

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 Investigated

Start Frequency

0 kHz

Stop Frequency

25 GHz

Software\Firmware Applied During Test

Exercise software

Special Test Software

Version

Unknown

Description

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 |

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

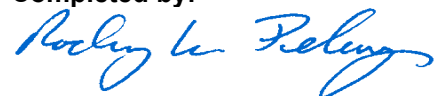
| Description | Manufacturer | Model | Identifier | Last Cal | Interval |
|-------------------|--------------|-------|------------|------------|----------|
| Spectrum Analyzer | Tektronix | 2784 | AAO | 03/08/2001 | 12 mo |


Test Description

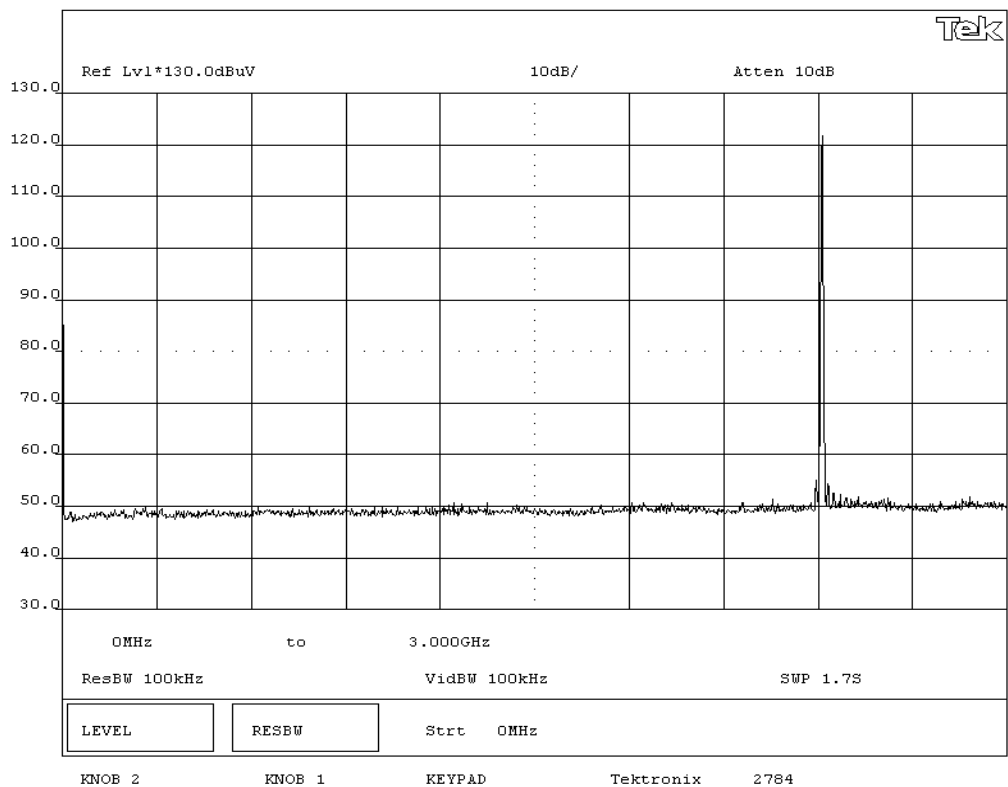
Requirement: Per 47 CFR 15.247(c), in any 100 kHz bandwidth outside the authorized band, the maximum level of radio frequency power must be at least 20dB down from the highest emission level within the authorized band. The measurement is made with the spectrum analyzer's resolution bandwidth set to 100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

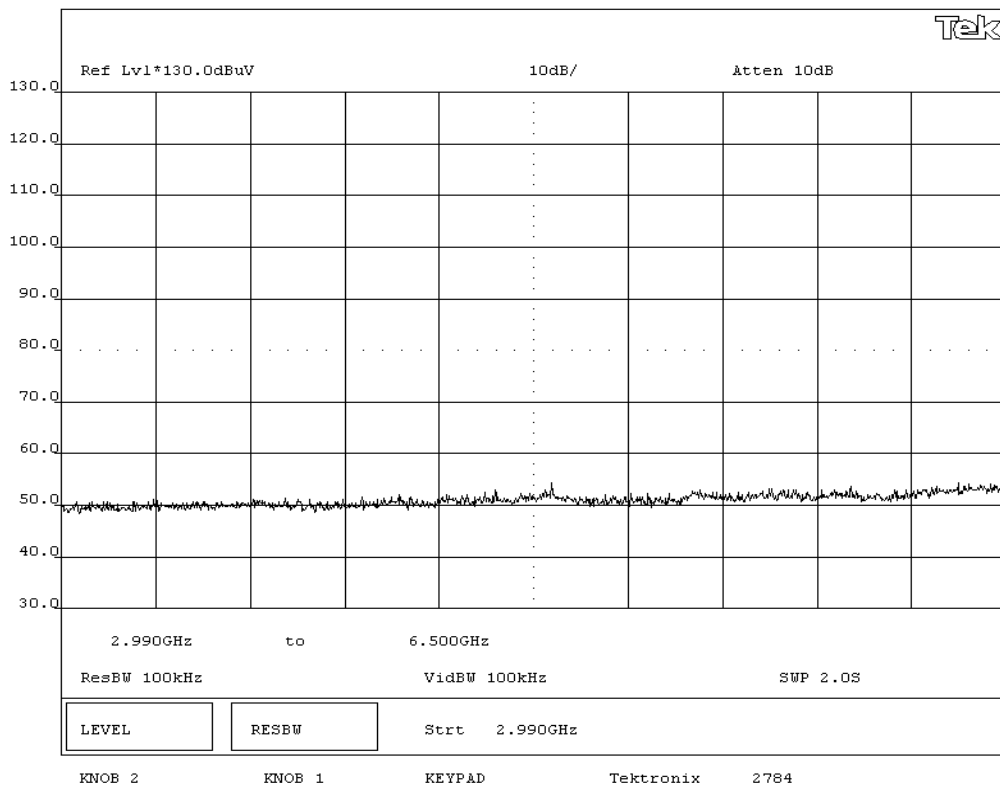
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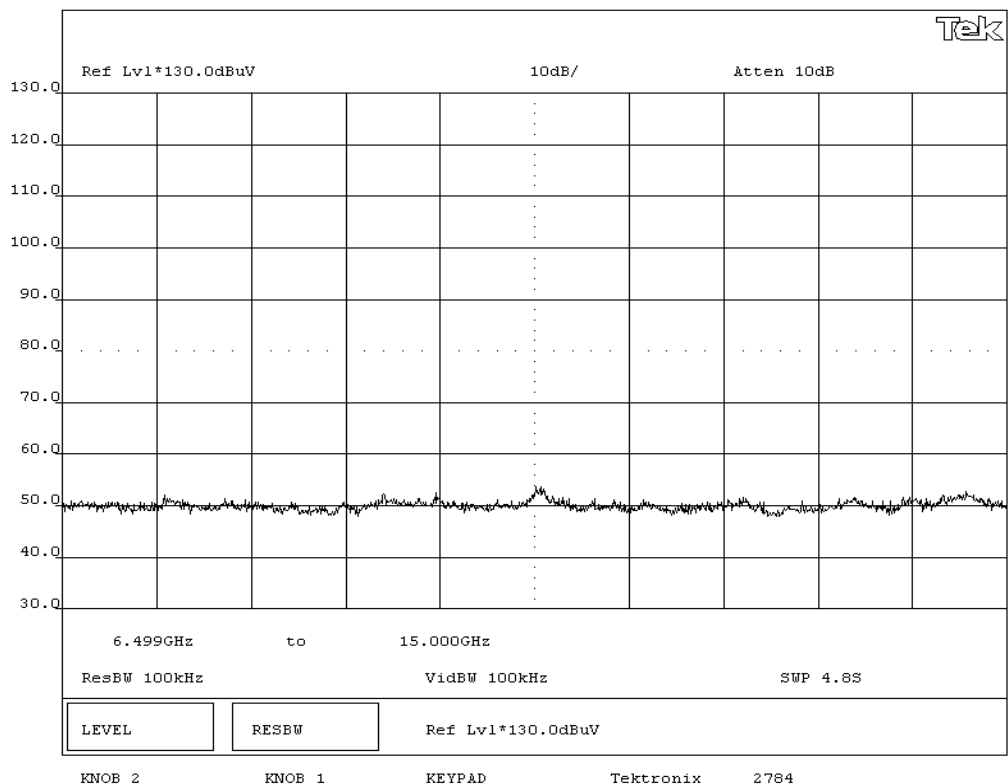
| NORTHWEST EMC | | EMISSIONS DATA SHEET | | Rev BETA 01/30/01 | |
|--|--------------------|-------------------------------|------------|----------------------|--|
| EUT: 6330 | | Work Order: SPAC0264 | | | |
| Serial Number: A30549980020A6386465 | | Date: 07/11/01 | | | |
| Customer: SpaceLabs Medical | | Temperature: 23 degrees C | | | |
| Attendees: N/A | | Tested by: Rod Poloquin | | 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 from the fundamental | | | | | |
| RESULTS | | | | | |
| Pass | | | | | |
| SIGNATURE | | | | | |
|  Tested By: _____ | | | | | |
| DESCRIPTION OF TEST | | | | | |
| Antenna Conducted Spurious Emissions - Low Channel 0MHz-3GHz | | | | | |




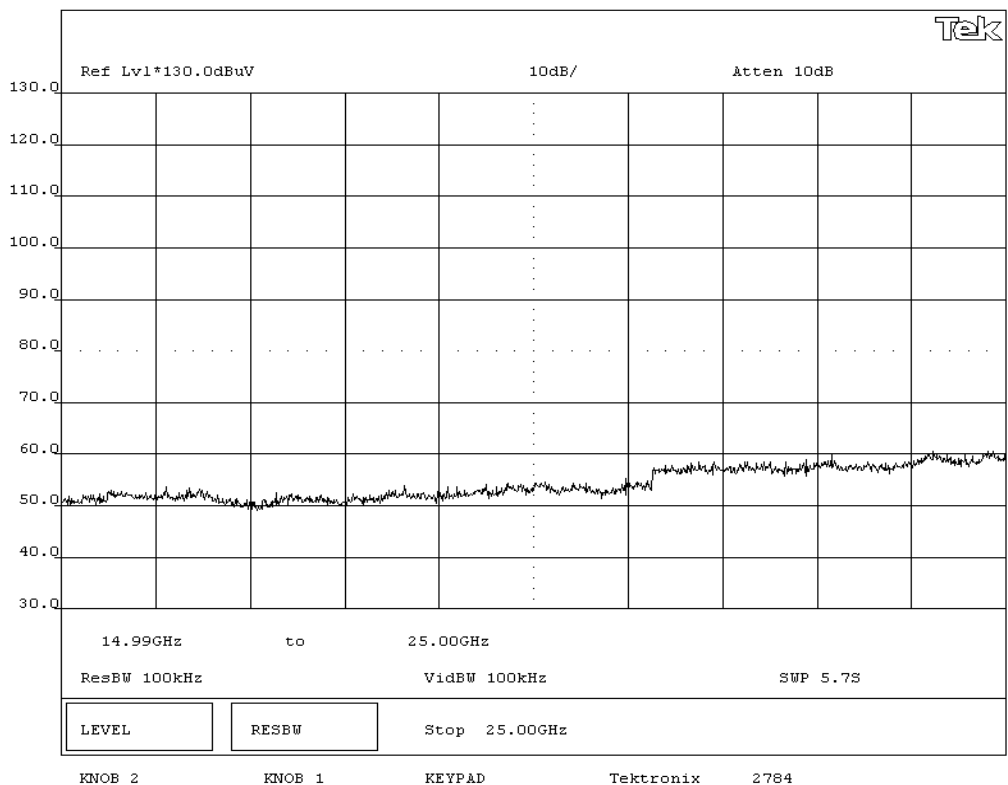
| NORTHWEST EMC | | EMISSIONS DATA SHEET | | Rev BETA 01/30/01 | |
|--|--|---------------------------|--|-------------------------------|--|
| EUT: 6330 | | Work Order: SPAC0264 | | | |
| Serial Number: A30549980020A6386465 | | Date: 07/11/01 | | | |
| Customer: SpaceLabs Medical | | Temperature: 23 degrees C | | | |
| Attendees: N/A | | Tested by: Rod Poloquin | | 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 from the fundamental | | | | | |
| RESULTS | | | | | |
| Pass | | | | | |
| SIGNATURE | | | | | |
|  Tested By: _____ | | | | | |
| DESCRIPTION OF TEST | | | | | |
| Antenna Conducted Spurious Emissions - Low Channel 3GHz-6.5GHz | | | | | |




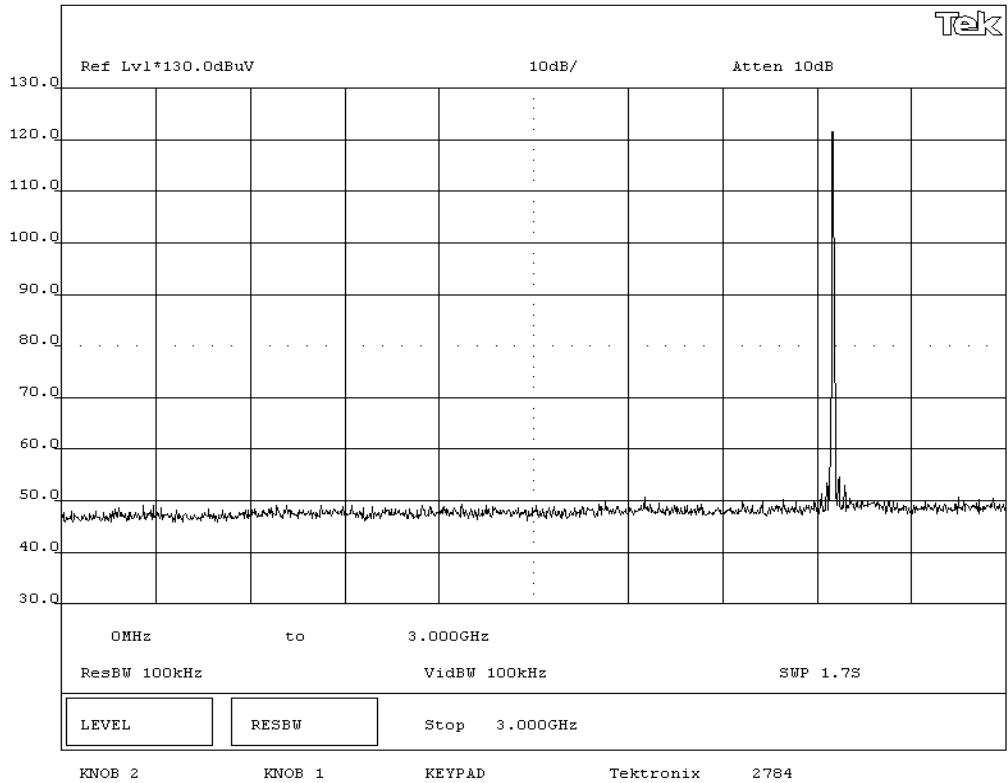
| NORTHWEST EMC | | EMISSIONS DATA SHEET | | Rev BETA 01/30/01 | |
|--|--|---------------------------|--|-------------------------------|--|
| EUT: 6330 | | Work Order: SPAC0264 | | | |
| Serial Number: A30549980020A6386465 | | Date: 07/11/01 | | | |
| Customer: SpaceLabs Medical | | Temperature: 23 degrees C | | | |
| Attendees: N/A | | Tested by: Rod Poloquin | | 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 from the fundamental | | | | | |
| RESULTS | | | | | |
| Pass | | | | | |
| SIGNATURE | | | | | |
|  Tested By: _____ | | | | | |
| DESCRIPTION OF TEST | | | | | |
| Antenna Conducted Spurious Emissions - Low Channel 6.5GHz-15GHz | | | | | |




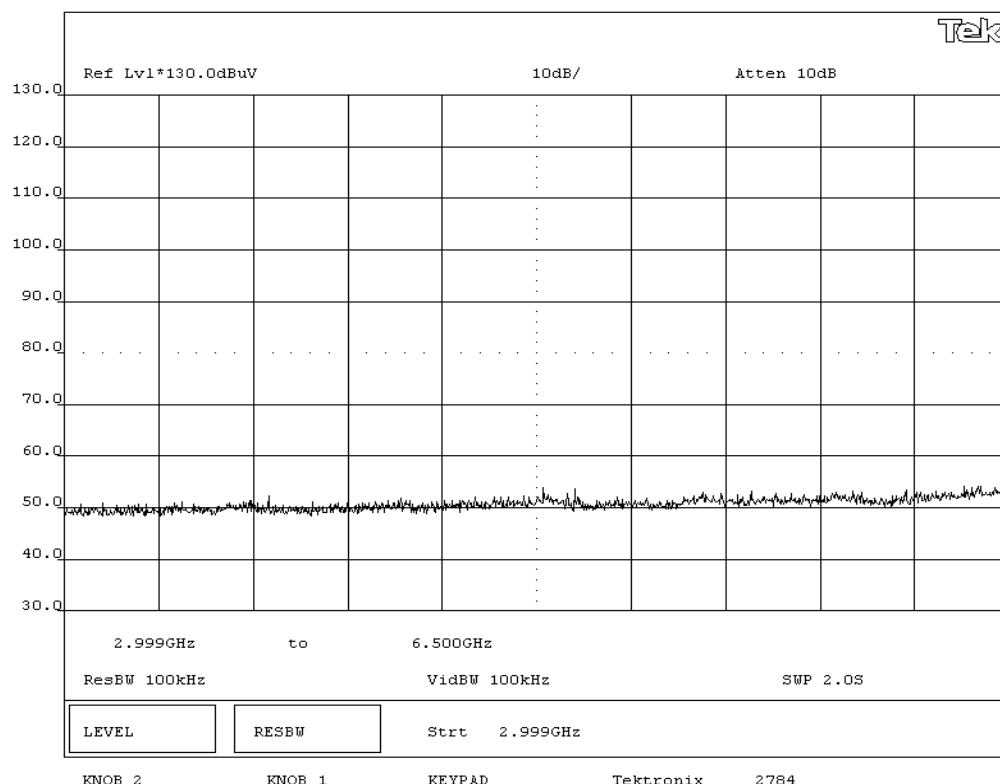
| NORTHWEST EMC | | EMISSIONS DATA SHEET | | Rev BETA 01/30/01 | |
|--|----------------------|----------------------|--------------|----------------------|-----------------------|
| EUT: | 6330 | Work Order: | SPAC0264 | | |
| Serial Number: | A30549980020A6386465 | Date: | 07/11/01 | | |
| Customer: | SpaceLabs Medical | Temperature: | 23 degrees C | | |
| Attendees: | N/A | Tested by: | Rod Poloquin | 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 from the fundamental | | | | | |
| RESULTS | | | | | |
| Pass | | | | | |
| SIGNATURE | | | | | |
|  | | | | | |
| Tested By: _____ | | | | | |
| DESCRIPTION OF TEST | | | | | |
| Antenna Conducted Spurious Emissions - Low Channel 15GHz - 25GHz | | | | | |

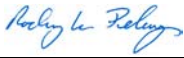


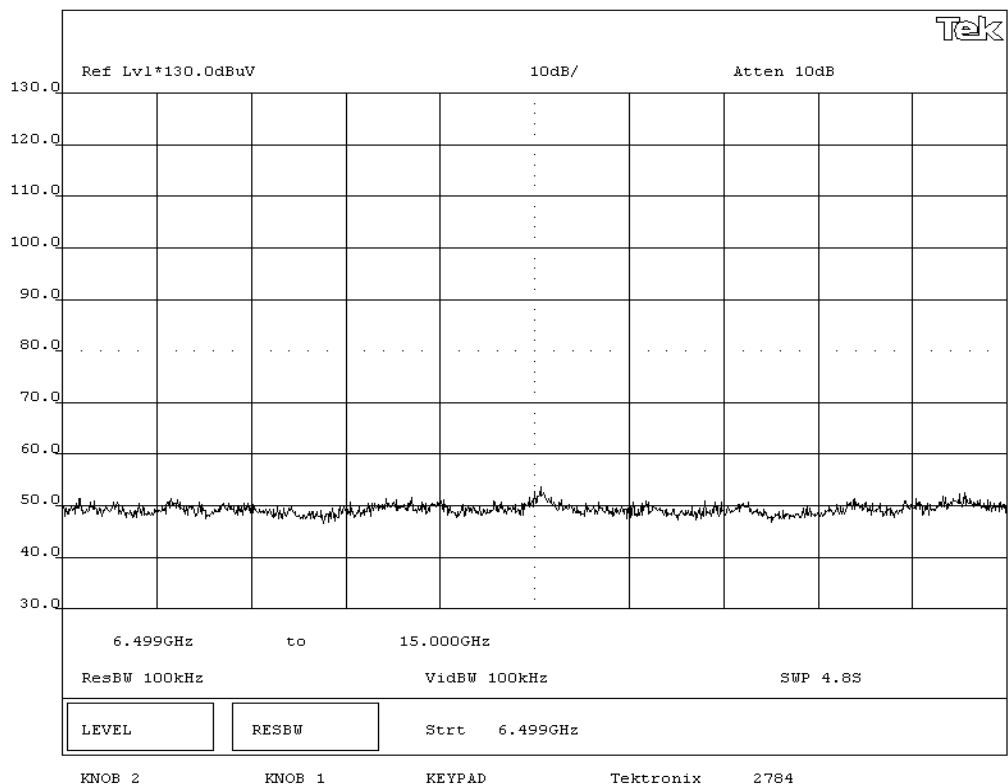
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|--|--|-----------------------------|--|-------------------------------|--|
| NORTHWEST EMC | | EMISSIONS DATA SHEET | | Rev BETA 01/30/01 | |
| EUT: 6330 | | Work Order: SPAC0264 | | | |
| Serial Number: A30549980020A6386465 | | Date: 07/11/01 | | | |
| Customer: SpaceLabs Medical | | Temperature: 23 degrees C | | | |
| Attendees: N/A | | Tested by: Rod Poloquin | | 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 from the fundamental | | | | | |
| RESULTS | | | | | |
| Pass | | | | | |
| SIGNATURE | | | | | |
| <div>Tested By: </div> | | | | | |
| DESCRIPTION OF TEST | | | | | |
| Antenna Conducted Spurious Emissions - Mid Channel 0MHz-3GHz | | | | | |




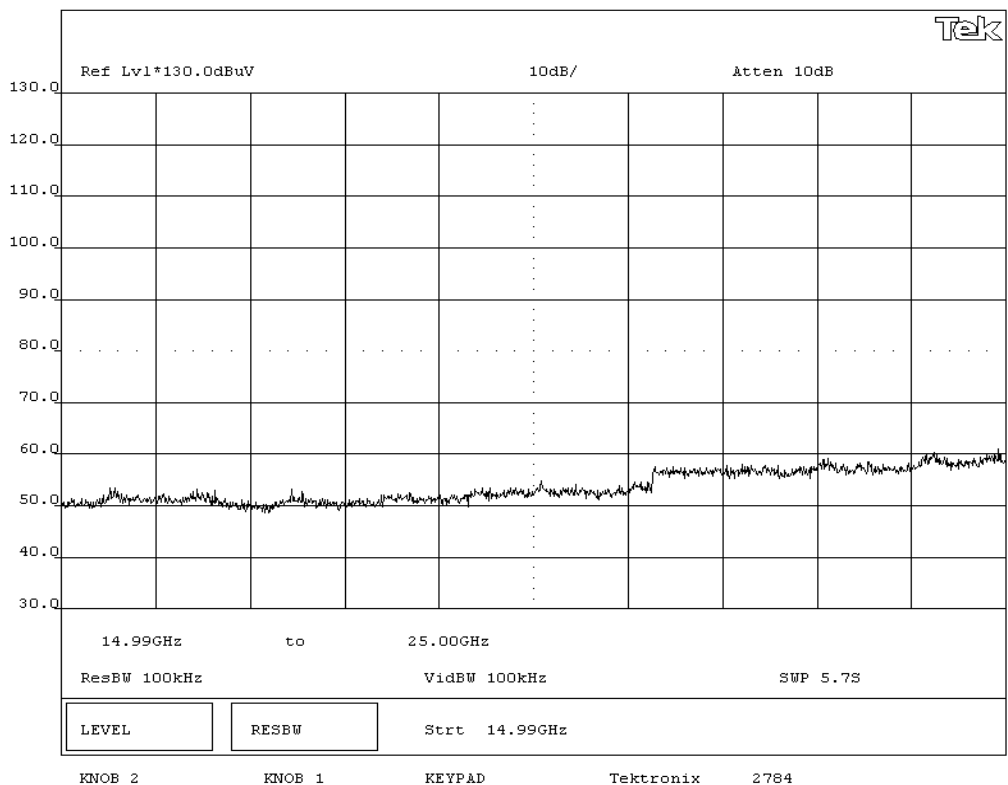
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|--|--|-----------------------------|--|-------------------------------|--|
| NORTHWEST EMC | | EMISSIONS DATA SHEET | | Rev BETA 01/30/01 | |
| EUT: 6330 | | Work Order: SPAC0264 | | | |
| Serial Number: A30549980020A6386465 | | Date: 07/11/01 | | | |
| Customer: SpaceLabs Medical | | Temperature: 23 degrees C | | | |
| Attendees: N/A | | Tested by: Rod Poloquin | | 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 from the fundamental | | | | | |
| RESULTS | | | | | |
| Pass | | | | | |
| SIGNATURE | | | | | |
|  Tested By: _____ | | | | | |
| DESCRIPTION OF TEST | | | | | |
| Antenna Conducted Spurious Emissions - Mid Channel 3GHz-6.5GHz | | | | | |




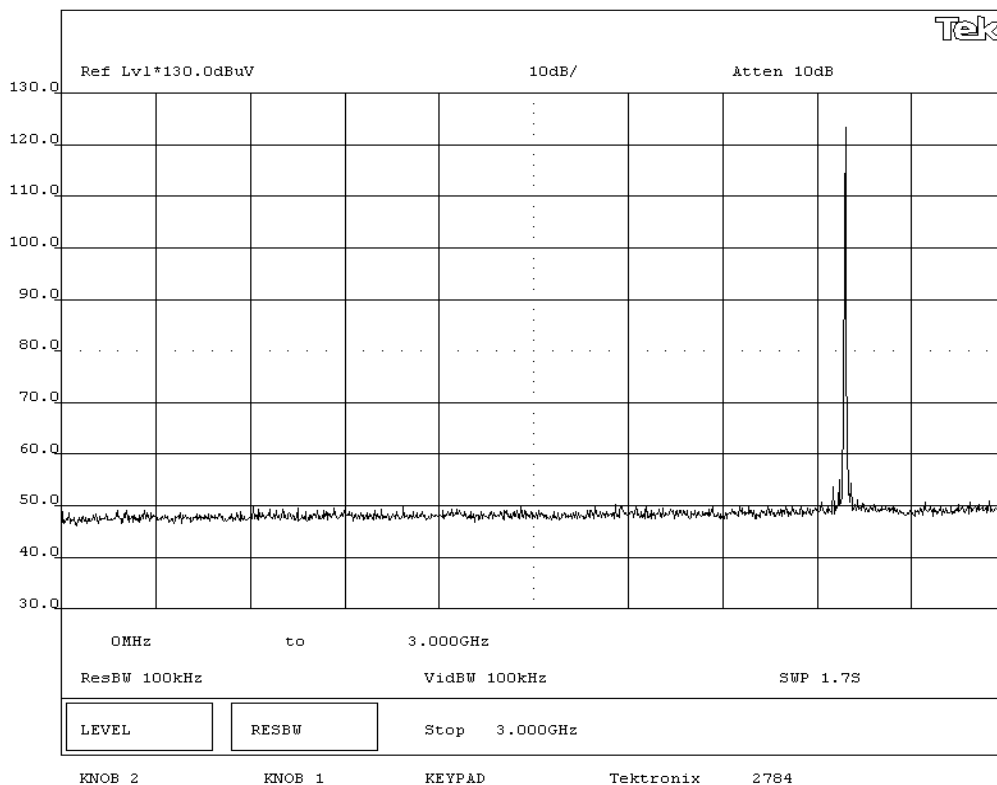
| NORTHWEST EMC | | | | EMISSIONS DATA SHEET | | Rev BETA 01/30/01 | |
|--|--|--------------------|--|-------------------------------|--|----------------------|--|
| EUT: 6330 | | | | Work Order: SPAC0264 | | | |
| Serial Number: A30549980020A6386465 | | | | Date: 07/11/01 | | | |
| Customer: SpaceLabs Medical | | | | Temperature: 23 degrees C | | | |
| Attendees: N/A | | | | Tested by: Rod Poloquin | | 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 from the fundamental | | | | | | | |
| RESULTS | | | | | | | |
| Pass | | | | | | | |
| SIGNATURE | | | | | | | |
|  Tested By: _____ | | | | | | | |
| DESCRIPTION OF TEST | | | | | | | |
| Antenna Conducted Spurious Emissions - Mid Channel 6.5GHz-15GHz | | | | | | | |




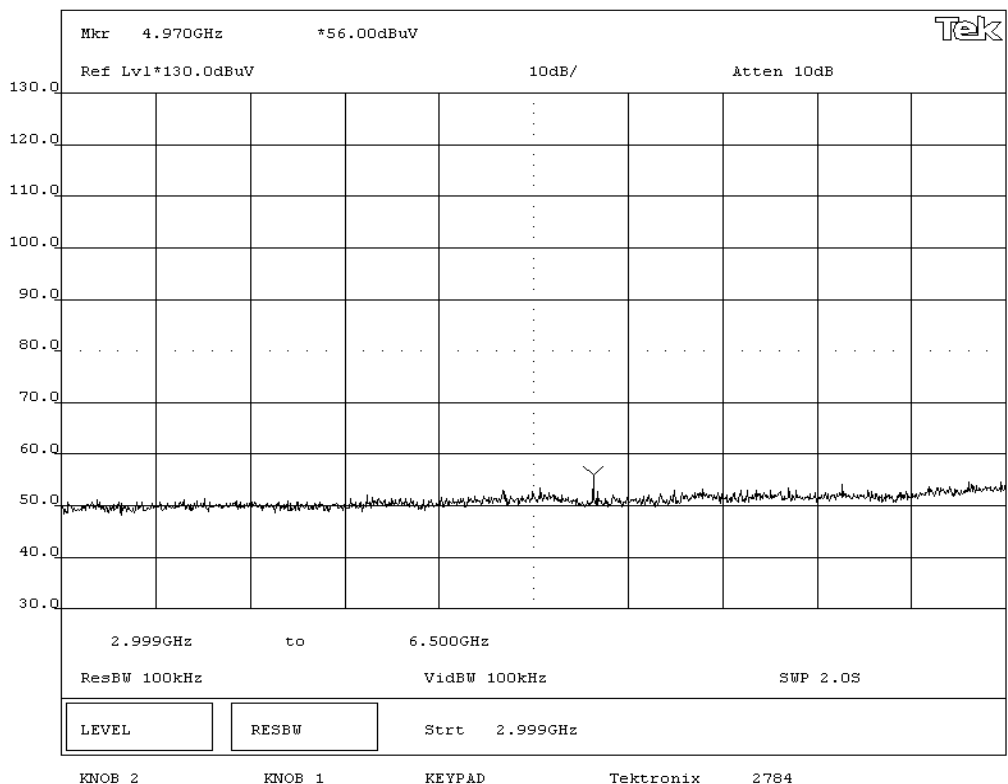
| NORTHWEST EMC | | | | EMISSIONS DATA SHEET | | Rev BETA 01/30/01 | |
|--|--|--------------------|--|-------------------------------|--|----------------------|--|
| EUT: 6330 | | | | Work Order: SPAC0264 | | | |
| Serial Number: A30549980020A6386465 | | | | Date: 07/11/01 | | | |
| Customer: SpaceLabs Medical | | | | Temperature: 23 degrees C | | | |
| Attendees: N/A | | | | Tested by: Rod Poloquin | | 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 from the fundamental | | | | | | | |
| RESULTS | | | | | | | |
| Pass | | | | | | | |
| SIGNATURE | | | | | | | |
|  Tested By: _____ | | | | | | | |
| DESCRIPTION OF TEST | | | | | | | |
| Antenna Conducted Spurious Emissions - Mid Channel 15GHz-25GHz | | | | | | | |




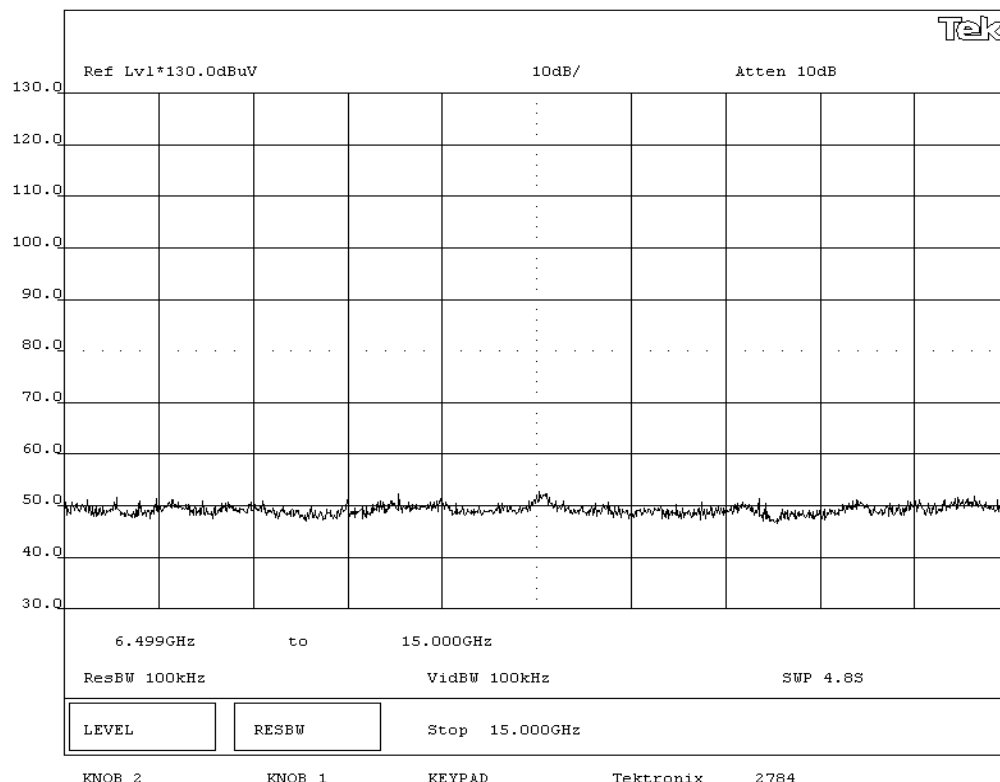
| NORTHWEST EMC | | EMISSIONS DATA SHEET | | Rev BETA 01/30/01 | |
|--|--------------------|-------------------------------|------------|----------------------|--|
| EUT: 6330 | | Work Order: SPAC0264 | | | |
| Serial Number: A30549980020A6386465 | | Date: 07/11/01 | | | |
| Customer: SpaceLabs Medical | | Temperature: 23 degrees C | | | |
| Attendees: N/A | | Tested by: Rod Poloquin | | 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 from the fundamental | | | | | |
| RESULTS | | | | | |
| Pass | | | | | |
| SIGNATURE | | | | | |
|  Tested By: _____ | | | | | |
| DESCRIPTION OF TEST | | | | | |
| Antenna Conducted Spurious Emissions - High Channel 0MHz-3GHz | | | | | |




| | | | | | |
|--|--|---------------------------|--|-------------------------------|--|
| NORTHWEST | | EMISSIONS DATA SHEET | | Rev BETA 01/30/01 | |
| EMC | | | | | |
| 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 Poloquin | | 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 from the fundamental | | | | | |
| RESULTS | | | | | |
| Pass | | | | | |
| SIGNATURE | | | | | |
| <div>Tested By: </div> | | | | | |
| DESCRIPTION OF TEST | | | | | |
| Antenna Conducted Spurious Emissions - High Channel 3GHz-6.5GHz | | | | | |



| NORTHWEST 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 Poloquin | | 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 from the fundamental | | | | | | | |
| RESULTS | | | | | | | |
| Pass | | | | | | | |
| SIGNATURE | | | | | | | |
|  Tested By: _____ | | | | | | | |
| 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: | SPAC0264 | | |
| Serial Number: | A30549980020A6386465 | Date: | 07/11/01 | | |
| Customer: | SpaceLabs Medical | Temperature: | 23 degrees C | | |
| Attendees: | N/A | Tested by: | Rod Poloquin | 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 from the fundamental | | | | | |
| RESULTS | | | | | |
| Pass | | | | | |
| SIGNATURE | | | | | |
|  Tested By: _____ | | | | | |
| DESCRIPTION OF TEST | | | | | |
| Antenna Conducted Spurious Emissions - High Channel 15GHz-25GHz | | | | | |

