

FCC CFR47 CERTIFICATION

PART 24E

TEST REPORT

FOR

KYOCERA CORPORATION

MODEL: UTD1900D-US-A

FCC ID: JOYIUD19AA

REPORT NUMBER: 04I2701-2

ISSUE DATE: JUNE 10, 2004

Prepared for

KYOCERA CORPORATION 2-1-1 KAGAHARA TSUZUKI-KU YOKOHAMA-SHI, JAPAN

Prepared by COMPLIANCE CERTIFICATION SERVICES 561F MONTEREY ROAD, ROUTE 2 MORGAN HILL, CA 95037, USA TEL: (408) 463-0885 FAX: (408) 463-0888

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1. TEST RESULT CERTIFICATION

DATE TESTED:	JUNE 01 TO JUNE 6, 2004
MODEL NUMBER:	UTD1900D-US-A
EUT DESCRIPTION:	USER TERMINAL (DESKTOP TYPE) OF WIRELESS BROADBAND INTERNET SYSTEM
COMPANY NAME:	KYOCERA CORPORATION 2-1-1 KAGAHARA TSUZUKI-KU YOKOHAMA-SHI KANAGAWA 224-8502, JAPAN

TYPE OF EQUIPMENT	INTENTIONAL RADIATOR, LICENSED TX MODULE IN MOBILE APPLICATION
MEASUREMENT PROCEDURE	ANSI C63.4 / 2001, TIA/EIA 603
PROCEDURE	CERTIFICATION
FCC RULE	CFR 47 PART 24 Subpart E

Compliance Certification Services, Inc. tested the above equipment for compliance with the requirement set forth in CFR 47, PART 24 Subpart E-Broadband PCS. The equipment in the configuration described in this report, shows the measured emission levels emanating from the equipment do not exceed the specified limit.

Note: This document reports conditions under which testing was conducted and results of tests performed. This document may not be altered or revised in any way unless done so by Compliance Certification Services and all revisions are duly noted in the revisions section. Any alteration of this document not carried out by Compliance Certification Services will constitute fraud and shall nullify the document.

Tested By:

VIEN TRAN EMC TECHNICIAN COMPLIANCE CERTIFICATION SERVICES Released For CCS By:

THU CHAN EMC SUPERVISOR COMPLIANCE CERTIFICATION SERVICES

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2. EUT DESCRIPTION

The EUT is a 1900MHz User Terminal (Desktop Type) of Wireless Broadband Internet System, which has an output power of 31.7dBm / 1.479W (EIRP Peak Output Power), which is designed for the bands transmitting of frequency range 1900MHz to 1910MHz.

3. TEST METHODOLOGY

Both conducted and radiated testing were performed according to the procedures documented on chapter 13 of ANSI C63.4 and FCC CFR 47 2.1046, 2.1047, 2.1049, 2.1051, 2.1053, 2.1055 and 2.1057.

4. TEST FACILITY

The open area test sites and conducted measurement facilities used to collect the radiated data are located at 561F Monterey Road, Morgan Hill, California, USA. The sites are constructed in conformance with the requirements of ANSI C63.7, ANSI C63.4 and CISPR Publication 22.

5. ACCREDITATION AND LISTING

The test facilities used to perform radiated and conducted emissions tests are accredited by National Voluntary Laboratory Accreditation Program for the specific scope of accreditation under Lab Code: 200065-0 to perform Electromagnetic Interference tests according to FCC PART 15 AND CISPR 22 requirements. No part of this report may be used to claim or imply product endorsement by NVLAP or any agency of the US Government. In addition, the test facilities are listed with Federal Communications Commission (reference no: 31040/SIT (1300B3) and 31040/SIT (1300F2))

6. MEASURING INSTRUMENT CALIBRATION

The measuring equipment, which was utilized in performing the tests documented herein, has been calibrated in accordance with the manufacturer's recommendations for utilizing calibration equipment, which is traceable to recognized national standards.

7. TEST SETUP, PROCEDURE AND RESULT

7.1. SECTION 2.1046: RF POWER OUTPUT

INSTRUMENTS LIST

TEST EQUIPMENT LIST							
Name of Equipment	Manufacturer	Model No.	Serial No.	Due Date			
Spectrum Analyzer	HP	E4446A	US42510266	7/23/2004			
Spectrum Analyzer, 26.5 GHz	HP	8593EM	3710A00205	10/1/2004			
Power Meter	HP	436A	2709A29209	7/15/2004			
Power Sensor, 100 kHz ~ 4.2 GHz	HP	8482A	2349A08568	7/15/2004			
Antenna, Horn 1 ~ 18 GHz	EMCO	3115	6717	2/4/2005			
Antenna, Horn 1 ~ 18 GHz	EMCO	3115	2238	2/4/2005			
10dB Attenuator	Weinschel	56-10	M2348	CNR			
Signal Generator	R & S	SMP04	DE34210	5/25/2005			

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MEASUREMENT PROCEDURE

1). On a test site, the EUT shall be placed on a turntable, and in the position closest to the normal use as declared by the user.

2). The test antenna shall be oriented initially for vertical polarization located 3m from the EUT to correspond to the frequency of the transmitter.

3). The output of the test antenna shall be connected to the measuring receiver and either a peak or quasi-peak detector was used for the measurement as indicated on the report. The detector selection is based on how close the emission level was approaching the limit.

4). The transmitter shall be placed 0.80 meter above the ground plane, the X, Y, and Z positions shall be tested and the worst case reported if necessary. The transmitter shall be switched on with typical modulation and the measurement receiver shall be tuned to the frequency of the transmitter under test.

5). The test antenna shall be raised and lowered through the specified range of height until a maximum signal level is detected by the measuring receiver.

6). The transmitter shall than be rotated through 360° in the horizontal plane, until the maximum signal level is detected by the measuring receiver.

7). The test antenna shall be raised and lowered again through the specified range of height until a maximum signal level is detected by the measuring receiver.

8). The maximum signal level detected by the measuring receiver shall be noted.

9). The transmitter shall be replaced by a tuned dipole (substitution antenna).

10). The substitution antenna shall be oriented for vertical polarization and the length of the substitution antenna shall be adjusted to correspond to the frequency of the transmitter.

11). The substitution antenna shall be connected to a calibrated signal generator.

12). If necessary, the input attenuator setting of the measuring receiver shall be adjusted in order to increase the sensitivity of the measuring receiver.

13). The test antenna shall be raised and lowered through the specified range of the height to ensure that the maximum signal is received.

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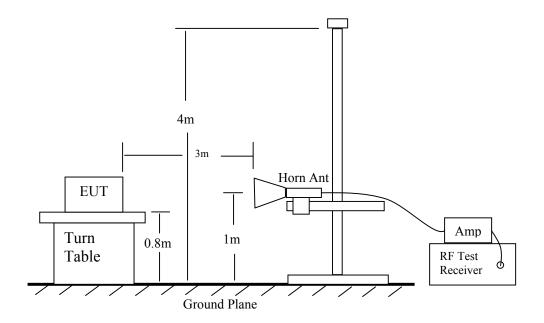
14). The input signal to the substitution antenna shall be adjusted to the level that produces a level detected by the measuring receiver, that is equal to the level noted while the transmitter radiated power was measured, corrected for the change of input attenuation setting of the measuring receiver.

15). The input level to the substitution antenna shall be recorded as power level in dBm, corrected for any change of input attenuator setting of the measuring receiver.

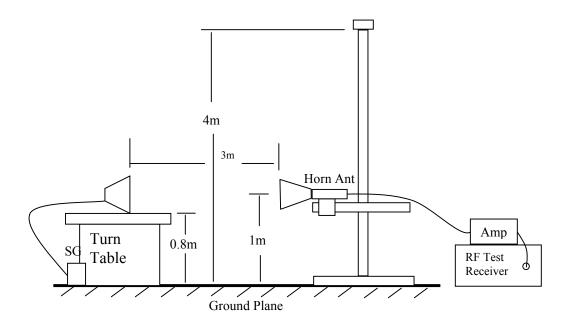
16). The measurement shall be repeated with the test antenna and the substitution antenna oriented for horizontal polarization.

17). The measure of the effective radiated power is the larger of the two levels recorded, at the input to the substitution antenna, corrected for the gain of the substitution antenna if necessary.

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Radiated Emission Above 1000 MHz

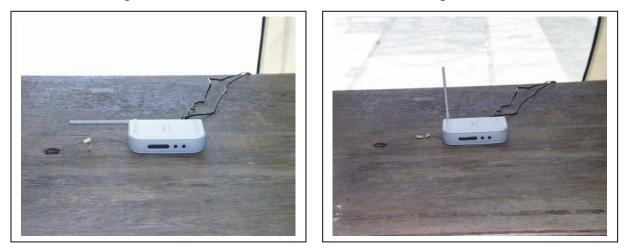


Radiated Emission - Substitution Method Set-up

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X position:

Y position:



Z position:



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Test result:

Output Power:

BPSK

	Ch.#	Freq. (MHz)	EIRP Peak Power (dBm)	Conducted Average Power (dBm)
Low Ch.	0	1900.3125	29.30	22.20
Mid Ch.	7	1904.6875	30.50	22.27
High Ch.	15	1909.6875	30.50	22.38

QPSK

	Ch.#	Freq. (MHz)	EIRP Peak Power (dBm)	Conducted Average Power (dBm)
Low Ch.	0	1900.3125	30.40	21.37
Mid Ch.	7	1904.6875	31.10	21.28
High Ch.	15	1909.6875	31.60	21.20

8PSK

	Ch.#	Freq. (MHz)	EIRP Peak Power (dBm)	Conducted Average Power (dBm)
Low Ch.	0	1900.3125	31.70	21.30
Mid Ch.	7	1904.6875	30.20	21.2
High Ch.	15	1909.6875	30.40	21.38

12QAM

	Ch.#	Freq. (MHz)	EIRP Peak Power (dBm)	Conducted Average Power (dBm)
Low Ch.	0	1900.3125	30.40	19.91
Mid Ch.	7	1904.6875	31.20	20.22
High Ch.	15	1909.6875	31.20	19.94

16QAM

Ch.# F		Freq. (MHz)	EIRP Peak Power (dBm)	Conducted Average Power (dBm)
Low Ch.	0	1900.3125	31.00	20.06
Mid Ch.	7	1904.6875	31.30	19.98
High Ch.	15	1909.6875	31.00	20.04

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Output Power (EIRP):

f	SA reading	SG reading	CL	Gain	Gain	EIRP	Limit	Margin	Notes
GHz	(dBuV)	(dBm)	(dB)	(dBi)	(dBd)	(dBm)	(dBm)	(dB)	
BPSK									
Y_Low ch									
1.900	94.2	23.4	1.4	7.2	5.1	29.3	33.0	-3.7	Peak, Vertical @ worst polarization
1.900	83.0	14.1	1.4	7.2	5.1	20.0	33.0	-13.0	Peak, Horizontal @ worst polarization
Y_mid Ch	05.5	24.6	1.4	7.2	51	20.5	22.0	2.5	Deal Vietnal Constant and the state
1.904	95.5	24.6	1.4	7.2	5.1	30.5	33.0	-2.5	Peak, Vertical @ worst polarization
1.904	84.0	14.7	1.4	7.2	5.1	20.6	33.0	-12.4	Peak, Horizontal @ worst polarization
Y_high ch 1.910	95.4	24.6	1.4	7.2	5.1	20.5	22.0	-2.5	Peak, Vertical @ worst polarization
1.910	84.5	14.8	<u>1.4</u> 1.4	7.2	5.1	30.5 20.7	33.0 33.0	-2.5	Peak, Vertical @ worst polarization Peak, Horizontal @ worst polarization
1.71000	04.5	14.0	1.4	7.2	5.1	20.7	55.0	-12.5	T cak, Horizontai @ worst polarization
OPSK									
Y pos, low c	:h								
1.900	95.3	24.5	1.4	7.2	5.1	30.4	33.0	-2.6	Peak, Vertical @ worst polarization
1.900	84.3	14.6	1.4	7.2	5.1	20.5	33.0	-12.5	Peak, Horizontal @ worst polarization
Y pos, mid o	ch								
1.904	97.0	25.2	1.4	7.2	5.1	31.1	33.0	-1.9	Peak, Vertical @ worst polarization
1.904	86.0	15.5	1.4	7.2	5.1	21.4	33.0	-11.6	Peak, Horizontal @ worst polarization
Y pos, high									
1.910	96.5	25.7	1.4	7.2	5.1	31.6	33.0	-1.4	Peak, Vertical @ worst polarization
1.91000	84.0	14.4	1.4	7.2	5.1	20.3	33.0	-12.7	Peak, Horizontal @ worst polarization
8PSK									
Y pos, low c		25.0	1.4		- 1	21.5	22.0	12	
1.900 1.900	96.8 85.6	25.8 15.3	<u>1.4</u> 1.4	7.2	5.1	31.7	33.0	-1.3	Peak, Vertical @ worst polarization Peak, Horizontal @ worst polarization
		15.5	1.4	1.2	5.1	21.2	33.0	-11.8	reak, Horizontai @ worst polarization
Y pos, mid o 1.904	95.3	24.3	1.4	7.2	5.1	30.2	33.0	-2.8	Peak, Vertical @ worst polarization
1.904	86.0	15.5	1.4	7.2	5.1	21.4	33.0	-11.6	Peak, Horizontal @ worst polarization
Y pos, high		15.5	1.4	1.2	5.1	21.4	55.0	-11.0	T cak, Horizontai @ worst polarization
1.910	95.2	24.5	1.4	7.2	5.1	30.4	33.0	-2.6	Peak, Vertical @ worst polarization
1.910	85.2	15.1	1.4	7.2	5.1	21.0	33.0	-12.0	Peak, Horizontal @ worst polarization
									· · · · · · · · · · · · · · · · · · ·
12QAM									
Y pos, low c	ch								
1.900	95.3	24.5	1.4	7.2	5.1	30.4	33.0	-2.6	Peak, Vertical @ worst polarization
1.900	85.5	15.3	1.4	7.2	5.1	21.2	33.0	-11.8	Peak, Horizontal @ worst polarization
Y pos, mid o									
1.904	96.2	25.3	1.4	7.2	5.1	31.2	33.0	-1.8	Peak, Vertical @ worst polarization
1.90400	85.3	15.1	1.4	7.2	5.1	21.0	33.0	-12.0	Peak, Horizontal @ worst polarization
Y pos, high									
1.91000	96.3	25.3	1.4	7.2	5.1	31.2	33.0	-1.8	Peak, Vertical @ worst polarization
1.91000	85.0	15.0	1.4	7.2	5.1	20.9	33.0	-12.1	Peak, Horizontal @ worst polarization
16QAM									
Y pos, low c	h				+			├	
<u>1.90000</u>	96.0	25.1	1.4	7.2	5.1	31.0	33.0	-4.4	Peak, Vertical @ worst polarization
1.90000	85.4	15.2	1.4	7.2	5.1	21.1	33.0	-14.4	Peak, Vertical @ worst polarization Peak, Horizontal @ worst polarization
1.90000 Y pos, mid (13,4	1.7	1.4	3.1	41.1	55.0	-17.5	i can, iioi izontai @ worst polarization
<u>1 pos, mu v</u> 1.90400	96.3	25.4	1.4	7.2	5.1	31.3	33.0	-3.1	Peak, Vertical @ worst polarization
1.90400	85.0	15.0	1.4	7.2	5.1	20.9	33.0	-14.5	Peak, Vertical @ worst polarization Peak, Horizontal @ worst polarization
Y pos, high		10.0							, ror zonan as norse polarization
1.91000	96.0	25.1	1.4	7.2	5.1	31.0	33.0	-4.5	Peak, Vertical @ worst polarization
1.91000	84.9	15.0	1.4	7.2	5.1	20.9	33.0	-14.6	Peak, Horizontal @ worst polarization

The peak reading is included the duty cycle factor of $10*\log(0.33) = -4.8$

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7.2. SECTION 2.1047: MODULATION CHARACTERISTICS

Not applicable.

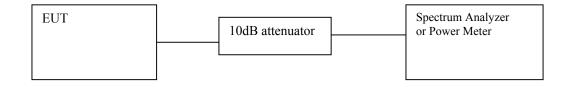
7.3. SECTION 2.1049: OCCUPIED BANDWIDTH

OCCUPIED BANDWIDTH:

INSTRUMENTS LIST

TEST EQUIPMENT LIST						
Name of Equipment Manufacturer Model No. Serial No. Du						
Spectrum Analyzer	HP	E4446A	US42510266	7/23/2004		
Power Meter	HP	436A	2709A29209	7/15/2004		
Power Sensor, 100 kHz ~ 4.2 GHz	HP	8482A	2349A08568	7/15/2004		
10dB Attenuator	Weinschel	56-10	M2348	CNR		

TEST SETUP



TEST PROCEDURE

The EUT's output RF connector (made solely for the purpose of the test) was connected with a short cable to the spectrum analyzer, RES BW was set to about 1% of emission BW, -26 dBc display line was placed on the screen (or 99% bandwidth), the occupied BW is the delta frequency between the two points where the display line intersects the signal trace.

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<u>RESULT</u>

No non-compliance noted, reference only.

BPSK

	Ch.#	Freq. (MHz)	99% BW (KHz)	26dBc BW (KHz)
Low Ch.	0	1900.3125	520.578	605.143
Mid Ch.	7	1904.6875	526.285	606.385
High Ch.	15	1909.6875	526.829	606.755

QPSK

	Ch.#	Freq. (MHz)	99% BW (KHz)	26dBc BW (KHz)
Low Ch.	0	1900.3125	519.722	616.882
Mid Ch.	7	1904.6875	523.086	607.098
High Ch.	15	1909.6875	521.723	606.886

8PSK

	Ch.#	Freq. (MHz)	99% BW (KHz)	26dBc BW (KHz)
Low Ch.	0	1900.3125	520.784	611.061
Mid Ch.	7	1904.6875	516.139	607.837
High Ch.	15	1909.6875	522.454	611.297

12QAM

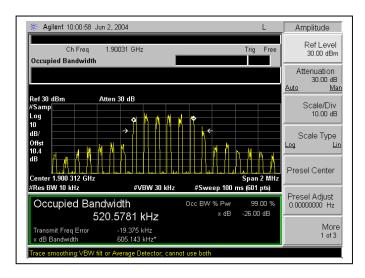
	Ch.#	Freq. (MHz)	99% BW (KHz)	26dBc BW (KHz)
Low Ch.	0	1900.3125	511.063	605.578
Mid Ch.	7	1904.6875	524.439	608.462
High Ch.	15	1909.6875	523.922	606.070

16QAM

	Ch.#	Freq. (MHz)	99% BW (KHz)	26dBc BW (KHz)
Low Ch.	0	1900.3125	527.018	608.121
Mid Ch.	7	1904.6875	524.742	607.064
High Ch.	15	1909.6875	523.769	613.482

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BPSK Modulation:



Display

Trig Free

Span 2 MHz

99.00 %

-26.00 dB

#Sweep 100 ms (601 pts)

Occ BW % Pw

Full Screen

Display Line -13.00 dBm

<u>Off</u>

Limits*

Bottom

Title 🕨

Active Fctn Position *

Preferences

On

Low Channel

Mid Channel:

#VBW 30 kHz

Agilent 09:59:28 Jun 2, 2004

Ch Frea

Occupied Bandwidth

Center 1.904 688 GHz

Transmit Freq Error

x dB Bandwidth

Occupied Bandwidth

#Res BW 10 kHz

Ref 30 dBm

#Sa

Log

10

dB/

Offst 10.4

dВ

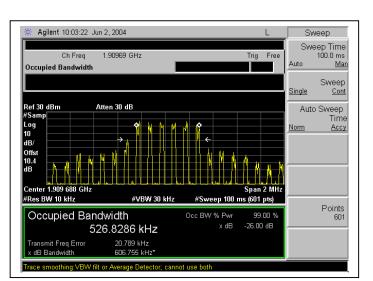
1.90469 GHz

Atten 30 dB

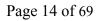
526.2849 kHz

17.298 kHz

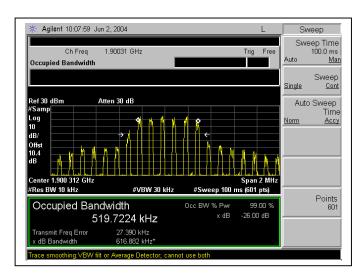
606 385 kHz* Frace smoothing:VBW filt or Average Detector: cannot use bot







QPSK Modulation:

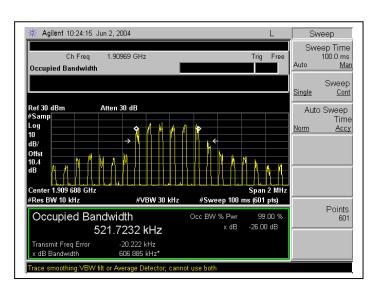


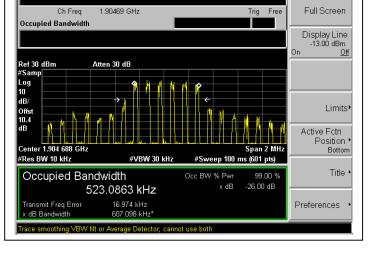
Display

Low Channel

Mid Channel:

Agilent 10:17:02 Jun 2, 2004



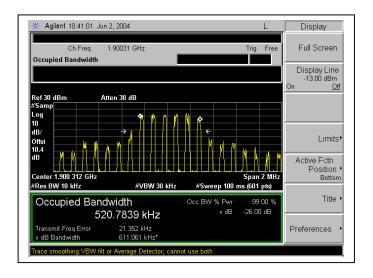


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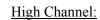
High Channel:

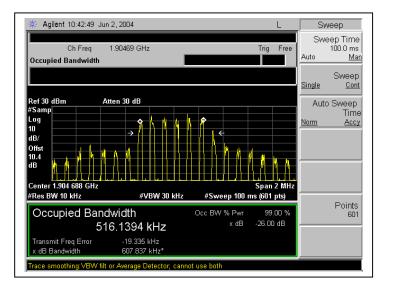
8PSK Modulation:

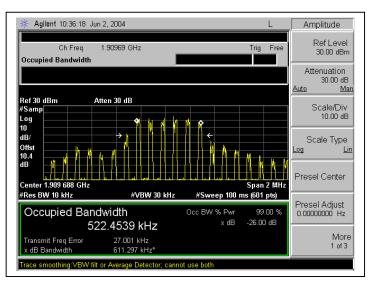


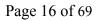
Low Channel

Mid Channel:

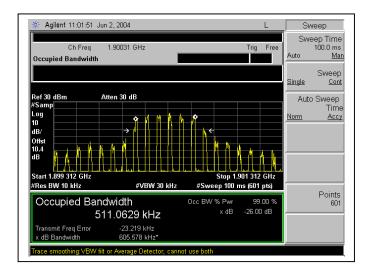






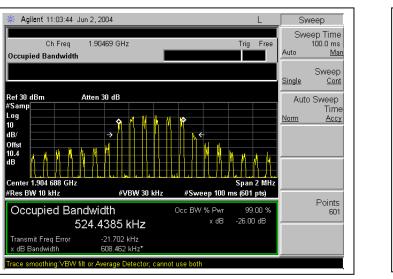


12QAM Modulation:

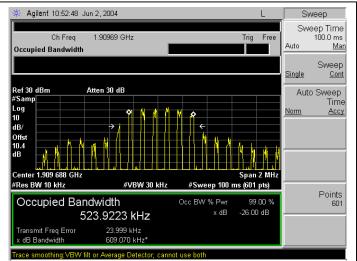


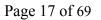
Low Channel

Mid Channel:

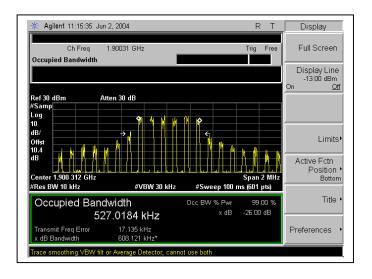


High Channel:



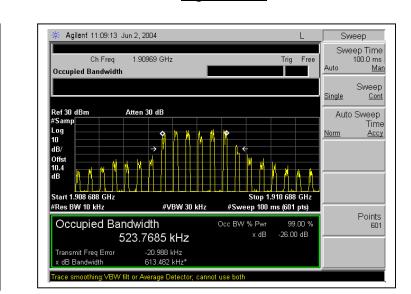


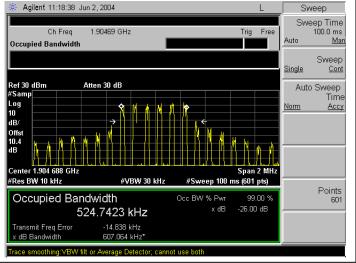
16QAM Modulation:

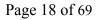


Low Channel

Mid Channel:







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High Channel:

7.4. SECTION 2.1051: SPURIOUS EMISSION AT ANTENNA TERMINAL

INSTRUMENTS LIST

TEST EQUIPMENT LIST						
Name of Equipment	Manufacturer	Model No.	Serial No.	Due Date		
Spectrum Analyzer	HP	E4446A	US42510266	7/23/2004		
Power Meter	HP	436A	2709A29209	7/15/2004		
Power Sensor, 100 kHz ~ 4.2 GHz	HP	8482A	2349A08568	7/15/2004		
10dB Attenuator	Weinschel	56-10	M2348	CNR		

TEST SETUP



TEST PROCEDURE

- RF signal or three balanced signals (intermodulation measurement) were applied to the RF input. One set as close as possible to the bottom of the block edge and one set as close as possible to the top of the block edge. Set the RES BW to 1% of the emission bandwidth to show compliance with the -13dBm limit, in the 1 MHz bands immediately outside and adjacent to the top and bottom edges of the frequency block.
- 2) For the Out-of-Band measurements a 1 MHz RES BW was used to scan from 15 MHz to 10x *f* o of the fundamental carrier for all frequency block. A display line was placed at -13dBm to show compliance for spurious, harmonics, and intermodulation emissions.

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RESULT:

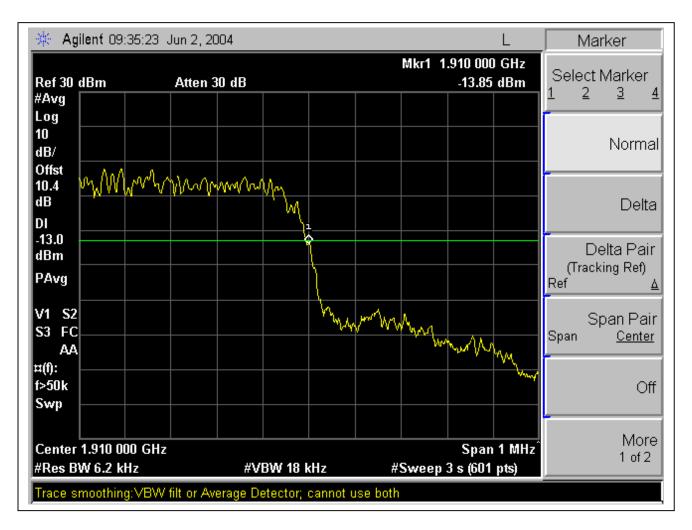
BPSK Modulation: Band Edges, Out-Of-Band Emissions

Low Channel Band Edge

🔆 Agilent 09:4	2:21 Jun 2, 2004		L	Amplitude
Ref 20 dBm	Atten 20 dE	}	Mkr1 1.895 813 GH -41.84 dBn	Doft oval
#Avg				20.00 dbm
Log 10				Attenuation
dB/				20.00 dB
Offst				<u>Auto Ma</u>
10.4				Scale/Div
dB				10.00 dB
DI				
dBm				Scale Type
PAvg				Log Li
			1	
W1 S2				Deside
S3 FC				Presel Center
AA				
¤(f): f>50k				Presel Adjust
		Lat. 1 albert 1 albert 1	warm in he a brack son Ash	0.00000000 Hz
Maledowell	uladan bergana ang ang ang ang ang ang ang ang ang	and Mahama na ha Anaga Mahama	which we have a start when when a start when a	
Center 1.895 000			Ener 2 M	u- More
Kes BW 6.2 kH		#VBW 18 kHz	Span 2 M Sweep 3 s (601 pts)#	1 of 3
		e Detector; cannot us		

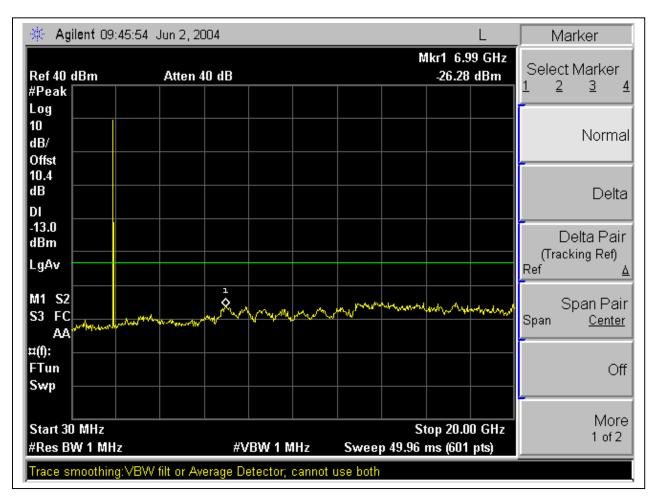
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High Channel Band Edge



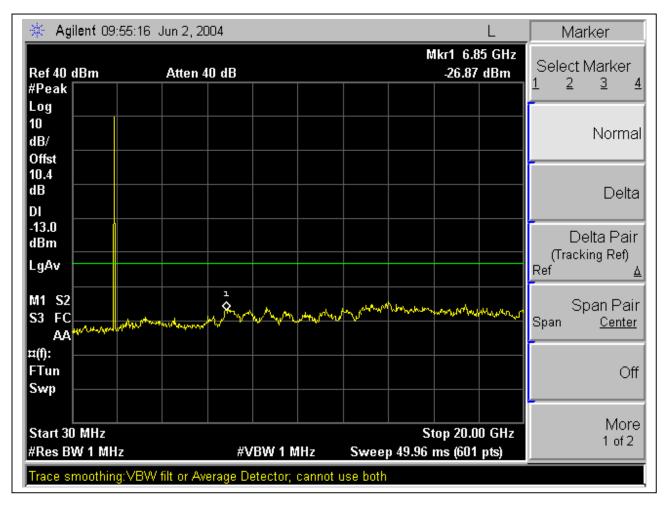
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Low Channel, Out-Of-Band Emissions



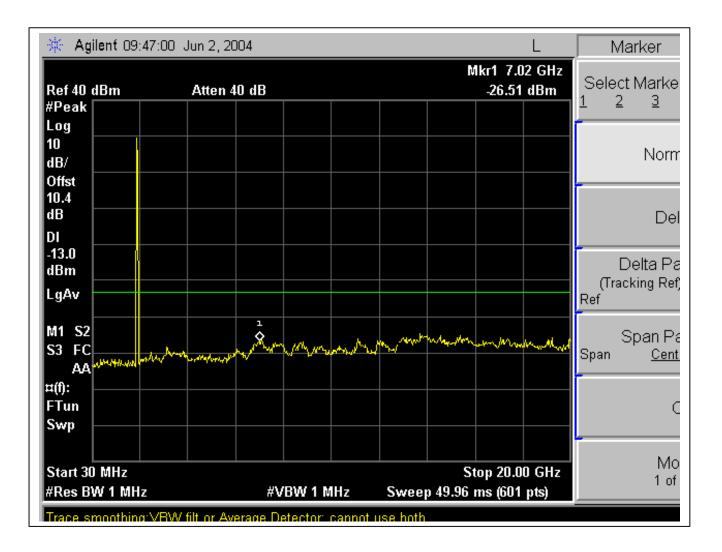
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Mid Channel, Out-Of-Band Emissions



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High Channel, Out-Of-Band Emissions



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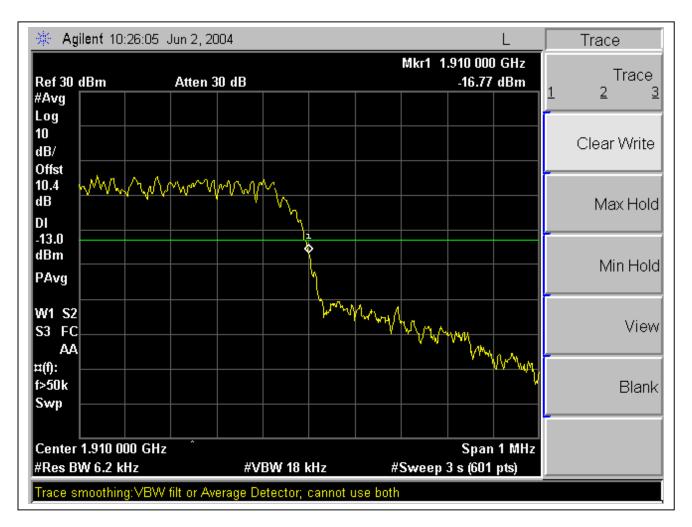
QPSK Modulation: Band Edges, Out-Of-Band Emissions

Low Channel Band Edge

🔆 Agilent 10:13:	16 Jun 2, 2004		L	Peak Search
Ref 20 dBm	Atten 20 dB	Mkr1	1.895 813 GHz -42.42 dBm	Next Peak
#Avg Log				
10 dB/				Next Pk Right
Offst 10.4 dB				Next Pk Left
DI -13.0 dBm				
PAvg				Min Search
M1 S2 S3 FC AA				Pk-Pk Search
¤(f): f>50k		and a state of a state of burder from	manual manand	Mkr © CF
Swp Center 1.895 000	ander and a state of the second s	**************************************		More
#Res BW 6.2 kHz	4VBW 18	kHz #Sweep	Span 2 MHz 3 s (601 pts)	1 of 2
Trace smoothing:V	BW filt or Average Detector	; cannot use both		

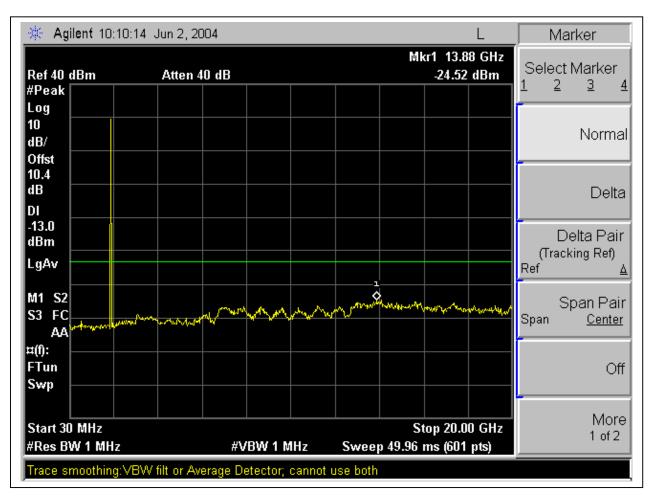
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High Channel Band Edge



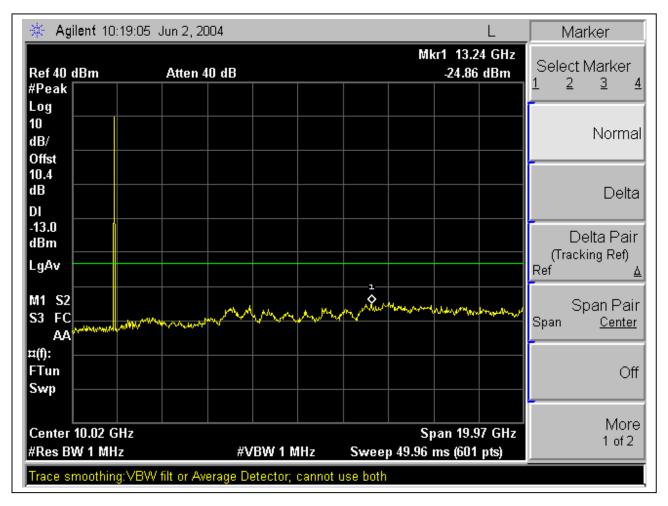
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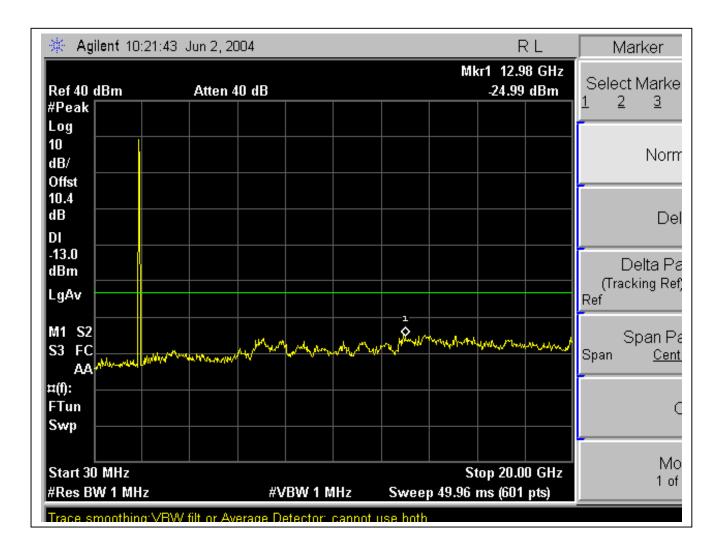
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Mid Channel, Out-Of-Band Emissions



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High Channel, Out-Of-Band Emissions



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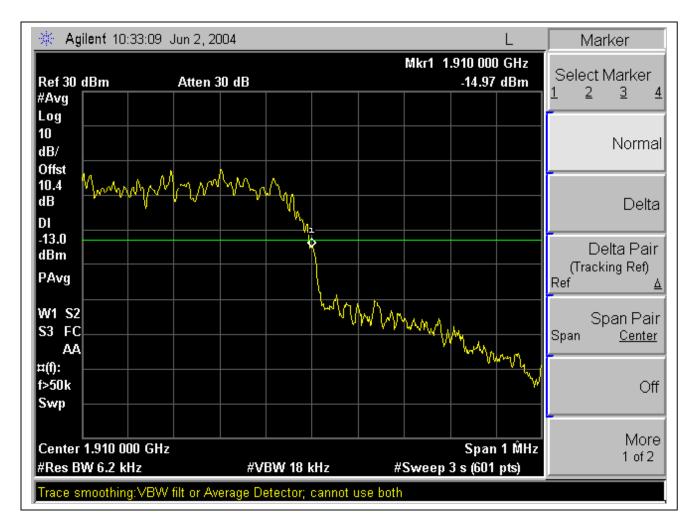
8PSK Modulation: Band Edges, Out-Of-Band Emissions

Low Channel Band Edge

🔆 Agilent 10:3	8:20 Jun 2, 2004			L	Marker
Ref 20 dBm	Atten 20 dB		Mkr1 1.895 8 -42.	13 GHz 49 dBm	Select Marker 1 2 <u>3</u> 4
#Avg Log					1 2 7 4
10 dB/					Normal
Offst 10.4 dB					Delta
DI -13.0 dBm					Delta Pair
PAvg				i	(Tracking Ref) Ref _∆
M1 S2 S3 FC AA					Span Pair Span <u>Center</u>
¤(f): f>50k			h		Off
	unthelanner fra the formal and	for program in the second of the			More
Center 1.895 00 #Res BW 6.2 kH		/BW 18 kHz	Sp #Sweep 3 s (6)	an 2 MHz [°] D1 pts)	1 of 2
	z #1 :VBW filt or Average [U1 pts)	

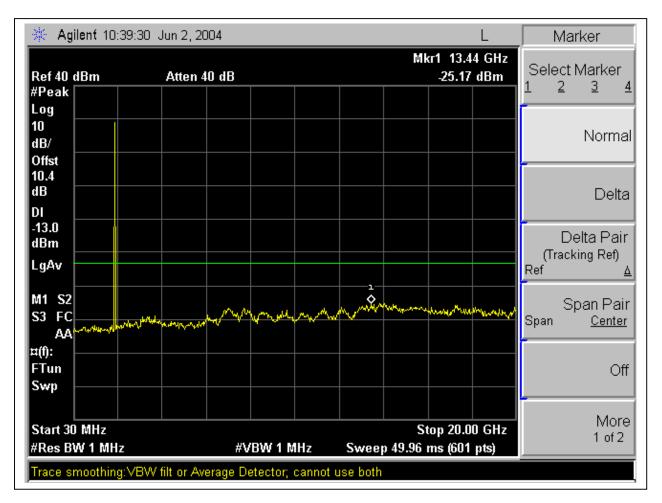
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High Channel Band Edge



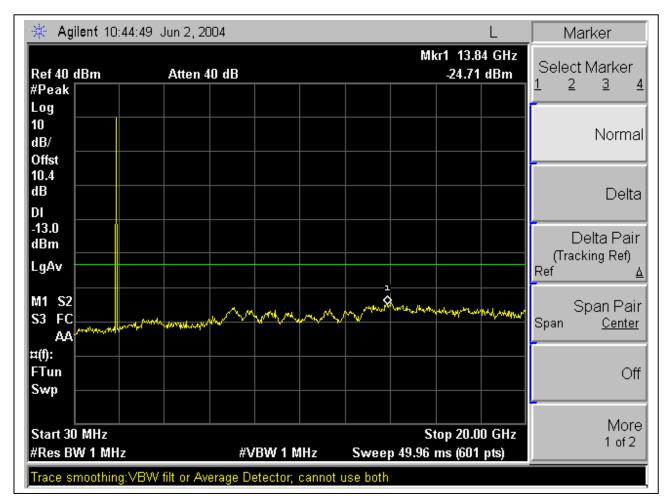
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Low Channel, Out-Of-Band Emissions



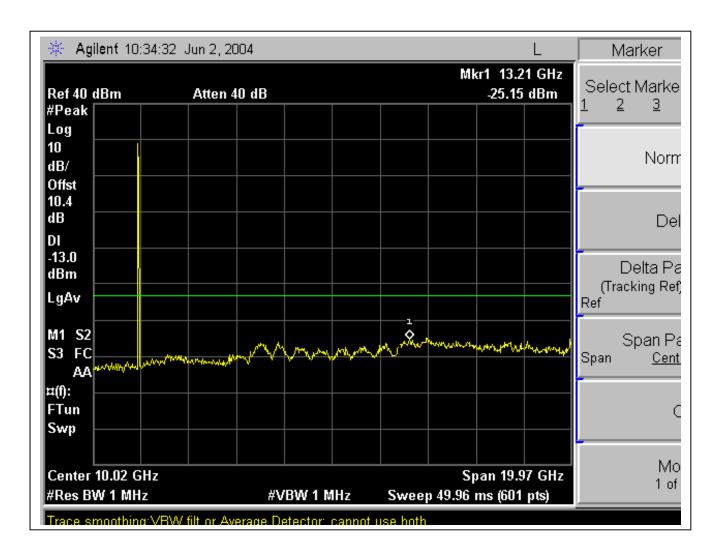
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Mid Channel, Out-Of-Band Emissions



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High Channel, Out-Of-Band Emissions



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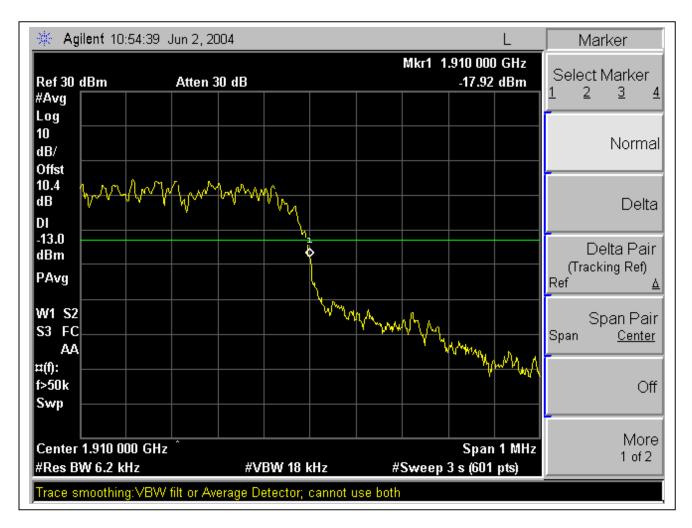
12QAM Modulation: Band Edges, Out-Of-Band Emissions

Low Channel Band Edge

🔆 Agilent 10:58	3:19 Jun 2, 2004			RL	Peak Search
Ref 20 dBm	Atten 20 dB		Mkr1 1.895 -44	813 GHz .37 dBm	Next Peak
#Avg Log					
10 dB/					Next Pk Right
Offst 10.4 dB					Next Pk Left
DI -13.0 dBm					Min Coarst
PAvg					Min Search
M1 S2 S3 FC AA					Pk-Pk Search
¤(f): f>50k					 Mkr©Cl
Swp Manufacture	nahadharahandhanaantailkeen	an the same and the second	uprovident the stand the s	wet hand	
Center 1.895 000 #Res BW 6.2 kHz		3W 18 kHz	Sp #Sweep 3 s (6	an 2 MHz i01 pts)	More 1 of 2
#Res BW 6.2 kHz			#Sweep 3 s (6		1 c

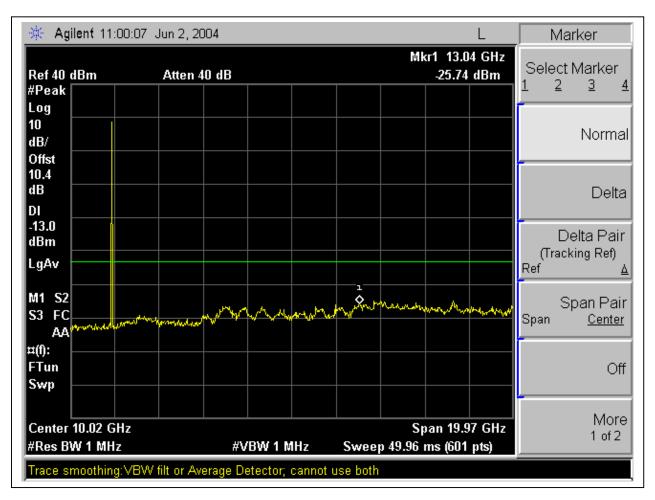
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High Channel Band Edge



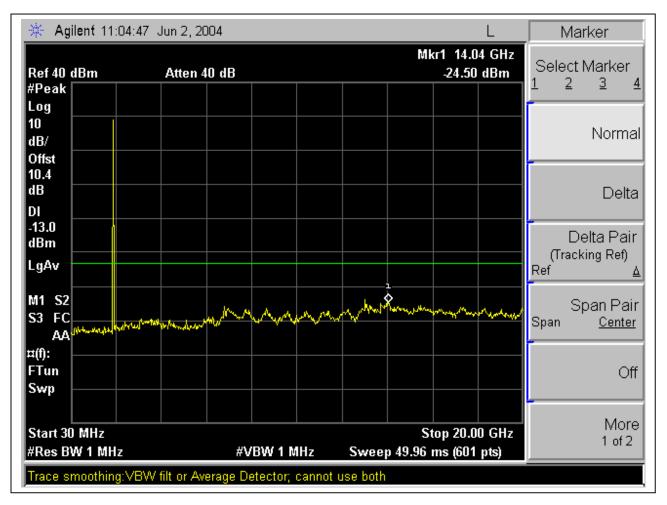
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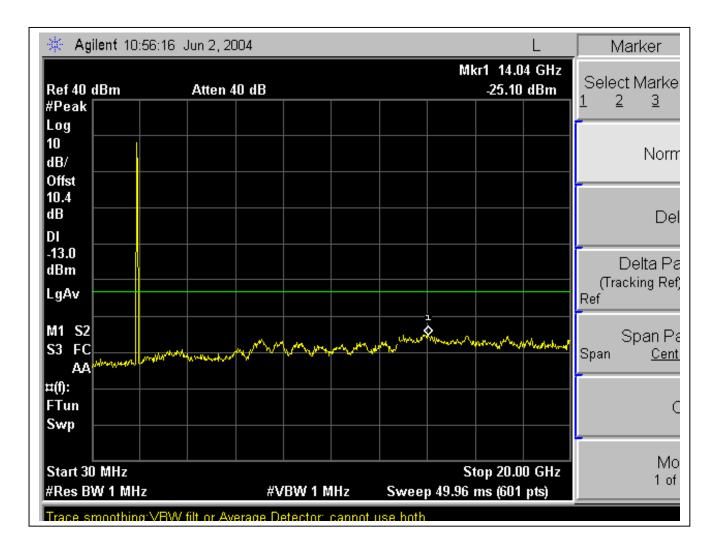
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Mid Channel, Out-Of-Band Emissions



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High Channel, Out-Of-Band Emissions



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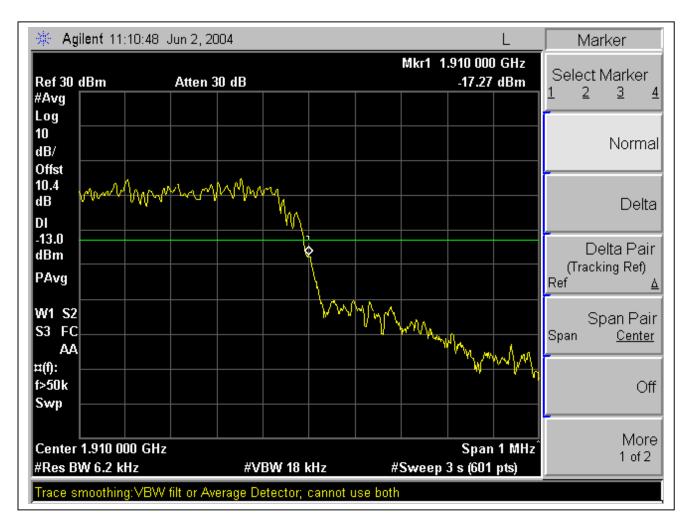
16QAM Modulation: Band Edges, Out-Of-Band Emissions

Low Channel Band Edge

🔆 Agilent	11:13:12 Ju	n 2, 2004					L	Peak Search
Ref 20 dBm	Δ	tten 20 dB			Mkr1 1.	895 813 -44.29		Next Peak
#Avg Log								
10 dB/								Next Pk Right
Offst 10.4 dB								Next Pk Left
DI -13.0 dBm								
PAvg								Min Search
W1 S2 S3 FC						¢		Pk-Pk Search
AA ¤(f): f>50k							_	 Mkr©Cl
Swp	waller the damaged and	mahrulleradanada	White	have were and here were and	un ny	Ny separate	handaayiya	
Center 1.895 #Res BW 6.2		#V	BW 18 kH	z #9	Sweep 3	Span : s (601)		More 1 of 2
Trace smooth	ning:∀BW filt	or Average De	etector; ca	nnot use both				

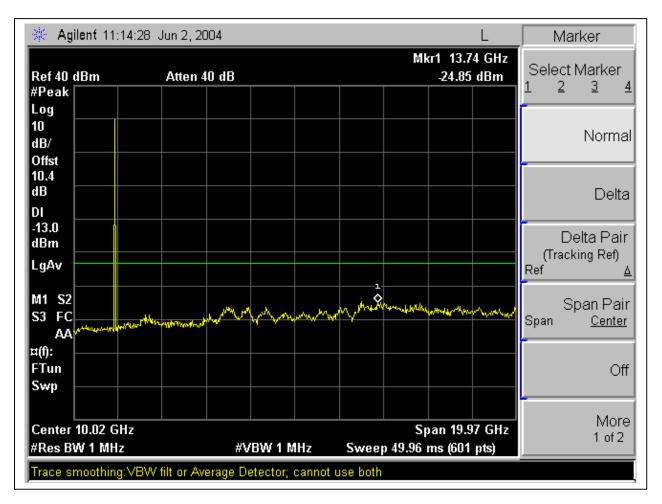
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High Channel Band Edge



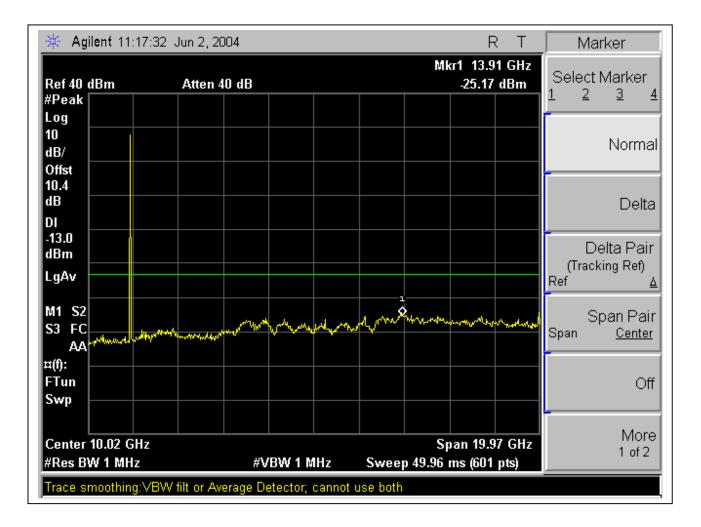
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Low Channel, Out-Of-Band Emissions



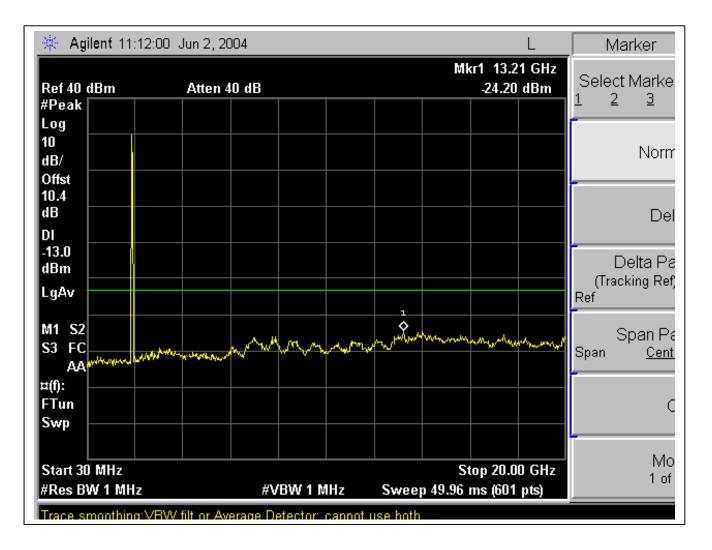
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Mid Channel, Out-Of-Band Emissions



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High Channel, Out-Of-Band Emissions



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7.5. SECTION 2.1053: FIELD STRENGTH OF SPURIOUS RADIATION

INSTRUMENTS LIST

	TEST EQUIPMENT LIST								
Name of Equipment	Manufacturer	Model No.	Serial No.	Due Date					
Spectrum Analyzer	HP	E4446A	US42510266	7/23/2004					
2.7GHz HPF	MicroTronic	HPM13193	1	CNR					
Antenna, Horn 1 ~ 18 GHz	ЕМСО	3115	6717	2/4/2005					
Antenna, Horn 1 ~ 18 GHz	ЕМСО	3115	2238	2/4/2005					
Amplifier 1-26GHz	MITEQ	NSP2600-SP	924342	4/25/2005					
10dB Attenuator	Weinschel	56-10	M2348	CNR					
Signal Generator	R & S	SMP04	DE34210	5/25/2005					

Detector Function Setting of Test Receiver

Frequency Range (MHz)	Detector Function	Resolution Bandwidth	Video Bandwidth
Above 1000	Peak	1 MHz 1 MHz	⊠ 1 MHz □ 10 Hz

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TEST SETUP

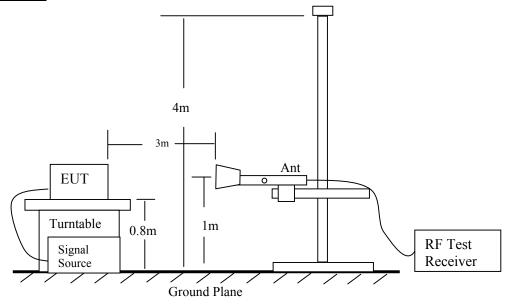
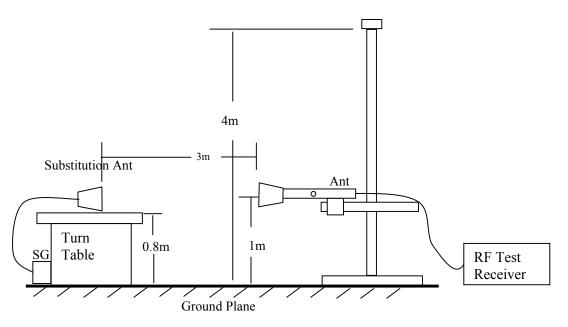


Fig 1: Radiated Emission Measurement





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TEST PROCEDURE

1). On a test site, the EUT shall be placed on a turntable, and in the position closest to the normal use as declared by the user.

2). The test antenna shall be oriented initially for vertical polarization located 1m from the EUT to correspond to the frequency of the transmitter.

3). The output of the test antenna shall be connected to the measuring receiver and either a peak or average detector was used for the measurement as indicated on the report. The detector selection is based on how close the emission level was approaching the limit.

4). The transmitter shall be switched on, if possible, without the modulation and the measurement receiver shall be tuned to the frequency of the transmitter under test.

5). The test antenna shall be raised and lowered through the specified range of height until a maximum signal level is detected by the measuring receiver.

6). The transmitter shall than be rotated through 360° in the horizontal plane, until the maximum signal level is detected by the measuring receiver.

7). The test antenna shall be raised and lowered again through the specified range of height until a maximum signal level is detected by the measuring receiver.

8). The maximum signal level detected by the measuring receiver shall be noted.

9). The transmitter shall be replaced by a substitution antenna.

10). The substitution antenna shall be oriented for vertical polarization.

11). The substitution antenna shall be connected to a calibrated signal generator.

12). If necessary, the input attenuator setting of the measuring receiver shall be adjusted in order to increase the sensitivity of the measuring receiver.

13). The test antenna shall be raised and lowered through the specified range of the height to ensure that the maximum signal is received.

14). The input signal to the substitution antenna shall be adjusted to the level that produces a level detected by the measuring receiver, that is equal to the level noted while the transmitter radiated power was measured, corrected for the change of input attenuation setting of the measuring receiver.

15). The input level to the substitution antenna shall be recorded as power level in dBm, corrected for any change of input attenuator setting of the measuring receiver.

16). The measurement shall be repeated with the test antenna and the substitution antenna oriented for horizontal polarization.

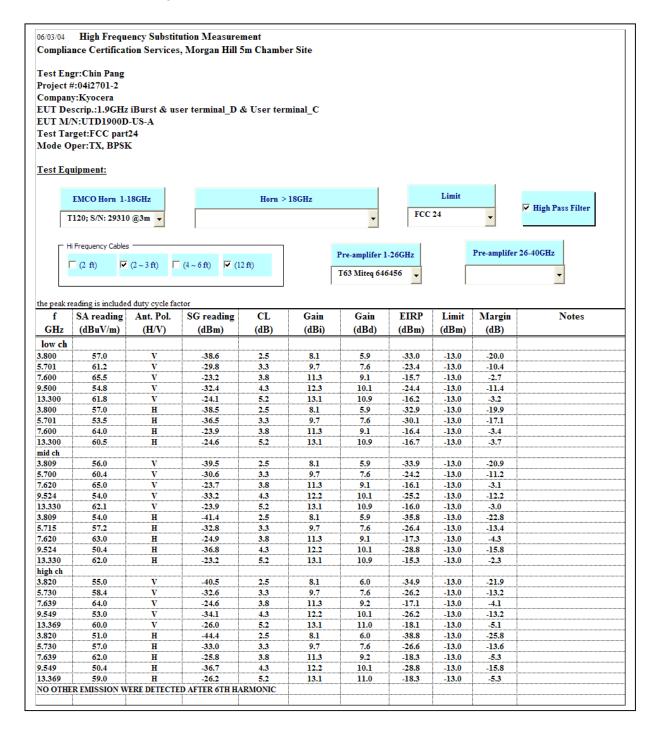
17). The measure of the effective radiated power is the larger of the two levels recorded, at the input to the substitution antenna, corrected for the gain of the substitution antenna if necessary.

<u>RESULT</u>

No non-compliance noted, as shown below

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BPSK: Low, Mid, & High Channels:



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QPSK: Low, Mid, & High Channels:

Complia		-	titution Measure ces, Morgan Hil		er Site					
Project # Company EUT Des EUT M/I Fest Tar	gr:Chin Pang 4:04i2701-2 y:Kyocera scrip.:1.9GHz N:UTD1900D get:FCC Part per:TX, QPSJ)-US-A t24	user terminal_D							
est Equ	ipment:									
	EMCO Horn 1-	18017		Horn >	18047			Limit		
	120; S/N: 2931			110111 >	100112	•	FCC	24	•	✓ High Pass Filter
							1		_	
	Frequency Cables					Pre-amplifer 1	-26GHz		Pre-amplifer	26-40GHz
	(2 ft)	(2 ~ 3 ft)	$\Box (4 \sim 6 \text{ ft}) \blacksquare \ ($	12 ft)		T63 Miteq 646	456 🗸	Г		-
	ading is include		:		C ·	C :	FIDD	T: 14	N	NT 4
f GHz	SA reading (dBuV/m)	Ant. Pol. (H/V)	SG reading (dBm)	CL (dB)	Gain (dBi)	Gain (dBd)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Notes
low ch	(uDu v/m)	(11/1)		(ub)	(uDI)	(uDu)	(шыш)	(ubiii)	(uD)	
.800	54.5	V	-41.1	2.5	8.1	5.9	-35.5	-13.0	-22.5	
.701	60.0	v	-31.0	3.3	9.7	7.6	-24.6	-13.0	-11.6	
.600	64.0	V	-24.7	3.8	11.3	9.1	-17.2	-13.0	-4.2	
.500	50.0	V	-37.2	4.3	12.3	10.1	-29.2	-13.0	-16.2	
	58.3	v	-27.6	5.2	13.1	10.9	-19.7	-13.0	-6.7 -23.9	
	¢¢			25	Q 1	50	360			
.800	53.0	H	-42.5	2.5 3.3	8.1 9.7	5.9 7.6	-36.9 -27.6	-13.0 -13.0		
.800 .701	¢¢			2.5 3.3 3.8	8.1 9.7 11.3	5.9 7.6 9.1	-36.9 -27.6 -20.4	-13.0 -13.0 -13.0	-14.6 -7.4	
.800 .701 .600 3.300	53.0 56.0	H H	-42.5 -34.0	3.3	9.7	7.6	-27.6	-13.0	-14.6	
.800 .701 .600 3.300 nid ch	53.0 56.0 60.0 57.2	H H H H	-42.5 -34.0 -27.9 -27.9	3.3 3.8 5.2	9.7 11.3 13.1	7.6 9.1 10.9	-27.6 -20.4 -20.0	-13.0 -13.0 -13.0	-14.6 -7.4 -7.0	
.800 .701 .600 3.300 iid ch .809	53.0 56.0 60.0 57.2 54.0	H H H V	-42.5 -34.0 -27.9 -27.9 -41.5	3.3 3.8 5.2 2.5	9.7 11.3 13.1 8.1	7.6 9.1 10.9 5.9	-27.6 -20.4 -20.0 -35.9	-13.0 -13.0 -13.0 -13.0	-14.6 -7.4 -7.0 -22.9	
.800 .701 .600 3.300 nid ch .809 .715	53.0 56.0 60.0 57.2 54.0 59.5	H H H V V	-42.5 -34.0 -27.9 -27.9 -41.5 -31.5	3.3 3.8 5.2 2.5 3.3	9.7 11.3 13.1 8.1 9.7	7.6 9.1 10.9 5.9 7.6	-27.6 -20.4 -20.0 -35.9 -25.1	-13.0 -13.0 -13.0 -13.0 -13.0	-14.6 -7.4 -7.0 -22.9 -12.1	
.800 .701 .600 3.300 nid ch .809 .715 .620	53.0 56.0 60.0 57.2 54.0	H H H V	-42.5 -34.0 -27.9 -27.9 -41.5	3.3 3.8 5.2 2.5	9.7 11.3 13.1 8.1	7.6 9.1 10.9 5.9	-27.6 -20.4 -20.0 -35.9	-13.0 -13.0 -13.0 -13.0	-14.6 -7.4 -7.0 -22.9	
.800 .701 .600 3.300 nid ch .809 .715 .620 .524 3.330	53.0 56.0 60.0 57.2 54.0 59.5 65.3 52.0 60.4	H H H V V V V V V V	-42.5 -34.0 -27.9 -27.9 -41.5 -31.5 -23.4	3.3 3.8 5.2 2.5 3.3 3.8 4.3 5.2	9.7 11.3 13.1 8.1 9.7 11.3 12.2 13.1	7.6 9.1 10.9 5.9 7.6 9.1 10.1 10.9	-27.6 -20.4 -20.0 -35.9 -25.1 -15.8 -27.2 -17.7	-13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0	-14.6 -7.4 -7.0 -22.9 -12.1 -2.8 -14.2 -4.7	
800 .701 .600 3.300 iid ch .809 .715 .620 .524 3.330 .809	53.0 56.0 60.0 57.2 54.0 59.5 65.3 52.0 60.4 51.0	H H H V V V V V V V H	-42.5 -34.0 -27.9 -27.9 -41.5 -31.5 -23.4 -35.2 -25.6 -44.4	3.3 3.8 5.2 2.5 3.3 3.8 4.3 5.2 2.5	9.7 11.3 13.1 9.7 11.3 12.2 13.1 8.1	7.6 9.1 10.9 7.6 9.1 10.1 10.9 5.9 5.9	-27.6 -20.4 -20.0 -35.9 -25.1 -15.8 -27.2 -17.7 -38.8	-13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0	-14.6 -7.4 -7.0 -22.9 -12.1 -2.8 -14.2 -4.7 -25.8	
800 701 .600 3.300 id ch 809 .715 .620 .524 3.330 .809 .715	53.0 56.0 60.0 57.2 54.0 59.5 65.3 52.0 60.4 51.0 56.2	H H H V V V V V V V H H	-42.5 -34.0 -27.9 -27.9 -41.5 -31.5 -23.4 -35.2 -25.6 -44.4 -33.8	3.3 3.8 5.2 2.5 3.3 3.8 4.3 5.2 2.5 3.3	9.7 11.3 13.1 9.7 11.3 12.2 13.1 8.1 9.7	7.6 9.1 10.9 5.9 7.6 9.1 10.1 10.9 5.9 7.6	-27.6 -20.4 -20.0 -35.9 -25.1 -15.8 -27.2 -17.7 -38.8 -27.4	-13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0	-14.6 -7.4 -7.0 -22.9 -12.1 -2.8 -14.2 -4.7 -25.8 -14.4	
.800 .701 .600 3.300 nid ch .809 .715 .620 .524 3.330 .809 .715 .620	53.0 56.0 60.0 57.2 54.0 59.5 65.3 52.0 60.4 51.0 56.2 60.0	H H H V V V V V V H H H	-42.5 -34.0 -27.9 -27.9 -41.5 -31.5 -31.5 -23.4 -35.2 -25.6 -44.4 -33.8 -27.9	3.3 3.8 5.2 2.5 3.3 3.8 4.3 5.2 2.5 3.3 3.8 3.8	9.7 11.3 13.1 9.7 11.3 12.2 13.1 8.1 9.7 11.3	7.6 9.1 10.9 7.6 9.1 10.1 10.1 10.9 5.9 7.6 9.1	-27.6 -20.4 -20.0 -35.9 -25.1 -15.8 -27.2 -17.7 -38.8 -27.4 -20.3	-13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0	-14.6 -7.4 -7.0 -22.9 -12.1 -2.8 -14.2 -4.7 -25.8 -14.4 -7.3	
.800 .701 .600 3.300 iid ch .809 .715 .620 .524 3.330 .809 .715 .620 .524	53.0 56.0 60.0 57.2 54.0 59.5 65.3 52.0 60.4 51.0 56.2	H H H V V V V V V V H H	-42.5 -34.0 -27.9 -27.9 -41.5 -31.5 -23.4 -35.2 -25.6 -44.4 -33.8	3.3 3.8 5.2 2.5 3.3 3.8 4.3 5.2 2.5 3.3	9.7 11.3 13.1 9.7 11.3 12.2 13.1 8.1 9.7	7.6 9.1 10.9 5.9 7.6 9.1 10.1 10.9 5.9 7.6	-27.6 -20.4 -20.0 -35.9 -25.1 -15.8 -27.2 -17.7 -38.8 -27.4	-13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0	-14.6 -7.4 -7.0 -22.9 -12.1 -2.8 -14.2 -4.7 -25.8 -14.4	
800 .701 .600 3.300 iid ch .809 .715 .620 .524 3.330 .809 .715 .620 .524 3.330 igh ch	53.0 55.0 60.0 57.2 54.0 59.5 65.3 52.0 60.4 51.0 56.2 60.0 49.4 58.4	H H H V V V V V V H H H H H H	-42.5 -34.0 -27.9 -27.9 -41.5 -31.5 -23.4 -35.2 -25.6 -44.4 -33.8 -27.9 -37.8 -26.8	3.3 3.8 5.2 2.5 3.3 3.8 4.3 5.2 2.5 3.3 3.8 4.3 5.2 2.5 3.3 3.8 4.3 5.2	9.7 11.3 8.1 9.7 11.3 12.2 13.1 8.1 9.7 11.3 12.2 13.1 1.3 12.2 13.1	7.6 9.1 10.9 7.6 9.1 10.1 10.9 5.9 7.6 9.1 10.1 10.1 10.9	-27.6 -20.4 -20.0 -35.9 -25.1 -15.8 -27.2 -17.7 -38.8 -27.4 -20.3 -29.8 -18.9	-13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0	-14.6 -7.4 -7.0 -22.9 -12.1 -2.8 -14.2 -4.7 -25.8 -14.4 -7.3 -16.8 -5.9	
800 701 .600 3.300 id ch 809 .715 .620 .524 3.330 .809 .715 .620 .524 3.330 .524 .524 .524 .524 .524 .524 .524 .524 .524 .524 .524 .524 .524 .524 .524 .525 .524 .524 .524 .524 .525 .524 .524 .525 .524 .524 .525 .524 .524 .525 .524 .524 .525 .524 .524 .525 .524 .525 .524 .525 .524 .525 .525 .524 .525 .524 .525 .525 .524 .525 .524 .525 .524 .525 .524 .525 .524 .525 .524 .525 .524 .525 .524 .525 .524 .525 .524 .524 .524 .525 .524 .524 .524 .525 .524 .526 .524 .5266 .5266 .5266 .5266 .5266 .5266	53.0 56.0 60.0 57.2 54.0 59.5 65.3 52.0 60.4 51.0 56.2 60.0 49.4 58.4 54.4	H H H V V V V V H H H H H Y	-42.5 -34.0 -27.9 -27.9 -41.5 -31.5 -23.4 -35.2 -25.6 -44.4 -33.8 -27.9 -37.8 -26.8 -41.1	3.3 3.8 5.2 2.5 3.3 3.8 4.3 5.2 2.5 3.3 3.8 4.3 5.2 2.5 3.3 3.8 4.3 5.2 2.5	9.7 11.3 13.1 8.1 9.7 11.3 12.2 13.1 8.1 9.7 11.3 12.2 13.1 8.1 9.7 11.3 12.2 13.1 8.1 9.7 11.3 12.2 13.1 8.1 9.7 11.3 12.2 13.1 8.1 9.7 11.3 13.1 8.1 9.7 11.3 13.1 8.1 9.7 11.3 13.1 8.1 9.7 11.3 13.1 8.1 9.7 11.3 13.1 8.1 9.7 11.3 13.1 8.1 9.7 11.3 13.1 8.1 9.7 11.3 12.2 13.1 8.1 9.7 11.3 12.2 13.1 8.1 9.7 11.3 12.2 13.1 8.1 9.7 11.3 12.2 13.1 8.1 9.7 11.3 12.2 13.1	7.6 9.1 10.9 5.9 7.6 9.1 10.1 10.9 5.9 7.6 9.1 10.1 10.9 6.0	-27.6 -20.4 -20.0 -35.9 -25.1 -15.8 -27.2 -17.7 -38.8 -27.4 -20.3 -29.8 -18.9 -35.5	-13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0	-14.6 -7.4 -7.0 -22.9 -12.1 -2.8 -14.2 -4.7 -25.8 -14.4 -7.3 -16.8 -5.9 -22.5	
800 701 600 3.300 id ch 809 524 3.330 809 715 620 524 3.330 809 715 620 524 3.330 809 715 620 524 809 715 620 730 809 715 75 75 75 75 75 75 75 75 75 7	53.0 56.0 60.0 57.2 54.0 59.5 65.3 52.0 60.4 51.0 56.2 60.0 49.4 58.4 54.4 56.5	H H H V V V V V H H H H Y V	-42.5 -34.0 -27.9 -27.9 -41.5 -31.5 -23.4 -35.2 -25.6 -44.4 -33.8 -27.9 -37.8 -26.8 -26.8 -41.1 -34.5	3.3 3.8 5.2 2.5 3.3 3.8 4.3 5.2 2.5 3.3 3.8 4.3 5.2 2.5 3.3 3.8 4.3 5.2 5.2 2.5 3.3 3.8 4.3 5.2	9.7 11.3 13.1 8.1 9.7 11.3 12.2 13.1 8.1 9.7 11.3 12.2 13.1 8.1 9.7 11.3 12.2 13.1 9.7 11.3 12.2 13.1 9.7 11.3 12.2 13.1 9.7 11.3 12.2 13.1 9.7 11.3 12.2 13.1 9.7 11.3 12.2 13.1 9.7 11.3 12.2 13.1 9.7 11.3 12.2 13.1 9.7 11.3 12.2 13.1 9.7 11.3 12.2 13.1 9.7 11.3 12.2 13.1 13.1 9.7 11.3 12.2 13.1 13.2 13.1 13.1 13.2 13.1	7.6 9.1 10.9 7.6 9.1 10.1 10.1 10.9 5.9 7.6 9.1 10.1 10.9 6.0 7.6	-27.6 -20.4 -20.0 -35.9 -25.1 -15.8 -27.2 -17.7 -38.8 -27.4 -20.3 -29.8 -18.9 -18.9 -35.5 -28.1	-13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0	-14.6 -7.4 -7.0 -22.9 -12.1 -2.8 -14.2 -4.7 -25.8 -14.4 -7.3 -16.8 -5.9 -22.5 -15.1	
.800 .701 .600 3.300 id ch .809 .715 .620 .524 .330 .809 .715 .620 .524 .3330 igh ch .820 .730 .639	53.0 56.0 60.0 57.2 54.0 59.5 65.3 52.0 60.4 51.0 56.2 60.0 49.4 58.4 54.4 56.5 65.0	H H H V V V V V V V H H H H Y V V	-42.5 -34.0 -27.9 -27.9 -41.5 -31.5 -31.5 -23.4 -35.2 -25.6 -44.4 -33.8 -27.9 -37.8 -26.8 -41.1 -34.5 -23.6	3.3 3.8 5.2 2.5 3.3 3.8 4.3 5.2 2.5 3.3 3.8 4.3 5.2 2.5 3.3 3.8 4.3 5.2 2.5 3.3 3.8 4.3 5.2 3.3 3.8 3.3 3.8	9.7 11.3 13.1 8.1 9.7 11.3 12.2 13.1 8.1 9.7 11.3 12.2 13.1 8.1 9.7 11.3 12.2 13.1 9.7 11.3 12.2 13.1 9.7 11.3 12.2 13.1 9.7 11.3 12.2 13.1 9.7 11.3 12.2 13.1 9.7 11.3 12.2 13.1 9.7 11.3 12.2 13.1 9.7 11.3 12.2 13.1 9.7 11.3 12.2 13.1 9.7 11.3 12.2 13.1 9.7 11.3 12.2 13.1 9.7 11.3 12.2 13.1 9.7 11.3 12.2 13.1 9.7 11.3 12.2 13.1 13.1 9.7 11.3 12.2 13.1 13.1 9.7 11.3 12.2 13.1 13.1 13.2 13.1 13.2 13.1 13.2 13.1 13.2 13.1 13.2 13.1 13.2 13.1 13.2 13.1 13.2 13.1 13.1 13.1 13.2 13.1 13.2 13.1 13.2 13.1 13.2 13.1 13.2 13.1 13.2 13.1 13.2 13.3 13.2 13.3 13.2 13.3	7.6 9.1 10.9 7.6 9.1 10.1 10.9 5.9 7.6 9.1 10.1 10.1 10.9 6.0 7.6 9.2	-27.6 -20.4 -20.0 -35.9 -25.1 -15.8 -27.2 -17.7 -38.8 -27.4 -20.3 -29.8 -18.9 -35.5 -28.1 -16.1	-13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0	-14.6 -7.4 -7.0 -22.9 -12.1 -2.8 -14.2 -4.7 -25.8 -14.4 -7.3 -16.8 -5.9 -22.5 -15.1 -3.1	
.800 .701 .600 3.300 3.300 .809 .715 .620 .524 3.330 .809 .715 .620 .524 3.330 igh ch .820 .730 .639 .549	53.0 56.0 60.0 57.2 54.0 59.5 65.3 52.0 60.4 51.0 56.2 60.0 49.4 58.4 54.4 56.5	H H H V V V V V H H H H Y V	-42.5 -34.0 -27.9 -27.9 -41.5 -31.5 -23.4 -35.2 -25.6 -44.4 -33.8 -27.9 -37.8 -26.8 -26.8 -41.1 -34.5	3.3 3.8 5.2 2.5 3.3 3.8 4.3 5.2 2.5 3.3 3.8 4.3 5.2 2.5 3.3 3.8 4.3 5.2 5.2 2.5 3.3 3.8 4.3 5.2	9.7 11.3 13.1 8.1 9.7 11.3 12.2 13.1 8.1 9.7 11.3 12.2 13.1 8.1 9.7 11.3 12.2 13.1 9.7 11.3 12.2 13.1 9.7 11.3 12.2 13.1 9.7 11.3 12.2 13.1 9.7 11.3 12.2 13.1 9.7 11.3 12.2 13.1 9.7 11.3 12.2 13.1 9.7 11.3 12.2 13.1 9.7 11.3 12.2 13.1 9.7 11.3 12.2 13.1 9.7 11.3 12.2 13.1	7.6 9.1 10.9 7.6 9.1 10.1 10.1 10.9 5.9 7.6 9.1 10.1 10.9 6.0 7.6	-27.6 -20.4 -20.0 -35.9 -25.1 -15.8 -27.2 -17.7 -38.8 -27.4 -20.3 -29.8 -18.9 -18.9 -35.5 -28.1	-13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0	-14.6 -7.4 -7.0 -22.9 -12.1 -2.8 -14.2 -4.7 -25.8 -14.4 -7.3 -16.8 -5.9 -22.5 -15.1	
.800 .701 .600 3.300 .809 .715 .620 .524 .3.300 .809 .715 .620 .524 .3.330 .809 .715 .620 .524 .3.330 igh ch .820 .730 .639 .549 .3.369	53.0 56.0 60.0 57.2 54.0 59.5 65.3 52.0 60.4 51.0 56.2 60.0 49.4 54.4 54.4 56.5 65.0 50.6	H H H V V V V V V V V V V V V V V V V V	-42.5 -34.0 -27.9 -27.9 -41.5 -31.5 -23.4 -35.2 -25.6 -44.4 -33.8 -27.9 -37.8 -26.8 -27.9 -37.8 -26.8 -21.1 -34.5 -23.6 -36.5	3.3 3.8 5.2 2.5 3.3 3.8 4.3 5.2 2.5 3.3 3.8 4.3 5.2 2.5 3.3 3.8 4.3 5.2 2.5 3.3 3.8 4.3 5.2	9.7 11.3 13.1 8.1 9.7 11.3 12.2 13.1 8.1 8.1 9.7 11.3 12.2 13.1 8.1 8.1 8.1 8.1 8.1 8.1 8.1 8	7.6 9.1 10.9 7.6 9.1 10.1 10.9 5.9 7.6 9.1 10.1 10.1 10.9 6.0 7.6 9.2 10.1	-27.6 -20.4 -20.0 -35.9 -25.1 -15.8 -27.2 -17.7 -38.8 -27.4 -20.3 -29.8 -18.9 -35.5 -28.1 -16.1 -28.6	-13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0	-14.6 -7.4 -7.0 -22.9 -12.1 -2.8 -14.2 -4.7 -25.8 -14.2 -4.7 -25.8 -14.4 -7.3 -16.8 -5.9 -22.5 -15.1 -3.1 -15.6	
3.300 .800 .701 .600 3.300 nid ch .809 .524 3.330 .524 3.330 .524 3.330 .524 3.330 .524 3.330 .524 3.330 .524 3.330 .524 3.330 .549 .3369 .820 .730	53.0 56.0 60.0 57.2 54.0 59.5 65.3 52.0 60.4 51.0 56.2 60.0 49.4 58.4 54.4 56.5 65.0 50.6 61.0 51.1 58.4	H H H V V V V V V H H H H H H H H H H H	-42.5 -34.0 -27.9 -27.9 -41.5 -31.5 -23.4 -35.2 -25.6 -44.4 -33.8 -27.9 -37.8 -26.8 -25.6 -41.1 -34.5 -26.8 -25.0 -41.1 -34.5 -25.0 -44.3 -31.6	3.3 3.8 5.2 2.5 3.3 3.8 4.3 5.2 2.5 3.3 3.8 4.3 5.2 2.5 3.3 3.8 4.3 5.2 2.5 3.3 3.8 4.3 5.2 2.5 3.3 3.8 4.3 5.2 2.5 3.3 3.8 4.3 5.2 2.5 3.3	9.7 11.3 13.1 8.1 9.7 11.3 12.2 13.1 8.1 9.7 11.3 12.2 13.1 13.1 8.1 9.7 11.3 12.2 13.1 8.1 9.7 11.3 12.2 13.1 8.1 9.7 11.3 12.2 13.1	7.6 9.1 10.9 7.6 9.1 10.1 10.9 5.9 7.6 9.1 10.1 10.9 6.0 7.6 9.2 10.1 11.0 6.0 7.6	-27.6 -20.4 -20.0 -35.9 -25.1 -15.8 -27.2 -17.7 -38.8 -27.4 -20.3 -29.8 -18.9 -35.5 -28.1 -16.1 -28.6 -17.1 -38.7 -25.2	-13.0 -13.0	-14.6 -7.4 -7.0 -22.9 -12.1 -2.8 -14.2 -4.7 -25.8 -14.4 -7.3 -16.8 -5.9 -22.5 -15.1 -3.1 -15.6 -4.1 -25.7 -12.2	
.800 .701 .600 3.300 id ch .809 .715 .620 .524 3.330 .715 .620 .524 3.330 .549 .730 .639 .549 3.369 .820 .730 .639	53.0 56.0 60.0 57.2 54.0 59.5 65.3 52.0 60.4 51.0 56.2 60.0 49.4 58.4 54.4 56.5 65.0 50.6 61.0 51.1 58.4 62.3	H H H V V V V V V V V V V V V V V V V V	-42.5 -34.0 -27.9 -27.9 -41.5 -31.5 -23.4 -35.2 -25.6 -44.4 -33.8 -27.9 -37.8 -26.8 -25.6 -41.1 -34.5 -26.8 -25.0 -41.3 -36.5 -25.0 -44.3 -31.6 -25.5	3.3 3.8 5.2 2.5 3.3 3.8 4.3 5.2 2.5 3.3 3.8 4.3 5.2 2.5 3.3 3.8 4.3 5.2 2.5 3.3 3.8 4.3 5.2 2.5 3.3 3.8 4.3 5.2 2.5 3.3 3.8 4.3 5.2 2.5 3.3 3.8	9.7 11.3 13.1 8.1 9.7 11.3 12.2 13.1 8.1 9.7 11.3 12.2 13.1 8.1 9.7 11.3 12.2 13.1 8.1 9.7 11.3 12.2 13.1 8.1 9.7 11.3 12.2 13.1 9.7 11.3 13.1 9.7 11.3 13.1 9.7 11.3 13.1 9.7 11.3 13.1 9.7 11.3 13.1 9.7 11.3 13.1 9.7 11.3	7.6 9.1 10.9 7.6 9.1 10.1 10.1 10.9 5.9 7.6 9.1 10.1 10.9 6.0 7.6 9.2 10.1 11.0 6.0 7.6 9.2	-27.6 -20.4 -20.0 -35.9 -25.1 -15.8 -27.2 -17.7 -38.8 -27.4 -20.3 -29.8 -18.9 -35.5 -28.1 -16.1 -28.6 -17.1 -38.7 -25.2 -18.0	-13.0 -13.0	-14.6 -7.4 -7.0 -22.9 -12.1 -2.8 -14.2 -4.7 -25.8 -14.4 -7.3 -16.8 -5.9 -22.5 -15.1 -3.1 -15.6 -4.1 -25.7 -12.2 -5.0	
.800 .701 .600 3.300 .300 .300 .300 .300 .300 .620 .524 .3.30 .620 .524 .3.330 .620 .524 .3.330 .620 .524 .3.330 .620 .524 .3.330 .620 .524 .3.330 .620 .524 .3.330 .639 .549 .3.369 .820 .730	53.0 56.0 60.0 57.2 54.0 59.5 65.3 52.0 60.4 51.0 56.2 60.0 49.4 58.4 54.4 56.5 65.0 50.6 61.0 51.1 58.4	H H H V V V V V V H H H H H H H H H H H	-42.5 -34.0 -27.9 -27.9 -41.5 -31.5 -23.4 -35.2 -25.6 -44.4 -33.8 -27.9 -37.8 -26.8 -25.6 -41.1 -34.5 -26.8 -25.0 -41.1 -34.5 -25.0 -44.3 -31.6	3.3 3.8 5.2 2.5 3.3 3.8 4.3 5.2 2.5 3.3 3.8 4.3 5.2 2.5 3.3 3.8 4.3 5.2 2.5 3.3 3.8 4.3 5.2 2.5 3.3 3.8 4.3 5.2 2.5 3.3 3.8 4.3 5.2 2.5 3.3	9.7 11.3 13.1 8.1 9.7 11.3 12.2 13.1 8.1 9.7 11.3 12.2 13.1 13.1 8.1 9.7 11.3 12.2 13.1 8.1 9.7 11.3 12.2 13.1 8.1 9.7 11.3 12.2 13.1	7.6 9.1 10.9 7.6 9.1 10.1 10.9 5.9 7.6 9.1 10.1 10.9 6.0 7.6 9.2 10.1 11.0 6.0 7.6	-27.6 -20.4 -20.0 -35.9 -25.1 -15.8 -27.2 -17.7 -38.8 -27.4 -20.3 -29.8 -18.9 -35.5 -28.1 -16.1 -28.6 -17.1 -38.7 -25.2	-13.0 -13.0	-14.6 -7.4 -7.0 -22.9 -12.1 -2.8 -14.2 -4.7 -25.8 -14.4 -7.3 -16.8 -5.9 -22.5 -15.1 -3.1 -15.6 -4.1 -25.7 -12.2	

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8PSK: Low, Mid, & High Channels:

Fest Eng Project # Company EUT Des EUT M/ Fest Tar	nce Certifica gr:Chin Pang #:04i2701-2 y:Kyocera scrip.:1.9GH2	tion Servic 2 iBurst & 124	titution Measur es, Morgan Hil user terminal_E	l 5m Chamb						
	uipment:									
Lest Ly	aipment.									
	EMCO Horn 1-	18GHz		Horn >	18GHz			Limit		✓ High Pass Filter
Т	120; S/N: 2931	0@3m 👻				-	FCC	24	-	IV nign rass ritter
			,							
	i Frequency Cable			(12.0)		Pre-amplifer 1	-26GHz		Pre-amplifer	26-40GHz
	(2 ft)	(2 ~ 3 ft)	□ (4 ~ 6 ft) 🔽	(12 ft)		T63 Miteq 646	5456 🖵	ſ		-
							_	L		
he peak re f	eading is include		:	CI	C-i-	Cala	FIDD	T : :4	Manala	Nataa
I GHz	SA reading (dBuV/m)	Ant. Pol. (H/V)	. SG reading (dBm)	CL (dB)	Gain (dBi)	Gain (dBd)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Notes
low ch	(ubu t/ill)	(11.1)	(ubiii)	(412)	(4151)	(uDu)	(uDill)	(uzm)	(012)	
.800	52.0	V	-43.6	2.5	8.1	5.9	-38.0	-13.0	-25.0	
.701	58.5	V	-32.6	3.3	9.7	7.6	-26.2	-13.0	-13.2	•
.600	64.2	V	-24.5	3.8	11.3	9.1	-17.0	-13.0	-4.0	
.500	50.4	V	-36.8	4.3	12.3	10.1	-28.8	-13.0	-15.8	
3.300 .800	58.2 53.5	V H	-27.7 -42.0	5.2 2.5	13.1 8.1	10.9 5.9	-19.8 -36.4	-13.0 -13.0	-6.8 -23.4	
.701	57.2	H	-32.8	3.3	9.7	7.6	-26.4	-13.0	-13.4	
.600	60.7	H	-27.2	3.8	11.3	9.1	-19.7	-13.0	-6.7	•
3.300	57.0	H	-28.1	5.2	13.1	10.9	-20.2	-13.0	-7.2	
1id ch .809	52.0	v	42.5	25	0 1	50	26.0	12.0	22.0	
.809	53.0 57.3	v V	-42.5 -33.7	2.5 3.3	8.1 9.7	5.9 7.6	-36.9 -27.3	-13.0 -13.0	-23.9 -14.3	
.620	63.0	v	-25.7	3.8	11.3	9.1	-18.1	-13.0	-5.1	
.524	49.5	V	-37.7	4.3	12.2	10.1	-29.7	-13.0	-16.7	
3.330	60.0	V	-26.0	5.2	13.1	10.9	-18.1	-13.0	-5.1	
.809 .715	50.2 56.3	H H	-45.2 -33.7	2.5	8.1 9.7	5.9 7.6	-39.6 -27.3	-13.0 -13.0	-26.6 -14.3	
./15 .620	50.5 61.5	н Н	-33.7	3.8	9.7	9.1	-27.5	-13.0	-14.5	
.524	50.4	H	-36.8	4.3	12.2	10.1	-28.8	-13.0	-15.8	
3.330	59.2	H	-26.0	5.2	13.1	10.9	-18.1	-13.0	-5.1	
igh ch	ED 6	v	(1.0	25	0 1	60	26.2	12.0		
.820 .730	53.6 56.7	v V	-41.9 -34.3	2.5	8.1 9.7	6.0 7.6	-36.3 -27.9	-13.0 -13.0	-23.3 -14.9	
	65.7	v	-22.9	3.8	11.3	9.2	-15.4	-13.0	-2.4	
.639	50.7	V	-36.4	4.3	12.2	10.1	-28.5	-13.0	-15.5	
.639 .549				5.2	13.1	11.0	-18.8	-13.0	-5.8	
.549 3.369	59.3	V	-26.7							
.549 3.369 .820	59.3 52.0	H	-43.4	2.5	8.1	6.0	-37.8	-13.0	-24.8	
.549 3.369 .820 .730	59.3 52.0 58.0	H H	-43.4 -32.0	2.5 3.3	9.7	7.6	-25.6	-13.0	-12.6	
	59.3 52.0	H	-43.4 -32.0 -26.5	2.5 3.3 3.8	9.7 11.3		-25.6 -19.0	-13.0 -13.0	-12.6 -6.0	
549 3.369 820 .730 .639 .549 3.369	59.3 52.0 58.0 61.3 49.4 60.3	H H H H	-43.4 -32.0	2.5 3.3 3.8 4.3 5.2	9.7	7.6 9.2	-25.6	-13.0	-12.6	

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12QAM: Low, Mid, & High Channels:

•	nce Certificat	-	titution Measur es, Morgan Hill		er Site					
Project # Company CUT De CUT M/ CUT M/ Cest Tar	gr:Chin Pang #:04i2701-2 y:Kyocera scrip.:1.9GH2 N:UTD1900E rget:FCC Part per:TX, 12Q2)-US-A t24	user terminal_D	& User ter	minal_C					
est Equ	uipment:									
	EMCO Horn 1-	18GHz		Horn >	18GHz			Limit		
Т	120; S/N: 2931	0@3m 🗸				•	FCC	24	•	✓ High Pass Filter
	· Francisco Cable		1				,		_	
	i Frequency Cables			(12.8)		Pre-amplifer 1	-26GHz		Pre-amplifer	26-40GHz
	(2 ft)	(2 ~ 3 ft)	□ (4 ~ 6 ft) 🔽 ((12 ft)		T63 Miteq 646	i456 🗸	Γ		-
						,		L		
he peak re f	ading is include SA reading	d duty cycle: Ant. Pol.	:	CL	Gain	Gain	EIRP	Limit	Margin	Notes
GHz	(dBuV/m)	(H/V)	(dBm)	(dB)	(dBi)	(dBd)	(dBm)	(dBm)	(dB)	110165
low ch									1 X	
.800	52.0	V	-43.6	2.5	8.1	5.9	-38.0	-13.0	-25.0	
.701	57.0	V	-34.0	3.3	9.7	7.6	-27.6	-13.0	-14.6	
.600	64.0	V	-24.7	3.8	11.3	9.1	-17.2	-13.0	-4.2	
.500 3.300	49.8 60.0	V V	-37.4 -25.9	4.3 5.2	12.3 13.1	10.1 10.9	-29.4 -18.0	-13.0 -13.0	-16.4 -5.0	
.800	51.3	H	-44.2	2.5	8.1	5.9	-18.6	-13.0	-25.6	
					•••	·····		-13.0	-15.2	
	55.4	H	-34.6	3.3	9.7	7.6	-28.2	-10.0		
.701 .600	55.4 60.0	H H	-34.6 -27.9	3.8	11.3	9.1	-20.4	-13.0	-7.4	
.701 .600 3.300	55.4	H	-34.6	٠			\$		••• \$•••••••••••••••••••••••••••	
.701 .600 3.300 1id ch	55.4 60.0 58.5	H H H	-34.6 -27.9 -26.6	3.8 5.2	11.3 13.1	9.1 10.9	-20.4 -18.7	-13.0 -13.0	-7.4 -5.7	
.701 .600 3.300 nid ch .809	55.4 60.0 58.5 51.0	H H H V	-34.6 -27.9 -26.6 -44.5	3.8 5.2 2.5	11.3 13.1 8.1	9.1 10.9 5.9	-20.4 -18.7 -38.9	-13.0 -13.0 -13.0	-7.4 -5.7 -25.9	
.701 .600 3.300 nid ch .809 .715	55.4 60.0 58.5	H H H	-34.6 -27.9 -26.6	3.8 5.2	11.3 13.1	9.1 10.9	-20.4 -18.7	-13.0 -13.0	-7.4 -5.7	
.701 .600 3.300 nid ch .809 .715 .620 .524	55.4 60.0 58.5 51.0 57.4 64.8 50.6	H H V V V V V	-34.6 -27.9 -26.6 -44.5 -33.6 -23.9 -36.6	3.8 5.2 2.5 3.3 3.8 4.3	11.3 13.1 8.1 9.7 11.3 12.2	9.1 10.9 5.9 7.6 9.1 10.1	-20.4 -18.7 -38.9 -27.2 -16.3 -28.6	-13.0 -13.0 -13.0 -13.0 -13.0 -13.0	-7.4 -5.7 -25.9 -14.2 -3.3 -15.6	
.701 (.600 3.300 nid ch .809 (.715 (.620 0.524 3.330	55.4 60.0 58.5 51.0 57.4 64.8 50.6 59.4	H H V V V V V V V	-34.6 -27.9 -26.6 -44.5 -33.6 -23.9 -36.6 -26.6	3.8 5.2 2.5 3.3 3.8 4.3 5.2	11.3 13.1 8.1 9.7 11.3 12.2 13.1	9.1 10.9 5.9 7.6 9.1 10.1 10.9	-20.4 -18.7 -38.9 -27.2 -16.3 -28.6 -18.7	-13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0	-7.4 -5.7 -25.9 -14.2 -3.3 -15.6 -5.7	
.701 .600 3.300 nid ch .809 .715 .620 .524 3.330 .809	55.4 60.0 58.5 51.0 57.4 64.8 50.6 59.4 51.0	H H V V V V V V H	-34.6 -27.9 -26.6 -44.5 -33.6 -23.9 -36.6 -26.6 -44.4	3.8 5.2 2.5 3.3 3.8 4.3 5.2 2.5	11.3 13.1 8.1 9.7 11.3 12.2 13.1 8.1	9.1 10.9 7.6 9.1 10.1 10.9 5.9	-20.4 -18.7 -38.9 -27.2 -16.3 -28.6 -18.7 -38.8	-13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0	-7.4 -5.7 -25.9 -14.2 -3.3 -15.6 -5.7 -25.8	
.701 .600 3.300 nid ch .809 .715 .620 .524 3.330 .809 .715	55.4 60.0 58.5 51.0 57.4 64.8 50.6 59.4 51.0 56.7	H H V V V V V V V H H	-34.6 -27.9 -26.6 -44.5 -33.6 -23.9 -36.6 -26.6 -26.6 -44.4 -33.3	3.8 5.2 2.5 3.3 3.8 4.3 5.2 2.5 3.3	11.3 13.1 9.7 11.3 12.2 13.1 8.1 9.7	9.1 10.9 5.9 7.6 9.1 10.1 10.9 5.9 7.6	-20.4 -18.7 -38.9 -27.2 -16.3 -28.6 -18.7 -38.8 -26.9	-13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0	-7.4 -5.7 -25.9 -14.2 -3.3 -15.6 -5.7 -25.8 -13.9	
.701 .600 3.300 iid ch .809 .715 .620 .524 3.330 .809 .715 .620	55.4 60.0 58.5 51.0 57.4 64.8 50.6 59.4 51.0	H H V V V V V V H	-34.6 -27.9 -26.6 -44.5 -33.6 -23.9 -36.6 -26.6 -44.4	3.8 5.2 2.5 3.3 3.8 4.3 5.2 2.5	11.3 13.1 8.1 9.7 11.3 12.2 13.1 8.1	9.1 10.9 7.6 9.1 10.1 10.9 5.9	-20.4 -18.7 -38.9 -27.2 -16.3 -28.6 -18.7 -38.8	-13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0	-7.4 -5.7 -25.9 -14.2 -3.3 -15.6 -5.7 -25.8	
.701 .600 3.300 iid ch .809 .715 .620 .524 3.330 .809 .715 .620 .524	55.4 60.0 58.5 51.0 57.4 64.8 50.6 59.4 51.0 56.7 61.3	H H V V V V V V H H H	-34.6 -27.9 -26.6 -44.5 -33.6 -23.9 -36.6 -26.6 -44.4 -33.3 -26.6	3.8 5.2 2.5 3.3 3.8 4.3 5.2 2.5 3.3 3.8	11.3 13.1 9.7 11.3 12.2 13.1 8.1 9.7 11.3	9.1 10.9 5.9 7.6 9.1 10.1 10.9 5.9 7.6 9.1	-20.4 -18.7 -38.9 -27.2 -16.3 -28.6 -18.7 -38.8 -26.9 -19.0	-13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0	-7.4 -5.7 -25.9 -14.2 -3.3 -15.6 -5.7 -25.8 -13.9 -6.0	
.701 .600 3.300 iid ch .809 .715 .620 .524 3.330 .809 .715 .620 .524 3.330 igh ch	55.4 60.0 58.5 51.0 57.4 64.8 50.6 59.4 51.0 56.7 61.3 49.2 59.2	н н V V V V H H H H H H	-34.6 -27.9 -26.6 -44.5 -33.6 -23.9 -36.6 -26.6 -44.4 -33.3 -26.6 -38.0 -26.0	3.8 5.2 2.5 3.3 3.8 4.3 5.2 2.5 3.3 3.8 4.3 5.2	11.3 13.1 9.7 11.3 12.2 13.1 8.1 9.7 11.3 12.2 13.1 1.3 12.2 13.1	9.1 10.9 7.6 9.1 10.1 10.9 5.9 7.6 9.1 10.1 10.1 10.9	-20.4 -18.7 -38.9 -27.2 -16.3 -28.6 -18.7 -38.8 -26.9 -19.0 -30.0 -18.1	-13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0	-7.4 -5.7 -25.9 -14.2 -3.3 -15.6 -5.7 -25.8 -13.9 -6.0 -17.0 -5.1	
.701 .600 3.300 iid ch .809 .715 .620 .524 3.330 .809 .715 .620 .524 3.330 igh ch .820	55.4 60.0 58.5 51.0 57.4 64.8 59.4 51.0 56.7 61.3 49.2 59.2 53.0	H H V V V V V V H H H H	-34.6 -27.9 -26.6 -44.5 -33.6 -23.9 -36.6 -26.6 -26.6 -44.4 -33.3 -26.6 -38.0 -26.0 -26.0	3.8 5.2 2.5 3.3 3.8 4.3 5.2 2.5 3.3 3.8 4.3 5.2 5.2 2.5 2.5	11.3 13.1 8.1 9.7 11.3 12.2 13.1 8.1 9.7 11.3 12.2 13.1 12.2 13.1 8.1	9.1 10.9 5.9 7.6 9.1 10.1 10.9 5.9 7.6 9.1 10.1 10.9 6.0	-20.4 -18.7 -38.9 -27.2 -16.3 -28.6 -18.7 -38.8 -26.9 -19.0 -30.0 -18.1 -36.9	-13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0	-7.4 -5.7 -25.9 -14.2 -3.3 -15.6 -5.7 -25.8 -13.9 -6.0 -17.0 -5.1 -23.9	
.701 .600 3.300 iid ch .809 .715 .620 .524 3.330 .809 .715 .620 .524 3.330 .524 3.330 .524 3.330 .524 3.330 .524 3.330 .524 3.330 .524 3.330 .524 .715 .727 .727 .737 .737 .737 .737 .737 .737	55.4 60.0 58.5 51.0 57.4 64.8 50.6 59.4 51.0 56.7 61.3 49.2 59.2 53.0 58.0	H H V V V V V H H H H V V V	-34.6 -27.9 -26.6 -44.5 -33.6 -23.9 -36.6 -26.6 -44.4 -33.3 -26.6 -38.0 -26.0 -26.0 -26.0 -26.0	3.8 5.2 2.5 3.3 3.8 4.3 5.2 2.5 3.3 3.8 4.3 5.2 2.5 3.3 3.8 4.3 5.2 2.5 3.3	11.3 13.1 8.1 9.7 11.3 12.2 13.1 8.1 9.7 11.3 12.2 13.1 12.2 13.1 8.1 9.7	9.1 10.9 5.9 7.6 9.1 10.1 10.9 5.9 7.6 9.1 10.1 10.9 6.0 7.6	-20.4 -18.7 -38.9 -27.2 -16.3 -28.6 -18.7 -38.8 -26.9 -19.0 -30.0 -18.1 -36.9 -26.6	-13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0	-7.4 -5.7 -25.9 -14.2 -3.3 -15.6 -5.7 -25.8 -13.9 -6.0 -17.0 -5.1 -5.1 -23.9 -13.6	
.701 .600 3.300 iid ch .809 .715 .620 .524 3.330 .809 .715 .620 .524 3.330 igh ch .820 .730 .639	55.4 60.0 58.5 51.0 57.4 64.8 50.6 59.4 51.0 56.7 61.3 49.2 59.2 53.0 58.0 63.5	H H H V V V V V V H H H H Y V V V	-34.6 -27.9 -26.6 -44.5 -33.6 -23.9 -36.6 -26.6 -44.4 -33.3 -26.6 -38.0 -26.0 -42.5 -33.0 -25.1	3.8 5.2 2.5 3.3 3.8 4.3 5.2 2.5 3.3 3.8 4.3 5.2 2.5 3.3 3.8 4.3 5.2 2.5 3.3 3.8 4.3 5.2	11.3 13.1 8.1 9.7 11.3 12.2 13.1 8.1 9.7 11.3 12.2 13.1 12.2 13.1 8.1 9.7 11.3	9.1 10.9 5.9 7.6 9.1 10.1 10.9 5.9 7.6 9.1 10.1 10.1 10.9 6.0 7.6 9.2	-20.4 -18.7 -38.9 -27.2 -16.3 -28.6 -18.7 -38.8 -26.9 -19.0 -30.0 -18.1 -36.9 -26.6 -17.6	-13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0	-7.4 -5.7 -25.9 -14.2 -3.3 -15.6 -5.7 -25.8 -13.9 -6.0 -17.0 -5.1 -23.9 -13.6 -4.6	
.701 .600 .3.300 .id ch .809 .715 .620 .524 .3.330 .809 .715 .620 .524 .3.330 .524 .3.330 .524 .3.330 .524 .3.30 .524 .524 .524 .524 .524 .524 .524 .524	55.4 60.0 58.5 51.0 57.4 64.8 50.6 59.4 51.0 56.7 61.3 49.2 59.2 53.0 58.0	H H V V V V V H H H H V V V	-34.6 -27.9 -26.6 -44.5 -33.6 -23.9 -36.6 -26.6 -44.4 -33.3 -26.6 -38.0 -26.0 -26.0 -26.0 -26.0	3.8 5.2 2.5 3.3 3.8 4.3 5.2 2.5 3.3 3.8 4.3 5.2 2.5 3.3 3.8 4.3 5.2 2.5 3.3	11.3 13.1 8.1 9.7 11.3 12.2 13.1 8.1 9.7 11.3 12.2 13.1 12.2 13.1 8.1 9.7	9.1 10.9 5.9 7.6 9.1 10.1 10.9 5.9 7.6 9.1 10.1 10.9 6.0 7.6	-20.4 -18.7 -38.9 -27.2 -16.3 -28.6 -18.7 -38.8 -26.9 -19.0 -30.0 -18.1 -36.9 -26.6	-13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0	-7.4 -5.7 -25.9 -14.2 -3.3 -15.6 -5.7 -25.8 -13.9 -6.0 -17.0 -5.1 -5.1 -23.9 -13.6	
.701 .600 3.300 nid ch .809 .715 .620 .524 3.330 .809 .715 .620 .524 .715 .620 .524 3.330 igh ch .820 .730 .639 .639 .549 3.369	55,4 60.0 58.5 51.0 57.4 64.8 50.6 59.4 51.0 56.7 61.3 49.2 59.2 53.0 58.0 63.5 50.3	H H H V V V V V V H H H H H V V V V V	-34.6 -27.9 -26.6 -44.5 -33.6 -23.9 -36.6 -26.6 -44.4 -33.3 -26.6 -38.0 -26.0 -26.0 -26.0 -25.1 -36.8	3.8 5.2 2.5 3.3 3.8 4.3 5.2 2.5 3.3 3.8 4.3 5.2 2.5 3.3 3.8 4.3 5.2	11.3 13.1 8.1 9.7 11.3 12.2 13.1 8.1 9.7 11.3 12.2 13.1 8.1 9.7 11.3 12.2 13.1	9.1 10.9 5.9 7.6 9.1 10.1 10.9 5.9 7.6 9.1 10.1 10.9 6.0 7.6 9.2 10.1	-20.4 -18.7 -38.9 -27.2 -16.3 -28.6 -18.7 -38.8 -26.9 -19.0 -30.0 -18.1 -36.9 -26.6 -17.6 -28.9	-13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0	-7.4 -5.7 -25.9 -14.2 -3.3 -15.6 -5.7 -25.8 -13.9 -6.0 -17.0 -5.1 -23.9 -13.6 -4.6 -15.9	
.701 .600 3.300 nid ch .809 .715 .620 .524 3.330 .715 .620 .524 3.330 .524 3.330 .524 3.330 .549 .549 3.369 .820 .730	55.4 60.0 58.5 51.0 57.4 64.8 50.6 59.4 51.0 56.7 61.3 49.2 59.2 53.0 58.0 63.5 50.3 61.2 49.9 57.8	H H H V V V V V V H H H H V V V V V V V	-34.6 -27.9 -26.6 -44.5 -33.6 -23.9 -36.6 -26.6 -44.4 -33.3 -26.6 -38.0 -26.0 -26.0 -26.0 -26.0 -26.0 -26.0 -26.0 -26.0 -26.0 -26.0 -26.0 -26.6 -26.0 -26.5	3.8 5.2 2.5 3.3 3.8 4.3 5.2 2.5 3.3 3.8 4.3 5.2 2.5 3.3 3.8 4.3 5.2 2.5 3.3 3.8 4.3 5.2 2.5 3.3 3.8 4.3 3.8 4.3 5.2 5.2 2.5 3.3 3.8 5.2 5.2 5.2 5.2 5.2 5.2 5.2 5.2 5.2 5.2	11.3 13.1 8.1 9.7 11.3 12.2 13.1 8.1 9.7 11.3 12.2 13.1 8.1 9.7 11.3 12.2 13.1 8.1 9.7 11.3 12.2 13.1 8.1 9.7 11.3 12.2 13.1 8.1 9.7 11.3 12.2 13.1 8.1 9.7 11.3 12.2 13.1 8.1 9.7 11.3 12.2 13.1 8.1 9.7 11.3 12.2 13.1 8.1 9.7 11.3 12.2 13.1 8.1 9.7 11.3 12.2 13.1 8.1 9.7 11.3 12.2 13.1 8.1 9.7 11.3 12.2 13.1 13	9.1 10.9 5.9 7.6 9.1 10.1 10.9 5.9 7.6 9.1 10.1 10.9 6.0 7.6 9.2 10.1 11.0 6.0 7.6	-20.4 -18.7 -38.9 -27.2 -16.3 -28.6 -18.7 -38.8 -26.9 -19.0 -30.0 -18.1 -36.9 -26.6 -17.6 -28.9 -26.6 -17.6 -28.9 -16.9 -40.0 -25.8	-13.0 -13.0	-7.4 -5.7 -25.9 -14.2 -3.3 -15.6 -5.7 -25.8 -13.9 -6.0 -17.0 -5.1 -23.9 -13.6 -4.6 -15.9 -3.9 -27.0 -12.8	
.701 .600 3.300 nid ch .809 .715 .620 .524 3.330 .524 3.330 .524 3.330 .524 3.330 .524 3.330 .524 3.330 .524 3.330 .549 3.369 .549 3.369 .520 .730	55,4 60.0 58.5 51.0 57,4 64.8 50.6 59,4 51.0 56.7 61.3 49.2 59.2 53.0 58.0 63.5 50.3 61.2 49.9 57.8 59.5	H H H V V V V V V H H H H H H H H H	-34.6 -27.9 -26.6 -44.5 -33.6 -23.9 -36.6 -26.6 -44.4 -33.3 -26.6 -38.0 -26.0 -44.4 -33.3 -26.6 -38.0 -26.0 -25.1 -33.0 -25.1 -36.8 -24.8 -45.6 -32.2 -28.3	3.8 5.2 2.5 3.3 3.8 4.3 5.2 2.5 3.3 3.8 4.3 5.2 2.5 3.3 3.8 4.3 5.2 2.5 3.3 3.8 4.3 5.2 2.5 3.3 3.8 4.3 5.2 2.5 3.3 3.8	11.3 13.1 8.1 9.7 11.3 12.2 13.1 8.1 9.7 11.3 12.2 13.1 12.2 13.1 12.2 13.1 12.2 13.1 12.2 13.1 12.2 13.1 8.1 9.7 11.3 12.2 13.1 9.7 11.3 13.1 9.7 11.3 13.1 9.7 11.3 13.1 9.7 11.3 13.1 9.7 11.3 13.1 9.7 11.3 13.1 9.7 11.3 9.7 11.3	9.1 10.9 5.9 7.6 9.1 10.1 10.9 5.9 7.6 9.1 10.1 10.9 6.0 7.6 9.2 10.1 11.0 6.0 7.6 9.2 10.1 11.0 6.0 7.6 9.2 10.1 11.0 7.6 9.2 10.1 10.0 7.6 9.2 9.2	-20.4 -18.7 -38.9 -27.2 -16.3 -28.6 -18.7 -38.8 -26.9 -19.0 -30.0 -18.1 -36.9 -26.6 -17.6 -28.9 -26.6 -17.6 -28.9 -16.9 -40.0 -25.8 -20.8	-13.0 -13.0	-7.4 -5.7 -25.9 -14.2 -3.3 -15.6 -5.7 -25.8 -13.9 -6.0 -17.0 -5.1 -23.9 -13.6 -4.6 -15.9 -3.9 -27.0 -12.8 -7.8	
.701 .600 3.300 nid ch .809 .715 .620 .524 3.330 .515 .620 .524 3.330 .524 3.330 .524 3.330 .524 3.330 .549 .549 3.369 .520 .730	55.4 60.0 58.5 51.0 57.4 64.8 50.6 59.4 51.0 56.7 61.3 49.2 59.2 53.0 58.0 63.5 50.3 61.2 49.9 57.8	H H H V V V V V V H H H H V V V V V V V	-34.6 -27.9 -26.6 -44.5 -33.6 -23.9 -36.6 -26.6 -44.4 -33.3 -26.6 -38.0 -26.0 -26.0 -26.0 -26.0 -26.0 -26.0 -26.0 -26.0 -26.0 -26.0 -26.0 -26.6 -26.0 -26.5	3.8 5.2 2.5 3.3 3.8 4.3 5.2 2.5 3.3 3.8 4.3 5.2 2.5 3.3 3.8 4.3 5.2 2.5 3.3 3.8 4.3 5.2 2.5 3.3 3.8 4.3 3.8 4.3 5.2 5.2 2.5 3.3 3.8 5.2 5.2 5.2 5.2 5.2 5.2 5.2 5.2 5.2 5.2	11.3 13.1 8.1 9.7 11.3 12.2 13.1 8.1 9.7 11.3 12.2 13.1 8.1 9.7 11.3 12.2 13.1 8.1 9.7 11.3 12.2 13.1 8.1 9.7 11.3 12.2 13.1 8.1 9.7 11.3 12.2 13.1 8.1 9.7 11.3 12.2 13.1 8.1 9.7 11.3 12.2 13.1 8.1 9.7 11.3 12.2 13.1 8.1 9.7 11.3 12.2 13.1 8.1 9.7 11.3 12.2 13.1 8.1 9.7 11.3 12.2 13.1 8.1 9.7 11.3 12.2 13.1 13	9.1 10.9 5.9 7.6 9.1 10.1 10.9 5.9 7.6 9.1 10.1 10.9 6.0 7.6 9.2 10.1 11.0 6.0 7.6	-20.4 -18.7 -38.9 -27.2 -16.3 -28.6 -18.7 -38.8 -26.9 -19.0 -30.0 -18.1 -36.9 -26.6 -17.6 -28.9 -26.6 -17.6 -28.9 -16.9 -40.0 -25.8	-13.0 -13.0	-7.4 -5.7 -25.9 -14.2 -3.3 -15.6 -5.7 -25.8 -13.9 -6.0 -17.0 -5.1 -23.9 -13.6 -4.6 -15.9 -3.9 -27.0 -12.8	

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16QAM: Low, Mid, & High Channels:

oject # ompany UT Des UT M/I est Tar ode Oj	N:UTD1900D get:FCC Part per:TX, 16Q4)-US-A 124	user termina	L D & User te	rminal_C					
est Equ	uipment:									
	EMCO Horn 1-	18GHz		Horn	>18GHz			Limit		-
Т	120; S/N: 2931	0@3m 👻				-	FCC	24	•	High Pass Filter
			1							
	i Frequency Cables]	Pre-amplifer 1	-26GHz		Pre-amplifer 26-	40GHz
	(2 ft)	(2 ~ 3 ft)	□ (4 ~ 6 ft)	✓ (12 ft)		T63 Miteq 640	6456 🗸	Γ		-
					L	,		1		
	eading is include		:							
f	SA reading	Ant. Pol		-	Gain	Gain	EIRP	Limit	Margin	Notes
GHz	(dBuV/m)	(H/V)	(dBm)	(dB)	(dBi)	(dBd)	(dBm)	(dBm)	(dB)	
ow ch										
300	53.2 59.5	V	-42.4	2.5	8.1	5.9	-36.8	-13.0	-23.8	
01 00	58.5 64.5	V V	-32.5 -24.2	3.3 3.8	9.7 11.3	7.6 9.1	-26.1 -16.7	-13.0 -13.0	-13.1 -3.7	
500	49.3	v	-37.9	4.3	12.3	10.1	-29.9	-13.0	-16.9	
.300	<u>61.0</u>	V	-24.9	5.2	13.1	10.9	-17.0	-13.0	-4.0	
300	52.9	H	-42.6	2.5	8.1	5.9	-37.0	-13.0	-24.0	
701 500	56.8	H H	-33.2	3.3	9.7	7.6	-26.8	-13.0 -13.0	-13.8	
500 .300	60.3 59.0	H H	-27.6 -26.1	3.8 5.2	11.3	9.1	-20.1 -18.2	-13.0	-7.1 -5.2	
d ch		**				100				
809	51.0	V	-44.5	2.5	8.1	5.9	-38.9	-13.0	-25.9	
715	57.4	V	-33.6	3.3	9.7	7.6	-27.2	-13.0	-14.2	
520	64.8	V	-23.9	3.8	11.3	9.1	-16.3	-13.0	-3.3	
524 .330	49.4 60.0	V V	-37.8 -26.0	4.3 5.2	12.2	10.1 10.9	-29.8 -18.1	-13.0 -13.0	-16.8 -5.1	
.330 809	49.5	H H	-20.0	2.5	8.1	5.9	-10.1	-13.0	-27.3	
15	56.4	H	-33.6	3.3	9.7	7.6	-27.2	-13.0	-14.2	
20	61.5	H	-26.4	3.8	11.3	9.1	-18.8	-13.0	-5.8	
24	48.3	H	-38.9	4.3	12.2	10.1	-30.9	-13.0	-17.9	
.330	60.7	H	-24.5	5.2	13.1	10.9	-16.6	-13.0	-3.6	
gh ch 20	52.3	V	-43.2	2.5	8.1	6.0	-37.6	-13.0	-24.6	
20 30	52.5 56.0	v	-43.2 -35.0	3.3	9.7	7.6	-37.0	-13.0	-15.6	
39	64.0	v	-24.6	3.8	11.3	9.2	-17.1	-13.0	-4.1	
549	50.1	V	-37.0	4.3	12.2	10.1	-29.1	-13.0	-16.1	
	59.8	V	-26.2	5.2	13.1	11.0	-18.3	-13.0	-5.3	
	50.0	H	-45.4	2.5	8.1	6.0	-39.8	-13.0	-26.8	
320			· · ·			7.6	-24.0	-13.0	-11.0	
820 730	59.6	H	-30.4	3.3	9.7		••• \$ ••••••••••••••••••••••••••••••••		···· \$ ····· \$ ····· \$ ···· * · · · · ·	
8,369 820 730 639 549		H H H	-30.4 -25.4 -38.1	3.3 3.8 4.3	11.3 12.2	9.2 10.1	-17.9 -30.2	-13.0 -13.0	-4.9 -17.2	

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7.6. SECTION 2.1055: FREQUENCY STABILITY

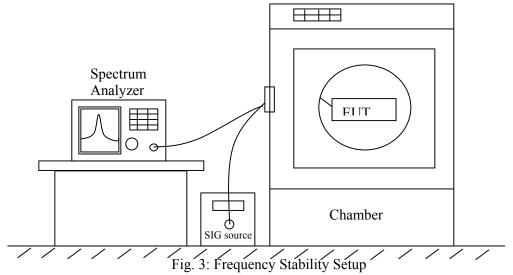
INSTRUMENTS LIST

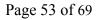
TEST EQUIPMENT LIST								
Name of Equipment	Manufacturer	Model No.	Serial No.	Due Date				
EMI Test Receiver	R & S	ESIB40	100192	11/21/2004				
Temperature / Humidity Chamber	Thermotron	SE 600-10-10	29800	5/30/2005				
Splitter	Agilent	N/A	2339A06150	N/A				
10dB Pad	Weinschel	56-10	M2348	N/A				
Signal Generator	Agilent	E4432B	MY41000108	11/14/2005				
<u> </u>	C							

Detector Function Setting of Test Receiver

Frequency Range (MHz)	Detector Function	Resolution Bandwidth	Video Bandwidth
800-1000	Peak	300 Hz	300 Hz

TEST SETUP





Test Setup Photos



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TEST PROCEDURE

• Frequency stability versus environmental temperature

1). Setup the configuration per figure 6 for frequencies measurement inside the environmental chamber. Set the temperature of the chamber to 25°C. Set SA Resolution Bandwidth low enough to obtain the desired frequency resolution and measure the EUT 25°C operating frequency as reference frequency.

2). Turn EUT off and set Chamber temperature to -30°C.

3). Allow sufficient time (approximately 20 to 30 minus after chamber reach the assigned temperature) for EUT to stabilize. Turn on EUT and measure the EUT operating frequency. Turn off EUT after the measurement.

4). Repeat step 3 with a 10°C increased per stage until the highest temperature of +50°C reached, record all measured frequencies on each temperature step.

• Frequency stability versus AC input voltage

1). Setup the configuration per figure 6 and set chamber temperature to 25°C. Use a variable AC power supply to power the EUT and set AC output voltage to EUT nominal input AC voltage. Set SA Resolution Bandwidth low enough to obtain the desired frequency resolution and measure the EUT 25°C operating frequency as reference frequency.

2). Slowly reduce the EUT input voltage to specified extreme voltage variation ($\pm 15\%$) and record the maximum frequency change.

<u>RESULT</u>

No non-compliance noted, as shown below because the EUT uses the same OSC in both receiver and transmitter LO circuit. As a result, the frequency does not shift in Frequency Stability Test.

Frequency stability versus environmental temperature

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	Reference Frequency: Low or High Channel @ 25% Limit: to stay within the authorized block									
Power Supply	Environment	Frequency Deviation Measureed with Time Elapse								
(Vac)	Temperature (2C)	(MHz)	Delta (ppm)	Limit (ppm)	Delta (Hz)					
115.00	50	1910.01091	-0.488	± 2.5	933					
115.00	40	1910.01080	-0.427	± 2.5	816					
115.00	30	1910.01057	-0.306	± 2.5	585					
115.00	25	1910.00998	0	± 2.5	0					
115.00	20	1910.01083	-0.445	± 2.5	849.9999999					
115.00	10	1910.01107	-0.572	± 2.5	1093					
115.00	0	1910.01083	-0.446	± 2.5	851.9999999					
115.00	-10	1910.01118	-0.626	± 2.5	1195					
115.00	-20	1910.01135	-0.718	± 2.5	1371					
115.00	-30	1910.01150	-0.793	± 2.5	1515					
97.75	25	1910.01034	-0.188	± 2.5	360					
132.25	25	1910.01086	-0.461	± 2.5	880.0000001					

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7.7. RADIATED EMISSION

Detector Setting of Spectrum Analyzer

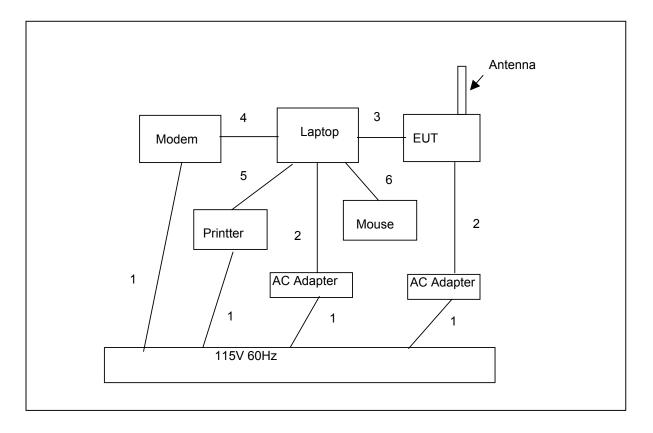
Frequency Range (MHz)	Detector Function	Resolution Bandwidth	Video Bandwidth
30 to 1000	⊠ Peak	⊠ 100 KHz	⊠ 100 KHz
	⊠ Quasi Peak	⊠ 1 MHz	⊠ 1 MHz

INSTRUMENT LIST

	TEST EQUIPMENT LIST									
Name of Equipment	Manufacturer	Model No.	Serial No.	Due Date						
EMI Receiver, 9 kHz ~ 2.9 GHz	HP	8542E	3942A00286	11/21/2004						
RF Filter Section	HP	85420E	3705A00256	11/21/2004						
10dB Attenuator	Weinschel	56-10	M2348	CNR						
2.7GHz HPF	MicroTronic	HPM13194	1	CNR						
Antenna, Horn 1 ~ 18 GHz	EMCO	3115	2238	2/4/2005						
30MHz 2Ghz	Sunol Sciences	JB1 Antenna	A121003	12/22/2004						
Spectrum Analyzer	HP	E4446A	US42510266	7/23/2004						

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TEST SETUP



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TEST PROCEDURE

1. The EUT was placed on the turn table 0.8 meter above ground inside 3 meter Anechoic Chamber. 2. Set the resolution bandwidth to 120KHz in the test receiver and select Peak function to scan the frequency below 1 GHz.

3. Shift the interference-receiving antenna located in antenna tower upwards and downwards between 1 and 4 meters above ground and find out the local peak emission on frequency domain.

4. Locate the interference-receiving antenna at the position where the local peak reach the maximum emission.

5. Rotate the turn table and stop at the angle where the measurement device has maximum reading

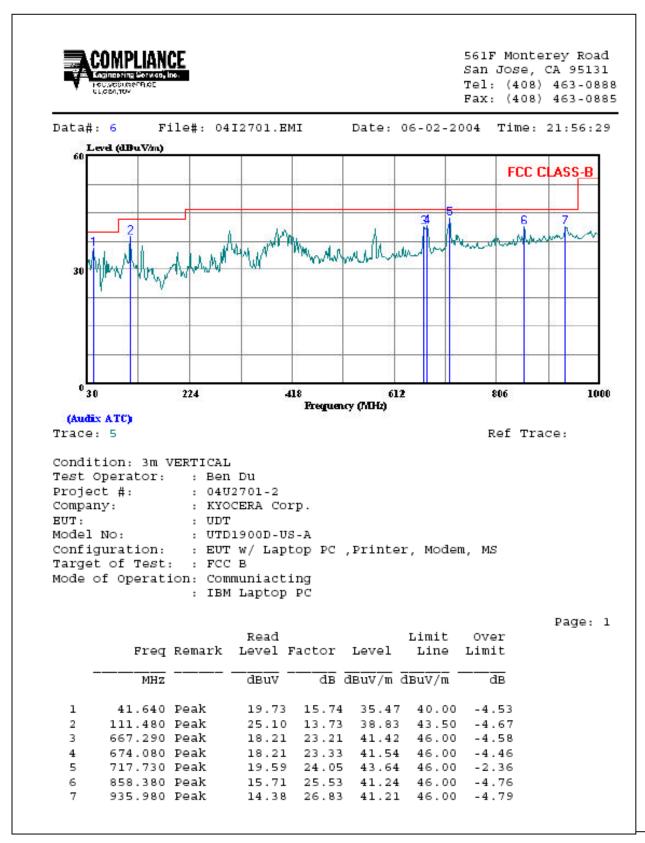
6. Shift the interference-receiving antenna again to detect the maximum emission of the local peak

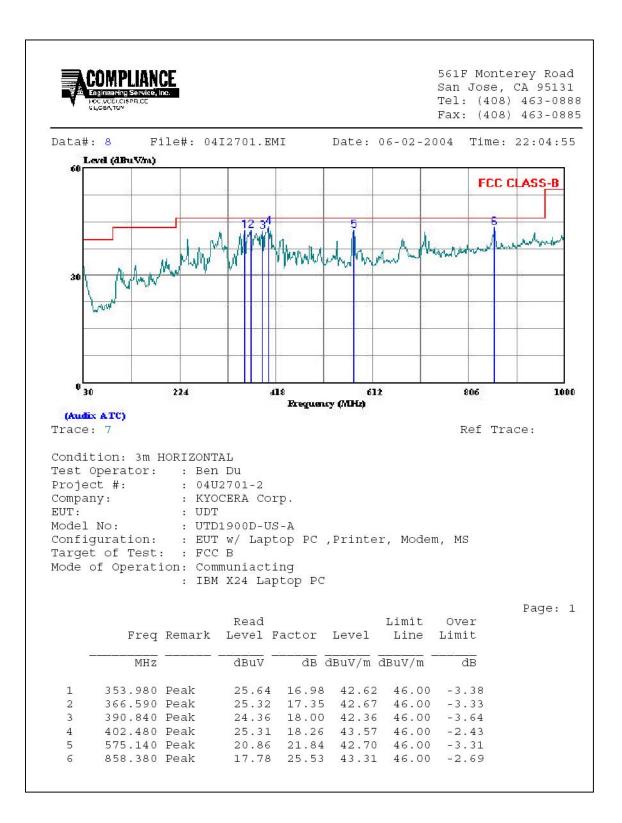
7. If the reading of the local peak under Peak function is lower than limit by 6dB, then Quasi Peak detection is not needed and this reading should be recorded. And if it is higher than Peak limit, then the test is fail. Others, switch the receiver to Quasi Peak function, set the resolution bandwidth to 100kHz and repeat the procedures $(3)\sim(6)$. If the reading is lower than limit, this reading should be recorded, otherwise, the test is fail.

MEASUREMENT RESULT

No non-compliance noted, as shown below.

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Radiated Emission photos





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7.8. POWERLINE CONDUCTED EMISSION

_	Detector Function	Detector Function Setting of Test Receiver						
	Frequency Range (MHz) Detector Function		Resolution Bandwidth	Video Bandwidth				
I	150 KHz to 30 MHz	⊠ Peak □ CISPR Quasi Peak	9 KHz	9 KHz				

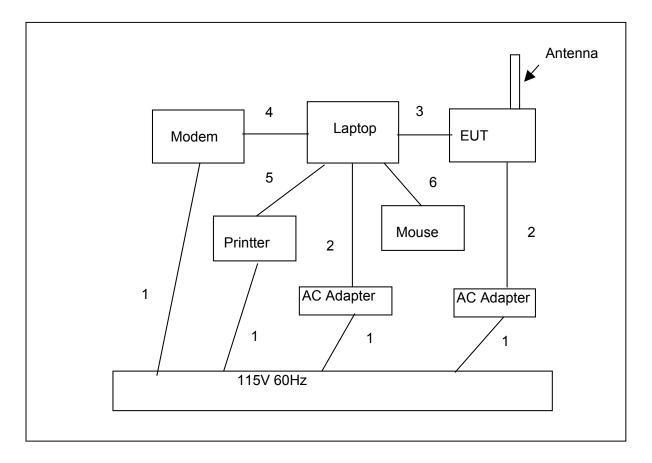
Detector Function Setting of Test Receiver

INSTRUMENT LIST

TEST EQUIPMENT LIST								
Name of Equipment	Manufacturer	Model No.	Serial No.	Due Date				
EMI Test Receiver	R & S	ESHS 20	827129/006	7/17/2004				
10dB Attenuator	Weinschel	56-10	M2348	CNR				
LISN, 10 kHz ~ 30 MHz	FCC	50/250-25-2	114	10/13/2004				
Line Filter	Lindgren	LMF-3489	497	CNR				
LISN, 10 kHz ~ 30 MHz	Solar	8012-50-R-24-BNC	837990	10/13/200				
AC Power Source, 10KVA	ACS	AFC-10K-AFC-2	J1568	CNR				

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TEST SETUP



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TEST PROCEDURE

1. The EUT was placed on a wooden table 40 cm from a vertical ground plane and approximately 80 cm above the horizontal ground plane on the floor. The EUT was set to transmit in a continuous mode.

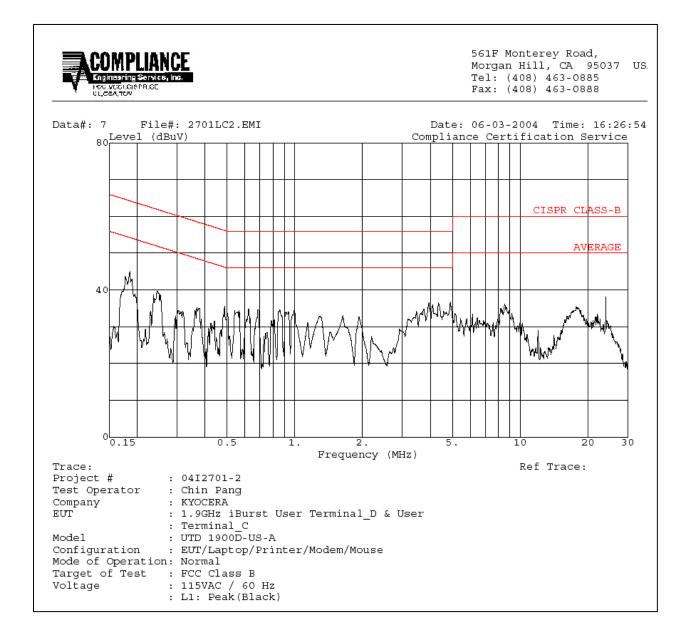
2. Line conducted data was recorded for both NEUTRAL and HOT lines.

MEASUREMENT RESULT

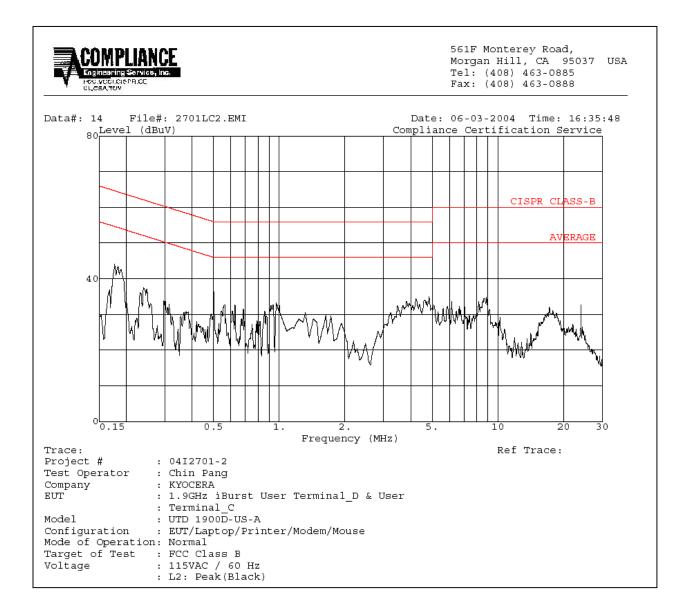
No non-compliance noted, as shown below.

Freq.	Reading		Closs	Limit	EN_A	Margin		Remark	
(MHz)	PK (dBuV)	QP (dBuV)	AV (dBuV)	(dB)	QP	AV	QP (dB)	AV (dB)	L1 / L2
0.19	44.96			0.00	65.00	55.00	-20.04	-10.04	L1
0.25	40.64			0.00	63.26	53.26	-22.62	-12.62	L1
24.01	38.02			0.00	60.00	50.00	-21.98	-11.98	L1
0.18	44.12			0.00	65.23	55.23	-21.11	-11.11	L2
0.97	34.28			0.00	56.00	46.00	-21.72	-11.72	L2
8.87	35.76			0.00	60.00	50.00	-24.24	-14.24	L2
6 Worst I									

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AC Conducted Emission photos





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8. APENDIX

8.1. EXTERNAL & INTERNAL PHOTOS

Please refer to attached sheets.

8.2. SCHEMATICS

Please refer to attached sheets.

8.3. BLOCK DIAGRAM

Please refer to attached sheets.

8.4. USER MANUAL

Please refer to attached sheets.

END OF REPORT

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