Spurious RF Conducted Emissions

Revision 2/4/02

Justification

The individuals and/or the organization requesting the test provided the modes, configurations and settings available to evaluate. All of the EUT parameters listed below were investigated. This includes, but may not be limited to, antennas, tuned transmit frequency ranges, operating modes, and data rates.

Channels in Specified Band Investigated:
Mid
High
Low

Operating Modes Investigated:

No Hop

Data Rates Investigated:

Maximum

Output Power Setting(s) Investigated:

Maximum

Power Input Settings Investigated:

120 VAC, 60 Hz.

Frequency Range Inv	vestigated		
Start Frequency	0 kHz	Stop Frequency	25 GHz

Software\Firmware Applied During Test						
Exercise software	Special Test Software	Version	Unknown			
Description	Description					
The system was tested us	ing special software develo	ped to test all functions of t	he device during the test.			
l —						

The system was tested using special software developed to test all functions of the device during the test. The special test software allowed the unit to be placed in a no hop mode at each of the low, mid, and high channels of the device.

Equipment Modifications

No EMI suppression devices were added or modified. The EUT was tested as delivered.

EUT and Peripherals

Description	Manufacturer	Model/Part Number	Serial Number
Host System	SpaceLabs Medical	90310-1A	PAR327-1
Ethernet Board	SpaceLabs Medical	670-0829-00	N3112-95B-040
Power Supply	SpaceLabs Medical	90486	486-101522
EUT	Proxim	6330	A30549980020A6386465

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Cables

Cable Type	Shield	Length (m)	Ferrite	Connection 1	Connection 2
AC Power	No	1.8	No	Power Supply	AC Mains
DC Power	Yes	.96	Yes	Power Supply	Host System

PA = Cable is permanently attached to the device. Shielding and/or presence of ferrite may be unknown.

Measurement Equipment

Description	Manufacturer	Model	Identifier	Last Cal	Interval
Spectrum Analyzer	Tektronix	2784	AAO	03/08/2001	12 mo

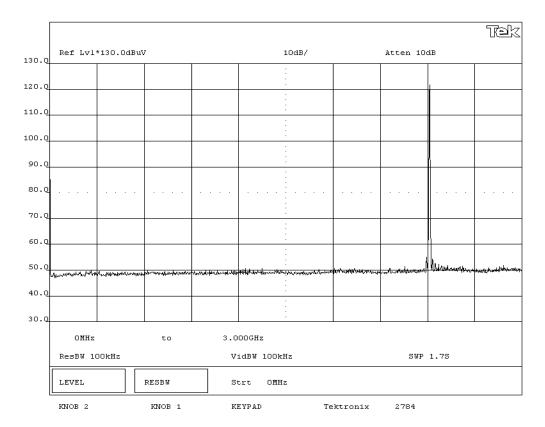
Test Description

Requirement: Per 47 CFR 15.247(c), in any 100 kHz bandwidth outside the authorized band, the maximum level of radio frequency power must be at least 20dB down from the highest emission level within the authorized band. The measurement is made with the spectrum analyzer's resolution bandwidth set to 100 kHz, and the video bandwidth set to greater than or equal to the resolution bandwidth.

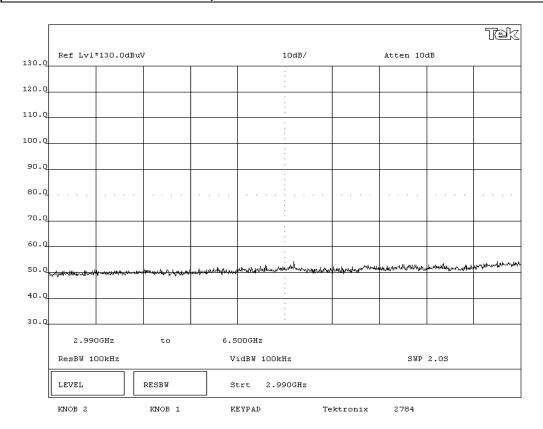
Configuration: The spurious RF conducted emissions were measured with the EUT set to low, medium, and high transmit frequencies. The measurements were made using a direct connection between the RF output of the EUT and the spectrum analyzer. The EUT was transmitting at its maximum data rate in a no hop mode. For each transmit frequency, the spectrum was scanned throughout the specified frequency.

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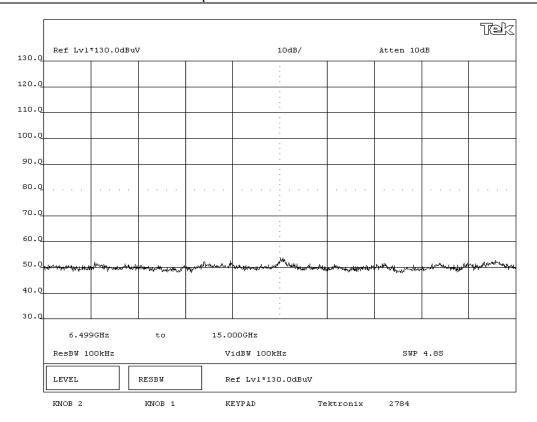
EMC EMISSIONS DATA SHEET					
EUT: 6330			Work Order:	SPAC0264	
Serial Number: A30549980020A6386465			Date:	07/11/01	
Customer: SpaceLabs Medical			Temperature:	23 degrees C	
Attendees: N/A		Tested by: Rod Peloquin	Humidity	38% RH	
Customer Ref. No.: N/A		Power: 120VAC/60Hz	Job Site:	EV06	
TEST SPECIFICATIONS					
Specification: 47 CFR 15.247(c)	Year: Most Current	Method: DA 00-705, ANSI C63.4	Year	1992	
SAMPLE CALCULATIONS					
COMMENTS					
COMMENTO					
EUT OPERATING MODES					
Modulated by PRBS at maximum data rate					
DEVIATIONS FROM TEST STANDARD					
None					
REQUIREMENTS					
Maximum level of any spurious emission outside of the	authorized band is 20 dB down fro	om the fundamental			
RESULTS					
Pass					
SIGNATURE					
Rolly be Rolly Tested By:	<u> </u>				
DESCRIPTION OF TEST					
Antenna Conducted Spurious Emissions - Low Channel 0MHz-3GHz					



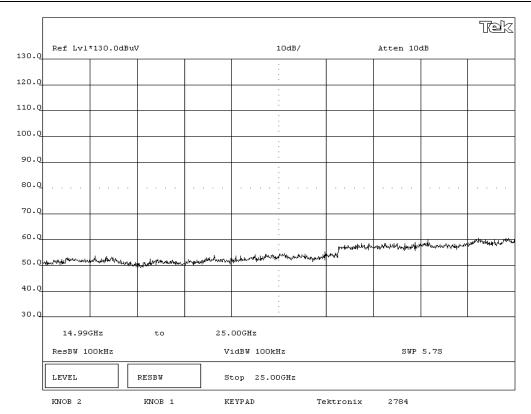
EMC EMISSIONS DATA SHEET						
EUT: 6330			Work Order:	01/30/01 SPAC0264		
Serial Number: A30549980020A6386465			Date:	07/11/01		
Customer: SpaceLabs Medical			Temperature:	23 degrees C		
Attendees: N/A		Tested by: Rod Peloquin	Humidity:	38% RH		
Customer Ref. No.: N/A		Power: 120VAC/60Hz	Job Site:	EV06		
TEST SPECIFICATIONS						
Specification: 47 CFR 15.247(c)	Year: Most Current	Method: DA 00-705, ANSI C63.4	Year:	1992		
SAMPLE CALCULATIONS						
COMMENTS EUT OPERATING MODES Modulated by PRBS at maximum data rate DEVIATIONS FROM TEST STANDARD None REQUIREMENTS Maximum level of any spurious emission outside of the	authorized band is 20 dB down fro	m the fundamental				
RESULTS						
Pass						
SIGNATURE						
Rolly le Rolly Tested By:	>					
DESCRIPTION OF TEST						
Antenna Cond	ucted Spurious Emi	ssions - Low Channel 3GI	Hz-6.5GHz			



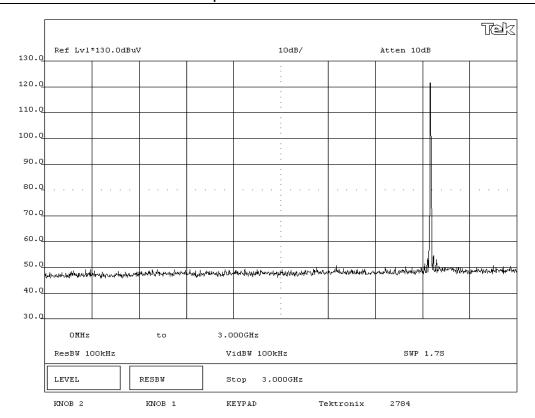
EMC EMISSIONS DATA SHEET					
EUT: 6330			Work Order:	SPAC0264	
Serial Number: A30549980020A6386465			Date:	07/11/01	
Customer: SpaceLabs Medical			Temperature:	23 degrees C	
Attendees: N/A		Tested by: Rod Peloquin	Humidity:	38% RH	
Customer Ref. No.: N/A		Power: 120VAC/60Hz	Job Site:	EV06	
TEST SPECIFICATIONS					
Specification: 47 CFR 15.247(c)	Year: Most Current	Method: DA 00-705, ANSI C63.4	Year:	1992	
SAMPLE CALCULATIONS					
COMMENTS EUT OPERATING MODES Modulated by PRBS at maximum data rate DEVIATIONS FROM TEST STANDARD None REQUIREMENTS Maximum level of any spurious emission outside of the	authorized band is 20 dB down fro	m the fundamental			
RESULTS					
Pass					
SIGNATURE					
Roley be Roley.	·				
DESCRIPTION OF TEST					
Antenna Conducted Spurious Emissions - Low Channel 6.5GHz-15GHz					



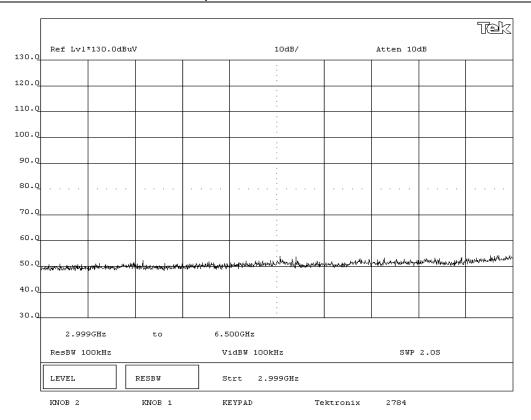
NORTHWEST EMC		EMISSIONS I	DATA SH	EET		Rev BETA 01/30/01
EUT:	6330				Work Order:	SPAC0264
Serial Number:	A30549980020A6386465				Date:	07/11/01
Customer:	SpaceLabs Medical				Temperature:	23 degrees C
Attendees:	N/A		Tested by:	Rod Peloquin	Humidity:	38% RH
Customer Ref. No.:	N/A		Power:	120VAC/60Hz	Job Site:	EV06
TEST SPECIFICATIONS	S					
Specification:	47 CFR 15.247(c)	Year: Most Current	Method:	DA 00-705, ANSI C63.4	Year:	1992
SAMPLE CALCULATION	ONS					
COMMENTS EUT OPERATING MOD Modulated by PRBS at DEVIATIONS FROM TE None REQUIREMENTS	maximum data rate					
Maximum level of any	spurious emission outside of the a	authorized band is 20 dB down from	n the fundamental			
RESULTS						
Pass						
SIGNATURE						
Tested By:	Rolly be Rolly					
DESCRIPTION OF TES	т					
	Antenna Conducted Spurious Emissions - Low Channel 15GHz - 25GHz					



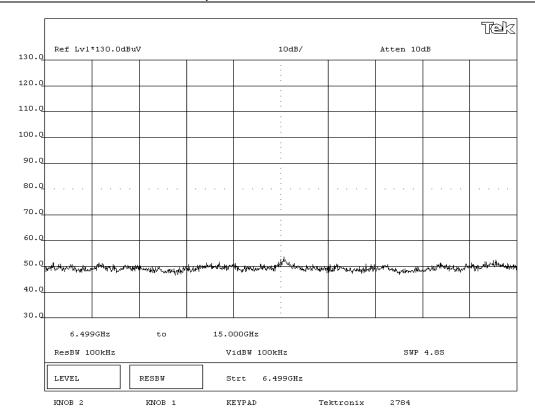
NORTHWEST	EMISSIONS	DATA SHEET		
EMC	EMISSIONS	DATA SHEET		Rev BETA 01/30/01
EUT: 6330			Work Order:	SPAC0264
Serial Number: A30549980020A6386465			Date:	07/11/01
Customer: SpaceLabs Medical			Temperature:	23 degrees C
Attendees: N/A		Tested by: Rod Peloquin	Humidity:	38% RH
Customer Ref. No.: N/A		Power: 120VAC/60Hz	Job Site:	EV06
TEST SPECIFICATIONS				
Specification: 47 CFR 15.247(c)	Year: Most Current	Method: DA 00-705, ANSI C63.4	Year	1992
SAMPLE CALCULATIONS				
COMMENTS				
EUT OPERATING MODES				
Modulated by PRBS at maximum data rate				
DEVIATIONS FROM TEST STANDARD				
None				
REQUIREMENTS				
Maximum level of any spurious emission outside of th	e authorized band is 20 dB down fro	om the fundamental		
RESULTS				
Pass				
SIGNATURE				
Rolly be Rolly				
Tested By:	<u>*************************************</u>			
DESCRIPTION OF TEST				
Antenna Con	ducted Spurious En	nissions - Mid Channel 0M	Hz-3GHz	



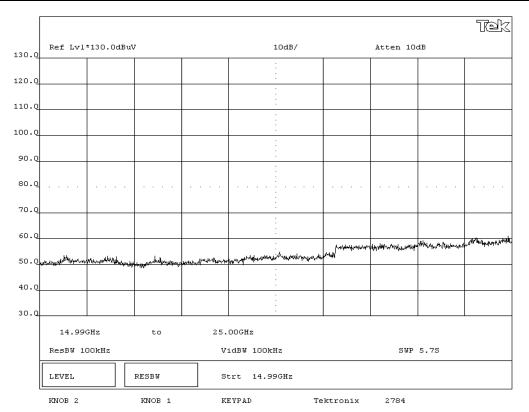
EMC EMISSIONS DATA SHEET						
EUT: 6330			Work Order:	SPAC0264		
Serial Number: A30549980020A638	36465		Date:	07/11/01		
Customer: SpaceLabs Medica	1		23 degrees C			
Attendees: N/A		Tested by: Rod Peloquin	Humidity:	38% RH		
Customer Ref. No.: N/A		Power: 120VAC/60Hz	Job Site:	EV06		
TEST SPECIFICATIONS						
Specification: 47 CFR 15.247(c)	Year: Most Current	Method: DA 00-705, ANSI C63.4	Year:	1992		
COMMENTS EUT OPERATING MODES Modulated by PRBS at maximum data rate DEVIATIONS FROM TEST STANDARD None	3					
REQUIREMENTS						
Maximum level of any spurious emission	outside of the authorized band is 20 dB down fro	om the fundamental				
RESULTS						
Pass						
SIGNATURE						
Rocky le	Releng					
DESCRIPTION OF TEST						
Antenr	na Conducted Spurious Em	issions - Mid Channel 3GI	Iz-6.5GHz			



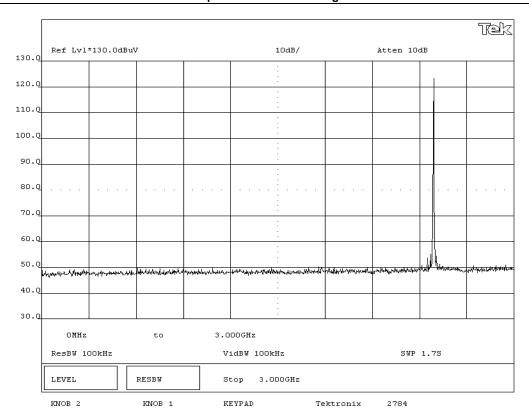
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EUT:	6330				Work Order:	SPAC0264
Serial Number:	A30549980020A6386465				Date:	07/11/01
Customer:	SpaceLabs Medical				Temperature:	23 degrees C
Attendees:	N/A		Tested by:	Rod Peloquin	Humidity:	38% RH
Customer Ref. No.:	N/A		Power:	120VAC/60Hz	Job Site:	EV06
TEST SPECIFICATION	S					
Specification:	47 CFR 15.247(c)	Year: Most Current	Method:	DA 00-705, ANSI C63.4	Year:	1992
SAMPLE CALCULATION	ONS					
EUT OPERATING MOD Modulated by PRBS at DEVIATIONS FROM TE None REQUIREMENTS	maximum data rate					
Maximum level of any	spurious emission outside of the a	uthorized band is 20 dB down fro	m the fundamental			
RESULTS						
Pass						
SIGNATURE						
Tested By:	Rolly be Rolly					
DESCRIPTION OF TES	T .					
	Antenna Conduc	cted Spurious Emis	ssions - Mid	Channel 6.50	Hz-15GHz	



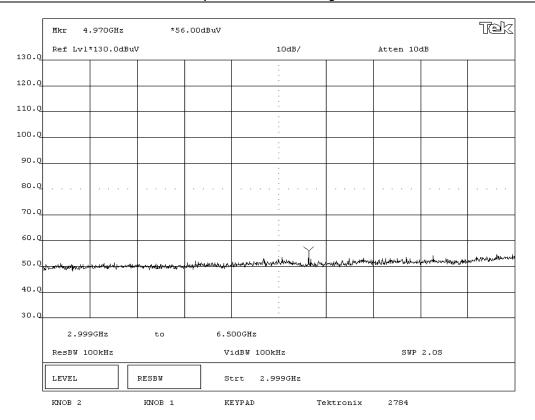
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EUT: 6330				Work Order:	SPAC0264
Serial Number: A30549980020A6386465				Date:	07/11/01
Customer: SpaceLabs Medical				Temperature:	
Attendees: N/A		Tested by:	Rod Peloquin	Humidity:	38% RH
Customer Ref. No.: N/A		Power:	120VAC/60Hz	Job Site:	EV06
TEST SPECIFICATIONS					
Specification: 47 CFR 15.247(c)	Year: Most Current	Method:	DA 00-705, ANSI C63.4	Year:	1992
COMMENTS					
EUT OPERATING MODES Modulated by PRBS at maximum data rate DEVIATIONS FROM TEST STANDARD					
EUT OPERATING MODES Modulated by PRBS at maximum data rate DEVIATIONS FROM TEST STANDARD None					
EUT OPERATING MODES Modulated by PRBS at maximum data rate DEVIATIONS FROM TEST STANDARD None REQUIREMENTS	e of the authorized band is 20 dB down fe	rom the fundamental			
EUT OPERATING MODES Modulated by PRBS at maximum data rate DEVIATIONS FROM TEST STANDARD None	e of the authorized band is 20 dB down fo	rom the fundamental			
EUT OPERATING MODES Modulated by PRBS at maximum data rate DEVIATIONS FROM TEST STANDARD None REQUIREMENTS Maximum level of any spurious emission outside RESULTS	e of the authorized band is 20 dB down fi	rom the fundamental			
EUT OPERATING MODES Modulated by PRBS at maximum data rate DEVIATIONS FROM TEST STANDARD None REQUIREMENTS Maximum level of any spurious emission outside	e of the authorized band is 20 dB down fu	rom the fundamental			
EUT OPERATING MODES Modulated by PRBS at maximum data rate DEVIATIONS FROM TEST STANDARD None REQUIREMENTS Maximum level of any spurious emission outside RESULTS Pass		rom the fundamental			
EUT OPERATING MODES Modulated by PRBS at maximum data rate DEVIATIONS FROM TEST STANDARD None REQUIREMENTS Maximum level of any spurious emission outside RESULTS Pass SIGNATURE Auty lu Re		rom the fundamental			



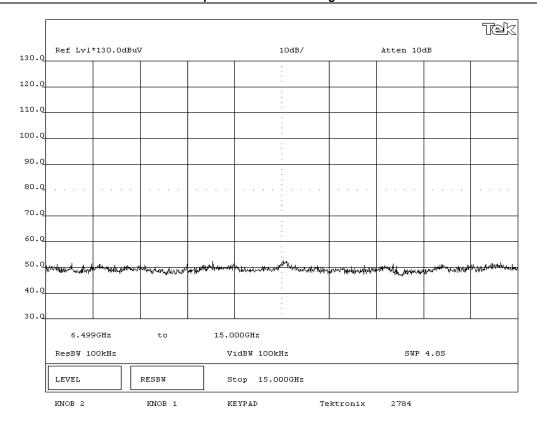
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EMC			JATA SI	EEI		Rev BETA 01/30/01
EUT:	6330				Work Order:	SPAC0264
Serial Number:	A30549980020A6386465				Date:	07/11/01
Customer:	SpaceLabs Medical				Temperature:	23 degrees C
Attendees:	N/A		Tested by:	Rod Peloquin	Humidity:	38% RH
Customer Ref. No.:	N/A		Power:	120VAC/60Hz	Job Site:	EV06
TEST SPECIFICATIONS	S					
Specification:	47 CFR 15.247(c)	Year: Most Current	Method:	DA 00-705, ANSI C63.4	Year:	1992
SAMPLE CALCULATIO	NS					
COMMENTS						
EUT OPERATING MOD	ES					
Modulated by PRBS at	maximum data rate					
DEVIATIONS FROM TE	ST STANDARD					
None						
REQUIREMENTS						
Maximum level of any	spurious emission outside of the	authorized band is 20 dB down fro	m the fundamental			
RESULTS						
Pass						
SIGNATURE						
SIGNATURE						
	Rocky be Releng					
	Du day					
Tested By:						
DESCRIPTION OF TEST	Т					
		usted Courious Fra	icciono Hiel	h Channal Al	4U- 2CU-	
	Antenna Condi	ucted Spurious Em	เธรเบทร - Migi	n Channel UN	バロス・3Gロス	



EMISSIONS DATA SHEET				
EUT: 6330			Work Order:	01/30/01 SPAC0264
Serial Number: A30549980020A6386465 Date: 07				
Customer: SpaceLabs Medical Temperature: 23				
			Humidity:	38% RH
Customer Ref. No.: N/A				EV06
TEST SPECIFICATIONS				
Specification: 47 CFR 15.247(c)				1992
SAMPLE CALCULATIONS				
COMMENTS EUT OPERATING MODES Modulated by PRBS at maximum data rate DEVIATIONS FROM TEST STANDARD None REQUIREMENTS Maximum level of any spurious emission outside of the	authorized band is 20 dB down fro	m the fundamental		
RESULTS	444	the fundamental		
Pass				
SIGNATURE				
Poely le Reley	· ·			
DESCRIPTION OF TEST				
Antenna Condi	ucted Spurious Emi	ssions - High Channel 3G	Hz-6.5GHz	



EMC EMISSIONS DATA SHEET					
EUT: 6330			Work Order:	SPAC0264	
Serial Number: A30549980020A6386465 Date: 07					
Customer: SpaceLabs Medical Temperature: 23					
Attendees: N/A					
Customer Ref. No.: N/A	N/A Power: 120VAC/60Hz			EV06	
TEST SPECIFICATIONS					
Specification: 47 CFR 15.247(c)	Year: Most Current	Method: DA 00-705, ANSI C63.4	Year:	1992	
SAMPLE CALCULATIONS					
COMMENTS EUT OPERATING MODES Modulated by PRBS at maximum data rate DEVIATIONS FROM TEST STANDARD None REQUIREMENTS Maximum level of any spurious emission outside of the	authorized band is 20 dB down fro	m the fundamental			
RESULTS					
Pass					
SIGNATURE					
Rolly be Religs					
DESCRIPTION OF TEST					
Antenna Conducted Spurious Emissions - High Channel 6.5GHz-15GHz					



NORTHWEST EMC	EMISSIONS	DATA SHEET		Rev BETA 01/30/01
EUT: 6330			Work Order:	
Serial Number: A30549980020A6386465			Date:	07/11/01
Customer: SpaceLabs Medical			Temperature:	23 degrees C
Attendees: N/A		Tested by: Rod Peloquin	Humidity:	38% RH
Customer Ref. No.: N/A	Power: 120VAC/60Hz			EV06
TEST SPECIFICATIONS				
Specification: 47 CFR 15.247(c)	Year: Most Current	Method: DA 00-705, ANSI C63.4 Yea		1992
SAMPLE CALCULATIONS				
EUT OPERATING MODES Modulated by PRBS at maximum data rate DEVIATIONS FROM TEST STANDARD None REQUIREMENTS Maximum level of any spurious emission outside of	the authorized band is 20 dB down fro	om the fundamental		
Pass				
SIGNATURE Rocky le Roley Tested By:	77			
DESCRIPTION OF TEST				
Antenna Cond	ducted Spurious Emi	ssions - High Channel 150	Hz-25GHz	

