

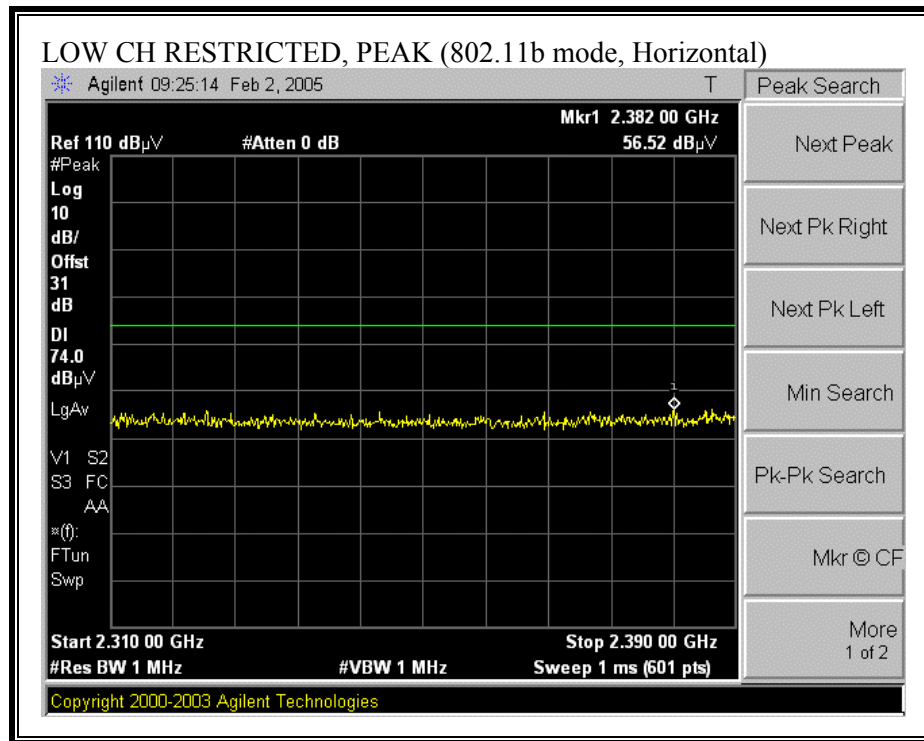
HARMONICS AND SPURIOUS EMISSIONS (g TURBO MODE)

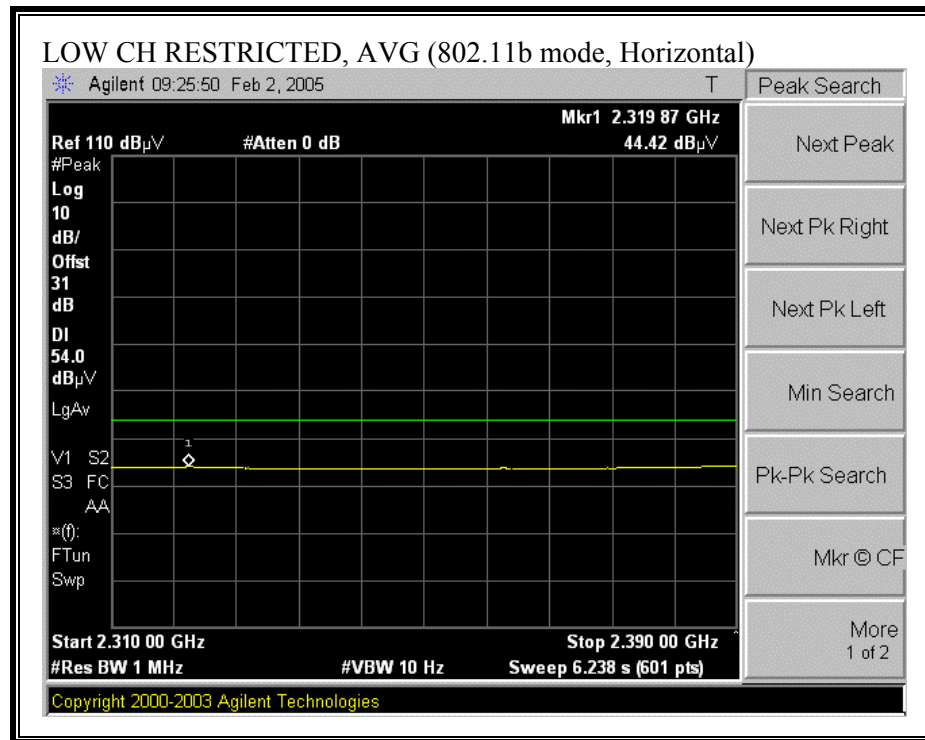
02/02/05 High Frequency Measurement Compliance Certification Services, Morgan Hill Open Field Site															
Test Engr: Chin Pang Project #: 04U3194-1 Company: Toshiba EUT Descrip.: 802.11b/g Half Size Mini-PCI WLAN Module EUT M/N: PA3426U-1MPC Test Target: FCC 15.247 Mode Oper: Tx_g Turbo mode_antenna HTL017, Portable															
Test Equipment:															
EMCO Horn 1-18GHz 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	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

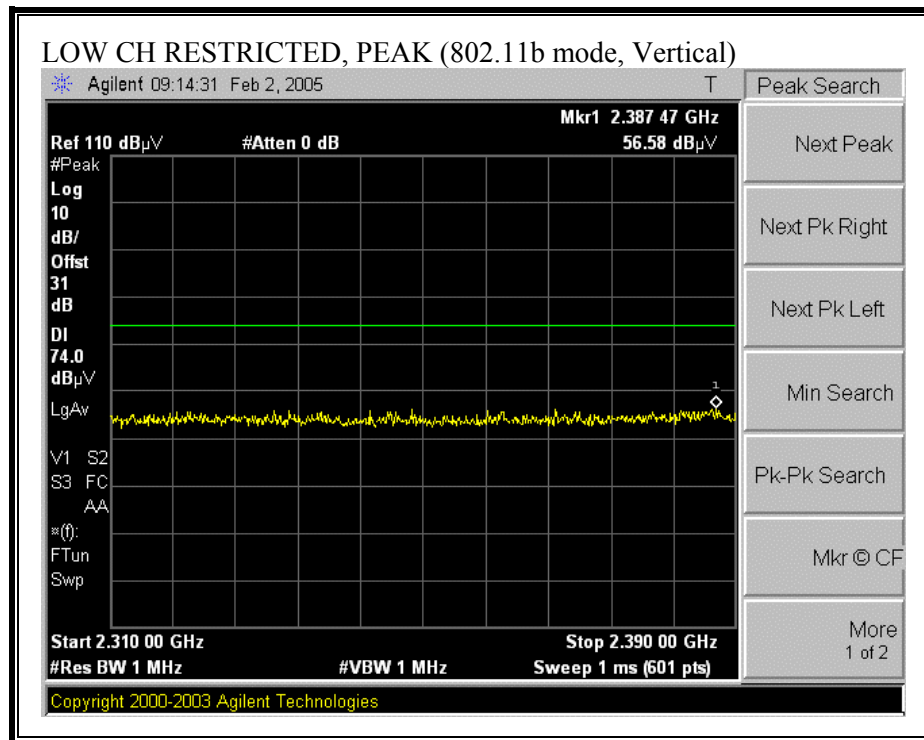
7.2.3.1 STAND-ALONE CONFIGURATION

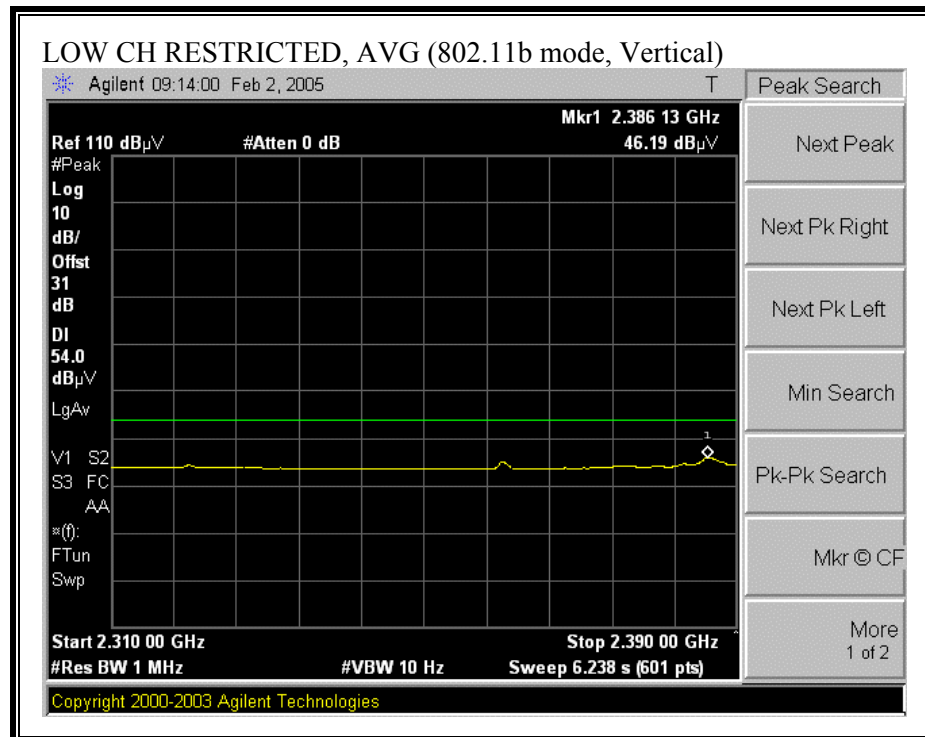
RESTRICTED BANDEDGE (b MODE, LOW CHANNEL, HORIZONTAL)



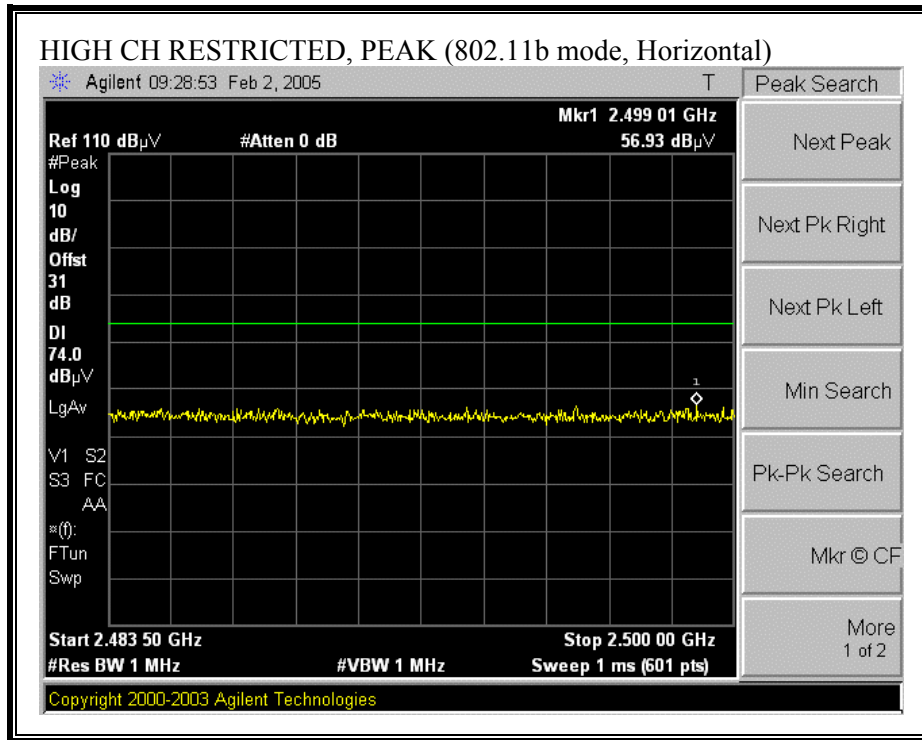


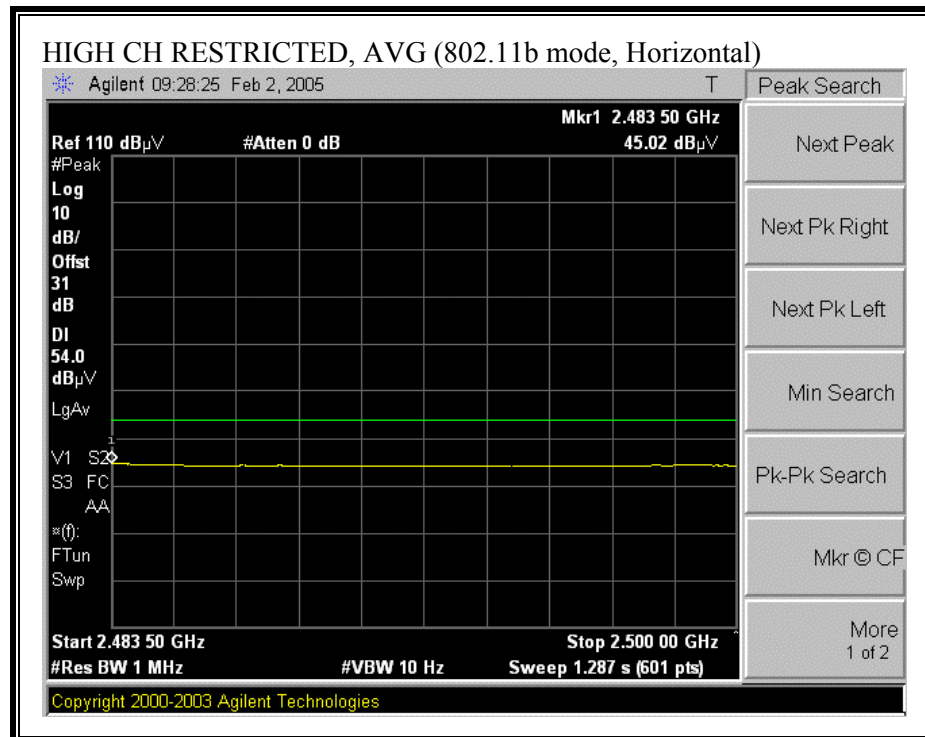
RESTRICTED BANDEDGE (b MODE, LOW CHANNEL, VERTICAL)



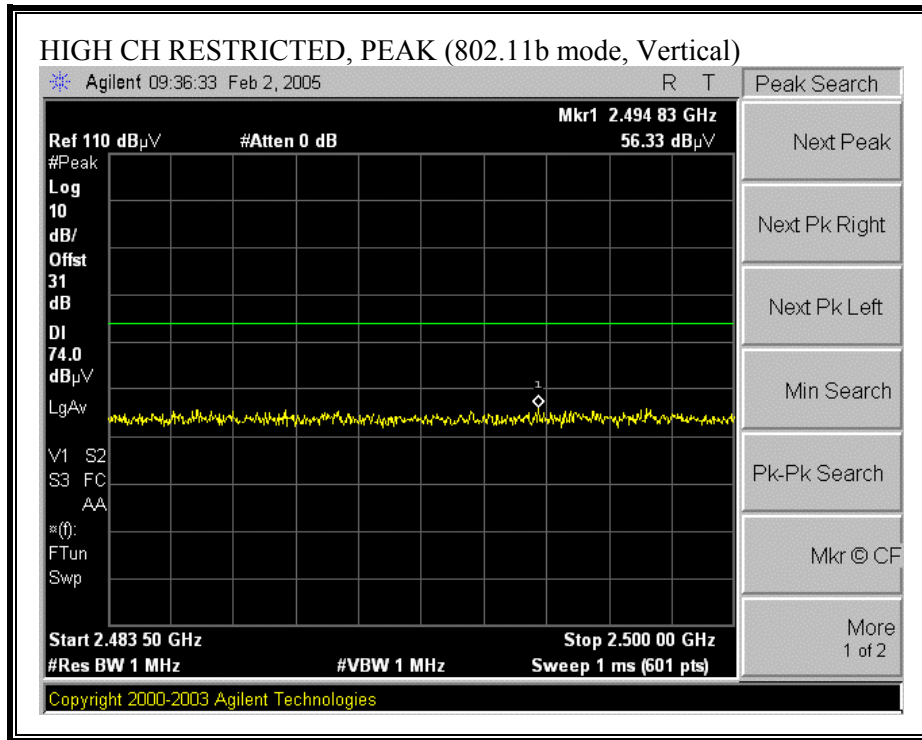


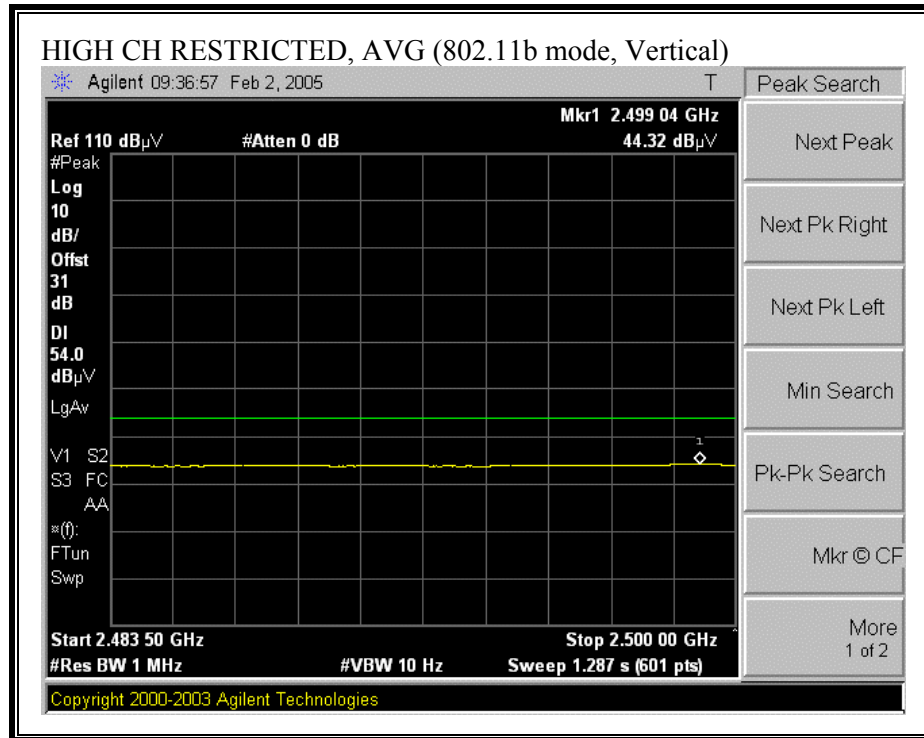
RESTRICTED BANDEDGE (b MODE, HIGH CHANNEL, HORIZONTAL)





RESTRICTED BANDEDGE (b MODE, HIGH CHANNEL, VERTICAL)

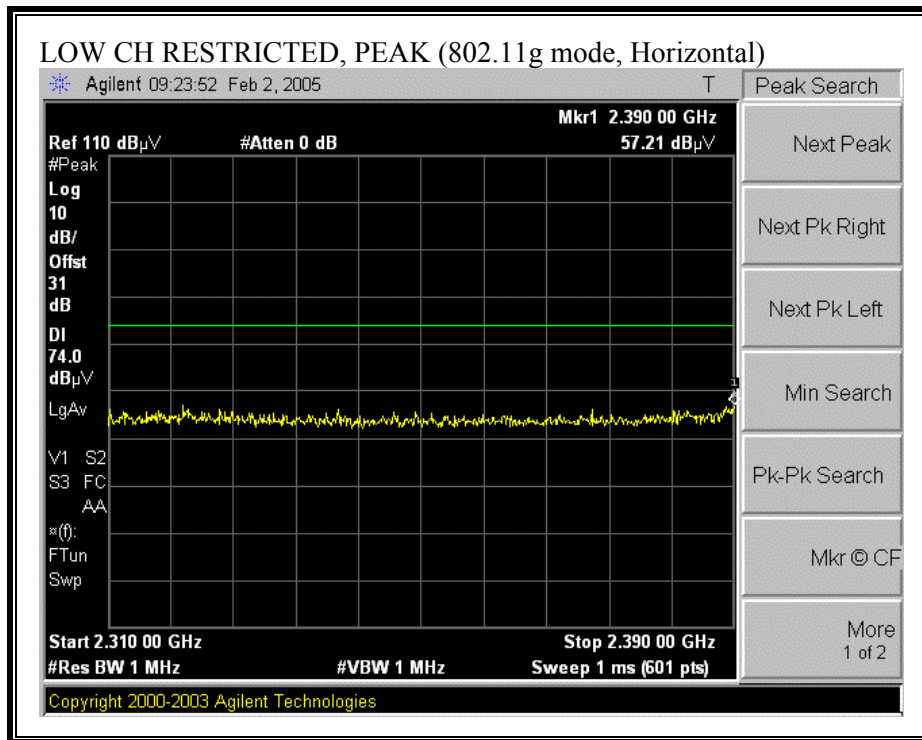


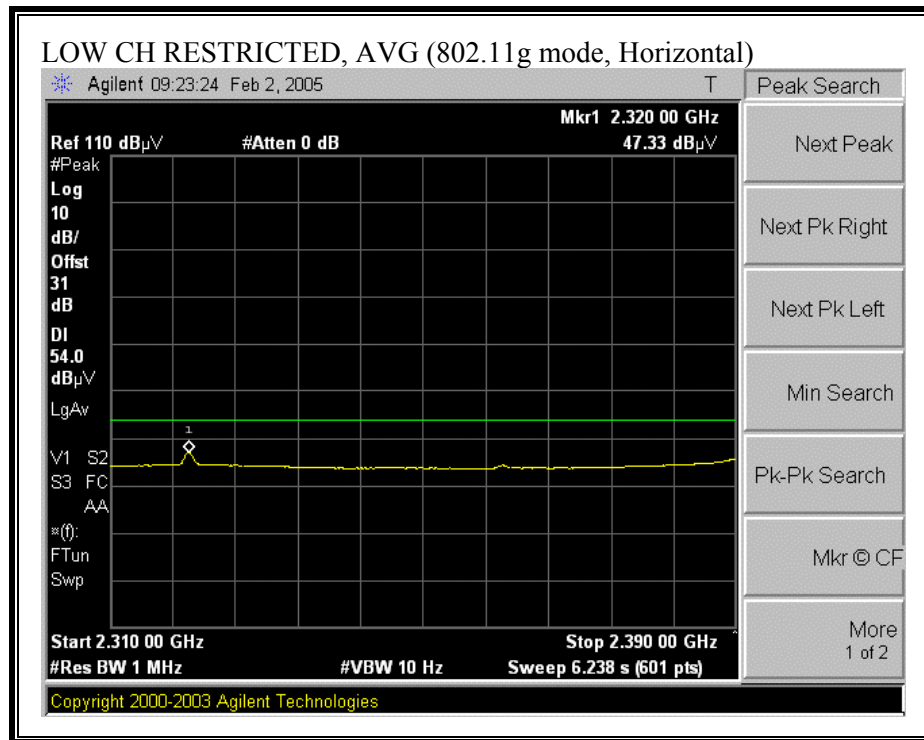


HARMONICS AND SPURIOUS EMISSIONS (b MODE)

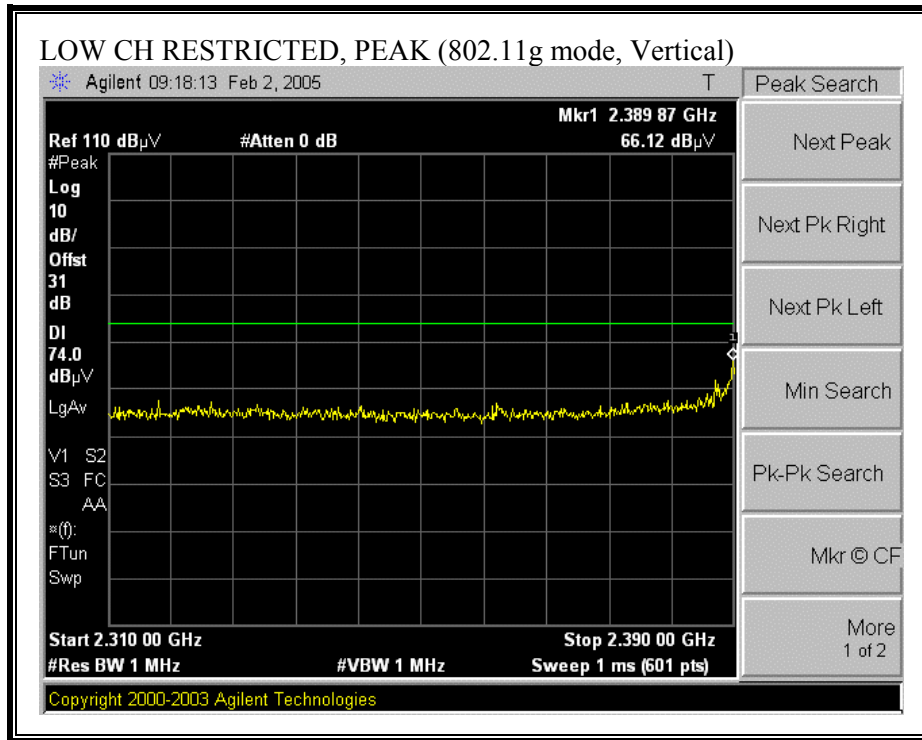
02/02/05 High Frequency Measurement Compliance Certification Services, Morgan Hill Open Field Site															
Test Engr: Chin Pang Project #: 04U3194-1 Company: Toshiba EUT Descrip.: 802.11b/g Half Size Mini-PCI WLAN Module EUT M/N: PA3426U-1MPC Test Target: FCC 15.247 Mode Oper: TX_b mode_antenna 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				HPF		Reject Filter		Peak Measurements RBW=VBW=1MHz Average Measurements RBW=1MHz; VBW=10Hz							
2 foot cable		3 foot cable		4 foot cable		12 foot cable		HPF 4.0GHz		Reject Filter					
3_Chin						12_Neelesh									
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										

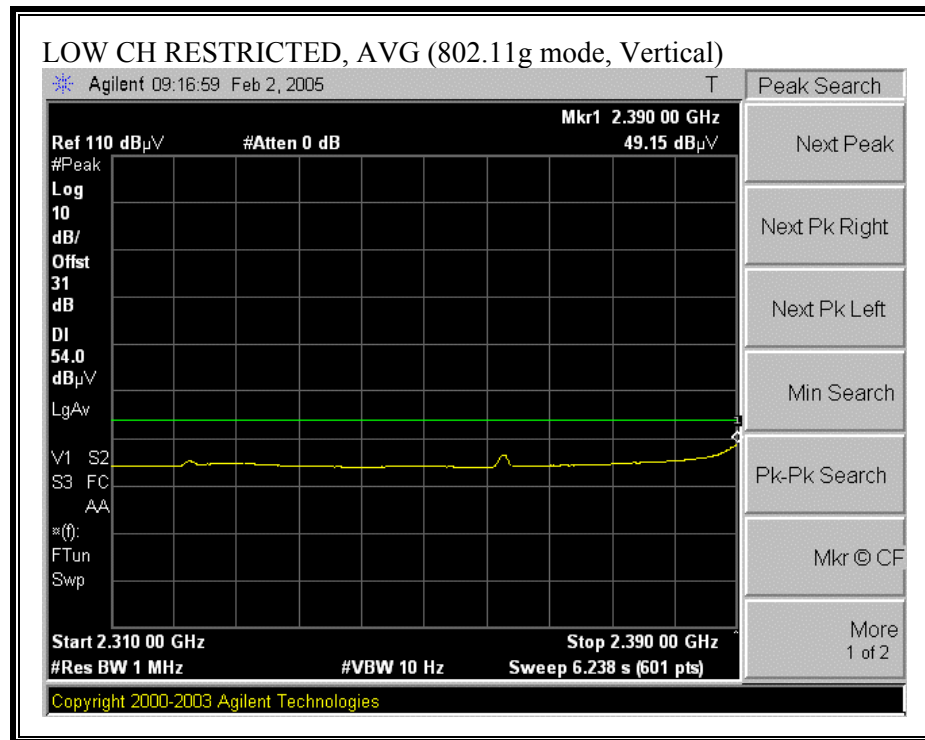
RESTRICTED BANDEDGE (g MODE, LOW CHANNEL, HORIZONTAL)



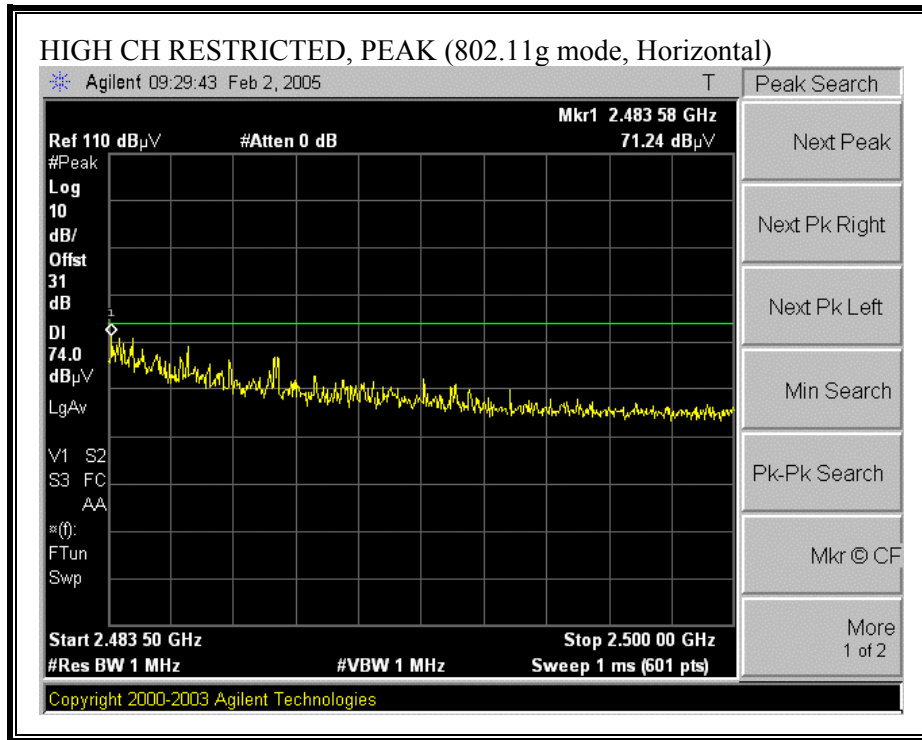


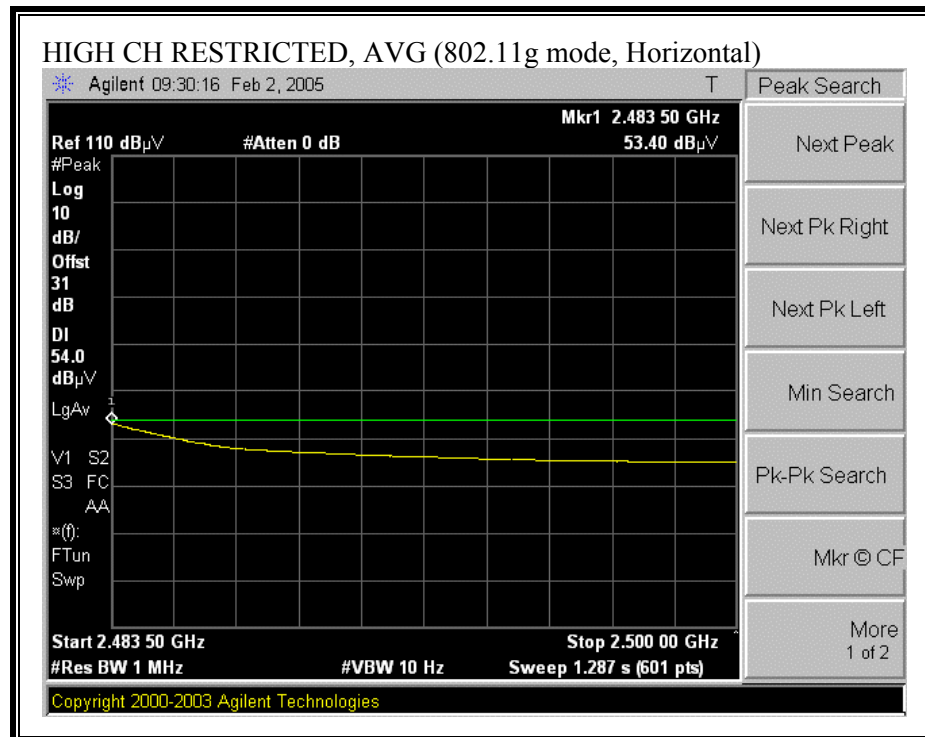
RESTRICTED BANDEDGE (g MODE, LOW CHANNEL, VERTICAL)



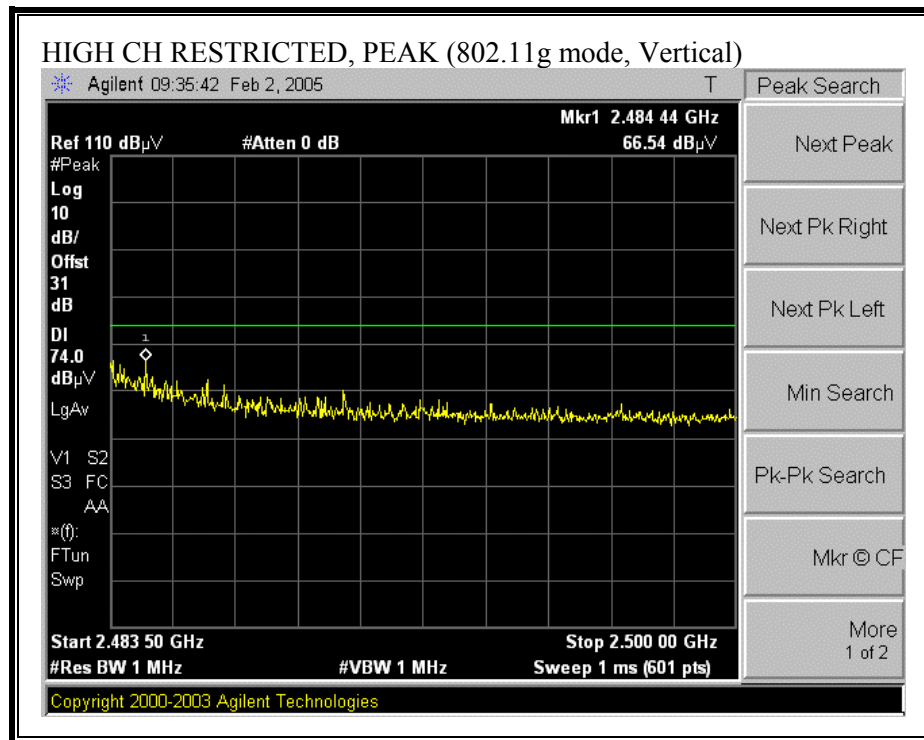


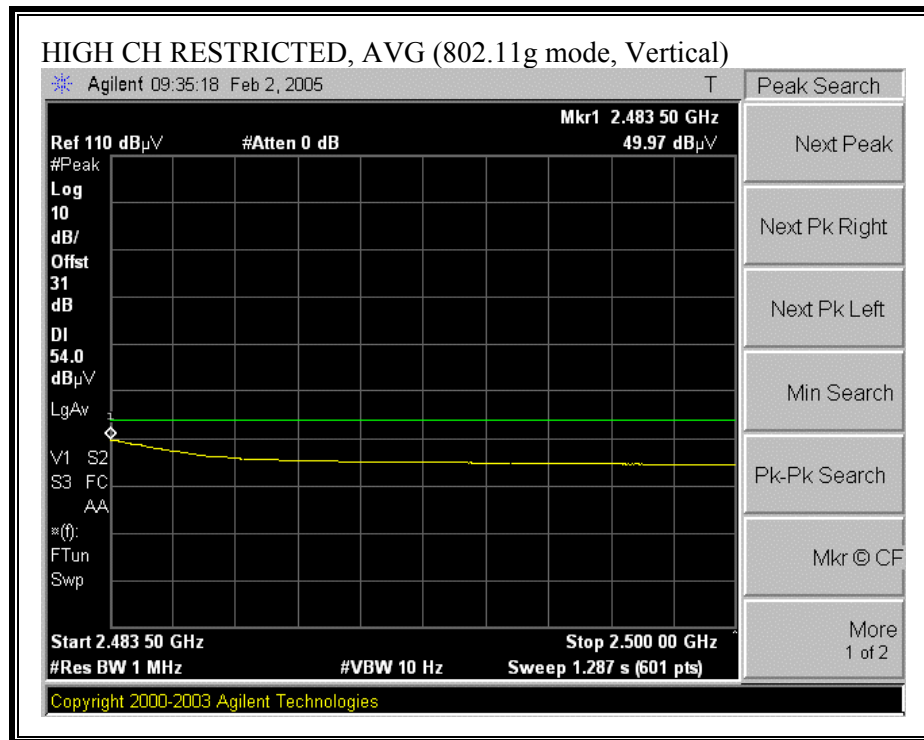
RESTRICTED BANDEDGE (g MODE, HIGH CHANNEL, HORIZONTAL)





RESTRICTED BANDEDGE (g MODE, HIGH CHANNEL, VERTICAL)



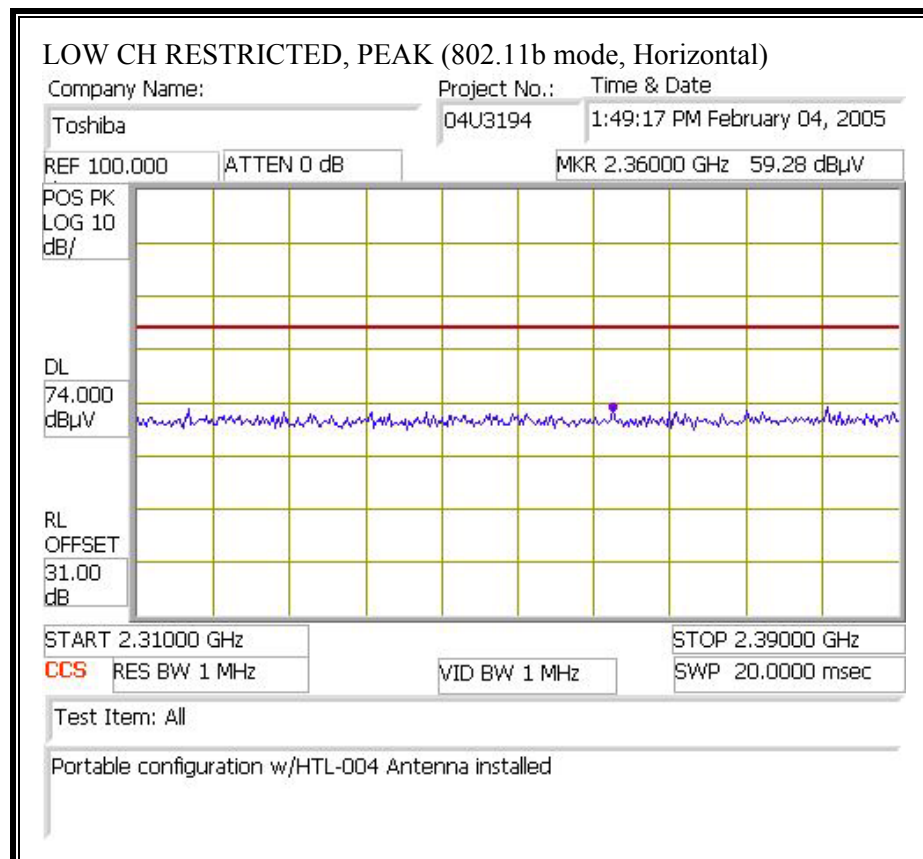


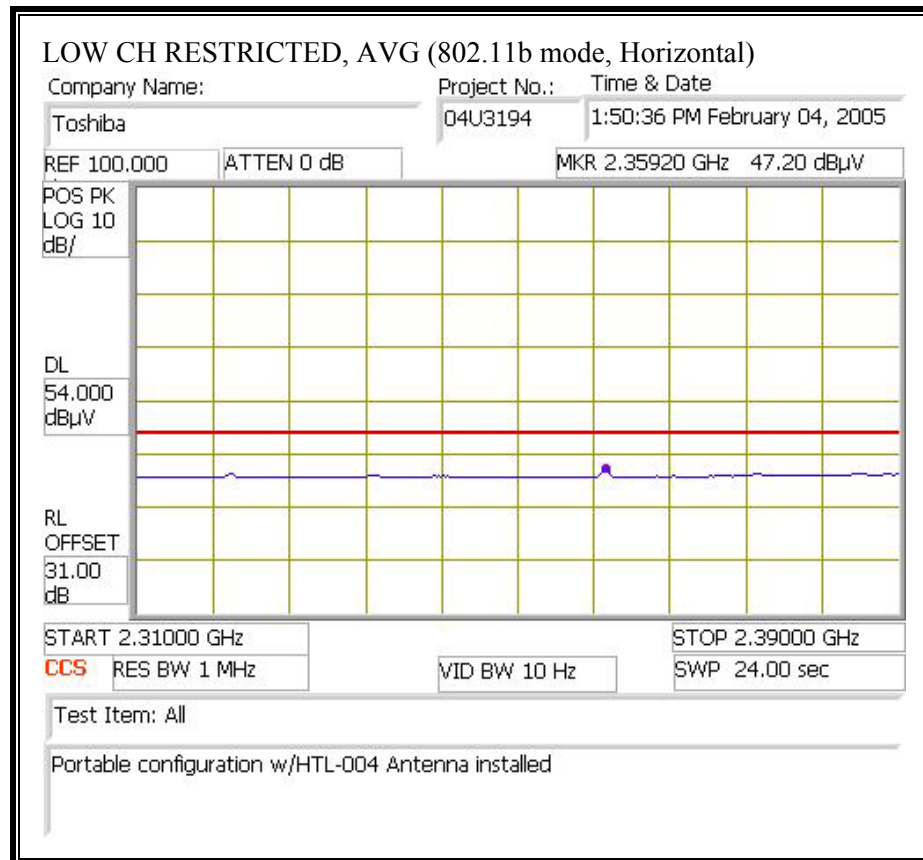
HARMONICS AND SPURIOUS EMISSIONS (g TURBO MODE)

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	Filt 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									

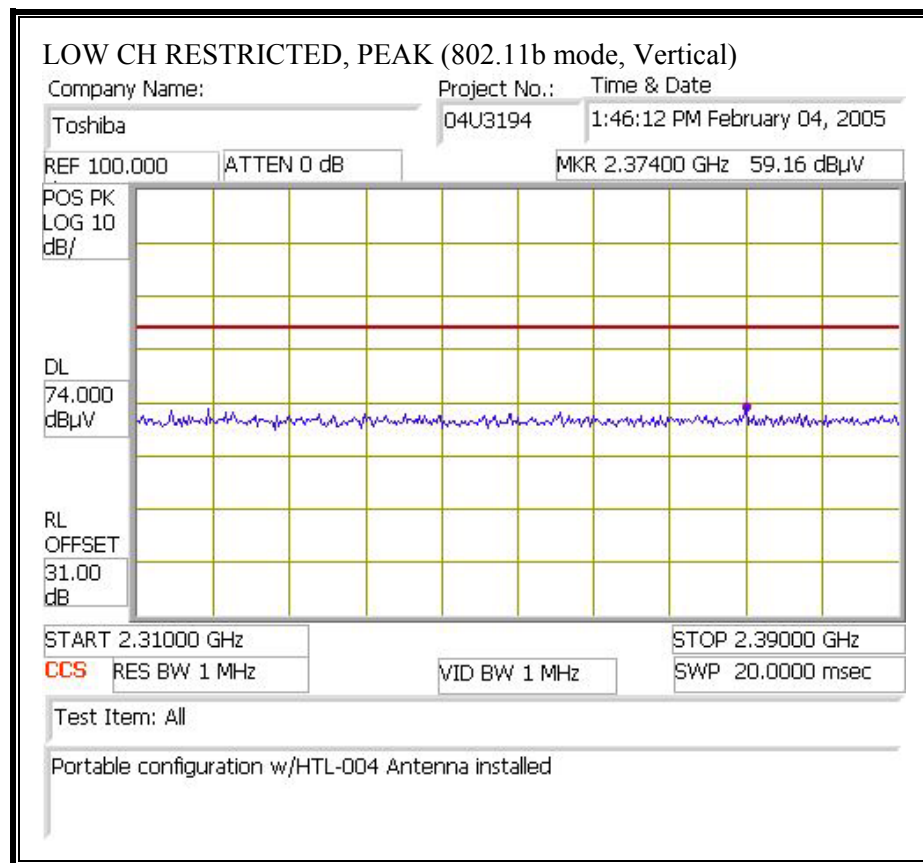
7.2.3.2 PORTABLE CONFIGURATION

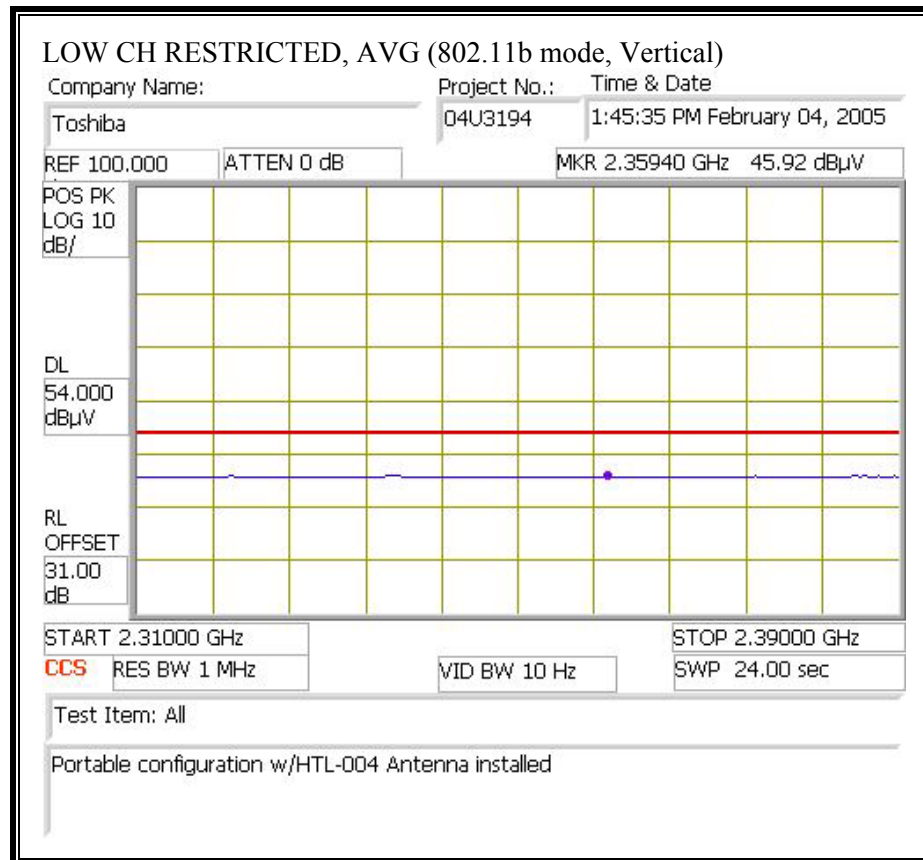
RESTRICTED BANDEDGE (b MODE, LOW CHANNEL, HORIZONTAL)



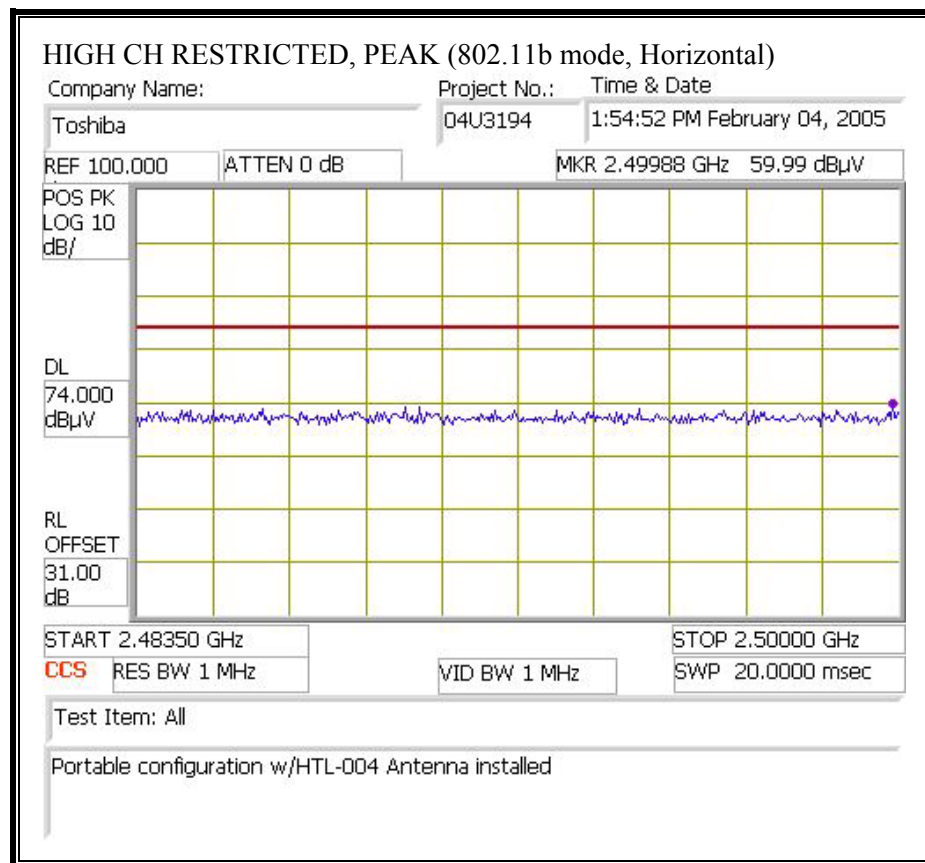


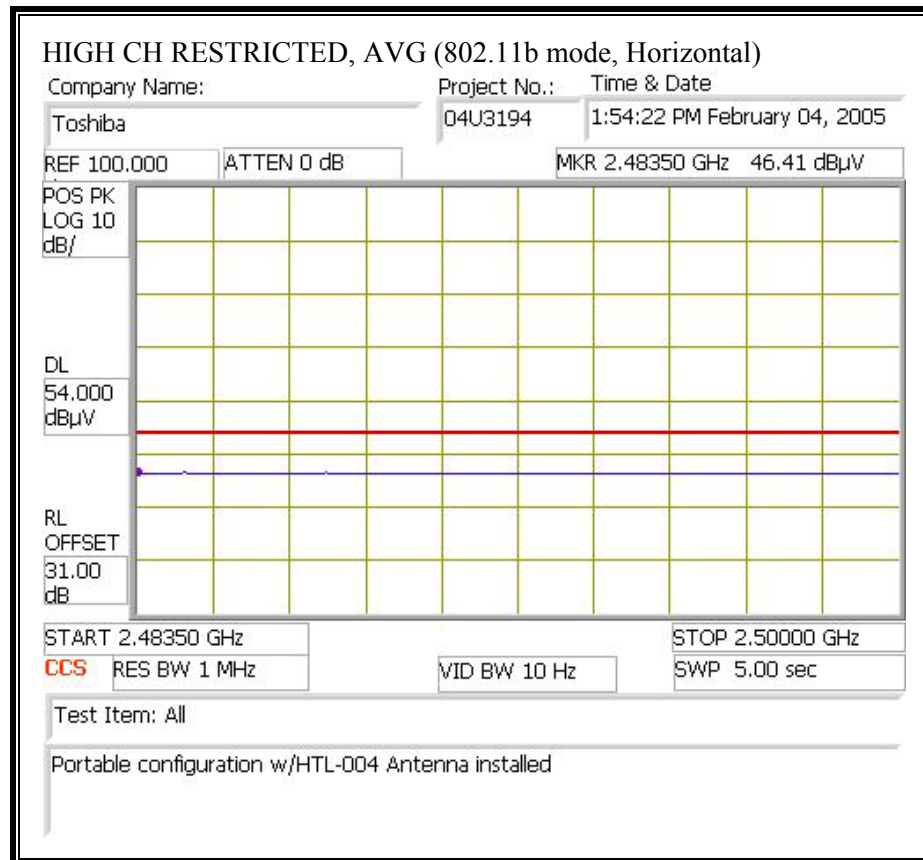
RESTRICTED BANDEDGE (b MODE, LOW CHANNEL, VERTICAL)



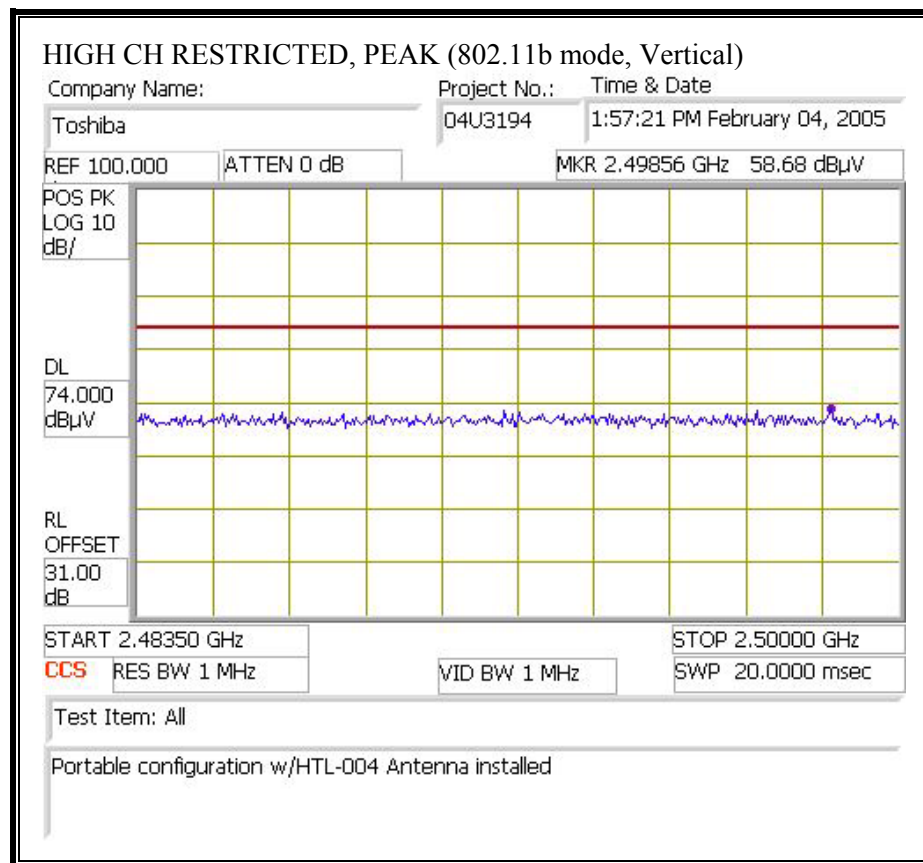


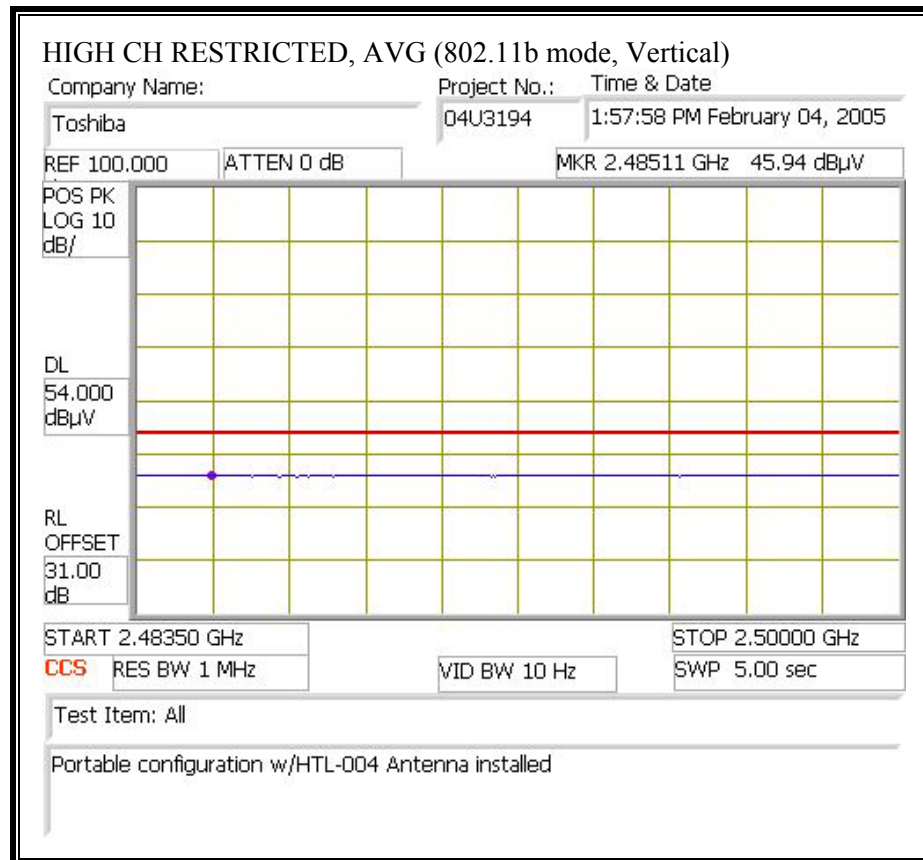
RESTRICTED BANDEDGE (b MODE, HIGH CHANNEL, HORIZONTAL)





RESTRICTED BANDEDGE (b MODE, HIGH CHANNEL, VERTICAL)

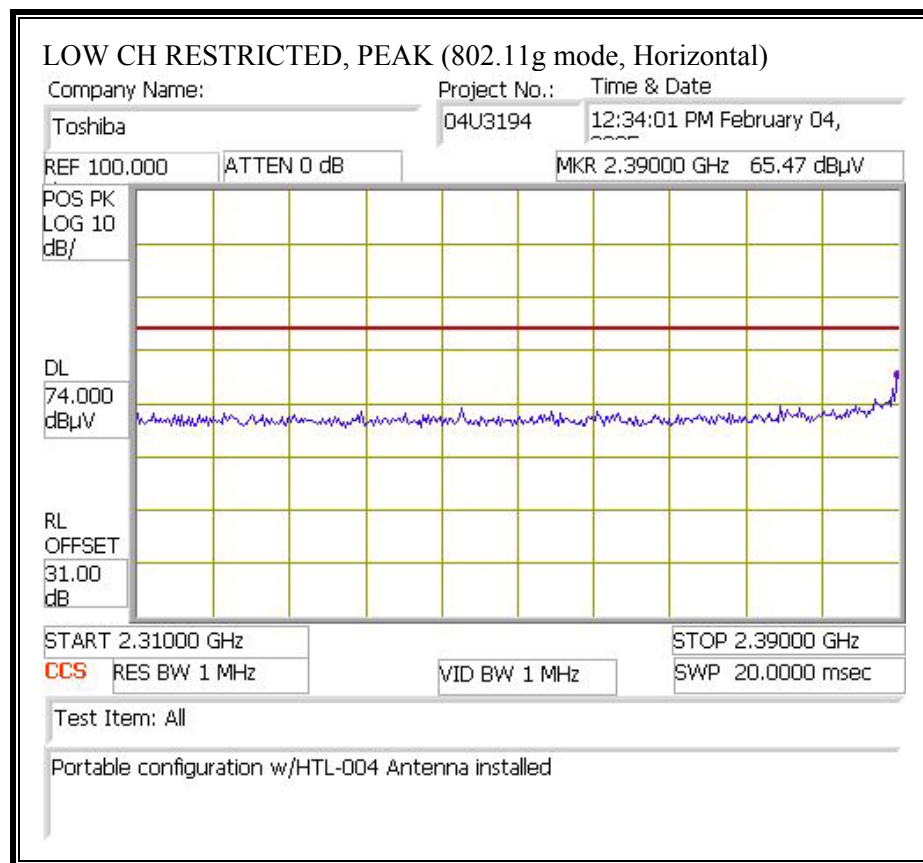


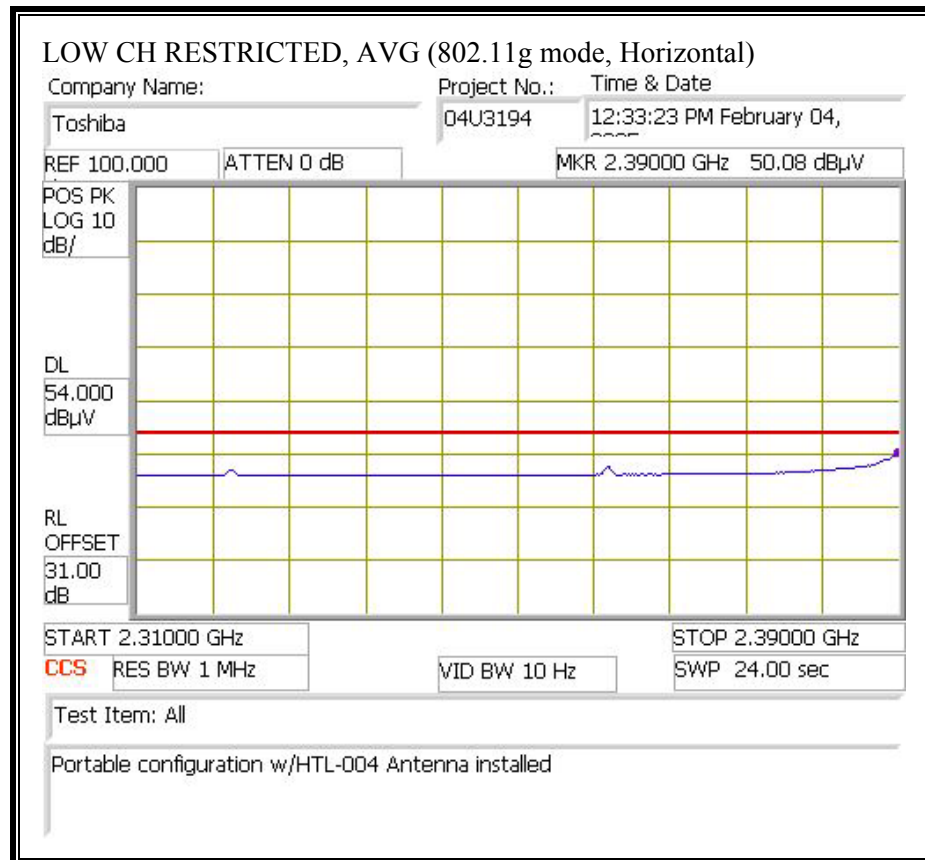


HARMONICS AND SPURIOUS EMISSIONS (b MODE)

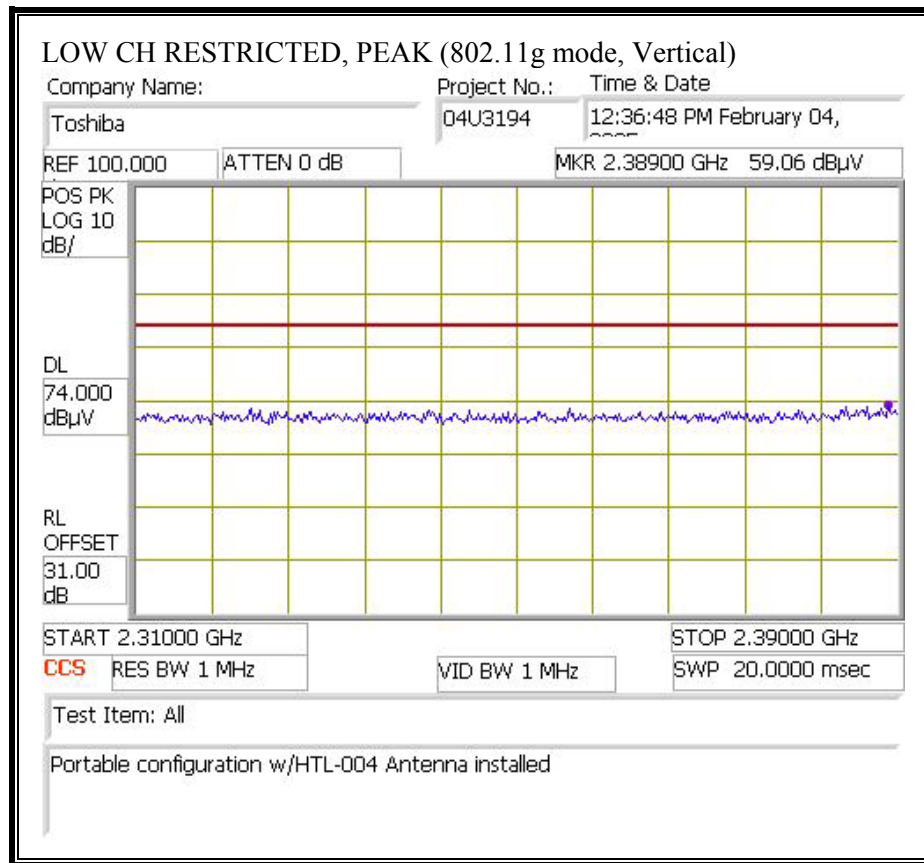
01/11/04 High Frequency Measurement Compliance Certification Services, Morgan Hill Open Field Site															
Test Engr: Chun Pang Project #: 04U3194-1 Company: Toshiba EUT Descrip.: 802.11b/g Half Size Mini-PCI WLAN Module EUT M/N: PA3426U-1MPC Test Target: FCC 15.247 Mode Oper: Tx_b mode_antenna HTL004, Portable															
Test Equipment:															
EMCO Horn 1-18GHz 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)
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								

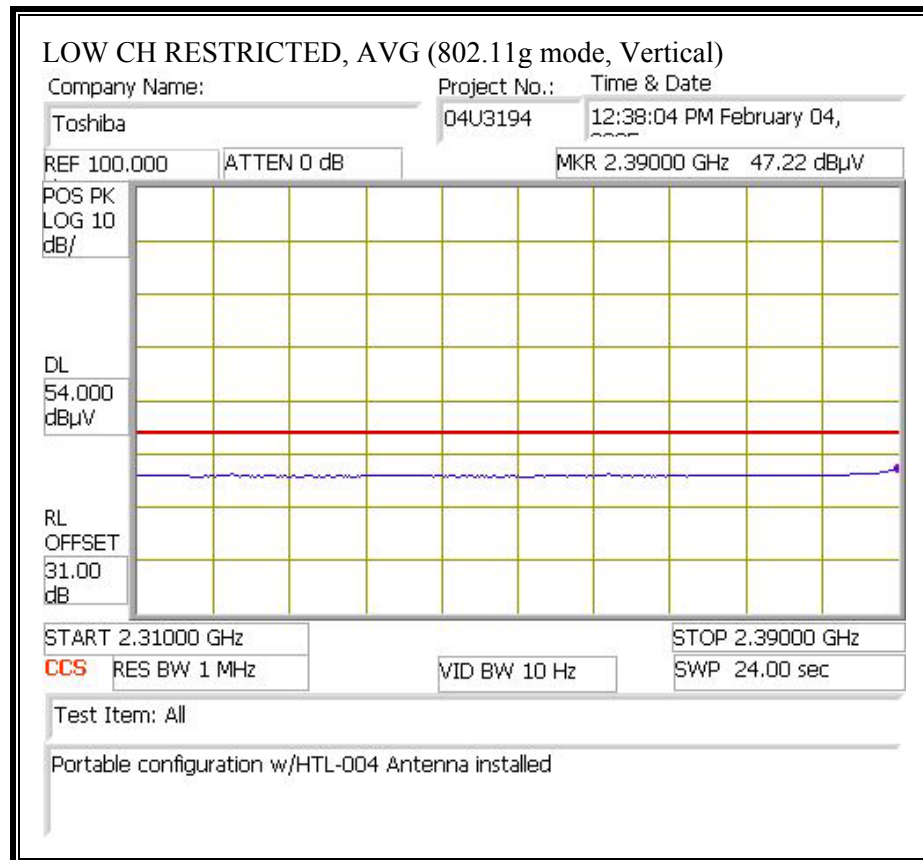
RESTRICTED BANDEDGE (g MODE, LOW CHANNEL, HORIZONTAL)



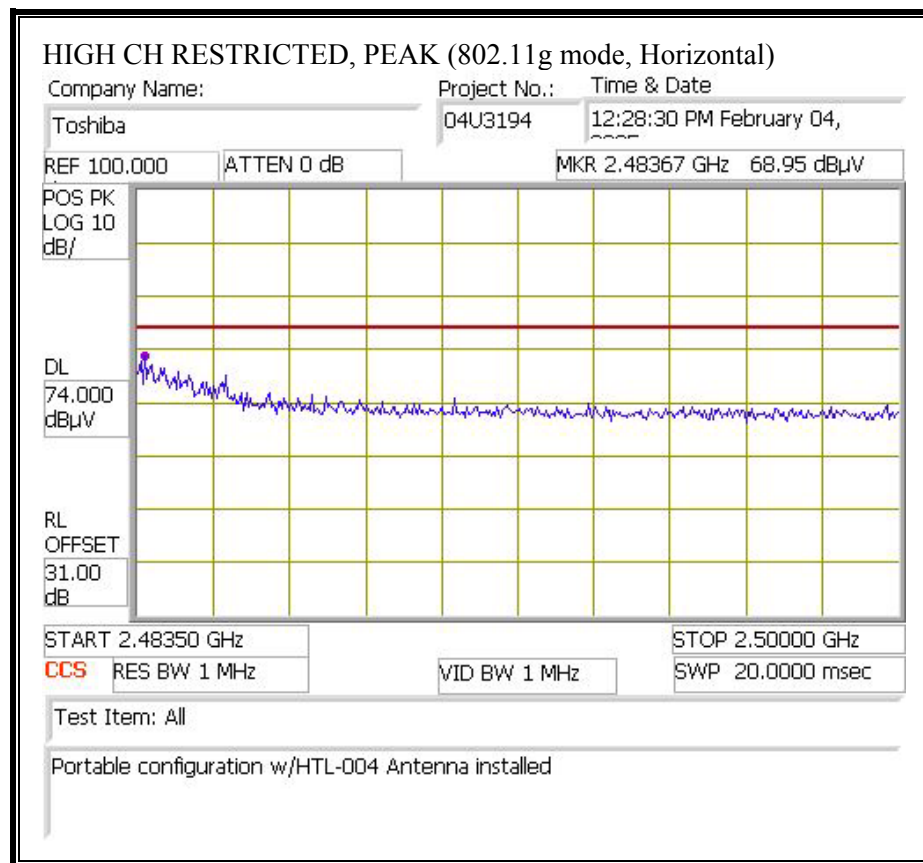


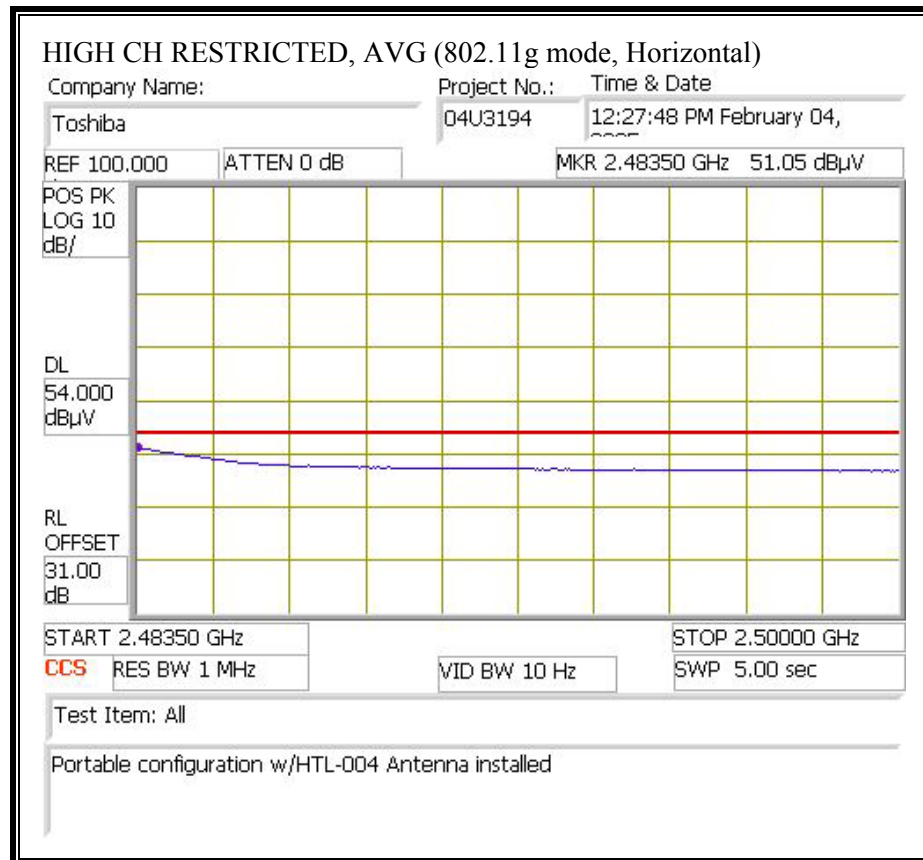
RESTRICTED BANDEDGE (g MODE, LOW CHANNEL, VERTICAL)



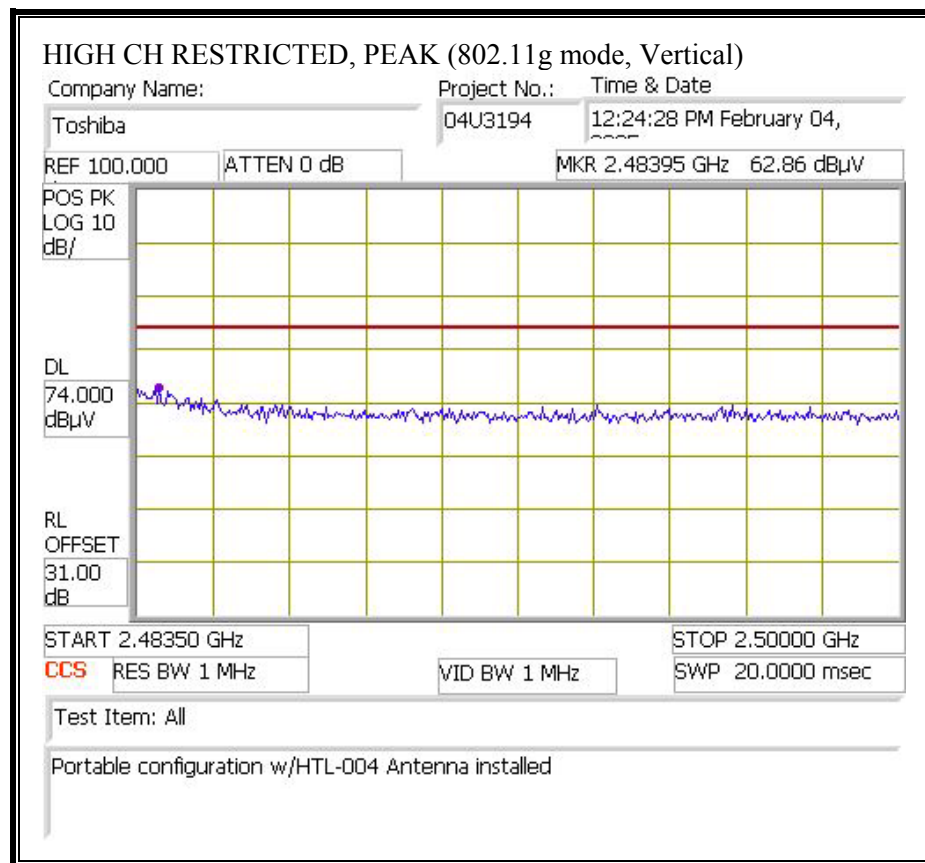


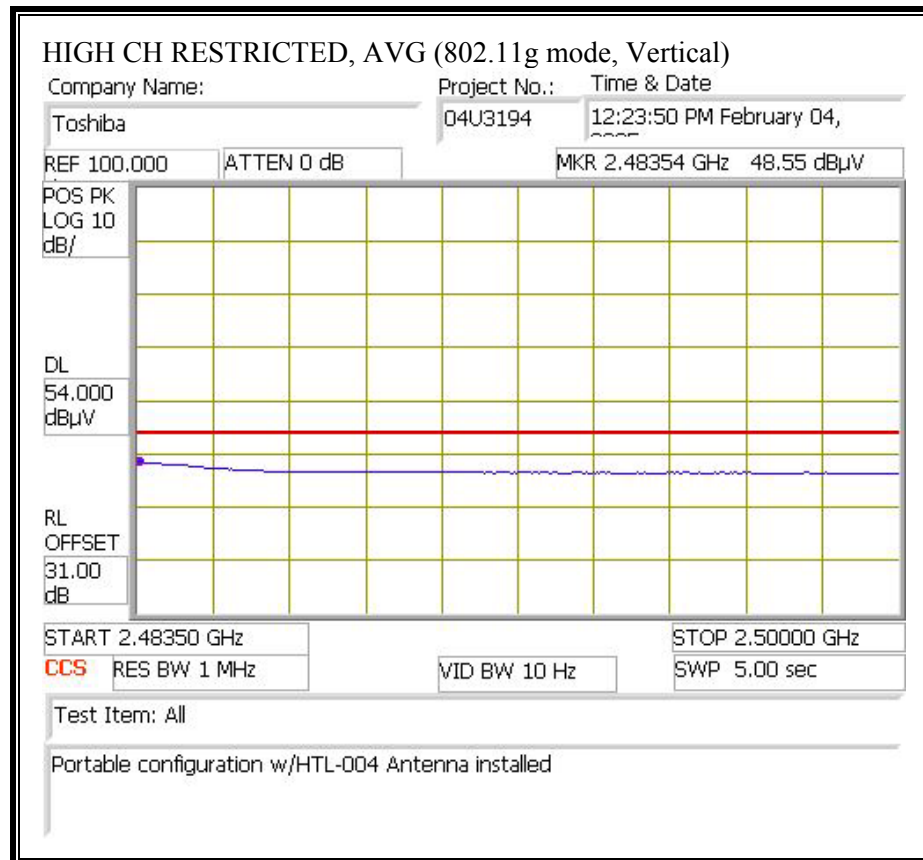
RESTRICTED BANDEDGE (g MODE, HIGH CHANNEL, HORIZONTAL)





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-IMP C 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		Horn > 18GHz		Limit FCC 15.205							
Hi Frequency Cables		2 foot cable 3_Chin		3 foot cable		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	Fltr 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										

02/04/05 High Frequency Measurement Compliance Certification Services, Morgan Hill Open Field Site																	
Test Engr: David Gacia 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, 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		<u>Peak Measurements</u> RBW=VBW=1MHz					
		3_David				12_Yan		HPF_4.0GHz				<u>Average Measurements</u> 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)		
Mid Ch																	
4.874	3.0	55.3	42.6	32.9	4.6	-39.6	0.0	0.6	53.9	41.2	74	54	-20.1	-12.8	V		
7.311	3.0	51.6	37.6	35.8	5.7	-40.3	0.0	0.6	53.5	39.5	74	54	-20.5	-14.5	V		
4.874	3.0	57.4	44.3	32.9	4.6	-39.6	0.0	0.6	56.0	42.9	74	54	-18.0	-11.1	H		
7.311	3.0	52.7	38.0	35.8	5.7	-40.3	0.0	0.6	54.6	39.9	74	54	-19.4	-14.1	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

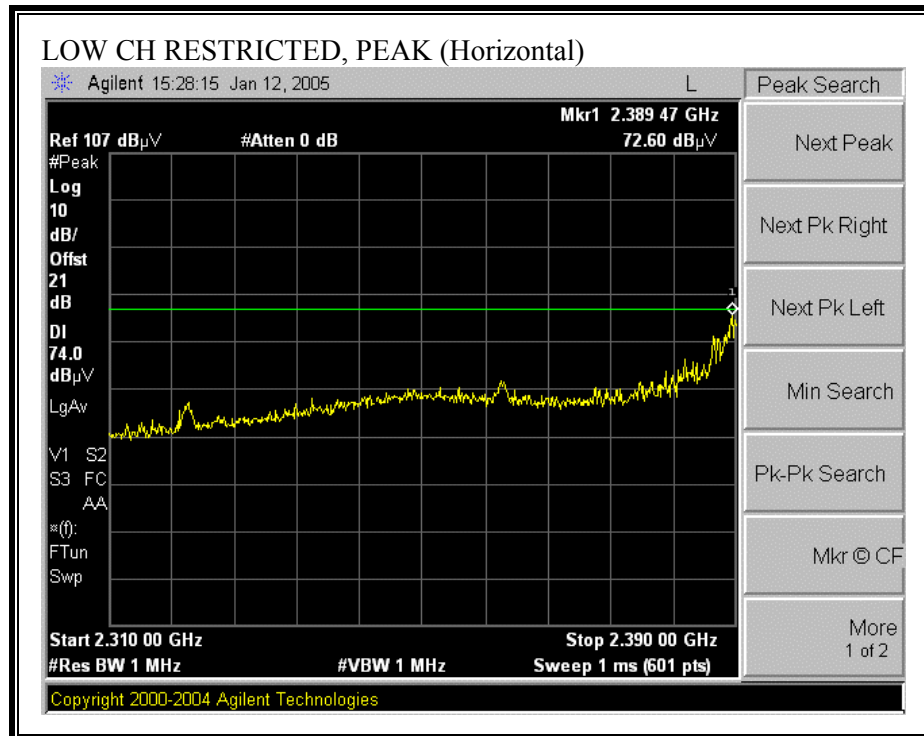
Not applicable. The BT has no extended card to use to be tested for this configuration. Please see 7.2.4.2 for reference.

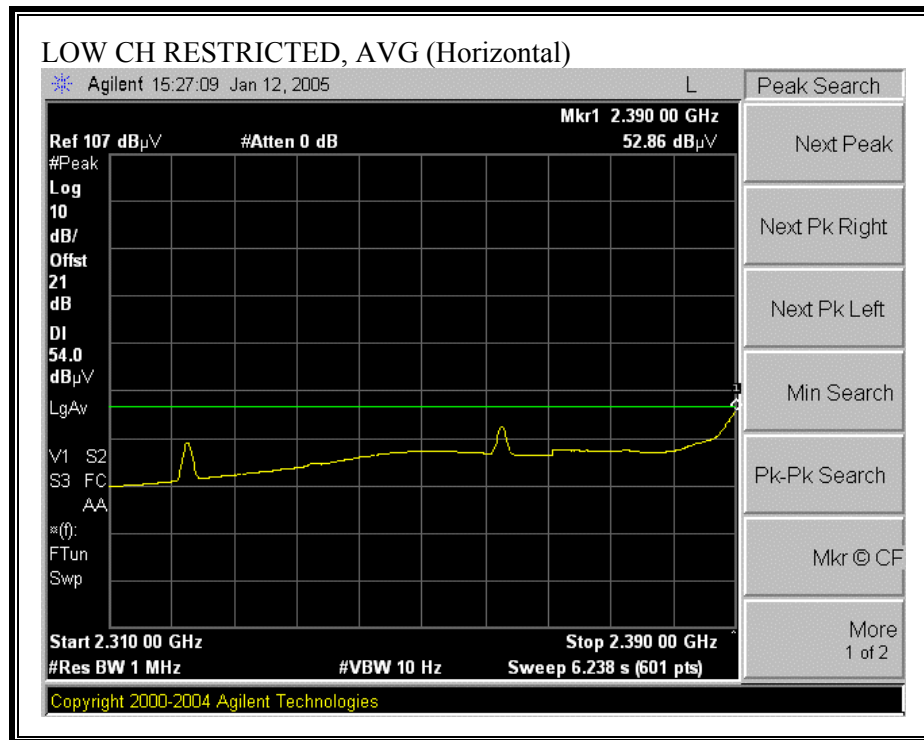
7.2.4.2 MOBILE CONFIGURATION, WITH BLUETOOTH BC04

No non-compliance noted:

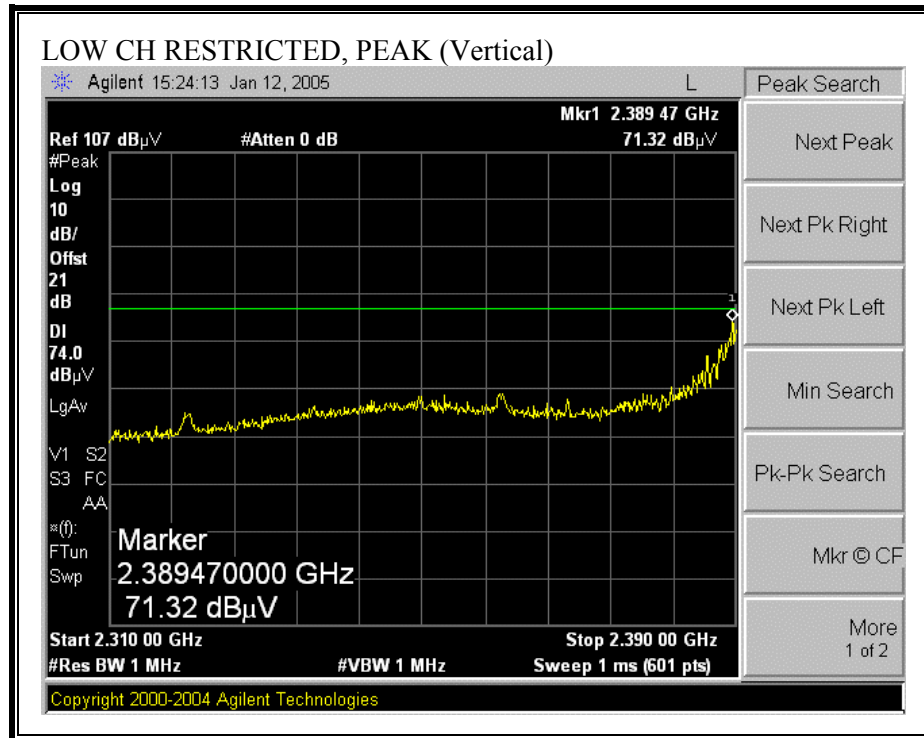
The dominant transmitter is the WLAN and the non-dominant transmitter is the Bluetooth.

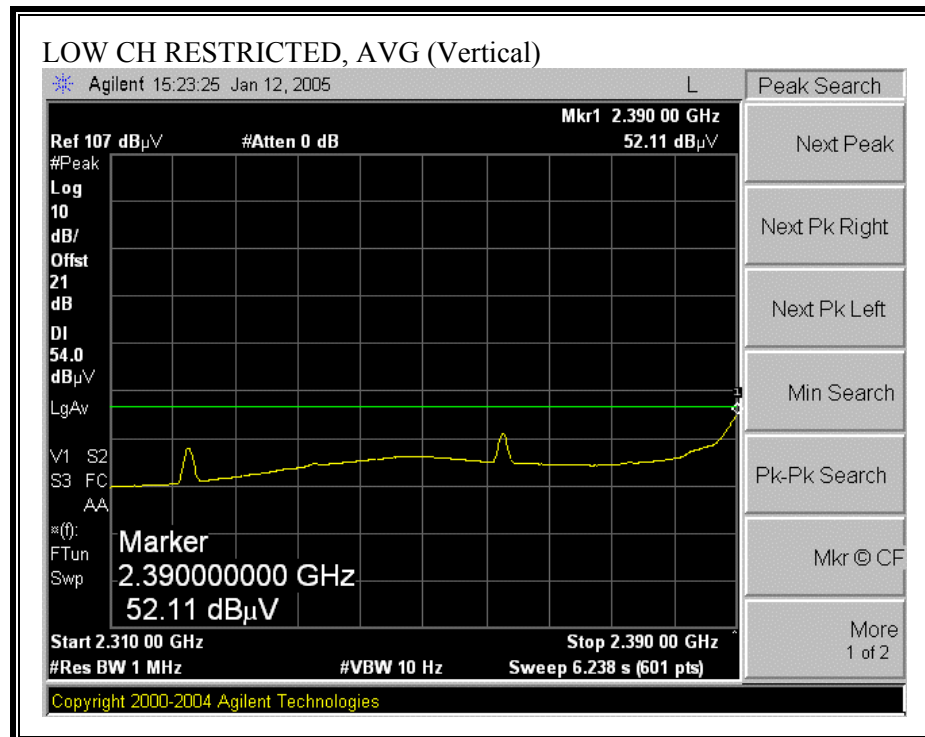
WORST-CASE RESTRICTED BANDEDGE (LOW CHANNEL, HORIZONTAL)



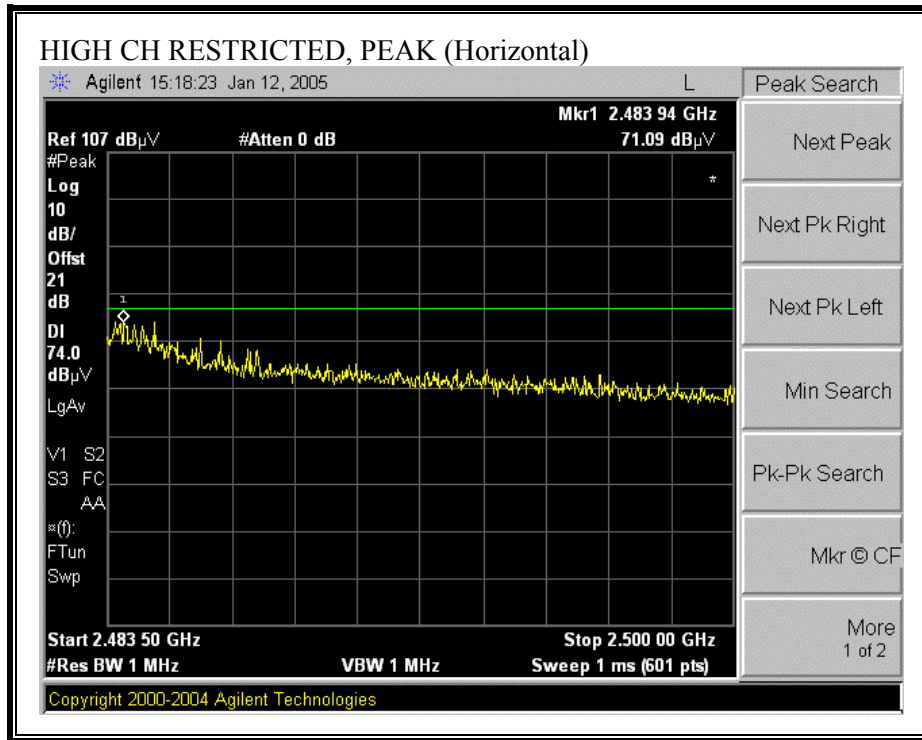


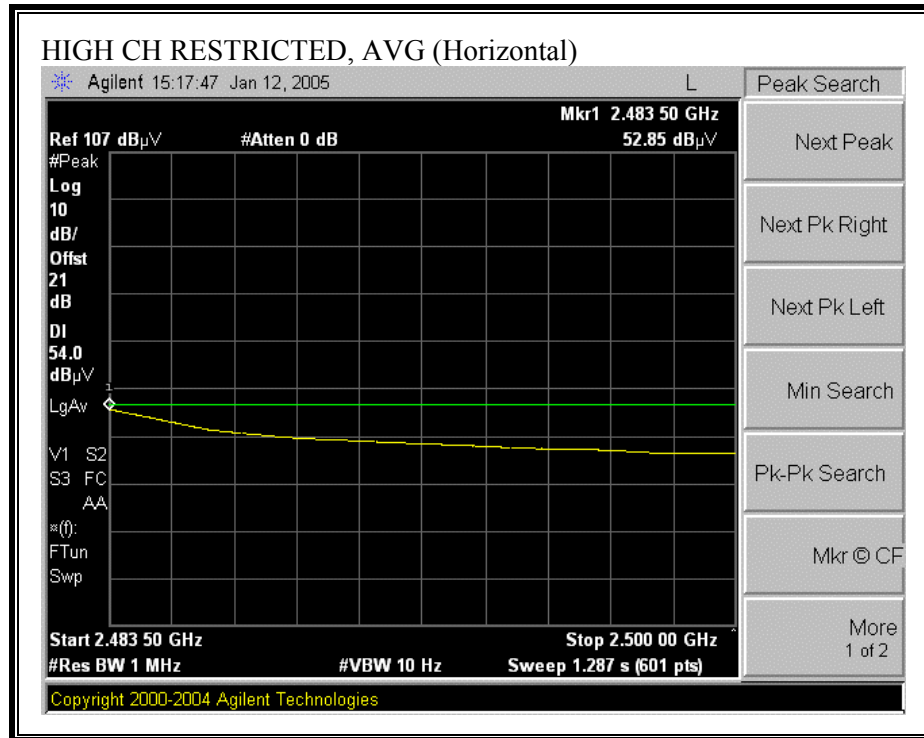
WORST-CASE RESTRICTED BANDEDGE (LOW CHANNEL, VERTICAL)



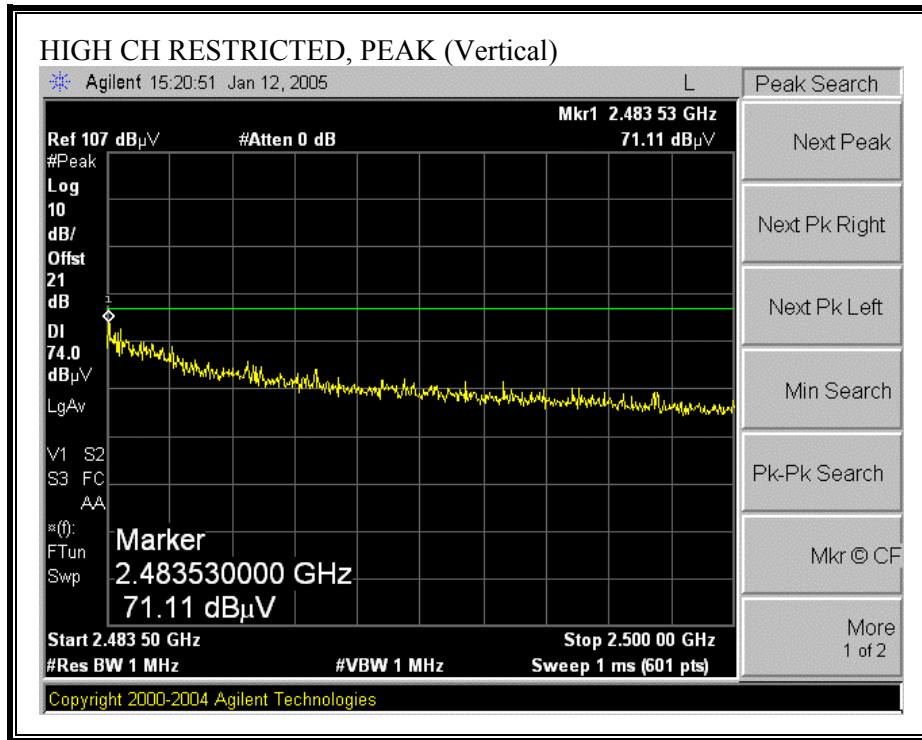


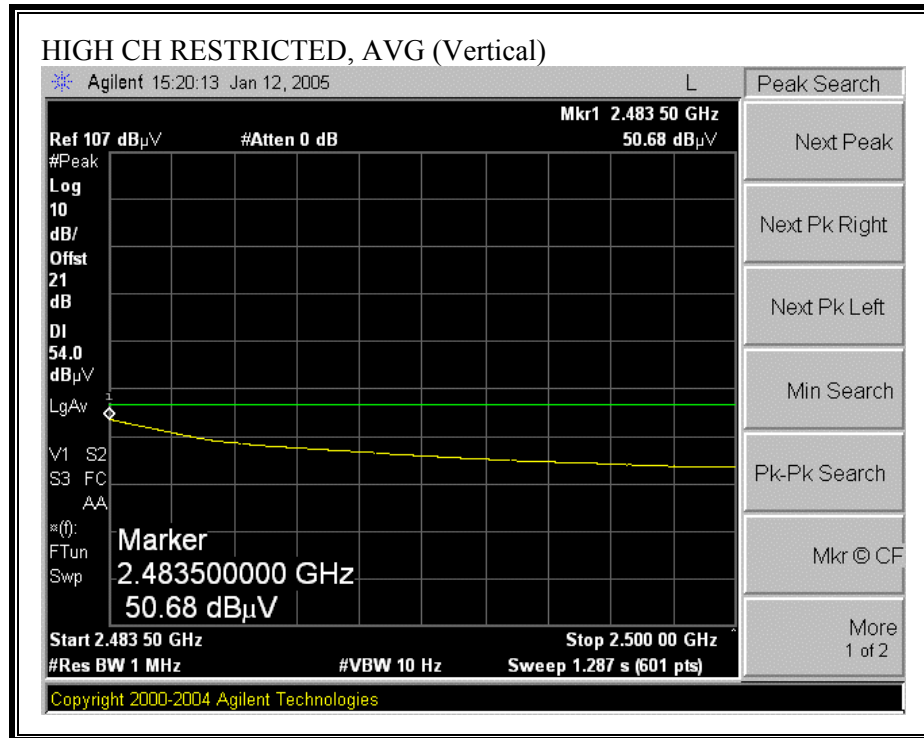
WORST-CASE RESTRICTED BANDEDGE (HIGH CHANNEL, HORIZONTAL)





WORST-CASE RESTRICTED BANDEDGE (HIGH CHANNEL, VERTICAL)





WORST-CASE HARMONICS AND SPURIOUS EMISSIONS

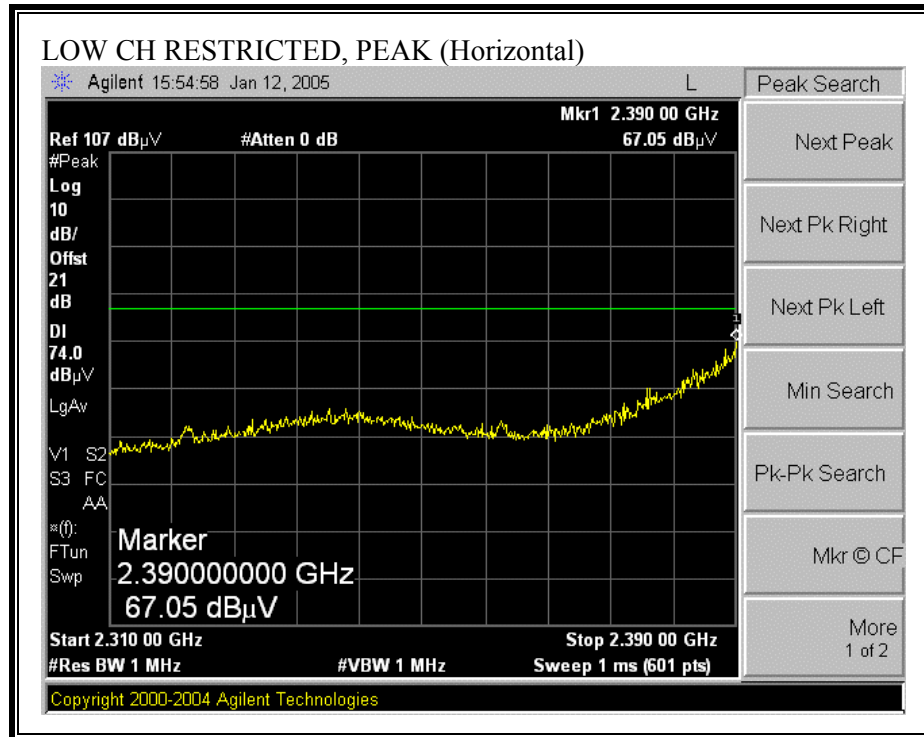
02/03/05 High Frequency Measurement Compliance Certification Services, Morgan Hill Open Field Site															
Test Engr: Chin Pang Project #: 04U3194-1 Company: Toshiba EUT Descrip.: 802.11b/g Half Size Mini-PCI WLAN Module EUT M/N: PA3426U-1MPC Test Target: FCC 15.247 Mode Oper: Tx_g mode_Antenna HTL017 WLAN and Bluetooth BC04 Co-location (Worst Case), 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										Peak Measurements RBW=VBW=1MHz					
2 foot cable		3 foot cable		4 foot cable		12 foot cable		HPF		Reject Filter		Average Measurements RBW=1MHz , VBW=10Hz			
3_Chin		12_Neelesh		HPF_4.0GHz											
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										

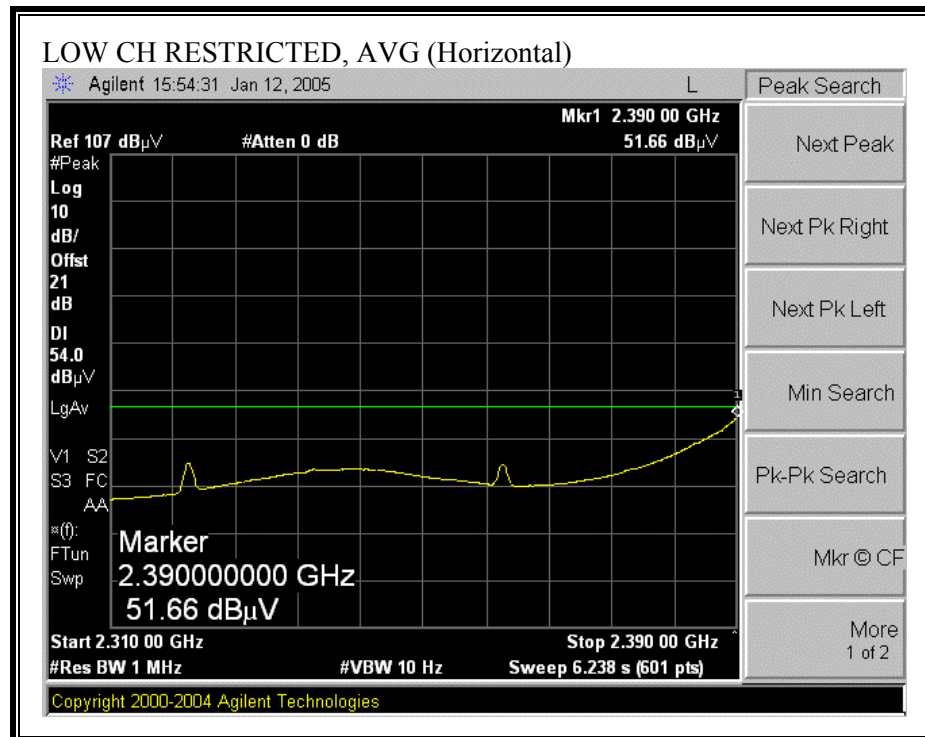
7.2.4.3 PORTABLE CONFIGURATION, WITH BLUETOOTH BC04

No non-compliance noted:

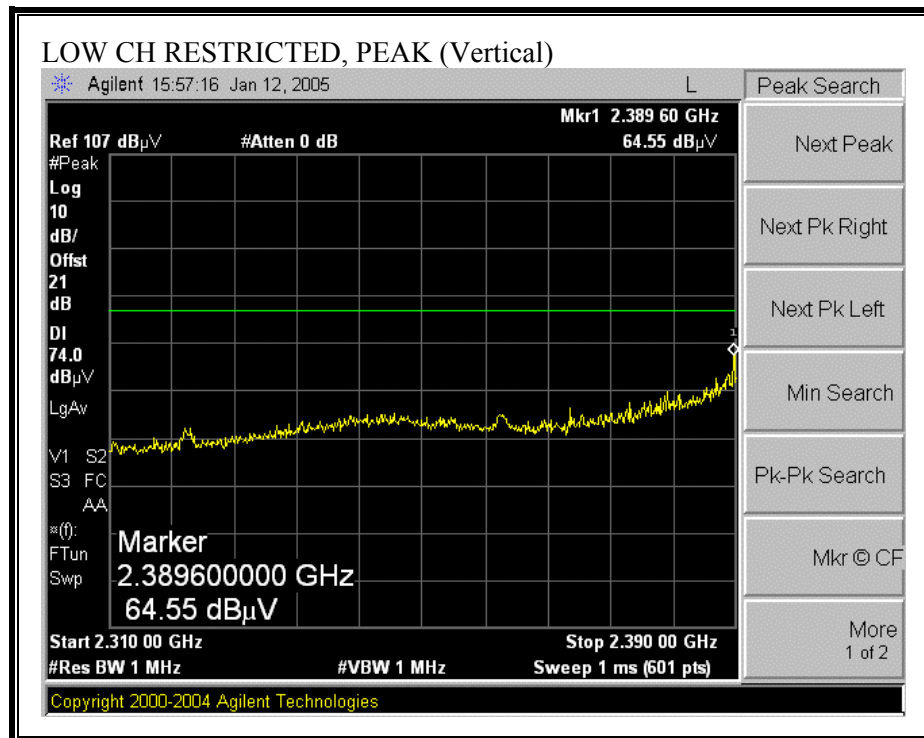
The dominant transmitter is the WLAN and the non-dominant transmitter is the Bluetooth

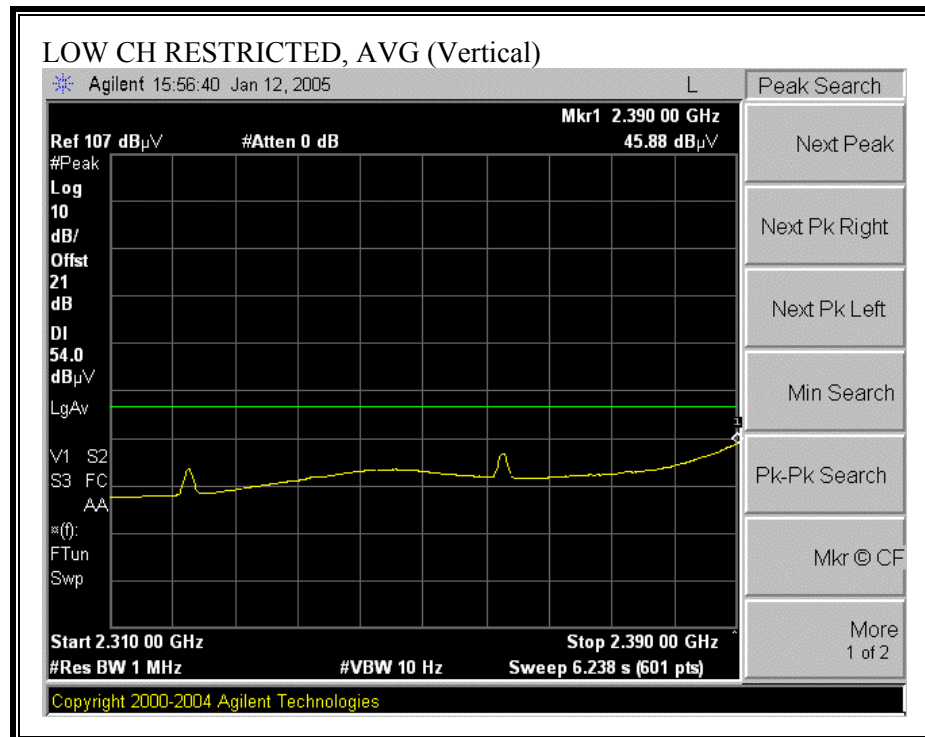
WORST-CASE RESTRICTED BANDEDGE (LOW CHANNEL, HORIZONTAL)



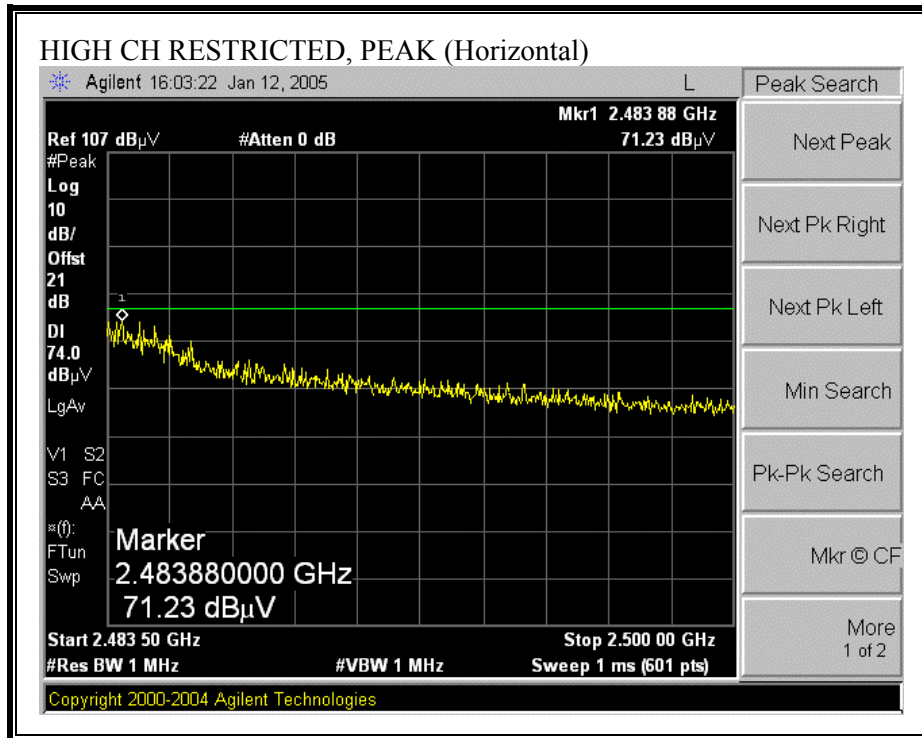


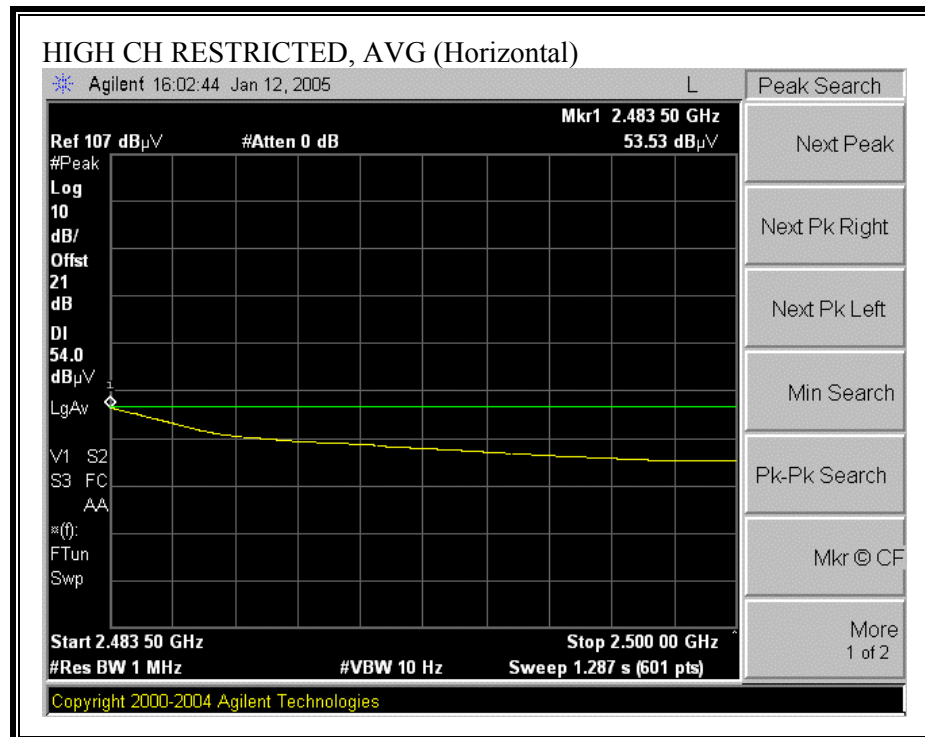
WORST-CASE RESTRICTED BANDEDGE (LOW CHANNEL, VERTICAL)



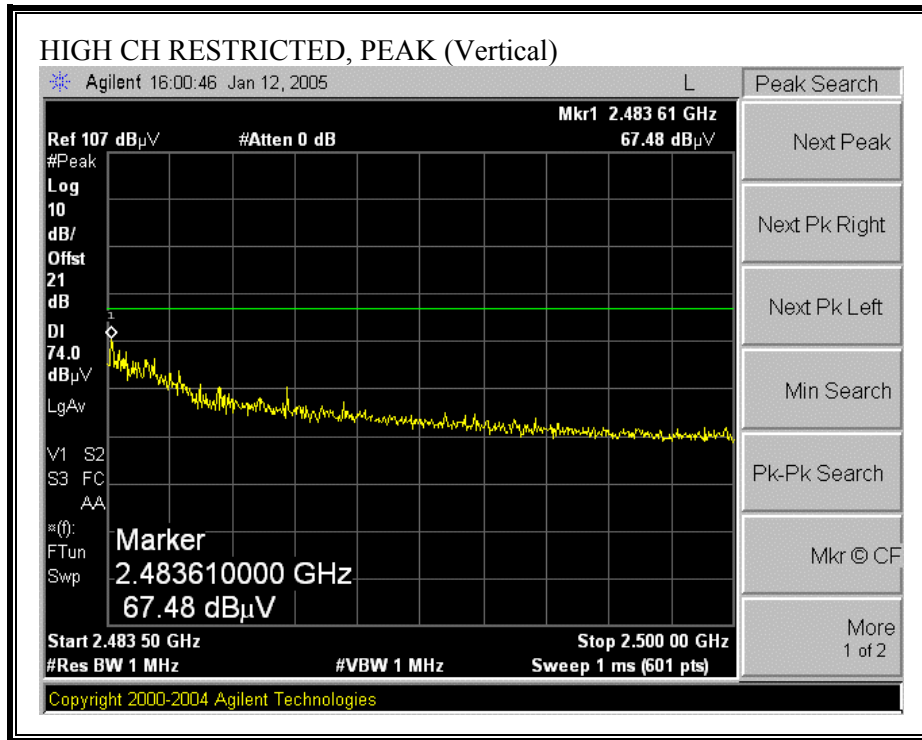


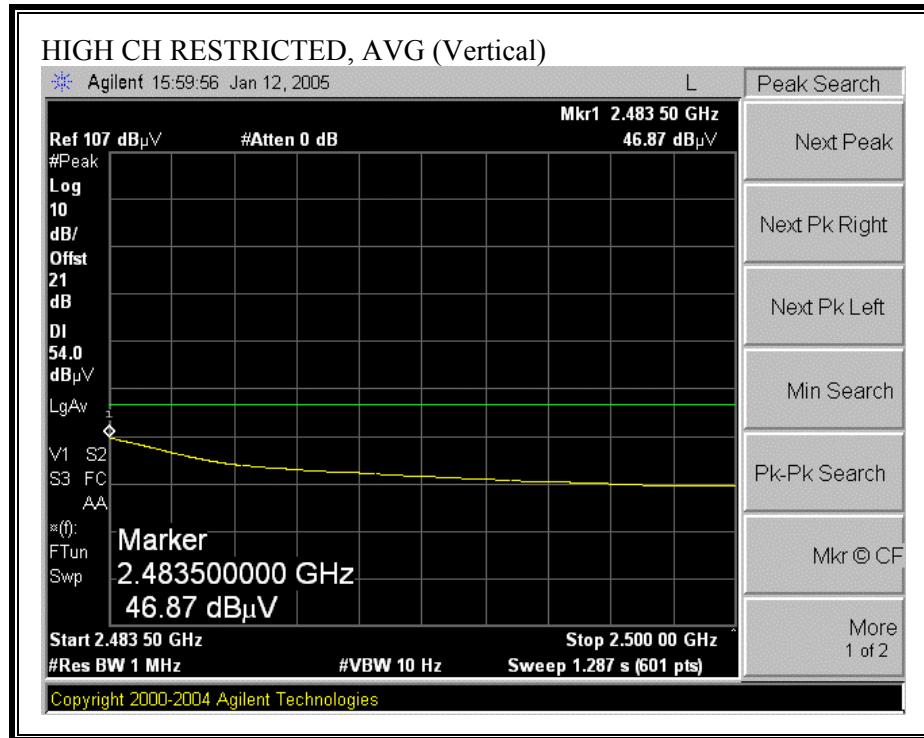
WORST-CASE RESTRICTED BANDEDGE (HIGH CHANNEL, HORIZONTAL)





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-amplifier 1-26GHz T87 Miteq 924342		Pre-amplifier 26-40GHz		Horn > 18GHz		Limit FCC 15.205								
Hi Frequency Cables										HPF		Reject Filter		Peak Measurements RBW=VBW=1MHz		
2 foot cable		3 foot cable		4 foot cable		12 foot cable		HPF_4.0GHz		Reject Filter		Average Measurements RBW=1MHz, VBW=10Hz				
3_Chin						12_Neelesh										
f GHz	Dist (m)	Read Pk dBuV	Read Avg. dBuV	AF dB/m	CL dB	Amp dB	D Corr dB	Filt 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

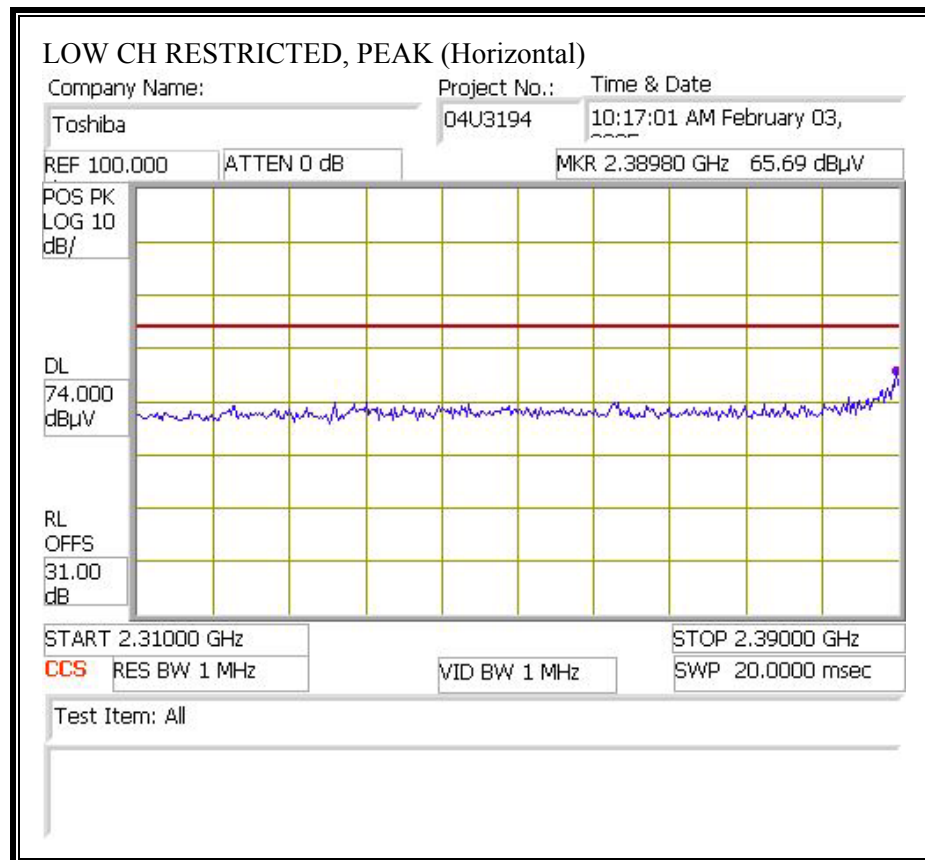
Not applicable. The BT has no extended card to use to be tested for this configuration. Please see 7.2.4.5 for reference.

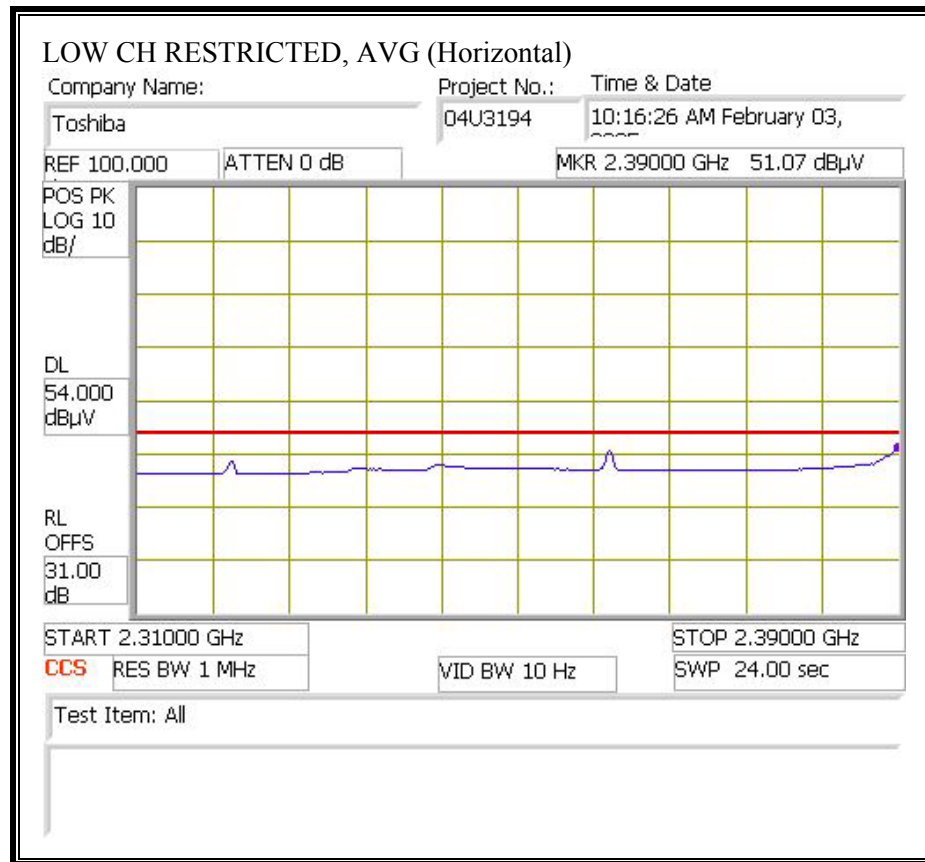
7.2.4.5 MOBILE CONFIGURATION, WITH BLUETOOTH BC02

No non-compliance noted:

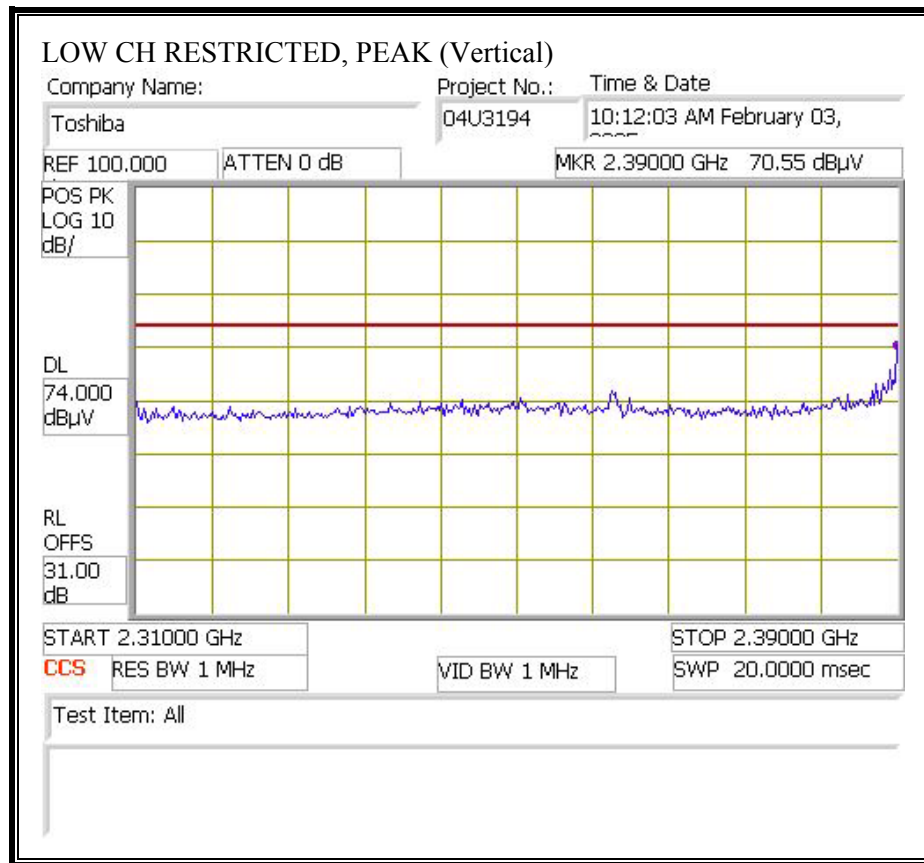
The dominant transmitter is the WLAN and the non-dominant transmitter is the Bluetooth

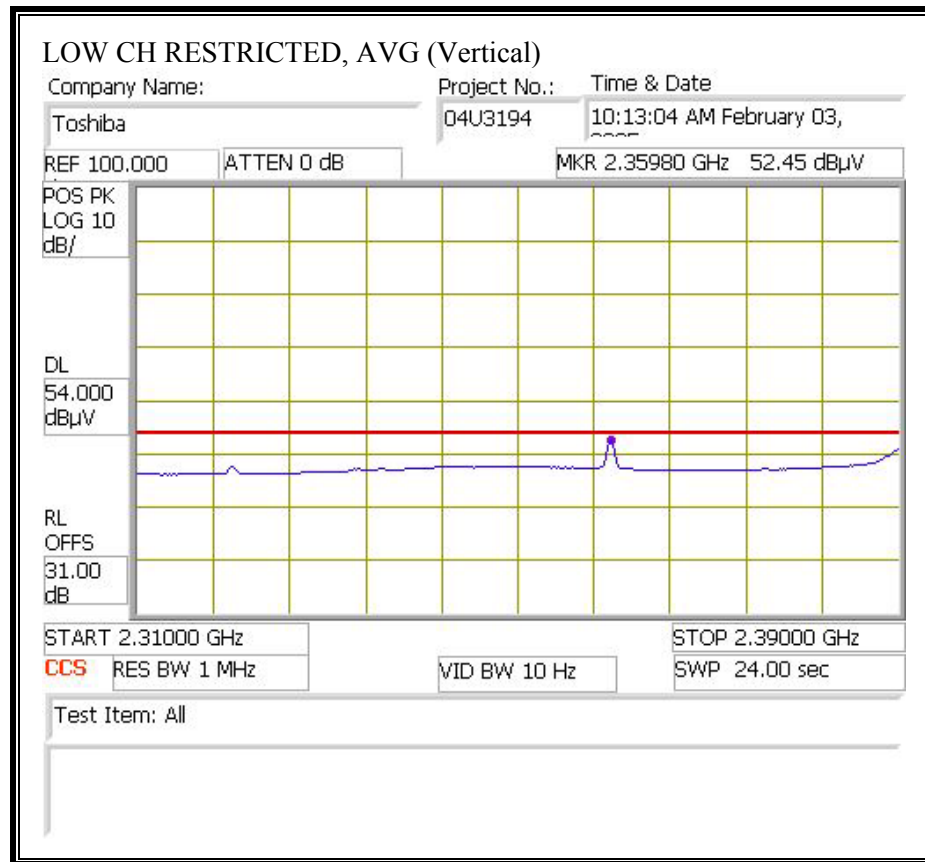
WORST-CASE RESTRICTED BANDEDGE (LOW CHANNEL, HORIZONTAL)



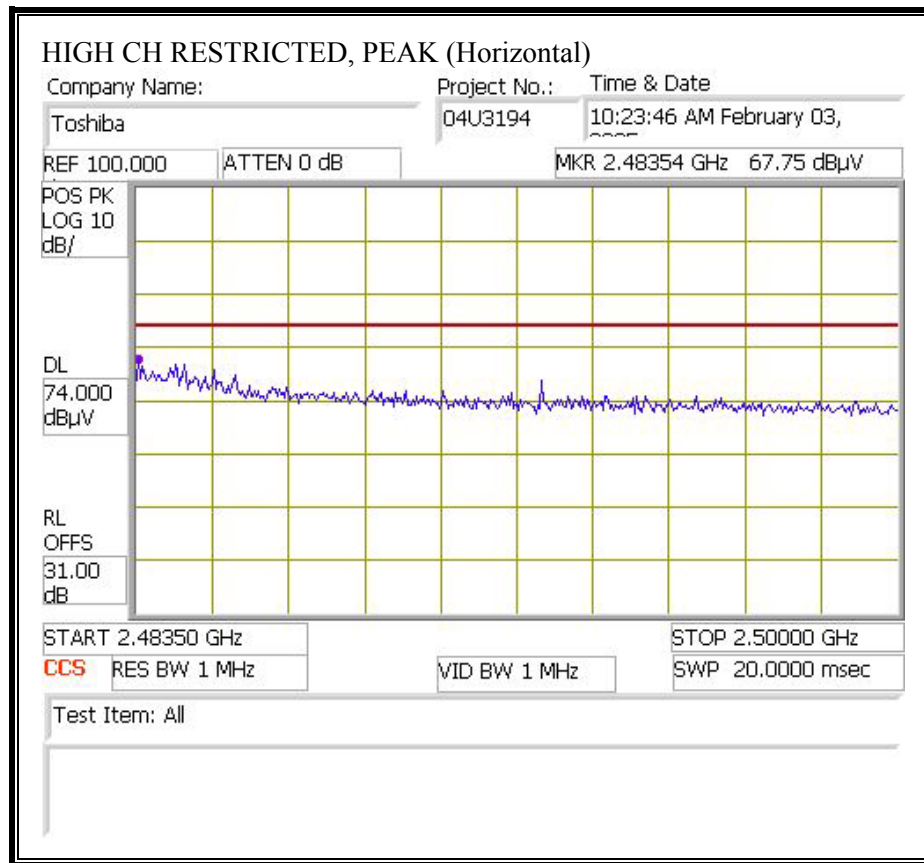


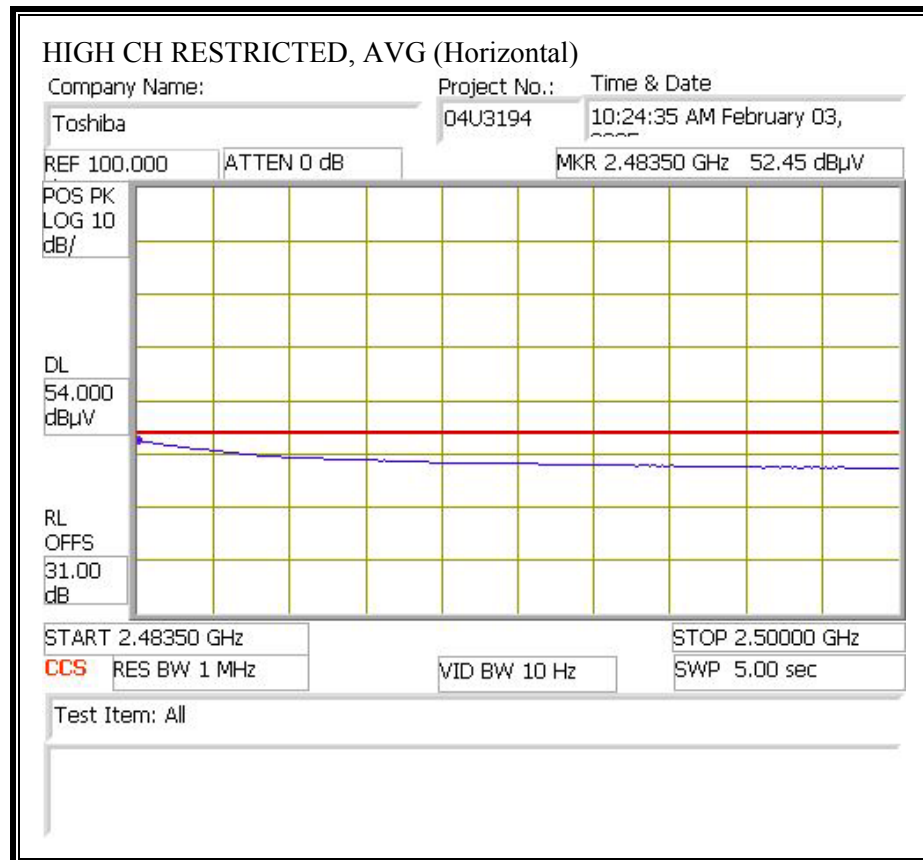
WORST-CASE RESTRICTED BANDEDGE (LOW CHANNEL, VERTICAL)



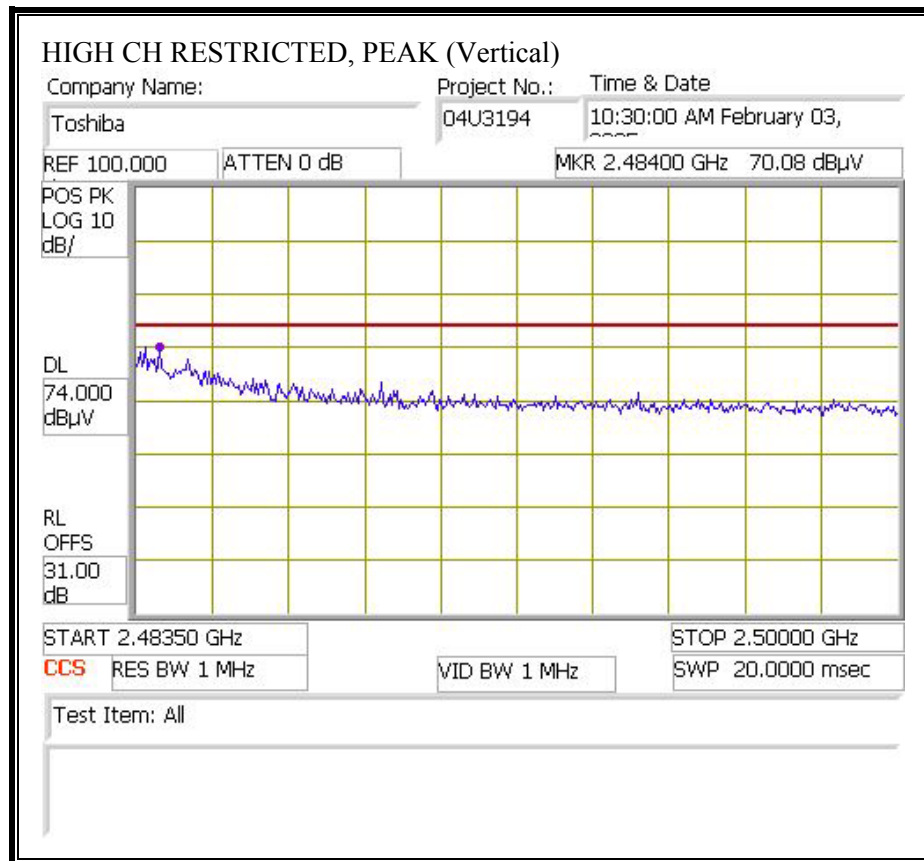


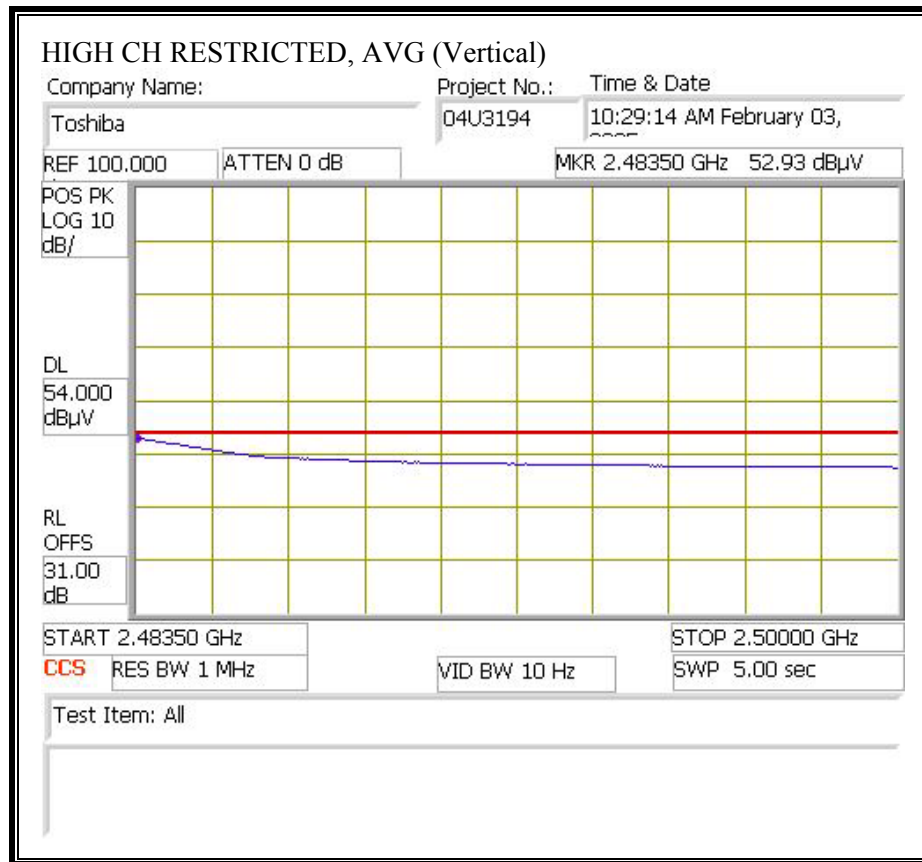
WORST-CASE RESTRICTED BANDEDGE (HIGH CHANNEL, HORIZONTAL)





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

