02/04/03 **High Frequency Measurement**
Compliance Certification Services, Morgan Hill Open Field Site

Test Engr: Chin Pang
Project #: 03U1821-1
Company: Tokeias RFI/EMI Consultanthomas N. C
EUT Descrip.: 2.4GHz DTS
EUT M/N: Point Red Device FCC ID: QDU-MCRD-2R4
Test Target:FCC Class B
Mode Oper: Tx with 9dBi omni Power into antenna: 26.35 dBm

Test Equipment:

Cable (feet)	EMCO Horn 1-18GHz	Pre-amplifer 1-26GHz	Spectrum Analyzer	Horn > 18GHz
1414	T73; S/N: 6717	Miteq NSP2600-44	8564E Analyzer	

Peak Measurements:
1 MHz Resolution Bandwidth
1MHz Video Bandwidth

Average Measurements:
1 MHz Resolution Bandwidth
10Hz Video Bandwidth

Flat Panel Antenna--15dBi, Low Channel

f GHz	Dist feet	Read Pk dBuV	Read Avg. dBuV	AF dB/m	CL dB	Amp dB	D Corr dB	HPF	Peak dBuV/m	Avg dBuV/m	Pk Lim dBuV/m	Avg Lim dBuV/m	Pk Mar dB	Avg Mar dB	Notes
2.405	9.8	82.3		28.9	3.6	-36.3	0.0	0.0	78.4		74.0	54.0			V
4.810	9.8	56.7	34.8	33.8	5.3	-36.1	0.0	1.0	60.7	38.8	74.0	54.0	-13.3	-15.2	V
4.810	9.8	52.9	33.5	33.8	5.3	-36.1	0.0	1.0	56.8	37.5	74.0	54.0	-17.2	-16.5	H
7.215	9.8	45.4	32.2	37.0	6.8	-36.3	0.0	1.0	53.8	40.6	74.0	54.0	-20.2	-13.4	V
7.215	9.8	41.9	32.4	37.0	6.8	-36.3	0.0	1.0	50.2	40.7	74.0	54.0	-23.8	-13.3	H
								1.0			74.0	54.0			V
								1.0			74.0	54.0			V
								1.0			74.0	54.0			V
								1.0			74.0	54.0			V
								1.0			74.0	54.0			V

Note: No emisssions found above 3rd harmonic

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		

02/04/03 **High Frequency Measurement**
Compliance Certification Services, Morgan Hill Open Field Site

Test Engr: Chin Pang
Project #: 03U1821-1
Company: Tokeias RFI/EMI Consultanthomas N. C
EUT Descrip.: 2.4GHz DTS
EUT M/N: Point Red Device FCC ID: QDU-MCRD-2R4
Test Target:FCC Class B
Mode Oper: Tx with 9dBi omni Power input: 25.05 dBm

Test Equipment:

Cable (feet)	EMCO Horn 1-18GHz	Pre-amplifer 1-26GHz	Spectrum Analyzer	Horn > 18GHz
1414	T73; S/N: 6717	Miteq NSP2600-44	8564E Analyzer	

Peak Measurements:
1 MHz Resolution Bandwidth
1MHz Video Bandwidth

Average Measurements:
1 MHz Resolution Bandwidth
10Hz Video Bandwidth

Flat Panel Antenna--15dBi, Mid Channel

f GHz	Dist feet	Read Pk dBuV	Read Avg. dBuV	AF dB/m	CL dB	Amp dB	D Corr dB	HPF	Peak dBuV/m	Avg dBuV/m	Pk Lim dBuV/m	Avg Lim dBuV/m	Pk Mar dB	Avg Mar dB	Notes
2.440	9.8			29.0	3.6	-36.3	0.0	0.0			74.0	54.0			V
4.880	9.8	58.0	34.0	34.0	5.4	-36.1	0.0	1.0	62.2	38.2	74.0	54.0	-11.8	-15.8	V
4.880	9.8	60.9	34.4	34.0	5.4	-36.1	0.0	1.0	65.1	38.6	74.0	54.0	-8.9	-15.4	H
7.319	9.8	52.0	33.9	37.2	6.8	-36.3	0.0	1.0	60.7	42.6	74.0	54.0	-13.3	-11.4	V
7.319	9.8	52.7	34.7	37.2	6.8	-36.3	0.0	1.0	61.4	43.4	74.0	54.0	-12.6	-10.6	H
								1.0			74.0	54.0			V
								1.0			74.0	54.0			V
								1.0			74.0	54.0			V
								1.0			74.0	54.0			V
								1.0			74.0	54.0			V
								1.0			74.0	54.0			V

Note: No emissions found above 3rd harmonic

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		

02/04/03 **High Frequency Measurement**

Compliance Certification Services, Morgan Hill Open Field Site

Test Engr: Chin Pang
Project #: 03U1821-1
Company: Tokeias RFI/EMI Consultanthomas N. C
EUT Descrip.: 2.4GHz DTS
EUT M/N: Point Red Device FCC ID: QDU-MCRD-2R4
Test Target:FCC Class B
Mode Oper: Tx with 9 dBi omni Power input: 25.73 dBm

Test Equipment:

Cable (feet)	EMCO Horn 1-18GHz	Pre-amplifer 1-26GHz	Spectrum Analyzer	Horn > 18GHz
1414	T73; S/N: 6717	Miteq NSP2600-44	8564E Analyzer	

Peak Measurements:
1 MHz Resolution Bandwidth
1MHz Video Bandwidth

Average Measurements:
1 MHz Resolution Bandwidth
10Hz Video Bandwidth

Flat Panel Antenna--15dBi, Low Channel

f GHz	Dist feet	Read Pk dBuV	Read Avg. dBuV	AF dB/m	CL dB	Amp dB	D Corr dB	HPF	Peak dBuV/m	Avg dBuV/m	Pk Lim dBuV/m	Avg Lim dBuV/m	Pk Mar dB	Avg Mar dB	Notes
2.475	9.8			29.0	3.6	-36.3	0.0	1.0			74.0	54.0			V
4.950	9.8	47.6	32.5	34.2	5.4	-36.1	0.0	1.0	52.1	36.9	74.0	54.0	-21.9	-17.1	V
7.424	9.8	42.8	32.3	37.4	6.9	-36.2	0.0	1.0	51.9	41.3	74.0	54.0	-22.1	-12.7	V
4.950	9.8	53.5	33.4	34.2	5.4	-36.1	0.0	1.0	58.0	37.9	74.0	54.0	-16.0	-16.1	H
7.424	9.8	45.0	32.2	37.4	6.9	-36.2	0.0	1.0	54.0	41.2	74.0	54.0	-20.0	-12.8	Hr
								1.0			74.0	54.0			V
								1.0			74.0	54.0			V
								1.0			74.0	54.0			V
								1.0			74.0	54.0			V
								1.0			74.0	54.0			V
								1.0			74.0	54.0			V
								1.0			74.0	54.0			V
								1.0			74.0	54.0			V

Note: No emissions found above 3rd harmonic

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		

02/04/03 **High Frequency Measurement**

Compliance Certification Services, Morgan Hill Open Field Site

Test Engr: Chin Pang
Project #: 03U1821-1
Company: Tokeias RFI/EMI Consultanthomas N. C
EUT Descrip.: 2.4GHz DTS
EUT M/N: Point Red FCC ID: QDU-MCRD-2R4
Test Target:FCC Class B
Mode Oper: Tx on flat panel antenna Power input: 26 dBm

Test Equipment:

Cable (feet)	EMCO Horn 1-18GHz	Pre-amplifer 1-26GHz	Spectrum Analyzer	Horn > 18GHz
1414	T73; S/N: 6717	Miteq NSP2600-44	8564E Analyzer	

Peak Measurements:
1 MHz Resolution Bandwidth
1MHz Video Bandwidth

Average Measurements:
1 MHz Resolution Bandwidth
10Hz Video Bandwidth

Antenna--PC-2415N, 15dBi, Low Channel

f GHz	Dist feet	Read Pk dBuV	Read Avg. dBuV	AF dB/m	CL dB	Amp dB	D Corr dB	HPF	Peak dBuV/m	Avg dBuV/m	Pk Lim dBuV/m	Avg Lim dBuV/m	Pk Mar dB	Avg Mar dB	Notes
2.405	9.8	83.1		28.9	3.6	-36.3	0.0	0.0	79.2		74.0	54.0			V
4.810	9.8	52.3	35.3	33.8	5.3	-36.1	0.0	1.0	56.3	39.2	74.0	54.0	-17.7	-14.8	V
4.810	9.8	44.6	32.0	33.8	5.3	-36.1	0.0	1.0	48.6	36.0	74.0	54.0	-25.4	-18.0	H
7.215	9.8	45.7	33.6	37.0	6.8	-36.3	0.0	1.0	54.0	42.0	74.0	54.0	-20.0	-12.0	V
7.215	9.8	45.1	32.0	37.0	6.8	-36.3	0.0	1.0	53.4	40.4	74.0	54.0	-20.6	-13.6	H
								1.0			74.0	54.0			V
								1.0			74.0	54.0			V
								1.0			74.0	54.0			V
								1.0			74.0	54.0			V
								1.0			74.0	54.0			V

Note: No emisssions found above 3rd harmonic

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		

02/04/03 **High Frequency Measurement**
Compliance Certification Services, Morgan Hill Open Field Site

Test Engr: Chin Pang
Project #: 03U1821-1
Company: Tokeias RFI/EMI Consultanthomas N. C
EUT Descrip.: 2.4GHz DTS
EUT M/N: Point Red FCC ID: QDU-MCRD-2R4
Test Target:FCC Class B
Mode Oper: Tx on flat panel antenna Power input: 25 dBm

Test Equipment:

Cable (feet)	EMCO Horn 1-18GHz	Pre-amplifer 1-26GHz	Spectrum Analyzer	Horn > 18GHz
1414	T73; S/N: 6717	Miteq NSP2600-44	8564E Analyzer	

Peak Measurements:
1 MHz Resolution Bandwidth
1MHz Video Bandwidth

Average Measurements:
1 MHz Resolution Bandwidth
10Hz Video Bandwidth

PC-2415N Antenna--15dBi, Mid Channel

f GHz	Dist feet	Read Pk dBuV	Read Avg. dBuV	AF dB/m	CL dB	Amp dB	D Corr dB	HPF	Peak dBuV/m	Avg dBuV/m	Pk Lim dBuV/m	Avg Lim dBuV/m	Pk Mar dB	Avg Mar dB	Notes
2.440	9.8			29.0	3.6	-36.3	0.0	0.0			74.0	54.0			V
4.880	9.8	56.0	32.3	34.0	5.4	-36.1	0.0	1.0	60.2	36.5	74.0	54.0	-13.8	-17.5	V
4.880	9.8	52.9	32.8	34.0	5.4	-36.1	0.0	1.0	57.1	37.1	74.0	54.0	-16.9	-16.9	H
7.319	9.8	50.3	32.7	37.2	6.8	-36.3	0.0	1.0	59.0	41.4	74.0	54.0	-15.0	-12.6	V
7.319	9.8	51.0	34.0	37.2	6.8	-36.3	0.0	1.0	59.7	42.7	74.0	54.0	-14.3	-11.3	H
								1.0			74.0	54.0			V
								1.0			74.0	54.0			V
								1.0			74.0	54.0			V
								1.0			74.0	54.0			V
								1.0			74.0	54.0			V
								1.0			74.0	54.0			V

Note: No emissions found above 3rd harmonic

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		

02/04/03 **High Frequency Measurement**

Compliance Certification Services, Morgan Hill Open Field Site

Test Engr: Chin Pang
Project #: 03U1821-1
Company: Tokeias RFI/EMI Consultanthomas N. C
EUT Descrip.: 2.4GHz DTS
EUT M/N: Point Red FCC ID: QDU-MCRD-2R4
Test Target:FCC Class B
Mode Oper: Tx on flat panel antenna Power input: 25.73 dBm

Test Equipment:

Cable (feet)	EMCO Horn 1-18GHz	Pre-amplifer 1-26GHz	Spectrum Analyzer	Horn > 18GHz
1414	T73; S/N: 6717	Miteq NSP2600-44	8564E Analyzer	

Peak Measurements:
1 MHz Resolution Bandwidth
1MHz Video Bandwidth

Average Measurements:
1 MHz Resolution Bandwidth
10Hz Video Bandwidth

Antenna--PC-2415N, 15dBi, Hi Channel

f GHz	Dist feet	Read Pk dBuV	Read Avg. dBuV	AF dB/m	CL dB	Amp dB	D Corr dB	HPF	Peak dBuV/m	Avg dBuV/m	Pk Lim dBuV/m	Avg Lim dBuV/m	Pk Mar dB	Avg Mar dB	Notes
2.475	9.8	82.7		29.0	3.6	-36.3	0.0	0.0	79.0		74.0	54.0			V
4.950	9.8	44.1	32.3	34.2	5.4	-36.1	0.0	1.0	48.5	36.8	74.0	54.0	-25.5	-17.2	V
7.424	9.8	44.5	32.9	37.4	6.9	-36.2	0.0	1.0	53.6	42.0	74.0	54.0	-20.4	-12.0	V
4.950	9.8	48.0	33.3	34.2	5.4	-36.1	0.0	1.0	52.5	37.8	74.0	54.0	-21.5	-16.2	H
7.424	9.8	44.9	32.6	37.4	6.9	-36.2	0.0	1.0	54.0	41.6	74.0	54.0	-20.0	-12.4	H
								1.0			74.0	54.0			V
								1.0			74.0	54.0			V
								1.0			74.0	54.0			V
								1.0			74.0	54.0			V
								1.0			74.0	54.0			V
								1.0			74.0	54.0			V
								1.0			74.0	54.0			V
								1.0			74.0	54.0			V

Note: No emissions found above 3rd harmonic

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		

02/03/03 **High Frequency Measurement**

Compliance Certification Services, Morgan Hill Open Field Site

Test Engr: NEELESH RAJ
Project #:
Company: POINT RED FCC ID: QDU-MCRD-2R4 with yagi antenna Power input: 26.35 dBm
EUT Descrip.:
EUT M/N:
Test Target:
Mode Oper:

Test Equipment:

Cable (feet	EMCO Horn 1-18GHz	Pre-amplifer 1-26GHz	Spectrum Analyzer	Horn > 18GHz
15	T73; S/N: 6717	Miteq NSP2600-44	PSA	

Peak Measurements:
1 MHz Resolution Bandwidth
1MHz Video Bandwidth

Average Measurements:
1 MHz Resolution Bandwidth
10Hz Video Bandwidth

f GHz	Dist feet	Read Pk dBuV	Read Avg. dBuV	AF dB/m	CL dB	Amp dB	D Corr dB	HPF	Peak dBuV/m	Avg dBuV/m	Pk Lim dBuV/m	Avg Lim dBuV/m	Pk Mar dB	Avg Mar dB	Notes
		HIGH CHANNEL HARMONICS (2.475GHz)													
4.950	9.8	43.9	33.2	34.2	5.8	-36.1	0.0	1.0	48.8	38.1	74.0	54.0	-25.2	-15.9	V
7.425	9.8	43.3	32.2	37.4	7.3	-36.2	0.0	1.0	52.8	41.7	74.0	54.0	-21.2	-12.3	V
9.900	9.8	40.9		40.1	8.6	-35.5	0.0	1.0	55.0		94.4		-39.4		V
12.375	9.8	41.5	31.8	39.1	9.6	-36.5	0.0	1.0	54.8	45.0	74.0	54.0	-19.2	-9.0	V
4.950	9.8	43.8	32.0	34.2	5.8	-36.1	0.0	1.0	48.7	36.9	74.0	54.0	-25.3	-17.1	H
7.425	9.8	43.4		37.4	7.3	-36.2	0.0	1.0	52.9		86.7		-33.8		H
9.900	9.8	41.0	30.0	40.1	8.6	-35.5	0.0	1.0	55.2	44.2	74.0	54.0	-18.8	-9.8	H
12.375	9.8	42.0	31.5	39.1	9.6	-36.5	0.0	1.0	55.3	44.8	74.0	54.0	-18.7	-9.2	H
		MIDDLE CHANNEL HARMONICS (2.440)													
4.880	9.8	48.6	30.6	34.0	5.8	-36.1	0.0	1.0	53.2	35.2	74.0	54.0	-20.8	-18.8	V
7.320	9.8	45.7	30.9	37.2	7.3	-36.3	0.0	1.0	54.9	40.1	74.0	54.0	-19.1	-13.9	V
9.750	9.8	42.1		39.9	8.6	-35.5	0.0	1.0	56.0		97.3		-41.2		V
12.200	9.8	41.7	31.1	39.3	9.6	-36.4	0.0	1.0	55.1	44.5	74.0	54.0	-18.9	-9.5	V
4.880	9.8	44.9	30.5	34.0	5.8	-36.1	0.0	1.0	49.6	35.1	74.0	54.0	-24.4	-18.9	H
7.320	9.8	41.8	30.8	37.2	7.3	-36.3	0.0	1.0	51.0	40.0	74.0	54.0	-23.0	-14.0	H
9.750	9.8	41.0		39.9	8.6	-35.5	0.0	1.0	54.9		87.7		-32.8		H
12.200	9.8	40.0	30.2	39.3	9.6	-36.4	0.0	1.0	53.4	43.6	74.0	54.0	-20.6	-10.4	H
			SPURIOUS												
10.551	9.8	54.0		39.2	8.9	-35.6	0.0	1.0	67.4		87.7		-20.3		H
		LOW CHANNEL HARMONICS (2.405GHz)													
4.810	9.8	43.1	31.1	33.8	5.7	-36.1	0.0	1.0	47.5	35.5	74.0	54.0	-26.5	-18.5	V
7.215	9.8	42.1		37.0	7.2	-36.3	0.0	1.0	50.9		90.4		-39.5		V
9.620	9.8	45.1		39.7	8.5	-35.4	0.0	1.0	58.8		90.4		-31.6		V
12.025	9.8	42.5	30.9	39.5	9.5	-36.3	0.0	1.0	56.1	44.5	74.0	54.0	-17.9	-9.5	V
4.810	9.8	42.8	30.1	33.8	5.7	-36.1	0.0	1.0	47.2	34.5	74.0	54.0	-26.8	-19.5	H
7.215	9.8	41.3		37.0	7.2	-36.3	0.0	1.0	50.1		82.7		-32.6		H
9.620	9.8	44.0		39.7	8.5	-35.4	0.0	1.0	57.7		82.7		-25.0		H
12.025	9.8	42.3	30.0	39.5	9.5	-36.3	0.0	1.0	55.9	43.6	74.0	54.0	-18.1	-10.4	H

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		

02/04/03 **High Frequency Measurement**
Compliance Certification Services, Morgan Hill Open Field Site

Test Engr: Chin Pang
Project #: 03U1821-1
Company: Tokeias RFI/EMI Consultanthomas N. C
EUT Descrip.: 2.4GHz DTS
EUT M/N: Point Red Device FCC ID: QDU-MCRD-2R4
Test Target:FCC Class B
Mode Oper: Tx with 24 dBi dish Power input: 24 dBm

Test Equipment:

Cable (feet)	EMCO Horn 1-18GHz	Pre-amplifer 1-26GHz	Spectrum Analyzer	Horn > 18GHz
1414	T73; S/N: 6717	Miteq NSP2600-44	8564E Analyzer	

Peak Measurements:
1 MHz Resolution Bandwidth
1MHz Video Bandwidth

Average Measurements:
1 MHz Resolution Bandwidth
10Hz Video Bandwidth

Antenna--24dBi, disk. Low Channel

f GHz	Dist feet	Read Pk dBuV	Read Avg. dBuV	AF dB/m	CL dB	Amp dB	D Corr dB	HPF	Peak dBuV/m	Avg dBuV/m	Pk Lim dBuV/m	Avg Lim dBuV/m	Pk Mar dB	Avg Mar dB	Notes
2.405	9.8	97.5		28.9	3.6	-36.3	0.0	0.0	93.6		74.0	54.0			V
4.810	9.8	65.7	33.8	33.8	5.3	-36.1	0.0	1.0	69.7	37.8	74.0	54.0	-4.3	-16.2	V
4.810	9.8	52.0	32.4	33.8	5.3	-36.1	0.0	1.0	56.0	36.4	74.0	54.0	-18.0	-17.6	H
7.215	9.8	59.1	33.2	37.0	6.8	-36.3	0.0	1.0	67.4	41.6	74.0	54.0	-6.6	-12.4	V
7.215	9.8	42.8	30.0	37.0	6.8	-36.3	0.0	1.0	51.1	38.4	74.0	54.0	-22.9	-15.6	H, Noise Floor
								1.0			74.0	54.0			V
								1.0			74.0	54.0			V
								1.0			74.0	54.0			V
								1.0			74.0	54.0			V
								1.0			74.0	54.0			V

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		

02/04/03 **High Frequency Measurement**
Compliance Certification Services, Morgan Hill Open Field Site

Test Engr: Chin Pang
Project #: 03U1821-1
Company: Tokeias RFI/EMI Consultanthomas N. C
EUT Descrip.: 2.4GHz DTS
EUT M/N: Point Red Device FCC ID: QDU-MCRD-2R4
Test Target:FCC Class B
Mode Oper: Tx with 24 dBi dish Power input: 24 dBm

Test Equipment:

Cable (feet)	EMCO Horn 1-18GHz	Pre-amplifer 1-26GHz	Spectrum Analyzer	Horn > 18GHz
1414	T73; S/N: 6717	Miteq NSP2600-44	8564E Analyzer	

Peak Measurements:
1 MHz Resolution Bandwidth
1MHz Video Bandwidth

Average Measurements:
1 MHz Resolution Bandwidth
10Hz Video Bandwidth

Antenna--24dBi, disk. Mid Channel

f GHz	Dist feet	Read Pk dBuV	Read Avg. dBuV	AF dB/m	CL dB	Amp dB	D Corr dB	HPF	Peak dBuV/m	Avg dBuV/m	Pk Lim dBuV/m	Avg Lim dBuV/m	Pk Mar dB	Avg Mar dB	Notes
2.440	9.8			29.0	3.6	-36.3	0.0	0.0			74.0	54.0			V
4.880	9.8	69.6	35.0	34.0	5.4	-36.1	0.0	1.0	73.9	39.2	74.0	54.0	-0.1	-14.8	V
4.880	9.8	49.2	32.6	34.0	5.4	-36.1	0.0	1.0	53.4	36.8	74.0	54.0	-20.6	-17.2	H
7.319	9.8	51.5	33.3	37.2	6.8	-36.3	0.0	1.0	60.2	42.0	74.0	54.0	-13.8	-12.0	V
7.319	9.8	50.1	32.5	37.2	6.8	-36.3	0.0	1.0	58.8	41.2	74.0	54.0	-15.2	-12.8	H
								1.0			74.0	54.0			V
								1.0			74.0	54.0			V
								1.0			74.0	54.0			V
								1.0			74.0	54.0			V
								1.0			74.0	54.0			V
								1.0			74.0	54.0			V

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		

02/04/03 **High Frequency Measurement**
Compliance Certification Services, Morgan Hill Open Field Site

Test Engr: Chin Pang
Project #: 03U1821-1
Company: Tokeias RFI/EMI Consultanthomas N. C
EUT Descrip.: 2.4GHz DTS
EUT M/N: Point Red Device FCC ID: QDU-MCRD-2R4
Test Target:FCC Class B
Mode Oper: Tx with 24 dBi dish Power input: 24 dBm

Test Equipment:

Cable (feet)	EMCO Horn 1-18GHz	Pre-amplifer 1-26GHz	Spectrum Analyzer	Horn > 18GHz
1414	T73; S/N: 6717	Miteq NSP2600-44	8564E Analyzer	

Peak Measurements:
1 MHz Resolution Bandwidth
1MHz Video Bandwidth

Average Measurements:
1 MHz Resolution Bandwidth
10Hz Video Bandwidth

Antenna--24dBi, disk. Hi Channel

f GHz	Dist feet	Read Pk dBuV	Read Avg. dBuV	AF dB/m	CL dB	Amp dB	D Corr dB	HPF	Peak dBuV/m	Avg dBuV/m	Pk Lim dBuV/m	Avg Lim dBuV/m	Pk Mar dB	Avg Mar dB	Notes
2.475	9.8			29.0	3.6	-36.3	0.0	1.0			74.0	54.0			V
4.950	9.8	62.5	39.0	34.2	5.4	-36.1	0.0	1.0	67.0	43.4	74.0	54.0	-7.0	-10.6	V
7.424	9.8	59.6	39.2	37.4	6.9	-36.2	0.0	1.0	68.6	48.2	74.0	54.0	-5.4	-5.8	V
4.950	9.8	42.0	30.0	34.2	5.4	-36.1	0.0	1.0	46.5	34.5	74.0	54.0	-27.5	-19.5	H
7.424	9.8	44.0	31.5	37.4	6.9	-36.2	0.0	1.0	53.0	40.5	74.0	54.0	-21.0	-13.5	H, Noise Floor
								1.0			74.0	54.0			V
								1.0			74.0	54.0			V
								1.0			74.0	54.0			V
								1.0			74.0	54.0			V
								1.0			74.0	54.0			V
								1.0			74.0	54.0			V
								1.0			74.0	54.0			V
								1.0			74.0	54.0			V

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		