

HARMONICS AND SPURIOUS EMISSIONS (g TURBO MODE)

02/02/05 High Frequency Measurement
 Compliance Certification Services, Morgan Hill Open Field Site

Test Engr: Chin Pang
 Project #: 04U3194-1
 Company: Toshiba
 EUT Descrip.: 802.11b/g Half Size Mini-PCI WLAN Module
 EUT M/N: PA3426U-1MPC
 Test Target: FCC 15.247
 Mode Oper: Tx_g Turbo mode_antenna HTL017, Portable

Test Equipment:

EMCO Horn 1-18GHz	Pre-amplifier 1-26GHz	Pre-amplifier 26-40GHz	Horn > 18GHz	Limit
T73; S/N: 6717 @3m	T87 Miteq 924342			FCC 15.205

Hi Frequency Cables

2 foot cable	3 foot cable	4 foot cable	12 foot cable	HPF	Reject Filter	
	3_Chin		12_Neelesh	HPF_4.0GHz		Peak Measurements RBW=VBW=1MHz Average Measurements RBW=1MHz, VBW=10Hz

f GHz	Dist (m)	Read Pk dBuV	Read Avg. dBuV	AF dB/m	CL dB	Amp dB	D Corr dB	Filtr dB	Peak dBuV/m	Avg dBuV/m	Pk Lim dBuV/m	Avg Lim dBuV/m	Pk Mar dB	Avg Mar dB	Notes (V/H)
<i>mid ch</i>															
4.874	3.0	53.6	39.4	32.9	3.8	-39.6	0.0	0.6	51.3	37.1	74	54	-22.7	-16.9	V
7.311	3.0	50.9	37.5	35.8	4.9	-40.3	0.0	0.6	51.9	38.5	74	54	-22.1	-15.5	V
4.874	3.0	58.6	43.8	32.9	3.8	-39.6	0.0	0.6	56.3	41.5	74	54	-17.7	-12.5	H
7.311	3.0	54.6	40.8	35.8	4.9	-40.3	0.0	0.6	55.6	41.8	74	54	-18.4	-12.2	H

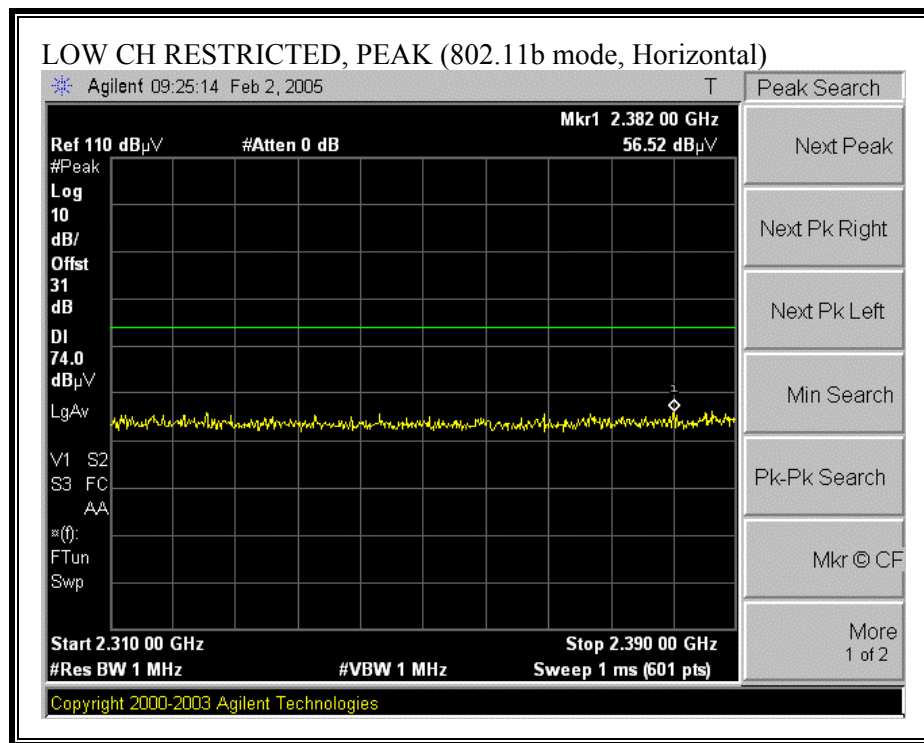
Note: No other emissions were detected above the system noise floor.

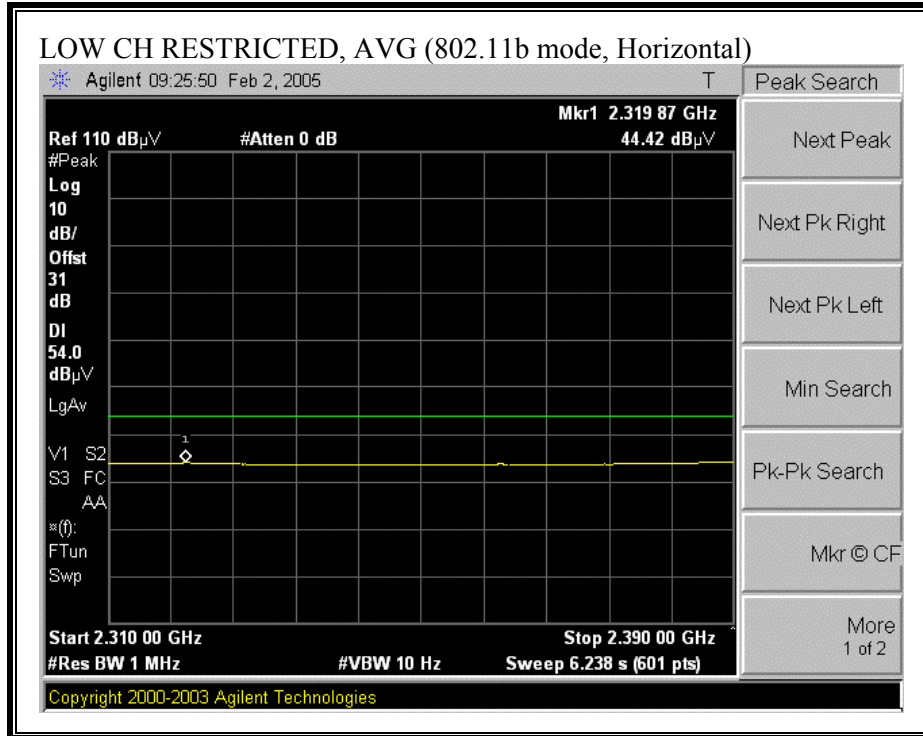
f	Measurement Frequency	Amp	Preamp Gain	Avg Lim	Average Field Strength Limit
Dist	Distance to Antenna	D Corr	Distance Correct to 3 meters	Pk Lim	Peak Field Strength Limit
Read	Analyzer Reading	Avg	Average Field Strength @ 3 m	Avg Mar	Margin vs. Average Limit
AF	Antenna Factor	Peak	Calculated Peak Field Strength	Pk Mar	Margin vs. Peak Limit
CL	Cable Loss	HPF	High Pass Filter		

7.2.3. TRANSMITTER ABOVE 1 GHz WITH ANTENNA HTL004 IN FIREBOLT

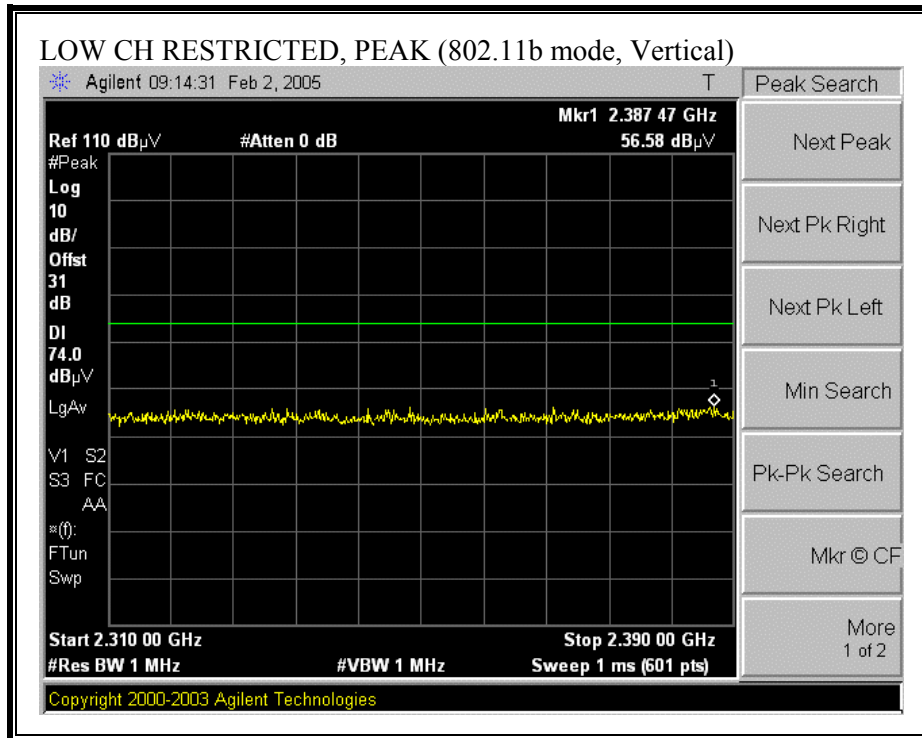
7.2.3.1 STAND-ALONE CONFIGURATION

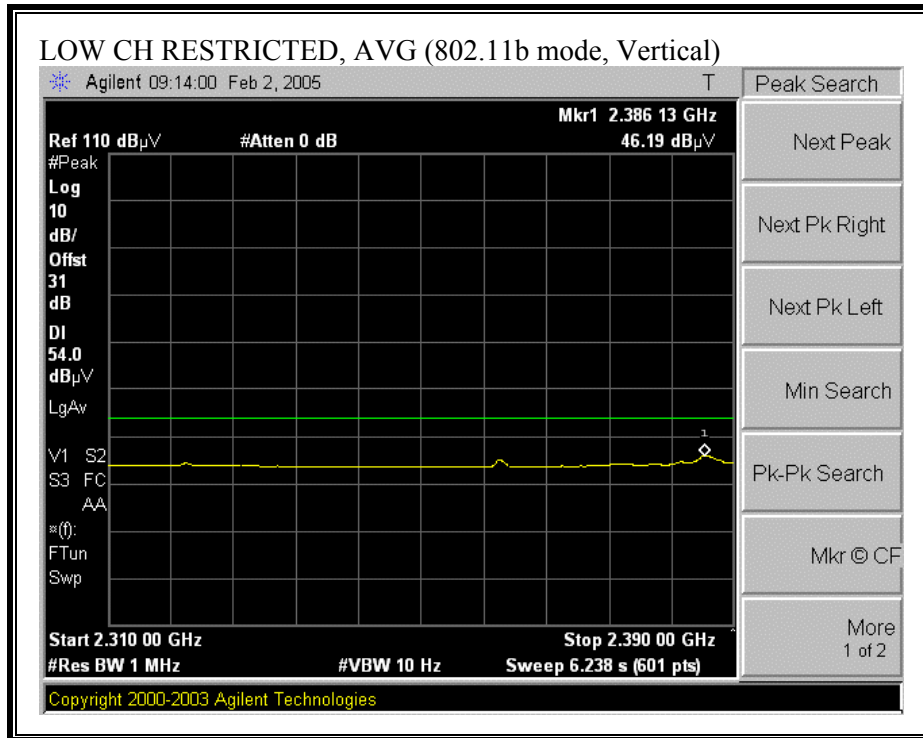
RESTRICTED BANDEDGE (b MODE, LOW CHANNEL, HORIZONTAL)



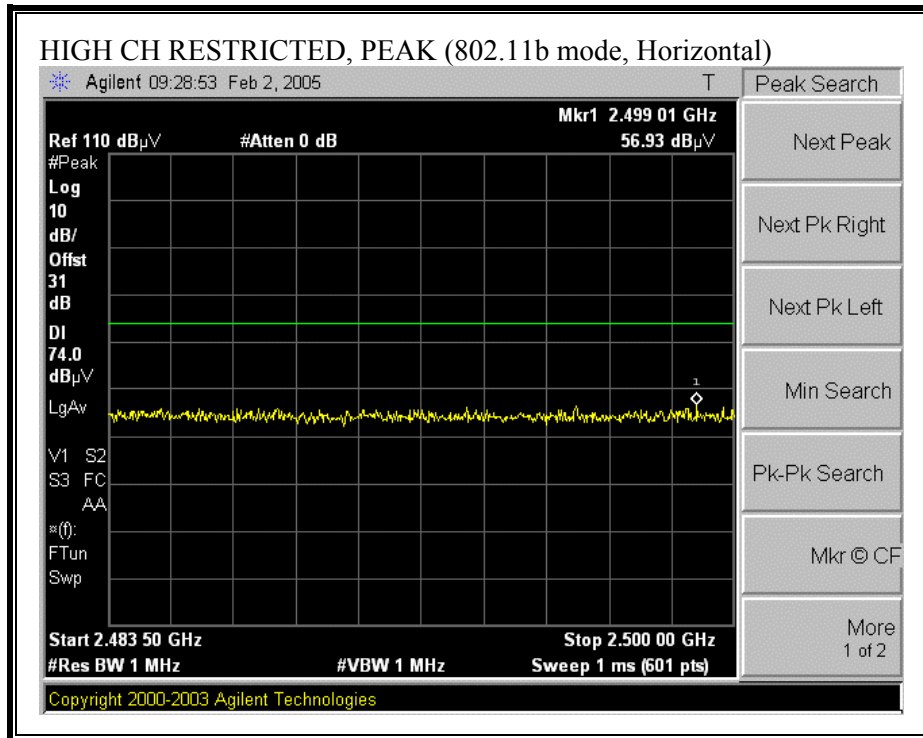


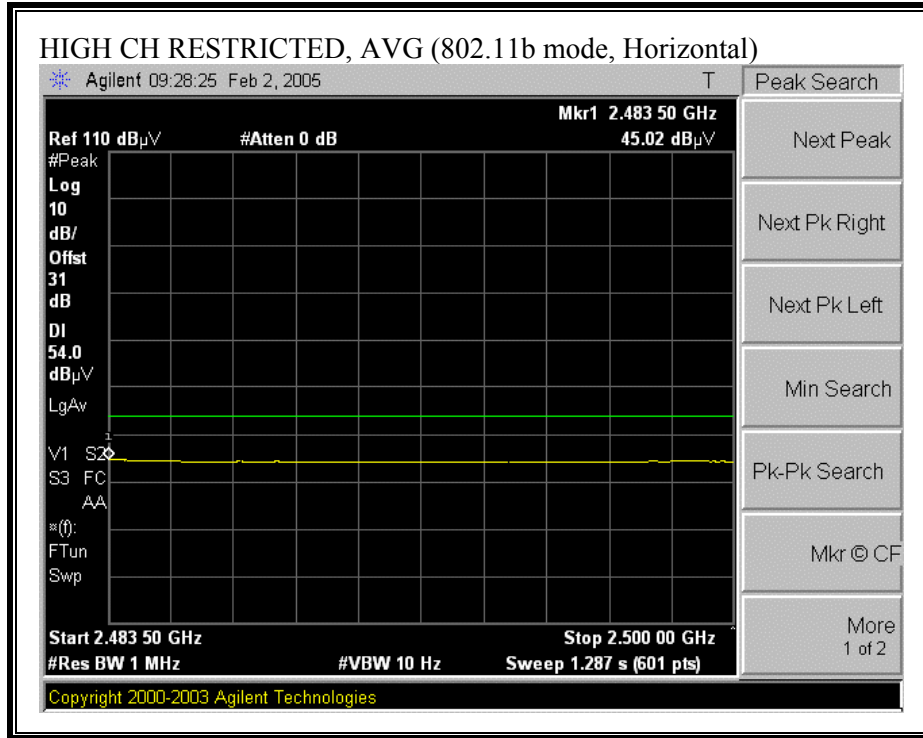
RESTRICTED BANDEDGE (b MODE, LOW CHANNEL, VERTICAL)



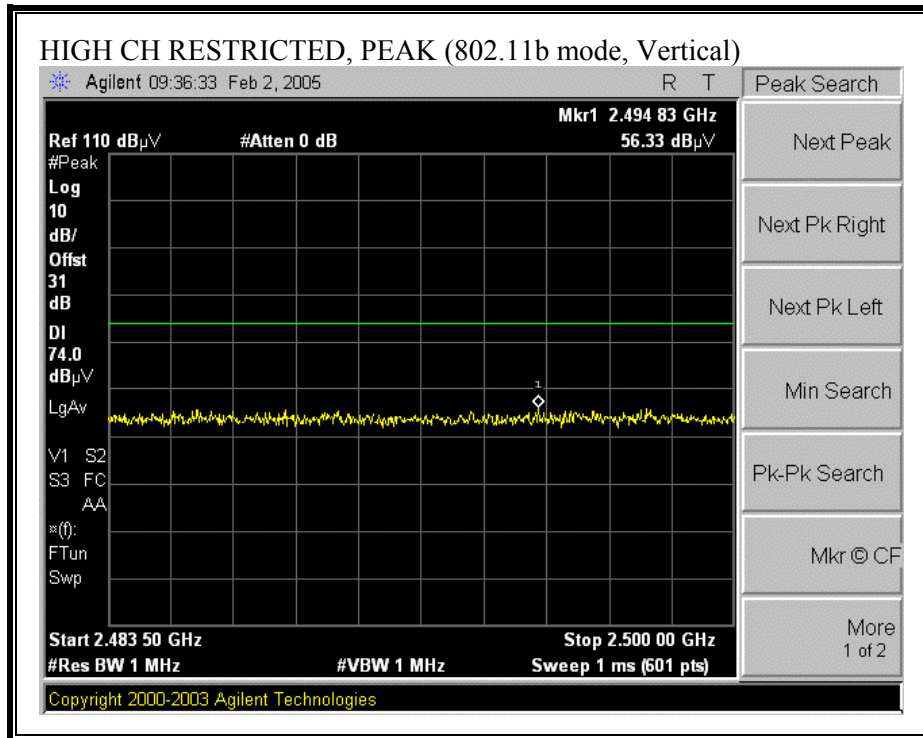


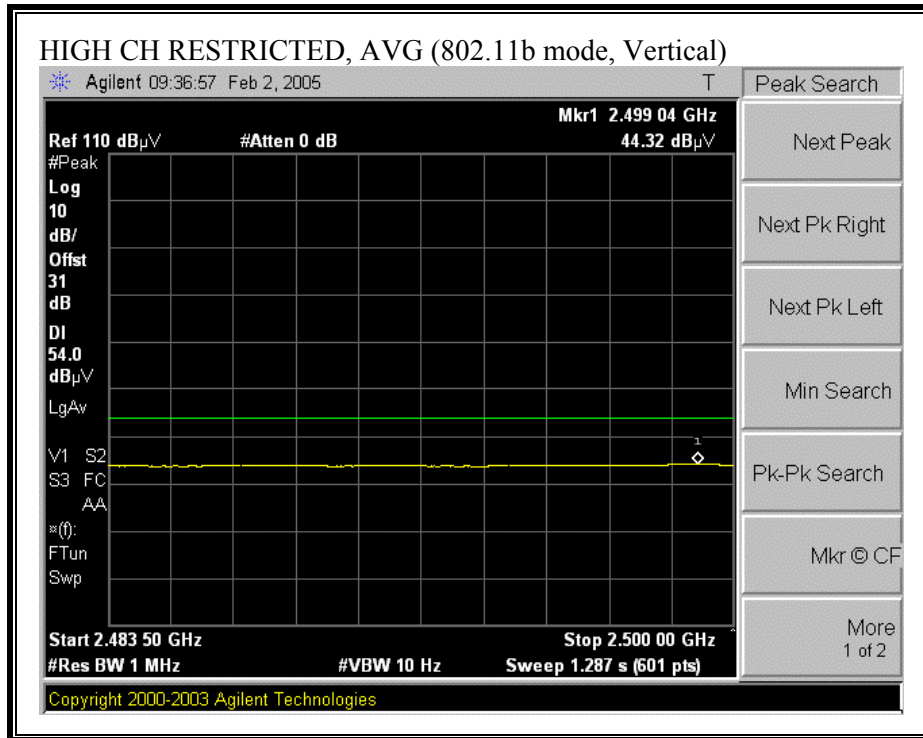
RESTRICTED BANDEDGE (b MODE, HIGH CHANNEL, HORIZONTAL)





RESTRICTED BANDEDGE (b MODE, HIGH CHANNEL, VERTICAL)





HARMONICS AND SPURIOUS EMISSIONS (b MODE)

02/02/05 High Frequency Measurement
 Compliance Certification Services, Morgan Hill Open Field Site

Test Engr: Chun Pang
 Project #: 04U3194-1
 Company: Toshiba
 EUT Descrip.: 802.11b/g Half Size Mini-PCI WLAN Module
 EUT M/N: PA3426U-1MPC
 Test Target: FCC 15.247
 Mode Oper: TX_b mode_antenna HTL004, Stand-alone

Test Equipment:

EMCO Horn 1-18GHz (T73; S/N: 6717 @3m) | Pre-amplifier 1-26GHz (T87 Miteq 924342) | Pre-amplifier 26-40GHz | Horn > 18GHz | Limit (FCC 15.205)

Hi Frequency Cables: 2 foot cable, 3 foot cable (3_Chin), 4 foot cable, 12 foot cable (12_Neelesh) | HPF (HPF_4.0GHz) | Reject Filter

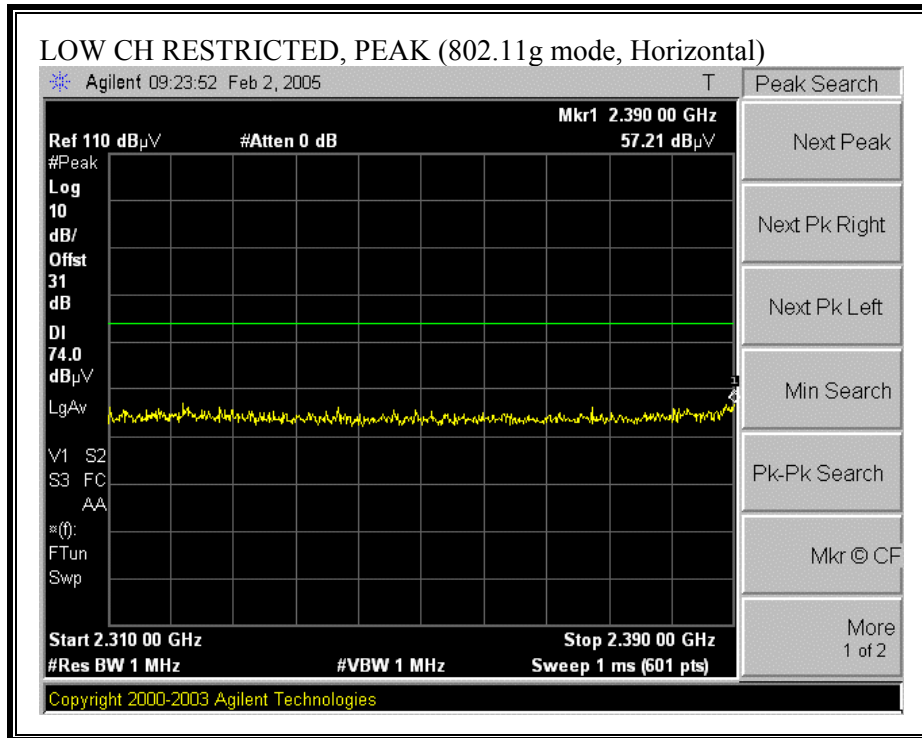
Peak Measurements: RBW=VBW=1MHz
 Average Measurements: RBW=1MHz; VBW=10Hz

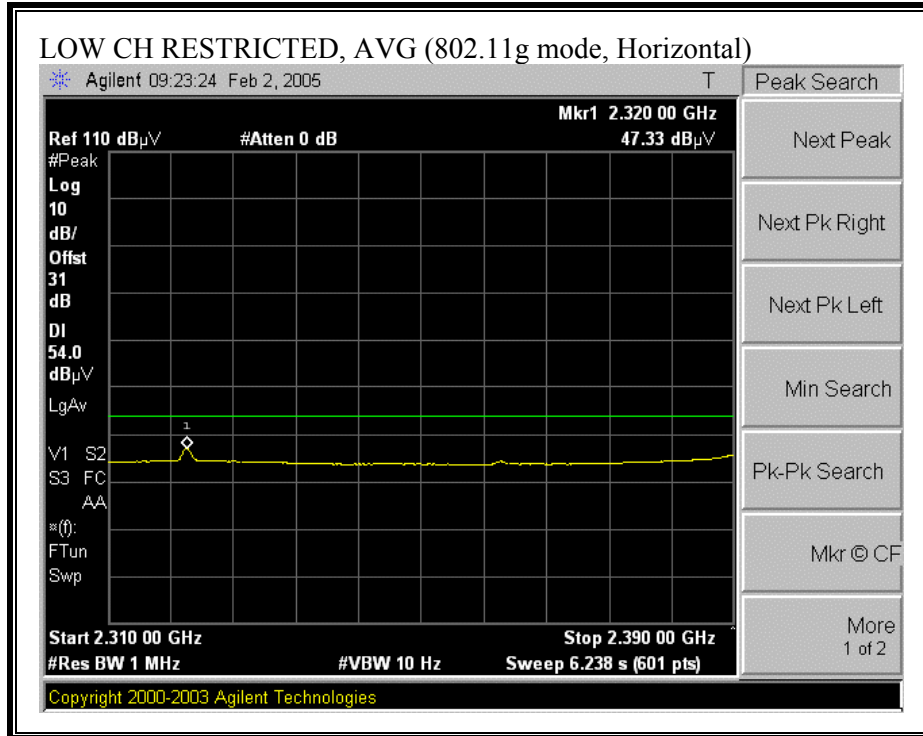
f GHz	Dist (m)	Read Pk dBuV	Read Avg dBuV	AF dB/m	CL dB	Amp dB	D Corr dB	Filtr dB	Peak dBuV/m	Avg dBuV/m	Pk Lim dBuV/m	Avg Lim dBuV/m	Pk Mar dB	Avg Mar dB	Notes (V/H)
low ch															
4.824	3.0	47.2	34.2	32.9	3.8	-39.6	0.0	0.6	44.9	31.9	74	54	-29.1	-22.1	V
4.824	3.0	50.8	38.1	32.9	3.8	-39.6	0.0	0.6	48.5	35.8	74	54	-25.5	-18.2	H
mid ch art=18															
4.874	3.0	47.5	34.5	32.9	3.8	-39.6	0.0	0.6	45.2	32.2	74	54	-28.8	-21.8	V
7.311	3.0	53.6	45.4	35.8	4.9	-40.3	0.0	0.6	54.6	46.4	74	54	-19.4	-7.6	V
4.874	3.0	55.0	42.0	32.9	3.8	-39.6	0.0	0.6	52.7	39.7	74	54	-21.3	-14.3	H
7.311	3.0	52.0	41.6	35.8	4.9	-40.3	0.0	0.6	53.0	42.6	74	54	-21.0	-11.4	H
High Ch															
4.924	3.0	49.8	47.8	33.0	3.8	-39.7	0.0	0.6	47.5	45.5	74	54	-26.5	-8.5	V
7.386	3.0	48.0	41.0	36.0	4.9	-40.3	0.0	0.6	49.2	42.2	74	54	-24.8	-11.8	V
3.335	3.0	48.0	35.0	30.8	3.0	-38.4	0.0	0.2	43.7	30.7	74	54	-30.3	-23.3	V
4.924	3.0	56.0	43.5	33.0	3.8	-39.7	0.0	0.6	53.7	41.2	74	54	-20.3	-12.8	H
7.386	3.0	49.8	40.2	36.0	4.9	-40.3	0.0	0.6	51.0	41.4	74	54	-23.0	-12.6	H
3.335	3.0	50.3	37.6	30.8	3.0	-38.4	0.0	0.2	46.0	33.3	74	54	-28.0	-20.7	H

Note: No other emissions were detected above the system noise floor.

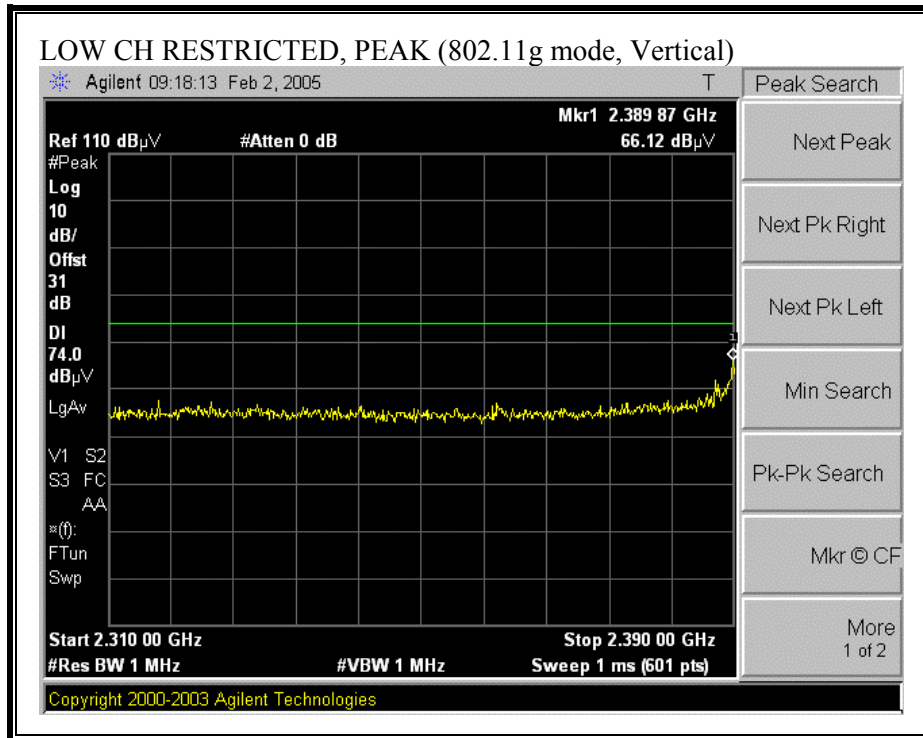
f	Measurement Frequency	Amp	Preamp Gain	Avg Lim	Average Field Strength Limit
Dist	Distance to Antenna	D Corr	Distance Correct to 3 meters	Pk Lim	Peak Field Strength Limit
Read	Analyzer Reading	Avg	Average Field Strength @ 3 m	Avg Mar	Margin vs. Average Limit
AF	Antenna Factor	Peak	Calculated Peak Field Strength	Pk Mar	Margin vs. Peak Limit
CL	Cable Loss	HPF	High Pass Filter		

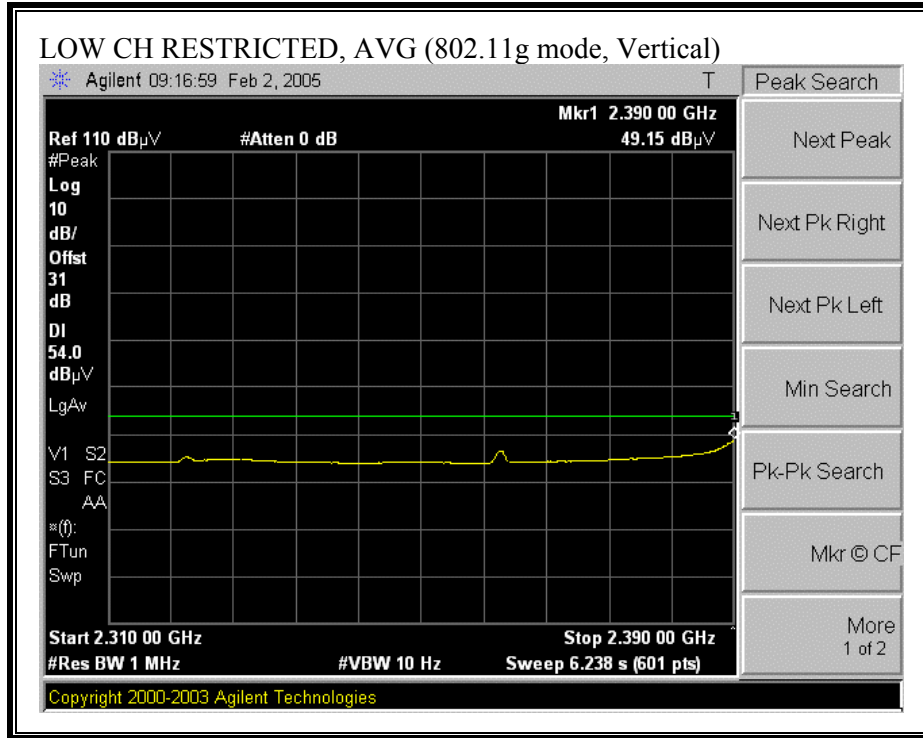
RESTRICTED BANDEDGE (g MODE, LOW CHANNEL, HORIZONTAL)



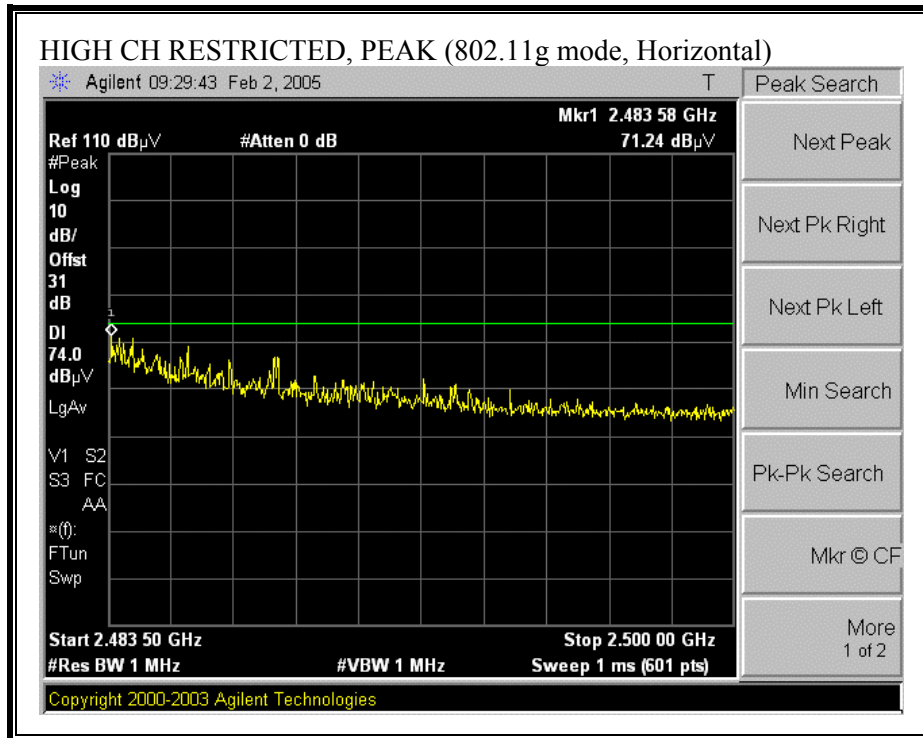


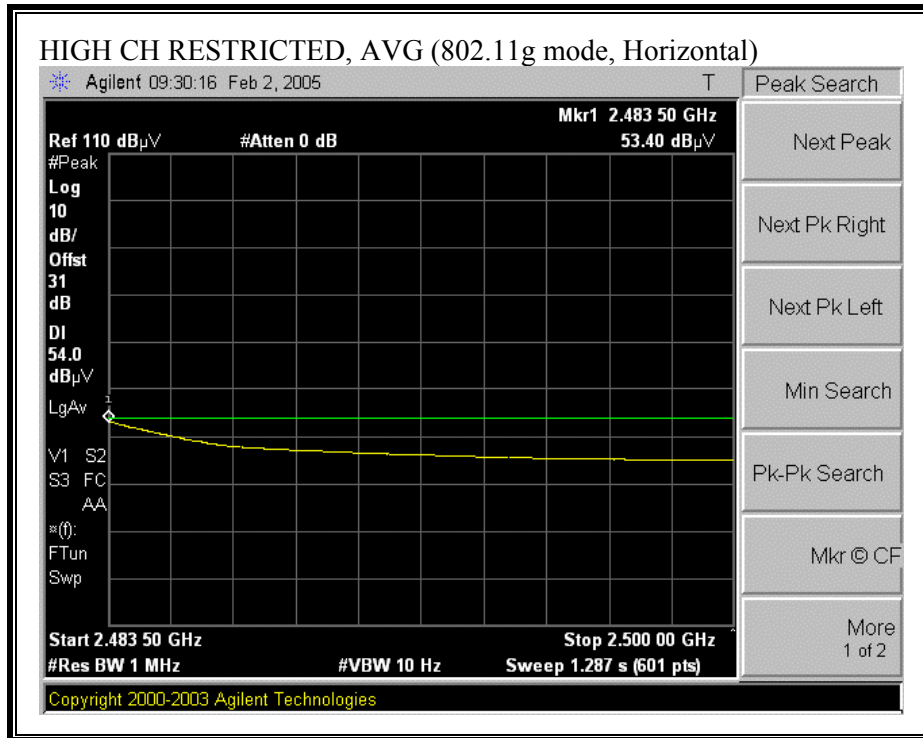
RESTRICTED BANDEDGE (g MODE, LOW CHANNEL, VERTICAL)



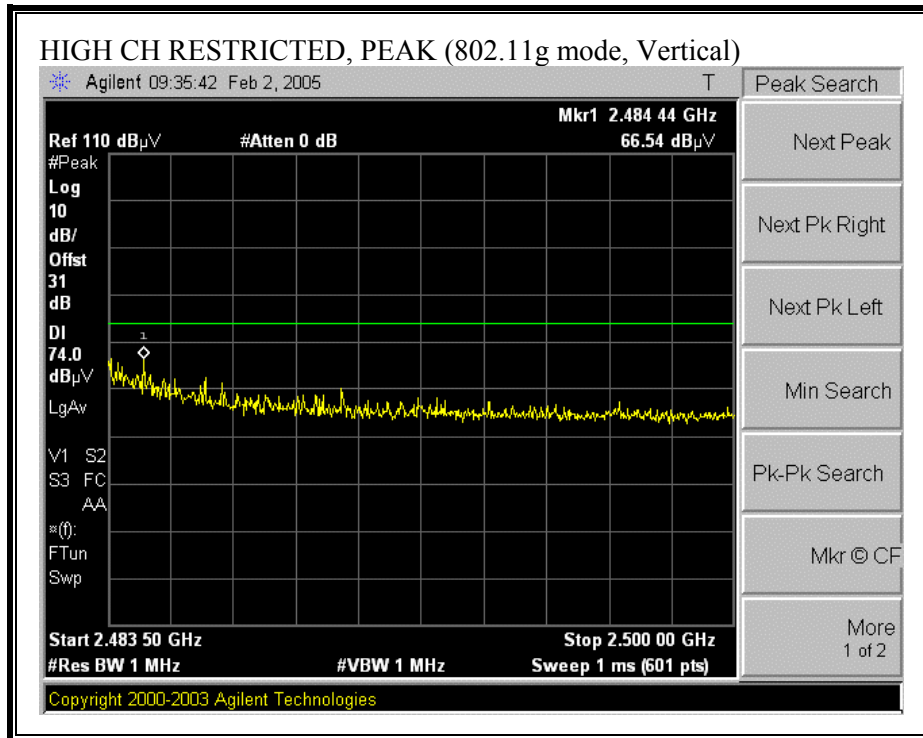


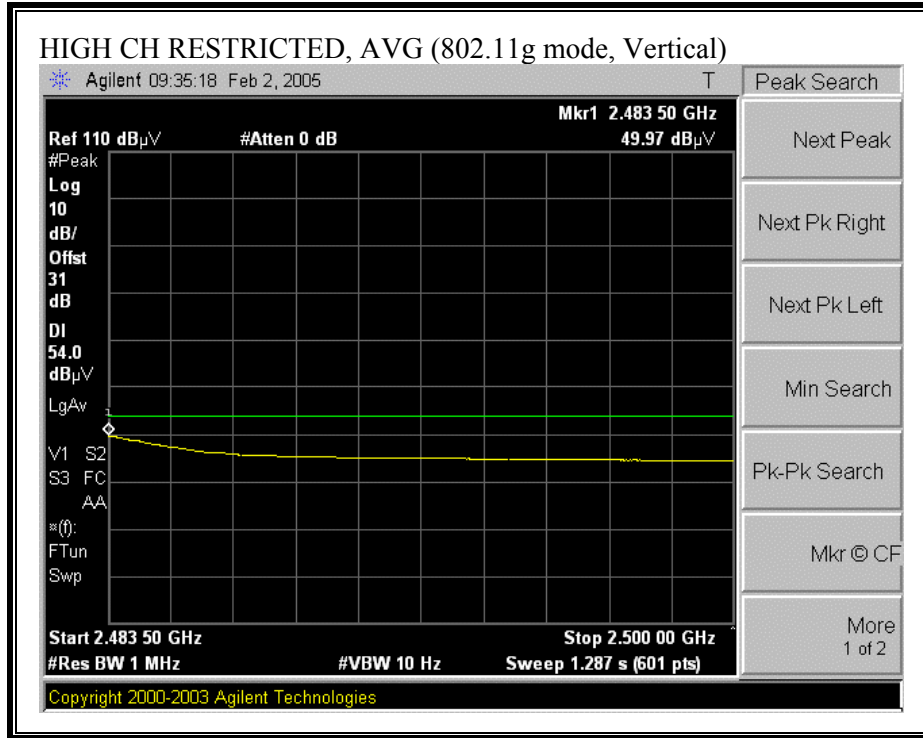
RESTRICTED BANDEDGE (g MODE, HIGH CHANNEL, HORIZONTAL)





RESTRICTED BANDEDGE (g MODE, HIGH CHANNEL, VERTICAL)





HARMONICS AND SPURIOUS EMISSIONS (g MODE)

01/05/04 High Frequency Measurement
 Compliance Certification Services, Morgan Hill Open Field Site

Test Engr: Chin Pang
 Project #: 04U3194-1
 Company: Toshiba
 EUT Descrip.: 802.11b/g Half Size Mini-PCI WLAN Module
 EUT M/N: PA3426U-1MPC
 Test Target: FCC 15.247
 Mode Oper: Tx_g mode_antenna HTL004, Stand-alone

Test Equipment:

EMCO Horn 1-18GHz T73; S/N: 6717 @3m	Pre-amplifer 1-26GHz T87 Miteq 924342	Pre-amplifer 26-40GHz	Horn > 18GHz	Limit FCC 15.205
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Hi Frequency Cables

2 foot cable	3 foot cable 3_Chin	4 foot cable	12 foot cable 12_Neelesh	HPF HPF_4.0GHz	Reject Filter
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Peak Measurements
 RBW=VBW=1MHz

Average Measurements
 RBW=1MHz, VBW=10Hz

f GHz	Dist (m)	Read Pk dBuV	Read Avg dBuV	AF dB/m	CL dB	Amp dB	D Corr dB	Filtr dB	Peak dBuV/m	Avg dBuV/m	Pk Lim dBuV/m	Avg Lim dBuV/m	Pk Mar dB	Avg Mar dB	Notes (V/H)
low ch															
4.824	3.0	47.4	34.6	32.9	3.8	-39.6	0.0	0.6	45.1	32.3	74	54	-28.9	-21.7	V
4.824	3.0	48.5	35.0	32.9	3.8	-39.6	0.0	0.6	46.2	32.7	74	54	-27.8	-21.3	H
mid ch															
4.874	3.0	50.6	39.5	32.9	3.8	-39.6	0.0	0.6	48.3	37.2	74	54	-25.7	-16.8	V
7.311	3.0	56.3	43.5	35.8	4.9	-40.3	0.0	0.6	57.3	44.5	74	54	-16.7	-9.5	V
4.874	3.0	54.8	42.3	32.9	3.8	-39.6	0.0	0.6	52.5	40.0	74	54	-21.5	-14.0	H
7.311	3.0	57.3	44.7	35.8	4.9	-40.3	0.0	0.6	58.3	45.7	74	54	-15.7	-8.3	H
High Ch															
4.924	3.0	48.0	35.4	33.0	3.8	-39.7	0.0	0.6	45.7	33.1	74	54	-28.3	-20.9	V
7.386	3.0	48.3	36.8	36.0	4.9	-40.3	0.0	0.6	49.5	38.0	74	54	-24.5	-16.0	V
3.335	3.0	48.7	35.4	30.8	3.0	-38.4	0.0	0.2	44.4	31.1	74	54	-29.6	-22.9	V
4.924	3.0	54.0	40.0	33.0	3.8	-39.7	0.0	0.6	51.7	37.7	74	54	-22.3	-16.3	H
7.386	3.0	53.5	38.6	36.0	4.9	-40.3	0.0	0.6	54.7	39.8	74	54	-19.3	-14.2	H
3.335	3.0	51.8	38.3	30.8	3.0	-38.4	0.0	0.2	47.5	34.0	74	54	-26.5	-20.0	H

Note: No other emissions were detected above the system noise floor.

f	Measurement Frequency	Amp	Preamp Gain	Avg Lim	Average Field Strength Limit
Dist	Distance to Antenna	D Corr	Distance Correct to 3 meters	Pk Lim	Peak Field Strength Limit
Read	Analyzer Reading	Avg	Average Field Strength @ 3 m	Avg Mar	Margin vs. Average Limit
AF	Antenna Factor	Peak	Calculated Peak Field Strength	Pk Mar	Margin vs. Peak Limit
CL	Cable Loss	HPF	High Pass Filter		

HARMONICS AND SPURIOUS EMISSIONS (g TURBO MODE)

01/10/04 High Frequency Measurement
 Compliance Certification Services, Morgan Hill Open Field Site

Test Engr: Chin Pang
 Project #: 04U3194-1
 Company: Toshiba
 EUT Descrip.: 802.11b/g Half Size Mini-PCI WLAN Module
 EUT M/N: PA3426U-1MPC
 Test Target: FCC 15.247
 Mode Oper: Tx_g Turbo mode_antenna HTL004, Stand-alone

Test Equipment:

EMCO Horn 1-18GHz
 T73; S/N: 6717 @3m

Pre-amplifier 1-26GHz
 T87 Miteq 924342

Pre-amplifier 26-40GHz

Horn > 18GHz

Limit
 FCC 15.205

Hi Frequency Cables
 2 foot cable
 3 foot cable
 4 foot cable
 12 foot cable

3_Chin
 12_Neelesh

HPF
 HPF_4.0GHz

Reject Filter

Peak Measurements
 RBW=VBW=1MHz

Average Measurements
 RBW=1MHz ; VBW=10Hz

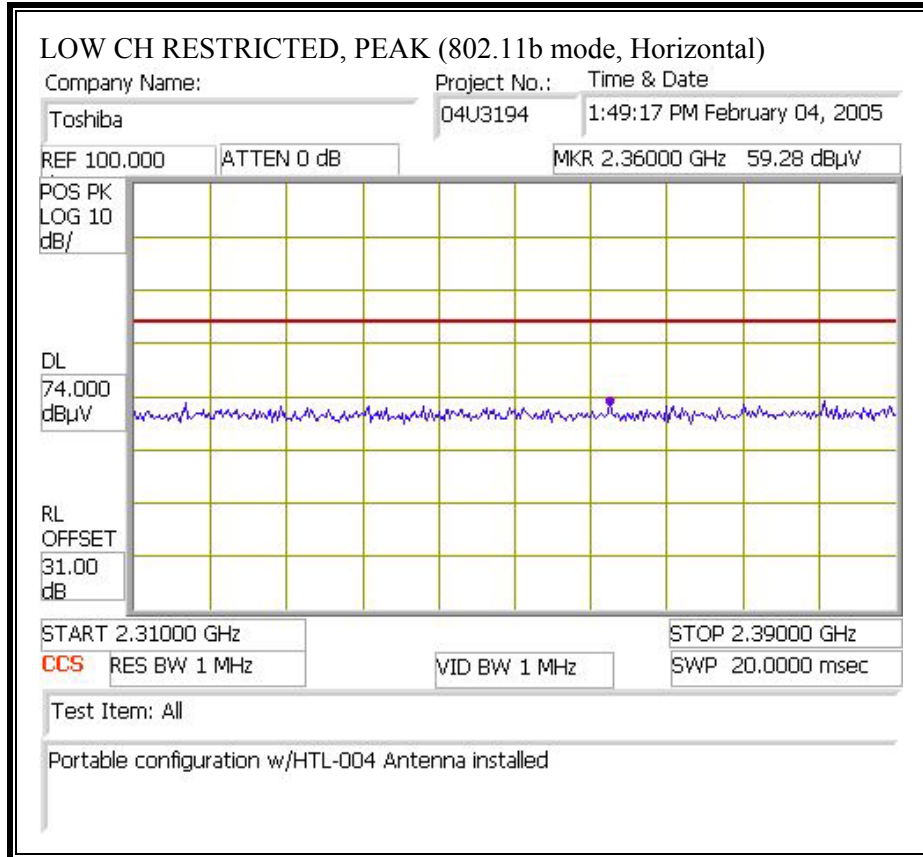
f GHz	Dist (m)	Read Pk dBuV	Read Avg. dBuV	AF dB/m	CL dB	Amp dB	D Corr dB	Filtr dB	Peak dBuV/m	Avg dBuV/m	Pk Lim dBuV/m	Avg Lim dBuV/m	Pk Mar dB	Avg Mar dB	Notes (V/H)
mid ch															
4.874	3.0	56.7	41.8	32.9	3.8	-39.6	0.0	0.6	54.4	39.5	74	54	-19.6	-14.5	V
7.311	3.0	52.8	38.0	35.8	4.9	-40.3	0.0	0.6	53.8	39.0	74	54	-20.2	-15.0	V
4.874	3.0	57.5	43.6	32.9	3.8	-39.6	0.0	0.6	55.2	41.3	74	54	-18.8	-12.7	H
7.311	3.0	54.0	38.0	35.8	4.9	-40.3	0.0	0.6	55.0	39.0	74	54	-19.0	-15.0	H

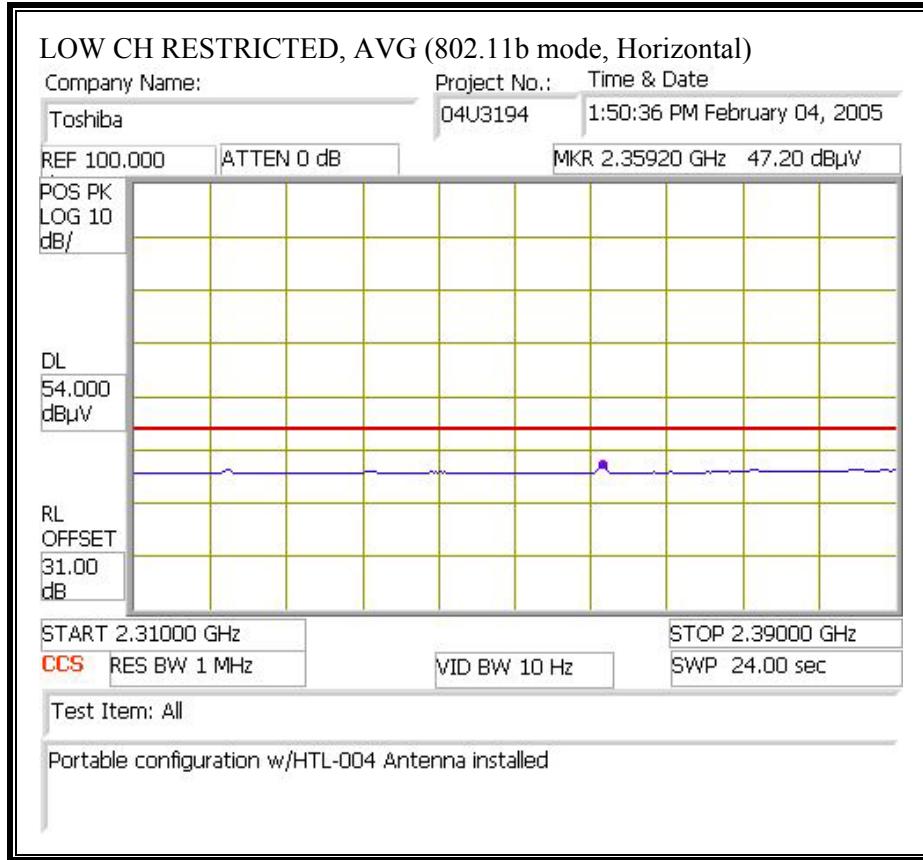
Note: No other emissions were detected above the system noise floor.

f	Measurement Frequency	Amp	Preamp Gain	Avg Lim	Average Field Strength Limit
Dist	Distance to Antenna	D Corr	Distance Correct to 3 meters	Pk Lim	Peak Field Strength Limit
Read	Analyzer Reading	Avg	Average Field Strength @ 3 m	Avg Mar	Margin vs. Average Limit
AF	Antenna Factor	Peak	Calculated Peak Field Strength	Pk Mar	Margin vs. Peak Limit
CL	Cable Loss	HPF	High Pass Filter		

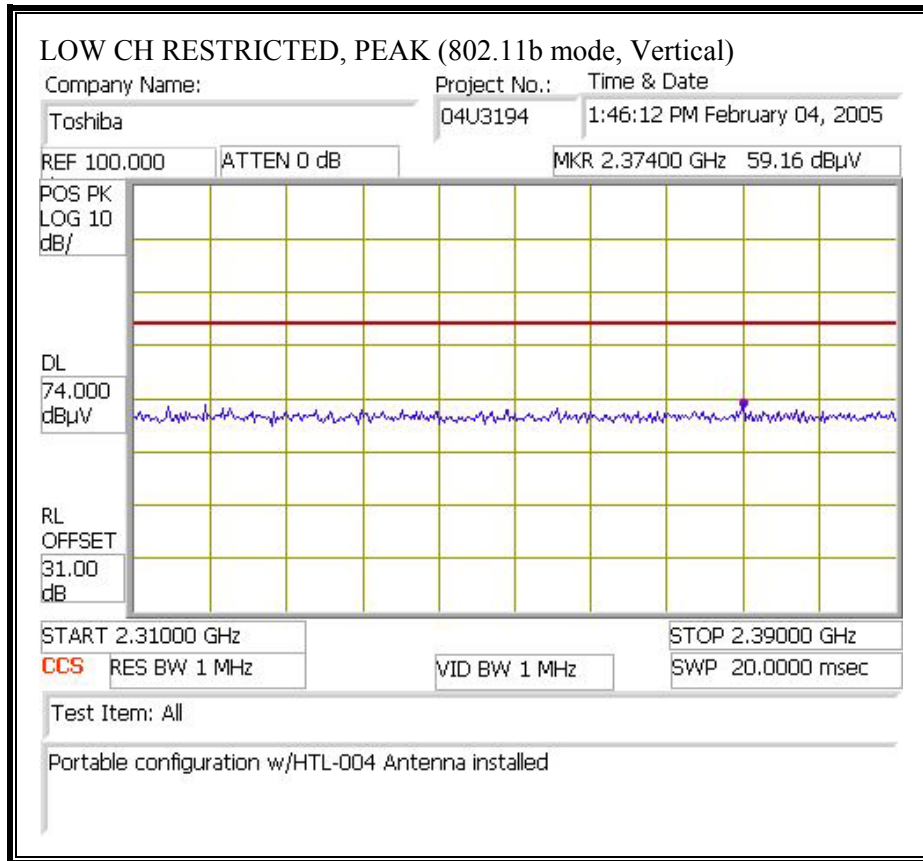
7.2.3.2 PORTABLE CONFIGURATION

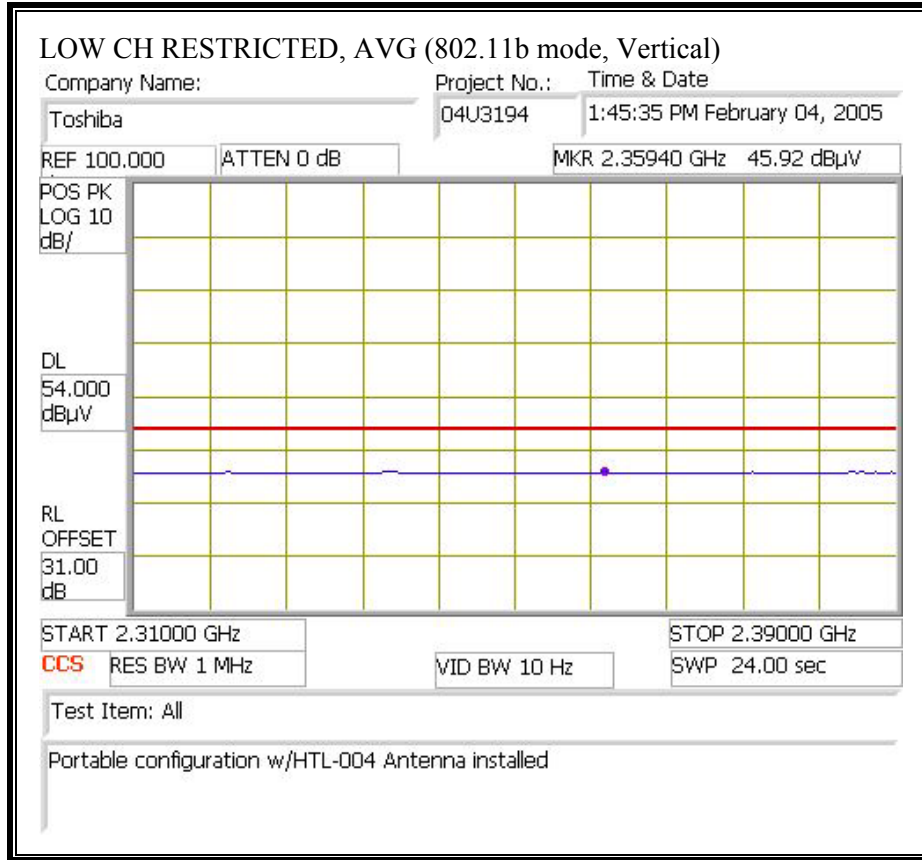
RESTRICTED BANDEDGE (b MODE, LOW CHANNEL, HORIZONTAL)



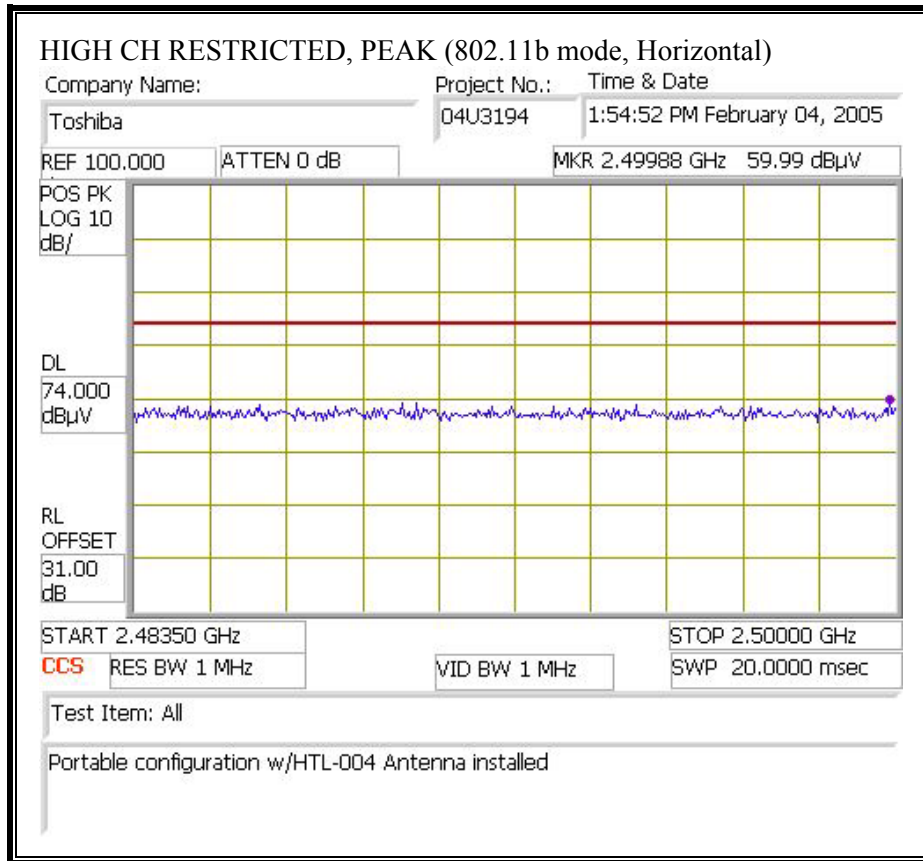


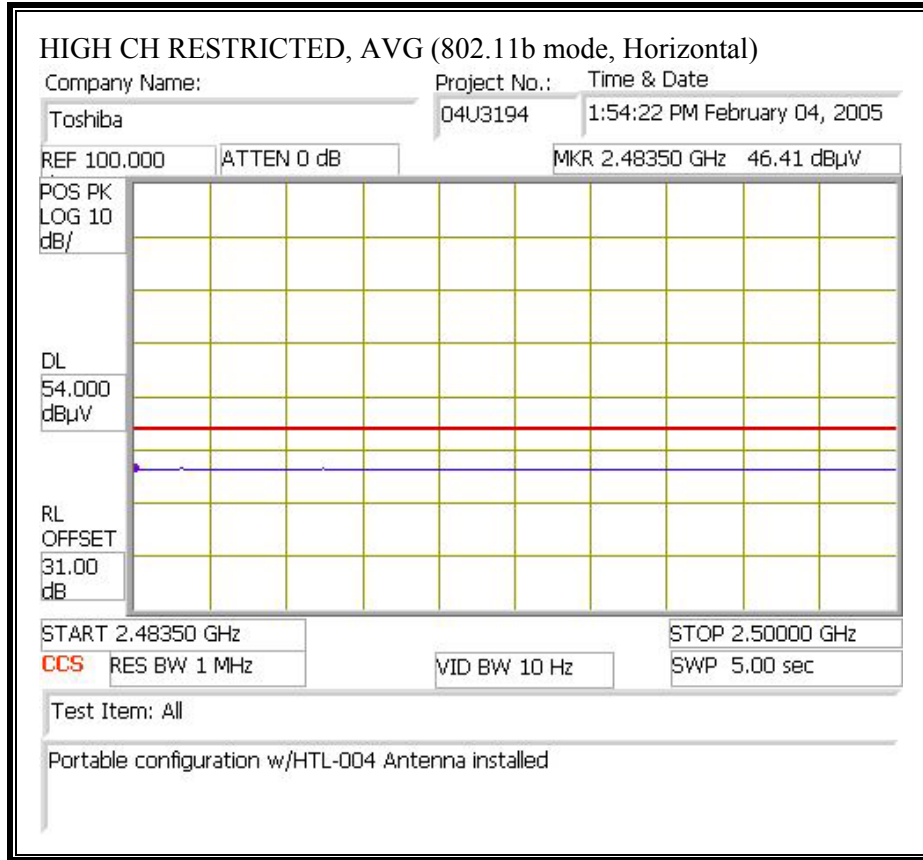
RESTRICTED BANDEDGE (b MODE, LOW CHANNEL, VERTICAL)



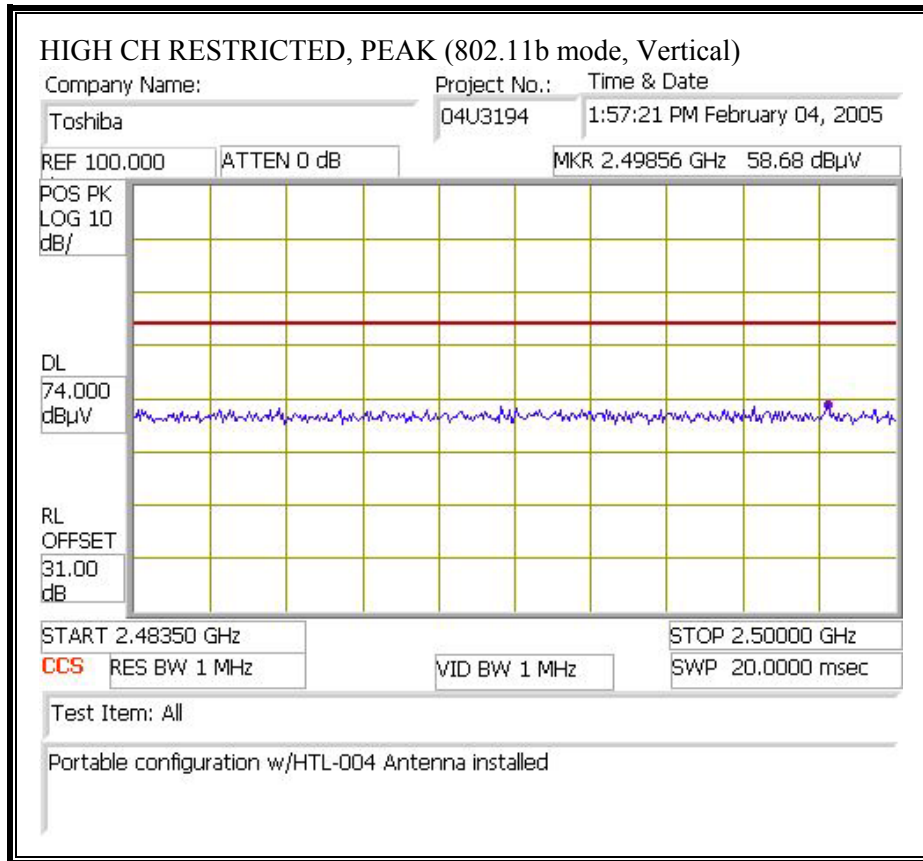


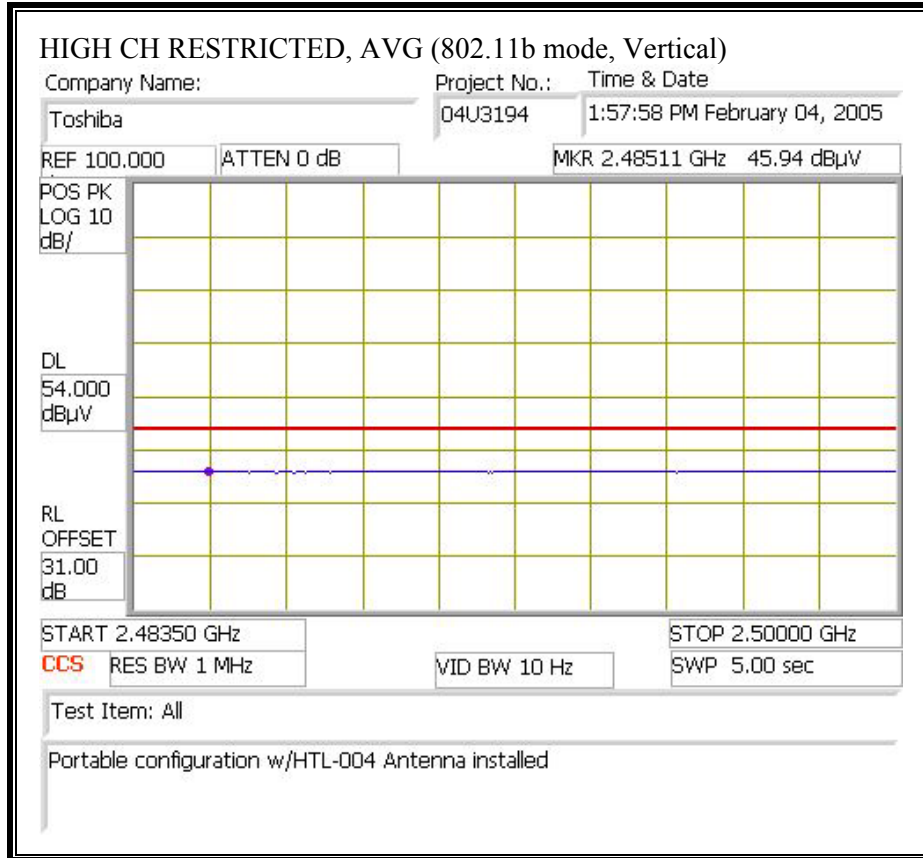
RESTRICTED BANDEDGE (b MODE, HIGH CHANNEL, HORIZONTAL)





RESTRICTED BANDEDGE (b MODE, HIGH CHANNEL, VERTICAL)





HARMONICS AND SPURIOUS EMISSIONS (b MODE)

01/11/04 High Frequency Measurement
 Compliance Certification Services, Morgan Hill Open Field Site

Test Engr: Chun Pang
 Project #: 04U3194-1
 Company: Toshiba
 EUT Descrip.: 802.11b/g Half Size Mini-PCI WLAN Module
 EUT M/N: PA3426U-1MPC
 Test Target: FCC 15.247
 Mode Oper: Tx_b mode_antenna HTL004, Portable

Test Equipment:

EMCO Horn 1-18GHz | Pre-amplifier 1-26GHz | Pre-amplifier 26-40GHz | Horn > 18GHz | Limit
 T73; S/N: 6717 @3m | T87 Miteq 924342 | | | FCC 15.205

Hi Frequency Cables: 2 foot cable | 3 foot cable | 4 foot cable | 12 foot cable
 3_Chin | 12_Neelesh

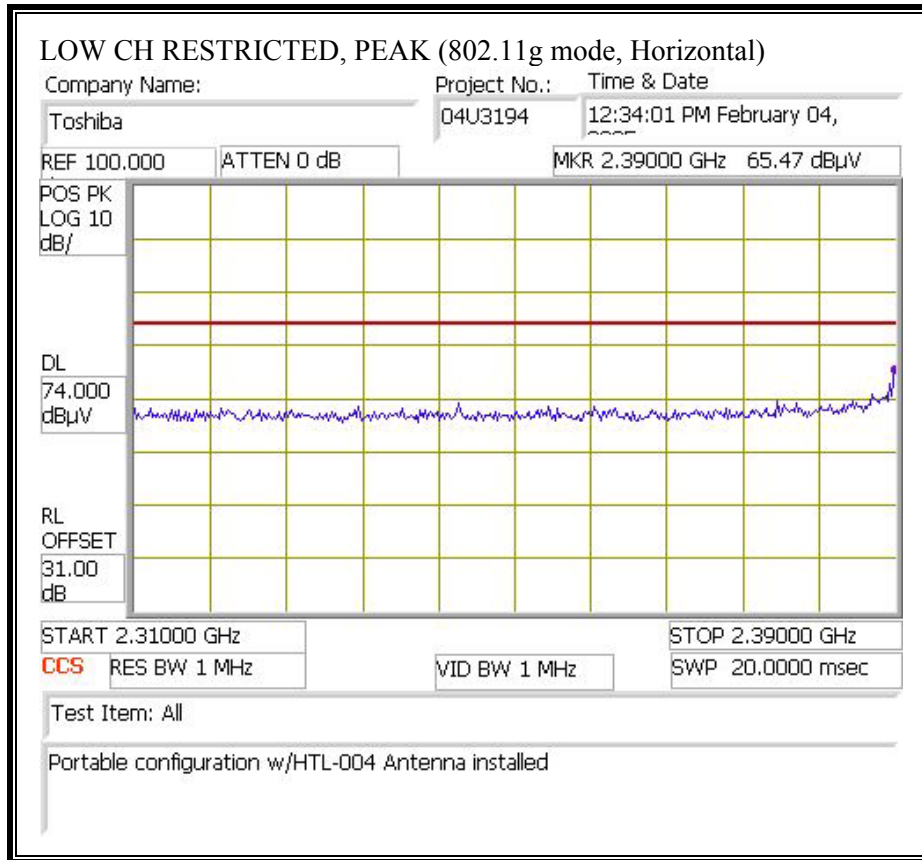
HPF: HPF_4.0GHz | Reject Filter

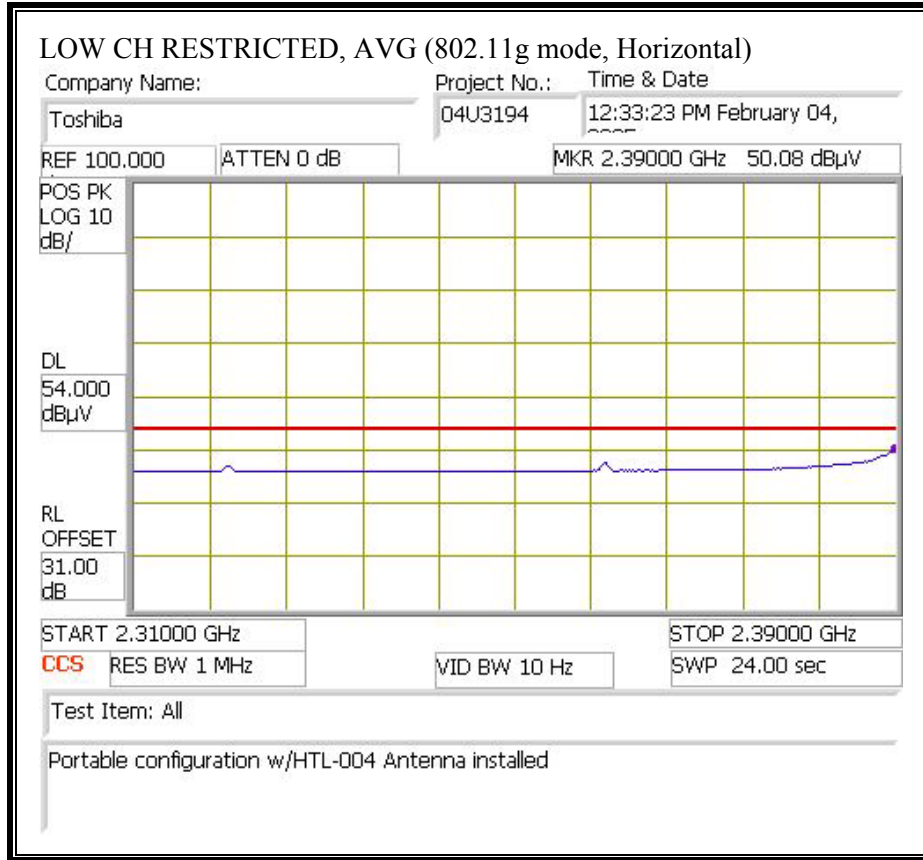
Peak Measurements: REBW=VBW=1MHz
 Average Measurements: REBW=1MHz; VBW=10Hz

f GHz	Dist (m)	Read Pk dBuV	Read Avg dBuV	AF dB/m	CL dB	Amp dB	D Corr dB	Filtr dB	Peak dBuV/m	Avg dBuV/m	Pk Lim dBuV/m	Avg Lim dBuV/m	Pk Mar dB	Avg Mar dB	Notes (V/H)
low ch															
4.824	3.0	54.0	50.3	32.9	3.8	-39.6	0.0	0.6	51.7	48.0	74	54	-22.3	-6.0	V
12.060	3.0	44.0	34.7	38.8	6.5	-39.2	0.0	0.9	51.1	41.8	74	54	-22.9	-12.2	H
4.824	3.0	52.7	47.4	32.9	8.0	-39.6	0.0	0.6	54.6	49.3	74	54	-19.4	-4.7	V
12.060	3.0	45.0	37.9	38.8	6.5	-39.2	0.0	0.9	52.1	45.0	74	54	-21.9	-9.0	H
mid ch															
4.874	3.0	51.8	47.8	32.9	3.8	-39.6	0.0	0.6	49.5	45.5	74	54	-24.5	-8.5	V
7.311	3.0	52.5	46.6	35.8	4.9	-40.3	0.0	0.6	53.5	47.6	74	54	-20.5	-6.4	V
12.180	3.0	43.5	33.2	38.8	6.6	-39.3	0.0	0.9	50.5	40.2	74	54	-23.5	-13.8	V
4.874	3.0	54.0	48.3	32.9	3.8	-39.6	0.0	0.6	51.7	46.0	74	54	-22.3	-8.0	H
7.311	3.0	54.6	48.8	35.8	4.9	-40.3	0.0	0.6	55.6	49.8	74	54	-18.4	-4.2	H
12.180	3.0	44.6	34.6	38.8	6.6	-39.3	0.0	0.9	51.6	41.6	74	54	-22.4	-12.4	H
High Ch															
4.924	3.0	53.0	48.7	33.0	3.8	-39.7	0.0	0.6	50.7	46.4	74	54	-23.3	-7.6	V
7.386	3.0	53.3	46.3	36.0	4.9	-40.3	0.0	0.6	54.5	47.5	74	54	-19.5	-6.5	V
12.310	3.0	42.4	33.0	38.8	6.6	-39.4	0.0	0.9	49.3	39.9	74	54	-24.7	-14.1	V
4.924	3.0	52.3	48.0	33.0	3.8	-39.7	0.0	0.6	50.0	45.7	74	54	-24.0	-8.3	H
7.386	3.0	53.8	46.3	36.0	4.9	-40.3	0.0	0.6	55.0	47.5	74	54	-19.0	-6.5	H
12.310	3.0	45.3	36.4	38.8	6.6	-39.4	0.0	0.9	52.2	43.3	74	54	-21.8	-10.7	H
Note: No other emissions were detected above the system noise floor.															

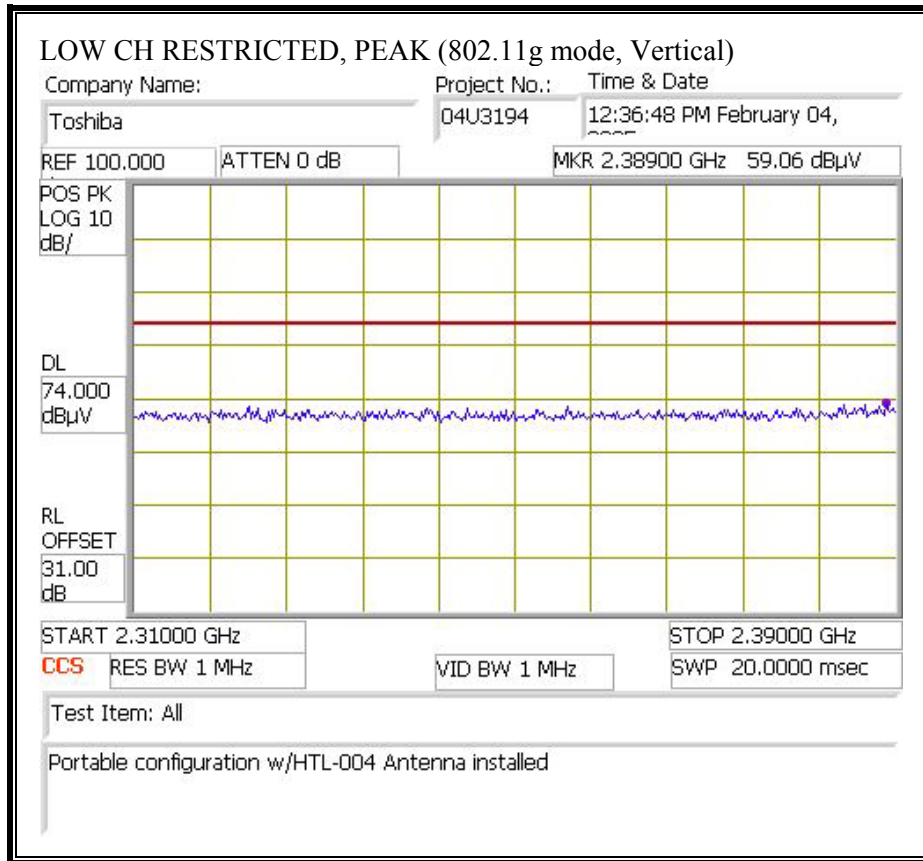
f Measurement Frequency Amp Preamp Gain Avg Lim Average Field Strength Limit
 Dist Distance to Antenna D Corr Distance Correct to 3 meters Pk Lim Peak Field Strength Limit
 Read Analyzer Reading Avg Average Field Strength @ 3 m Avg Mar Margin vs. Average Limit
 AF Antenna Factor Peak Calculated Peak Field Strength Pk Mar Margin vs. Peak Limit
 CL Cable Loss HPF High Pass Filter

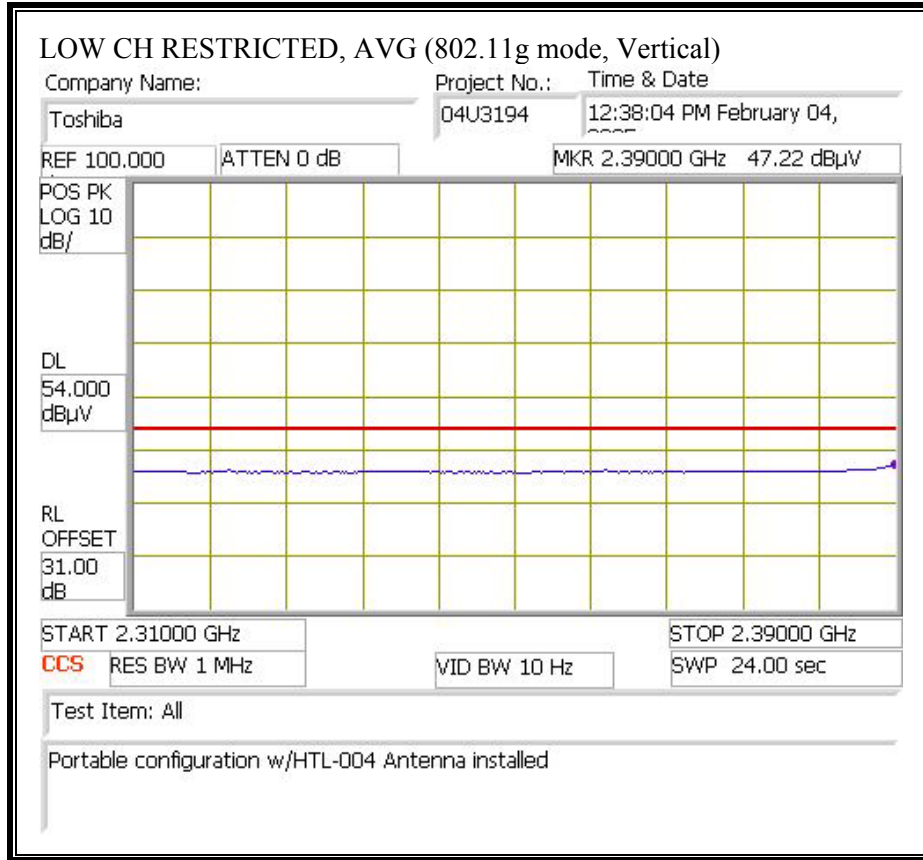
RESTRICTED BANDEDGE (g MODE, LOW CHANNEL, HORIZONTAL)



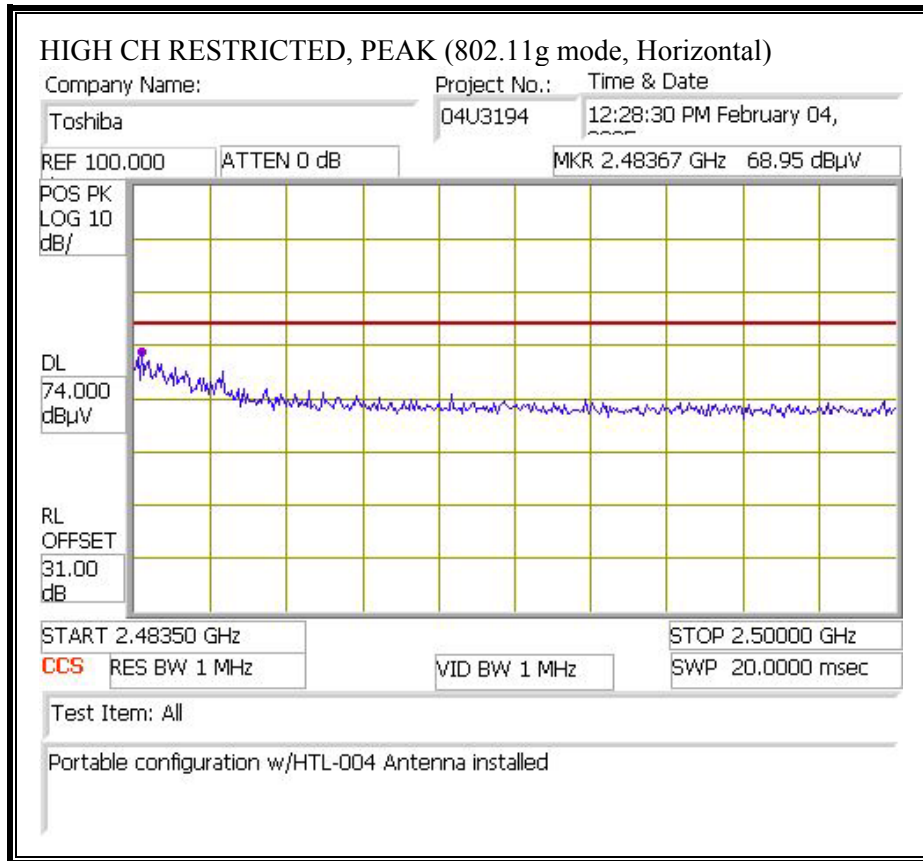


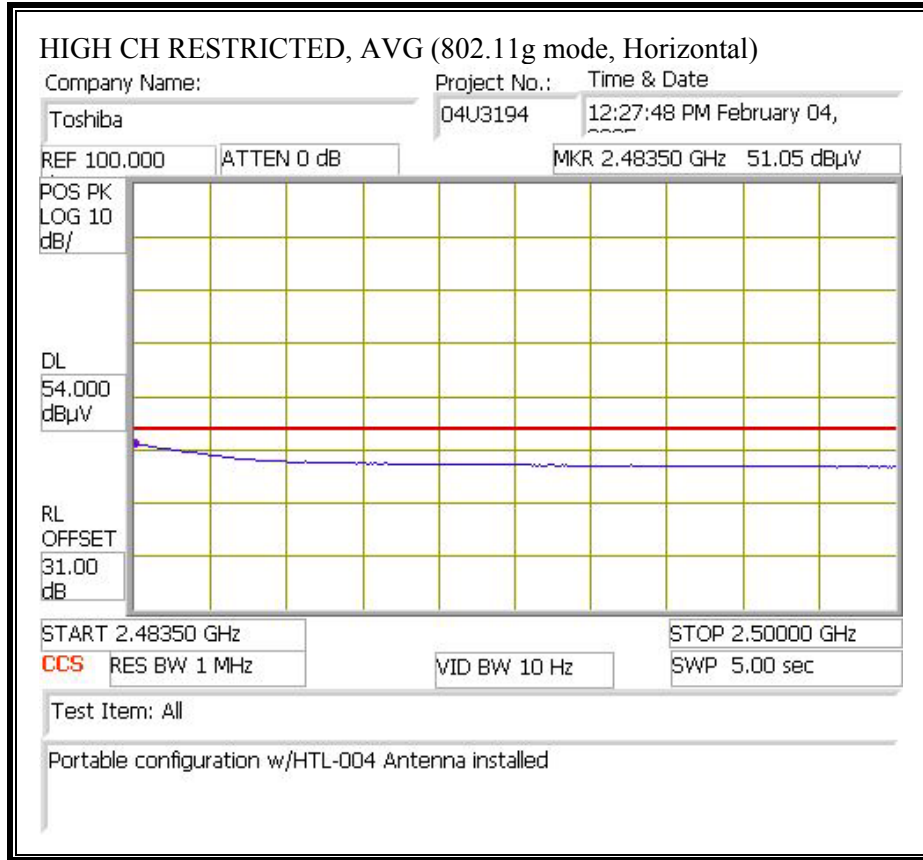
RESTRICTED BANDEDGE (g MODE, LOW CHANNEL, VERTICAL)



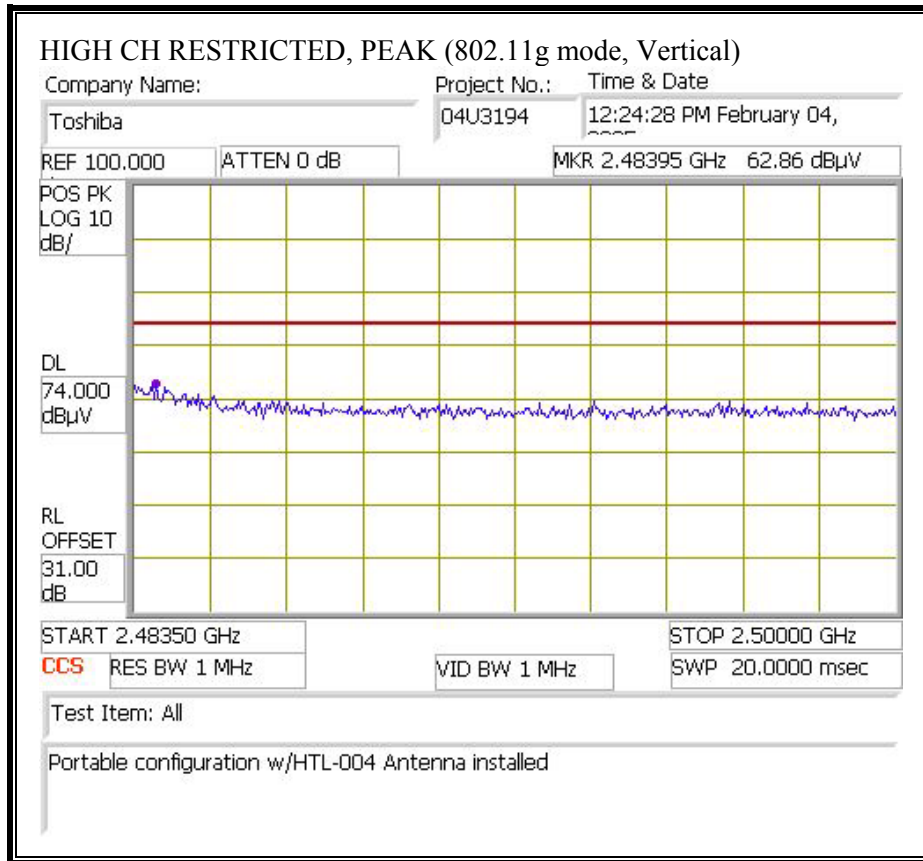


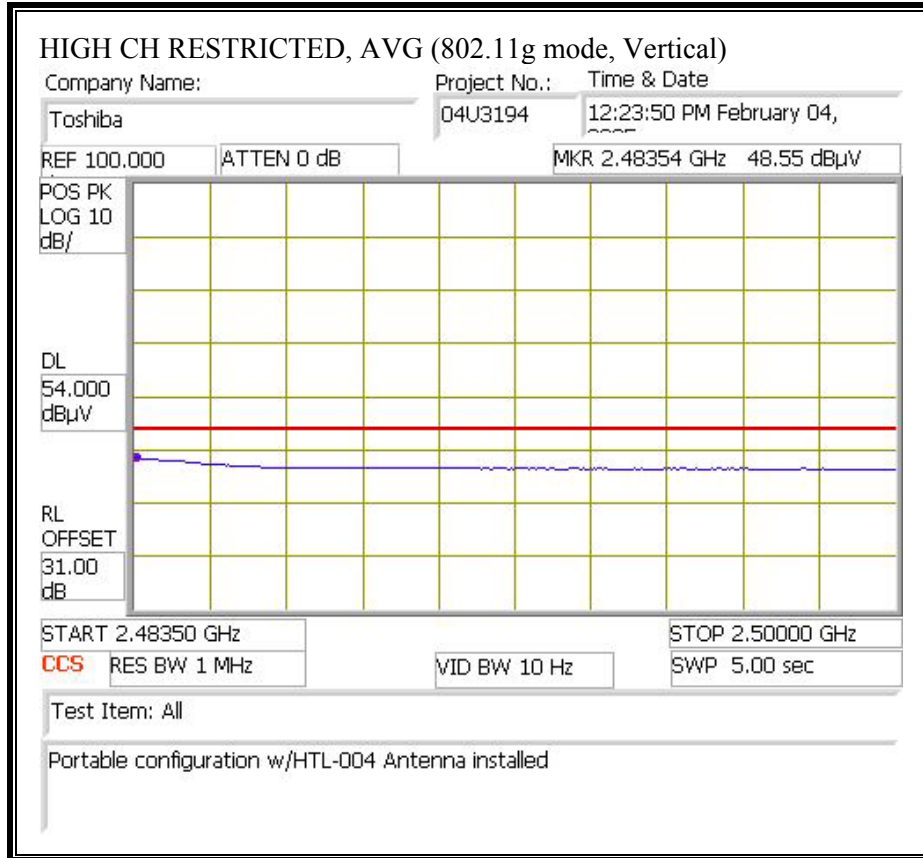
RESTRICTED BANDEDGE (g MODE, HIGH CHANNEL, HORIZONTAL)





RESTRICTED BANDEDGE (g MODE, HIGH CHANNEL, VERTICAL)





HARMONICS AND SPURIOUS EMISSIONS (g MODE)

02/02/05 High Frequency Measurement
 Compliance Certification Services, Morgan Hill Open Field Site

Test Engr: Chin Pang
 Project #: 04U3194-1
 Company: Toshiba
 EUT Descrip.: 802.11b/g Half Size Mini-PCI WLAN Module
 EUT M/N: PA3426U-1MPC
 Test Target: FCC 15.247
 Mode Oper: Tx_g_mode_antenna HTL004, Portable

Test Equipment:

EMCO Horn 1-18GHz: T73; S/N: 6717 @3m
 Pre-amplifier 1-26GHz: T87 Miteq 924342
 Pre-amplifier 26-40GHz: [Empty]
 Horn > 18GHz: [Empty]
 Limit: FCC 15.205

Hi Frequency Cables:
 2 foot cable: [Empty]
 3 foot cable: 3_Chin
 4 foot cable: [Empty]
 12 foot cable: 12_Neelesh

HPF: HPF_4.0GHz
 Reject Filter: [Empty]

Peak Measurements: RBW=VBW=1MHz
 Average Measurements: RBW=1MHz; VBW=10Hz

f GHz	Dist (m)	Read Pk dBuV	Read Avg dBuV	AF dB/m	CL dB	Amp dB	D Corr dB	Fldr dB	Peak dBuV/m	Avg dBuV/m	Pk Lim dBuV/m	Avg Lim dBuV/m	Pk Mar dB	Avg Mar dB	Notes (V/H)
Low Ch															
4.824	3.0	48.8	38.6	32.9	3.8	-39.6	0.0	0.6	46.5	36.3	74	54	-27.5	-17.7	V
12.060	3.0	42.5	34.0	38.8	6.5	-39.2	0.0	0.9	49.6	41.1	74	54	-24.4	-12.9	H
4.824	3.0	52.0	41.0	32.9	3.8	-39.6	0.0	0.6	49.7	38.7	74	54	-24.3	-15.3	V
12.060	3.0	44.3	34.6	38.8	6.5	-39.2	0.0	0.9	51.4	41.7	74	54	-22.6	-12.3	H
Mid Ch															
4.874	3.0	56.0	42.6	32.9	3.8	-39.6	0.0	0.6	53.7	40.3	74	54	-20.3	-13.7	V
7.311	3.0	56.2	42.4	35.8	4.9	-40.3	0.0	0.6	57.2	43.4	74	54	-16.8	-10.6	V
12.180	3.0	42.3	34.0	38.8	6.6	-39.3	0.0	0.9	49.3	41.0	74	54	-24.7	-13.0	V
4.874	3.0	52.5	40.4	32.9	3.8	-39.6	0.0	0.6	50.2	38.1	74	54	-23.8	-15.9	H
7.311	3.0	55.3	42.3	35.8	4.9	-40.3	0.0	0.6	56.3	43.3	74	54	-17.7	-10.7	H
12.180	3.0	43.1	34.0	38.8	6.6	-39.3	0.0	0.9	50.1	41.0	74	54	-23.9	-13.0	H
High Ch															
4.924	3.0	55.2	42.3	33.0	3.8	-39.7	0.0	0.6	52.9	40.0	74	54	-21.1	-14.0	V
7.386	3.0	53.6	41.2	36.0	4.9	-40.3	0.0	0.6	54.8	42.4	74	54	-19.2	-11.6	V
12.310	3.0	43.5	34.3	38.8	6.6	-39.4	0.0	0.9	50.4	41.2	74	54	-23.6	-12.8	V
4.924	3.0	48.0	37.3	33.0	3.8	-39.7	0.0	0.6	45.7	35.0	74	54	-28.3	-19.0	H
7.386	3.0	49.5	38.0	36.0	4.9	-40.3	0.0	0.6	50.7	39.2	74	54	-23.3	-14.8	H
12.310	3.0	43.0	33.6	38.8	6.6	-39.4	0.0	0.9	49.9	40.5	74	54	-24.1	-13.5	H
Note: No other emissions were detected above the system noise floor.															

f Measurement Frequency Amp Preamp Gain Avg Lim Average Field Strength Limit
 Dist Distance to Antenna D Corr Distance Correct to 3 meters Pk Lim Peak Field Strength Limit
 Read Analyzer Reading Avg Average Field Strength @ 3 m Avg Mar Margin vs. Average Limit
 AF Antenna Factor Peak Calculated Peak Field Strength Pk Mar Margin vs. Peak Limit
 CL Cable Loss HPF High Pass Filter

7.2.4 CO-LOCATED TRANSMITTER RADIATED EMISSIONS ABOVE 1 GHz, WITH ANTENNA HTL017 IN FIREBOLT

Worst-case configurations are determined as:

Lower bandedge: WLAN in g mode at low channel and Bluetooth at low channel;

Upper bandedge: WLAN in g mode at high channel and Bluetooth at high channel;

Harmonics and spurious emissions: WLAN in g mode at mid channel and Bluetooth at mid channel.

7.2.4.1 STAND-ALONE CONFIGURATION, WITH BLUETOOTH BC04

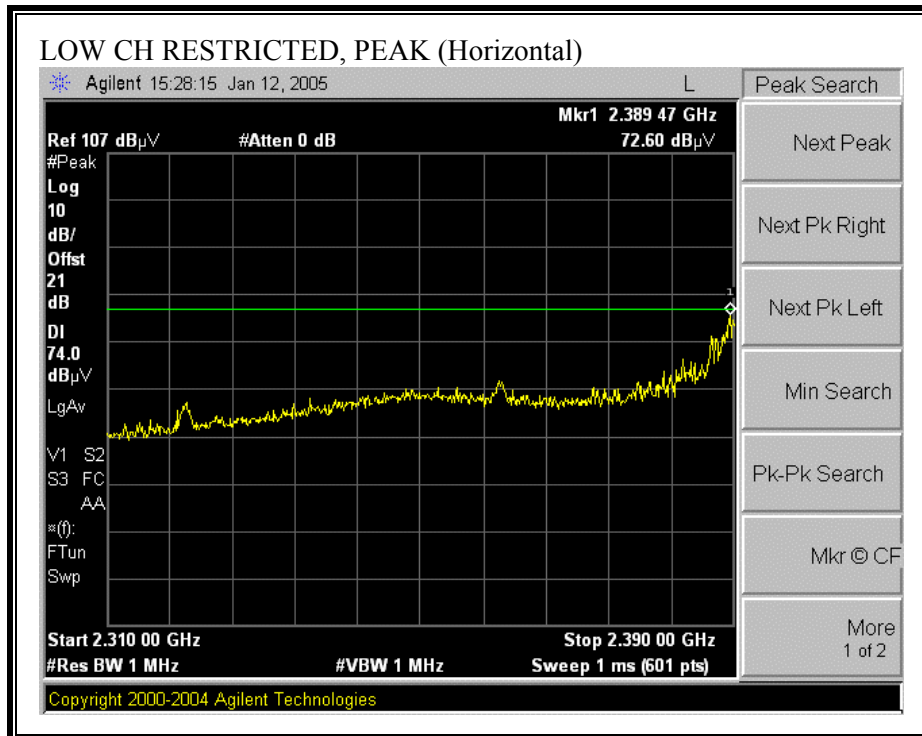
Not applicable. The BT has no extended card to use to be tested for this configuration. Please see 7.2.4.2 for reference.

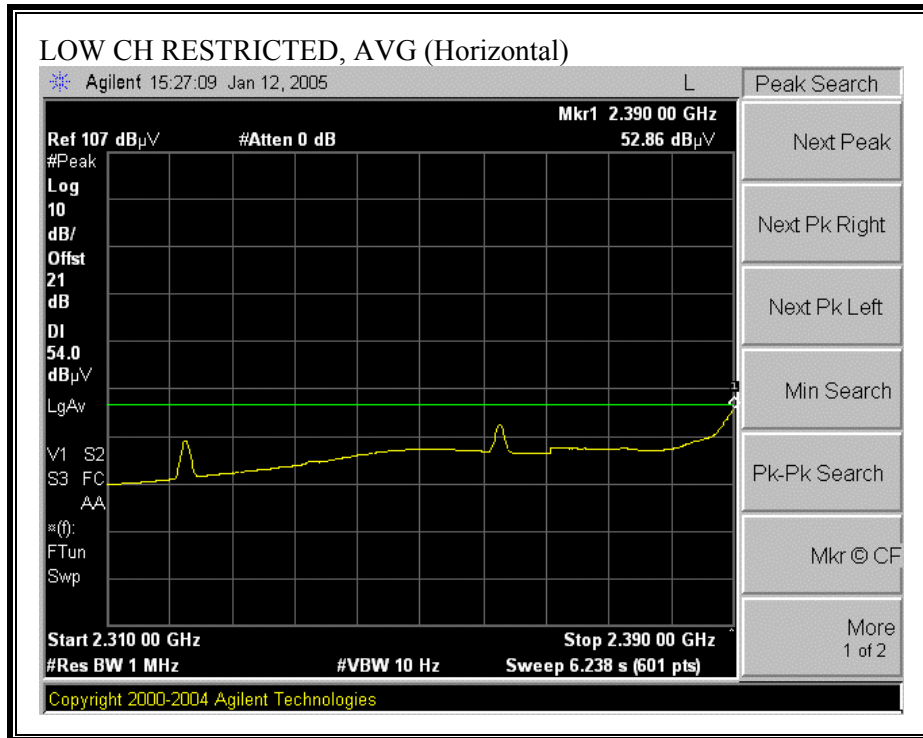
7.2.4.2 MOBILE CONFIGURATION, WITH BLUETOOTH BC04

No non-compliance noted:

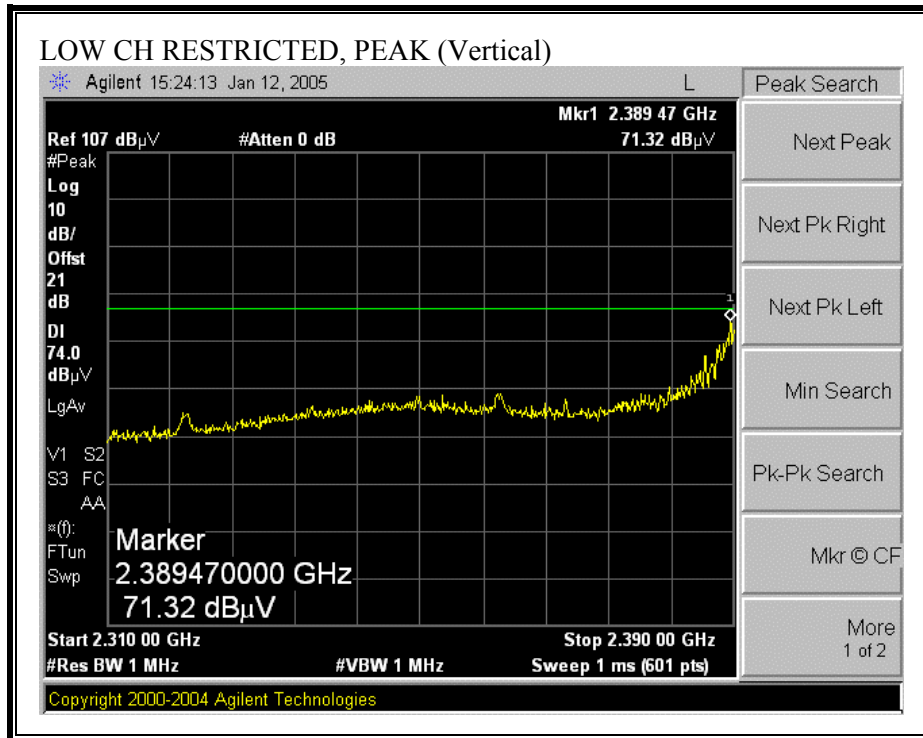
The dominant transmitter is the WLAN and the non-dominant transmitter is the Bluetooth.

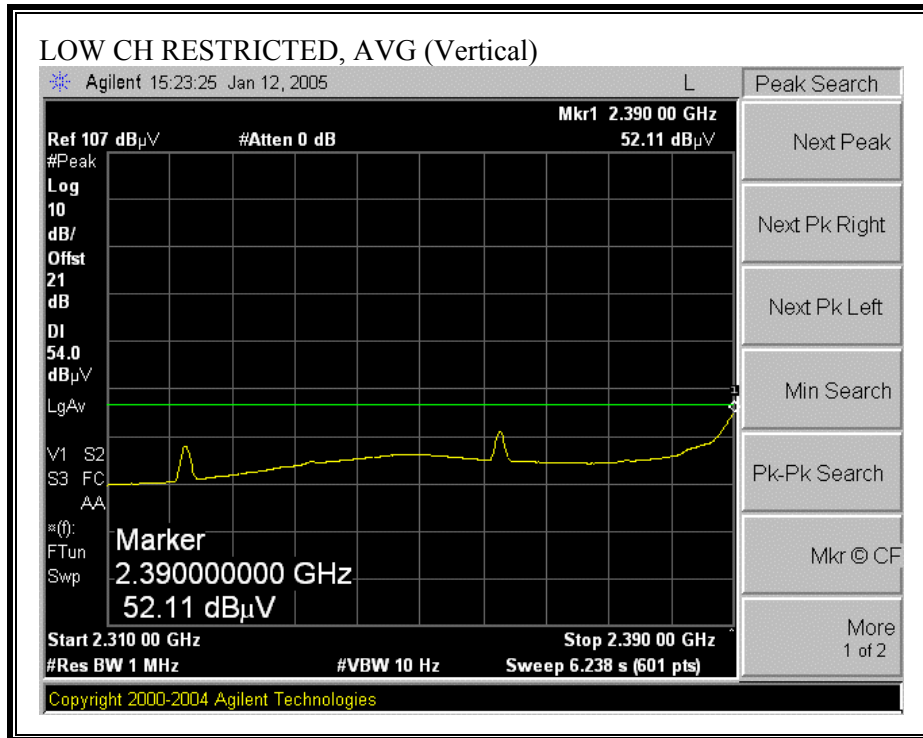
WORST-CASE RESTRICTED BANDEDGE (LOW CHANNEL, HORIZONTAL)



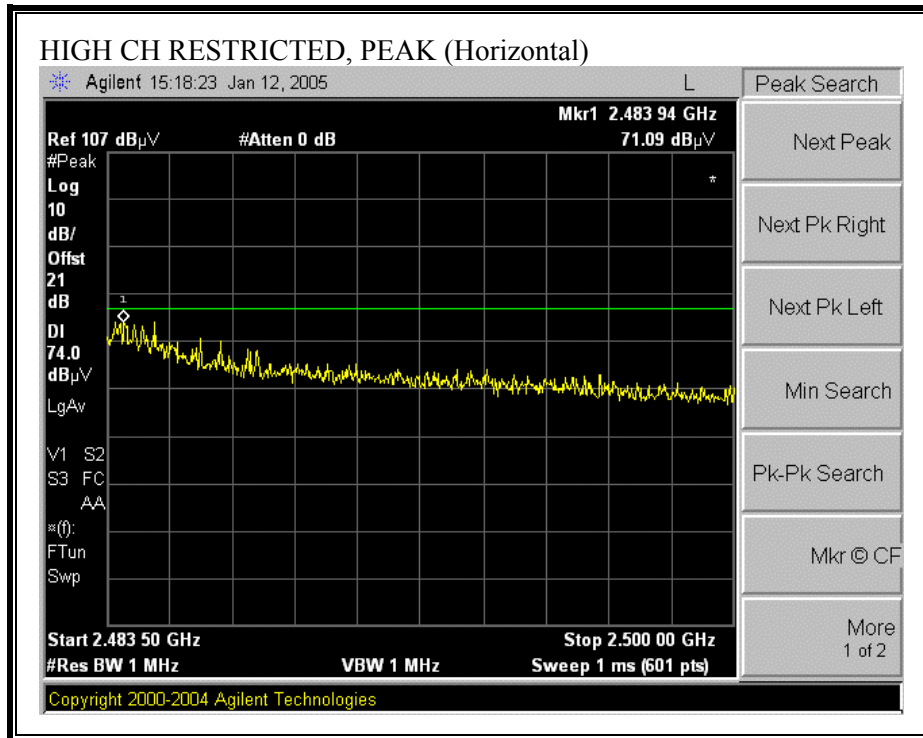


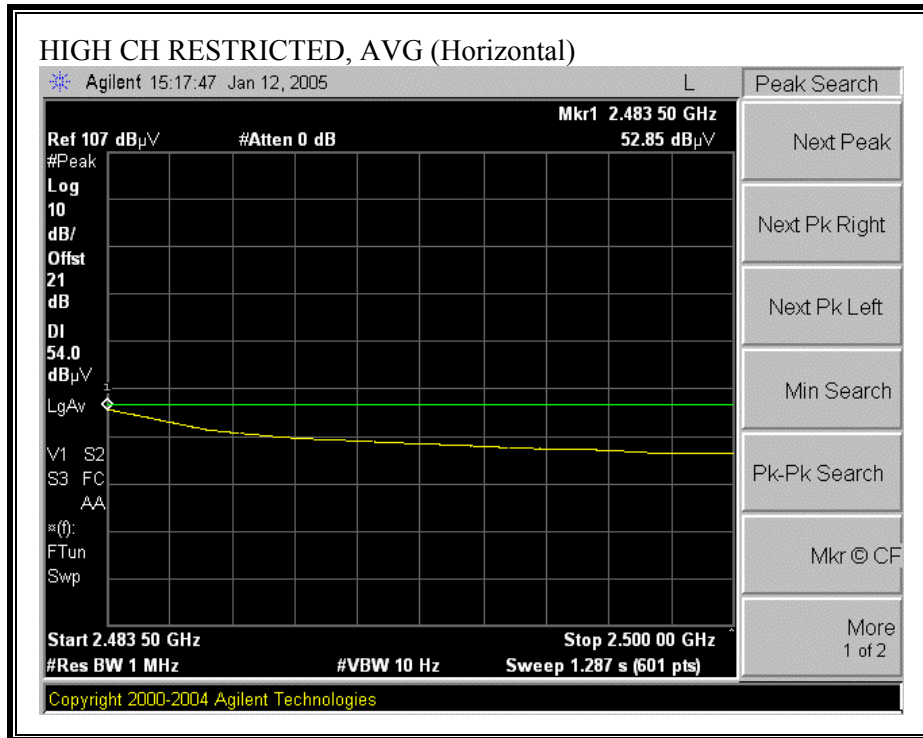
WORST-CASE RESTRICTED BANDEDGE (LOW CHANNEL, VERTICAL)



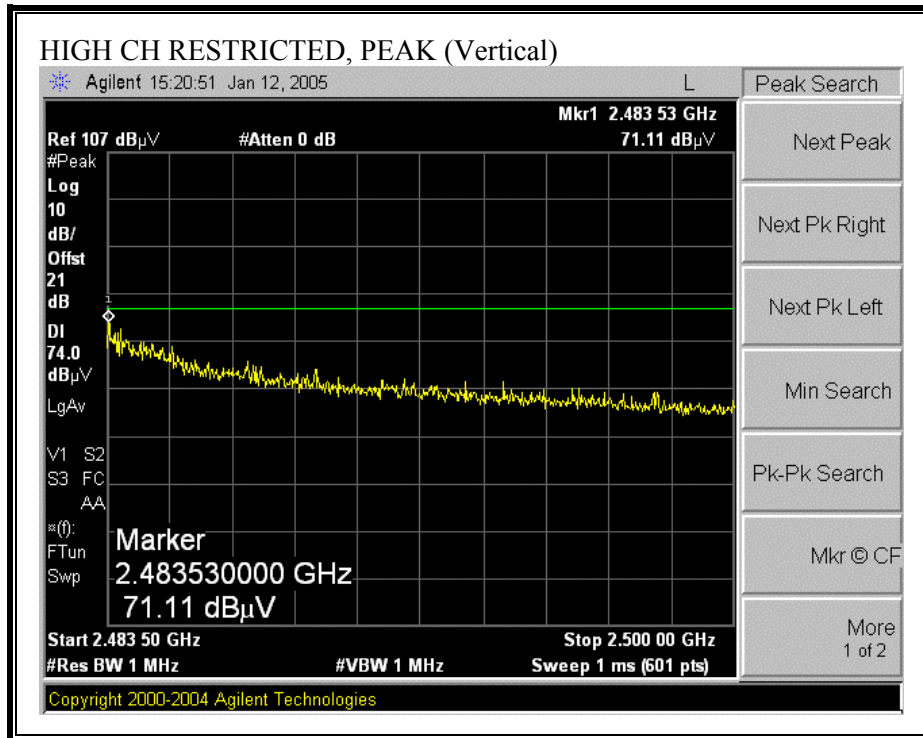


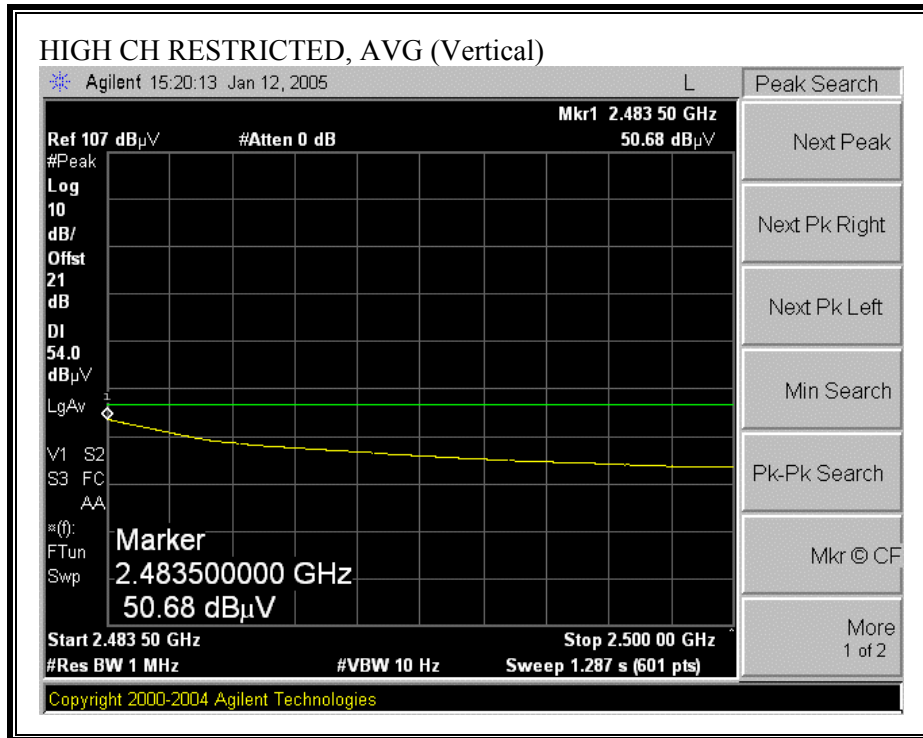
WORST-CASE RESTRICTED BANDEDGE (HIGH CHANNEL, HORIZONTAL)





WORST-CASE RESTRICTED BANDEDGE (HIGH CHANNEL, VERTICAL)





WORST-CASE HARMONICS AND SPURIOUS EMISSIONS

02/03/05 High Frequency Measurement
 Compliance Certification Services, Morgan Hill Open Field Site

Test Engr: Chin Pang
 Project #: 04U3194-1
 Company: Toshiba
 EUT Descr.: 802.11b/g Half Size Mini-PCI WLAN Module
 EUT M/N: PA3426U-1MPC
 Test Target: FCC 15.247
 Mode Oper: Tx_g mode_Antenna HTL017 WLAN and Bluetooth BC04 Co-location (Worst Case), Mobile

Test Equipment:

EMCO Horn 1-18GHz: T73; S/N: 6717 @3m
 Pre-amplifier 1-26GHz: T87 Miteq 924342
 Pre-amplifier 26-40GHz:
 Horn > 18GHz:
 Limit: FCC 15.205

Hi Frequency Cables: 2 foot cable, 3 foot cable (3_Chin), 4 foot cable, 12 foot cable (12_Neelesh)
 HPF: HPF_4.0GHz
 Reject Filter:
 Peak Measurements: RBW=VBW=1MHz
 Average Measurements: RBW=1MHz, VBW=10Hz

f GHz	Dist (m)	Read Pk dBuV	Read Avg dBuV	AF dB/m	CL dB	Amp dB	D Corr dB	Filtr dB	Peak dBuV/m	Avg dBuV/m	Pk Lim dBuV/m	Avg Lim dBuV/m	Pk Mar dB	Avg Mar dB	Notes (V/H)
Mid Ch															
4.874	3.0	45.0	34.6	32.9	3.8	-39.6	0.0	0.6	42.7	32.3	74	54	-31.3	-21.7	V
7.311	3.0	55.8	43.0	35.8	4.9	-40.3	0.0	0.6	56.8	44.0	74	54	-17.2	-10.0	V
12.185	3.0	43.2	32.8	38.8	6.6	-39.3	0.0	0.9	50.2	39.8	74	54	-23.8	-14.2	V
4.874	3.0	44.8	34.0	32.9	3.8	-39.6	0.0	0.6	42.5	31.7	74	54	-31.5	-22.3	H
7.311	3.0	49.0	38.3	35.8	4.9	-40.3	0.0	0.6	50.0	39.3	74	54	-24.0	-14.7	H
12.185	3.0	40.0	32.0	38.8	6.6	-39.3	0.0	0.9	47.0	39.0	74	54	-27.0	-15.0	H

Note: No other emissions were detected above the system noise floor.

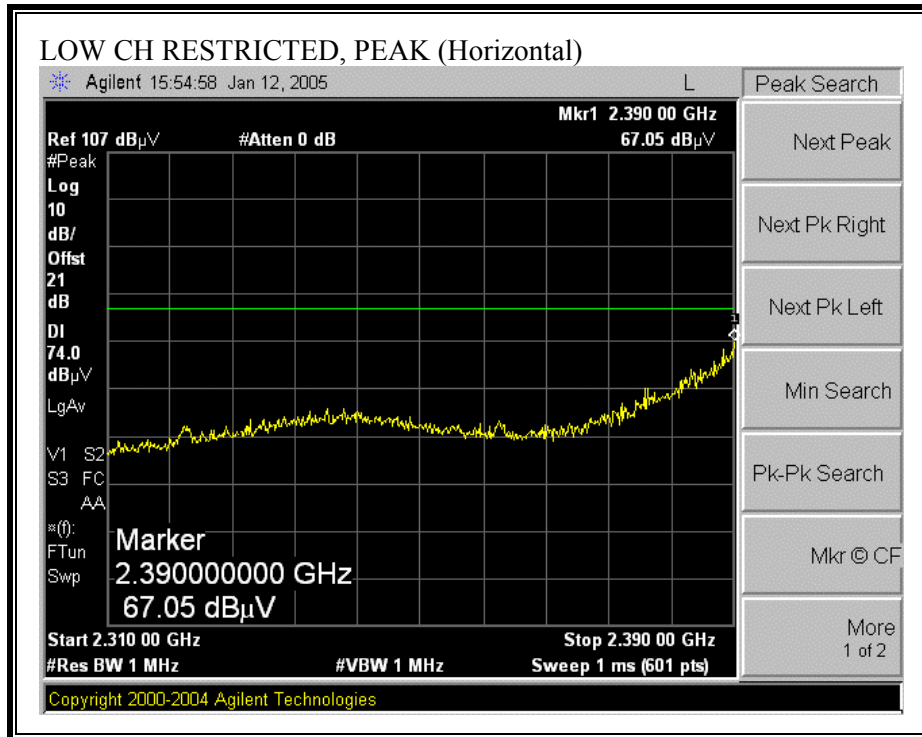
f Measurement Frequency Amp Preamp Gain Avg Lim Average Field Strength Limit
 Dist Distance to Antenna D Corr Distance Correct to 3 meters Pk Lim Peak Field Strength Limit
 Read Analyzer Reading Avg Average Field Strength @ 3 m Avg Mar Margin vs. Average Limit
 AF Antenna Factor Peak Calculated Peak Field Strength Pk Mar Margin vs. Peak Limit
 CL Cable Loss HPF High Pass Filter

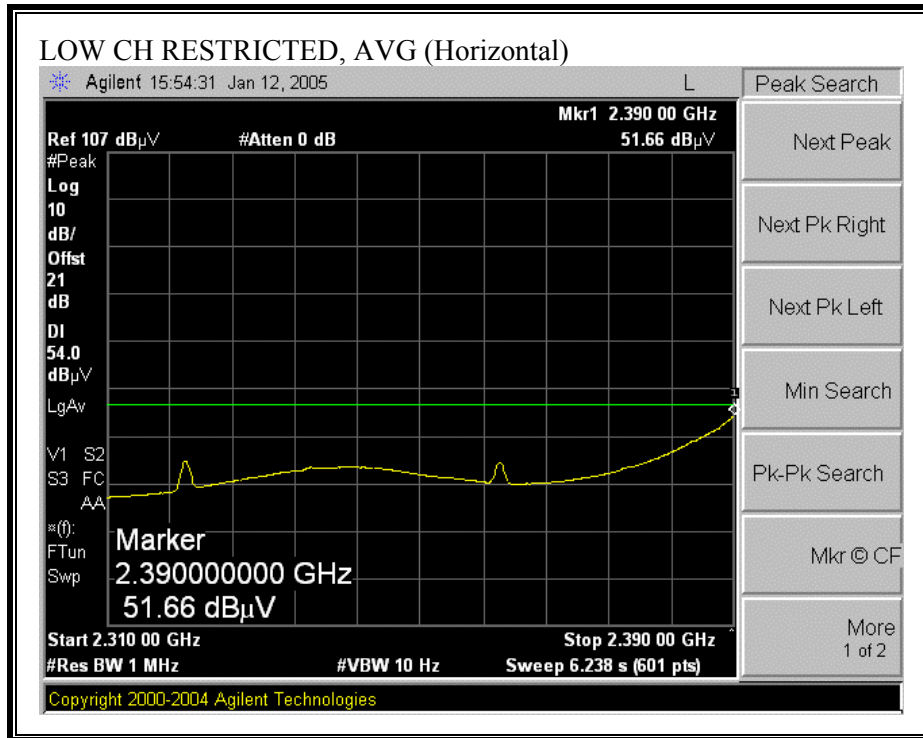
7.2.4.3 PORTABLE CONFIGURATION, WITH BLUETOOTH BC04

No non-compliance noted:

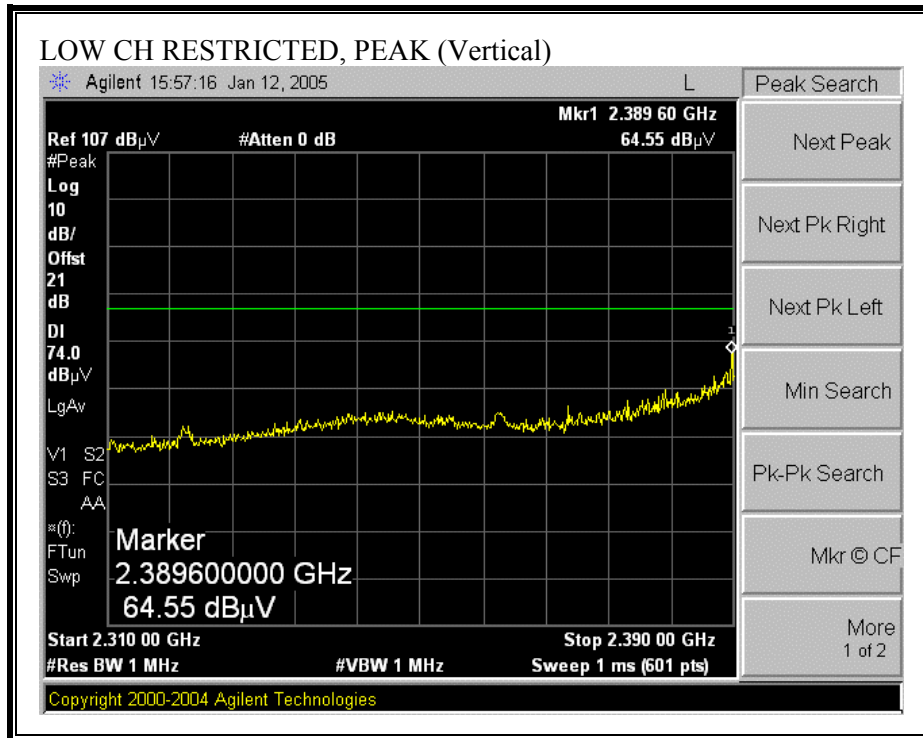
The dominant transmitter is the WLAN and the non-dominant transmitter is the Bluetooth

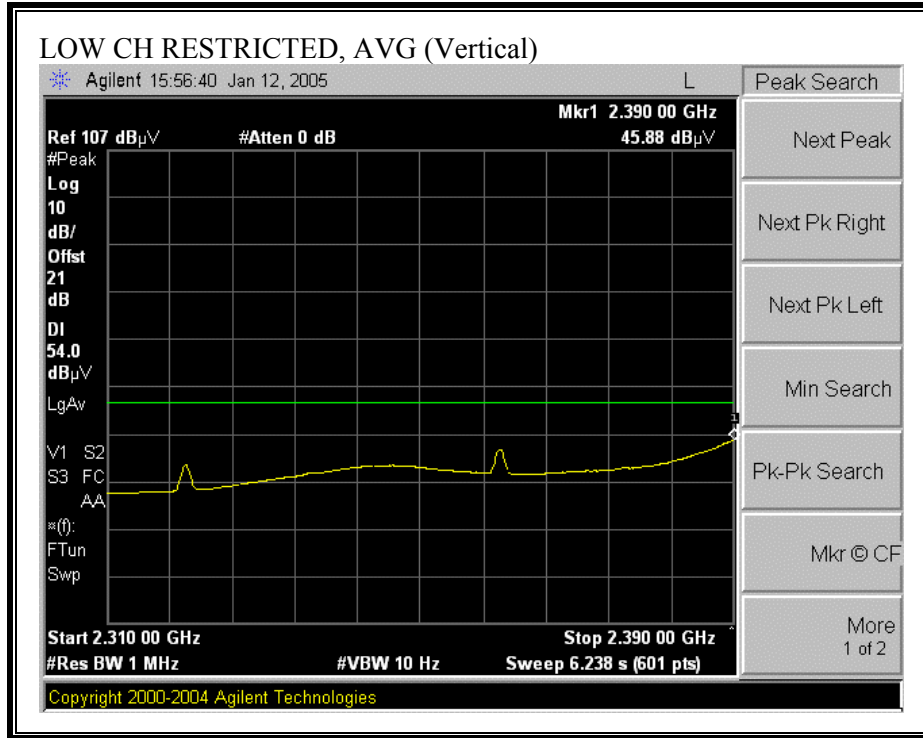
WORST-CASE RESTRICTED BANDEDGE (LOW CHANNEL, HORIZONTAL)



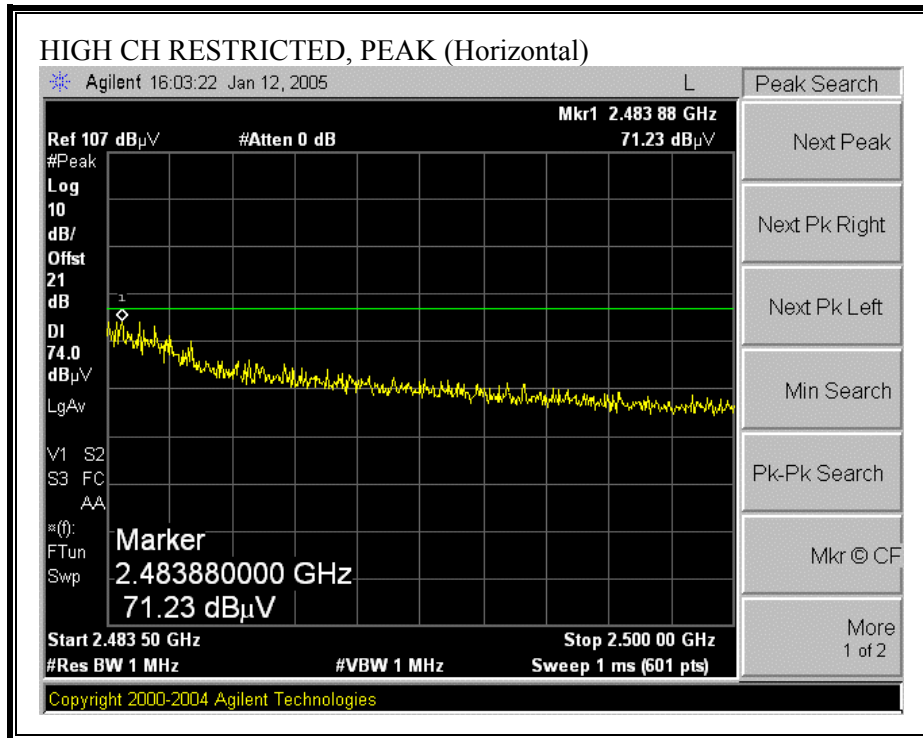


WORST-CASE RESTRICTED BANDEDGE (LOW CHANNEL, VERTICAL)

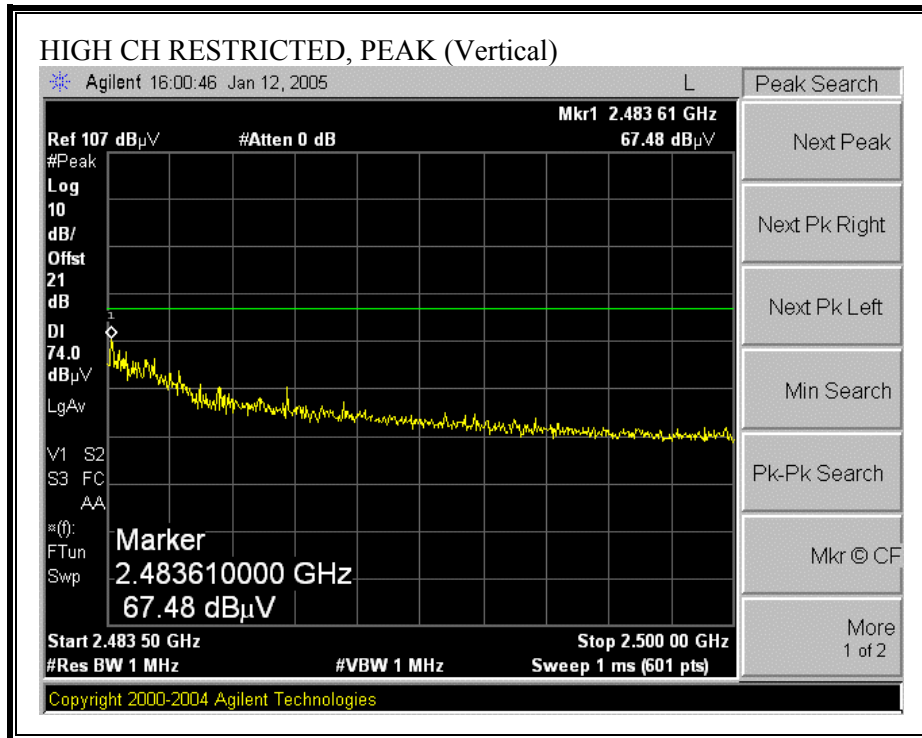


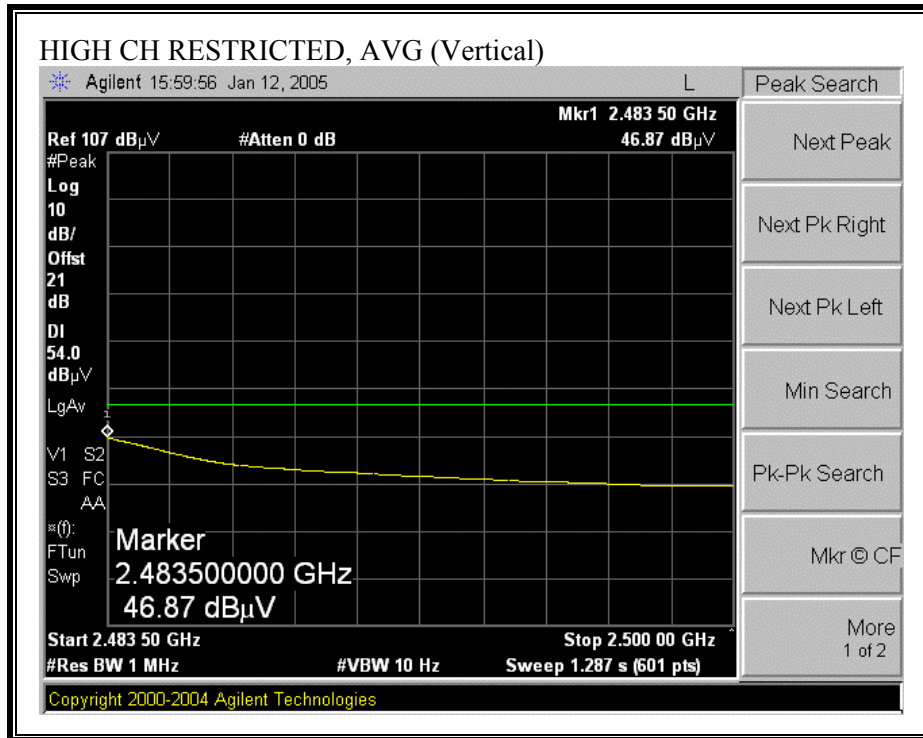


WORST-CASE RESTRICTED BANDEDGE (HIGH CHANNEL, HORIZONTAL)



WORST-CASE RESTRICTED BANDEDGE (HIGH CHANNEL, VERTICAL)





WORST-CASE HARMONICS AND SPURIOUS EMISSIONS

02/02/05 High Frequency Measurement
 Compliance Certification Services, Morgan Hill Open Field Site

Test Engr: Chin Pang
 Project #: 04U3194-1
 Company: Toshiba
 EUT Descrip.: 802.11b/g Half Size Mini-PCI WLAN Module
 EUT M/N: PA3426U-1MPC
 Test Target: FCC 15.247
 Mode Oper: Tx_g mode_Antenna HTL017, WLAN and Bluetooth, BC04 Co-location (Worst Case), portable

Test Equipment:

EMCO Horn 1-18GHz T73; S/N: 6717 @3m	Pre-amplifer 1-26GHz T87 Miteq 924342	Pre-amplifer 26-40GHz	Horn > 18GHz	Limit FCC 15.205
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Hi Frequency Cables

2 foot cable	3 foot cable 3_Chin	4 foot cable	12 foot cable 12_Neelesh	HPF HPF_4.0GHz	Reject Filter
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Peak Measurements
 RBW=VBW=1MHz
 Average Measurements
 RBW=1MHz , VBW=10Hz

f GHz	Dist (m)	Read Pk dBuV	Read Avg. dBuV	AF dB/m	CL dB	Amp dB	D Corr dB	Filtr dB	Peak dBuV/m	Avg dBuV/m	Pk Lim dBuV/m	Avg Lim dBuV/m	Pk Mar dB	Avg Mar dB	Notes (V/H)
Mid Ch															
4.874	3.0	45.3	34.0	32.9	3.8	-39.6	0.0	0.6	43.0	31.7	74	54	-31.0	-22.3	V
7.311	3.0	53.6	42.0	35.8	4.9	-40.3	0.0	0.6	54.6	43.0	74	54	-19.4	-11.0	V
12.185	3.0	40.0	31.6	38.8	6.6	-39.3	0.0	0.9	47.0	38.6	74	54	-27.0	-15.4	V
4.874	3.0	48.3	36.5	32.9	3.8	-39.6	0.0	0.6	46.0	34.2	74	54	-28.0	-19.8	H
7.311	3.0	56.4	44.6	35.8	4.9	-40.3	0.0	0.6	57.4	45.6	74	54	-16.6	-8.4	H
12.185	3.0	44.5	34.0	38.8	6.6	-39.3	0.0	0.9	51.5	41.0	74	54	-22.5	-13.0	H

Note: No other emissions were detected above the system noise floor.

f	Measurement Frequency	Amp	Preamp Gain	Avg Lim	Average Field Strength Limit
Dist	Distance to Antenna	D Corr	Distance Correct to 3 meters	Pk Lim	Peak Field Strength Limit
Read	Analyzer Reading	Avg	Average Field Strength @ 3 m	Avg Mar	Margin vs. Average Limit
AF	Antenna Factor	Peak	Calculated Peak Field Strength	Pk Mar	Margin vs. Peak Limit
CL	Cable Loss	HPF	High Pass Filter		

7.2.4.4 STAND-ALONE CONFIGURATION, WITH BLUETOOTH BC02

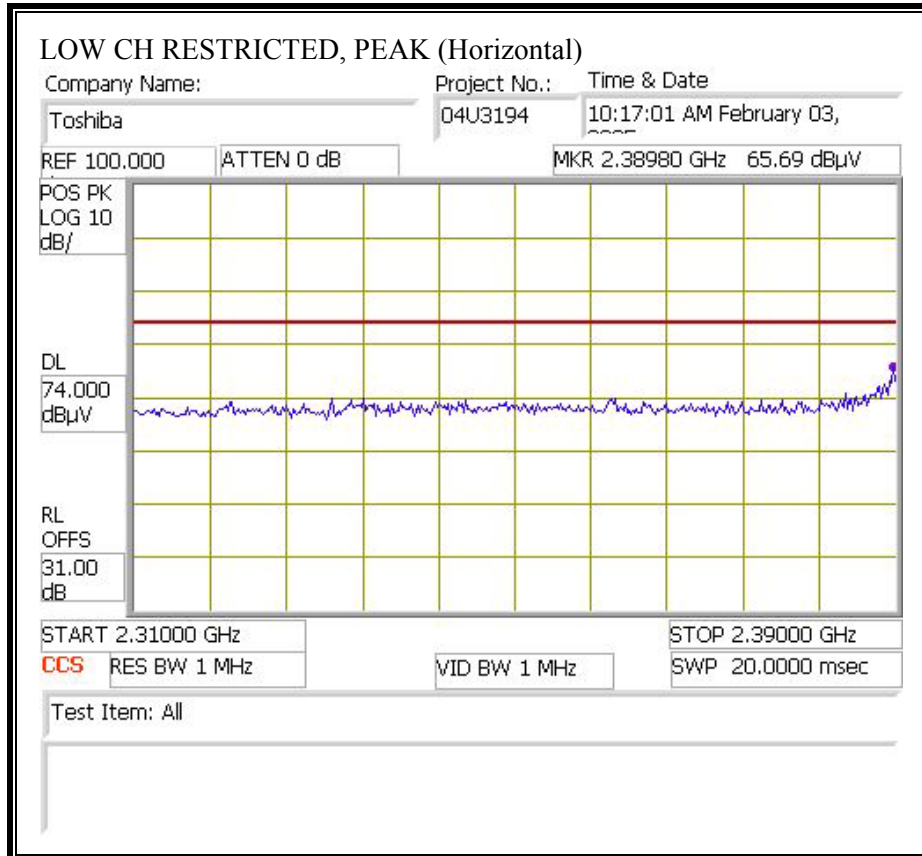
Not applicable. The BT has no extended card to use to be tested for this configuration. Please see 7.2.4.5 for reference.

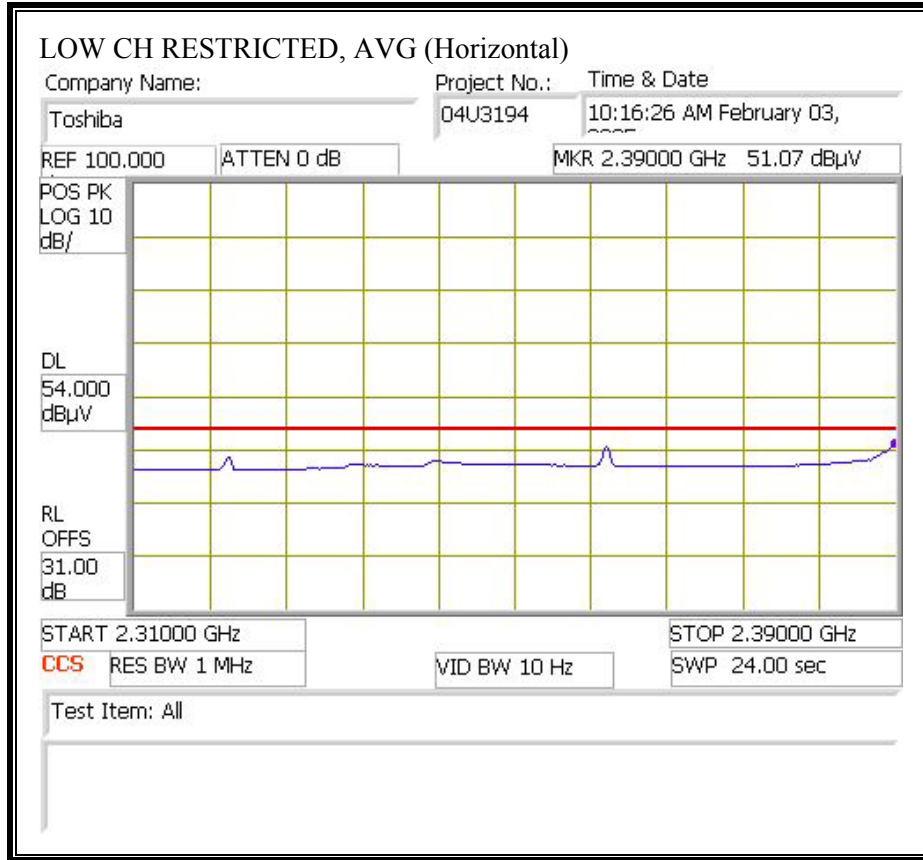
7.2.4.5 MOBILE CONFIGURATION, WITH BLUETOOTH BC02

No non-compliance noted:

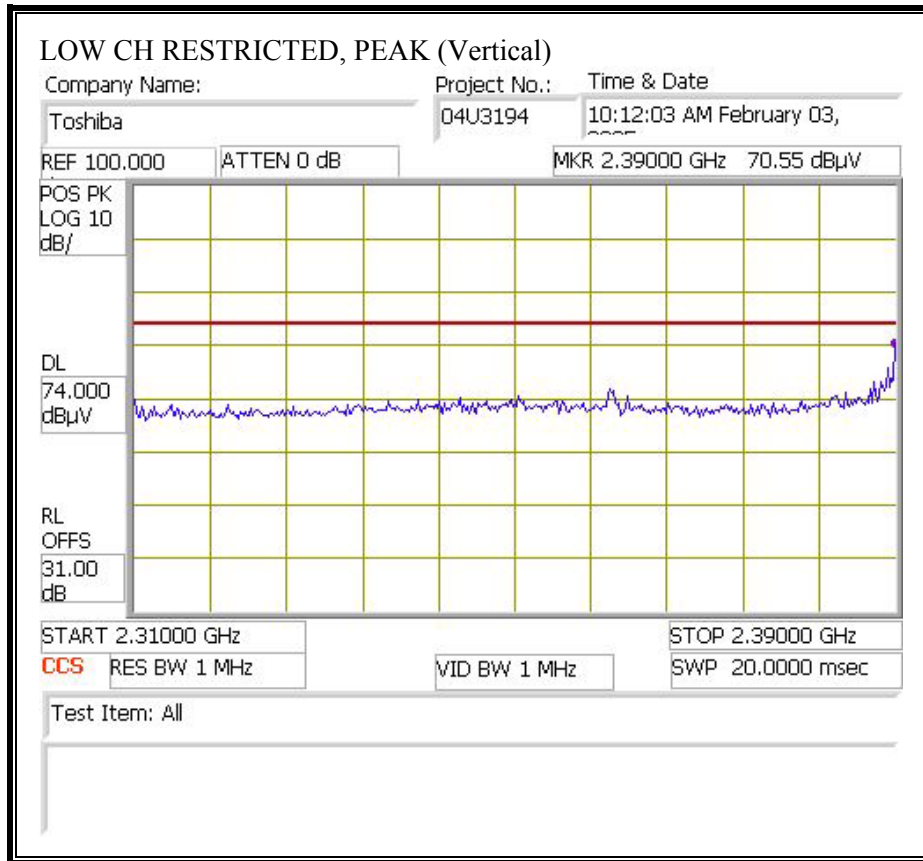
The dominant transmitter is the WLAN and the non-dominant transmitter is the Bluetooth

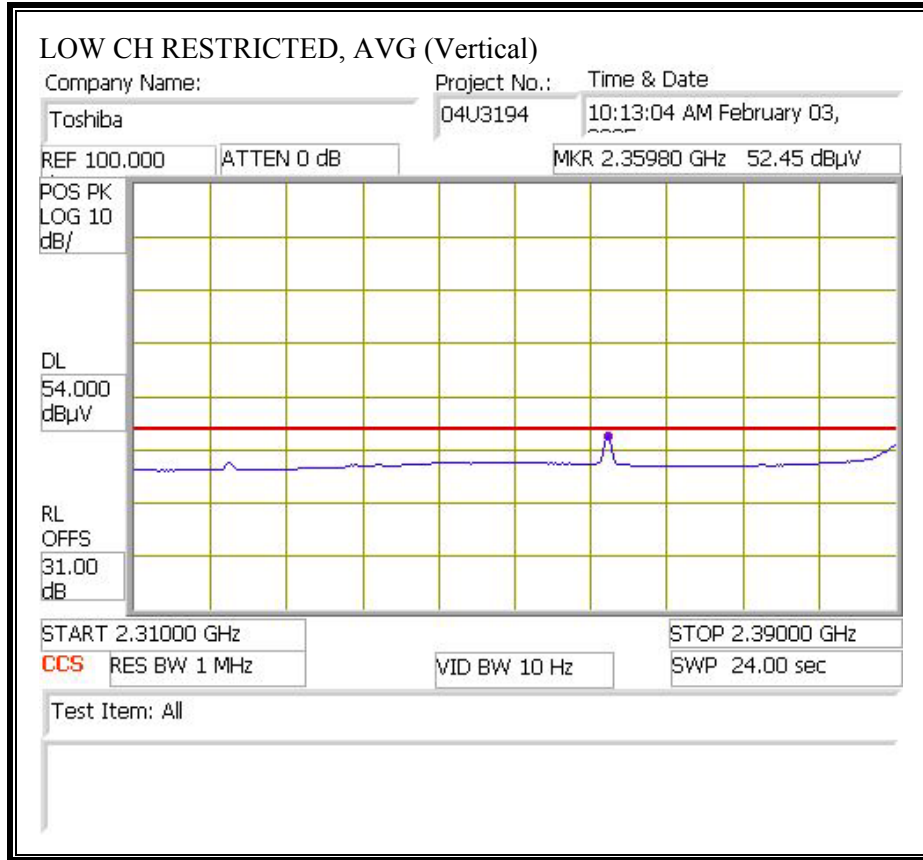
WORST-CASE RESTRICTED BANDEDGE (LOW CHANNEL, HORIZONTAL)



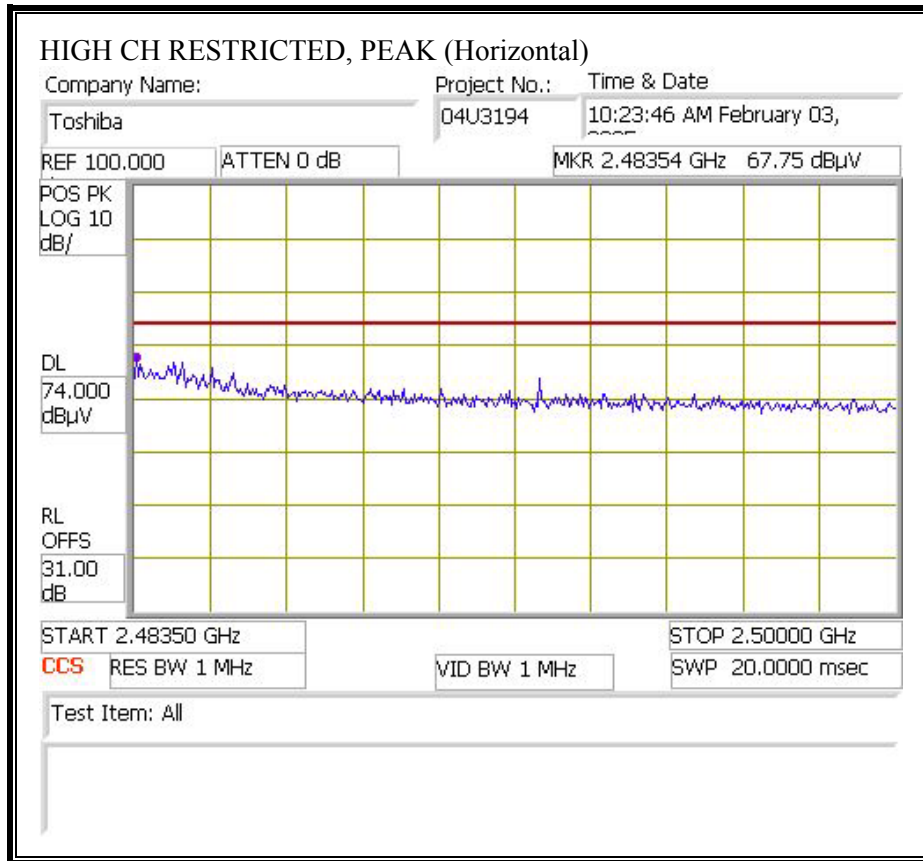


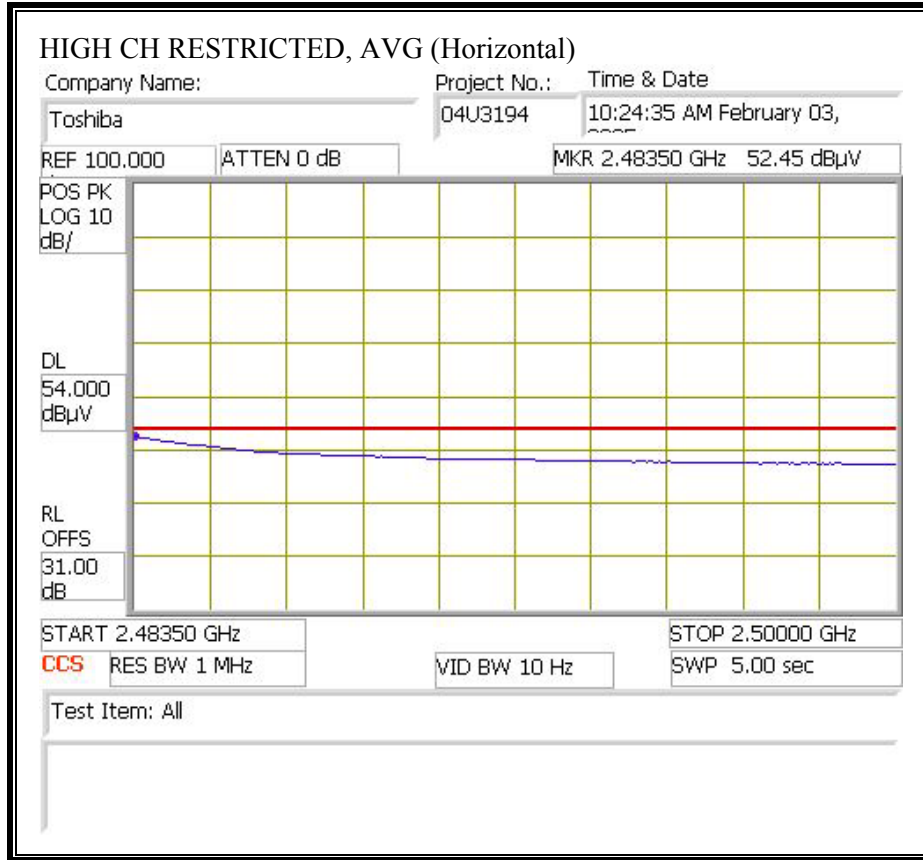
WORST-CASE RESTRICTED BANDEDGE (LOW CHANNEL, VERTICAL)



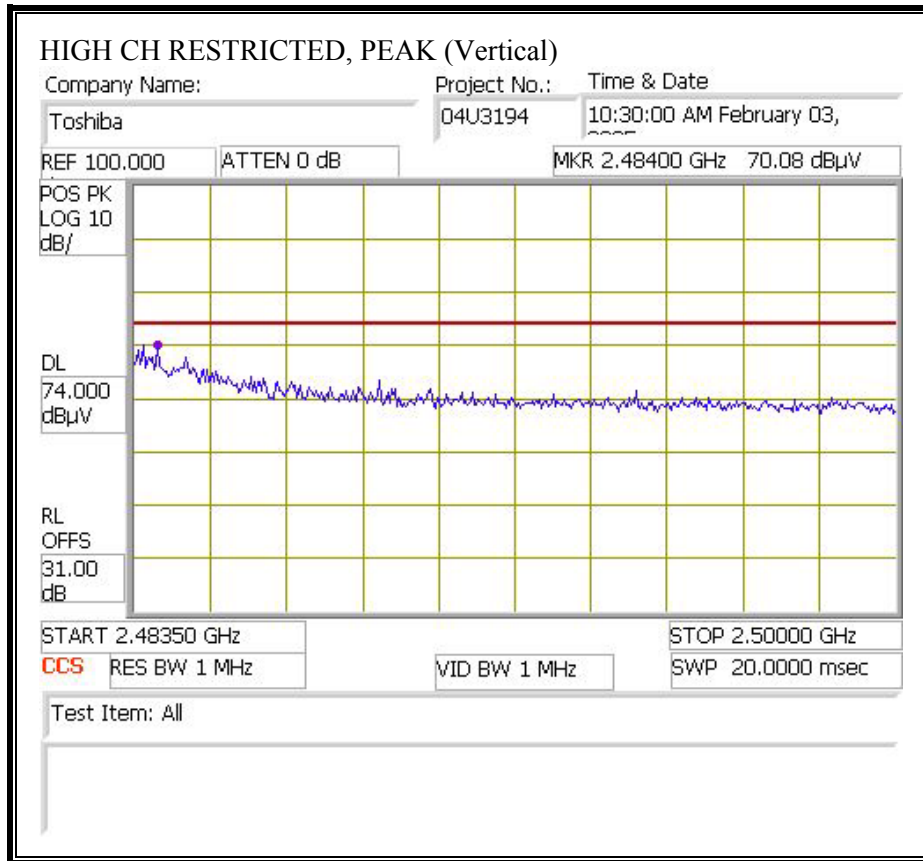


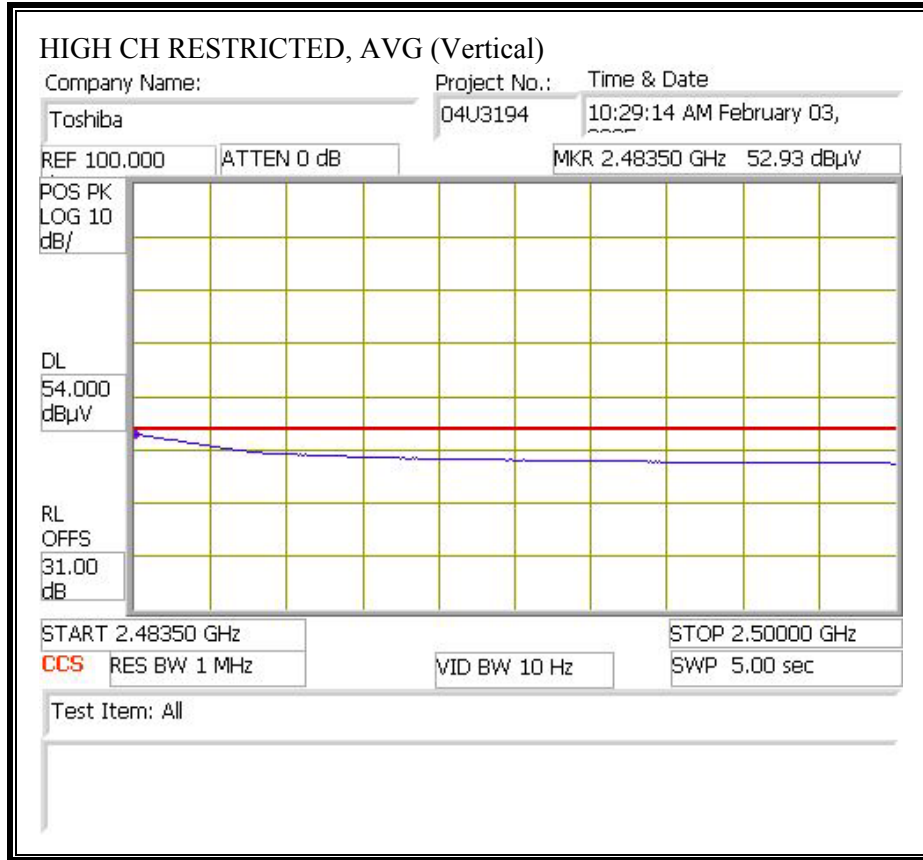
WORST-CASE RESTRICTED BANDEDGE (HIGH CHANNEL, HORIZONTAL)





WORST-CASE RESTRICTED BANDEDGE (HIGH CHANNEL, VERTICAL)





WORST-CASE HARMONICS AND SPURIOUS EMISSIONS

02/04/05 High Frequency Measurement
 Compliance Certification Services, Morgan Hill Open Field Site

Test Engr: David Garcia
 Project #: 04U3194-1
 Company: Toshiba
 EUT Descrip.: 802.11b/g Half Size Mini-PCI WLAN Module
 EUT M/N: PA3426U-1MPC
 Test Target: FCC 15.247
 Mode Oper: TX_g mode_antenna HTL017, WLAN and Bluetooth, BC02 Co-location (Worst Case), Mobile

Test Equipment:

EMCO Horn 1-18GHz: T73; S/N: 6717 @3m
 Pre-amplifier 1-26GHz: T87 Miteq 924342
 Pre-amplifier 26-40GHz:
 Horn > 18GHz:
 Limit: FCC 15.205

Hi Frequency Cables: 2 foot cable (3_David), 3 foot cable (3_David), 4 foot cable, 12 foot cable (12_Yan)
 HPF: HPF_4.0GHz
 Reject Filter:
 Peak Measurements: RBW=VBW=1MHz
 Average Measurements: RBW=1MHz, VBW=10Hz

f GHz	Dist (m)	Read Pk dBuV	Read Avg dBuV	AF dB/m	CL dB	Amp dB	D Corr dB	Filtr dB	Peak dBuV/m	Avg dBuV/m	Pk Lim dBuV/m	Avg Lim dBuV/m	Pk Mar dB	Avg Mar dB	Notes (V/H)
mid ch															
4.874	3.0	50.5	37.6	32.9	4.6	-39.6	0.0	0.6	49.1	36.2	74	54	-24.9	-17.8	V
7.311	3.0	56.0	42.5	35.8	5.7	-40.3	0.0	0.6	57.9	44.4	74	54	-16.1	-9.6	V
12.185	3.0	43.7	33.2	38.8	8.2	-39.3	0.0	0.9	52.3	41.8	74	54	-21.7	-12.2	V
4.874	3.0	48.3	36.6	32.9	4.6	-39.6	0.0	0.6	46.9	35.2	74	54	-27.1	-18.8	H
7.311	3.0	53.4	40.0	35.8	5.7	-40.3	0.0	0.6	55.3	41.9	74	54	-18.7	-12.1	H
12.185	3.0	42.3	32.4	38.8	8.2	-39.3	0.0	0.9	50.9	41.0	74	54	-23.1	-13.0	H

Note: No other emissions were detected above the system noise floor.

f	Measurement Frequency	Amp	Preamp Gain	Avg Lim	Average Field Strength Limit
Dist	Distance to Antenna	D Corr	Distance Correct to 3 meters	Pk Lim	Peak Field Strength Limit
Read	Analyzer Reading	Avg	Average Field Strength @ 3 m	Avg Mar	Margin vs. Average Limit
AF	Antenna Factor	Peak	Calculated Peak Field Strength	Pk Mar	Margin vs. Peak Limit
CL	Cable Loss	HPF	High Pass Filter		

7.2.4.6 PORTABLE CONFIGURATION, WITH BLUETOOTH BC02

No non-compliance noted:

The dominant transmitter is the WLAN and the non-dominant transmitter is the Bluetooth

WORST-CASE RESTRICTED BANDEDGE (LOW CHANNEL, HORIZONTAL)

