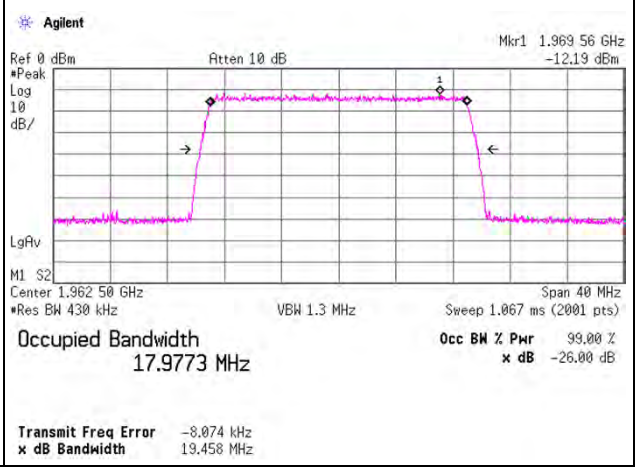
Transmitting(1962.5MHz, 10M, 1 carrier, TX2)



Transmitting(1962.5MHz, 15M, 1 carrier, TX2)



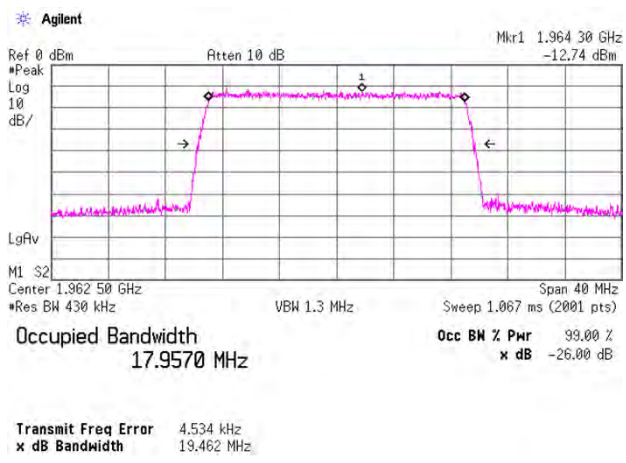
Transmitting(1962.5MHz, 20M, 1 carrier, TX2)



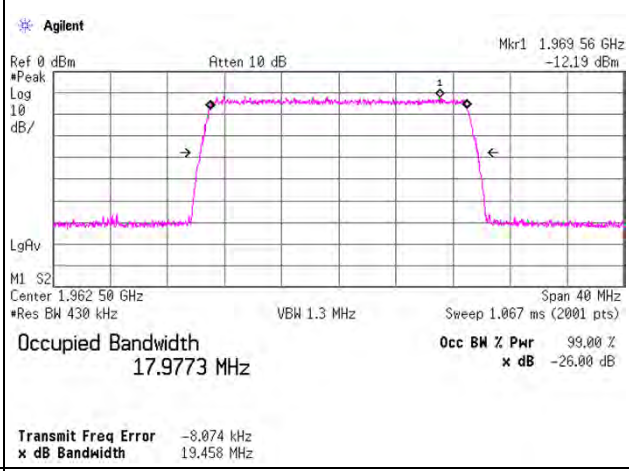
-26dB Bandwidth

(Reference)

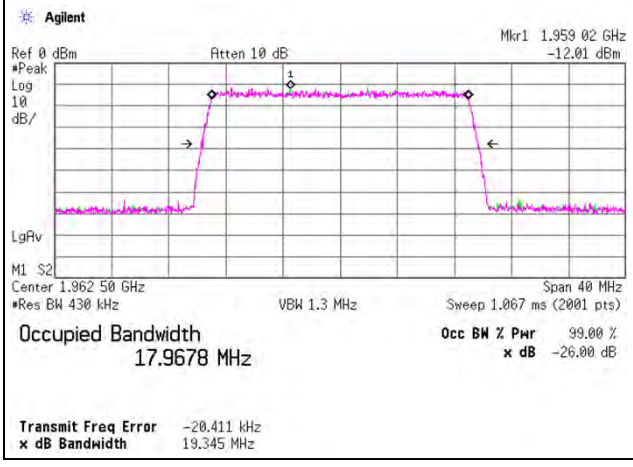
Transmitting(1962.5MHz, 20M, 1 carrier, TX1)



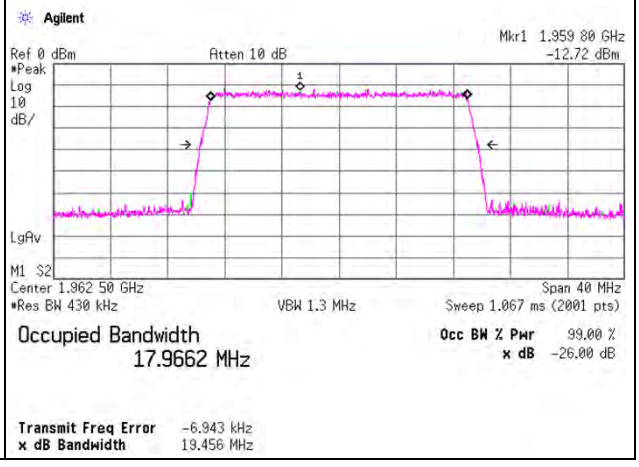
Transmitting(1962.5MHz, 20M, 1 carrier, TX2)



Transmitting(1962.5MHz, 20M, 1 carrier, TX3)

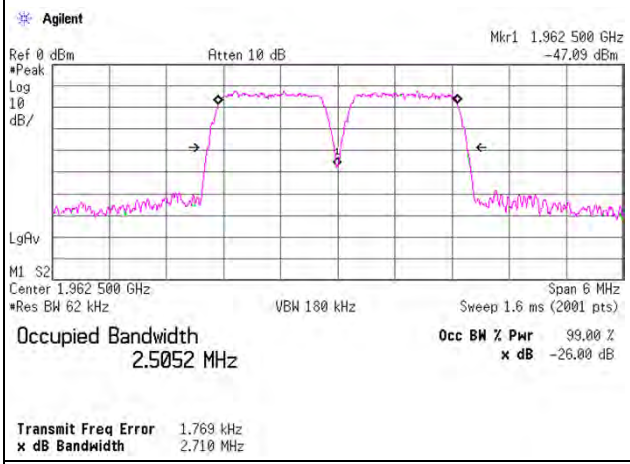
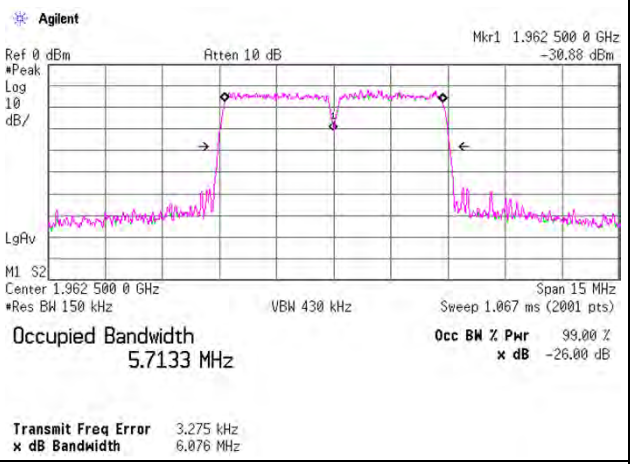
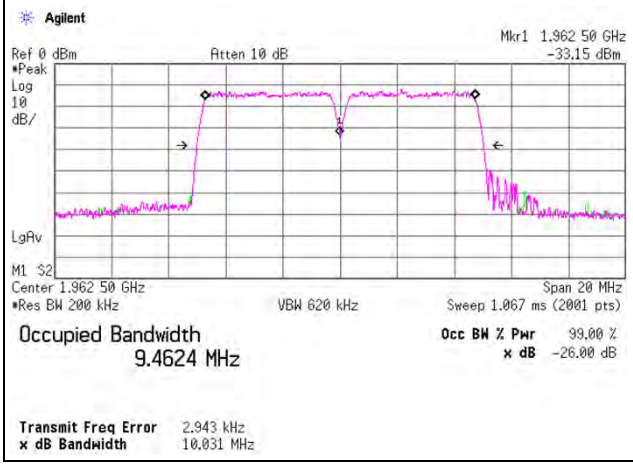
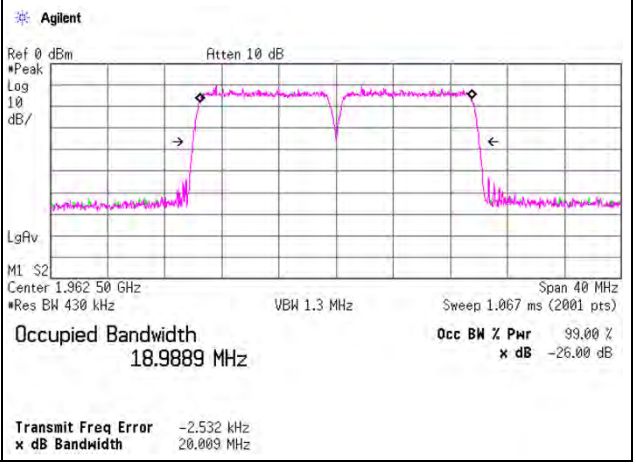


Transmitting(1962.5MHz, 20M, 1 carrier, TX4)



-26dB Bandwidth

(Reference)

Transmitting(1962.5MHz, 1.4M, 2 carrier, TX2)	Transmitting(1962.5MHz, 3M, 2 carrier, TX2)
	
Transmitting(1962.5MHz, 5M, 2 carrier, TX2)	**Transmitting(1962.5MHz, 10M, 2 carrier, TX2)**
	

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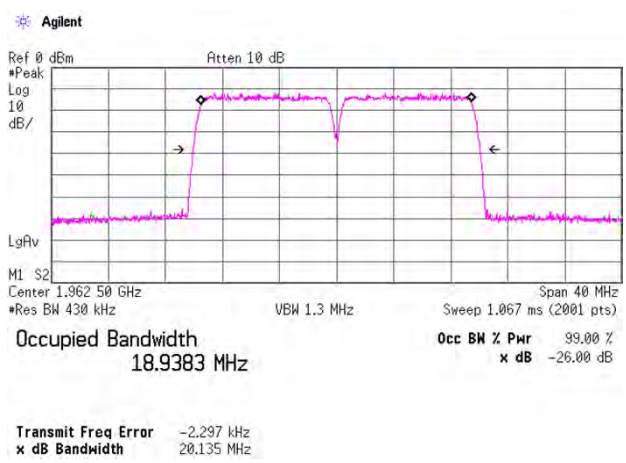
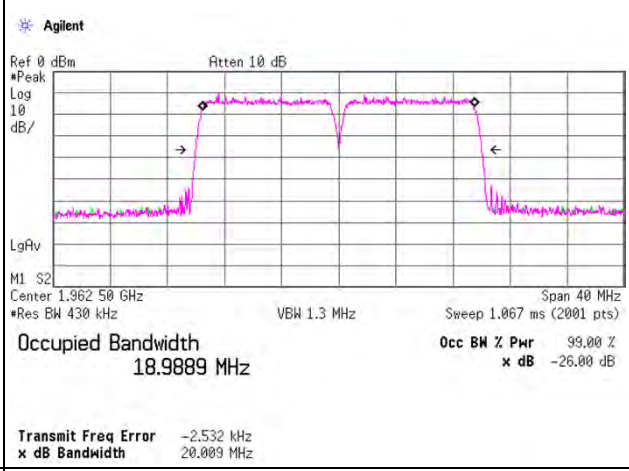
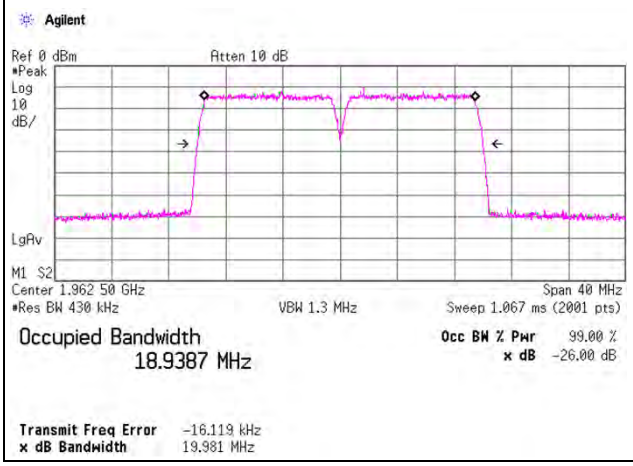
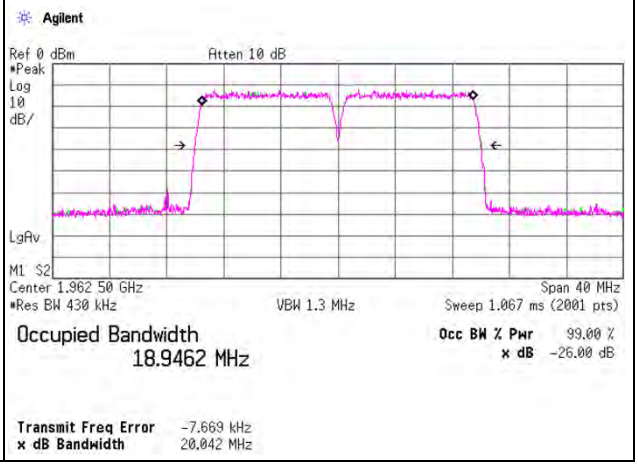
Facsimile : +81 463 50 6401

-26dB Bandwidth

(Reference)

Transmitting(1962.5MHz, 10M, 2 carrier, TX1)	Transmitting(1962.5MHz, 10M, 2 carrier, TX2)
	
Transmitting(1962.5MHz, 10M, 2 carrier, TX3)	**Transmitting(1962.5MHz, 10M, 2 carrier, TX4)**
	

99% Occupied Bandwidth

Test place	UL Japan, Inc. Shonan EMC Lab.	No.6 Shielded Room
Date	June 22, 2011	
Temperature / Humidity	26deg.C , 58%RH	
Engineer	Kenichi Adachi	
Mode	Tx, CDMA, PN9	worst antenna : TX1

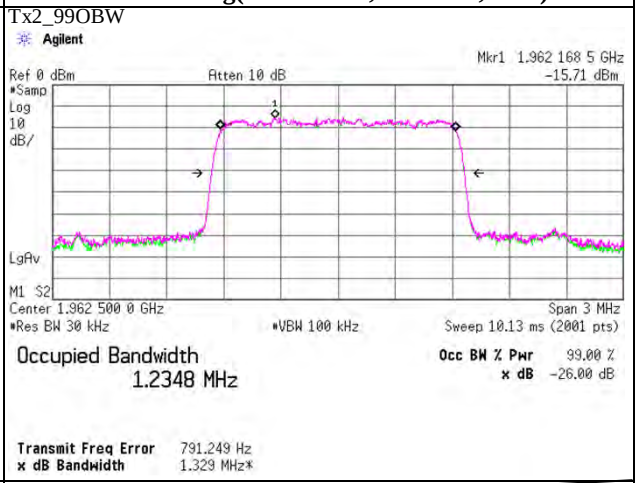
Freq. [MHz]	99% Occupied Bandwidth [MHz]
1930.7000	1.235
1962.5000	1.235
1994.3000	1.236

Transmitting(1930.7MHz, 1 carrier, TX1)

Tx1_99OBW

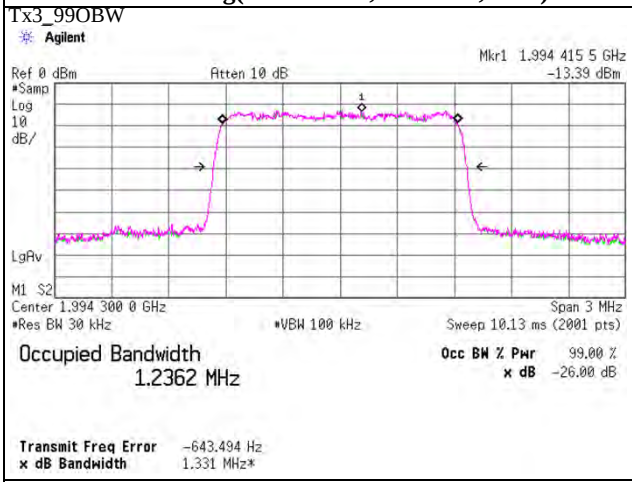
Transmitting(1962.5MHz, 1 carrier, TX1)

Tx2_99OBW



Transmitting(1994.3MHz, 1 carrier, TX1)

Tx3_99OBW



99% Occupied Bandwidth

Test place	UL Japan, Inc. Shonan EMC Lab.	No.6 Shielded Room
Date	June 22, 2011	
Temperature / Humidity	26deg.C , 58%RH	
Engineer	Kenichi Adachi	
Mode	Tx, CDMA, PN9	worst antenna : TX1

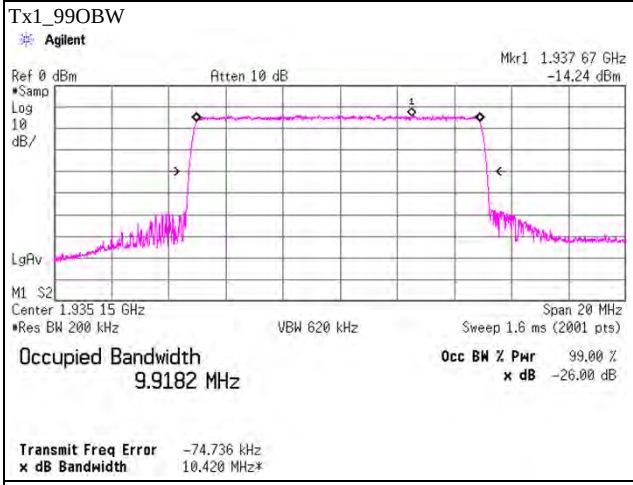
(Reference)

Freq. [MHz]	99% Occupied Bandwidth [MHz]
1930.7000	9.918
1962.5000	9.913
1994.3000	9.939

(Reference)

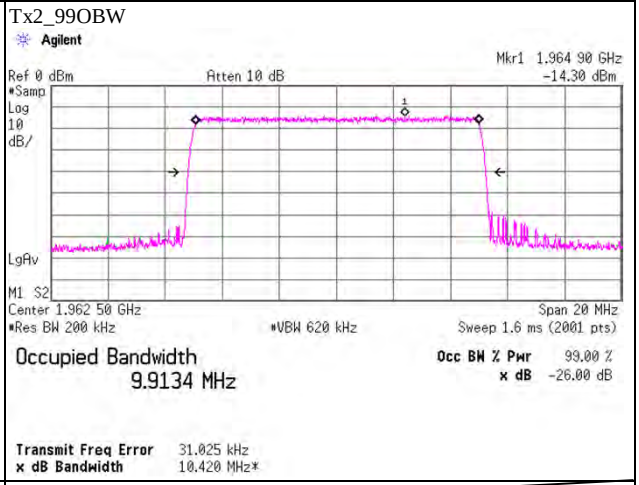
Transmitting(1930.7MHz, 8 carrier, TX1)

Tx1_99OBW



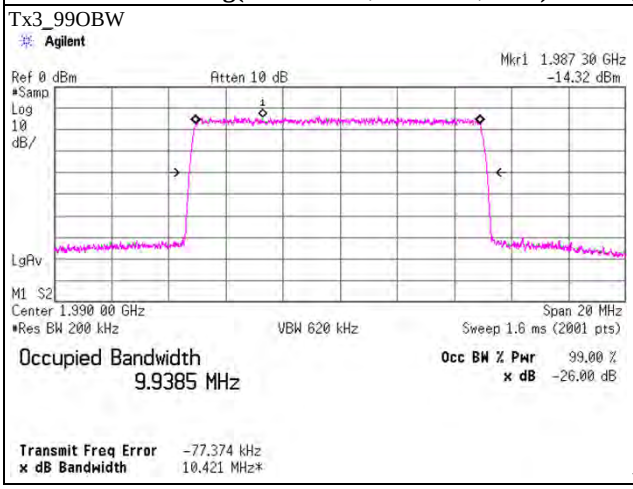
Transmitting(1962.5MHz, 8 carrier, TX1)

Tx2_99OBW



Transmitting(1994.3MHz, 8 carrier, TX1)

Tx3_99OBW

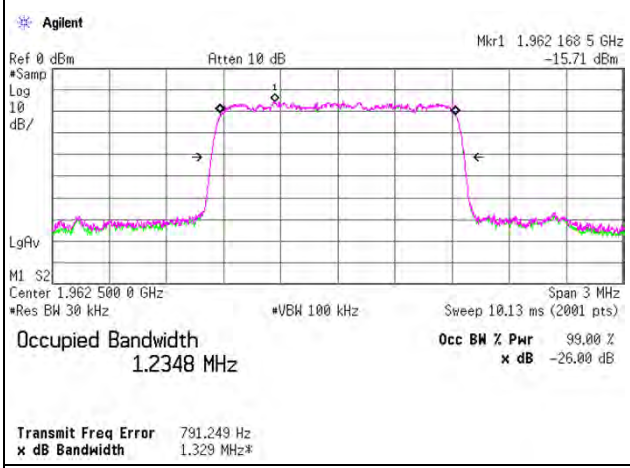
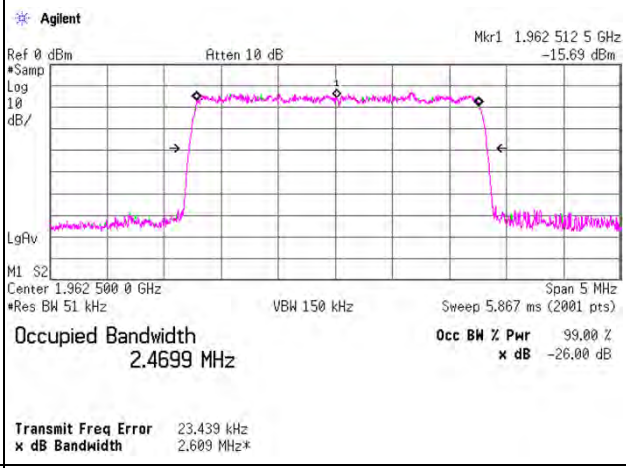
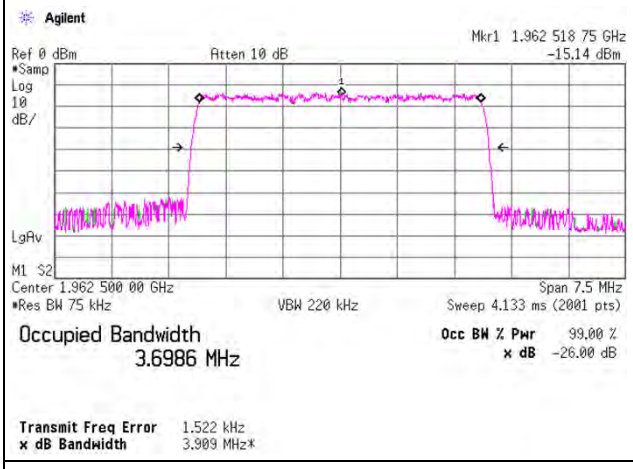
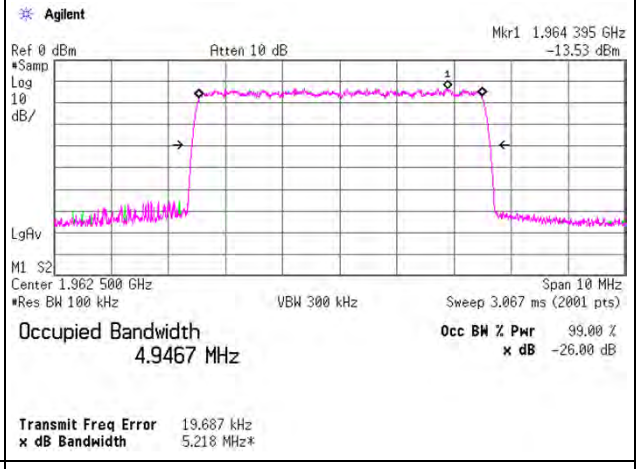
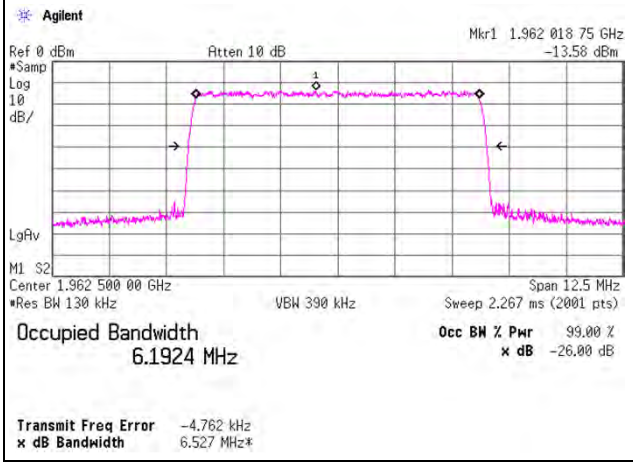
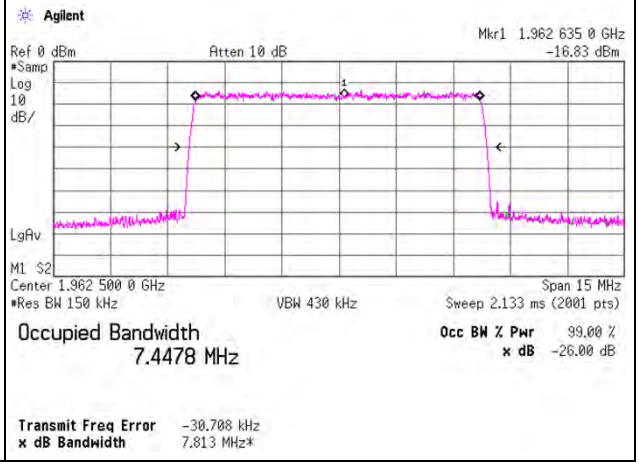


Test Report No.: 31JE0290-SH-01-A
Issued date : July 26, 2011

FCC ID : WV2611849144431A

99% Occupied Bandwidth

(Reference)

Transmitting(1962.5MHz, 1 carrier, TX1)	Transmitting(1962.5MHz, 2 carrier, TX1)
	
Transmitting(1962.5MHz, 3 carrier, TX1)	**Transmitting(1962.5MHz, 4 carrier, TX1)**
	
Transmitting(1962.5MHz, 5 carrier, TX1)	**Transmitting(1962.5MHz, 6 carrier, TX1)**
	

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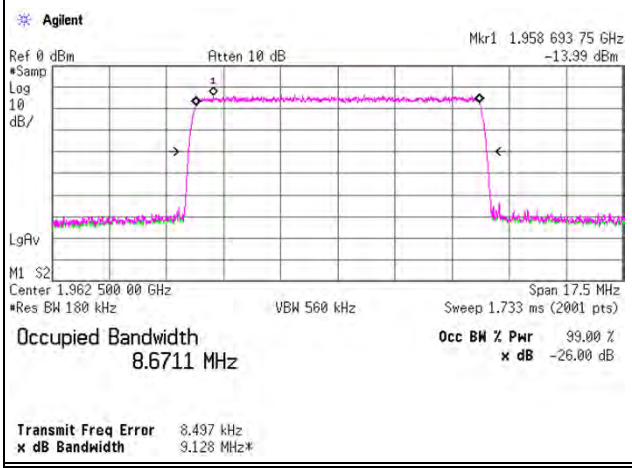
Test Report No.: 31JE0290-SH-01-A
Issued date : July 26, 2011

FCC ID : WV2611849144431A

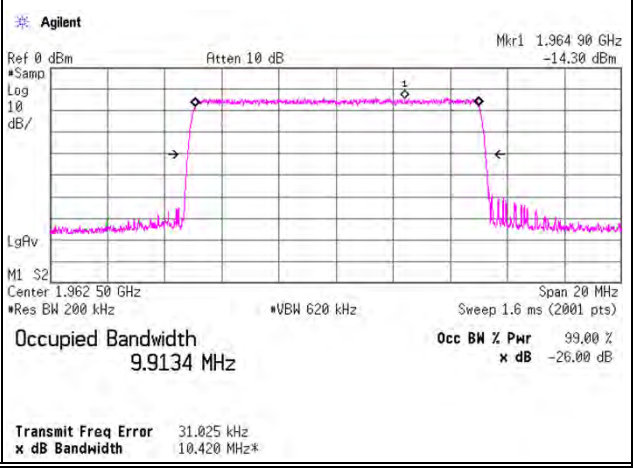
99% Occupied Bandwidth

(Reference)

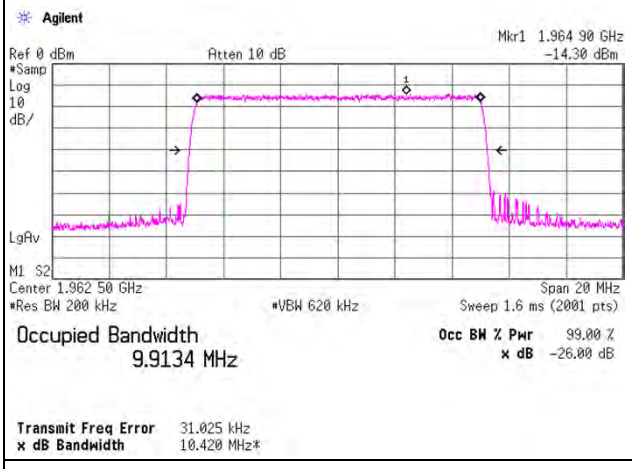
Transmitting(1962.5MHz, 7 carrier, TX1)



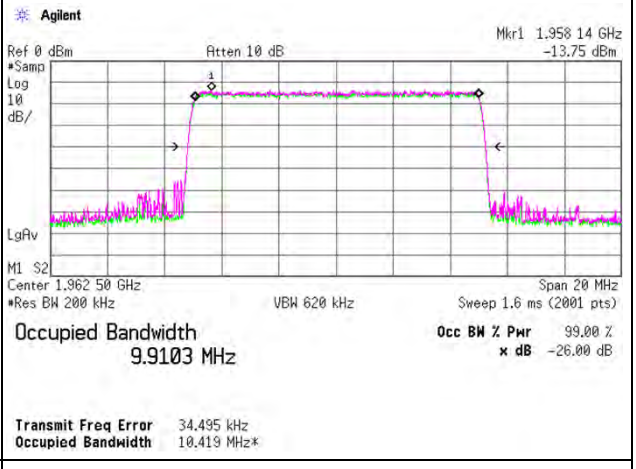
Transmitting(1962.5MHz, 8 carrier, TX1)



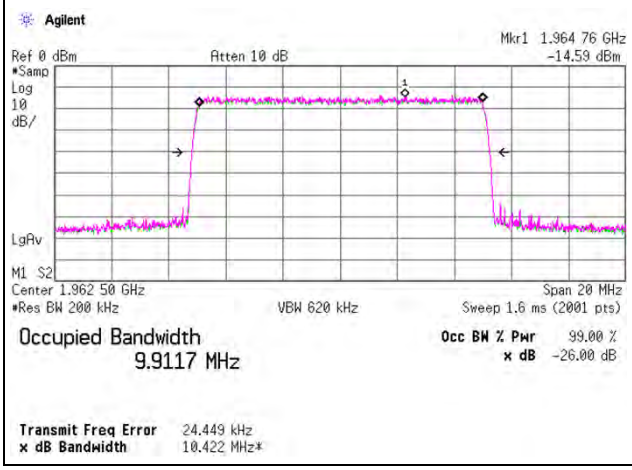
Transmitting(1962.5MHz, 8 carrier, TX1)



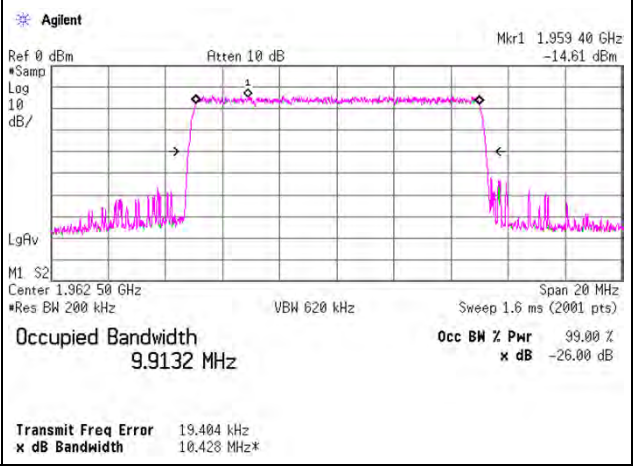
Transmitting(1962.5MHz, 8 carrier, TX2)



Transmitting(1962.5MHz, 8 carrier, TX3)



Transmitting(1962.5MHz, 8 carrier, TX4)



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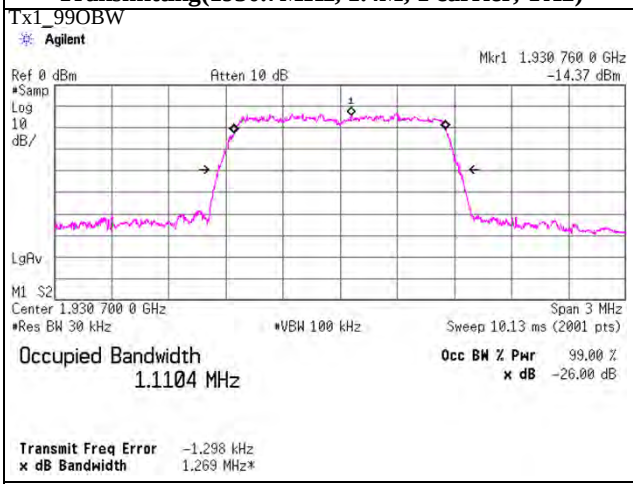
99% Occupied Bandwidth

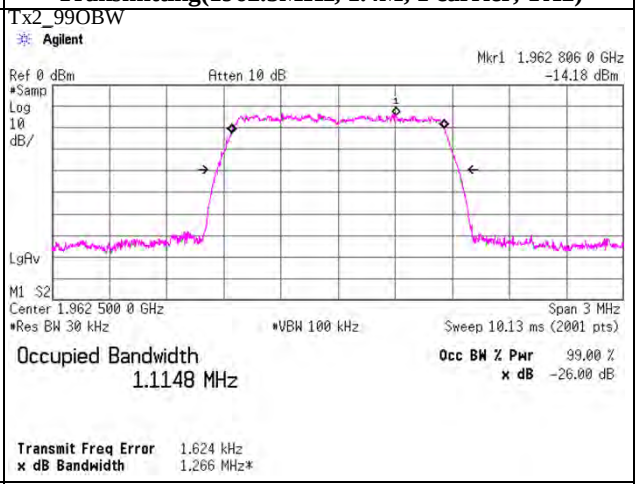
Test place	UL Japan, Inc. Shonan EMC Lab.	No.6 Shielded Room	
Date	June 22, 2011		
Temperature / Humidity	26deg.C , 58%RH		
Engineer	Kenichi Adachi		
Mode	Tx, LTE, PN9	worst antenna :TX2	worst antenna :1.4M, 1carrier

Freq. [MHz]	99% Occupied Bandwidth [MHz]
1930.7000	1.110
1962.5000	1.115
1994.3000	1.110

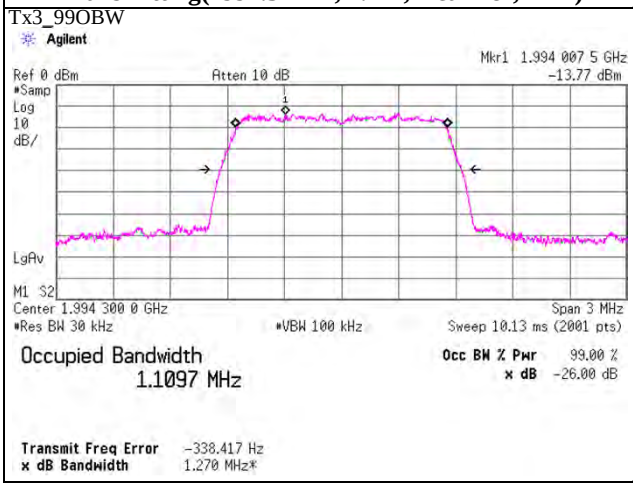
Transmitting(1930.7MHz, 1.4M, 1 carrier, TX2)



Transmitting(1962.5MHz, 1.4M, 1 carrier, TX2)



Transmitting(1994.3MHz, 1.4M, 1 carrier, TX2)



99% Occupied Bandwidth

Test place	UL Japan, Inc. Shonan EMC Lab.	No.6 Shielded Room	
Date	June 22, 2011		
Temperature / Humidity	26deg.C , 58%RH		
Engineer	Kenichi Adachi		
Mode	Tx, LTE, PN9	worst antenna :TX2	worst antenna :1.4M, 1carrier

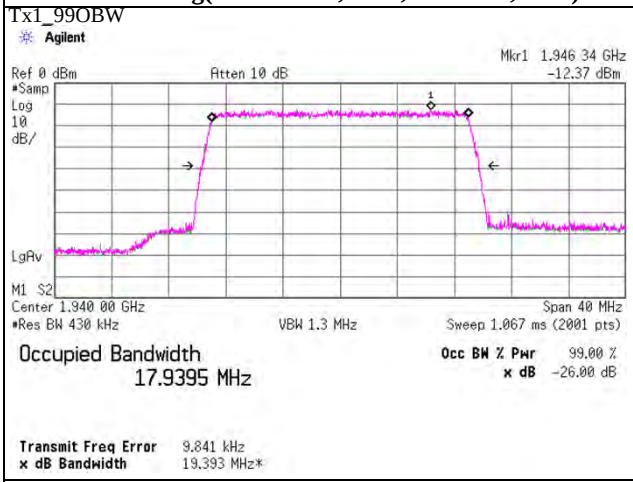
(Reference)

Freq. [MHz]	99% Occupied Bandwidth [MHz]
1930.7000	17.940
1962.5000	17.977
1994.3000	17.944

(Reference)

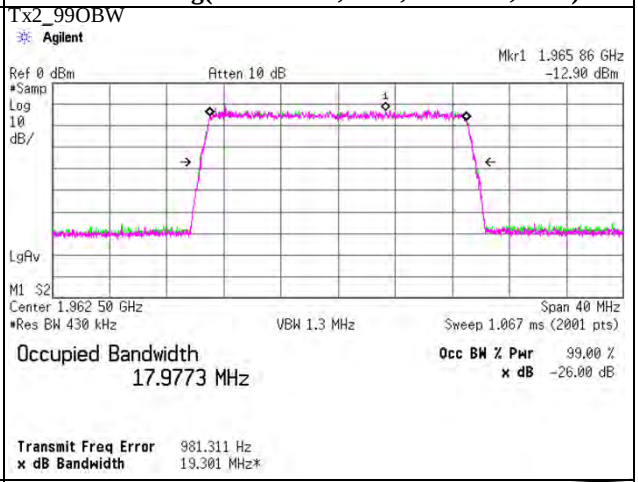
Transmitting(1930.7MHz, 20M, 1 carrier, TX2)

Tx1_99OBW



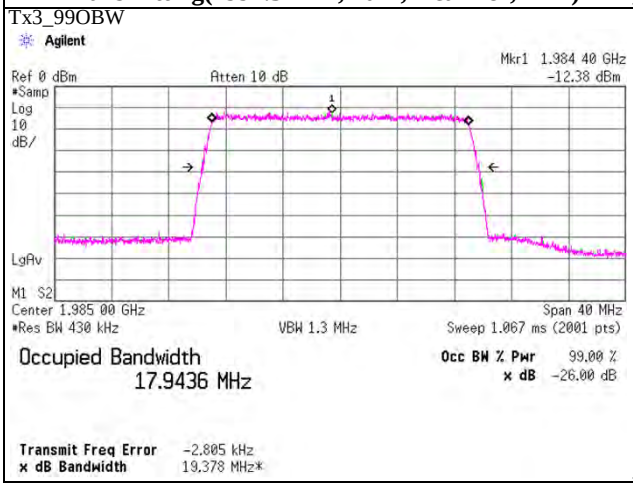
Transmitting(1962.5MHz, 20M, 1 carrier, TX2)

Tx2_99OBW



Transmitting(1994.3MHz, 20M, 1 carrier, TX2)

Tx3_99OBW



99% Occupied Bandwidth

Test place	UL Japan, Inc. Shonan EMC Lab.	No.6 Shielded Room	
Date	June 22, 2011		
Temperature / Humidity	26deg.C , 58%RH		
Engineer	Kenichi Adachi		
Mode	Tx, LTE, PN9	worst antenna :TX2	worst antenna :1.4M, 1carrier

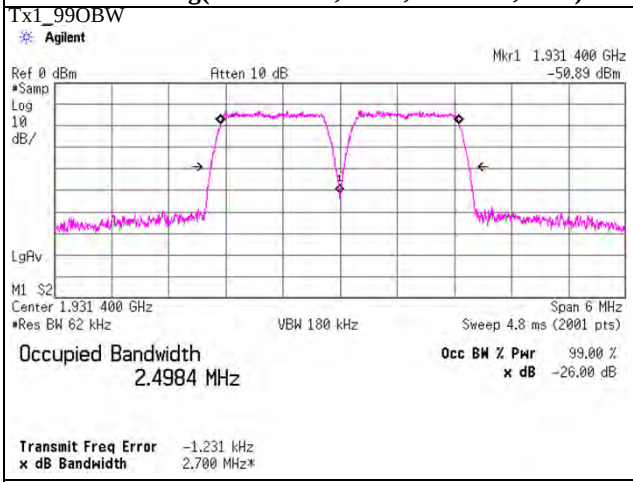
(Reference)

Freq. [MHz]	99% Occupied Bandwidth [MHz]
1930.7000	2.498
1962.5000	2.499
1994.3000	2.508

(Reference)

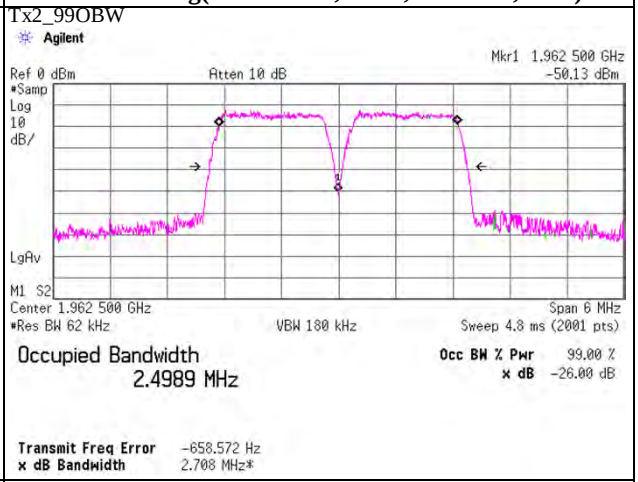
Transmitting(1930.7MHz, 1.4M, 2 carrier, TX2)

Tx1_99OBW



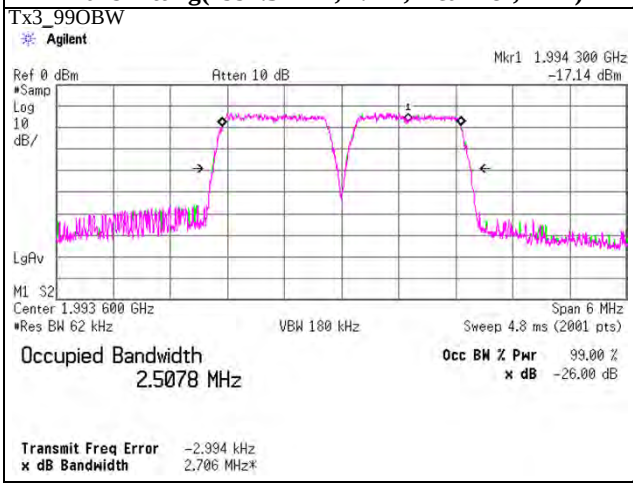
Transmitting(1962.5MHz, 1.4M, 2 carrier, TX2)

Tx2_99OBW



Transmitting(1994.3MHz, 1.4M, 2 carrier, TX2)

Tx3_99OBW



99% Occupied Bandwidth

Test place	UL Japan, Inc. Shonan EMC Lab.	No.6 Shielded Room	
Date	June 22, 2011		
Temperature / Humidity	26deg.C , 58%RH		
Engineer	Kenichi Adachi		
Mode	Tx, LTE, PN9	worst antenna :TX2	worst antenna :1.4M, 1carrier

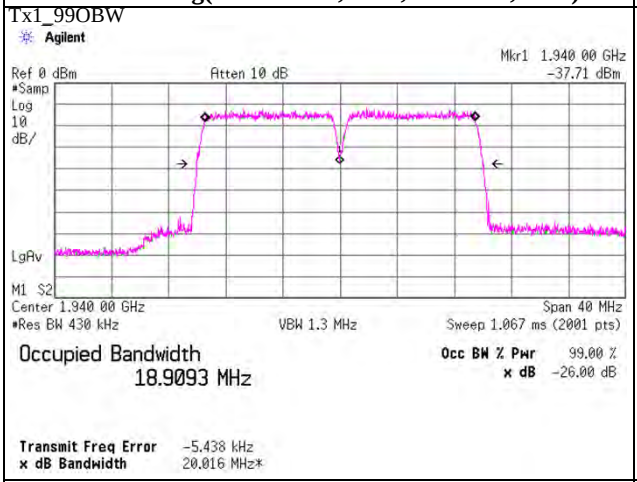
(Reference)

Freq. [MHz]	99% Occupied Bandwidth [MHz]
1930.7000	18.909
1962.5000	18.981
1994.3000	18.938

(Reference)

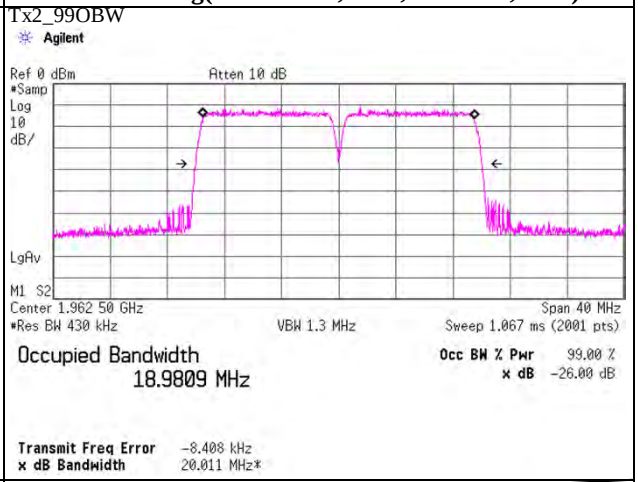
Transmitting(1930.7MHz, 10M, 2 carrier, TX2)

Tx1_99OBW



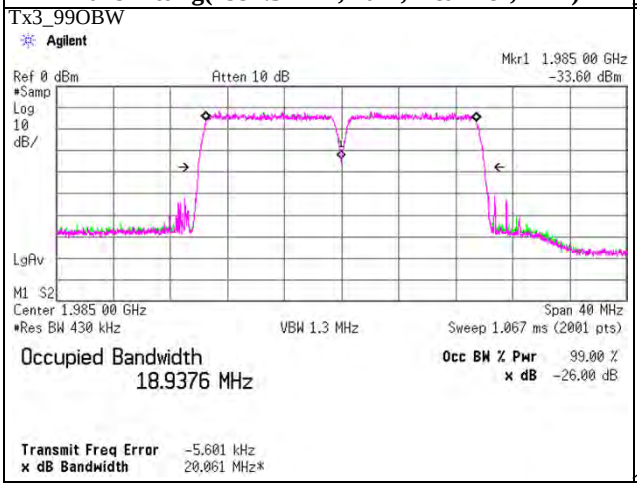
Transmitting(1962.5MHz, 10M, 2 carrier, TX2)

Tx2_99OBW



Transmitting(1994.3MHz, 10M, 2 carrier, TX2)

Tx3_99OBW



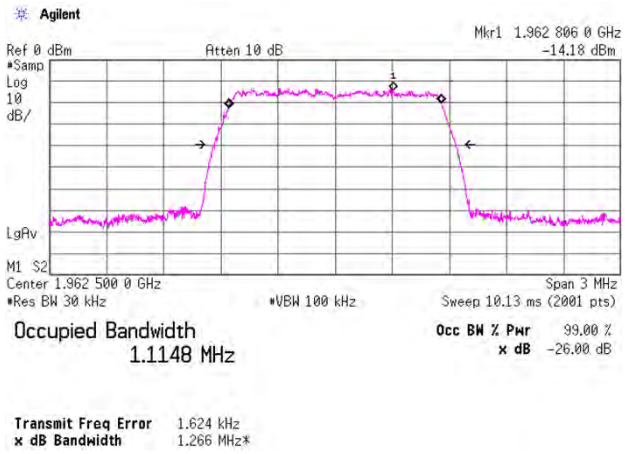
Test Report No.: 31JE0290-SH-01-A
Issued date : July 26, 2011

FCC ID : WV2611849144431A

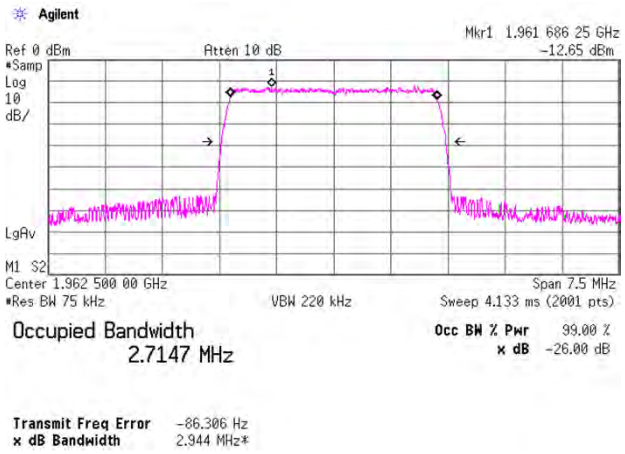
99% Occupied Bandwidth

(Reference)

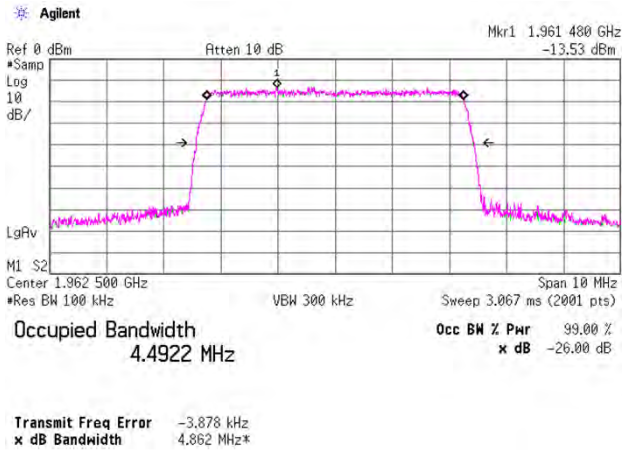
Transmitting(1962.5MHz, 1.4M, 1 carrier, TX2)



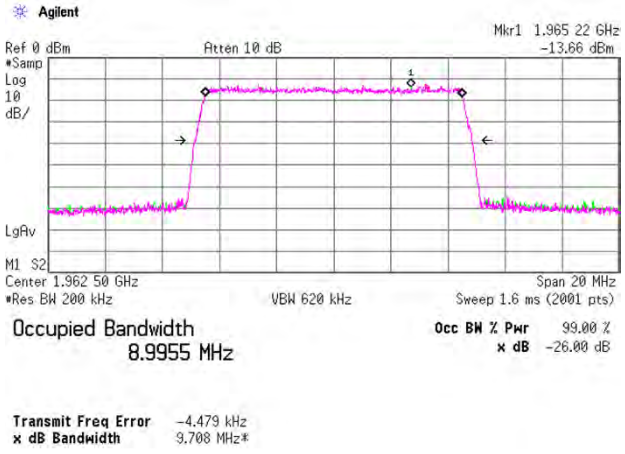
Transmitting(1962.5MHz, 3M, 1 carrier, TX2)



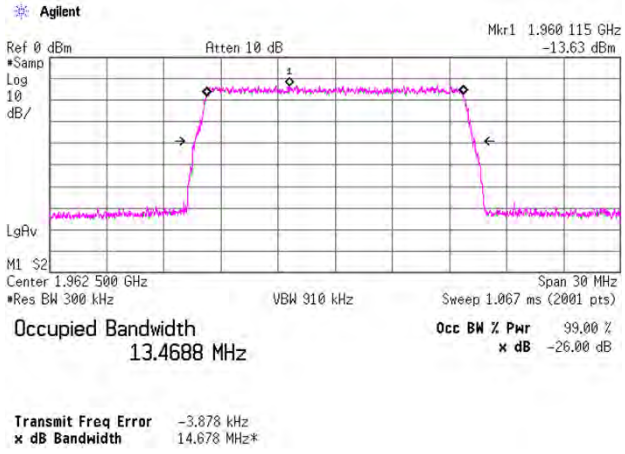
Transmitting(1962.5MHz, 5M, 1 carrier, TX2)



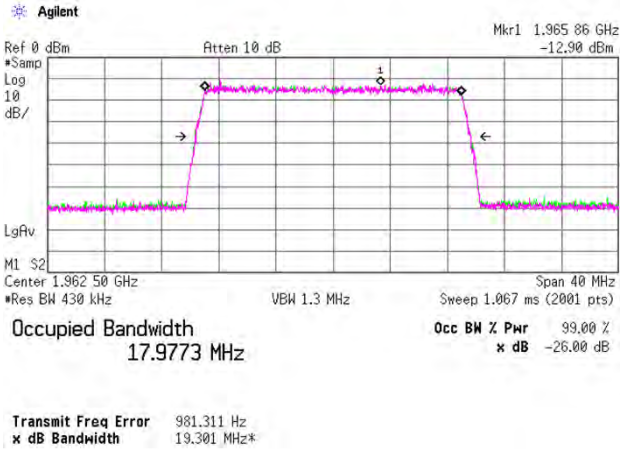
Transmitting(1962.5MHz, 10M, 1 carrier, TX2)



Transmitting(1962.5MHz, 15M, 1 carrier, TX2)



Transmitting(1962.5MHz, 20M, 1 carrier, TX2)



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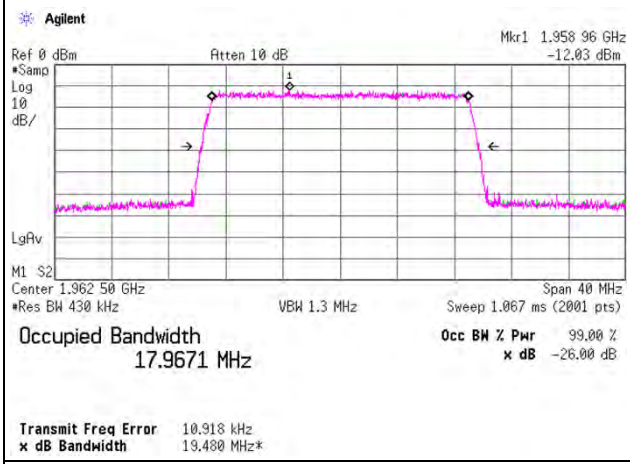
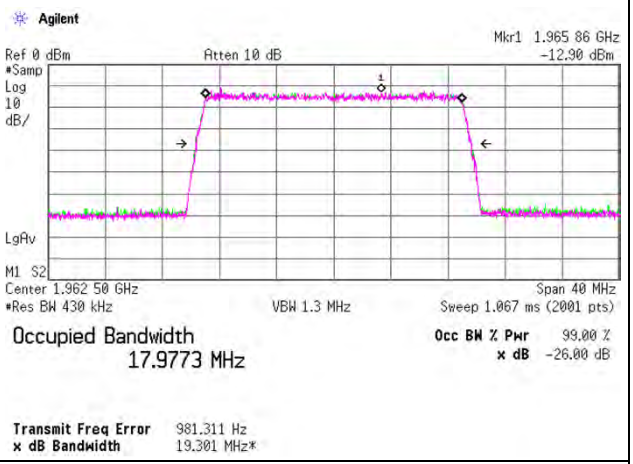
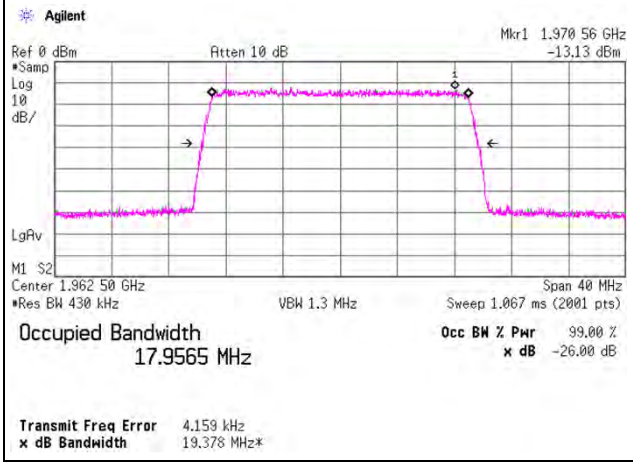
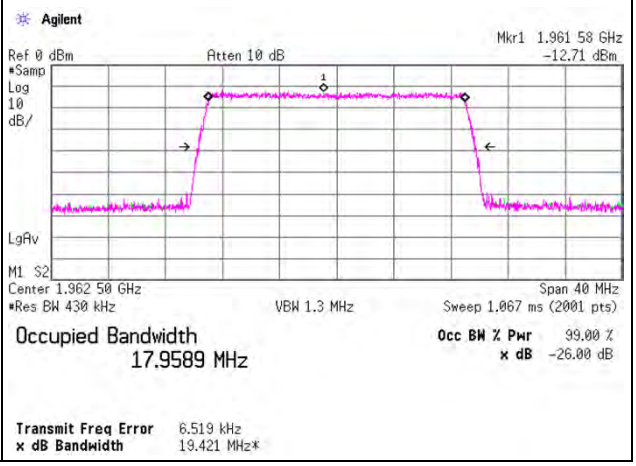
99% Occupied Bandwidth

(Reference)

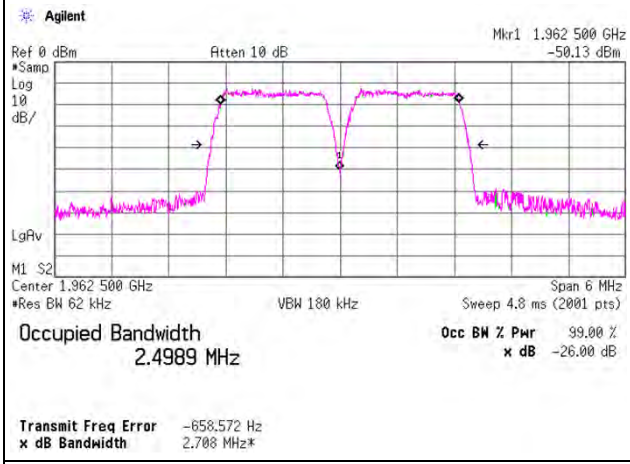
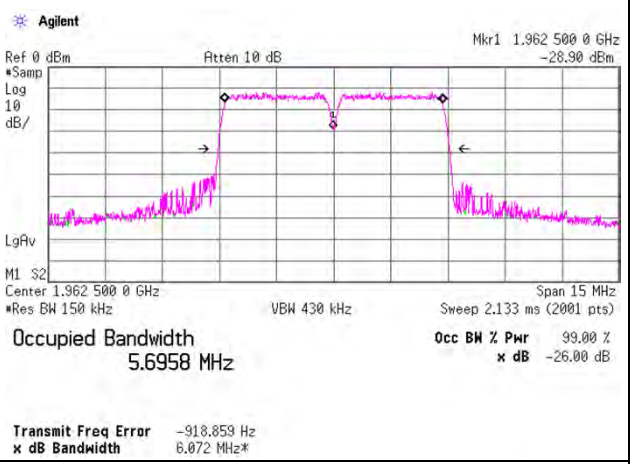
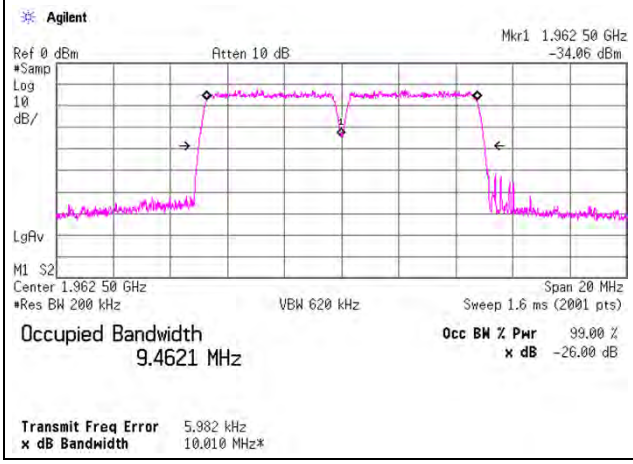
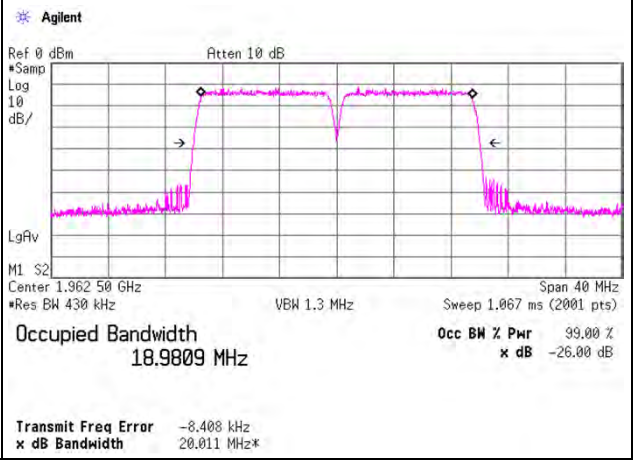
Transmitting(1962.5MHz, 20M, 1 carrier, TX1)	Transmitting(1962.5MHz, 20M, 1 carrier, TX2)
	
Transmitting(1962.5MHz, 20M, 1 carrier, TX3)	**Transmitting(1962.5MHz, 20M, 1 carrier, TX4)**
	

Test Report No.: 31JE0290-SH-01-A
Issued date : July 26, 2011

FCC ID : WV2611849144431A

99% Occupied Bandwidth

(Reference)

Transmitting(1962.5MHz, 1.4M, 2 carrier, TX2)	Transmitting(1962.5MHz, 3M, 2 carrier, TX2)
	
Transmitting(1962.5MHz, 5M, 2 carrier, TX2)	**Transmitting(1962.5MHz, 10M, 2 carrier, TX2)**
	

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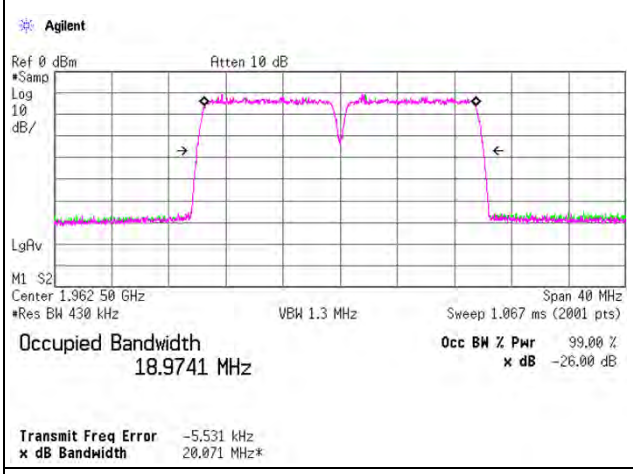
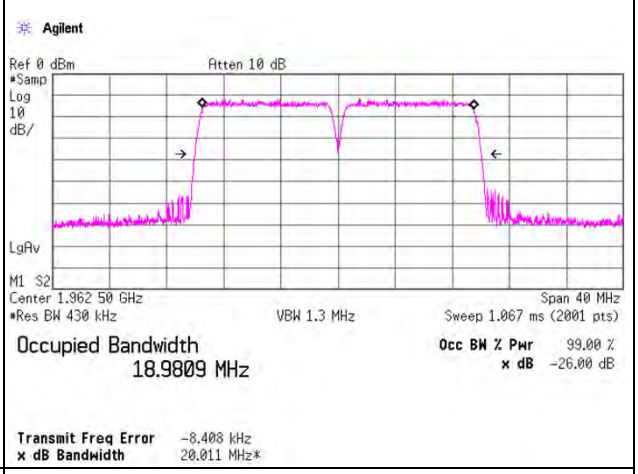
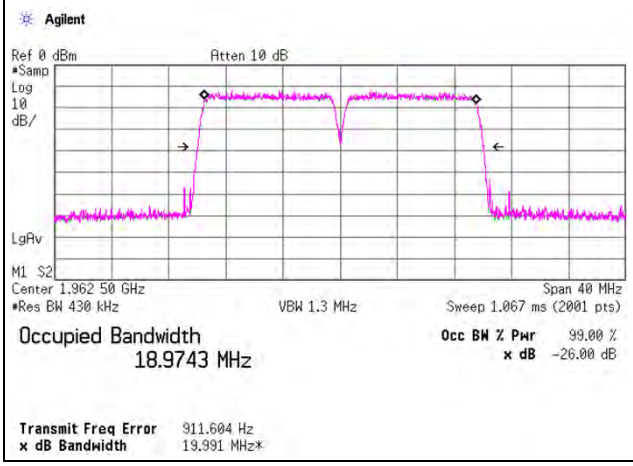
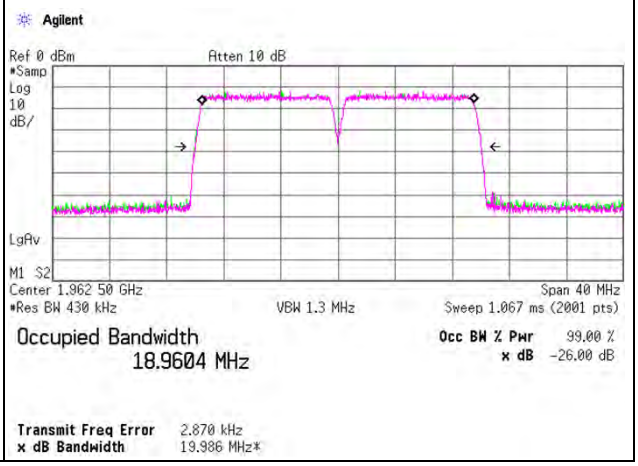
99% Occupied Bandwidth

(Reference)

Transmitting(1962.5MHz, 10M, 2 carrier, TX1)	Transmitting(1962.5MHz, 10M, 2 carrier, TX2)
	
Transmitting(1962.5MHz, 10M, 2 carrier, TX3)	**Transmitting(1962.5MHz, 10M, 2 carrier, TX4)**
	

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Bandedge (Conducted)

Test place	UL Japan, Inc. Shonan EMC Lab.	No.6 Shielded Room
Date	June 23, 2011	
Temperature / Humidity	26deg.C , 61%RH	
Engineer	Kenichi Adachi	
Mode	Tx, CDMA, PN9,	worst antenna : TX1

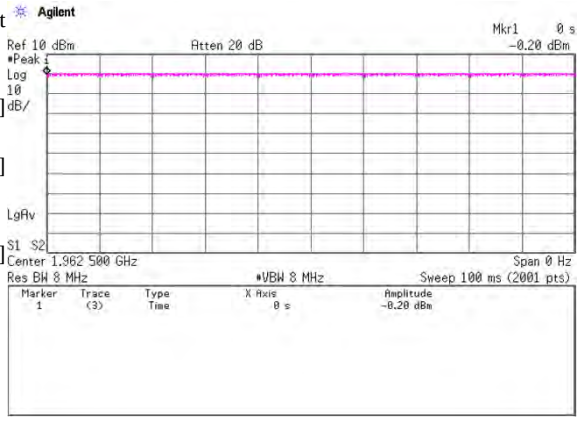
Number of Carrier	Freq. [MHz]	S/A Reading [dBm]	Cable Loss [dB]	Atten. Loss [dB]	Duty factor [dB]	Result [dBm]	Limit [dBm]	Margin [dB]
1	1930.0000	-62.00	2.17	40.29	0.00	-19.54	-13.00	6.54
	1995.0000	-61.60	2.21	40.31	0.00	-19.08	-13.00	6.08
2	1930.0000	-63.28	2.17	40.29	0.00	-20.82	-13.00	7.82
	1995.0000	-63.11	2.21	40.31	0.00	-20.59	-13.00	7.59
3	1930.0000	-62.60	2.17	40.29	0.00	-20.14	-13.00	7.14
	1995.0000	-63.62	2.21	40.31	0.00	-21.10	-13.00	8.10
4	1930.0000	-60.84	2.17	40.29	0.00	-18.38	-13.00	5.38
	1995.0000	-62.89	2.21	40.31	0.00	-20.37	-13.00	7.37
5	1930.0000	-58.30	2.17	40.29	0.00	-15.84	-13.00	2.84
	1995.0000	-60.26	2.21	40.31	0.00	-17.74	-13.00	4.74
6	1930.0000	-58.82	2.17	40.29	0.00	-16.36	-13.00	3.36
	1995.0000	-61.68	2.21	40.31	0.00	-19.16	-13.00	6.16
7	1930.0000	-58.71	2.17	40.29	0.00	-16.25	-13.00	3.25
	1995.0000	-57.82	2.21	40.31	0.00	-15.30	-13.00	2.30
8	1930.0000	-57.43	2.17	40.29	0.00	-14.97	-13.00	**1.97**
	1995.0000	-57.72	2.21	40.31	0.00	-15.20	-13.00	2.20

Sample Calculation:
Result = Reading + Cable Loss (supplied by customer) + Atten. Loss + Duty factor

Limit line Limit - Cable Loss (supplied by customer) - Atten. Loss - Duty factor - Antenna Gain
-55.46 dB (Low side) -55.52 dB (Low side)

** Duty chart

On time [ms]
100.000
1cycle time [ms]
100.000
Duty factor [dB]
0.000



* Sample Calculation: Duty factor = 10 x log (1cycle time / On time)

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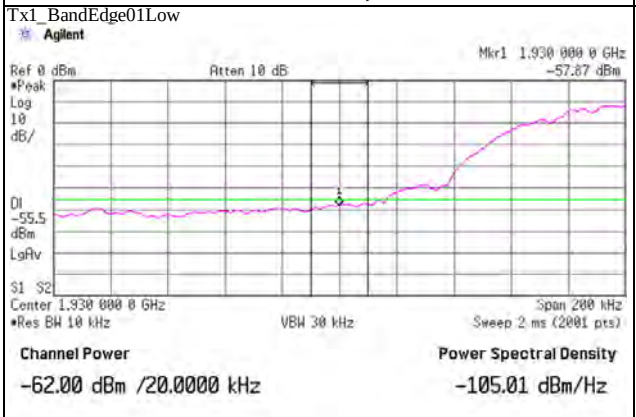
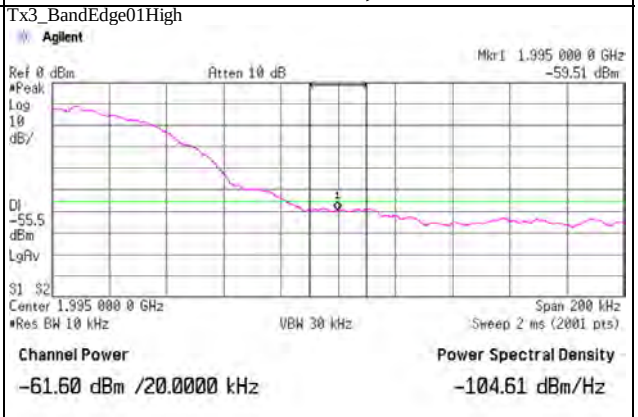
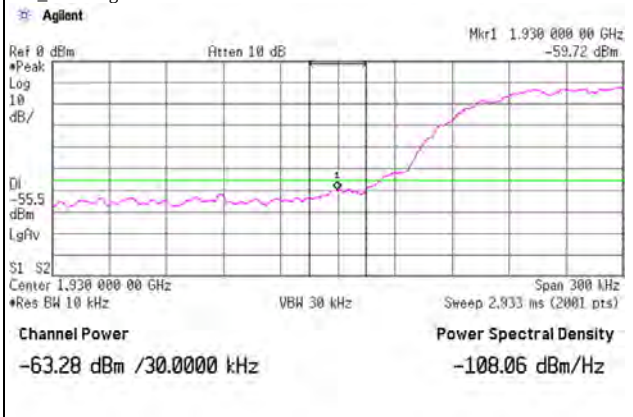
Bandedge (Conducted)

Band Edge compliance

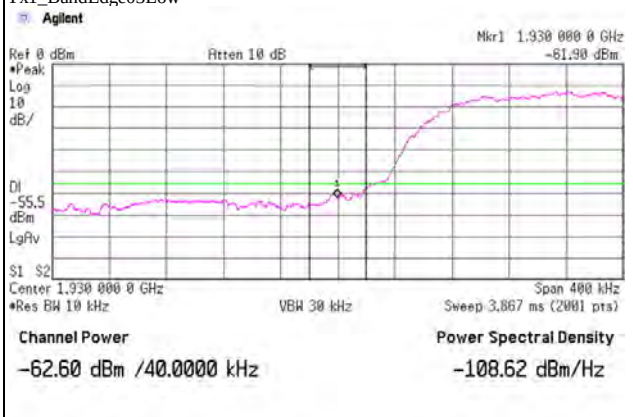
1 carrier

Tx 1930.7MHz, TX1	Tx 1994.3MHz, TX1
Tx1_BandEdge01Low	Tx3_BandEdge01High
	
Channel Power: -62.00 dBm /20.0000 kHz Power Spectral Density: -105.01 dBm/Hz	Channel Power: -61.60 dBm /20.0000 kHz Power Spectral Density: -104.61 dBm/Hz

2 carrier

Tx 1930.7MHz, TX1	Tx 1994.3MHz, TX1
Tx1_BandEdge02Low	Tx3_BandEdge02High
	
Channel Power: -63.28 dBm /30.0000 kHz Power Spectral Density: -108.06 dBm/Hz	Channel Power: -63.11 dBm /30.0000 kHz Power Spectral Density: -107.88 dBm/Hz

3 carrier

Tx 1930.7MHz, TX1	Tx 1994.3MHz, TX1
Tx1_BandEdge03Low	Tx3_BandEdge03High
	
Channel Power: -62.60 dBm /40.0000 kHz Power Spectral Density: -108.62 dBm/Hz	Channel Power: -63.62 dBm /40.0000 kHz Power Spectral Density: -109.65 dBm/Hz

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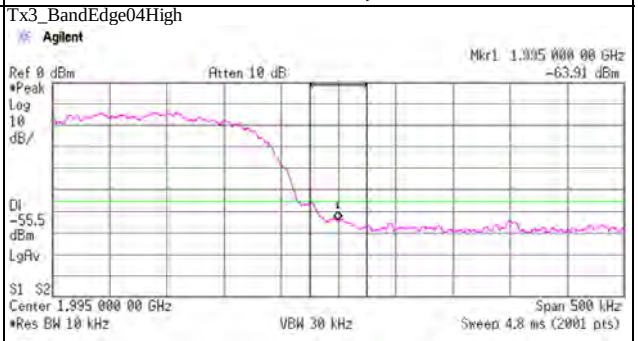
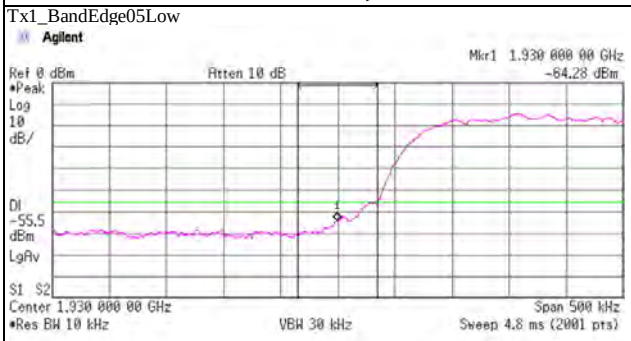
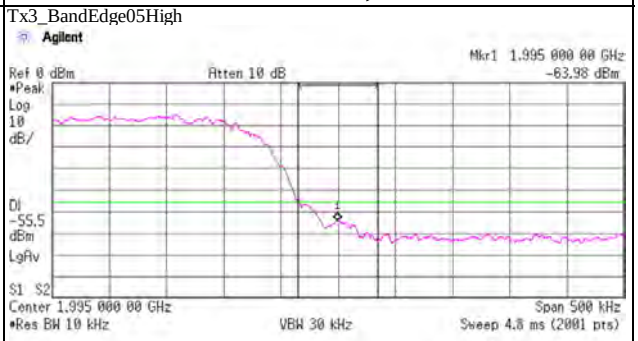
Bandedge (Conducted)

Band Edge compliance

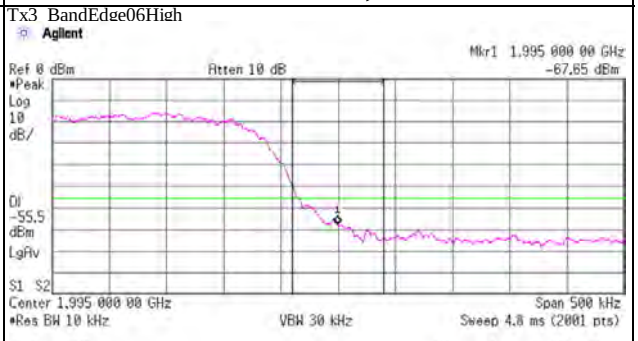
4 carrier

Tx 1930.7MHz, TX1	Tx 1994.3MHz, TX1
Tx1_BandEdge04Low	Tx3_BandEdge04High
	
Channel Power: -60.84 dBm /50.0000 kHz Power Spectral Density: -107.83 dBm/Hz	Channel Power: -62.89 dBm /50.0000 kHz Power Spectral Density: -109.88 dBm/Hz

5 carrier

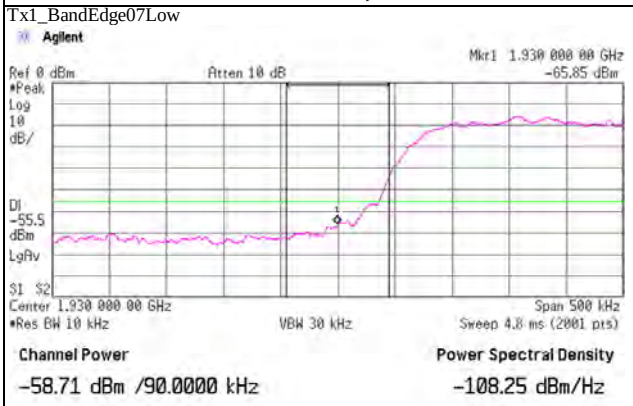
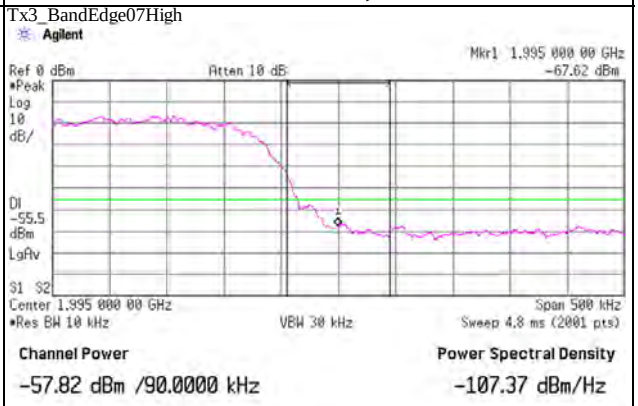
Tx 1930.7MHz, TX1	Tx 1994.3MHz, TX1
Tx1_BandEdge05Low	Tx3_BandEdge05High
	
Channel Power: -58.30 dBm /70.0000 kHz Power Spectral Density: -106.75 dBm/Hz	Channel Power: -60.26 dBm /70.0000 kHz Power Spectral Density: -108.71 dBm/Hz

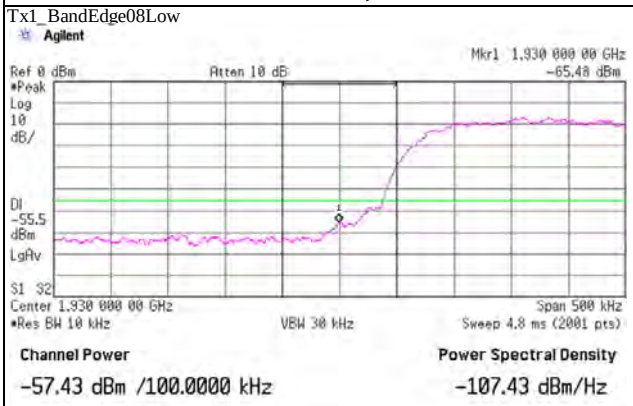
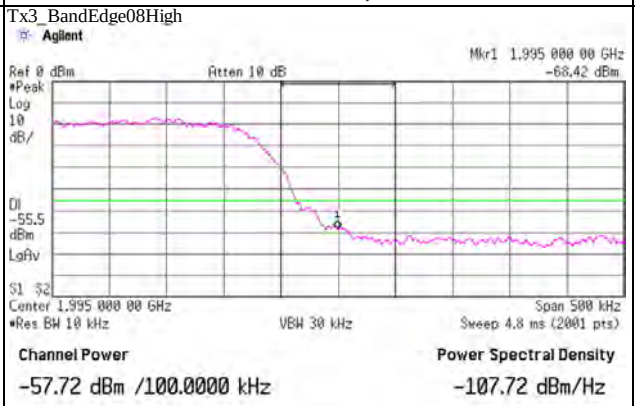
6 carrier

Tx 1930.7MHz, TX1	Tx 1994.3MHz, TX1
Tx1_BandEdge06Low	Tx3_BandEdge06High
	
Channel Power: -58.82 dBm /80.0000 kHz Power Spectral Density: -107.85 dBm/Hz	Channel Power: -61.68 dBm /80.0000 kHz Power Spectral Density: -110.72 dBm/Hz

Bandedge (Conducted)

Band Edge compliance

7 carrier	
Tx 1930.7MHz, TX1	**Tx 1994.3MHz, TX1**
Tx1_BandEdge07Low	Tx3_BandEdge07High
	
Channel Power: -58.71 dBm /90.0000 kHz Power Spectral Density: -108.25 dBm/Hz	Channel Power: -57.82 dBm /90.0000 kHz Power Spectral Density: -107.37 dBm/Hz

8 carrier	
Tx 1930.7MHz, TX1	**Tx 1994.3MHz, TX1**
Tx1_BandEdge08Low	Tx3_BandEdge08High
	
Channel Power: -57.43 dBm /100.0000 kHz Power Spectral Density: -107.43 dBm/Hz	Channel Power: -57.72 dBm /100.0000 kHz Power Spectral Density: -107.72 dBm/Hz

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Bandedge (Conducted)

Test place	UL Japan, Inc. Shonan EMC Lab.	No.6 Shielded Room
Date	June 23, 2011	
Temperature / Humidity	26deg.C , 61%RH	
Engineer	Kenichi Adachi	
Mode	Tx, LTE, PN9,	worst antenna :TX2

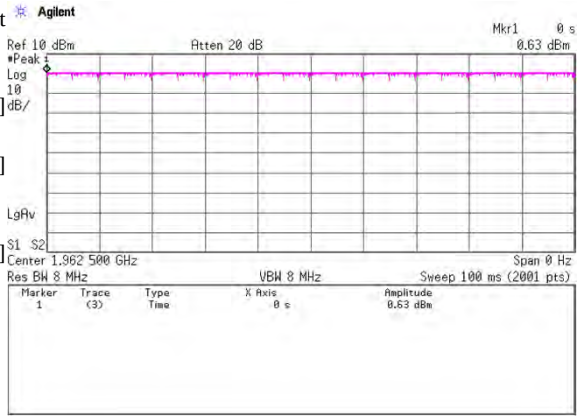
Modulation mode	Freq. [MHz]	S/A Reading [dBm]	Cable Loss [dB]	Atten. Loss [dB]	Duty factor [dB]	Result [dBm]	Limit [dBm]	Margin [dB]
1.4M, 1carrier	1930.0000	-62.72	2.17	40.29	0.00	-20.26	-13.00	7.26
	1995.0000	-62.63	2.21	40.31	0.00	-20.11	-13.00	7.11
3M, 1carrier	1930.0000	-62.87	2.17	40.29	0.00	-20.41	-13.00	7.41
	1995.0000	-63.40	2.21	40.31	0.00	-20.88	-13.00	7.88
5M, 1carrier	1930.0000	-63.60	2.17	40.29	0.00	-21.14	-13.00	8.14
	1995.0000	-62.09	2.21	40.31	0.00	-19.57	-13.00	6.57
10M, 1carrier	1930.0000	-64.66	2.17	40.29	0.00	-22.20	-13.00	9.20
	1995.0000	-65.84	2.21	40.31	0.00	-23.32	-13.00	10.32
15M, 1carrier	1930.0000	-61.62	2.17	40.29	0.00	-19.16	-13.00	6.16
	1995.0000	-61.28	2.21	40.31	0.00	-18.76	-13.00	5.76
20M, 1carrier	1930.0000	-66.94	2.17	40.29	0.00	-24.48	-13.00	11.48
	1995.0000	-66.78	2.21	40.31	0.00	-24.26	-13.00	11.26

Sample Calculation:
Result = Reading + Cable Loss (supplied by customer) + Atten. Loss + Duty factor

Limit line Limit - Cable Loss (supplied by customer) - Atten. Loss - Duty factor
-55.46 dB (Low side) -55.52 dB (High side)

** Duty chart

On time [ms]
100.000
1cycle time [ms]
100.000
Duty factor [dB]
0.000



* Sample Calculation: Duty factor = 10 x log (1cycle time / On time)

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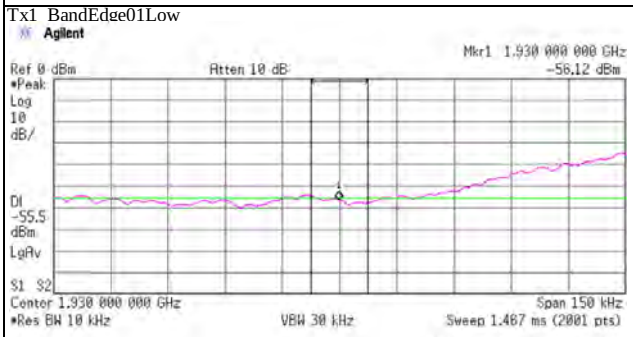
Bandedge (Conducted)

Band Edge compliance

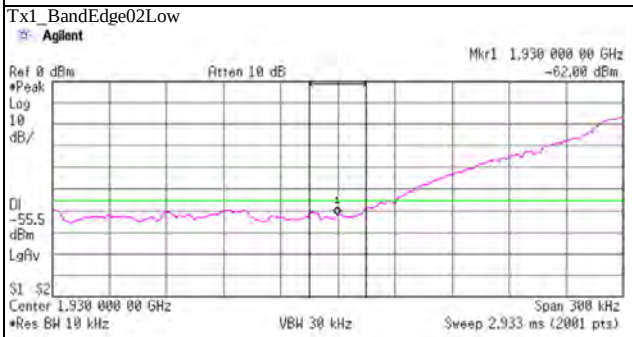
1.4M, 1carrier

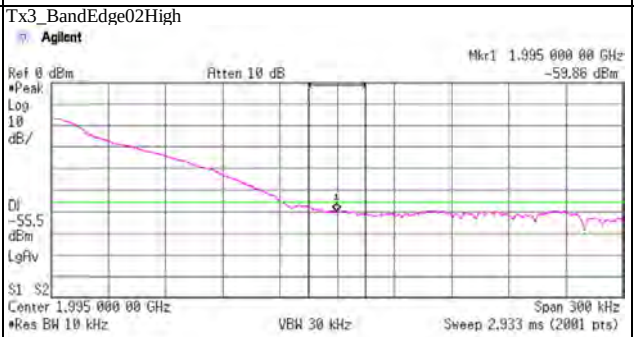
Tx 1930.7MHz	Tx 1994.3MHz
Tx1_BandEdge01Low	Tx3_BandEdge01High



3M, 1carrier

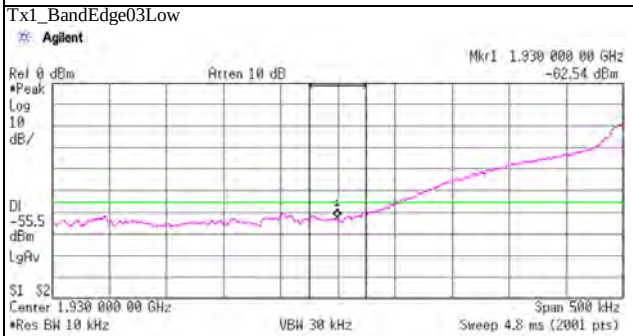
Tx 1930.7MHz	Tx 1994.3MHz
Tx1_BandEdge02Low	Tx3_BandEdge02High

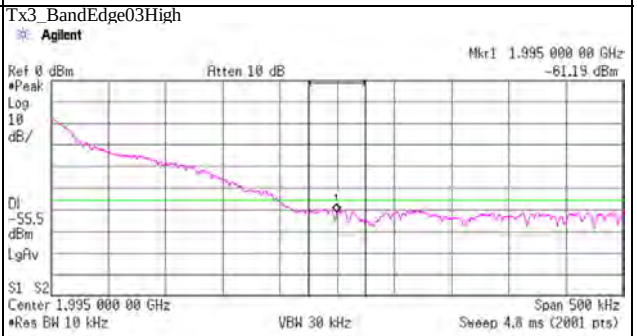




5M, 1carrier

Tx 1930.7MHz	Tx 1994.3MHz
Tx1_BandEdge03Low	Tx3_BandEdge03High



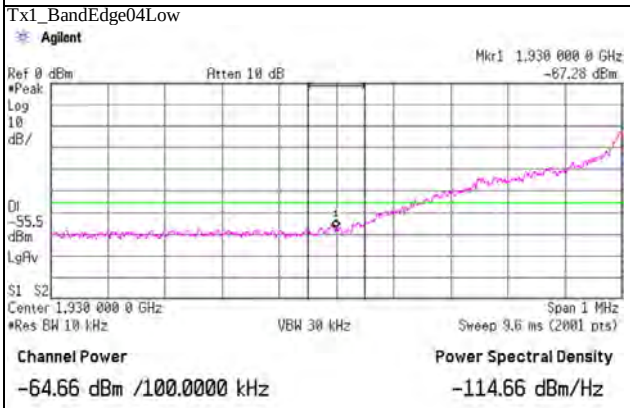


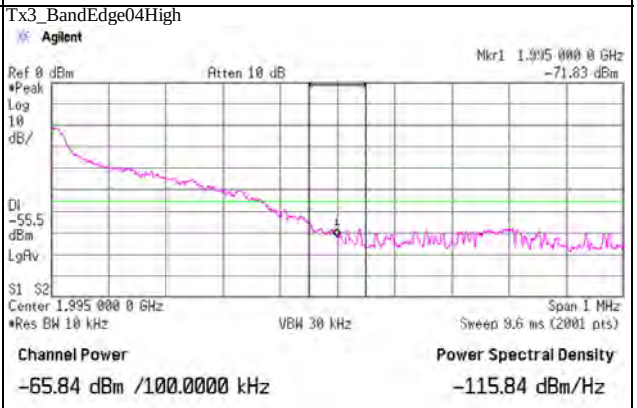
Bandedge (Conducted)

Band Edge compliance

10M, 1carrier

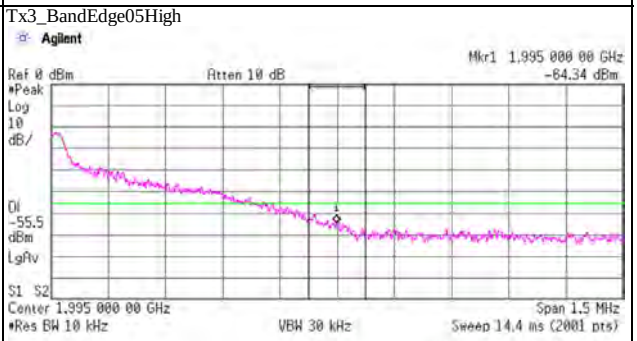
Tx 1930.7MHz	Tx 1994.3MHz
Tx1_BandEdge04Low	Tx3_BandEdge04High





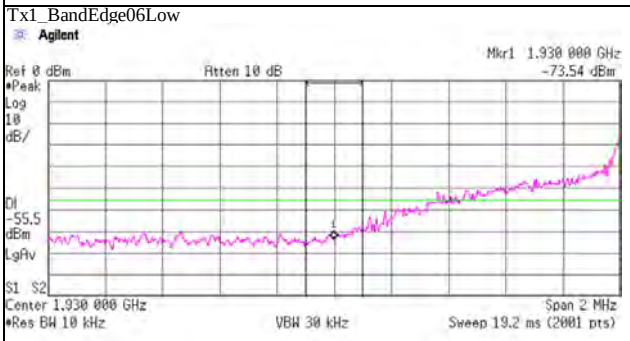
15M, 1carrier

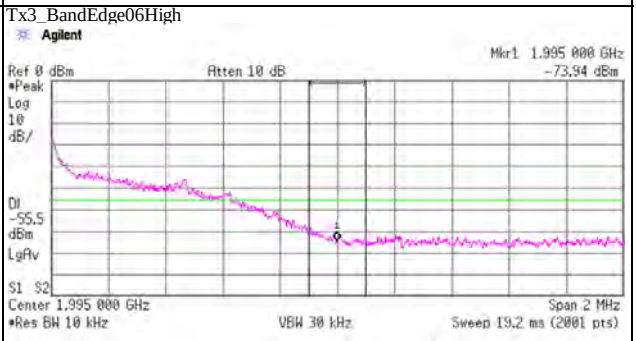
Tx 1930.7MHz	Tx 1994.3MHz
Tx1_BandEdge05Low	Tx3_BandEdge05High



20M, 1carrier

Tx 1930.7MHz	Tx 1994.3MHz
Tx1_BandEdge06Low	Tx3_BandEdge06High





Spurious Emission (Conducted)

Test place	UL Japan, Inc. Shonan EMC Lab.	No.6 Shielded Room
Date	June 23, 2011	
Temperature / Humidity	26deg.C , 61%RH	
Engineer	Kenichi Adachi	
Mode	Tx, CDMA, PN9,	worst antenna : TX1

PK DETECT(S/A : RBW 1MHz ,VBW 3MHz, sweep time AUTO)
Limit Line

Limit [dBm]	Duty Factor [dB]	Atten. Loss [dB]	Cable Loss [dB]	Limit Line [dBm]
-13.0	0.0	40.3	2.2	-55.5

Sample Calculation : Limit Line = Limit - Duty Factor - Atten. Loss - Cable Loss

* It detected no signal at antenna terminal except carrier.

Test Report No.: 31JE0290-SH-01-A
Issued date : July 26, 2011

FCC ID : WV2611849144431A

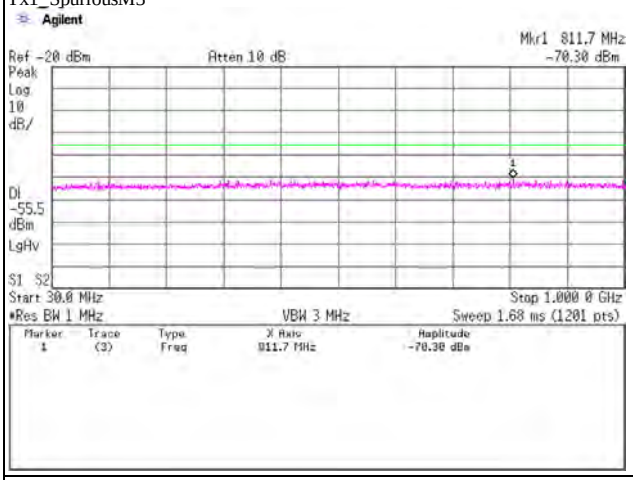
Spurious emission (Conducted)

Tx, CDMA, worst antenna : TX1, worst mode : 1 Carrier

Tx 1930.7MHz (1/2)

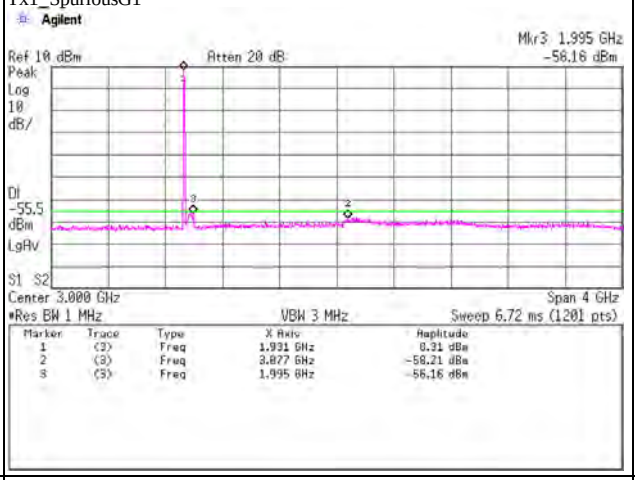
30MHz - 1GHz

Tx1_SpuriousM3



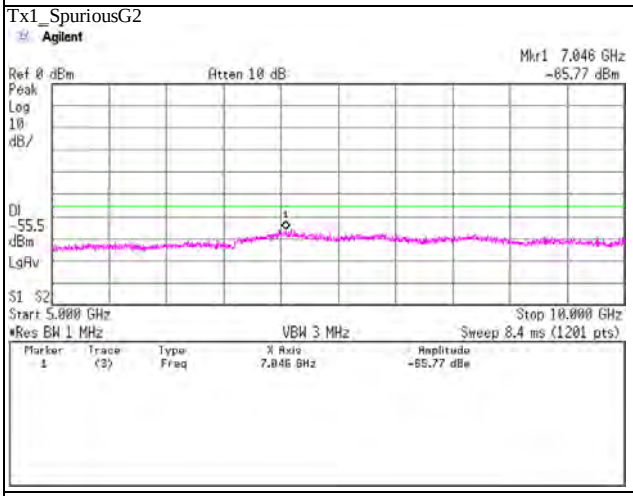
1GHz - 5GHz

Tx1_SpuriousG1



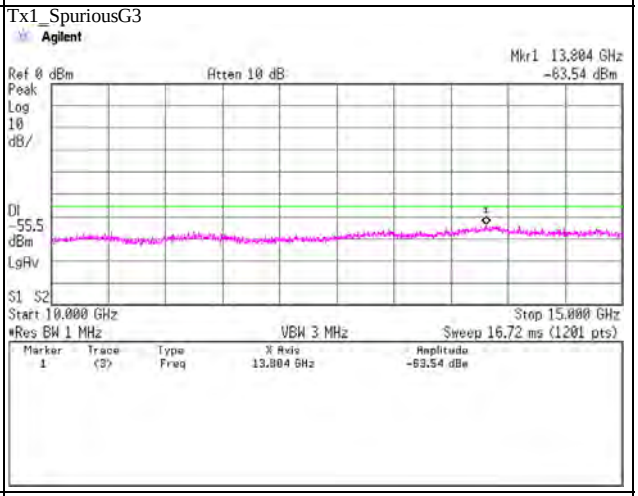
5GHz - 10GHz

Tx1_SpuriousG2



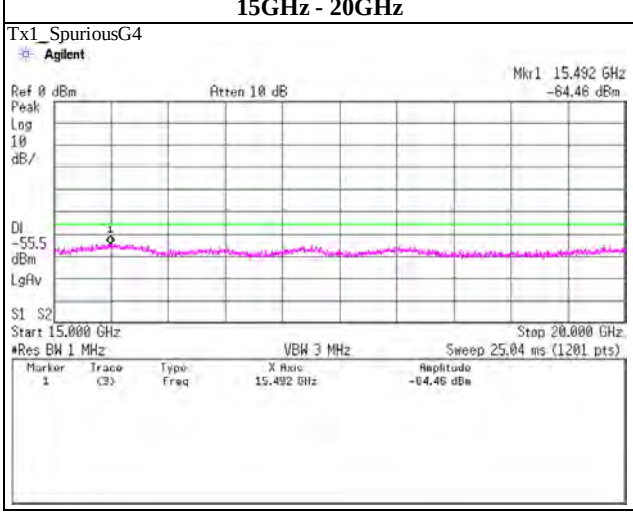
10GHz - 15GHz

Tx1_SpuriousG3



15GHz - 20GHz

Tx1_SpuriousG4



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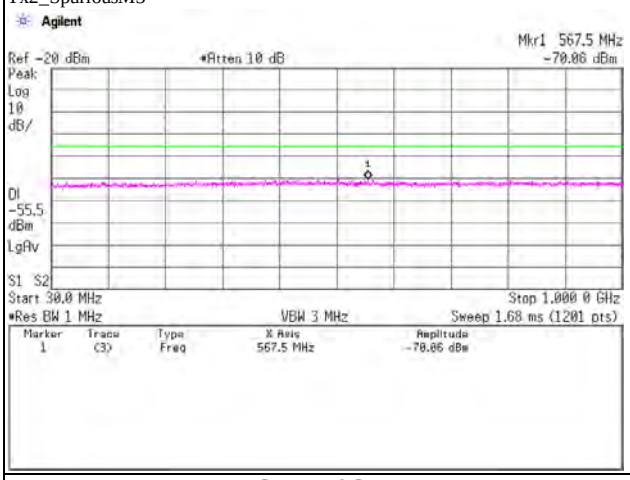
Spurious emission (Conducted)

Tx, CDMA, worst antenna : TX1, worst mode : 1 Carrier

Tx 1962.5MHz (1/2)

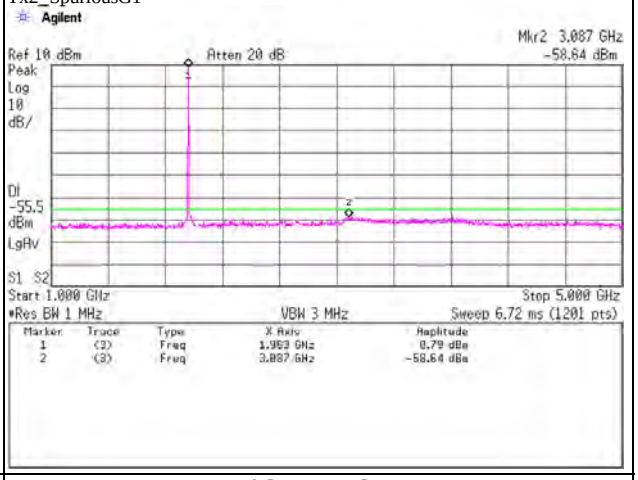
30MHz - 1GHz

Tx2_SpuriousM3



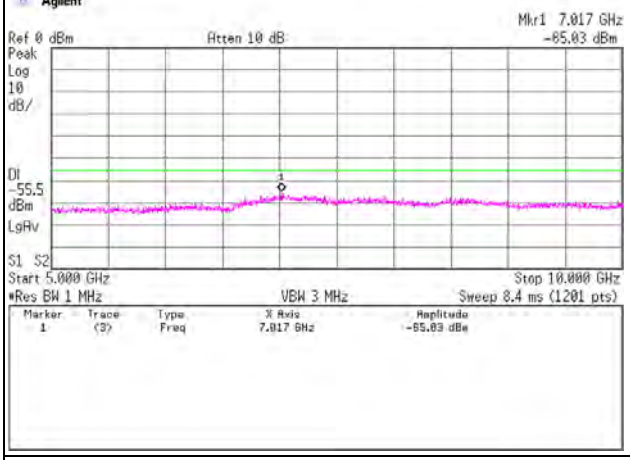
1GHz - 5GHz

Tx2_SpuriousG1



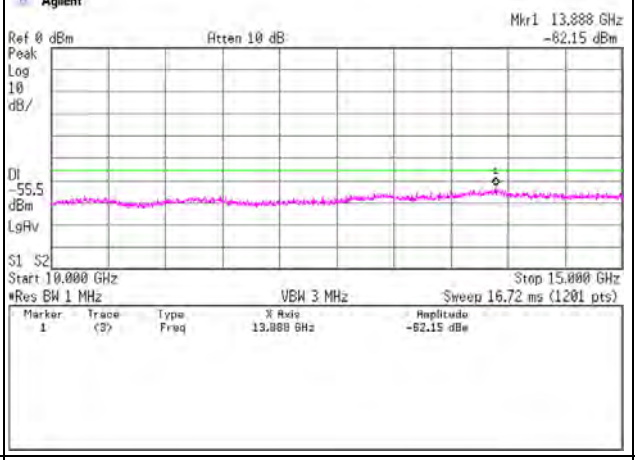
5GHz - 10GHz

Tx2_SpuriousG2



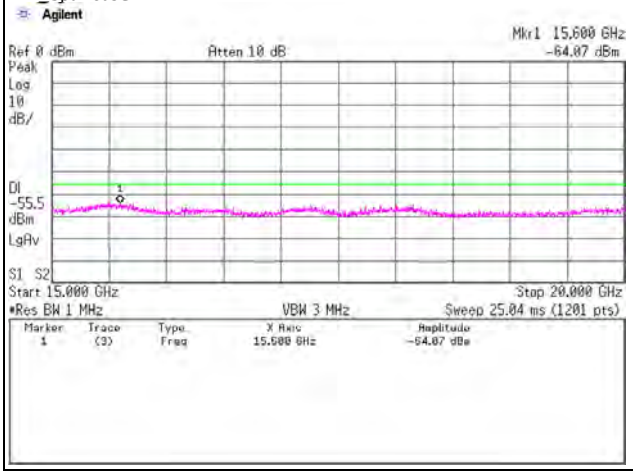
10GHz - 15GHz

Tx2_SpuriousG3



15GHz - 20GHz

Tx2_SpuriousG4



Test Report No.: 31JE0290-SH-01-A
Issued date : July 26, 2011

FCC ID : WV2611849144431A

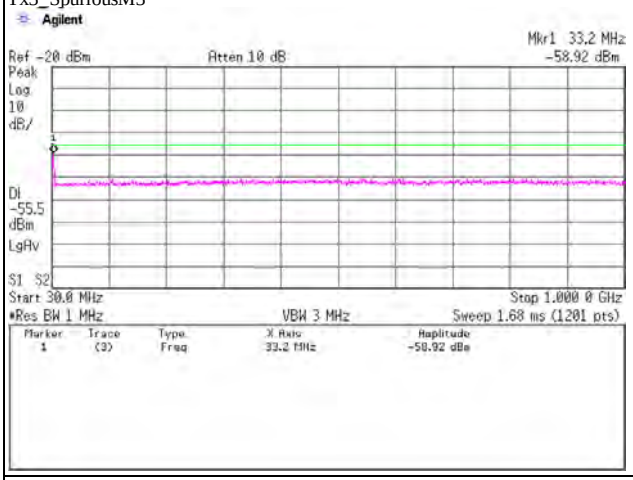
Spurious emission (Conducted)

Tx, CDMA, worst antenna : TX1, worst mode : 1 Carrier

Tx 1994.3MHz (1/2)

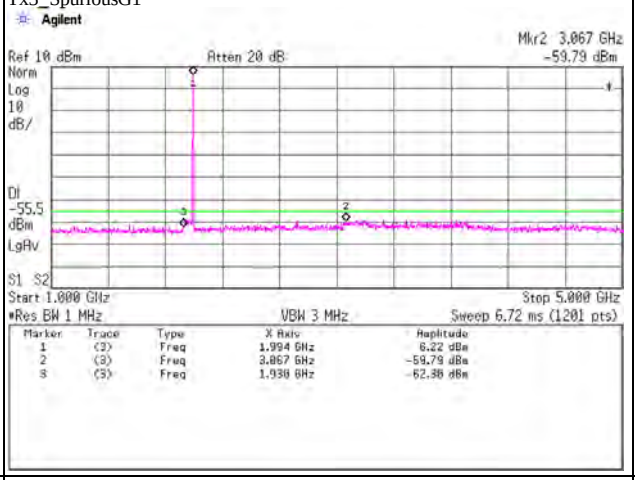
30MHz - 1GHz

Tx3_SpuriousM3



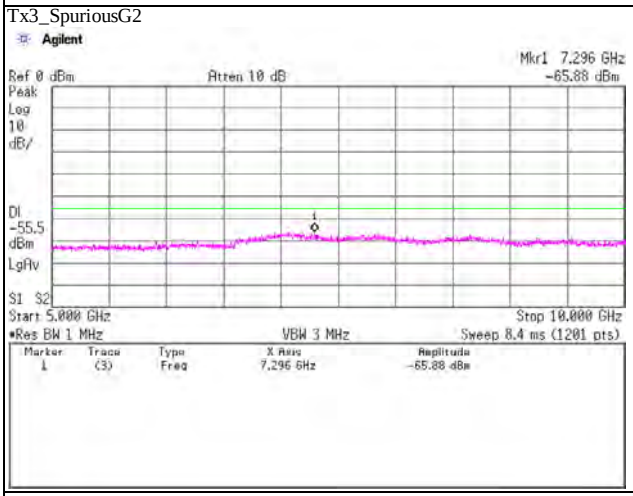
1GHz - 5GHz

Tx3_SpuriousG1



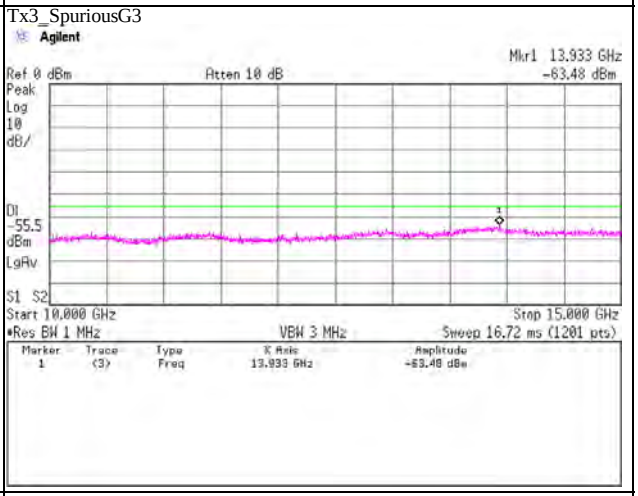
5GHz - 10GHz

Tx3_SpuriousG2



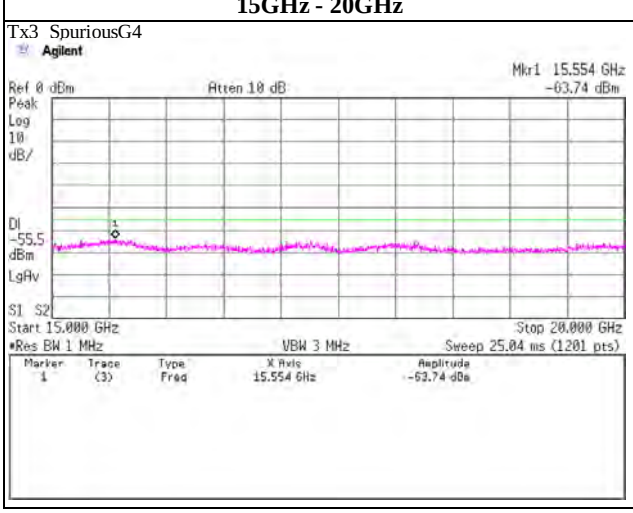
10GHz - 15GHz

Tx3_SpuriousG3



15GHz - 20GHz

Tx3 SpuriousG4



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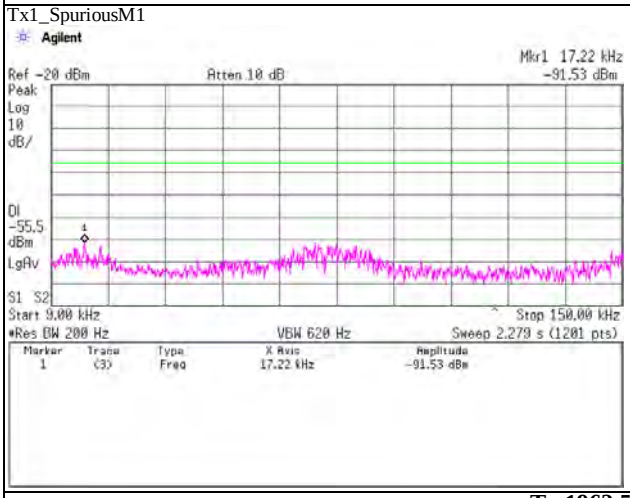
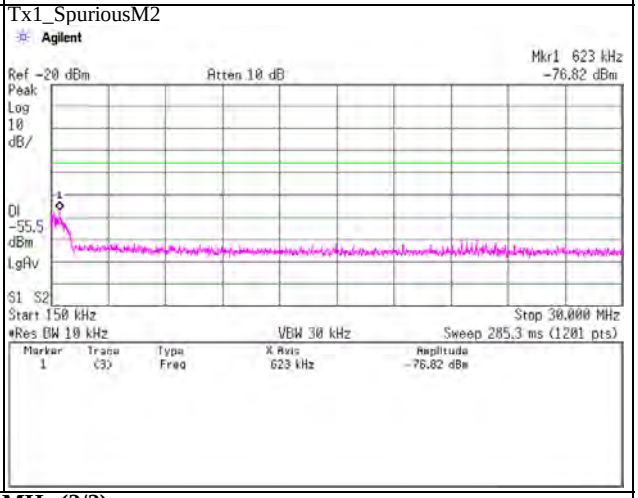
Facsimile : +81 463 50 6401

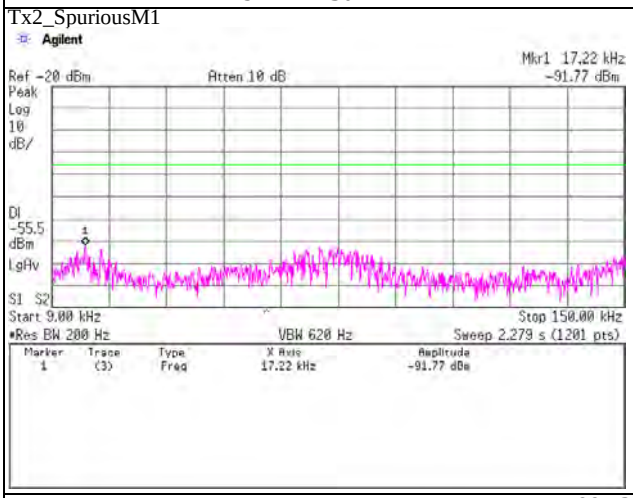
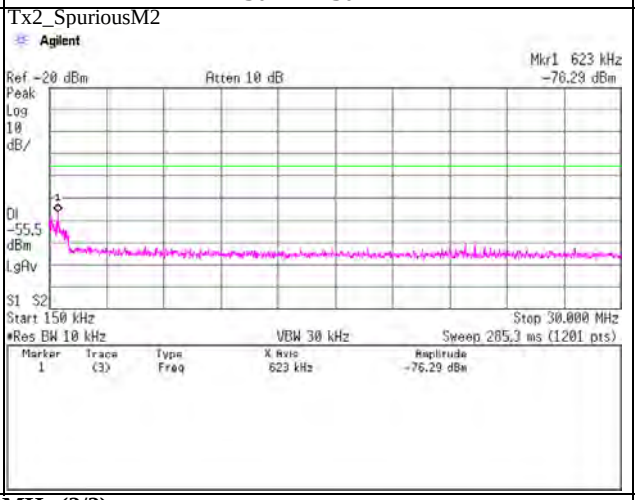
Spurious emission (Conducted) (Reference)

Tx, CDMA, worst antenna : TX1, worst mode : 1 Carrier

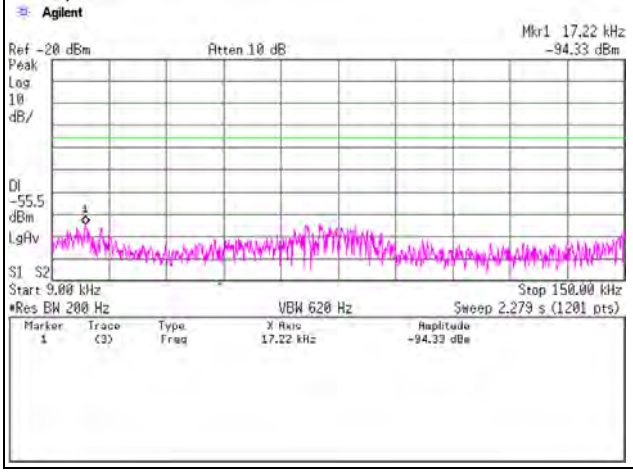
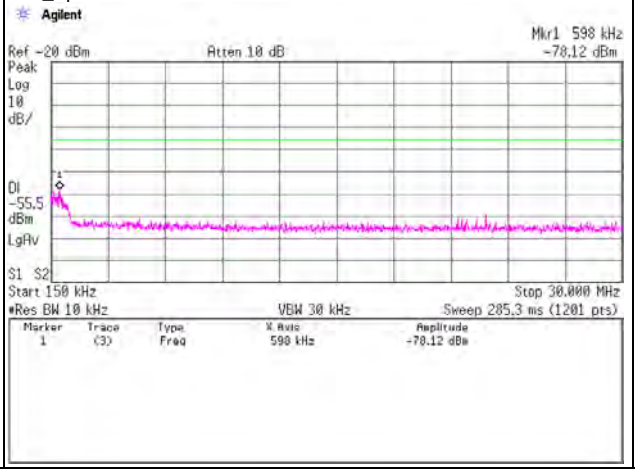
Tx 1930.7MHz (2/2)

9kHz - 150kHz	150kHz - 30MHz
Tx1_SpuriousM1	Tx1_SpuriousM2
	

Tx 1962.5MHz (2/2)

9kHz - 150kHz	150kHz - 30MHz
Tx2_SpuriousM1	Tx2_SpuriousM2
	

Tx 1994.3MHz (2/2)

9kHz - 150kHz	150kHz - 30MHz
Tx3_SpuriousM1	Tx3_SpuriousM2
	

Spurious Emission (Conducted)

Test place	UL Japan, Inc. Shonan EMC Lab.	No.6 Shielded Room
Date	June 23, 2011	
Temperature / Humidity	26deg.C , 61%RH	
Engineer	Kenichi Adachi	
Mode	Tx, LTE, PN9,	worst antenna :TX2

PK DETECT(S/A : RBW 1MHz ,VBW 3MHz, sweep time AUTO)
Limit Line

Limit [dBm]	Duty Factor [dB]	Atten. [dB]	Cable Loss [dB]	Limit Line [dBm]
-13.0	0.0	40.3	2.2	-55.5

Sample Calculation : Limit Line = Limit - Duty Factor - Atten. Loss - Cable Loss

* It detected no signal at antenna terminal except carrier.

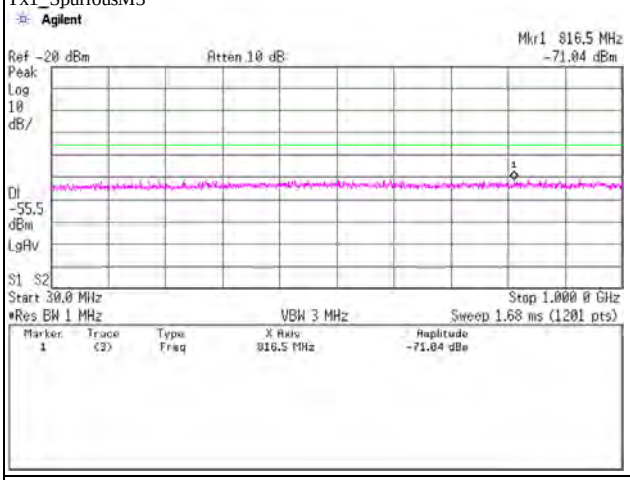
Spurious emission (Conducted)

Tx, LTE, worst antenna :TX2, worst antenna :1.4M, 1carrier

Tx 1930.7MHz (1/2)

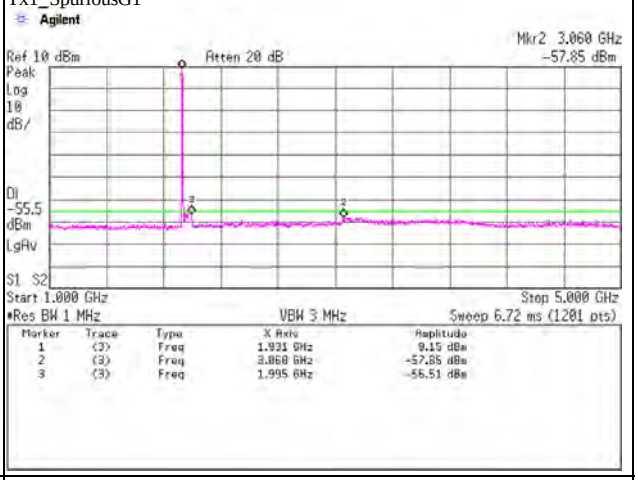
30MHz - 1GHz

Tx1_SpuriousM3



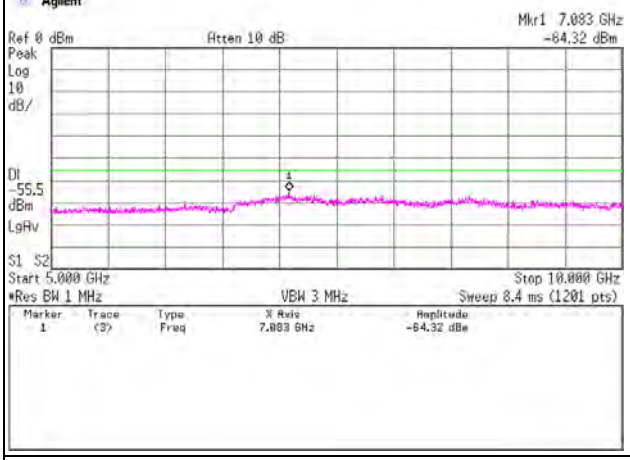
1GHz - 5GHz

Tx1_SpuriousG1



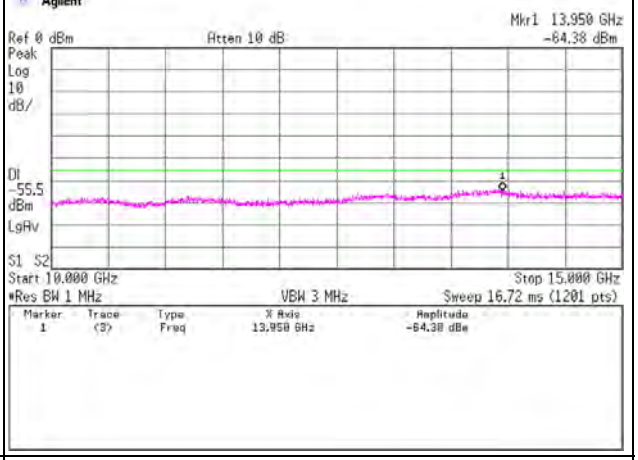
5GHz - 10GHz

Tx1_SpuriousG2



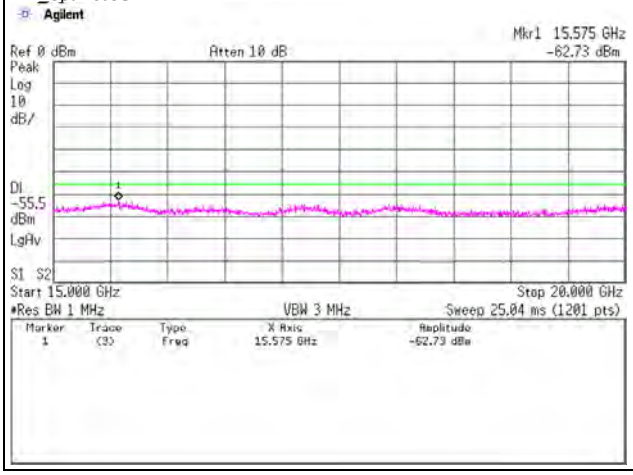
10GHz - 15GHz

Tx1_SpuriousG3



15GHz - 20GHz

Tx1_SpuriousG4



Test Report No.: 31JE0290-SH-01-A
Issued date : July 26, 2011

FCC ID : WV2611849144431A

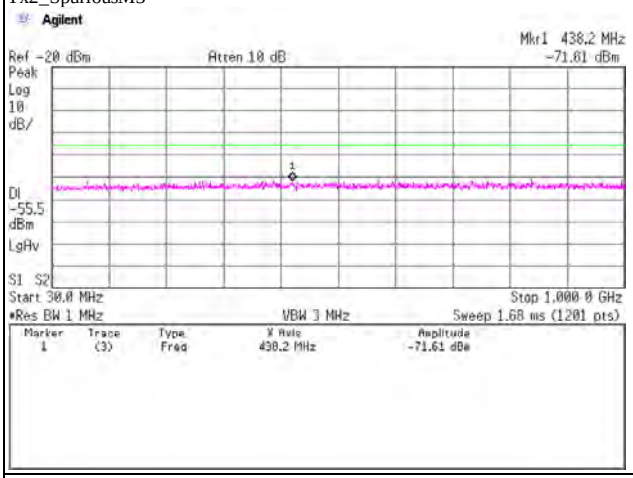
Spurious emission (Conducted)

Tx, LTE, worst antenna :TX2, worst antenna :1.4M, 1carrier

Tx 1962.5MHz (1/2)

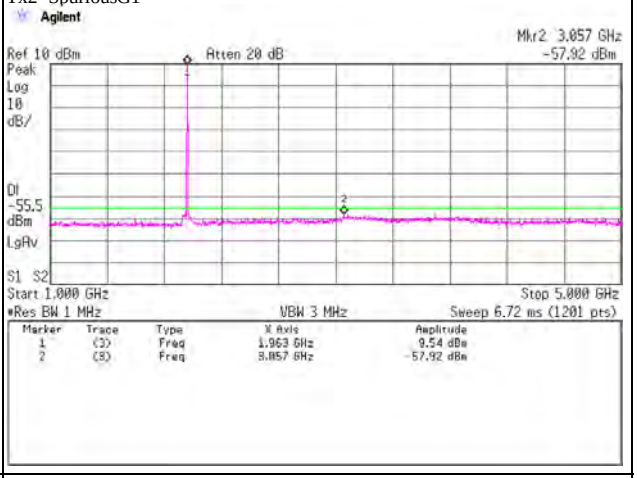
30MHz - 1GHz

Tx2_SpuriousM3



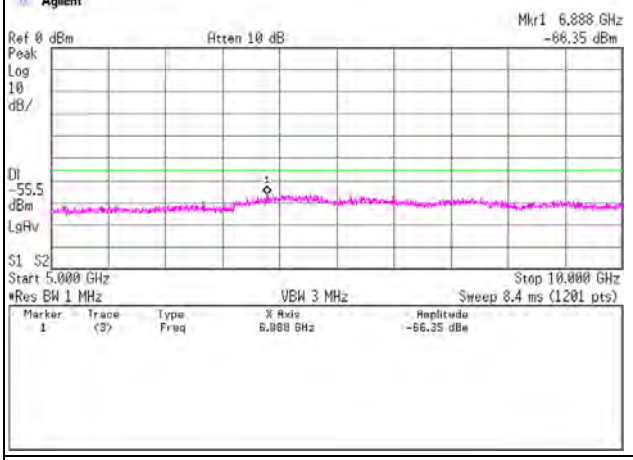
1GHz - 5GHz

Tx2 SpuriousG1



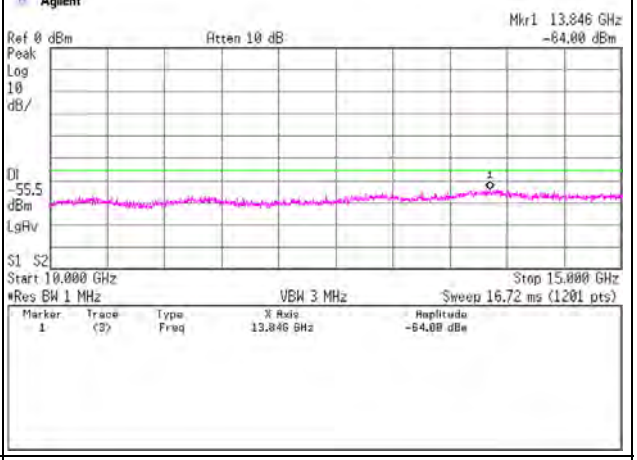
5GHz - 10GHz

Tx2_SpuriousG2



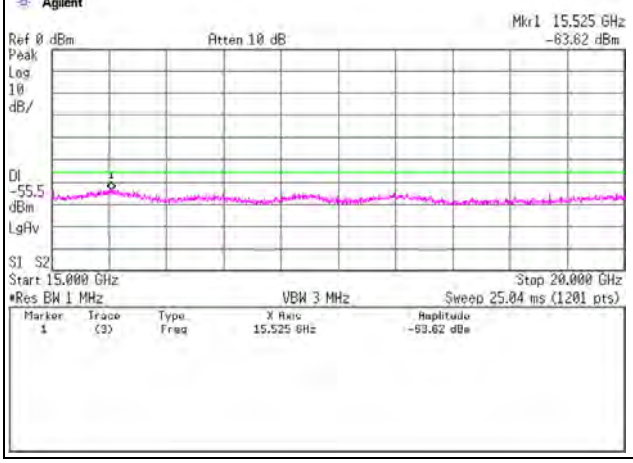
10GHz - 15GHz

Tx2_SpuriousG3



15GHz - 20GHz

Tx2_SpuriousG4



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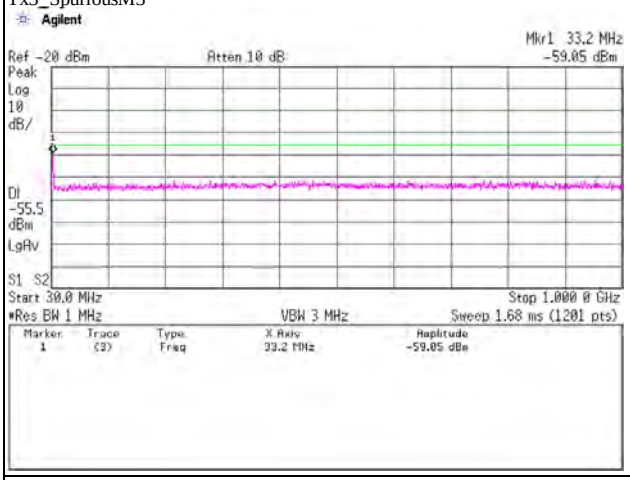
Spurious emission (Conducted)

Tx, LTE, worst antenna :TX2, worst antenna :1.4M, 1carrier

Tx 1994.3MHz (1/2)

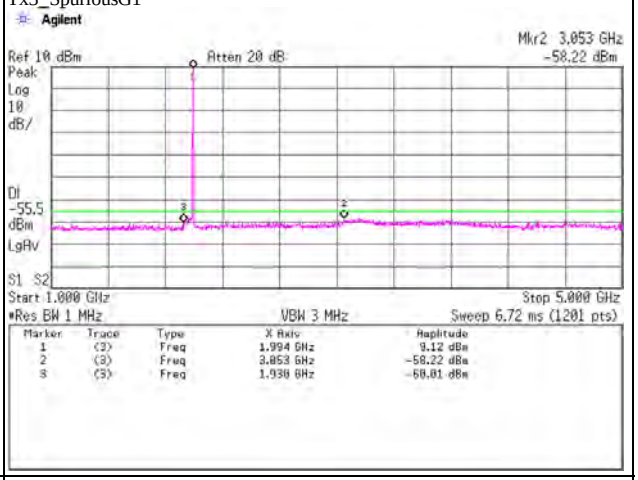
30MHz - 1GHz

Tx3_SpuriousM3



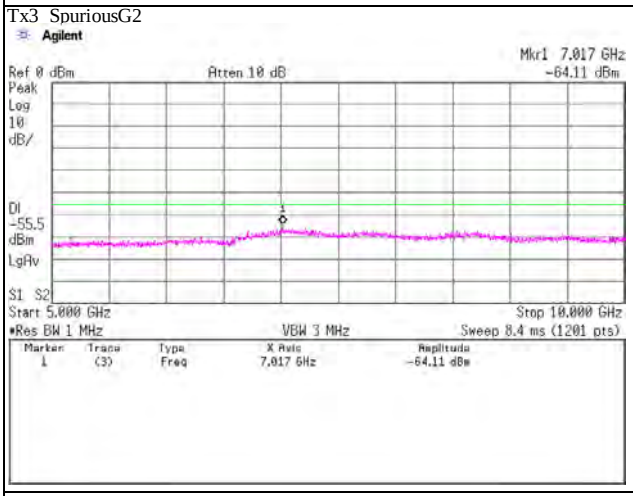
1GHz - 5GHz

Tx3_SpuriousG1



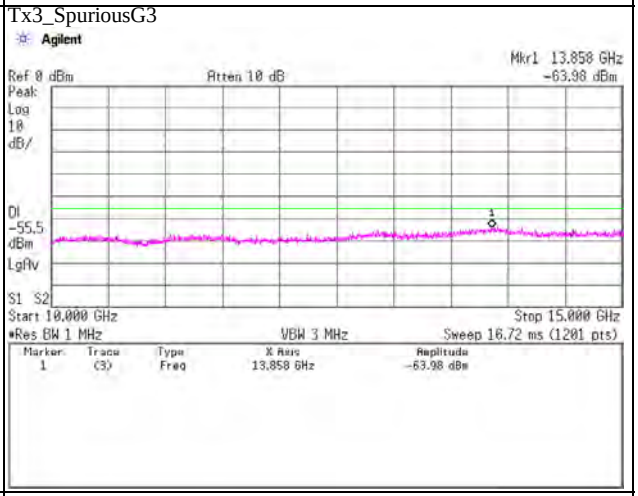
5GHz - 10GHz

Tx3_SpuriousG2



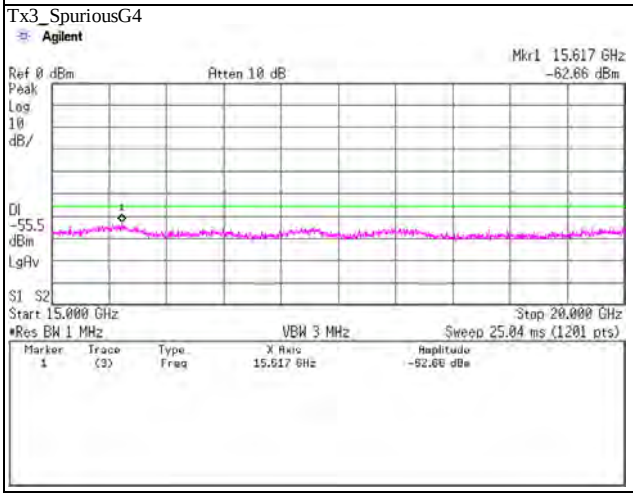
10GHz - 15GHz

Tx3_SpuriousG3



15GHz - 20GHz

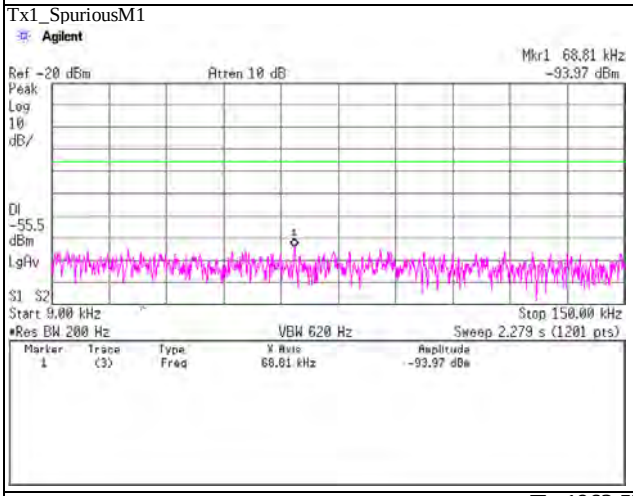
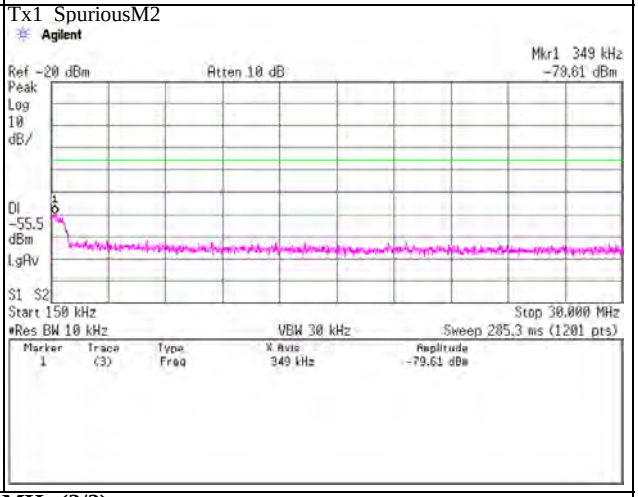
Tx3_SpuriousG4



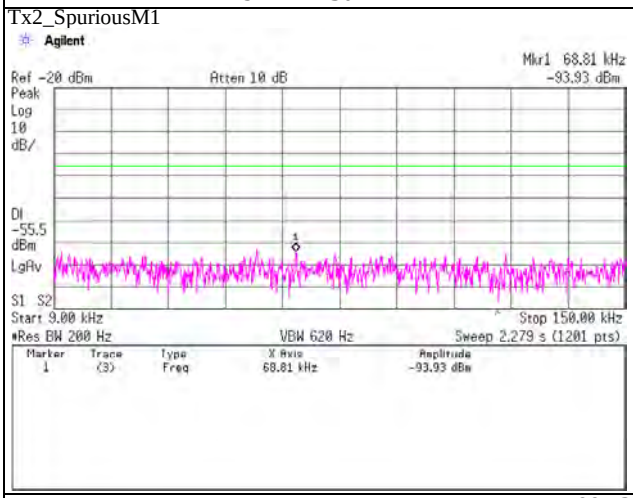
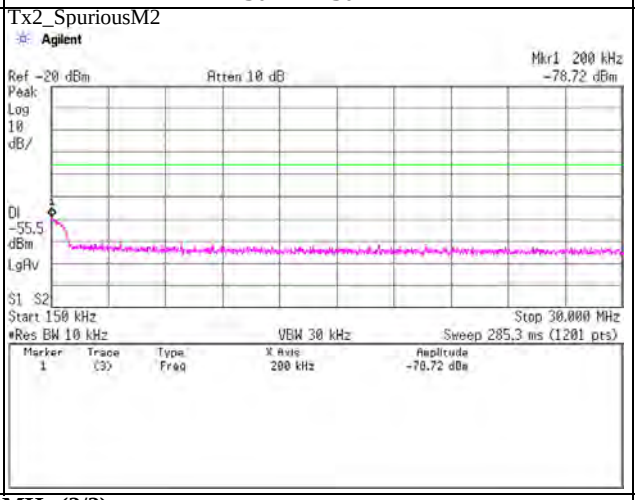
Spurious emission (Conducted)(Reference)

Tx, LTE, worst antenna :TX2, worst antenna :1.4M, 1carrier

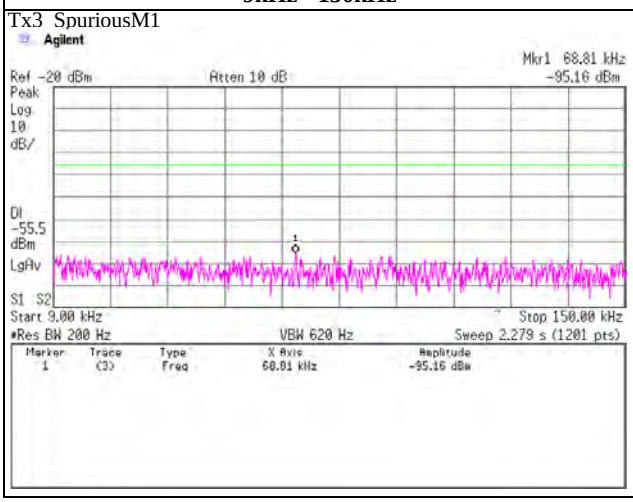
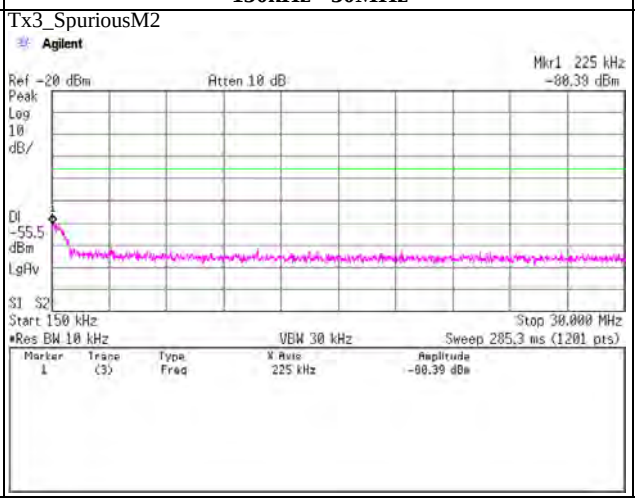
Tx 1930.7MHz (2/2)

9kHz - 150kHz	150kHz - 30MHz
Tx1_SpuriousM1	Tx1_SpuriousM2
	

Tx 1962.5MHz (2/2)

9kHz - 150kHz	150kHz - 30MHz
Tx2_SpuriousM1	Tx2_SpuriousM2
	

Tx 1994.3MHz (2/2)

9kHz - 150kHz	150kHz - 30MHz
Tx3_SpuriousM1	Tx3_SpuriousM2
	

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Facsimile : +81 463 50 6401

DATA OF RADIATED EMISSION (SUBSTITUTION) TEST

UL Japan,Inc. Shonan EMC Lab. No.2 Semi-Anechoic Chamber
Date : 2011/06/17

Company : Panasonic Mobile Communications Co.,Ltd
Kind of EUT : RRH4x40-PCSKS24829L11
Model No. : 849144431
Serial No. : LBALLU-M51121D159A/D159B

Mode : CDMA (Low ch)
Report No. : 31JE0290-SH-01-A
Power : DC-48V
Temp./Humi. : 25deg.C./56%

Remarks : -

Limit : FCC part24 spurious limit

Engineer : Akio Hayashi

<< EIRP DATA >>

No.	Freq.	Reading <PK>	SG Level	TX Ant.Gain	TX Loss	EIRP Result	EIRP Limit	Margin	Pola.	Height	Angle	TX Ant.Type	Comment
	[MHz]	[dBuV]	[dBm]	[dBi]	[dB]	[dBm]	[dBm]	[dB]		[cm]	[deg]		
1	41.885	31.1	-37.3	-22.4	1.3	-61.0	-13.0	48.0	Hori.	316	321	Dipol	
2	95.057	39.6	-58.1	-3.5	2.1	-63.7	-13.0	50.7	Hori.	200	248	Dipol	
3	197.903	37.5	-59.8	2.2	3.1	-60.7	-13.0	47.7	Hori.	150	307	Dipol	
4	400.081	38.2	-56.8	2.2	4.5	-59.1	-13.0	46.1	Hori.	100	230	Dipol	
5	649.924	34.9	-52.0	2.2	5.9	-55.7	-13.0	42.7	Hori.	100	239	Dipol	
6	983.284	31.4	-51.0	2.2	7.4	-56.2	-13.0	43.2	Hori.	150	124	Dipol	
7	38.612	28.0	-48.5	-24.2	1.3	-74.0	-13.0	61.0	Vert.	100	242	Dipol	
8	69.971	45.7	-47.3	-12.2	1.7	-61.2	-13.0	48.2	Vert.	100	27	Dipol	
9	95.849	42.0	-55.2	-3.1	2.1	-60.4	-13.0	47.4	Vert.	100	278	Dipol	
10	198.098	35.2	-56.7	2.2	3.1	-57.6	-13.0	44.6	Vert.	100	2	Dipol	
11	491.817	40.1	-51.3	2.2	5.0	-54.1	-13.0	41.1	Vert.	100	239	Dipol	
12	650.028	39.1	-49.6	2.2	5.9	-53.3	-13.0	40.3	Vert.	115	228	Dipol	
13	737.536	37.1	-48.7	2.2	6.3	-52.8	-13.0	39.8	Vert.	157	280	Dipol	
14	983.277	35.2	-44.6	2.2	7.4	-49.8	-13.0	36.8	Vert.	121	17	Dipol	

Calculation: Result [dBm] = SG level [dB] +Tx Ant Gain [dBi] -Tx Loss (Cable+ATT) [dB]
Tx Ant: 120MHz turned Dipole (30M-120M), Dipole (120M-1G) / Rx-Ant: Biconical (30M-300M), Logperiodic (300M-1G)

DATA OF RADIATED EMISSION (SUBSTITUTION) TEST

UL Japan, Inc. Shonan EMC Lab. No.3 Semi-Anechoic Chamber
Date : 2011/06/18

Company : Panasonic Mobile Communications Co.,Ltd
Kind of EUT : RRH4x40-PCSKS24829L11
Model No. : 849144431
Serial No. : LBALLU-M51121D159A/D159B

Mode : CDMA (Low ch)
Report No. : 31JE0290-SH-01-A
Power : DC-48V
Temp./Humi. : 25deg.C./56%

Remarks : -

Limit : FCC part24 spurious limit

Engineer : Hikaru Shirasawa

<< EIRP DATA >>

No.	Freq.	Reading <PK>	SG Level	TX Ant.Gain	TX Loss	EIRP Result	EIRP Limit	Margin	Pola.	Height	Angle	TX Ant.Type	Comment
	[MHz]	[dBuV]	[dBm]	[dBi]	[dB]	[dBm]	[dBm]	[dB]		[cm]	[deg]		
1	3861.400	66.9	-41.5	12.5	7.6	-36.6	-13.0	23.6	Hori.	124	313	Horn	
2	5792.100	66.4	-33.4	13.1	9.4	-29.7	-13.0	16.7	Hori.	172	153	Horn	
3	3440.651	64.9	-45.5	12.5	7.1	-40.1	-13.0	27.1	Vert.	132	71	Horn	
4	3686.425	62.2	-47.7	12.6	7.4	-42.5	-13.0	29.5	Vert.	125	110	Horn	
5	3861.400	72.4	-35.7	12.5	7.6	-30.8	-13.0	17.8	Vert.	113	89	Horn	2nd
6	3932.175	71.7	-36.5	12.5	7.7	-31.7	-13.0	18.7	Vert.	113	101	Horn	
7	5792.100	75.2	-26.5	13.1	9.4	-22.8	-13.0	9.8	Vert.	113	91	Horn	3rd
8	7722.800	65.9	-30.5	11.0	10.9	-30.4	-13.0	17.4	Vert.	131	88	Horn	4th
9	9653.500	60.9	-32.7	11.8	12.2	-33.1	-13.0	20.1	Vert.	139	120	Horn	5th

Calculation:Result [dBm] =SG level [dB] +Tx Ant Gain [dBi] -Tx Loss (Cable+ATT) [dB]
Tx Antenna: Horn (1G-40G) / Rx-Antenna: Horn (1G-40G)

DATA OF RADIATED EMISSION (SUBSTITUTION) TEST

UL Japan, Inc. Shonan EMC Lab. No.3 Semi-Anechoic Chamber
Date : 2011/06/18

Company : Panasonic Mobile Communications Co.,Ltd
Kind of EUT : RRH4x40-PCSKS24829L11
Model No. : 849144431
Serial No. : LBALLU-M51121D159A/D159B

Mode : CDMA (Low ch)
Report No. : 31JE0290-SH-01-A
Power : DC-48V
Temp./Humi. : 25deg.C./56%

Remarks : -

Limit : FCC part24 spurious limit

Engineer : Hikaru Shirasawa

<< EIRP DATA >>

No.	Freq.	Reading <PK>	SG Level	TX Ant.Gain	TX Loss	EIRP		Margin	Pola.	Height	Angle	TX Ant.Type	Comment
						Result	Limit						
	[MHz]	[dBuV]	[dBm]	[dBi]	[dB]	[dBm]	[dBm]	[dB]		[cm]	[deg]		
1	13514.900	66.7	-27.8	13.0	14.8	-29.6	-13.0	16.6	Vert.	100	84	Horn	7th
2	15445.600	65.7	-21.3	14.8	16.0	-22.5	-13.0	9.5	Vert.	100	100	Horn	8th

Calculation:Result [dBm] =SG level [dB] +Tx Ant Gain [dBi] -Tx Loss (Cable+ATT) [dB]
Tx Antenna: Horn (1G-40G) / Rx-Antenna: Horn (1G-40G)

DATA OF RADIATED EMISSION (SUBSTITUTION) TEST

UL Japan,Inc. Shonan EMC Lab. No.2 Semi-Anechoic Chamber
Date : 2011/06/17

Company : Panasonic Mobile Communications Co.,Ltd
Kind of EUT : RRH4x40-PCSKS24829L11
Model No. : 849144431
Serial No. : LBALLU-M51121D159A/D159B

Mode : CDMA (Mid ch)
Report No. : 31JE0290-SH-01-A
Power : DC-48V
Temp./Humi. : 24deg.C./52%

Remarks : -

Limit : FCC part24 spurious limit

Engineer : Akio Hayashi

<< EIRP DATA >>

No.	Freq.	Reading <PK>	SG Level	TX Ant.Gain	TX Loss	EIRP Result	EIRP Limit	Margin	Pola.	Height	Angle	TX Ant.Type	Comment
	[MHz]	[dBuV]	[dBm]	[dBi]	[dB]	[dBm]	[dBm]	[dB]		[cm]	[deg]		
1	41.871	32.0	-36.4	-22.4	1.3	-60.1	-13.0	47.1	Hori.	332	123	Dipol	
2	95.880	40.0	-57.6	-3.1	2.1	-62.8	-13.0	49.8	Hori.	200	251	Dipol	
3	197.575	37.3	-59.2	2.2	3.1	-60.1	-13.0	47.1	Hori.	150	305	Dipol	
4	400.060	38.7	-56.3	2.2	4.5	-58.6	-13.0	45.6	Hori.	100	233	Dipol	
5	649.730	34.5	-52.4	2.2	5.9	-56.1	-13.0	43.1	Hori.	150	276	Dipol	
6	983.254	31.7	-50.7	2.2	7.4	-55.9	-13.0	42.9	Hori.	141	139	Dipol	
7	37.876	29.0	-45.2	-24.6	1.3	-71.1	-13.0	58.1	Vert.	100	1	Dipol	
8	70.200	45.0	-48.0	-12.1	1.7	-61.8	-13.0	48.8	Vert.	100	36	Dipol	
9	89.066	42.2	-54.5	-6.2	2.0	-62.7	-13.0	49.7	Vert.	100	119	Dipol	
10	197.575	35.1	-56.8	2.2	3.1	-57.7	-13.0	44.7	Vert.	185	1	Dipol	
11	491.574	39.8	-51.6	2.2	5.0	-54.4	-13.0	41.4	Vert.	126	229	Dipol	
12	649.730	38.6	-50.1	2.2	5.9	-53.8	-13.0	40.8	Vert.	100	238	Dipol	
13	737.302	36.8	-49.0	2.2	6.3	-53.1	-13.0	40.1	Vert.	156	279	Dipol	
14	983.254	34.8	-45.0	2.2	7.4	-50.2	-13.0	37.2	Vert.	120	12	Dipol	

Calculation: Result [dBm] = SG level [dB] +Tx Ant Gain [dBi] -Tx Loss (Cable+ATT) [dB]
Tx Ant: 120MHz turned Dipole (30M-120M), Dipole (120M-1G) / Rx-Ant: Biconical (30M-300M), Logperiodic (300M-1G)

DATA OF RADIATED EMISSION (SUBSTITUTION) TEST

UL Japan, Inc. Shonan EMC Lab. No.3 Semi-Anechoic Chamber
Date : 2011/06/18

Company : Panasonic Mobile Communications Co.,Ltd
Kind of EUT : RRH4x40-PCSKS24829L11
Model No. : 849144431
Serial No. : LBALLU-M51121D159A/D159B

Mode : CDMA (Mid ch)
Report No. : 31JE0290-SH-01-A
Power : DC-48V
Temp./Humi. : 25deg.C./56%

Remarks : -

Limit : FCC part24 spurious limit

Engineer : Hikaru Shirasawa

<< EIRP DATA >>

No.	Freq.	Reading <PK>	SG Level	TX Ant.Gain	TX Loss	EIRP Result	EIRP Limit	Margin	Pola.	Height	Angle	TX Ant.Type	Comment
	[MHz]	[dBuV]	[dBm]	[dBi]	[dB]	[dBm]	[dBm]	[dB]		[cm]	[deg]		
1	5887.500	68.5	-32.0	13.1	9.5	-28.4	-13.0	15.4	Hori.	113	153	Horn	
2	3440.650	65.1	-45.2	12.5	7.1	-39.8	-13.0	26.8	Vert.	116	71	Horn	
3	3686.412	65.7	-43.5	12.6	7.4	-38.3	-13.0	25.3	Vert.	114	152	Horn	
4	3925.000	61.8	-43.2	12.5	7.7	-38.4	-13.0	25.4	Vert.	120	109	Horn	2nd
5	3932.187	72.0	-36.1	12.5	7.7	-31.3	-13.0	18.3	Vert.	115	104	Horn	
6	5887.500	77.0	-23.7	13.1	9.5	-20.1	-13.0	7.1	Vert.	117	136	Horn	3rd
7	7850.000	56.9	-42.6	11.1	11.0	-42.5	-13.0	29.5	Vert.	128	81	Horn	4th
8	9812.500	55.1	-39.2	11.7	12.3	-39.8	-13.0	26.8	Vert.	128	81	Horn	5th
9	11775.000	56.6	-34.2	12.2	13.5	-35.5	-13.0	22.5	Vert.	123	140	Horn	6th

Calculation:Result [dBm] =SG level [dB] +Tx Ant Gain [dBi] -Tx Loss (Cable+ATT) [dB]
Tx Antenna: Horn (1G-40G) / Rx-Antenna: Horn (1G-40G)

DATA OF RADIATED EMISSION (SUBSTITUTION) TEST

UL Japan, Inc. Shonan EMC Lab. No.3 Semi-Anechoic Chamber
Date : 2011/06/18

Company : Panasonic Mobile Communications Co.,Ltd
Kind of EUT : RRH4x40-PCSKS24829L11
Model No. : 849144431
Serial No. : LBALLU-M51121D159A/D159B

Mode : CDMA (Mid ch)
Report No. : 31JE0290-SH-01-A
Power : DC-48V
Temp./Humi. : 25deg.C./56%

Remarks : -

Limit : FCC part24 spurious limit

Engineer : Hikaru Shirasawa

<< EIRP DATA >>

No.	Freq.	Reading <PK>	SG Level	TX Ant.Gain	TX Loss	EIRP		Margin	Pola.	Height	Angle	TX Ant.Type	Comment
						Result	Limit						
	[MHz]	[dBuV]	[dBm]	[dBi]	[dB]	[dBm]	[dBm]	[dB]		[cm]	[deg]		
1	17662.500	64.7	-23.8	9.1	17.2	-31.9	-13.0	18.9	Hori.	115	109	Horn	9th
2	13737.500	58.2	-37.1	12.6	14.9	-39.4	-13.0	26.4	Vert.	105	105	Horn	7th
3	15700.000	70.9	-14.7	16.0	16.1	-14.8	-13.0	1.8	Vert.	100	81	Horn	8th

Calculation:Result [dBm] =SG level [dB] +Tx Ant Gain [dBi] -Tx Loss (Cable+ATT) [dB]
Tx Antenna: Horn (1G-40G) / Rx-Antenna: Horn (1G-40G)

DATA OF RADIATED EMISSION (SUBSTITUTION) TEST

UL Japan, Inc. Shonan EMC Lab. No.3 Semi-Anechoic Chamber
Date : 2011/06/19

Company : Panasonic Mobile Communications Co.,Ltd
Kind of EUT : RRH4x40-PCSKS24829L11
Model No. : 849144431
Serial No. : LBALLU-M51121D159A/D159B

Mode : CDMA (Mid ch)
Report No. : 31JE0290-SH-01-A
Power : DC-48V
Temp./Humi. : 25deg.C./65%

Remarks : -

Limit : FCC part24 spurious limit

Engineer : Hikaru Shirasawa

<< EIRP DATA >>

No.	Freq.	Reading <PK>	SG Level	TX Ant.Gain	TX Loss	EIRP		Margin	Pola.	Height	Angle	TX Ant.Type	Comment
						Result	Limit						
	[MHz]	[dBuV]	[dBm]	[dBi]	[dB]	[dBm]	[dBm]	[dB]		[cm]	[deg]		
1	19625.000	61.5	-41.5	10.3	18.4	-49.6	-13.0	36.6	Hori.	100	75	Horn	
2	19625.000	61.6	-39.1	10.3	18.4	-47.2	-13.0	34.2	Vert.	100	93	Horn	

Calculation:Result [dBm] =SG level [dB] +Tx Ant Gain [dBi] -Tx Loss (Cable+ATT) [dB]
Tx Antenna: Horn (1G-40G) / Rx-Antenna: Horn (1G-40G)

DATA OF RADIATED EMISSION (SUBSTITUTION) TEST

UL Japan,Inc. Shonan EMC Lab. No.2 Semi-Anechoic Chamber
Date : 2011/06/18

Company : Panasonic Mobile Communications Co.,Ltd
Kind of EUT : RRH4x40-PCSKS24829L11
Model No. : 849144431
Serial No. : LBALLU-M51121D159A/D159B

Mode : CDMA (High ch)
Report No. : 31JE0290-SH-01-A
Power : DC-48V
Temp./Humi. : 24deg.C./52%

Remarks : -

Limit : FCC part24 spurious limit

Engineer : Akio Hayashi

<< EIRP DATA >>

No.	Freq.	Reading <PK>	SG Level	TX Ant.Gain	TX Loss	EIRP Result	EIRP Limit	Margin	Pola.	Height	Angle	TX Ant.Type	Comment
	[MHz]	[dBuV]	[dBm]	[dBi]	[dB]	[dBm]	[dBm]	[dB]		[cm]	[deg]		
1	41.855	32.0	-36.4	-22.4	1.3	-60.1	-13.0	47.1	Hori.	300	301	Dipol	
2	95.825	39.0	-58.6	-3.1	2.1	-63.8	-13.0	50.8	Hori.	305	69	Dipol	
3	198.023	36.9	-59.5	2.2	3.1	-60.4	-13.0	47.4	Hori.	208	287	Dipol	
4	400.061	38.6	-56.4	2.2	4.5	-58.7	-13.0	45.7	Hori.	100	236	Dipol	
5	649.996	34.4	-52.5	2.2	5.9	-56.2	-13.0	43.2	Hori.	152	325	Dipol	
6	983.250	31.7	-50.7	2.2	7.4	-55.9	-13.0	42.9	Hori.	158	108	Dipol	
7	38.052	28.9	-45.3	-24.5	1.3	-71.1	-13.0	58.1	Vert.	100	218	Dipol	
8	70.002	45.4	-47.6	-12.2	1.7	-61.5	-13.0	48.5	Vert.	100	24	Dipol	
9	89.178	41.6	-55.1	-6.2	2.0	-63.3	-13.0	50.3	Vert.	100	180	Dipol	
10	198.023	36.0	-55.9	2.2	3.1	-56.8	-13.0	43.8	Vert.	100	44	Dipol	
11	491.754	35.6	-55.8	2.2	5.0	-58.6	-13.0	45.6	Vert.	100	314	Dipol	
12	649.937	38.1	-50.6	2.2	5.9	-54.3	-13.0	41.3	Vert.	122	212	Dipol	
13	737.513	33.9	-51.9	2.2	6.3	-56.0	-13.0	43.0	Vert.	104	217	Dipol	
14	983.250	34.4	-45.4	2.2	7.4	-50.6	-13.0	37.6	Vert.	189	82	Dipol	

Calculation: Result [dBm] = SG level [dB] +Tx Ant Gain [dBi] -Tx Loss (Cable+ATT) [dB]
Tx Ant: 120MHz turned Dipole (30M-120M), Dipole (120M-1G) / Rx-Ant: Biconical (30M-300M), Logperiodic (300M-1G)

DATA OF RADIATED EMISSION (SUBSTITUTION) TEST

UL Japan, Inc. Shonan EMC Lab. No.3 Semi-Anechoic Chamber
Date : 2011/06/18

Company : Panasonic Mobile Communications Co.,Ltd
Kind of EUT : RRH4x40-PCSKS24829L11
Model No. : 849144431
Serial No. : LBALLU-M51121D159A/D159B

Mode : CDMA (High ch)
Report No. : 31JE0290-SH-01-A
Power : DC-48V
Temp./Humi. : 25deg.C./56%

Remarks : -

Limit : FCC part24 spurious limit

Engineer : Hikaru Shirasawa

<< EIRP DATA >>

No.	Freq.	Reading <PK>	SG Level	TX Ant.Gain	TX Loss	EIRP		Margin	Pola.	Height	Angle	TX Ant.Type	Comment
						Result	Limit						
	[MHz]	[dBuV]	[dBm]	[dBi]	[dB]	[dBm]	[dBm]	[dB]		[cm]	[deg]		
1	5982.900	69.0	-31.7	13.1	9.5	-28.1	-13.0	15.1	Hori.	107	128	Horn	
2	11965.800	59.1	-30.4	12.7	13.7	-31.4	-13.0	18.4	Hori.	114	131	Horn	
3	1720.300	55.8	-43.4	10.1	4.9	-38.2	-13.0	25.2	Vert.	113	297	Horn	
4	3440.663	65.6	-44.5	12.5	7.1	-39.1	-13.0	26.1	Vert.	115	72	Horn	
5	3686.425	65.8	-43.4	12.6	7.4	-38.2	-13.0	25.2	Vert.	113	150	Horn	
6	3932.178	72.0	-36.1	12.5	7.7	-31.3	-13.0	18.3	Vert.	114	104	Horn	
7	3988.600	63.1	-46.5	12.5	7.7	-41.7	-13.0	28.7	Vert.	116	117	Horn	2nd
8	5982.900	74.7	-26.4	13.1	9.5	-22.8	-13.0	9.8	Vert.	116	136	Horn	3rd
9	7977.200	67.9	-27.9	11.1	11.1	-27.9	-13.0	14.9	Vert.	125	83	Horn	4th
10	9971.500	53.8	-41.5	11.6	12.4	-42.3	-13.0	29.3	Vert.	119	105	Horn	5th
11	11965.800	60.5	-30.5	12.7	13.7	-31.5	-13.0	18.5	Vert.	108	72	Horn	6th

Calculation:Result [dBm] =SG level [dB] +Tx Ant Gain [dBi] -Tx Loss (Cable+ATT) [dB]
Tx Antenna: Horn (1G-40G) / Rx-Antenna: Horn (1G-40G)

DATA OF RADIATED EMISSION (SUBSTITUTION) TEST

UL Japan, Inc. Shonan EMC Lab. No.3 Semi-Anechoic Chamber
Date : 2011/06/18

Company : Panasonic Mobile Communications Co.,Ltd
Kind of EUT : RRH4x40-PCSKS24829L11
Model No. : 849144431
Serial No. : LBALLU-M51121D159A/D159B

Mode : CDMA (High ch)
Report No. : 31JE0290-SH-01-A
Power : DC-48V
Temp./Humi. : 25deg.C./56%

Remarks : -

Limit : FCC part24 spurious limit

Engineer : Hikaru Shirasawa

<< EIRP DATA >>

No.	Freq.	Reading <PK>	SG Level	TX Ant.Gain	TX Loss	EIRP		Margin	Pola.	Height	Angle	TX Ant.Type	Comment
						Result	Limit						
	[MHz]	[dBuV]	[dBm]	[dBi]	[dB]	[dBm]	[dBm]	[dB]		[cm]	[deg]		
1	13960.100	58.7	-34.6	12.2	15.0	-37.4	-13.0	24.4	Vert.	102	105	Horn	7th
2	15954.400	60.1	-25.0	17.2	16.3	-24.1	-13.0	11.1	Vert.	100	97	Horn	8th

Calculation:Result [dBm] =SG level [dB] +Tx Ant Gain [dBi] -Tx Loss (Cable+ATT) [dB]
Tx Antenna: Horn (1G-40G) / Rx-Antenna: Horn (1G-40G)

DATA OF RADIATED EMISSION (SUBSTITUTION) TEST

UL Japan, Inc. Shonan EMC Lab. No.3 Semi-Anechoic Chamber
Date : 2011/06/18

Company : Panasonic Mobile Communications Co.,Ltd
Kind of EUT : RRH4x40-PCSKS24829L11
Model No. : 849144431
Serial No. : LBALLU-M51121D159A/D159B

Mode : LTE (Low ch)
Report No. : 31JE0290-SH-01-A
Power : DC-48V
Temp./Humi. : 24deg.C./52%

Remarks : -

Limit : FCC part24 spurious limit

Engineer : Akio Hayashi

<< EIRP DATA >>

No.	Freq.	Reading <PK>	SG Level	TX Ant.Gain	TX Loss	EIRP		Margin	Pola.	Height	Angle	TX Ant.Type	Comment
						Result	Limit						
	[MHz]	[dBuV]	[dBm]	[dBi]	[dB]	[dBm]	[dBm]	[dB]		[cm]	[deg]		
1	41.875	31.4	-37.0	-22.4	1.3	-60.7	-13.0	47.7	Hori.	300	329	Dipol	
2	95.111	39.9	-57.8	-3.5	2.1	-63.4	-13.0	50.4	Hori.	200	271	Dipol	
3	197.984	37.5	-59.0	2.2	3.1	-59.9	-13.0	46.9	Hori.	200	295	Dipol	
4	399.977	38.3	-56.7	2.2	4.5	-59.0	-13.0	46.0	Hori.	100	225	Dipol	
5	649.991	33.3	-53.6	2.2	5.9	-57.3	-13.0	44.3	Hori.	151	1	Dipol	
6	983.292	33.7	-48.7	2.2	7.4	-53.9	-13.0	40.9	Hori.	100	356	Dipol	
7	37.951	28.9	-45.3	-24.6	1.3	-71.2	-13.0	58.2	Vert.	100	243	Dipol	
8	70.052	38.6	-50.0	-12.2	1.7	-63.9	-13.0	50.9	Vert.	100	2	Dipol	
9	88.868	41.4	-55.3	-6.3	2.0	-63.6	-13.0	50.6	Vert.	100	130	Dipol	
10	197.984	34.6	-57.3	2.2	3.1	-58.2	-13.0	45.2	Vert.	100	36	Dipol	
11	491.781	37.6	-53.8	2.2	5.0	-56.6	-13.0	43.6	Vert.	160	271	Dipol	
12	650.182	37.2	-51.3	2.2	5.9	-55.0	-13.0	42.0	Vert.	100	48	Dipol	
13	737.549	34.3	-51.5	2.2	6.3	-55.6	-13.0	42.6	Vert.	100	61	Dipol	
14	983.292	36.1	-43.7	2.2	7.4	-48.9	-13.0	35.9	Vert.	138	130	Dipol	

Calculation: Result [dBm] = SG level [dB] +Tx Ant Gain [dBi] -Tx Loss (Cable+ATT) [dB] -2.15 [dB]
Tx Ant: 120MHz turned Dipole (30M-120M), Dipole (120M-1G) / Rx-Ant: Biconical (30M-300M), Logperiodic (300M-1G)

DATA OF RADIATED EMISSION (SUBSTITUTION) TEST

UL Japan, Inc. Shonan EMC Lab. No.3 Semi-Anechoic Chamber
Date : 2011/06/18

Company : Panasonic Mobile Communications Co.,Ltd
Kind of EUT : RRH4x40-PCSKS24829L11
Model No. : 849144431
Serial No. : LBALLU-M51121D159A/D159B

Mode : LTE (Low ch)
Report No. : 31JE0290-SH-01-A
Power : DC-48V
Temp./Humi. : 25deg.C./56%

Remarks : -

Limit : FCC part24 spurious limit

Engineer : Hikaru Shirasawa

<< EIRP DATA >>

No.	Freq.	Reading <PK>	SG Level	TX Ant.Gain	TX Loss	EIRP Result	EIRP Limit	Margin	Pola.	Height	Angle	TX Ant.Type	Comment
	[MHz]	[dBuV]	[dBm]	[dBi]	[dB]	[dBm]	[dBm]	[dB]		[cm]	[deg]		
1	3861.400	71.3	-36.2	12.5	7.6	-31.3	-13.0	18.3	Hori.	100	125	Horn	
2	5792.100	71.2	-28.8	13.1	9.4	-25.1	-13.0	12.1	Hori.	100	129	Horn	
3	7722.800	63.4	-32.7	11.0	10.9	-32.6	-13.0	19.6	Hori.	145	85	Horn	
4	3686.400	66.3	-42.8	12.6	7.4	-37.6	-13.0	24.6	Vert.	100	154	Horn	
5	3861.400	72.8	-35.4	12.5	7.6	-30.5	-13.0	17.5	Vert.	111	93	Horn	2nd
6	3932.171	69.9	-38.6	12.5	7.7	-33.8	-13.0	20.8	Vert.	119	148	Horn	
7	5792.100	79.6	-21.7	13.1	9.4	-18.0	-13.0	5.0	Vert.	100	114	Horn	3rd
8	7722.800	64.0	-32.6	11.0	10.9	-32.5	-13.0	19.5	Vert.	122	63	Horn	4th
9	9653.500	59.1	-34.9	11.8	12.2	-35.3	-13.0	22.3	Vert.	122	166	Horn	5th
10	11584.200	54.8	-34.6	11.7	13.4	-36.3	-13.0	23.3	Vert.	122	123	Horn	6th

Calculation:Result [dBm] =SG level [dB] +Tx Ant Gain [dBi] -Tx Loss (Cable+ATT) [dB]
Tx Antenna: Horn (1G-40G) / Rx-Antenna: Horn (1G-40G)

DATA OF RADIATED EMISSION (SUBSTITUTION) TEST

UL Japan, Inc. Shonan EMC Lab. No.3 Semi-Anechoic Chamber
Date : 2011/06/18

Company : Panasonic Mobile Communications Co.,Ltd
Kind of EUT : RRH4x40-PCSKS24829L11
Model No. : 849144431
Serial No. : LBALLU-M51121D159A/D159B

Mode : LTE (Low ch)
Report No. : 31JE0290-SH-01-A
Power : DC-48V
Temp./Humi. : 25deg.C./56%

Remarks : -

Limit : FCC part24 spurious limit

Engineer : Hikaru Shirasawa

<< EIRP DATA >>

No.	Freq.	Reading <PK>	SG Level	TX Ant.Gain	TX Loss	EIRP		Margin	Pola.	Height	Angle	TX Ant.Type	Comment
						Result	Limit						
	[MHz]	[dBuV]	[dBm]	[dBi]	[dB]	[dBm]	[dBm]	[dB]		[cm]	[deg]		
1	17376.300	53.8	-36.5	11.1	17.0	-42.4	-13.0	29.4	Hori.	100	107	Horn	9th
2	13514.900	69.3	-25.0	13.0	14.8	-26.8	-13.0	13.8	Vert.	100	131	Horn	7th
3	15445.600	72.2	-14.3	14.8	16.0	-15.5	-13.0	2.5	Vert.	100	98	Horn	8th

Calculation:Result [dBm] =SG level [dB] +Tx Ant Gain [dBi] -Tx Loss (Cable+ATT) [dB]
Tx Antenna: Horn (1G-40G) / Rx-Antenna: Horn (1G-40G)

DATA OF RADIATED EMISSION (SUBSTITUTION) TEST

UL Japan, Inc. Shonan EMC Lab. No.3 Semi-Anechoic Chamber
Date : 2011/06/19

Company : Panasonic Mobile Communications Co.,Ltd
Kind of EUT : RRH4x40-PCSKS24829L11
Model No. : 849144431
Serial No. : LBALLU-M51121D159A/D159B

Mode : LTE (Low ch)
Report No. : 31JE0290-SH-01-A
Power : DC-48V
Temp./Humi. : 25deg.C./65%

Remarks : -

Limit : FCC part24 spurious limit

Engineer : Hikaru Shirasawa

<< EIRP DATA >>

No.	Freq.	Reading <PK>	SG Level	TX Ant.Gain	TX Loss	EIRP		Margin	Pola.	Height	Angle	TX Ant.Type	Comment
						Result	Limit						
	[MHz]	[dBuV]	[dBm]	[dBi]	[dB]	[dBm]	[dBm]	[dB]		[cm]	[deg]		
1	19307.000	61.2	-41.6	10.4	18.2	-49.4	-13.0	36.4	Hori.	100	95	Horn	
2	19307.000	62.0	-38.3	10.4	18.2	-46.1	-13.0	33.1	Vert.	100	112	Horn	

Calculation:Result [dBm] =SG level [dB] +Tx Ant Gain [dBi] -Tx Loss (Cable+ATT) [dB]
Tx Antenna: Horn (1G-40G) / Rx-Antenna: Horn (1G-40G)

DATA OF RADIATED EMISSION (SUBSTITUTION) TEST

UL Japan,Inc. Shonan EMC Lab. No.2 Semi-Anechoic Chamber
Date : 2011/06/18

Company : Panasonic Mobile Communications Co.,Ltd
Kind of EUT : RRH4x40-PCSKS24829L11
Model No. : 849144431
Serial No. : LBALLU-M51121D159A/D159B

Mode : LTE (Mid ch)
Report No. : 31JE0290-SH-01-A
Power : DC-48V
Temp./Humi. : 24deg.C./52%

Remarks : -

Limit : FCC part24 spurious limit

Engineer : Akio Hayashi

<< EIRP DATA >>

No.	Freq.	Reading <PK>	SG Level	TX Ant.Gain	TX Loss	EIRP Result	EIRP Limit	Margin	Pola.	Height	Angle	TX Ant.Type	Comment
	[MHz]	[dBuV]	[dBm]	[dBi]	[dB]	[dBm]	[dBm]	[dB]		[cm]	[deg]		
1	41.761	31.0	-37.4	-22.4	1.3	-61.1	-13.0	48.1	Hori.	332	303	Dipol	
2	95.623	40.3	-57.3	-3.2	2.1	-62.6	-13.0	49.6	Hori.	301	43	Dipol	
3	197.601	37.7	-58.8	2.2	3.1	-59.7	-13.0	46.7	Hori.	150	287	Dipol	
4	400.089	37.8	-57.2	2.2	4.5	-59.5	-13.0	46.5	Hori.	100	236	Dipol	
5	650.014	34.1	-52.8	2.2	5.9	-56.5	-13.0	43.5	Hori.	150	276	Dipol	
6	983.212	33.9	-48.5	2.2	7.4	-53.7	-13.0	40.7	Hori.	154	264	Dipol	
7	37.099	29.2	-43.7	-25.1	1.3	-70.1	-13.0	57.1	Vert.	100	252	Dipol	
8	70.091	37.9	-50.7	-12.2	1.7	-64.6	-13.0	51.6	Vert.	100	32	Dipol	
9	89.280	41.7	-55.0	-6.1	2.0	-63.1	-13.0	50.1	Vert.	100	130	Dipol	
10	197.601	35.1	-56.8	2.2	3.1	-57.7	-13.0	44.7	Vert.	100	34	Dipol	
11	491.674	37.1	-54.3	2.2	5.0	-57.1	-13.0	44.1	Vert.	155	251	Dipol	
12	649.954	37.7	-50.8	2.2	5.9	-54.5	-13.0	41.5	Vert.	100	252	Dipol	
13	737.420	35.3	-50.5	2.2	6.3	-54.6	-13.0	41.6	Vert.	102	96	Dipol	
14	983.212	37.1	-42.7	2.2	7.4	-47.9	-13.0	34.9	Vert.	130	142	Dipol	

Calculation: Result [dBm] = SG level [dB] +Tx Ant Gain [dBi] -Tx Loss (Cable+ATT) [dB]
Tx Ant: 120MHz turned Dipole (30M-120M), Dipole (120M-1G) / Rx-Ant: Biconical (30M-300M), Logperiodic (300M-1G)

DATA OF RADIATED EMISSION (SUBSTITUTION) TEST

UL Japan, Inc. Shonan EMC Lab. No.3 Semi-Anechoic Chamber
Date : 2011/06/18

Company : Panasonic Mobile Communications Co.,Ltd
Kind of EUT : RRH4x40-PCSKS24829L11
Model No. : 849144431
Serial No. : LBALLU-M51121D159A/D159B

Mode : LTE (Mid ch)
Report No. : 31JE0290-SH-01-A
Power : DC-48V
Temp./Humi. : 25deg.C./56%

Remarks : -

Limit : FCC part24 spurious limit

Engineer : Hikaru Shirasawa

<< EIRP DATA >>

No.	Freq.	Reading <PK>	SG Level	TX Ant.Gain	TX Loss	EIRP Result	EIRP Limit	Margin	Pola.	Height	Angle	TX Ant.Type	Comment
	[MHz]	[dBuV]	[dBm]	[dBi]	[dB]	[dBm]	[dBm]	[dB]		[cm]	[deg]		
1	3925.000	64.2	-44.7	12.5	7.7	-39.9	-13.0	26.9	Hori.	100	131	Horn	
2	5887.500	75.3	-24.9	13.1	9.5	-21.3	-13.0	8.3	Hori.	100	56	Horn	
3	11775.000	57.3	-32.2	12.2	13.5	-33.5	-13.0	20.5	Hori.	100	90	Horn	
4	3686.435	68.9	-40.0	12.6	7.4	-34.8	-13.0	21.8	Vert.	100	151	Horn	
5	3925.000	63.5	-45.8	12.5	7.7	-41.0	-13.0	28.0	Vert.	128	103	Horn	2nd
6	3932.190	69.2	-39.1	12.5	7.7	-34.3	-13.0	21.3	Vert.	120	152	Horn	
7	5887.500	78.3	-22.3	13.1	9.5	-18.7	-13.0	5.7	Vert.	121	83	Horn	3rd
8	7850.000	67.3	-29.0	11.1	11.0	-28.9	-13.0	15.9	Vert.	136	113	Horn	4th
9	9812.500	56.9	-36.2	11.7	12.3	-36.8	-13.0	23.8	Vert.	128	104	Horn	5th
10	11775.000	59.1	-31.1	12.2	13.5	-32.4	-13.0	19.4	Vert.	119	127	Horn	6th

Calculation:Result [dBm] =SG level [dB] +Tx Ant Gain [dBi] -Tx Loss (Cable+ATT) [dB]
Tx Antenna: Horn (1G-40G) / Rx-Antenna: Horn (1G-40G)

DATA OF RADIATED EMISSION (SUBSTITUTION) TEST

UL Japan, Inc. Shonan EMC Lab. No.3 Semi-Anechoic Chamber
Date : 2011/06/18

Company : Panasonic Mobile Communications Co.,Ltd
Kind of EUT : RRH4x40-PCSKS24829L11
Model No. : 849144431
Serial No. : LBALLU-M51121D159A/D159B

Mode : LTE (Mid ch)
Report No. : 31JE0290-SH-01-A
Power : DC-48V
Temp./Humi. : 25deg.C./56%

Remarks : -

Limit : FCC part24 spurious limit

Engineer : Hikaru Shirasawa

<< EIRP DATA >>

No.	Freq.	Reading <PK>	SG Level	TX Ant.Gain	TX Loss	EIRP		Margin	Pola.	Height	Angle	TX Ant.Type	Comment
						Result	Limit						
	[MHz]	[dBuV]	[dBm]	[dBi]	[dB]	[dBm]	[dBm]	[dB]		[cm]	[deg]		
1	17662.500	62.3	-26.5	9.1	17.2	-34.6	-13.0	21.6	Hori.	113	125	Horn	9th
2	13737.500	63.9	-30.1	12.6	14.9	-32.4	-13.0	19.4	Vert.	100	94	Horn	7th
3	15700.000	66.9	-17.9	16.0	16.1	-18.0	-13.0	5.0	Vert.	100	90	Horn	8th

Calculation:Result [dBm] =SG level [dB] +Tx Ant Gain [dBi] -Tx Loss (Cable+ATT) [dB]
Tx Antenna: Horn (1G-40G) / Rx-Antenna: Horn (1G-40G)

DATA OF RADIATED EMISSION (SUBSTITUTION) TEST

UL Japan, Inc. Shonan EMC Lab. No.3 Semi-Anechoic Chamber
Date : 2011/06/19

Company : Panasonic Mobile Communications Co.,Ltd
Kind of EUT : RRH4x40-PCSKS24829L11
Model No. : 849144431
Serial No. : LBALLU-M51121D159A/D159B

Mode : LTE (Mid ch)
Report No. : 31JE0290-SH-01-A
Power : DC-48V
Temp./Humi. : 25deg.C./65%

Remarks : -

Limit : FCC part24 spurious limit

Engineer : Hikaru Shirasawa

<< EIRP DATA >>

No.	Freq.	Reading <PK>	SG Level	TX Ant.Gain	TX Loss	EIRP		Margin	Pola.	Height	Angle	TX Ant.Type	Comment
						Result	Limit						
	[MHz]	[dBuV]	[dBm]	[dBi]	[dB]	[dBm]	[dBm]	[dB]		[cm]	[deg]		
1	19625.000	64.4	-37.5	10.3	18.4	-45.6	-13.0	32.6	Hori.	100	112	Horn	
2	19625.000	69.0	-30.4	10.3	18.4	-38.5	-13.0	25.5	Vert.	100	93	Horn	

Calculation:Result [dBm] =SG level [dB] +Tx Ant Gain [dBi] -Tx Loss (Cable+ATT) [dB]
Tx Antenna: Horn (1G-40G) / Rx-Antenna: Horn (1G-40G)

DATA OF RADIATED EMISSION (SUBSTITUTION) TEST

UL Japan,Inc. Shonan EMC Lab. No.2 Semi-Anechoic Chamber
Date : 2011/06/18

Company : Panasonic Mobile Communications Co.,Ltd
Kind of EUT : RRH4x40-PCSKS24829L11
Model No. : 849144431
Serial No. : LBALLU-M51121D159A/D159B

Mode : LTE (High ch)
Report No. : 31JE0290-SH-01-A
Power : DC-48V
Temp./Humi. : 24deg.C./52%

Remarks : -

Limit : FCC part24 spurious limit

Engineer : Akio Hayashi

<< EIRP DATA >>

No.	Freq.	Reading <PK>	SG Level	TX Ant.Gain	TX Loss	EIRP Result	EIRP Limit	Margin	Pola.	Height	Angle	TX Ant.Type	Comment
	[MHz]	[dBuV]	[dBm]	[dBi]	[dB]	[dBm]	[dBm]	[dB]		[cm]	[deg]		
1	41.762	30.5	-38.7	-22.4	1.3	-62.4	-13.0	49.4	Hori.	302	103	Dipol	
2	95.891	40.3	-57.3	-3.1	2.1	-62.5	-13.0	49.5	Hori.	267	84	Dipol	
3	197.275	37.1	-59.3	2.2	3.1	-60.2	-13.0	47.2	Hori.	200	294	Dipol	
4	400.080	38.0	-57.8	2.2	4.5	-60.1	-13.0	47.1	Hori.	100	222	Dipol	
5	649.939	35.1	-51.8	2.2	5.9	-55.5	-13.0	42.5	Hori.	143	233	Dipol	
6	983.151	34.1	-48.3	2.2	7.4	-53.5	-13.0	40.5	Hori.	133	198	Dipol	
7	37.832	29.0	-45.2	-24.7	1.3	-71.2	-13.0	58.2	Vert.	100	2	Dipol	
8	69.986	37.6	-51.0	-12.2	1.7	-64.9	-13.0	51.9	Vert.	100	82	Dipol	
9	88.594	42.0	-54.7	-6.4	2.0	-63.1	-13.0	50.1	Vert.	100	126	Dipol	
10	197.275	35.4	-56.5	2.2	3.1	-57.4	-13.0	44.4	Vert.	100	25	Dipol	
11	491.850	37.0	-54.4	2.2	5.0	-57.2	-13.0	44.2	Vert.	100	235	Dipol	
12	649.915	37.3	-51.4	2.2	5.9	-55.1	-13.0	42.1	Vert.	132	248	Dipol	
13	737.639	35.0	-50.8	2.2	6.3	-54.9	-13.0	41.9	Vert.	100	252	Dipol	
14	983.151	36.7	-43.1	2.2	7.4	-48.3	-13.0	35.3	Vert.	118	122	Dipol	

Calculation: Result [dBm] = SG level [dB] +Tx Ant Gain [dBi] -Tx Loss (Cable+ATT) [dB]
Tx Ant: 120MHz turned Dipole (30M-120M), Dipole (120M-1G) / Rx-Ant: Biconical (30M-300M), Logperiodic (300M-1G)

DATA OF RADIATED EMISSION (SUBSTITUTION) TEST

UL Japan, Inc. Shonan EMC Lab. No.3 Semi-Anechoic Chamber
Date : 2011/06/18

Company : Panasonic Mobile Communications Co.,Ltd
Kind of EUT : RRH4x40-PCSKS24829L11
Model No. : 849144431
Serial No. : LBALLU-M51121D159A/D159B

Mode : LTE (High ch)
Report No. : 31JE0290-SH-01-A
Power : DC-48V
Temp./Humi. : 25deg.C./56%

Remarks : -

Limit : FCC part24 spurious limit

Engineer : Hikaru Shirasawa

<< EIRP DATA >>

No.	Freq.	Reading <PK>	SG Level	TX Ant.Gain	TX Loss	EIRP		Margin	Pola.	Height	Angle	TX Ant.Type	Comment
						Result	Limit						
	[MHz]	[dBuV]	[dBm]	[dBi]	[dB]	[dBm]	[dBm]	[dB]		[cm]	[deg]		
1	5982.900	75.8	-24.4	13.1	9.5	-20.8	-13.0	7.8	Hori.	103	93	Horn	
2	7977.200	63.8	-32.3	11.1	11.1	-32.3	-13.0	19.3	Hori.	118	67	Horn	
3	11965.800	61.3	-27.4	12.7	13.7	-28.4	-13.0	15.4	Hori.	106	131	Horn	
4	3194.860	66.8	-44.1	11.9	6.8	-39.0	-13.0	26.0	Vert.	112	146	Horn	
5	3686.428	66.2	-42.8	12.6	7.4	-37.6	-13.0	24.6	Vert.	100	152	Horn	
6	3932.165	71.3	-36.9	12.5	7.7	-32.1	-13.0	19.1	Vert.	115	103	Horn	
7	3988.600	66.3	-42.7	12.5	7.7	-37.9	-13.0	24.9	Vert.	100	73	Horn	2nd
8	5982.900	80.2	-20.9	13.1	9.5	-17.3	-13.0	4.3	Vert.	154	109	Horn	3rd
9	7977.200	72.8	-22.7	11.1	11.1	-22.7	-13.0	9.7	Vert.	120	97	Horn	4th
10	9971.500	53.4	-41.9	11.6	12.4	-42.7	-13.0	29.7	Vert.	100	61	Horn	5th
11	11965.800	63.0	-27.5	12.7	13.7	-28.5	-13.0	15.5	Vert.	105	66	Horn	6th

Calculation:Result [dBm] =SG level [dB] +Tx Ant Gain [dBi] -Tx Loss (Cable+ATT) [dB]
Tx Antenna: Horn (1G-40G) / Rx-Antenna: Horn (1G-40G)

DATA OF RADIATED EMISSION (SUBSTITUTION) TEST

UL Japan, Inc. Shonan EMC Lab. No.3 Semi-Anechoic Chamber
Date : 2011/06/18

Company : Panasonic Mobile Communications Co.,Ltd
Kind of EUT : RRH4x40-PCSKS24829L11
Model No. : 849144431
Serial No. : LBALLU-M51121D159A/D159B

Mode : LTE (High ch)
Report No. : 31JE0290-SH-01-A
Power : DC-48V
Temp./Humi. : 25deg.C./56%

Remarks : -

Limit : FCC part24 spurious limit

Engineer : Hikaru Shirasawa

<< EIRP DATA >>

No.	Freq.	Reading <PK>	SG Level	TX Ant.Gain	TX Loss	EIRP		Margin	Pola.	Height	Angle	TX Ant.Type	Comment
						Result	Limit						
	[MHz]	[dBuV]	[dBm]	[dBi]	[dB]	[dBm]	[dBm]	[dB]		[cm]	[deg]		
1	17948.700	52.4	-39.9	7.1	17.3	-50.1	-13.0	37.1	Hori.	116	124	Horn	9th
2	13960.100	57.7	-35.6	12.2	15.0	-38.4	-13.0	25.4	Vert.	100	106	Horn	7th
3	15954.400	58.4	-27.3	17.2	16.3	-26.4	-13.0	13.4	Vert.	100	100	Horn	8th

Calculation:Result [dBm] =SG level [dB] +Tx Ant Gain [dBi] -Tx Loss (Cable+ATT) [dB]
Tx Antenna: Horn (1G-40G) / Rx-Antenna: Horn (1G-40G)

DATA OF RADIATED EMISSION (SUBSTITUTION) TEST

UL Japan, Inc. Shonan EMC Lab. No.3 Semi-Anechoic Chamber
Date : 2011/06/19

Company : Panasonic Mobile Communications Co.,Ltd
Kind of EUT : RRH4x40-PCSKS24829L11
Model No. : 849144431
Serial No. : LBALLU-M51121D159A/D159B

Mode : LTE (High ch)
Report No. : 31JE0290-SH-01-A
Power : DC-48V
Temp./Humi. : 25deg.C./65%

Remarks : -

Limit : FCC part24 spurious limit

Engineer : Hikaru Shirasawa

<< EIRP DATA >>

No.	Freq.	Reading <PK>	SG Level	TX Ant.Gain	TX Loss	EIRP		Margin	Pola.	Height	Angle	TX Ant.Type	Comment
						Result	Limit						
	[MHz]	[dBuV]	[dBm]	[dBi]	[dB]	[dBm]	[dBm]	[dB]		[cm]	[deg]		
1	19943.000	65.6	-34.7	10.2	18.5	-43.0	-13.0	30.0	Hori.	100	98	Horn	
2	19943.000	63.0	-36.2	10.2	18.5	-44.5	-13.0	31.5	Vert.	100	98	Horn	

Calculation:Result [dBm] =SG level [dB] +Tx Ant Gain [dBi] -Tx Loss (Cable+ATT) [dB]
Tx Antenna: Horn (1G-40G) / Rx-Antenna: Horn (1G-40G)

Frequency Stability

Test place	UL Japan, Inc. Shonan EMC Lab.	
Date	June 23, 2011	June 27, 2011
Temperature / Humidity	26deg.C , 61%RH	25deg.C , 65%RH
Engineer	Kenichi Adachi	Kenichi Adachi
	No.6 Shielded Room	(Customer measurement room)
Mode	Tx, CW	worst antenna : TX1

Opearating Freq.		1930.7000MHz		1962.5000MHz		1994.3000MHz	
Temp. [deg.C]	Volt. [V]	Frequency Result [MHz]	Frequency Deviation [ppm]	Frequency Result [MHz]	Frequency Deviation [ppm]	Frequency Result [MHz]	Frequency Deviation [ppm]
-30	-48.00	1930.700073	0.037810	1962.500074	0.037707	1994.300075	0.037607
-20	-48.00	1930.700073	0.037810	1962.500074	0.037707	1994.300075	0.037607
-10	-48.00	1930.700073	0.037810	1962.500075	0.038217	1994.300075	0.037607
0	-48.00	1930.700073	0.037810	1962.500075	0.038217	1994.300076	0.038109
10	-48.00	1930.700074	0.038328	1962.500075	0.038217	1994.300076	0.038109
20	-48.00	1930.700074	0.038328	1962.500076	0.038726	1994.300077	0.038610
30	-48.00	1930.700074	0.038328	1962.500075	0.038217	1994.300076	0.038109
40	-48.00	1930.700073	0.037810	1962.500075	0.038217	1994.300076	0.038109
50	-48.00	1930.700074	0.038328	1962.500074	0.037707	1994.300076	0.038109

Temp. [deg.C]	Volt. [V]	Frequency Result [MHz]	Frequency Deviation [ppm]	Frequency Result [MHz]	Frequency Deviation [ppm]	Frequency Result [MHz]	Frequency Deviation [ppm]
20	-40.80	1930.700075	0.038846	1962.500074	0.037707	1994.300074	0.037106
20	-48.00	1930.700074	0.038328	1962.500073	0.037197	1994.300075	0.037607
20	-55.20	1930.700074	0.038328	1962.500074	0.037707	1994.300074	0.037106

Sample Calculation : (Frequency Result [MHz] - Operating Freq/ [MHz]) / Operating Freq/ [MHz] x 10 ^ 6

* Extreme temperature tests, only the frequency at start time was measured because these had not difference at start time and after a minute and after two minutes and after five minutes and after ten minutes.

* Tx1 was measured as a representative, because it was equal measurements at four antenna port at normal condition.

Test Report No :31JE0290-SH-01-A

APPENDIX 3
Test Instruments

EMI test equipment(1/2)

Control No.	Instrument	Manufacturer	Model No	Serial No	Test Item	Calibration Date * Interval(month)
SAF-02	Pre Amplifier	SONOMA	310N	290212	RE	2011/02/17 * 12
SAT6-02	Attenuator	JFW	50HF-006N	-	RE	2011/02/17 * 12
SAT3-02	Attenuator	JFW	50HF-003N	-	RE	2011/02/17 * 12
SBA-02	Biconical Antenna	Schwarzbeck	BBA9106	91032665	RE	2010/10/11 * 12
SCC-B1/B3/B5/B7/B8/B13/SRSE-02	Coaxial Cable&RF Selector	Fujikura/Fujikura/Suhner/Suhner/Suhner/TOYO	8D2W/12DSFA/141PE/141PE/141PE/141PE/NS4906	-/0901-270(RF Selector)	RE	2011/04/28 * 12
SCC-B2/B4/B6/B7/B8/B13/SRSE-02	Coaxial Cable&RF Selector	Fujikura/Fujikura/Suhner/Suhner/Suhner/TOYO	8D2W/12DSFA/141PE/141PE/141PE/141PE/NS4906	-/0901-270(RF Selector)	RE	2011/04/28 * 12
SLA-02	Logperiodic Antenna	Schwarzbeck	UHALP9108A	UHALP 9108-A 0893	RE	2010/10/11 * 12
SOS-03	Humidity Indicator	A&D	AD-5681	4063325	RE	2011/02/23 * 12
STR-02	Test Receiver	Rohde & Schwarz	ESCI	100575	RE	2010/08/18 * 12
SJM-02	Measure	KOMELON	KMC-36	-	RE	-
SAEC-02(NSA)	Semi-Anechoic Chamber	TDK	SAEC-02(NSA)	2	RE	2010/09/04 * 12
COTS-SEMI-1	EMI Software	TSJ	TEPTO-DV(RE,CE,RFI,MF)	-	RE	-
SAF-04	Pre Amplifier	TOYO Corporation	TPA0118-36	1440489	RE	2011/03/23 * 12
SCC-G03	Coaxial Cable	Suhner	SUCOFLEX 104A	46499/4A	RE	2011/04/28 * 12
SCC-G23	Coaxial Cable	Suhner	SUCOFLEX 104	297342/4	RE	2011/05/27 * 12
SHA-03	Horn Antenna	Schwarzbeck	BBHA9120D	9120D-739	RE	2010/08/17 * 12
SOS-05	Humidity Indicator	A&D	AD-5681	4062518	RE	2011/02/23 * 12
SSA-02	Spectrum Analyzer	Agilent	E4448A	MY48250106	RE	2011/03/07 * 12
SJM-10	Measure	PROMART	SEN1935	-	RE	-
SFL-02	Highpass Filter	MICRO-TRONICS	HPM50111	051	RE	2010/12/15 * 12
SAT20-01	Attenuator(above1GHz)	Agilent	8493C-020	74889	RE	2010/12/15 * 12
SAT10-05	Attenuator(above1GHz)	Agilent	8493C-010	74864	RE	2010/12/15 * 12
SHA-04	Horn Antenna	ETS LINDGREN	3160-09	LM3640	RE	2011/03/15 * 12
SAF-08	Pre Amplifier	TOYO Corporation	HAP18-26W	00000019	RE	2011/03/16 * 12
SCC-G17	Coaxial Cable	Suhner	SUCOFLEX 104A	46291/4A	RE	2011/03/16 * 12
SHA-01	Horn Antenna	Schwarzbeck	BBHA9120D	9120D-725	RE	2010/08/08 * 12
SSG-02	Signal Generator	Agilent	E8257D-540	MY48051404	RE	2011/03/01 * 12
SCC-G16	Coaxial Cable	Suhner	SUCOFLEX 102	32704/2	RE	2011/03/23 * 12
SDA-07	Dipole Antenna	Schwarzbeck	VHAP	1177	RE	2011/03/21 * 12
SDA-08	Dipole Antenna	Schwarzbeck	UHAP	1158	RE	2011/03/21 * 12
SCC-07	Coaxial Cable	Fujikura	5D2W	-	RE	2010/09/09 * 12

The expiration date of the calibration is the end of the expired month .
As for some calibrations performed after the tested dates , those test equipment have been controlled by means of an unbroken chains of calibrations .

All equipment is calibrated with traceable calibrations . Each calibration is traceable to the national or international standards .
Test Item :
RE: Radiated emission ,
AT: Antenna terminal conducted tests ,

APPENDIX 3
Test Instruments

EMI test equipment(2/2)

Control No.	Instrument	Manufacturer	Model No	Serial No	Test Item	Calibration Date * Interval(month)
SSG-01	Signal Generator	Agilent	E4438C	MY47271584	RE	2011/02/21 * 12
KPM-08	Power meter	Anritsu	ML2495A	6K00003356	AT	2010/09/22 * 12
KPSS-04	Power sensor	Anritsu	MA2411B	012088	AT	2010/09/22 * 12
SCC-G13	Coaxial Cable	Suhner	SUCOFLEX 102	31599/2	AT	2011/03/23 * 12
SAT10-08	Attenuator	Weinschel	W54-10	-	AT	2011/03/23 * 12
SOS-10	Humidity Indicator	A&D	AD-5681	4064561	AT	2011/02/23 * 12
KSA-08	Spectrum Analyzer	Agilent	E4446A	MY46180525	AT	2011/02/02 * 12
SOS-09	Humidity Indicator	A&D	AD-5681	4061484	AT	2011/03/02 * 12
SFC-01	Microwave Counter	Agilent	53151A	US40511493	AT	2011/03/01 * 12

The expiration date of the calibration is the end of the expired month .
As for some calibrations performed after the tested dates , those test equipment have been controlled by means of an unbroken chains of calibrations .
All equipment is calibrated with traceable calibrations . Each calibration is traceable to the national or international standards .
Test Item :
RE: Radiated emission ,
AT: Antenna terminal conducted tests ,