EMT
ELECTRO MAGNETIC TEST, INC.
1547 Plymouth Street, Mountain View, CA 94043 Tel: (650) 965-4000 Fax: (650) 965-3000

FCC PART 15.407 SUBPART E

for

the

POINT TO MULTIPOINT DEVICE

MODEL: B5C

Prepared for

Mimosa Networks
469 El Camino Real, Suite 100
Santa Clara, CA, 95050

Prepared by: 

GEORGE HSU

Approved by: 

KEVIN BOTHMANN

ELECTRO MAGNETIC TEST, INC.
1547 PLYMOUTH STREET
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DATE: April 23, 2016

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GENERAL REPORT SUMMARY

This electromagnetic emission test report is generated by Electro Magnetic Test, Inc., which is an independent testing and consulting firm. The test report is based on testing performed Electro Magnetic Test, Inc. personnel according to the measurement procedure described in the test specification given below and in the "Test Procedures" section of this report.

The measurement data and conclusions appearing herein relate only to the sample tested and this report may not be reproduced in any form unless done so in full.

This report must not be used to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the U.S. Federal Government.

The measurement data and conclusions contained in this test report are deemed satisfactory evidence of compliance with Industry Canada Interference-Causing Equipment Standard ICES-003, Issue 5, August 2012.

Electro Magnetic Test, Inc. is recognized by the following agencies for performing EMI/EMC testing:

COUNTRY	AGENCY	IDENTIFYING #
USA	Federal Communications Commission (FCC) (EMT's test site is recognized by the FCC)	Registration Number: 90576
USA, Canada, Taiwan, Australia/New Zealand, European Community	National Voluntary Lab Accreditation Program (NVLAP) (EMT is accredited by NVLAP. A copy of the NVLAP Scope Of Accreditation is available upon request.)	Lab Code: 200147-0
Canada	Industry Canada	File No.: IC 2804
Japan	Voluntary Control Council For Interference (VCCI)	A-0118
	Open Field Test Site "A"	-
	Mains Conducted Emissions Test Site "A"	-
	Telecom Conducted Emissions Test Site "A"	-
	3 Meter Semi-Anechoic Chamber Site "E"	-
	3 Meter Semi-Anechoic Chamber Site "E" (1GHz – 6GHz)	-
	Mains Conducted Emissions Test Site "E"	-
	Telecom Conducted Emissions Test Site "E"	-
Korea	Ministry of Information and Communication's Radio Research Laboratory (RRL) under the Asia Pacific Economic Cooperation (APEC) Mutual Recognition Arrangement (A copy of the Scope Of Accreditation is available upon request)	US0036
Taiwan	Bureau Of Standards, Metrology and Inspection (BSMI)	Reference Number: SL2-IN-E-1024
Australia / New Zealand	Australian Communications Authority (AUSTEL)	*

*These agencies do not issue an identifying number to test labs.

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GENERAL REPORT SUMMARY (CONTINUED)

Device Tested: Point to Multipoint Device
Model: B5C
S/N: N/A

Product Description: The EUT is a wireless router that operates in the 5 GHz bands.

Modifications: The EUT was not modified during the testing.

Manufacturer: Mimosa Networks
469 El Camino Real, Suite 100
Santa Clara, CA, 95050

Test Date(s): April 4, June 8, 2016, August 17, and 18

Test Specifications: EMI requirements
Limits: FCC Title 47, Part 15 Subpart C
Test Procedure: ANSI C63.10 2013

Test Deviations: The test procedure was not deviated from during the testing.

SUMMARY OF TEST RESULTS

TEST	DESCRIPTION	FCC STANDARD	REMARKS	RESULTS
7.1	Radiated Emissions (General Requirements and Emissions in Restricted Freqeuency Bands)	15.209	N/A	**N/A****
7.2	Conducted Emissions	15.207(a)	N/A	**N/A***
7.3	Occupied Bandwidth	15.407(e)	N/A	**N/A***
7.4	Maximum Average Output Power	15.407 (a)(1)(i), 15.407 (a)(3)	Conducted	**PASS*****
7.5	Maximum Average Power Spectral Density	15.407(a)(1)(i), 15.407(a)(3)	Conducted	**PASS*****
7.6	Emissions in Non-Restricted Frequency Bands	15.407(b)(1, 4)	N/A	**N/A****
7.7	Bandedge	15.407(b)(1, 4)	N/A	**N/A****
7.8	Antenna Requirement	15.203	N/A	**PASS**

*No changes were made in this permissive change, that would effect this test.

**Changing from point to point into point to multipoint has resulted in lower power settings, therefore the marked tests are not necessary

***Only UNII-1 and UNII-3 Bands were tested, because point to point and point to multipoint limits for antenna gain are the same for the other UNII bands, Also since the 0 dBi antenna is under the limit in the point to multipoint case, the output power remains the same, therefore no retest is required. Since UNII-2 bands were not tested, no DFS testing was repeated. Beamforming mode is not used therefore beamforming mode was not retested.

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TECHNICAL DESCRIPTION OF THE EUT

Manufacturer:	Mimosa Networks
EUT Name:	Point to Multipoint Device
Model No:	B5C
Operating Frequency:	5150 MHz to 5825 MHz, (UNII-1, UNII-2A, UNII-2C, UNII-3)
Modulation Technology:	DSSS
Antenna Gain:	0 dBi, 25 dBi

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1. PURPOSE

This document is a qualification test report based on the Electromagnetic Interference (EMI) tests performed on the POINT TO MULTIPOINT DEVICE Model: B5C. The EMI measurements were performed according to the measurement procedure described in ANSI C63.4: 2009. The tests were performed in order to determine whether the electromagnetic emissions from the equipment under test, referred to as EUT hereafter, are within the specification limits defined in FCC Title 47, Part 15, Subpart C.

2. ADMINISTRATIVE DATA

2.1 Location of Testing

The EMI tests described herein were performed at the test facility of Electro Magnetic Test, Inc., 1547 Plymouth Street, Mountain View, California, 94043.

2.2 Traceability Statement

The calibration certificates of all test equipment used during the test are on file at the location of the test. The measurement results in this report and the calibration of the test equipment are traceable to the National Institute of Standards and Technology (NIST).

2.3 Cognizant Personnel

Mimosa Networks

Omer Ileri	Product Manager

Electro Magnetic Test, Inc.

David Vivanco	Test Technician
George Hsu	Test Technician
Kevin Bothmann	Lab Manager

2.4 Date Test Sample was Received

The test sample was received on March 31, 2016.

2.5 Disposition of the Test Sample

The test sample has not yet been returned Mimosa Networks

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2.6 Abbreviations and Acronyms

The following abbreviations and acronyms may be used in this document.

RF	Radio Frequency
EMI	Electromagnetic Interference
EUT	Equipment Under Test
P/N	Part Number
S/N	Serial Number
HP	Hewlett Packard
ITE	Information Technology Equipment
CML	Corrected Meter Limit
LISN	Line Impedance Stabilization Network
CISPR	International Special Committee On Radio Interference
FCC	Federal Communications Commission

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3. APPLICABLE DOCUMENTS

The following documents are referenced or used in the preparation of this EMI Test Report.

SPEC	TITLE
FCC Title 47, Part 15, Subpart C	FCC Rules - Radio frequency devices (including digital devices).
FCC Publication KDB789033 D02 General U-NII Test Procedures New Rules v01r02	Guidelines for Compliance Testing of Unlicensed National Information Infrastructure (U-NII) Devices Part 15, Subpart E, April 8, 2016
FCC Publication KDB662911 D01 Multiple Transmitter Output v02r01	Emissions Testing of Transmitters with Multiple Outputs in the Same Band, October 31, 2013
ANSI C63.10 2013	American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices

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4. DESCRIPTION OF TEST CONFIGURATION

4.1 Description of Test Configuration – EMI

The EUT was connected to the POE power adapter through it Ethernet Port. The EUT was connect to the remote laptop via the POE power adapter. During testing the remote laptop was pinging the EUT and the EUT was continuously transmitting data packets.

It was determined that the emissions were at their highest level when the EUT was operating in the above configuration. The cables were moved to maximize the emissions. The final conducted as well as radiated data was taken in this mode of operation. All initial investigations were performed with the EMI receiver in manual mode scanning the frequency range continuously. The cables were bundled and routed as shown in the photographs in Appendix B.

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4.1.1 Cable Construction and Termination

Cables #1

This is a 50 foot foil shielded CAT5 Ethernet cable. The cable has metallic RJ45 connectors on both ends of the cables. The shields of the cables were grounded to the chassis via the connectors.

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5. LISTS OF EUT, ACCESSORIES AND TEST EQUIPMENT

5.1 EUT and Accessory List

EQUIPMENT TYPE	MANUFACTURER	MODEL	SERIAL NUMBER	FCC ID
Wireless Access Point (EUT)	Mimosa Networks	B5c	N/A	2ABZJ-100-00014
POE Adapter	Mimosa Networks	402-00002	N/A	DoC
THE FOLLOWING WERE LOCATED OUTSIDE THE TEST SITE:				
Laptop Computer	Dell	D630	34793879869	DoC
Laptop Power Supply	Dell	PA-1900-02D	CN-09T215-71615-42I-6739	DoC

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5.2 EMI Test Equipment

EQUIPMENT TYPE	MANU-FACTURER	MODEL NUMBER	SERIAL NUMBER	CAL. DATE	CAL. CYCLE
MXA Signal Analyzer	Agilent	N9020A	MY53420778	September 4, 2015	1 Year

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6. TEST SITE DESCRIPTION

6.1 Test Facility Description

Please refer to the table below and section 7 of this report for the details of which sites were used for testing. All sites are located at 1547 Plymouth Street, Mountain View, California 94043.

Site Used For Test	Site Description
	Open Field Test Site "A"
X	Mains Conducted Emissions Test Site "A"
	Telecom Conducted Emissions Test Site "A"
X	3 Meter Semi-Anechoic Chamber Site "E"
	Mains Conducted Emissions Test Site "E"
	Telecom Conducted Emissions Test Site "E"

6.2 EUT Mounting, Bonding and Grounding

The EUT was mounted on a 1.0 by 1.5 meter non-conductive table 1.5 meters above the ground plane.

The EUT was grounded only through the shield in its ethernet cable.

6.3 Facility Environmental Characteristics

All tests were performed in a climate controlled building. The temperature was 22° C, humidity 45%, and barometric pressure 102.6 kPa.

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7. TEST PROCEDURES

7.1 Radiated Emissions Test – Semi-Anechoic Chamber

7.1.1 General Requirements Limit (FCC PART 15 Section 15.209(a)(1))

Frequency of Emission (MHz)	Field Strength		Measurement Distance (Meters)
	µV/m	dBµV/m	
0.009-0.49	2400/F(kHz)		300
0.49-1.705	24000/F(kHz)		30
1.705-30	30		30
30-88	100	40	3
88-216	150	43.5	3
216-960	200	46	3
Above 960	500	54	3

7.1.2 Emissions in Restricted Bands Limit (FCC PART 15 Section 15.407(a)(6,7)])

15.407(a)(6,7)

(6) Unwanted emissions below 1 GHz must comply with the general field strength limits set forth in §15.209. Further, any U-NII devices using an AC power line are required to comply also with the conducted limits set forth in §15.207.

(7) The provisions of §15.205 apply to intentional radiators operating under this section.

Limit
See General Limits Requirement In Above Chart

7.1.3 Test Procedure

The Rohde & Schwarz ESU40 EMI receiver was used as a measuring meter while under software control by the Rohde & Schwarz EMC32 software. To increase the sensitivity of the instrument, the built in preamplifier was used from 9 KHz to 1 GHz and an external preamplifier was used from 1 GHz to 40 GHz. The EMI receiver was used in the peak detect mode with the "Max Hold" feature activated. In this mode, the EMI receiver records the highest measured reading over all the sweeps. The built in quasi-peak or average detector was used only for those readings which are marked accordingly on the data sheets. The

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7.1.3 Test Procedure (Continued)

effective measurement bandwidth used for the radiated emissions test was 100 kHz from 9 kHz to to 40 GHz.

The Loop Antenna, Broadband BiConiLog and horn antennas were used as transducers during the measurement. The Loop antenna was used from 9 KHz to 30 MHz, the BiConiLog antenna was used from 30 MHz to 1000 MHz and horn antennas were used from 1GHz – 26.5 GHz. The frequency spans were wide (9 kHz to 150 kHz, 150 kHz to 30 MHz, 30 MHz to 88 MHz, 88 MHz to 216 MHz, 216 to 300 MHz, 300 MHz to 1 GHz, 1 GHz to 18 GHz 18 GHz to 26.5 GHz, and 26.5 GHz to 40 GHz) during preliminary investigations. The final data was taken with a frequency span of 1 MHz. Furthermore, the frequency span was reduced during the preliminary investigations as deemed necessary.

The 5 meter semi-anechoic chamber of Electro Magnetic Test, Inc. was used for radiated emission testing. This test site is set up according to ANSI C63.4: 2009. Please see section 6.2 of this report for mounting, bonding and grounding of the EUT. The turntable supporting the EUT is remote controlled using a motor. The turntable permits EUT rotation of 360 degrees in order to maximize emissions. Also, the antenna mast allows height variation of the antenna from 1 meter to 4 meters. Data was collected in the worst case (highest emission) configuration of the EUT. The EUT was rotated 360 degrees and the antenna height was varied from 1 to 4 meters (for E field radiated field strength).

The presence of non EUT signals was verified by turning the EUT off. In case a non EUT signal was detected, the measurement bandwidth was reduced temporarily and verification was made that an additional adjacent peak did not exist. This ensures that the other signal does not hide any emissions from the EUT. The EUT was tested at a 3 meter test distance from 9 kHz to 26.5 GHz. to obtain final test data.

Calculation Of Radiated Emission Test Data:

Amplitude - Gain + Antenna Factor + Cable Loss = Corrected Amplitude

Corrected Amplitude - Limit = Margin

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7.2 Conducted Emissions Test – Mains Ports

7.2.1 Limit (FCC PART 15 Section 15.207(a))

Frequency of Emission (MHz)	Conducted Limit (dBµV)	
	Quasi-peak	Average
0.15-0.5	66 to 56 *	56 to 46 *
0.5-5	56	46
5-30	60	50

*Note: Decreases with the logarithm of the frequency

7.2.2 Test Procedure

The HP 8566B spectrum analyzer was used as a measuring meter along with the HP 85650A quasi-peak adapter. The data was collected with the spectrum analyzer in the peak detect mode with the "Max Hold" feature activated. The quasi-peak detector was used only where indicated in the data sheets. A 10 dB attenuation pad was used for the protection of the spectrum analyzer input stage, and the spectrum analyzer offset was adjusted accordingly to read the actual data measured. The LISN output was read by the HP 8566B spectrum analyzer. The output of the second LISN was terminated by a 50 ohm termination. The effective measurement bandwidth used for the conducted emissions test was 9 kHz.

Please see section 6.2 of this report for mounting, bonding and grounding of the EUT. The EUT was powered through the LISN, which was bonded to the ground plane. The LISN power was filtered and the filter was bonded to the ground plane. The EUT was set up with the minimum distances from any conductive surfaces as specified in ANSI C63.4: 2009. The excess power cord was wrapped in a figure eight pattern to form a bundle not exceeding 0.4 meters in length.

The initial test data was taken in manual mode while scanning the frequency ranges of 0.15 MHz to 1.6 MHz, 1.6 MHz to 5 MHz and 5 MHz to 30 MHz. The conducted emissions from the EUT were maximized for operating mode as well as cable and peripheral placement. Once a predominant frequency (within 12 dB of the limit) was found, it was more closely examined with the spectrum analyzer span adjusted to 1 MHz.

The final data was collected under program control by the HP 85869PC software in several overlapping sweeps by running the spectrum analyzer at a minimum scan rate of 10 seconds per octave.

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7.3 Occupied Bandwidth

7.3.1 Limit (FCC PART 15 Section 15.407(e))

15.407(e)

Within the 5.725-5.85 GHz band, the minimum 6 dB bandwidth of U-NII devices shall be at least 500 kHz

Limit
6 dB Bandwidth ≥ 500 kHz

7.3.2 Test Procedure

Connect the antenna port of the EUT to the spectrum analyzer via an Attenuator, set the Spectrum Analyzer as below:

RBW: 1% of Emission Bandwidth
VBW: ≥ RBW
Detector: Peak
Trace Mode: Max Hold

(1) Measure the 26db bandwidth using Xdb down function, If this does not encompass the full bandwidth, then "Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower) that are attenuated by 26 dB relative to the maximum level measured in the fundamental emission"

(2) Remeasure to ensure the RBW is around 1% of the emission bandwidth

For band 5.725-5.85 GHz :

RBW: 100 KHz
VBW: ≥ 3 x RBW
Detector: Peak
Trace Mode: Max Hold

(1) Measure the 6db bandwidth using Xdb down function, If this does not encompass the full bandwidth, then "Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission"

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7.3.3 Test Result

This test is not applicable, please see page 6 under summary of test results

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7.4 Maximum Output Power

7.4.1 Limit (FCC PART 15 Section 15.407 (a)(1)(i), 15.407 (a)(3))

15.407 (a)(1)(i)

For outdoor access point operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. If transmitting antennas of directional gain freater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. The maximum e.i.r.p. at any elevation angle above 30 degreees as measured from the horizon must not exceed 125 mW (21 dBm)

Limit
Maximum Average Output Power (Digital Modulation) ≤ 1Watt or 30 dBm and Maximum e.i.r.p. above 30 degrees measured from the horizon ≤ 125 mW (21 dBm)

15.407 (a)(3)

For the band 5.725-5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. In addition, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi

Limit
Maximum Average Output Power (Digital Modulation) ≤ 1Watt or 30 dBm

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7.4 Maximum Output Power (Continued)

7.4.2 Test Procedure

Method SA-1 (Trace Averaging with the EUT transmitting at full power throughout each sweep):

Connect the antenna port of the EUT to the spectrum analyzer via an Attenuator and set the Spectrum Analyzer as below:

RBW = 1 MHz
VBW ≥ 3 MHz
Number of points in Sweep ≥ 2 Span/ RBW
Detector: RMS
Trace Mode: Average
Sweep Time: Auto
Span: Encompass entire emission bandwidth

(1) Switch analyzer to channel power mode

(2) Switch center frequency to center of transmitting frequency

(3) Adjust channel measurement bandwidth to greater than the occupied bandwidth

(4) Trace average at least 100 traces

7.4.3 Test Result

The EUT meets the requirements. Please see the datasheets in Appendix A for the measurement results.

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7.5 Maximum Average Power Spectral Density

7.5.1 Limit (FCC PART 15 Section 15.407(a)(1)(i), 15.407(a)(3)])

15.407(a)(1)(i):

For an outdoor access point operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

Limit
17 dBm/1 MHz

15.407(a)(3):

For the band 5.725-5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. In addition, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

Limit
30 dBm/500 kHz

7.5.2 Test Procedure

Connect the antenna port of the EUT to the spectrum analyzer via an Attenuator and set the Spectrum Analyzer as below:

(1) Follow SA-1 procedure for measuring output power documented in section 7.4.2

(2) Do not switch to channel power mode, instead keep in regular spectrum analyzer mode

(3) Use marker to find peak

(4) Add correction of 10log(Specified Bandwidth/Actual Used Bandwidth), if the actual used bandwidth is lower than the specified bandwidth.

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7.5.3 Test Result

The EUT meets the requirements. Please see the datasheets in Appendix A for the measurement results.

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7.6 Emissions in Non-Restricted Frequency Bands

7.6.1 Limit (FCC PART 15 Section 15.407(b)(1,4))

15.407(b)(1):

For transmitters operating in the 5.15-5.25 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of −27 dBm/MHz.

15.407(b)(4):

For transmitters operating in the 5.725-5.85 GHz band: All emissions within the frequency range from the band edge to 10 MHz above or below the band edge shall not exceed an e.i.r.p. of −17 dBm/MHz; for frequencies 10 MHz or greater above or below the band edge, emissions shall not exceed an e.i.r.p. of −27 dBm/MHz.

Limit
-27 dBm/MHz outside 5.15-5.35 GHz for 5.15-5.25 GHz transmitter
AND
-27 dBm/MHz outside 5.725-5.85 GHz for 5.725-5.85 GHz transmitter
With limit of -17 dBm/MHz, 10 MHz below or above the bandedge

7.6.2 Test Procedure

Connect the antenna port of the EUT to the spectrum analyzer via an Attenuator, set the Spectrum Analyzer as below:

RBW: 1 MHz
VBW: ≥ 3 MHz
Detector: Peak
Trace Mode: Max Hold

(1) Mark highest emissions

7.6.3 Test Result

This test is not applicable, please see page 6 under summary of test results

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7.7 Bandedge

7.7.1 Limit (FCC PART 15 Section 15.407(b)(1,4))

For transmitters operating in the 5.15-5.25 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of −27 dBm/MHz.

Spectrum Mask	
Frequency (MHz)	**Limit(dBm/MHz)**
5650 and Below	-27
5700	10
5720	15.6
5725	27
5850	27
5855	15.6
5875	10
5925 and Above	-27

Limit
-27 dBm/MHz outside 5.15-5.35 GHz for 5.15-5.25 GHz transmitter
AND
Spectrum Mask for 5.725-5.85 GHz

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7.7.2 Test Procedure

Connect the antenna port of the EUT to the spectrum analyzer via an Attenuator, set the Spectrum Analyzer as below:

RBW: 1 MHz
VBW: ≥ 3 MHz
Detector: Peak
Trace Mode: Max Hold

(1) Mark highest emissions

7.7.3 Test Result

This test is not applicable, please see page 6 under summary of test results.

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7.8 Antenna Requirement

7.8.1 Requirement (FCC PART 15 SECTION 15.203)

An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this Section.

7.8.2 Test Result

This test is not applicable, please see page 6 under summary of test results.

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8. CONCLUSIONS / COMPLIANCE STATEMENT

Based upon the results contained in this report, Electro Magnetic Test, Inc. has determined that the POINT TO MULTIPOINT DEVICE, Model: B5C meets all of the specification limits defined in FCC Title 47, Part 15, Subpart C.

EMT ELECTRO MAGNETIC TEST, INC.
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APPENDIX A

RADIATED AND CONDUCTED DATA SHEETS

EMT ELECTRO MAGNETIC TEST, INC.
1547 Plymouth Street, Mountain View, CA 94043 Tel: (650) 965-4000 Fax: (650) 965-3000

Maximum Output Power Sample Calculation

Measure and Sum Technique is used as defined in Section D in KDB 662911

Chain 0 Output Power (dBm) = 4.27 dBm
Chain 0 Output Power (mW) = 10^(4.27/10) = 2.673 mW

Chain 1 Output Power = 4.26 dBm
Chain 1 Output Power (mW) = 10^(4.26/10) = 2.667 mW

Total Power (mW) = 2.673 + 2.667 = 5.340 mW

Total Power (dBm) =10*Log(5.340) = 7.275 dBm

EMT ELECTRO MAGNETIC TEST, INC.
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Maximum Output Power Test Data (Conducted)

Company:	Mimosa Networks	**Test Date:**	4/4/16
EUT Name:	Point to Multipoint Device	**Test Engineer:**	George Hsu
Model:	B5C	**Test Result:**	PASS
Operating Mode:	TX Mode	**Test Method Used:**	KDB 789033 SA-1

Mode	Test CH	Frequency (MHz)	Chain 0 Output Power (dBm)	Chain 1 Output Power (dBm)	Total Output Power (dBm)	Limit (dBm)***	Conclusion
20 MHz	33	5165	4.27	4.26	7.28	≤ 11	Pass
	40	5200	6.86	7.17	10.03	≤ 11	Pass
	48	5240	7.20	7.28	10.25	≤ 11	Pass
40 MHz	35	5175	7.31	7.36	10.35	≤ 11	Pass
	40	5200	7.01	7.28	10.16	≤ 11	Pass
	46	5230	7.22	7.35	10.30	≤ 11	Pass
80 MHz	39	5195	7.25	7.15	10.21	≤ 11	Pass
	40	5200	7.33	7.20	10.28	≤ 11	Pass
	42	5210	7.17	7.23	10.21	≤ 11	Pass
20 MHz	149	5745	8.35	6.88	10.69	≤ 11	Pass
	157	5785	7.41	7.54	10.49	≤ 11	Pass
	165	5825	7.09	7.22	10.17	≤ 11	Pass
40 MHz	151	5755	7.63	7.42	10.54	≤ 11	Pass
	157	5785	7.31	7.42	10.38	≤ 11	Pass
	163	5815	7.25	7.63	10.45	≤ 11	Pass
80 MHz	155	5775	7.23	7.75	10.51	≤ 11	Pass
	157	5785	7.19	7.56	10.39	≤ 11	Pass
	159	5795	7.09	7.36	10.24	≤ 11	Pass

Test Equipment: Please refer to section 5.2

***Limit Derivation:
(Original Limit) – [(EUT Antenna Gain)- (Antenna Gain Limit)] = Limit
(30dBm) – [(25dBi) – (6dBi)] =Limit
11 dBm = Limit

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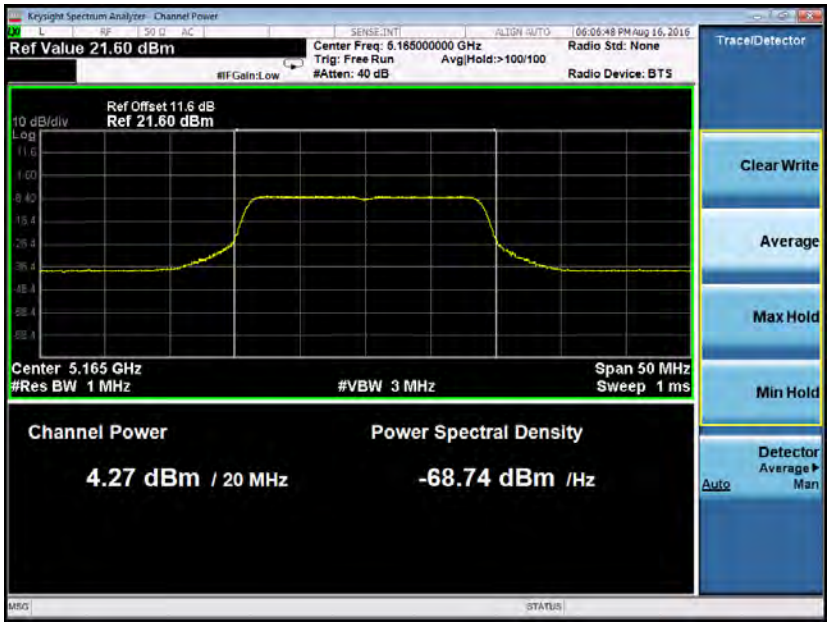
Maximum Output Power Test Data (Conducted)



Chain 0, 20 MHz, 5165 MHz

Chain 1, 20 MHz, 5165 MHz

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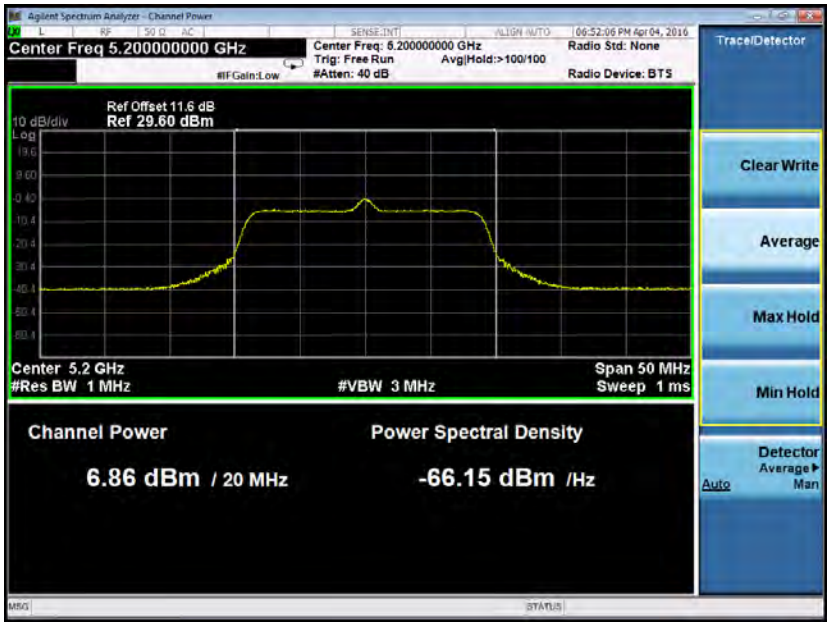
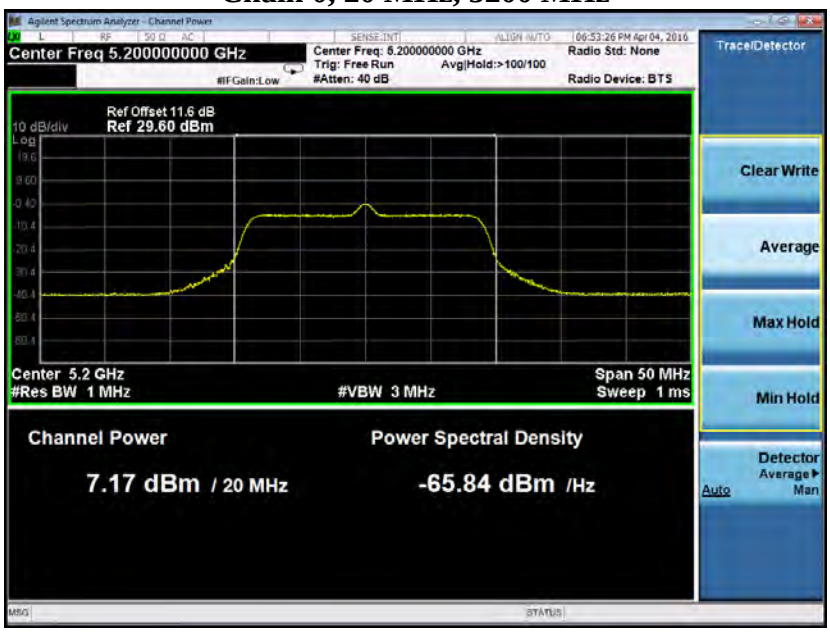
Maximum Output Power Test Data (Conducted)



Chain 0, 20 MHz, 5200 MHz



Chain 1, 20 MHz, 5200 MHz

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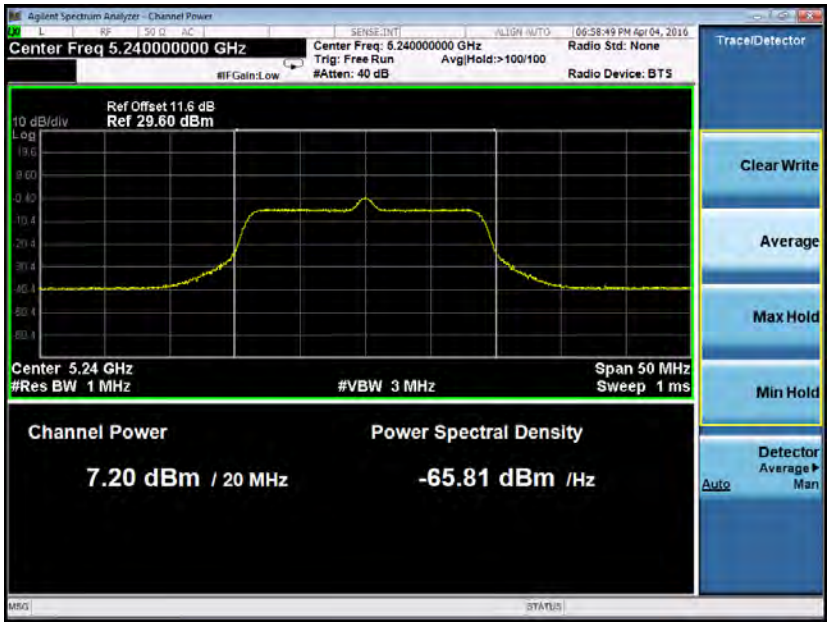
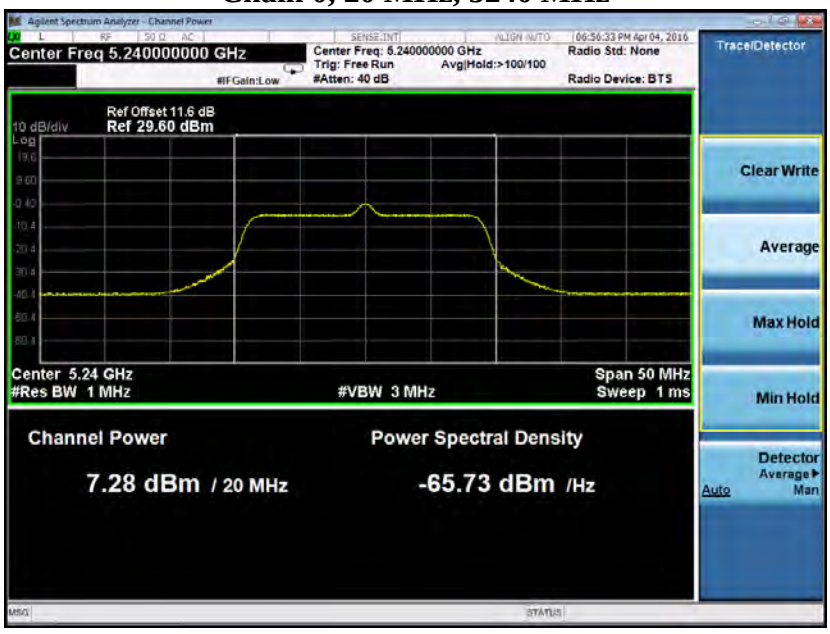
1547 Plymouth Street, Mountain View, CA 94043 Tel: (650) 965-4000 Fax: (650) 965-3000

Maximum Output Power Test Data (Conducted)



Chain 0, 20 MHz, 5240 MHz



Chain 1, 20 MHz, 5240 MHz

EMT ELECTRO MAGNETIC TEST, INC.
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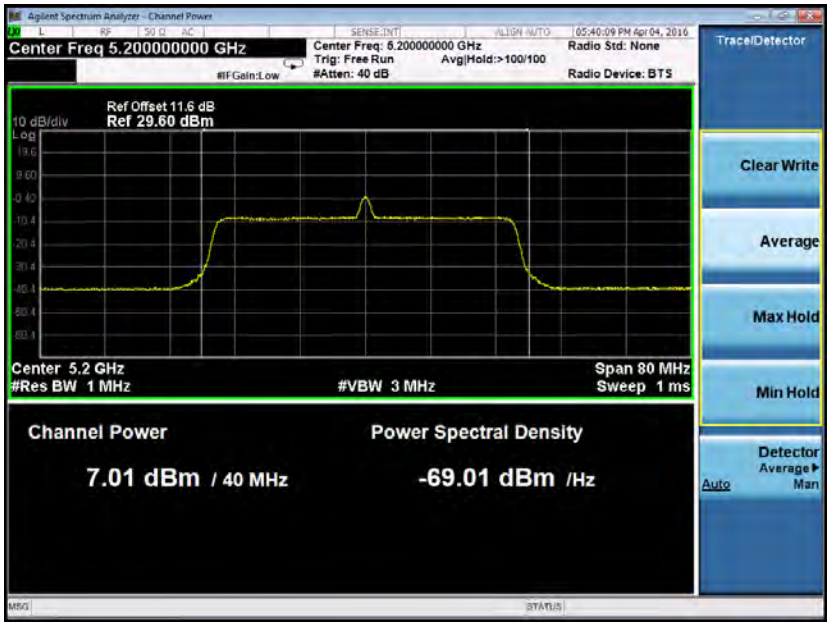
Maximum Output Power Test Data (Conducted)

Chain 0, 40 MHz, 5175 MHz

Chain 1, 40 MHz, 5175 MHz

EMT ELECTRO MAGNETIC TEST, INC.
1547 Plymouth Street, Mountain View, CA 94043 Tel: (650) 965-4000 Fax: (650) 965-3000

Maximum Output Power Test Data (Conducted)

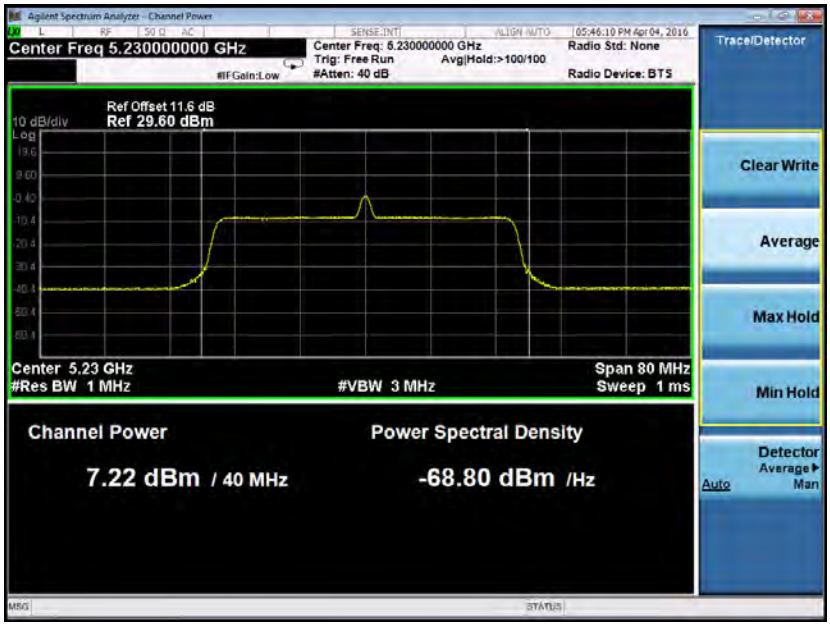


Chain 0, 40 MHz, 5200 MHz

Chain 1, 40 MHz, 5200 MHz

EMT ELECTRO MAGNETIC TEST, INC.
1547 Plymouth Street, Mountain View, CA 94043 Tel: (650) 965-4000 Fax: (650) 965-3000

Maximum Output Power Test Data (Conducted)

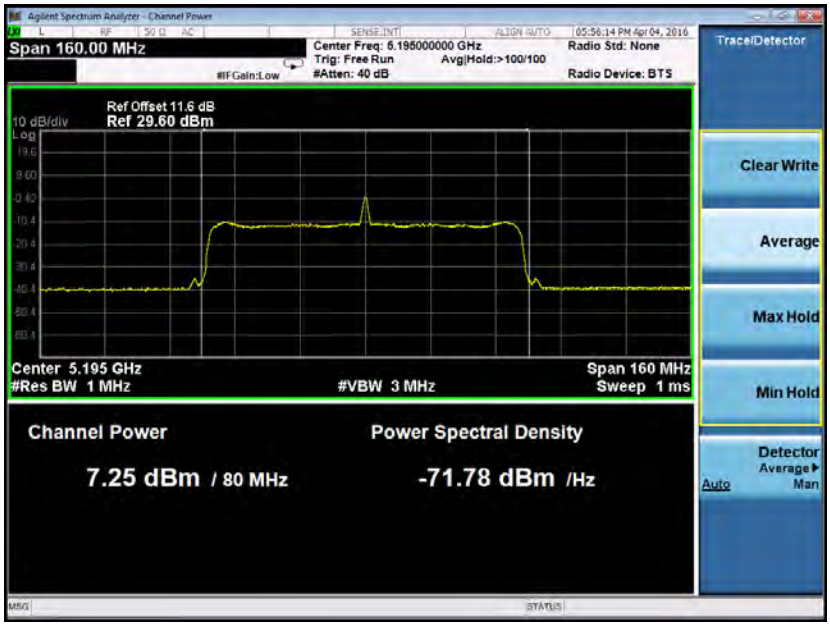


Chain 0, 40 MHz, 5230 MHz

Chain 1, 40 MHz, 5230 MHz

EMT ELECTRO MAGNETIC TEST, INC.
1547 Plymouth Street, Mountain View, CA 94043 Tel: (650) 965-4000 Fax: (650) 965-3000

Maximum Output Power Test Data (Conducted)

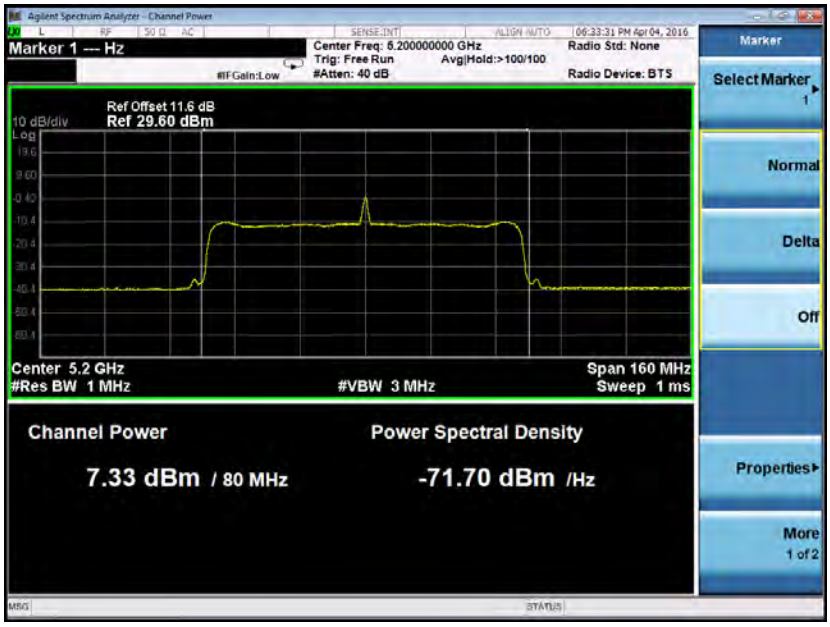


Chain 0, 80 MHz, 5195 MHz

Chain 1, 80 MHz, 5195 MHz

EMT ELECTRO MAGNETIC TEST, INC.
1547 Plymouth Street, Mountain View, CA 94043 Tel: (650) 965-4000 Fax: (650) 965-3000

Maximum Output Power Test Data (Conducted)

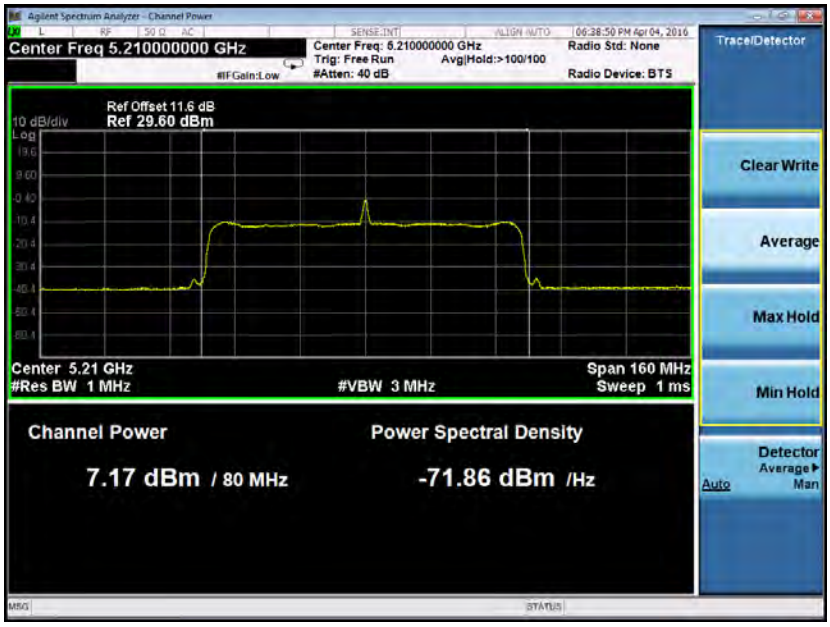


Chain 0, 80 MHz, 5200 MHz

Chain 1, 80 MHz, 5200 MHz

EMT ELECTRO MAGNETIC TEST, INC.
1547 Plymouth Street, Mountain View, CA 94043 Tel: (650) 965-4000 Fax: (650) 965-3000

Maximum Output Power Test Data (Conducted)

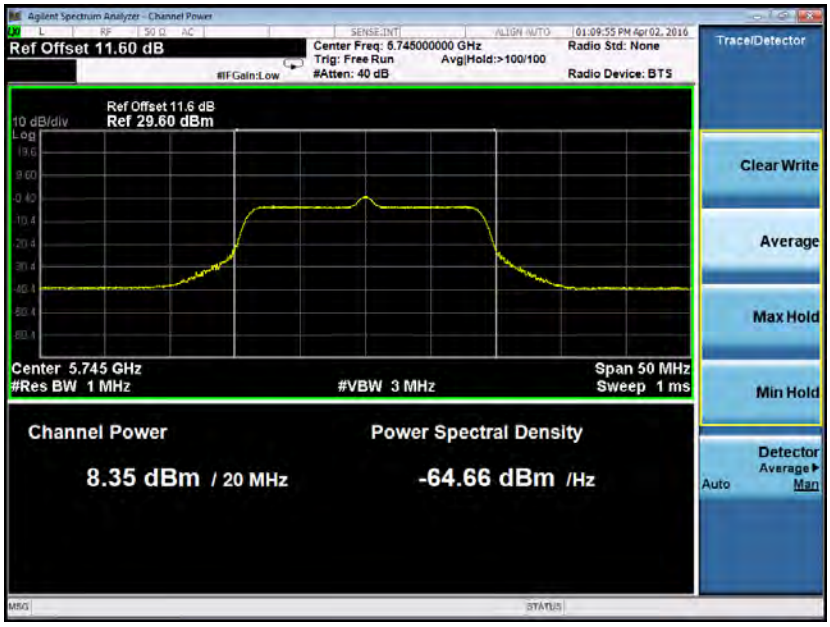


Chain 0, 80 MHz, 5210 MHz

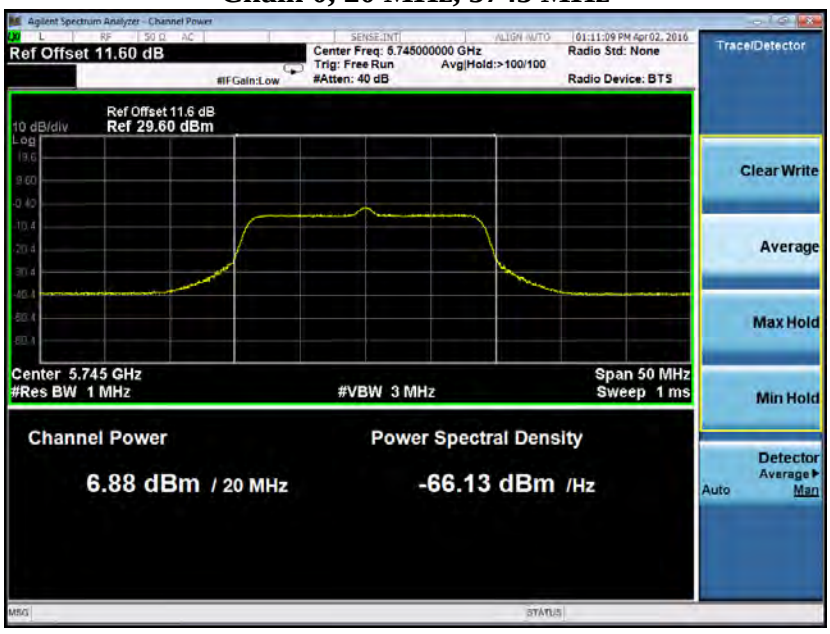
Chain 1, 80 MHz, 5210 MHz

EMT ELECTRO MAGNETIC TEST, INC.
1547 Plymouth Street, Mountain View, CA 94043 Tel: (650) 965-4000 Fax: (650) 965-3000

Maximum Output Power Test Data (Conducted)



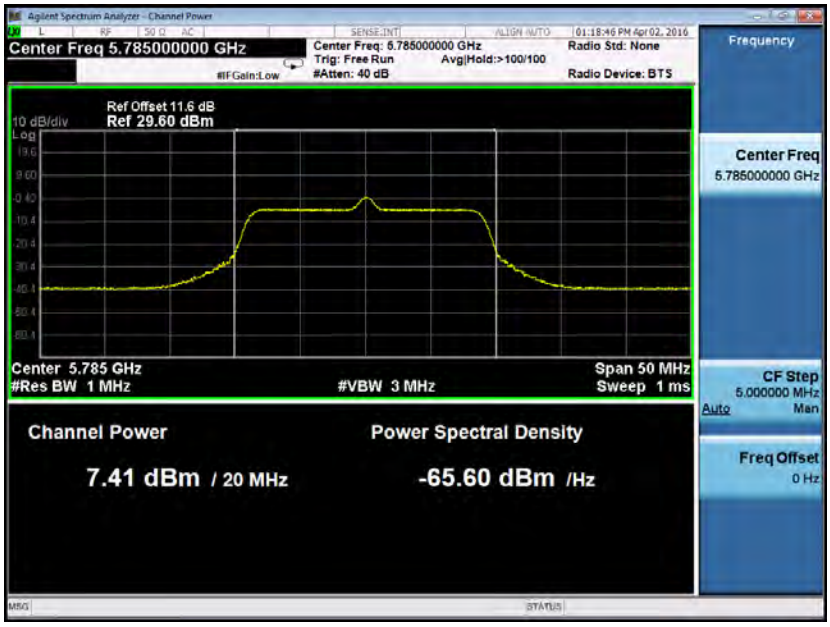
Chain 0, 20 MHz, 5745 MHz



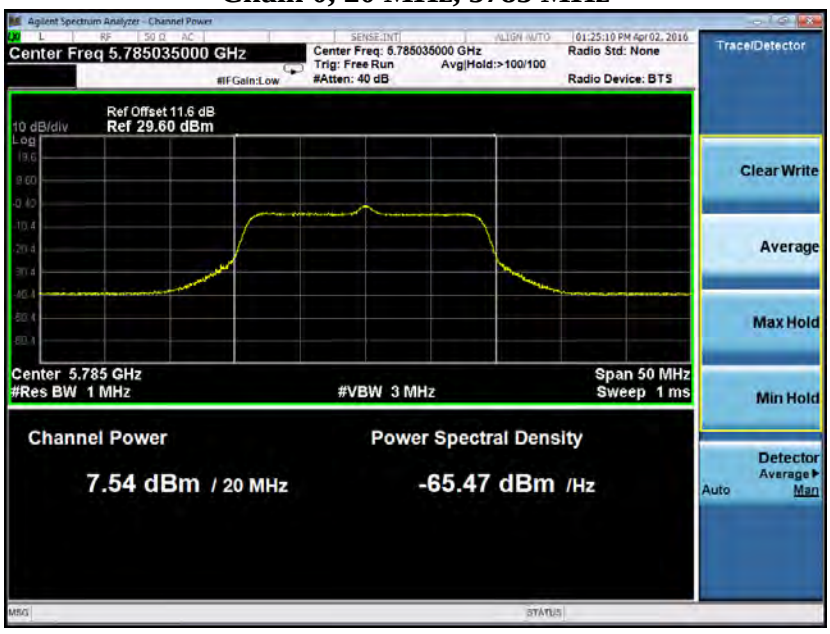
Chain 1, 20 MHz, 5745 MHz

EMT ELECTRO MAGNETIC TEST, INC.
1547 Plymouth Street, Mountain View, CA 94043 Tel: (650) 965-4000 Fax: (650) 965-3000

Maximum Output Power Test Data (Conducted)



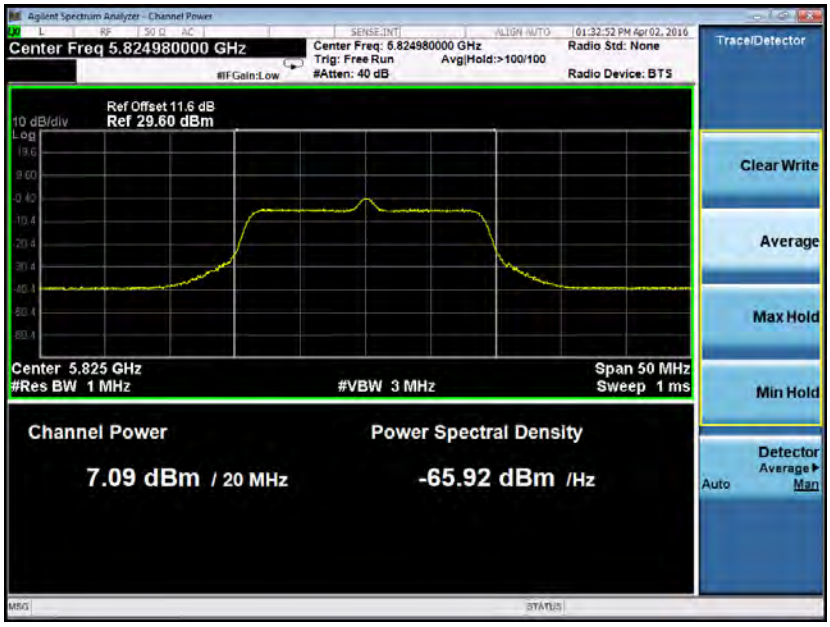
Chain 0, 20 MHz, 5785 MHz



Chain 1, 20 MHz, 5785 MHz

EMT ELECTRO MAGNETIC TEST, INC.
1547 Plymouth Street, Mountain View, CA 94043 Tel: (650) 965-4000 Fax: (650) 965-3000

Maximum Output Power Test Data (Conducted)



Chain 0, 20 MHz, 5825 MHz

Chain 1, 20 MHz, 5825 MHz

EMT ELECTRO MAGNETIC TEST, INC.
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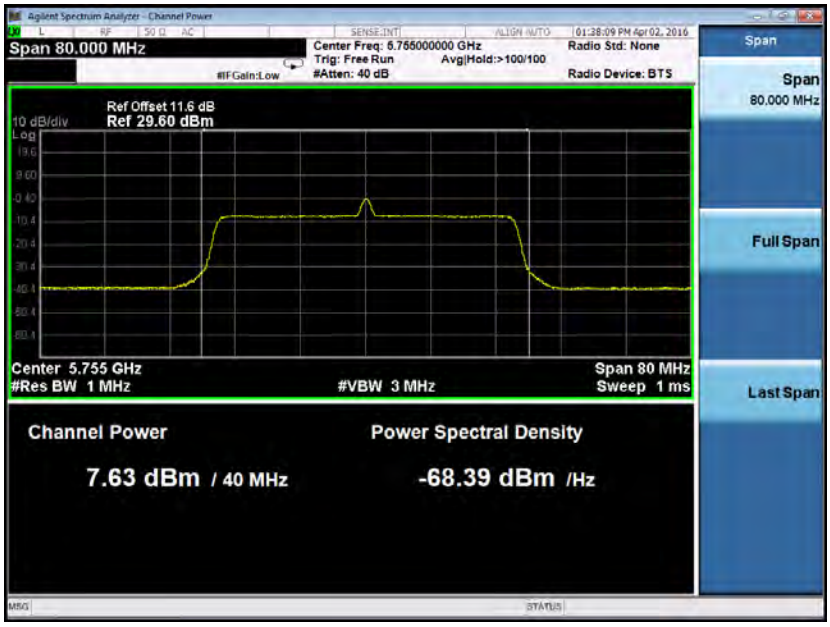
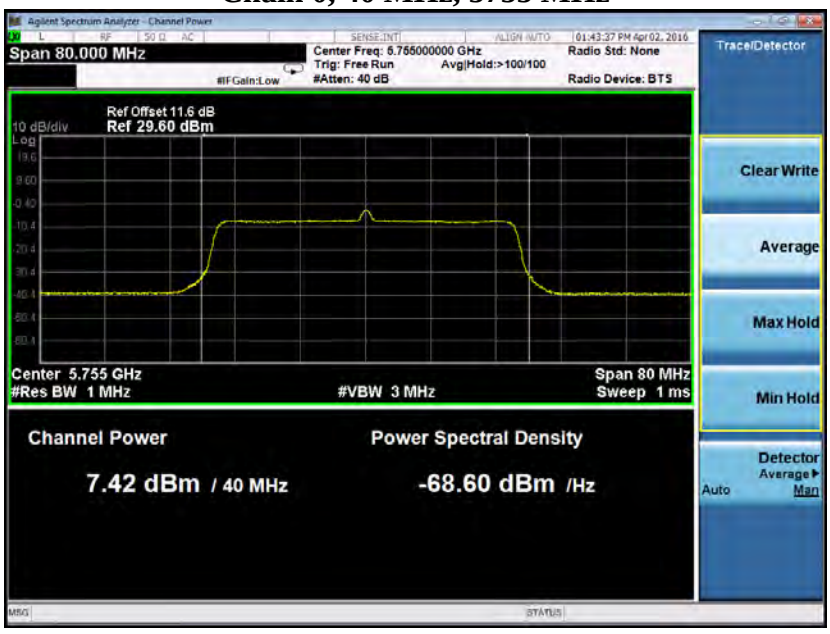
Maximum Output Power Test Data (Conducted)



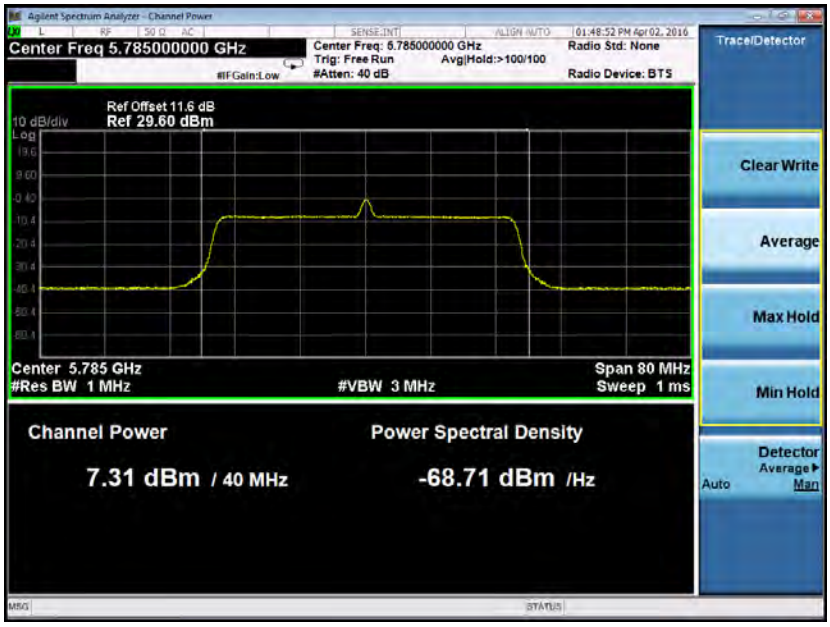
Chain 0, 40 MHz, 5755 MHz



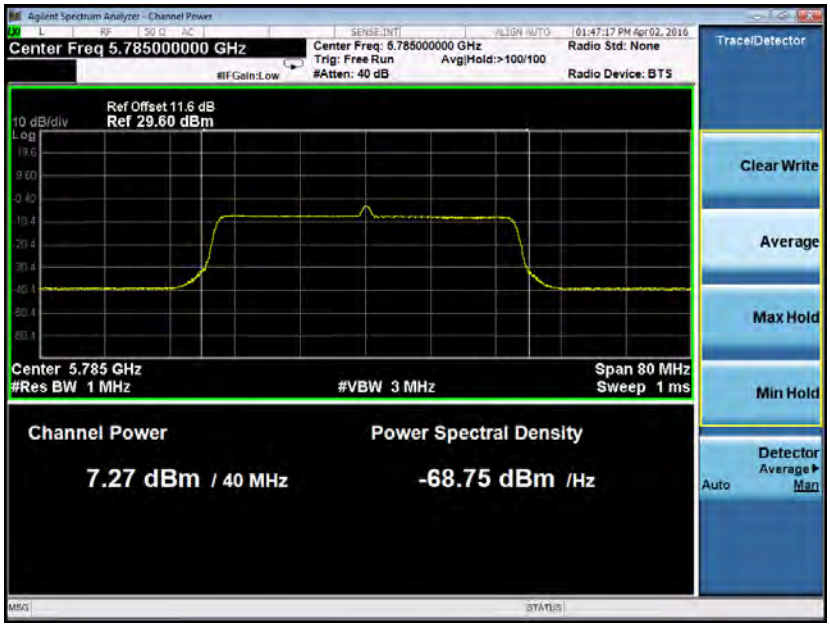
Chain 1, 40 MHz, 5755 MHz

EMT ELECTRO MAGNETIC TEST, INC.
1547 Plymouth Street, Mountain View, CA 94043 Tel: (650) 965-4000 Fax: (650) 965-3000

Maximum Output Power Test Data (Conducted)



Chain 0, 40 MHz, 5785 MHz



Chain 1, 40 MHz, 5785 MHz

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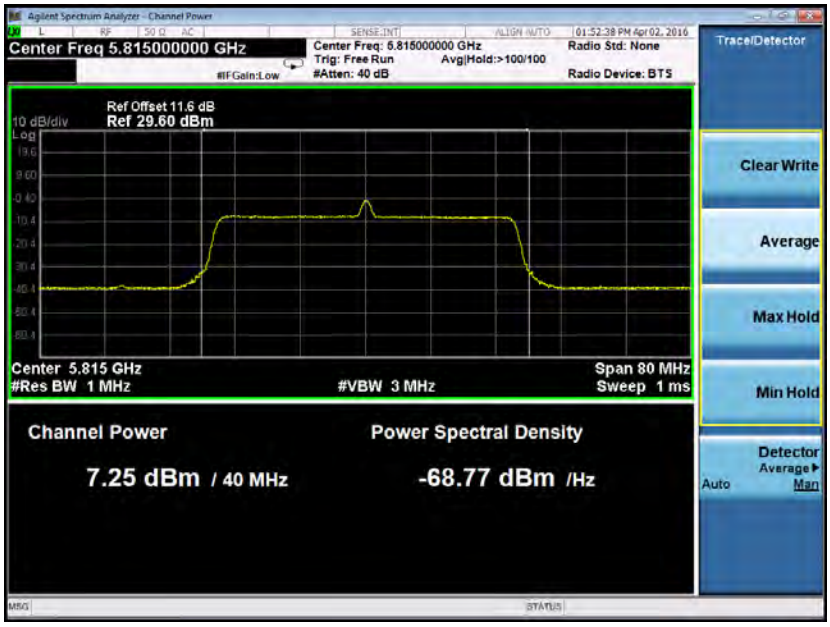
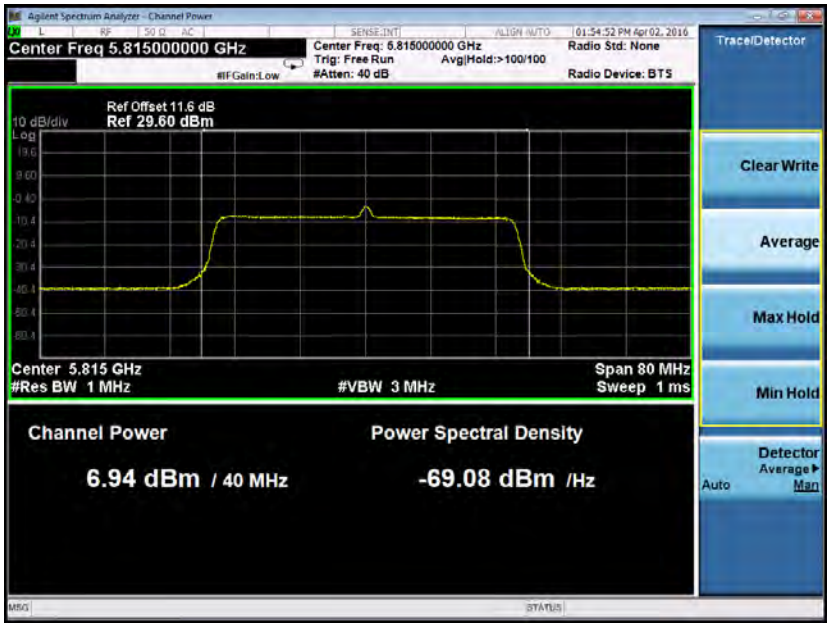
Maximum Output Power Test Data (Conducted)



Chain 0, 40 MHz, 5815 MHz



Chain 1, 40 MHz, 5815 MHz

EMT ELECTRO MAGNETIC TEST, INC.
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Maximum Output Power Test Data (Conducted)

Chain 0, 80 MHz, 5775 MHz

Chain 1, 80 MHz, 5775 MHz

EMT ELECTRO MAGNETIC TEST, INC.
1547 Plymouth Street, Mountain View, CA 94043 Tel: (650) 965-4000 Fax: (650) 965-3000

Maximum Output Power Test Data (Conducted)

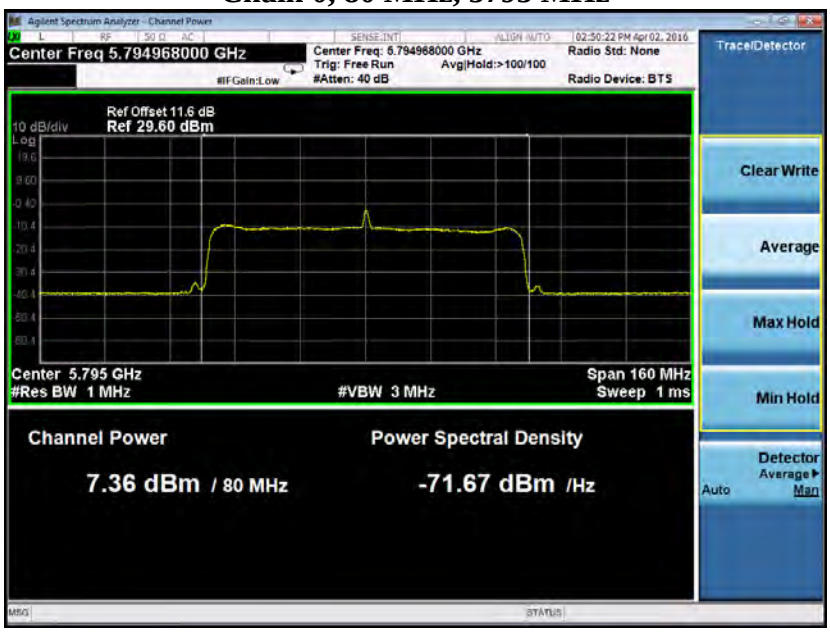
Chain 0, 80 MHz, 5785 MHz

Chain 1, 80 MHz, 5785 MHz

EMT ELECTRO MAGNETIC TEST, INC.
1547 Plymouth Street, Mountain View, CA 94043 Tel: (650) 965-4000 Fax: (650) 965-3000

Maximum Output Power Test Data (Conducted)

Chain 0, 80 MHz, 5795 MHz



Chain 1, 80 MHz, 5795 MHz

EMT ELECTRO MAGNETIC TEST, INC.
1547 Plymouth Street, Mountain View, CA 94043 Tel: (650) 965-4000 Fax: (650) 965-3000

Maximum Output Power Test Data (Conducted)

Company:	Mimosa Networks	**Test Date:**	4/4/16
EUT Name:	Point to Multipoint Device	**Test Engineer:**	George Hsu
Model:	B5C	**Test Result:**	PASS
Operating Mode:	TX Mode	**Test Method Used:**	KDB 789033 SA-1

Mode	Test CH	Frequency (MHz)	Chain 2 Output Power (dBm)	Chain 3 Output Power (dBm)	Total Output Power (dBm)	Limit (dBm)***	Conclusion
20 MHz	33	5165	4.26	3.09	6.72	≤ 11	Pass
	40	5200	7.19	7.91	10.58	≤ 11	Pass
	48	5240	7.43	7.75	10.60	≤ 11	Pass
40 MHz	35	5175	7.47	8.39	10.96	≤ 11	Pass
	40	5200	7.17	7.52	10.36	≤ 11	Pass
	46	5230	7.46	8.06	10.78	≤ 11	Pass
80 MHz	39	5195	7.37	6.49	9.96	≤ 11	Pass
	40	5200	7.20	7.89	10.57	≤ 11	Pass
	42	5210	7.20	7.81	10.53	≤ 11	Pass
20 MHz	149	5745	5.91	8.42	10.35	≤ 11	Pass
	157	5785	6.72	7.44	10.11	≤ 11	Pass
	165	5825	7.88	7.34	10.63	≤ 11	Pass
40 MHz	151	5755	7.86	6.88	10.41	≤ 11	Pass
	157	5785	7.27	6.75	10.03	≤ 11	Pass
	163	5815	7.31	6.94	10.14	≤ 11	Pass
80 MHz	155	5775	7.60	7.03	10.33	≤ 11	Pass
	157	5785	7.78	7.17	10.50	≤ 11	Pass
	159	5795	7.76	7.11	10.46	≤ 11	Pass

Test Equipment: Please refer to section 5.2

***Limit Derivation:
(Original Limit) – [(EUT Antenna Gain)- (Antenna Gain Limit)] = Limit
(30dBm) – [(25dBi) – (6dBi)] =Limit
11 dBm = Limit

EMT ELECTRO MAGNETIC TEST, INC.
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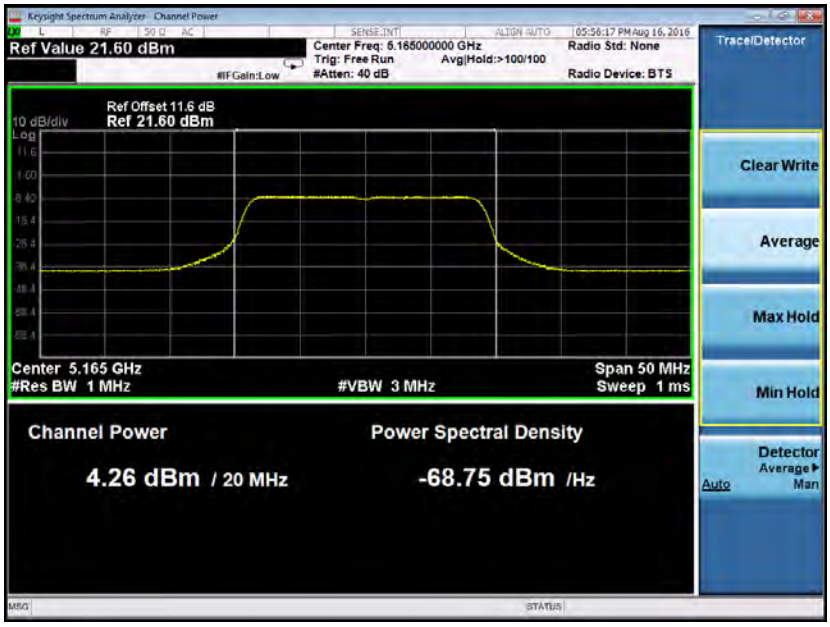
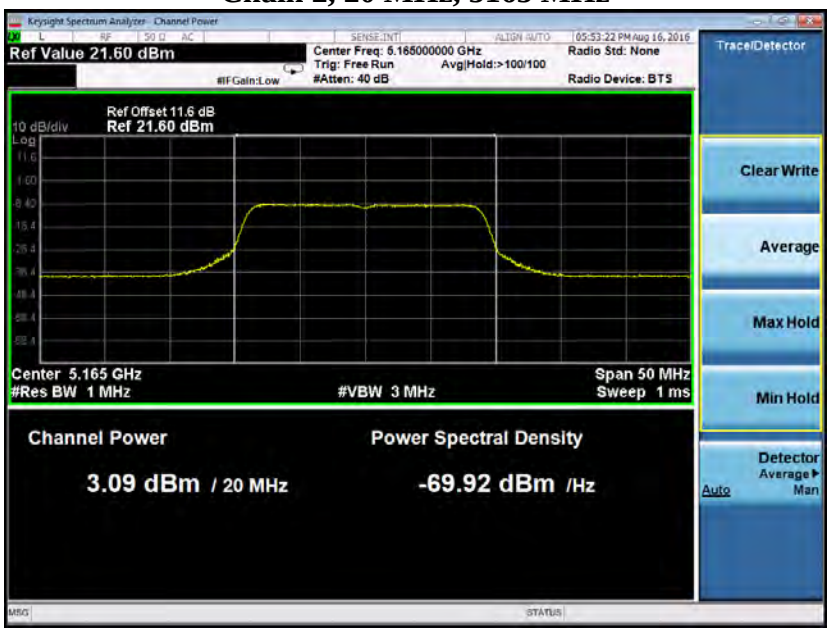
Maximum Output Power Test Data (Conducted)



Chain 2, 20 MHz, 5165 MHz



Chain 3, 20 MHz, 5165 MHz

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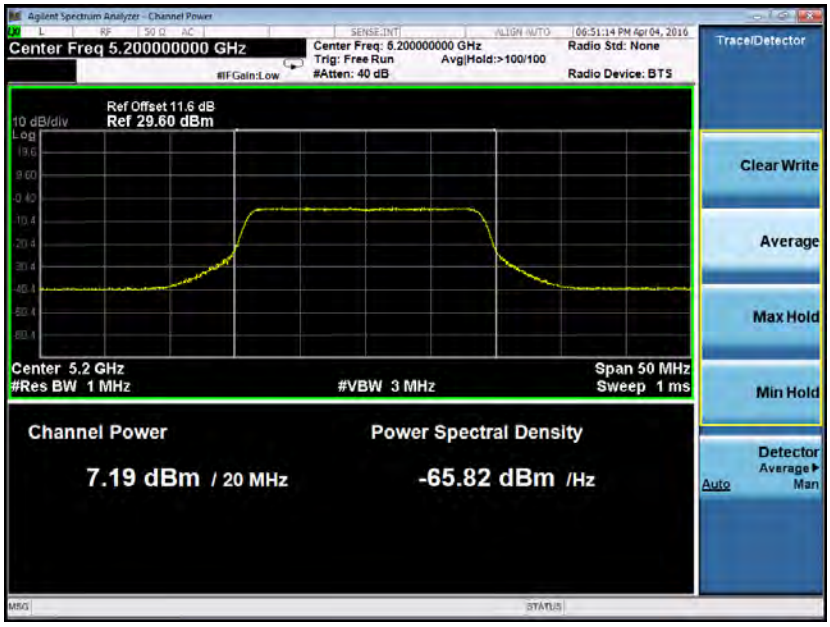
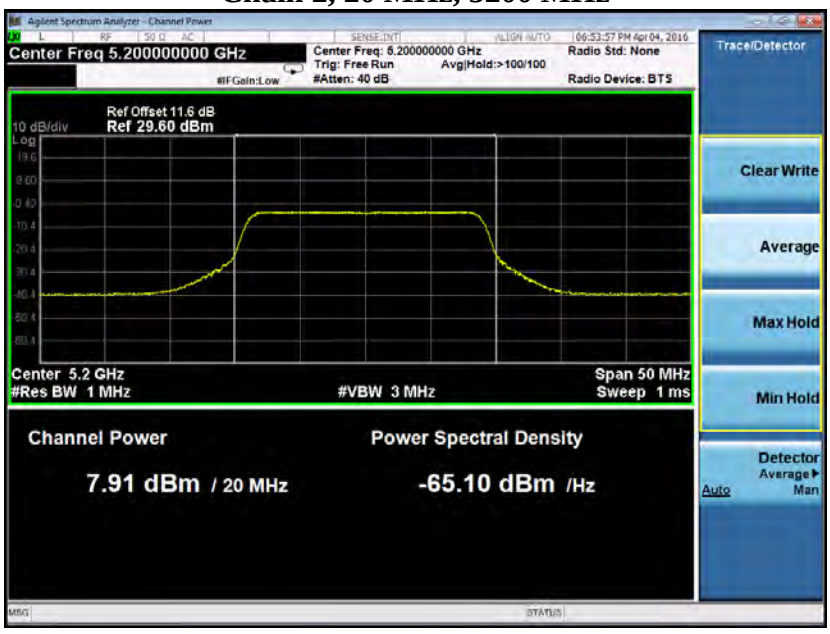
1547 Plymouth Street, Mountain View, CA 94043 Tel: (650) 965-4000 Fax: (650) 965-3000

Maximum Output Power Test Data (Conducted)



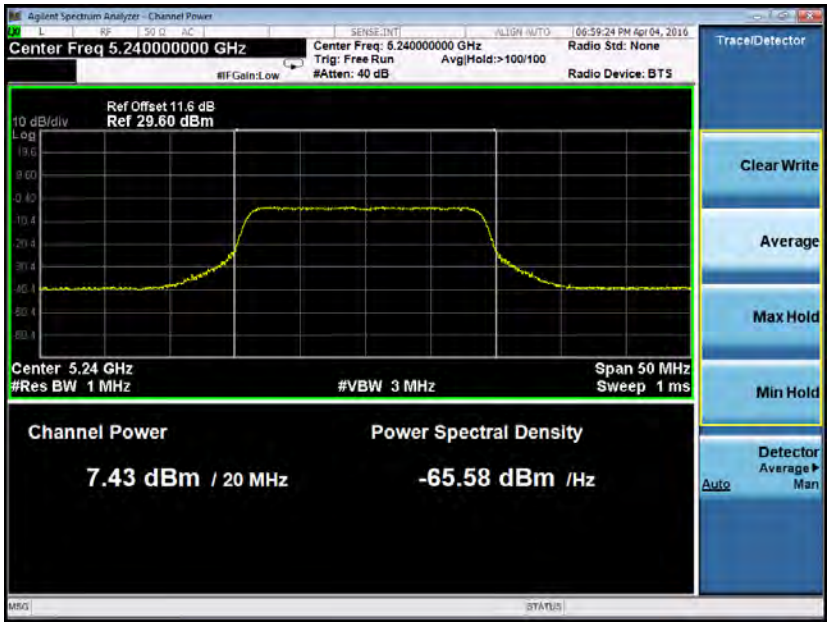
Chain 2, 20 MHz, 5200 MHz



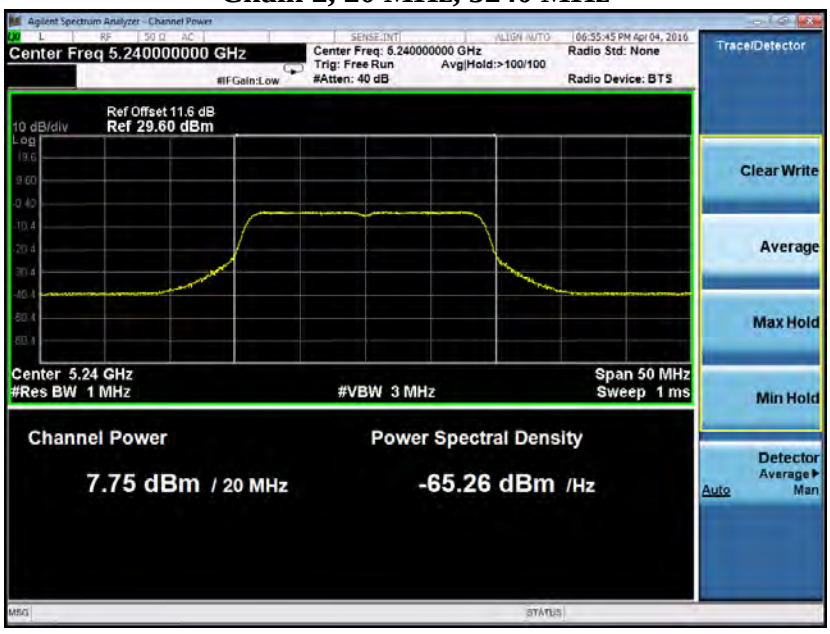
Chain 3, 20 MHz, 5200 MHz

EMT ELECTRO MAGNETIC TEST, INC.
1547 Plymouth Street, Mountain View, CA 94043 Tel: (650) 965-4000 Fax: (650) 965-3000

Maximum Output Power Test Data (Conducted)



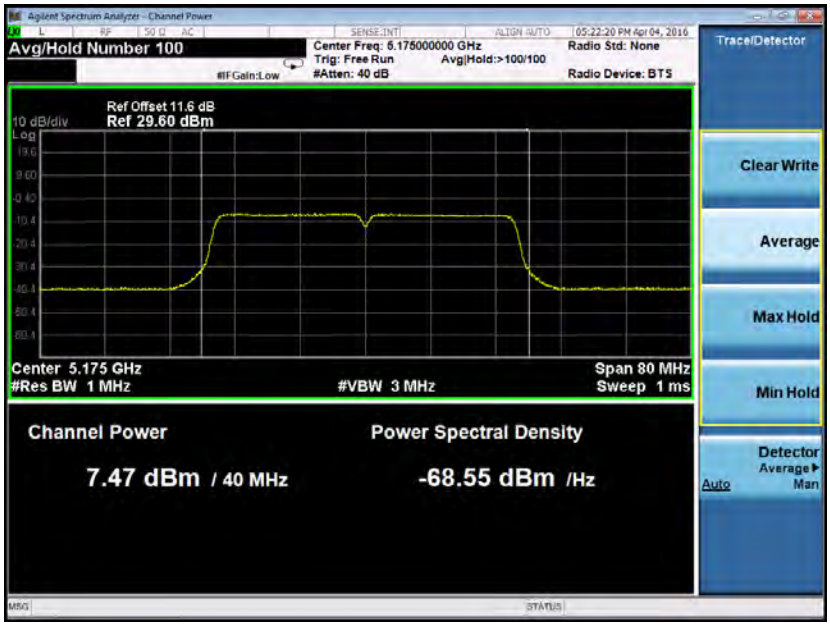
Chain 2, 20 MHz, 5240 MHz



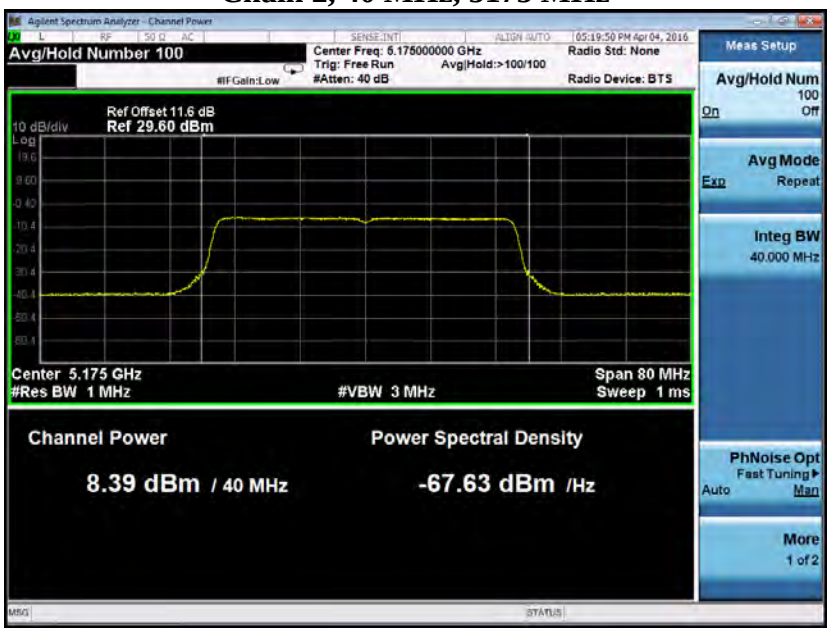
Chain 3, 20 MHz, 5240 MHz

EMT ELECTRO MAGNETIC TEST, INC.
1547 Plymouth Street, Mountain View, CA 94043 Tel: (650) 965-4000 Fax: (650) 965-3000

Maximum Output Power Test Data (Conducted)



Chain 2, 40 MHz, 5175 MHz



Chain 3, 40 MHz, 5175 MHz

EMT ELECTRO MAGNETIC TEST, INC.
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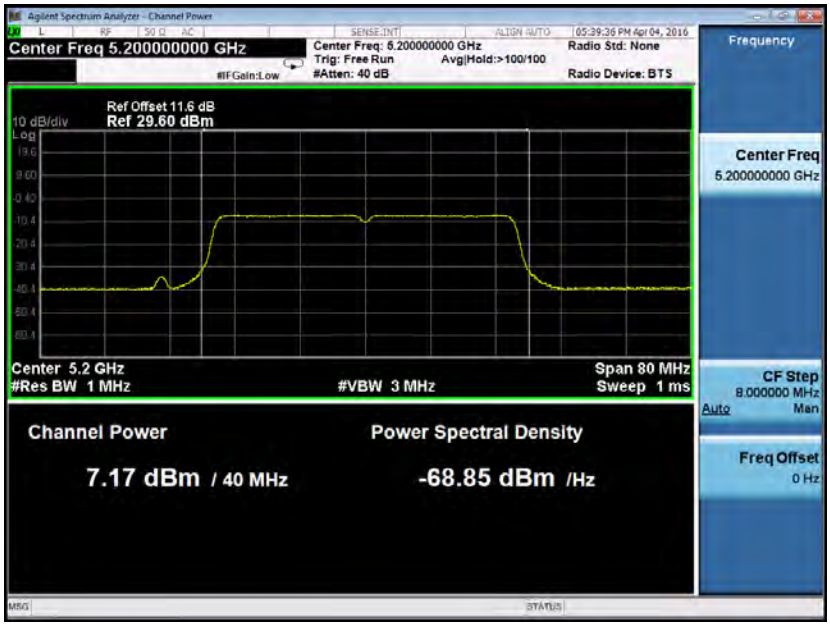
Maximum Output Power Test Data (Conducted)

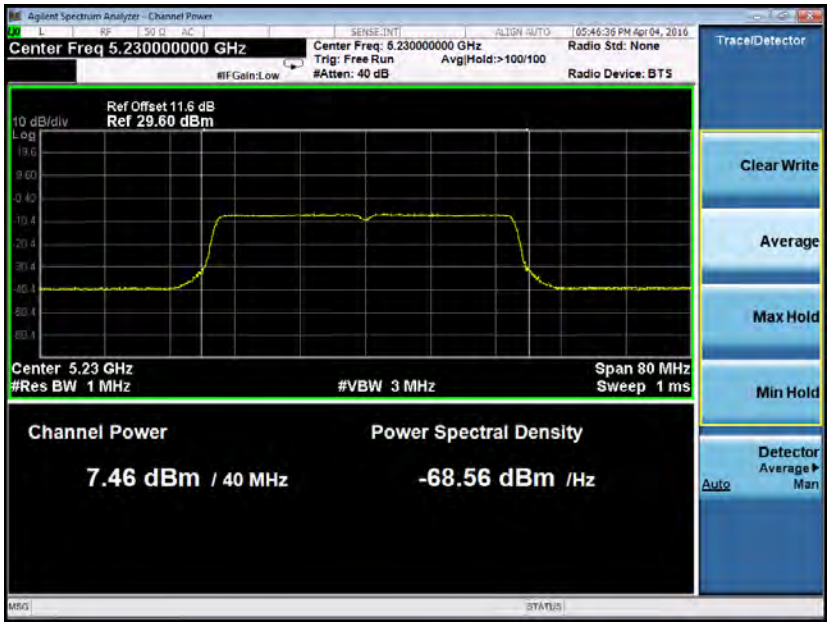


Chain 2, 40 MHz, 5200 MHz

Chain 3, 40 MHz, 5200 MHz

EMT ELECTRO MAGNETIC TEST, INC.
1547 Plymouth Street, Mountain View, CA 94043 Tel: (650) 965-4000 Fax: (650) 965-3000

Maximum Output Power Test Data (Conducted)

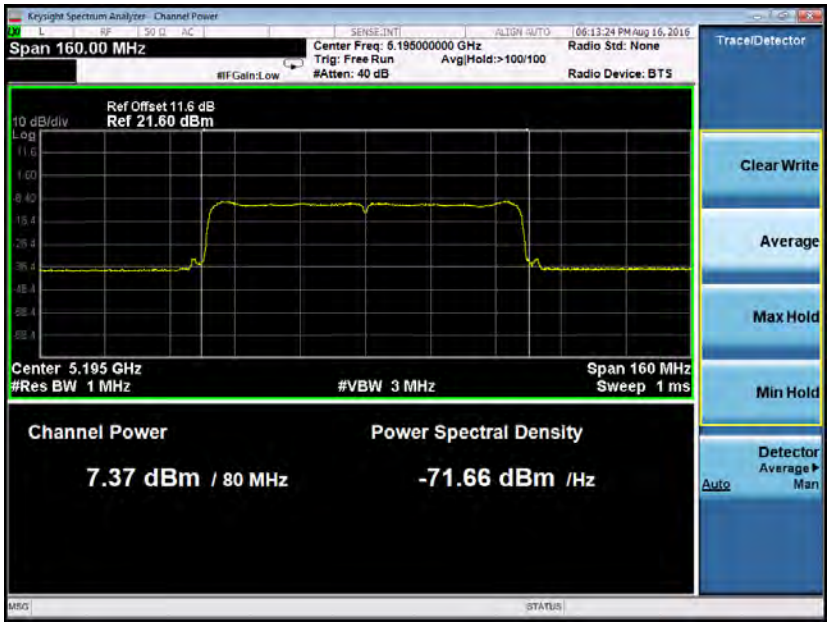


Chain 2, 40 MHz, 5230 MHz

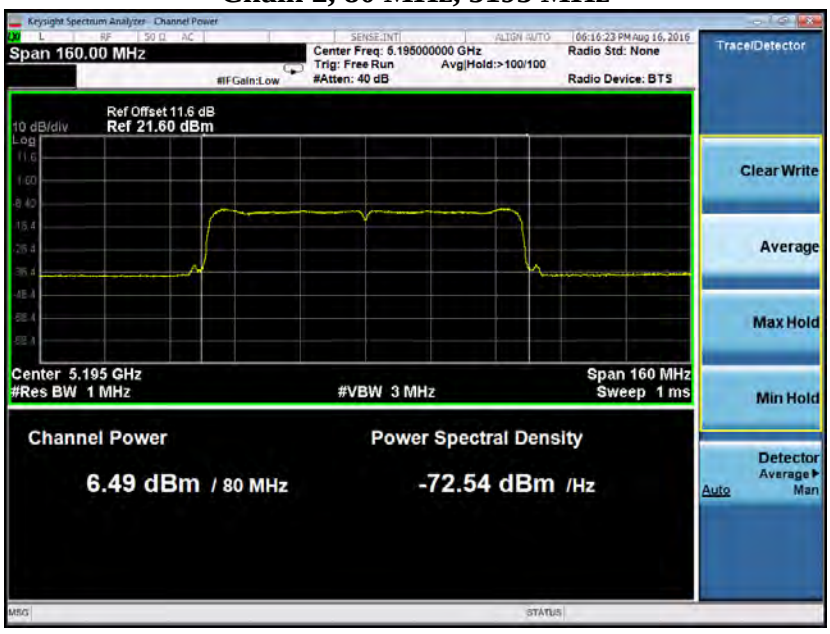
Chain 3, 40 MHz, 5230 MHz

EMT ELECTRO MAGNETIC TEST, INC.
1547 Plymouth Street, Mountain View, CA 94043 Tel: (650) 965-4000 Fax: (650) 965-3000

Maximum Output Power Test Data (Conducted)



Chain 2, 80 MHz, 5195 MHz

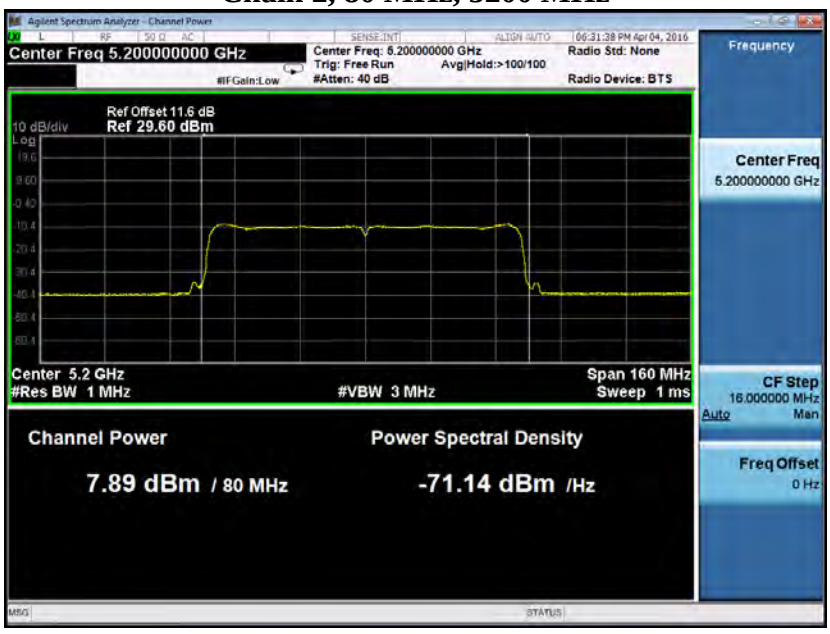


Chain 3, 80 MHz, 5195 MHz

EMT ELECTRO MAGNETIC TEST, INC.
1547 Plymouth Street, Mountain View, CA 94043 Tel: (650) 965-4000 Fax: (650) 965-3000

Maximum Output Power Test Data (Conducted)

Chain 2, 80 MHz, 5200 MHz

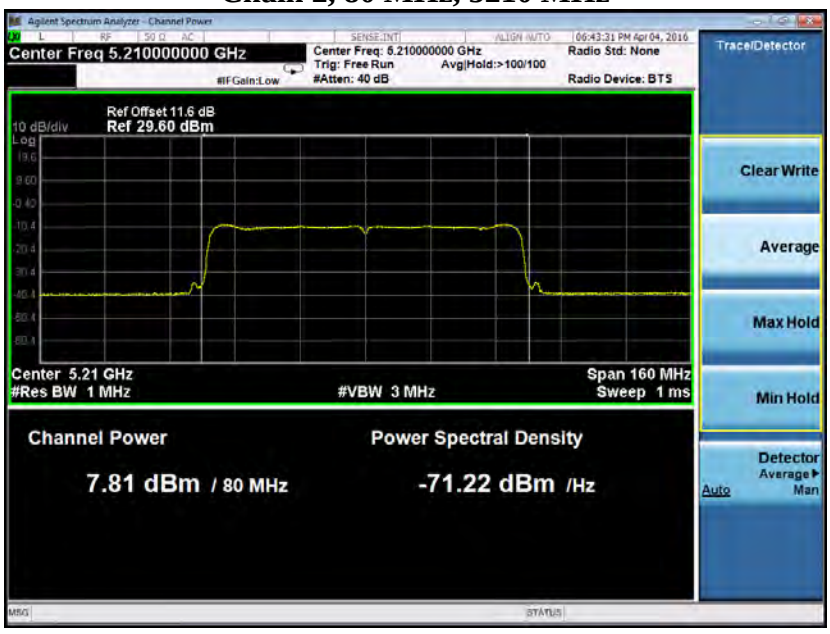


Chain 3, 80 MHz, 5200 MHz

EMT ELECTRO MAGNETIC TEST, INC.
1547 Plymouth Street, Mountain View, CA 94043 Tel: (650) 965-4000 Fax: (650) 965-3000

Maximum Output Power Test Data (Conducted)

Chain 2, 80 MHz, 5210 MHz



Chain 3, 80 MHz, 5210 MHz

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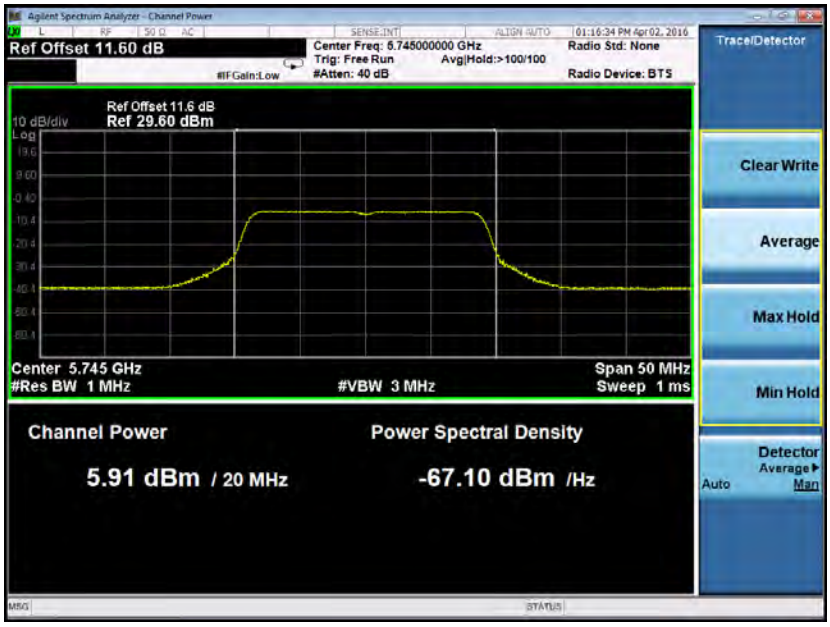
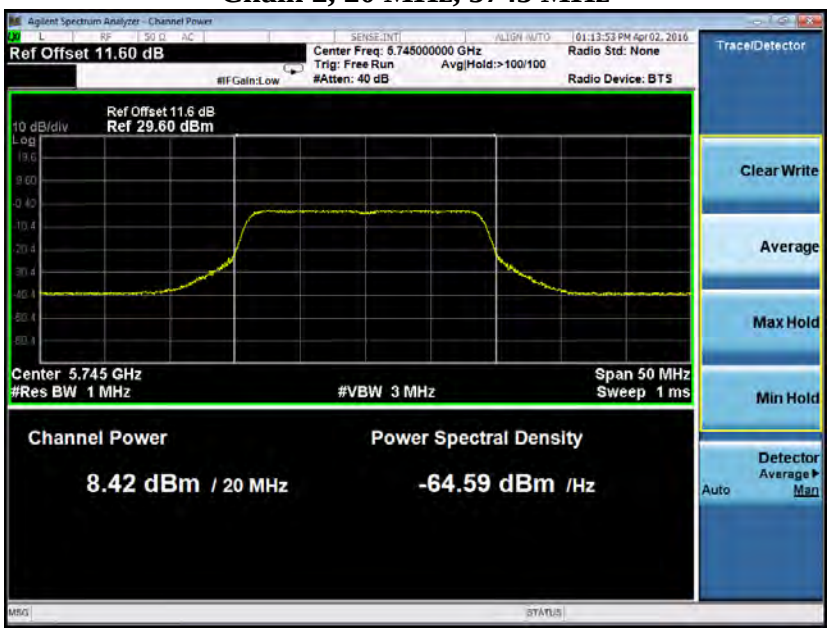
Maximum Output Power Test Data (Conducted)



Chain 2, 20 MHz, 5745 MHz



Chain 3, 20 MHz, 5745 MHz

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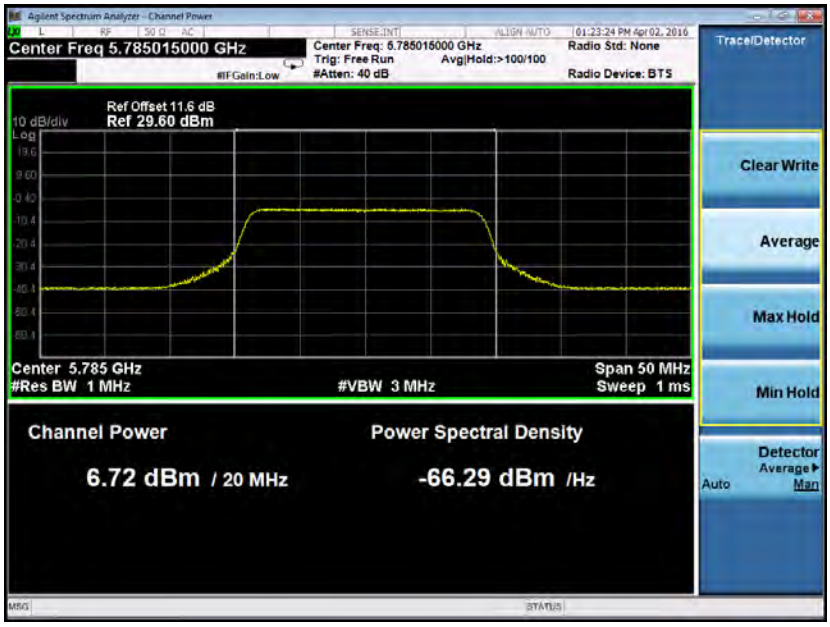
Maximum Output Power Test Data (Conducted)

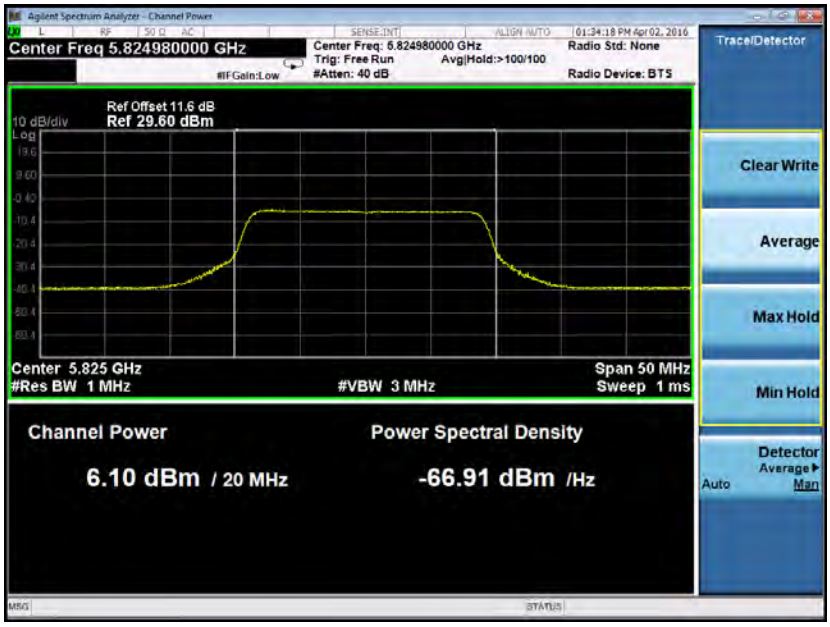


Chain 2, 20 MHz, 5785 MHz

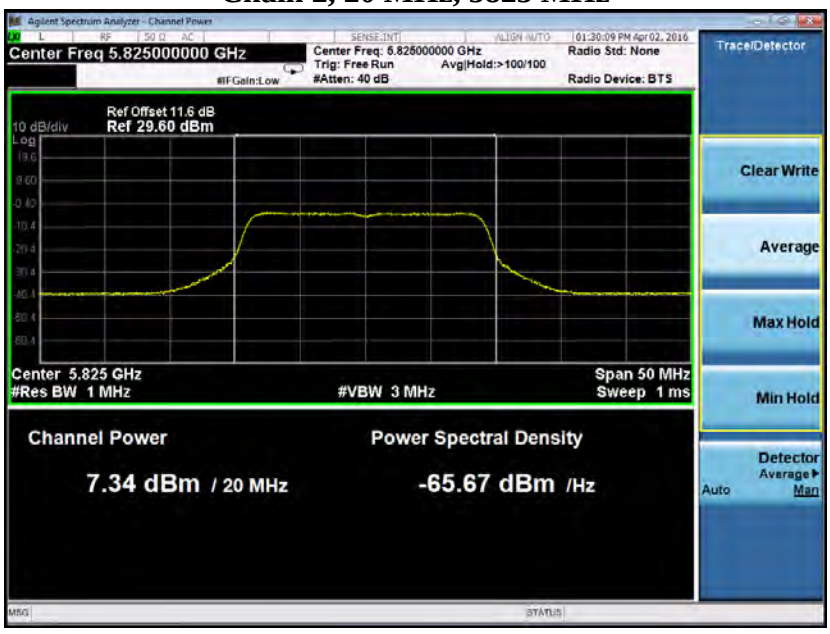
Chain 3, 20 MHz, 5785 MHz

EMT ELECTRO MAGNETIC TEST, INC.
1547 Plymouth Street, Mountain View, CA 94043 Tel: (650) 965-4000 Fax: (650) 965-3000

Maximum Output Power Test Data (Conducted)



Chain 2, 20 MHz, 5825 MHz



Chain 3, 20 MHz, 5825 MHz

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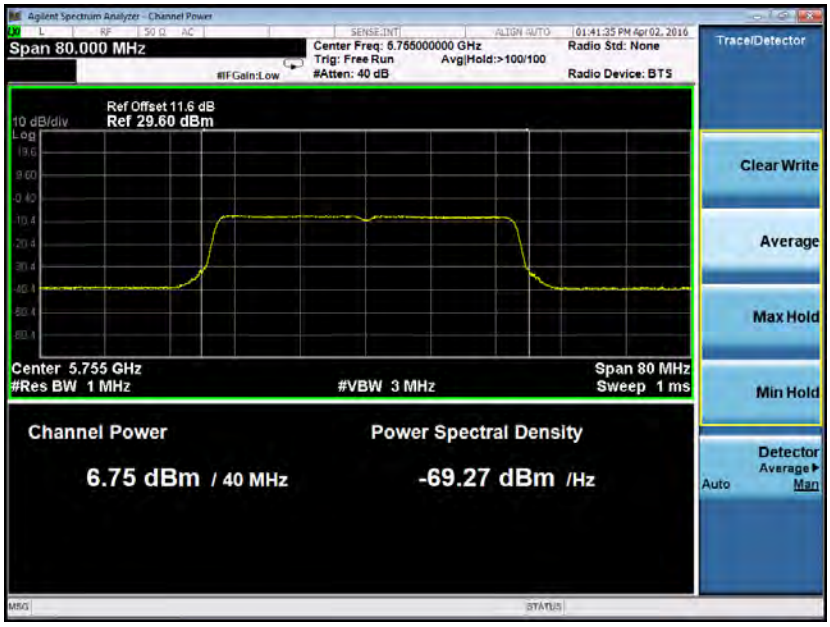
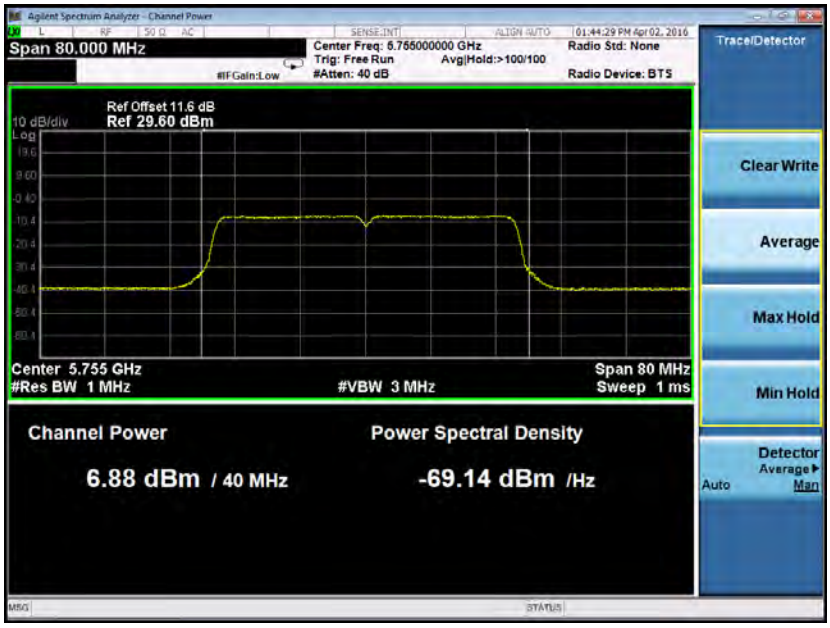
Maximum Output Power Test Data (Conducted)



Chain 2, 40 MHz, 5755 MHz



Chain 3, 40 MHz, 5755 MHz

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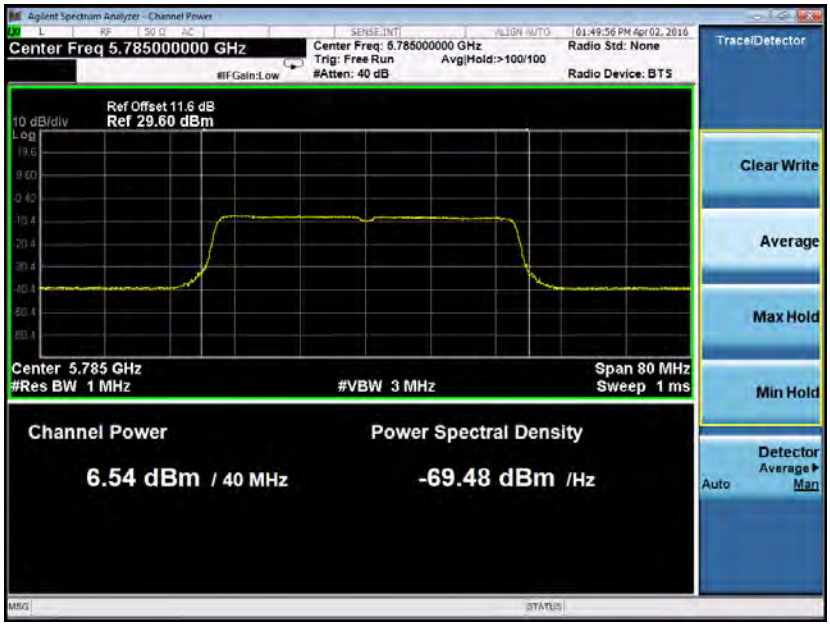
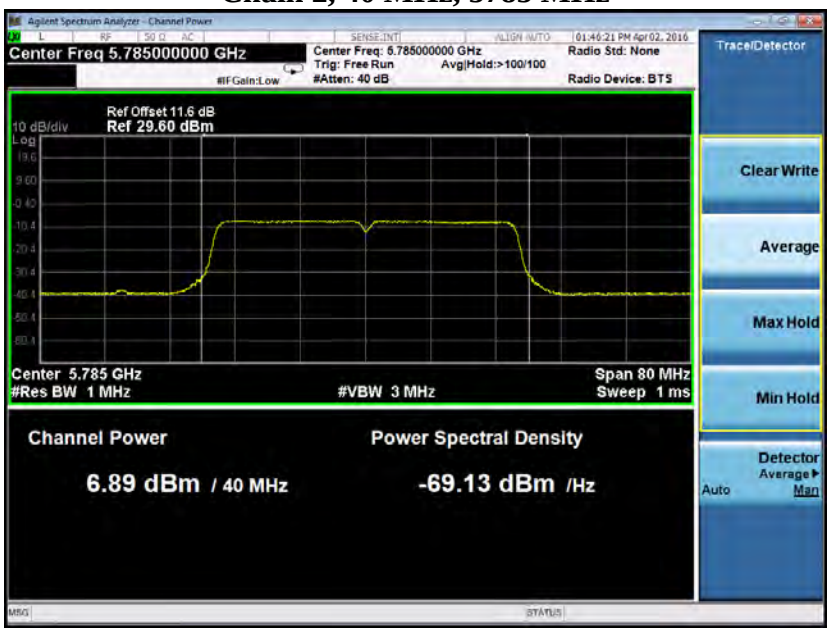
Maximum Output Power Test Data (Conducted)



Chain 2, 40 MHz, 5785 MHz



Chain 3, 40 MHz, 5785 MHz

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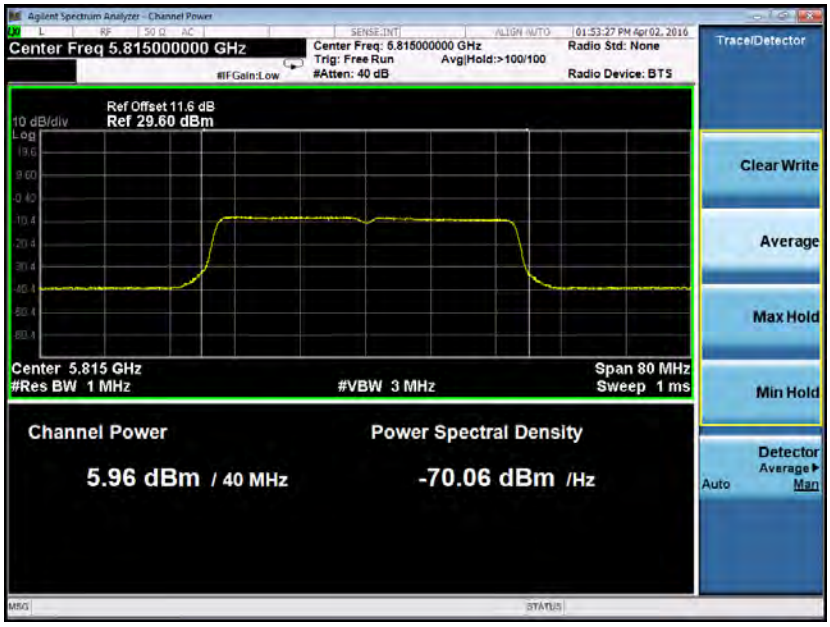
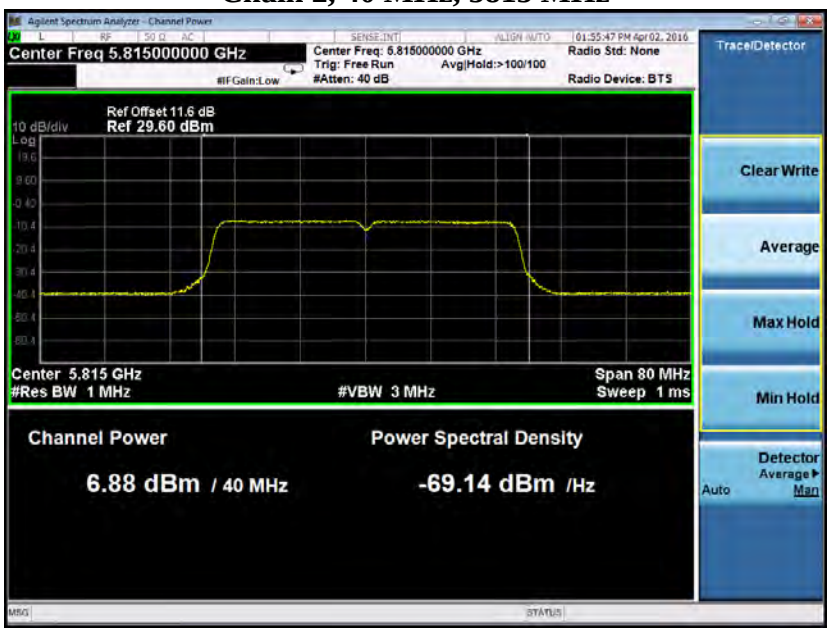
Maximum Output Power Test Data (Conducted)



Chain 2, 40 MHz, 5815 MHz

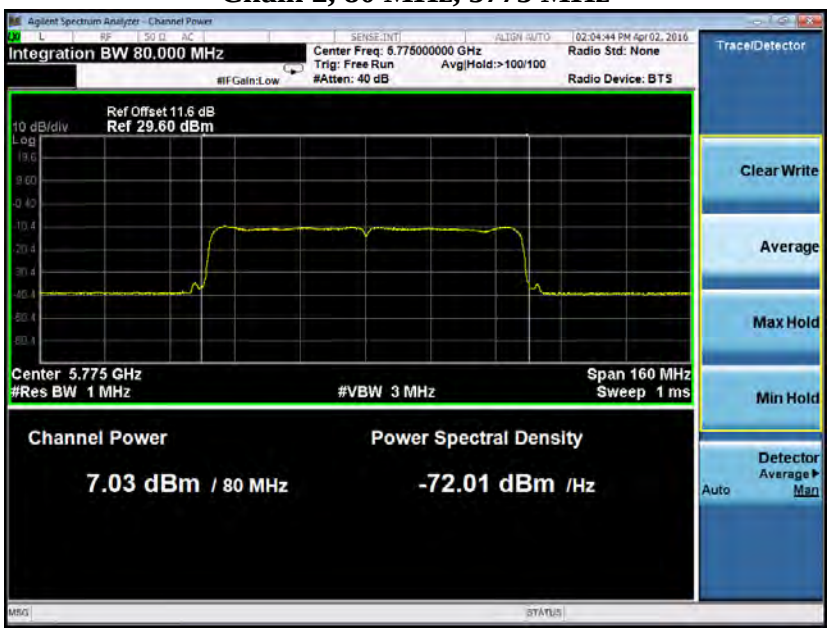


Chain 3, 40 MHz, 5815 MHz

EMT ELECTRO MAGNETIC TEST, INC.
1547 Plymouth Street, Mountain View, CA 94043 Tel: (650) 965-4000 Fax: (650) 965-3000

Maximum Output Power Test Data (Conducted)

Chain 2, 80 MHz, 5775 MHz

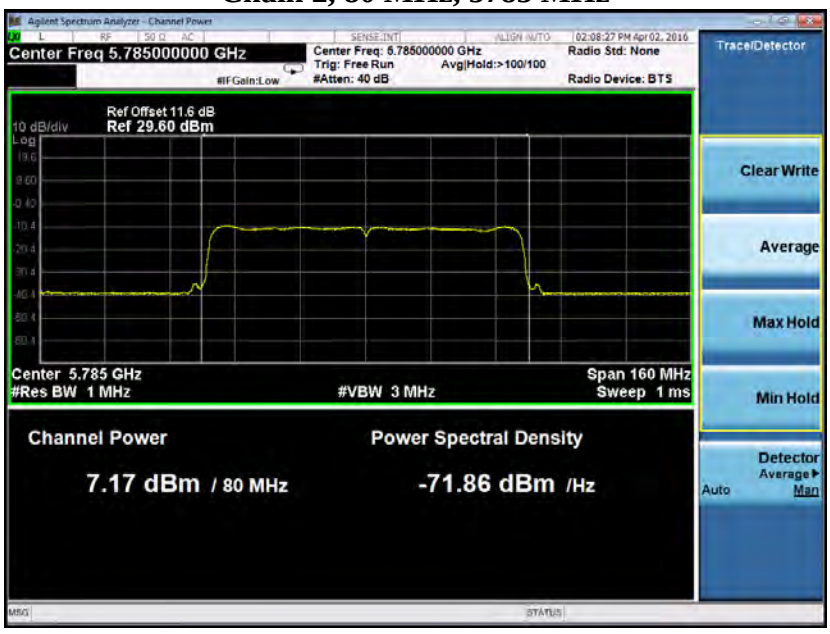


Chain 3, 80 MHz, 5775 MHz

EMT ELECTRO MAGNETIC TEST, INC.
1547 Plymouth Street, Mountain View, CA 94043 Tel: (650) 965-4000 Fax: (650) 965-3000

Maximum Output Power Test Data (Conducted)

Chain 2, 80 MHz, 5785 MHz



Chain 3, 80 MHz, 5785 MHz

EMT ELECTRO MAGNETIC TEST, INC.
1547 Plymouth Street, Mountain View, CA 94043 Tel: (650) 965-4000 Fax: (650) 965-3000

Maximum Output Power Test Data (Conducted)

Chain 2, 80 MHz, 5795 MHz

Chain 3, 80 MHz, 5795 MHz

EMT ELECTRO MAGNETIC TEST, INC.
1547 Plymouth Street, Mountain View, CA 94043 Tel: (650) 965-4000 Fax: (650) 965-3000

Maximum Power Spectral Density Sample Calculation

Measure and Sum Spectral Maximia across the outputs is used as defined in Section E.2.b in KDB 662911

Chain 0 Output Power (dBm) = -14.217 dBm
Chain 0 Output Power (mW) = 10^(-14.217/10) = 0.0378704 mW

Chain 1 Output Power = -15.046 dBm
Chain 1 Output Power (mW) = 10^(-15.046/10) = 0.0312895 mW

Total Power (mW) = 0.0378704 +0.0312895 = 0.0691 mW

Total Power (dBm) =10*Log(0.0687) = -11.601 dBm

EMT ELECTRO MAGNETIC TEST, INC.
1547 Plymouth Street, Mountain View, CA 94043 Tel: (650) 965-4000 Fax: (650) 965-3000

Maximum Power Spectral Density
(Bandwidth Correction Factor Already Added to Analyzer Offset)

Company:	Mimosa Networks	**Test Date:**	4/4/16
EUT Name:	Point to Multipoint Device	**Test Engineer:**	George Hsu
Model:	B5C	**Test Result:**	PASS
Operating Mode:	TX Mode		

Mode	Test CH	Frequency (MHz)	Chain 0 PSD (dBm)	Chain 1 PSD (dBm)	Total PSD (dBm)	Limit (dBm)***	Conclusion
20 MHz	33	5165	-14.22	-15.05	-11.60	≤ -2 /MHz	Pass
	40	5200	-14.09	-14.98	-11.50	≤ -2 /MHz	Pass
	48	5240	-14.67	-15.31	-11.97	≤ -2 /MHz	Pass
40 MHz	35	5175	-16.51	-17.68	-14.05	≤ -2 /MHz	Pass
	40	5200	-16.67	-17.85	-14.21	≤ -2 /MHz	Pass
	46	5230	-17.53	-18.63	-15.03	≤ -2 /MHz	Pass
80 MHz	39	5195	-19.95	-20.68	-17.29	≤ -2 /MHz	Pass
	40	5200	-19.87	-20.92	-17.35	≤ -2 /MHz	Pass
	42	5210	-21.83	-20.88	-18.32	≤ -2 /MHz	Pass
20 MHz	149	5745	-9.157	-9.900	-6.50	≤ 11 /500 KHz	Pass
	157	5785	-10.427	-9.796	-7.09	≤ 11 /500 KHz	Pass
	165	5825	-10.326	-11.069	-7.67	≤ 11 /500 KHz	Pass
40 MHz	151	5755	-12.633	-12.961	-9.78	≤ 11 /500 KHz	Pass
	157	5785	-13.117	-12.563	-9.82	≤ 11 /500 KHz	Pass
	163	5815	-13.209	-13.002	-10.09	≤ 11 /500 KHz	Pass
80 MHz	155	5775	-16.191	-15.107	-12.60	≤ 11 /500 KHz	Pass
	157	5785	-15.577	-15.766	-12.66	≤ 11 /500 KHz	Pass
	159	5795	-15.801	-15.388	-12.58	≤ 11 /500 KHz	Pass

Test Equipment: Please refer to section 5.2

***Limit Derivation:
(Original Limit) – [(EUT Antenna Gain)- (Antenna Gain Limit)] = Limit
(30dBm) – [(25dBi) – (6dBi)] =Limit (UNII-3)
11 dBm = Limit (UNII-3)
(17dBm) – [(25dBi) – (6dBi)] =Limit (UNII-1)
-2 dBm = Limit (UNII-1)

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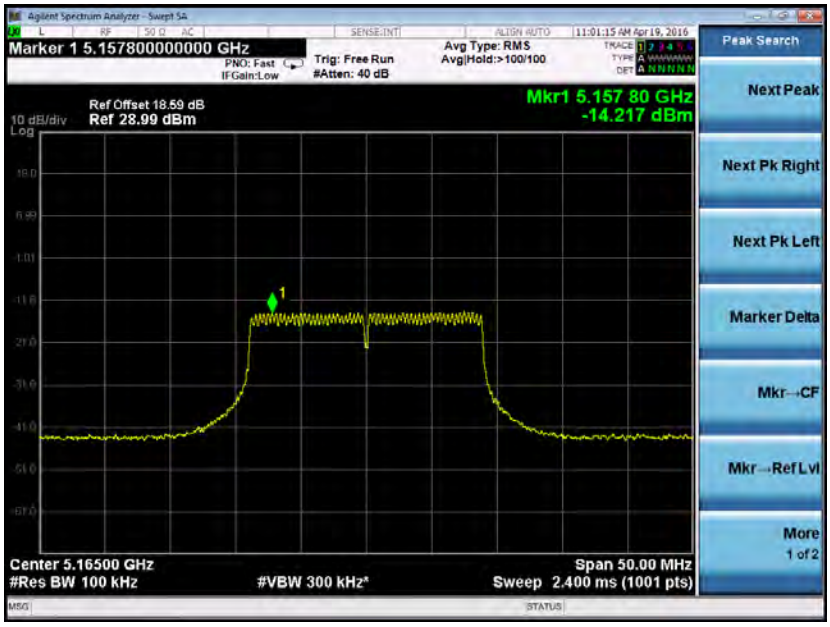
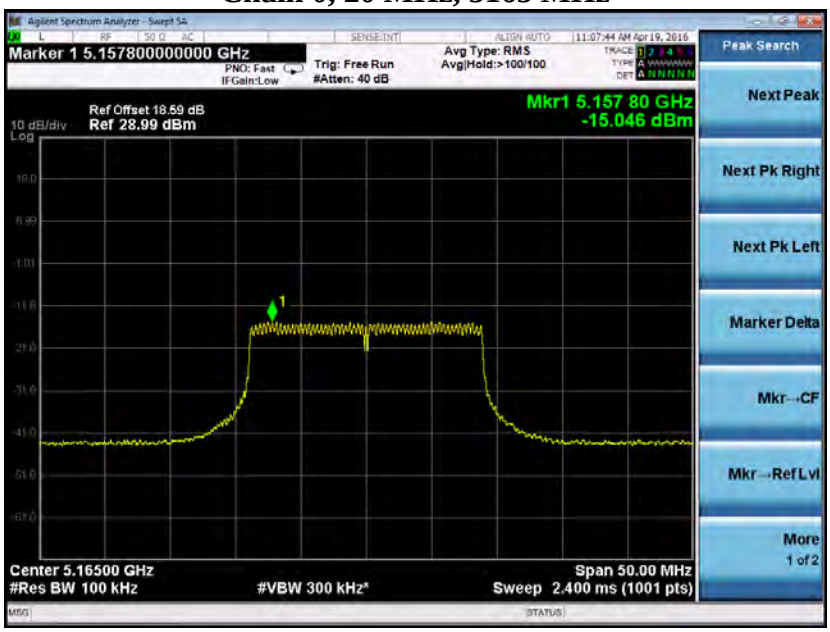
Maximum Power Spectral Density Test Data (Conducted)



Chain 0, 20 MHz, 5165 MHz



Chain 1, 20 MHz, 5165 MHz

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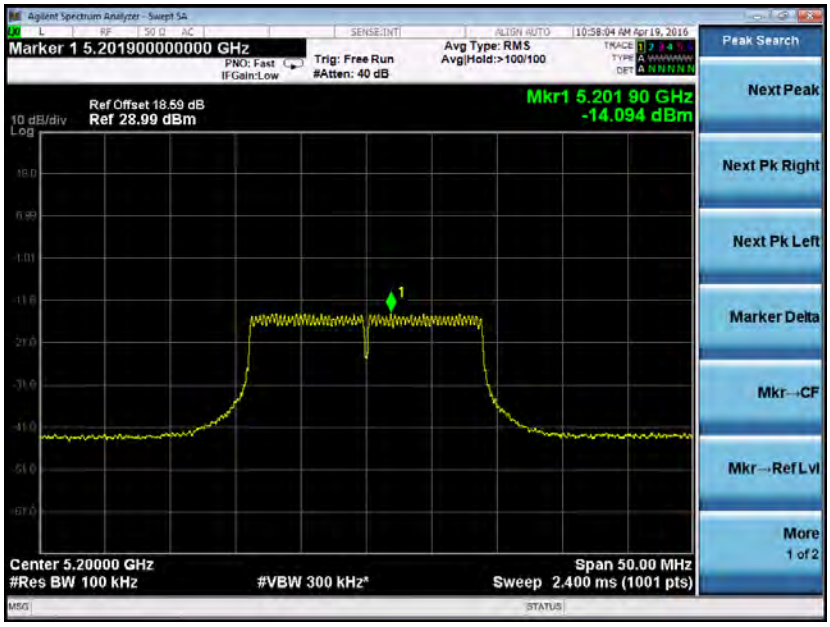
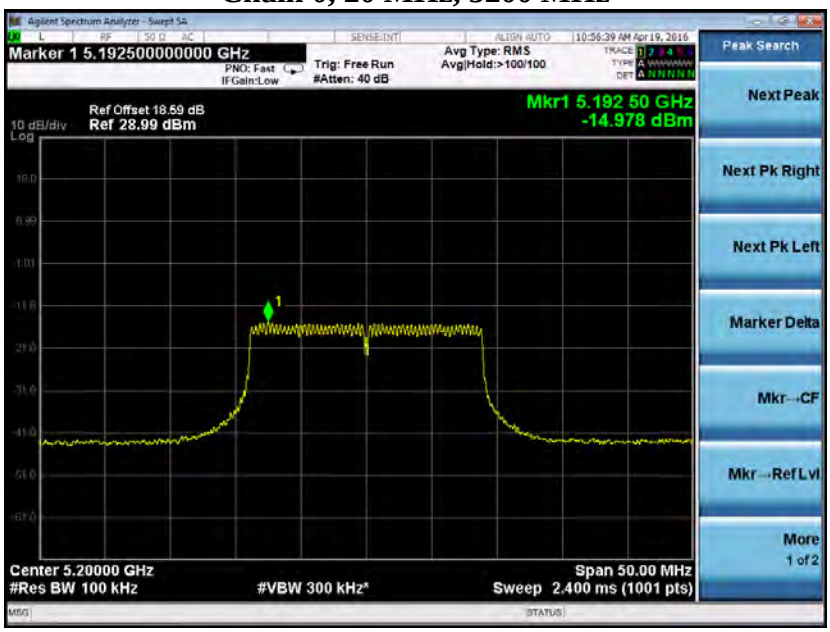
Maximum Power Spectral Density Test Data (Conducted)



Chain 0, 20 MHz, 5200 MHz



Chain 1, 20 MHz, 5200 MHz

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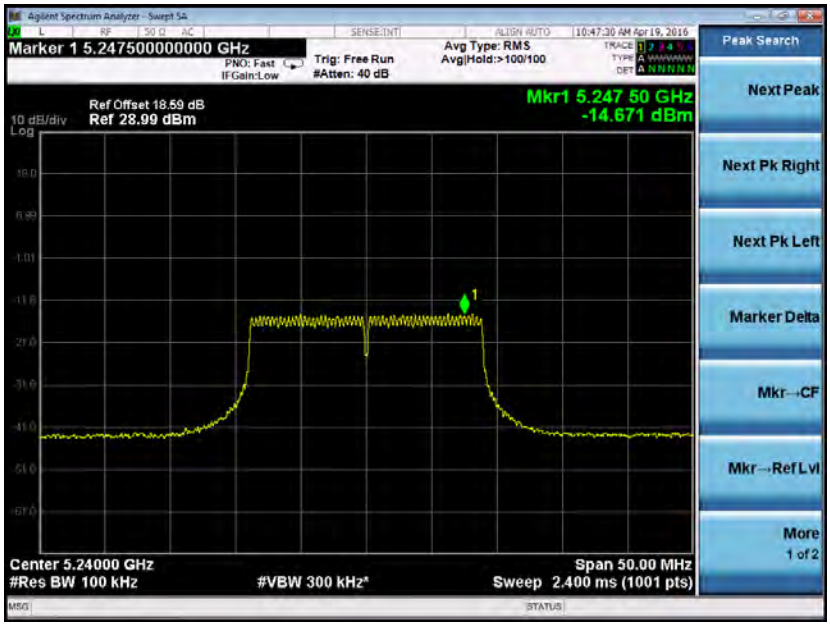
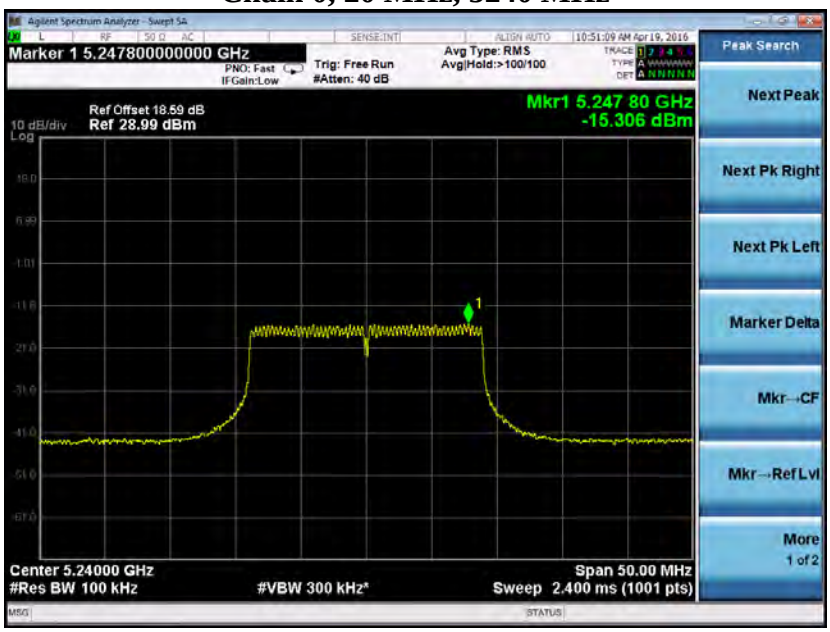
Maximum Power Spectral Density Test Data (Conducted)



Chain 0, 20 MHz, 5240 MHz



Chain 1, 20 MHz, 5240 MHz

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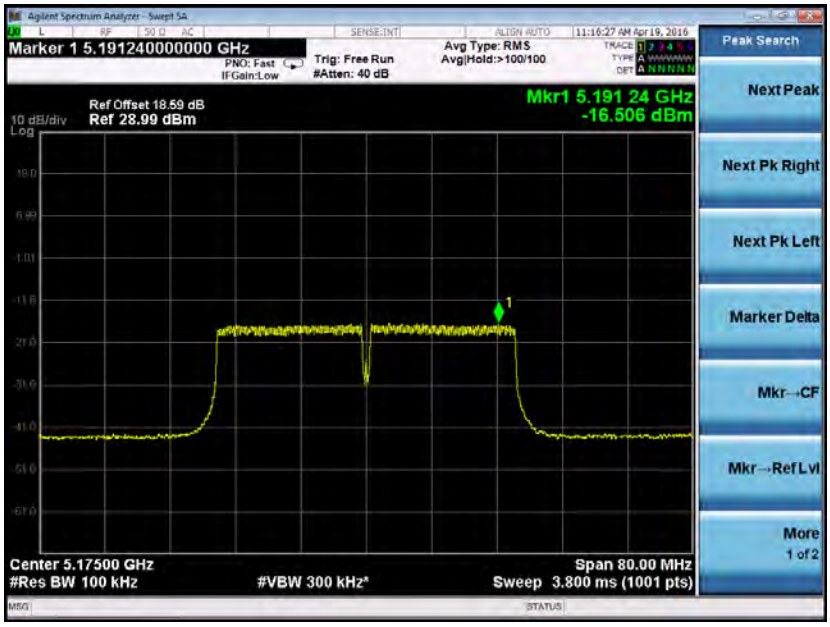
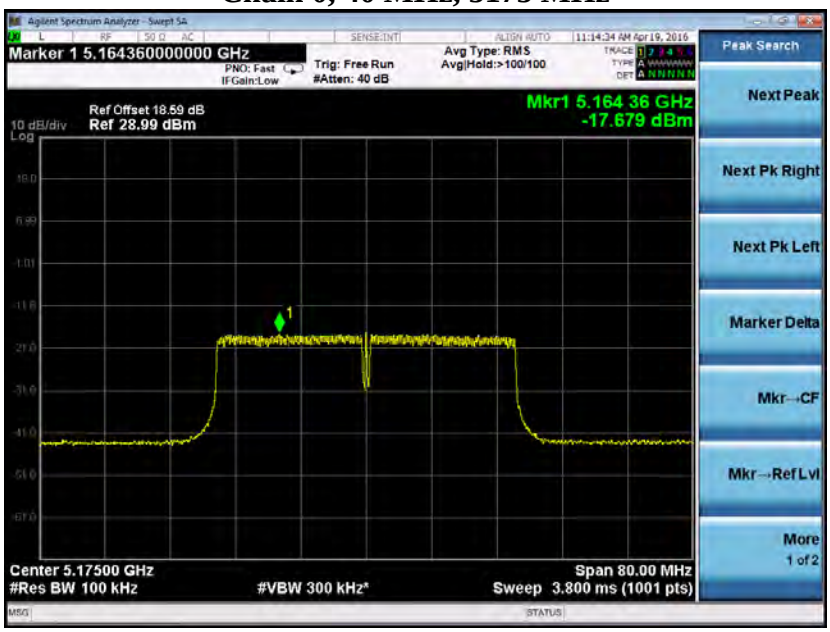
Maximum Power Spectral Density Test Data (Conducted)



Chain 0, 40 MHz, 5175 MHz



Chain 1, 40 MHz, 5175 MHz

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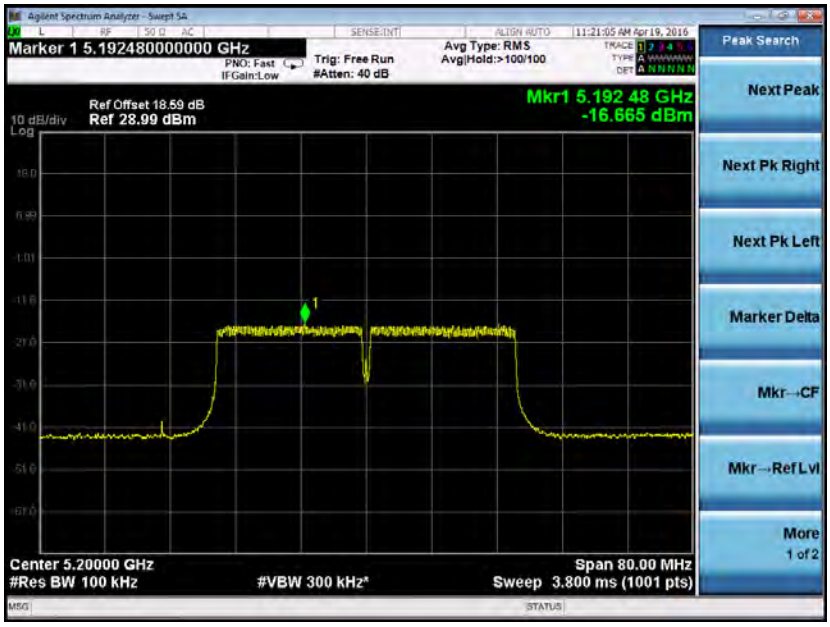
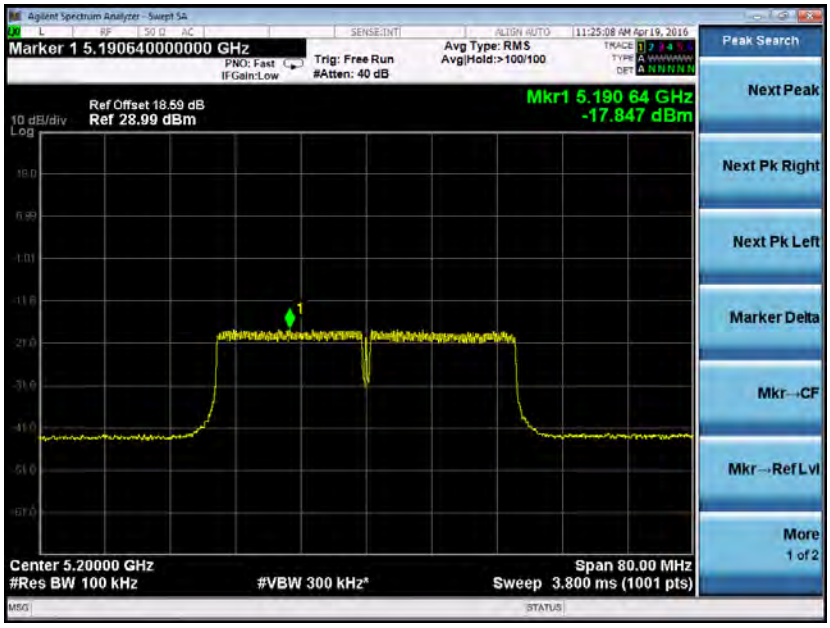
Maximum Power Spectral Density Test Data (Conducted)



Chain 0, 40 MHz, 5200 MHz



Chain 1, 40 MHz, 5200 MHz

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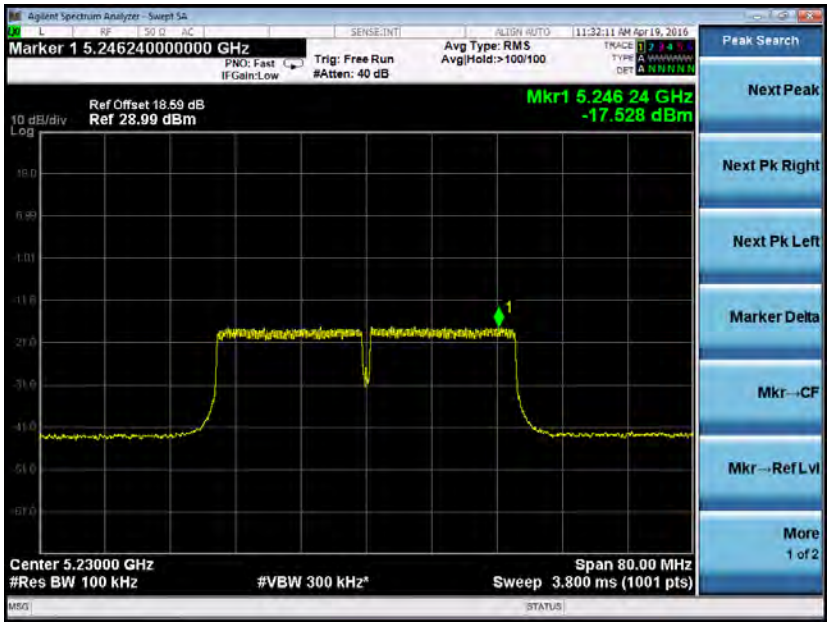
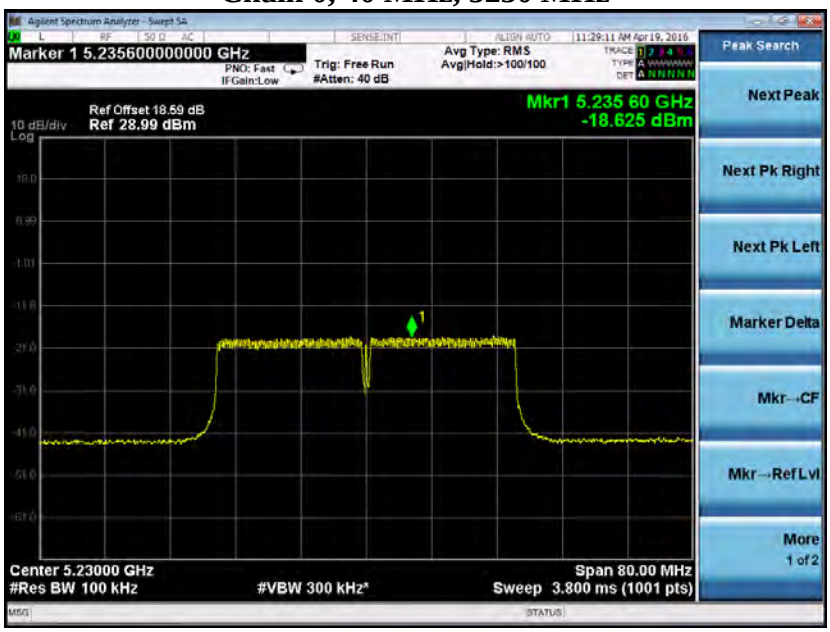
Maximum Power Spectral Density Test Data (Conducted)



Chain 0, 40 MHz, 5230 MHz



Chain 1, 40 MHz, 5230 MHz

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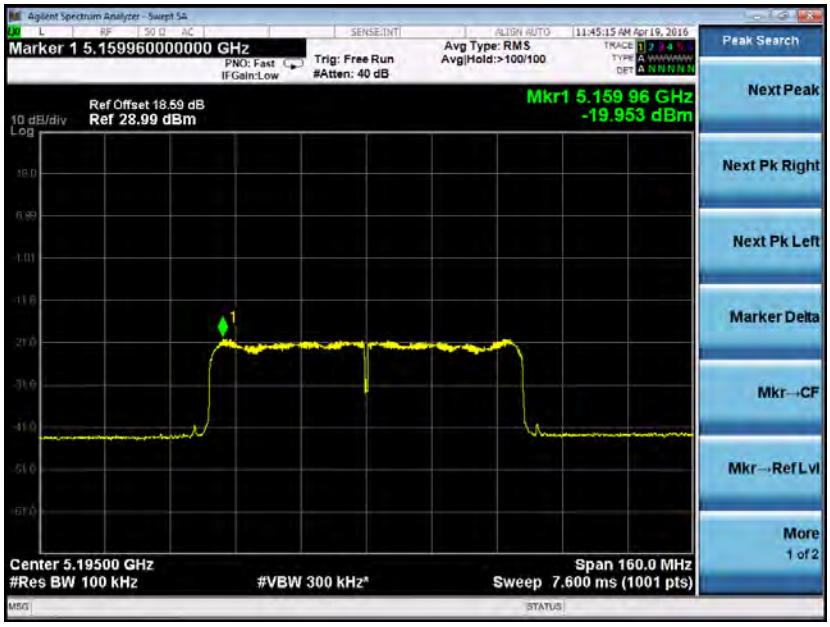
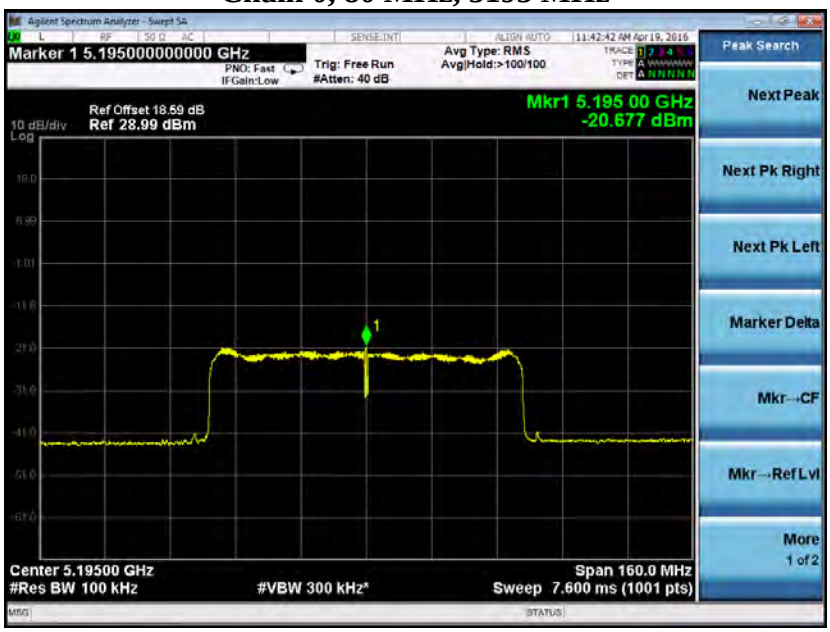
Maximum Power Spectral Density Test Data (Conducted)



Chain 0, 80 MHz, 5195 MHz



Chain 1, 80 MHz, 5195 MHz

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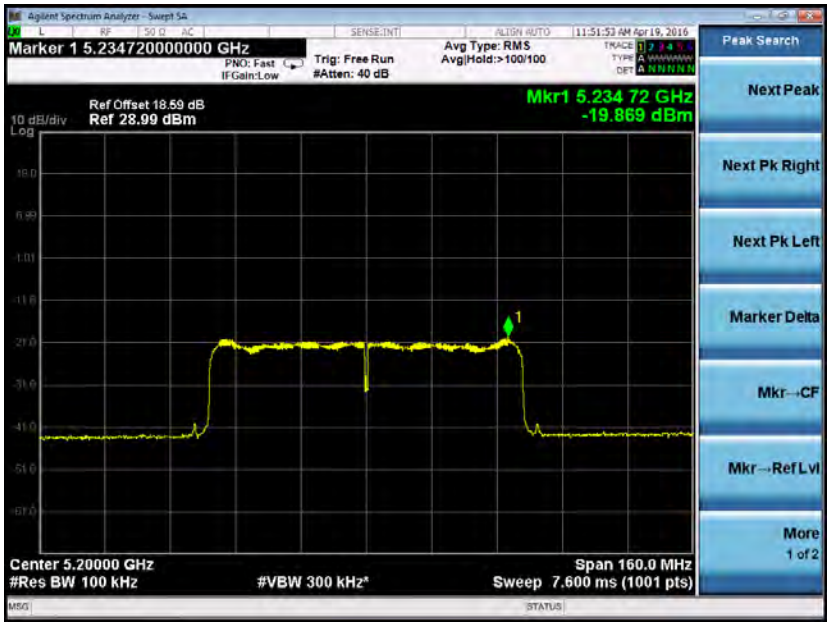
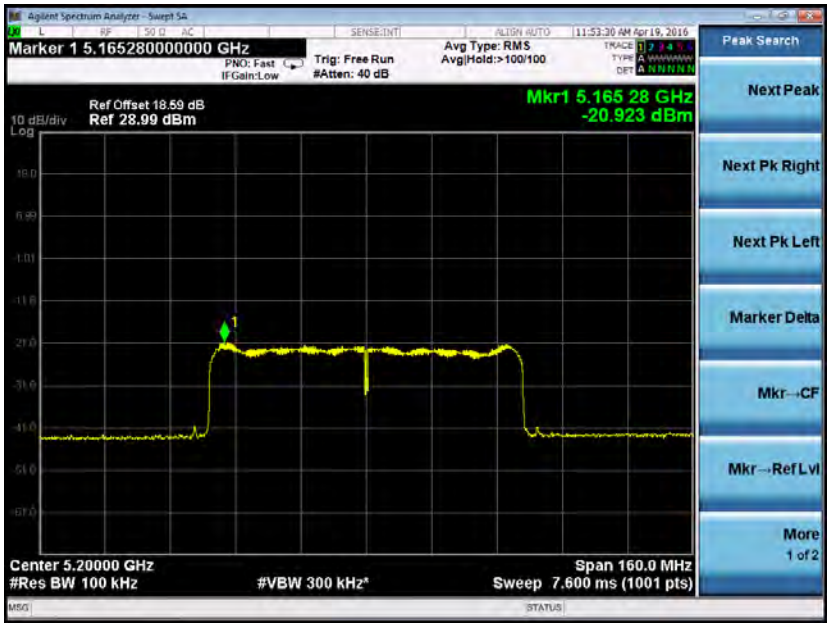
Maximum Power Spectral Density Test Data (Conducted)



Chain 0, 80 MHz, 5200 MHz



Chain 1, 80 MHz, 5200 MHz

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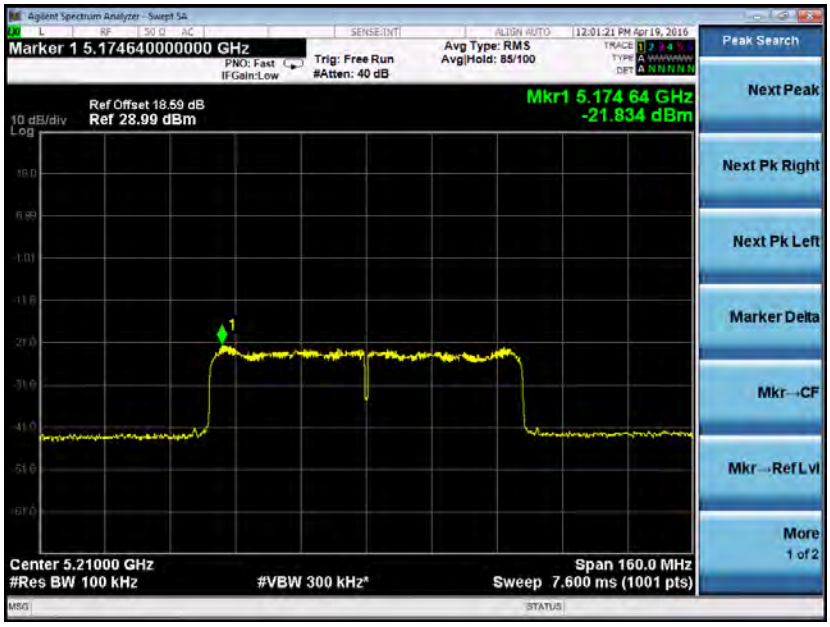
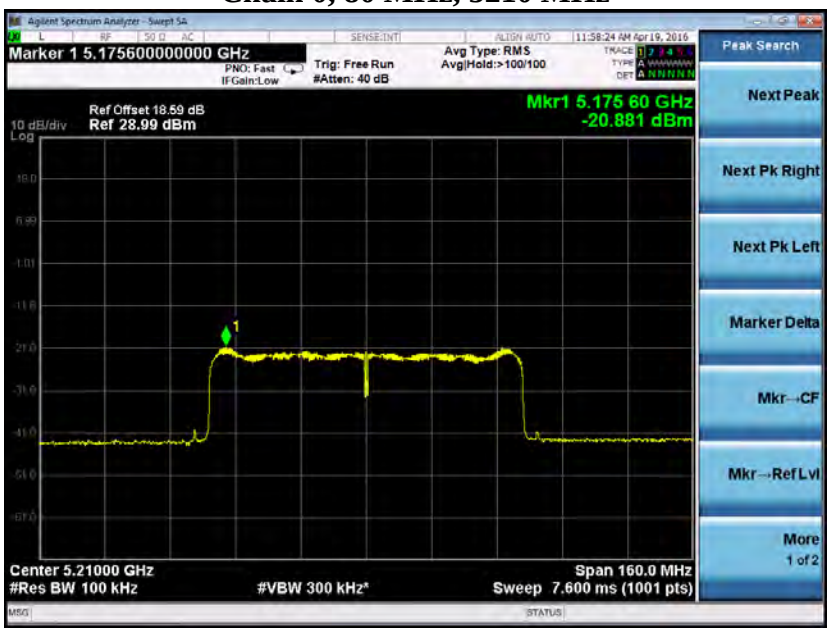
Maximum Power Spectral Density Test Data (Conducted)



Chain 0, 80 MHz, 5210 MHz



Chain 1, 80 MHz, 5210 MHz

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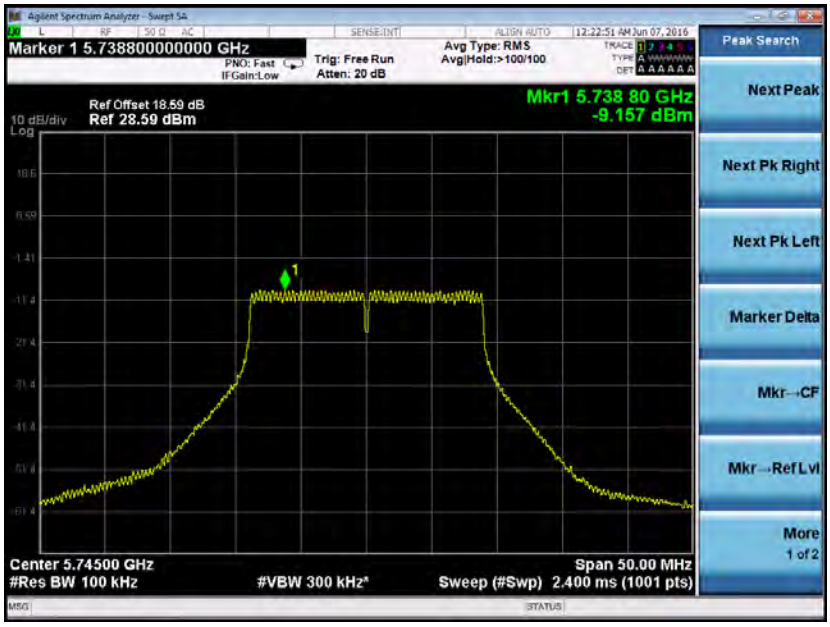
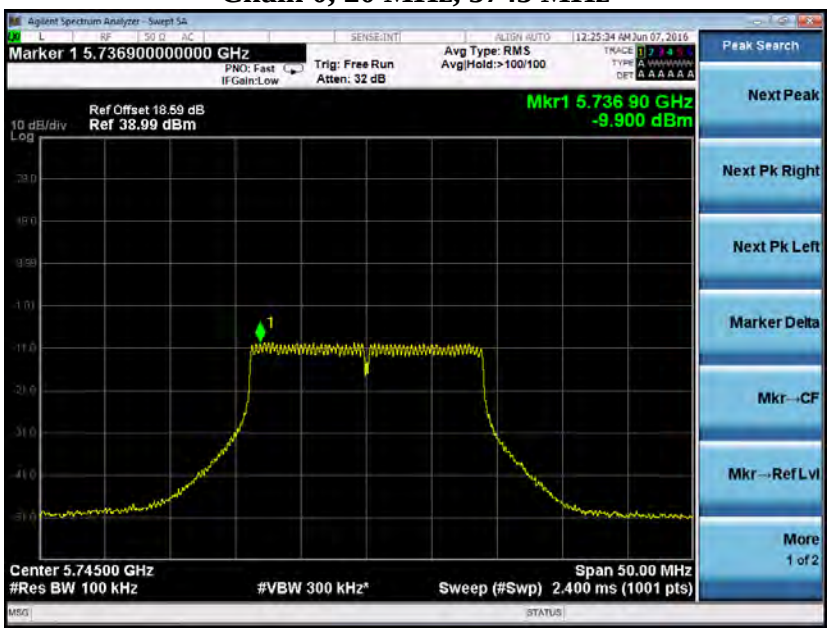
Maximum Power Spectral Density Test Data (Conducted)



Chain 0, 20 MHz, 5745 MHz



Chain 1, 20 MHz, 5745 MHz

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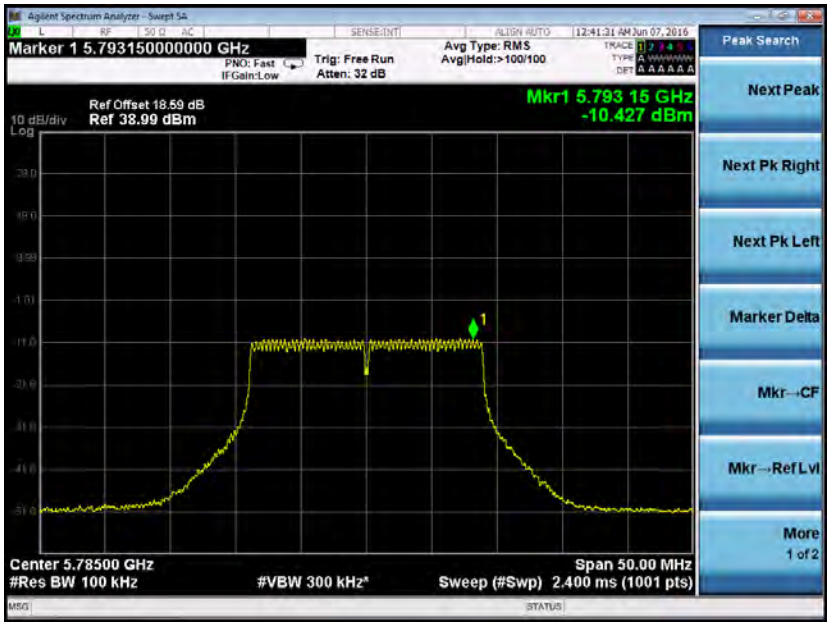
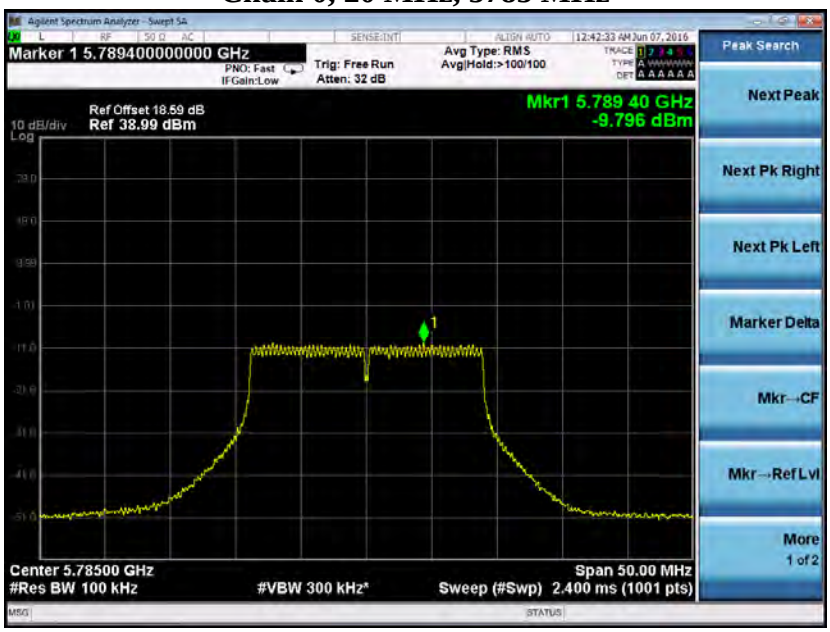
Maximum Power Spectral Density Test Data (Conducted)



Chain 0, 20 MHz, 5785 MHz



Chain 1, 20 MHz, 5785 MHz

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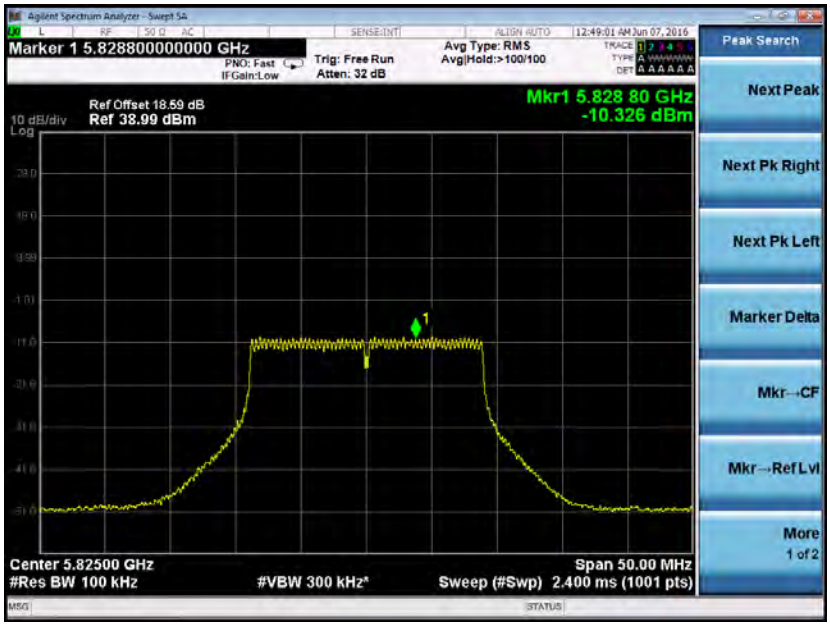
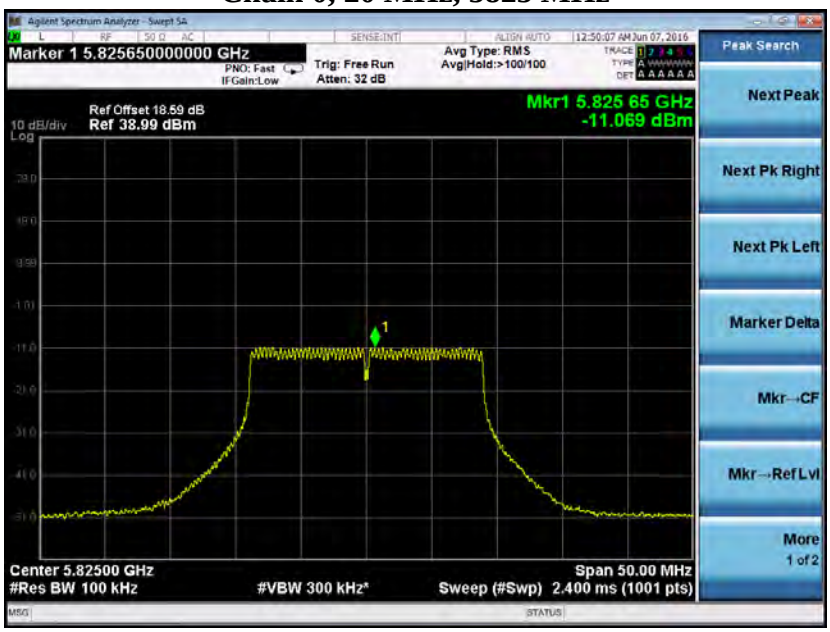
Maximum Power Spectral Density Test Data (Conducted)



Chain 0, 20 MHz, 5825 MHz



Chain 1, 20 MHz, 5825 MHz

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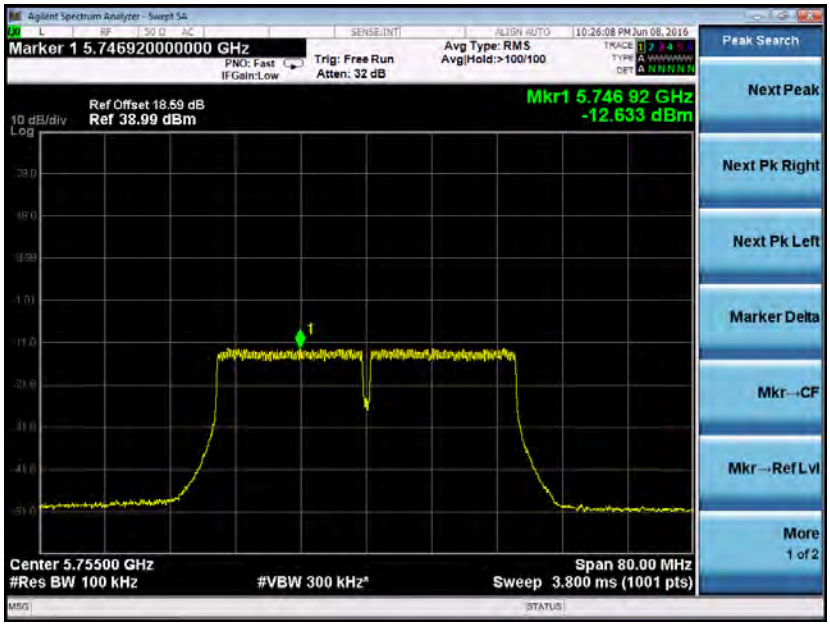
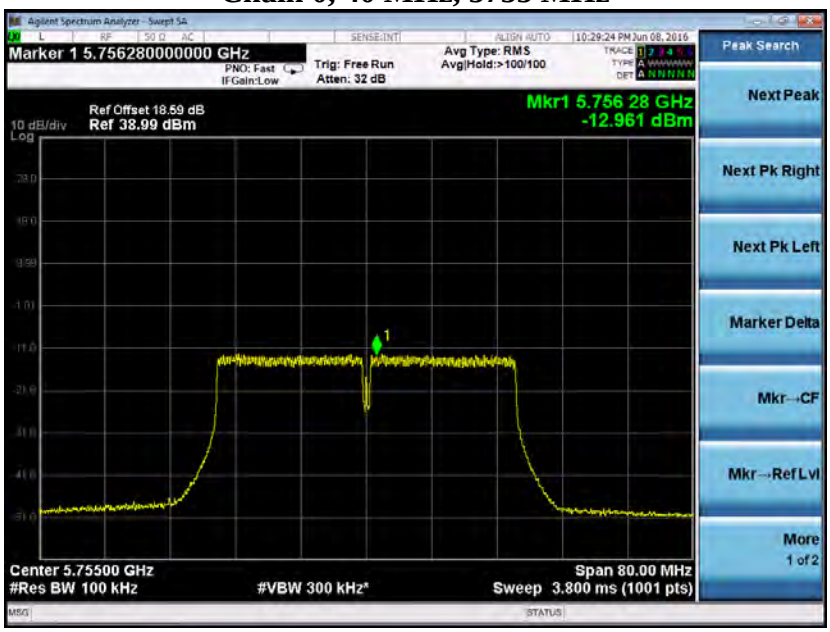
1547 Plymouth Street, Mountain View, CA 94043 Tel: (650) 965-4000 Fax: (650) 965-3000

Maximum Power Spectral Density Test Data (Conducted)



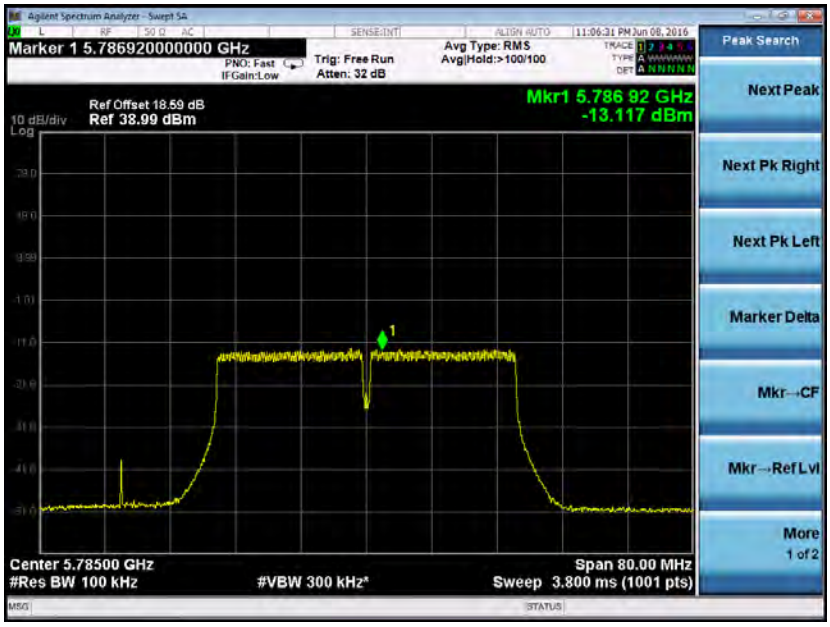
Chain 0, 40 MHz, 5755 MHz



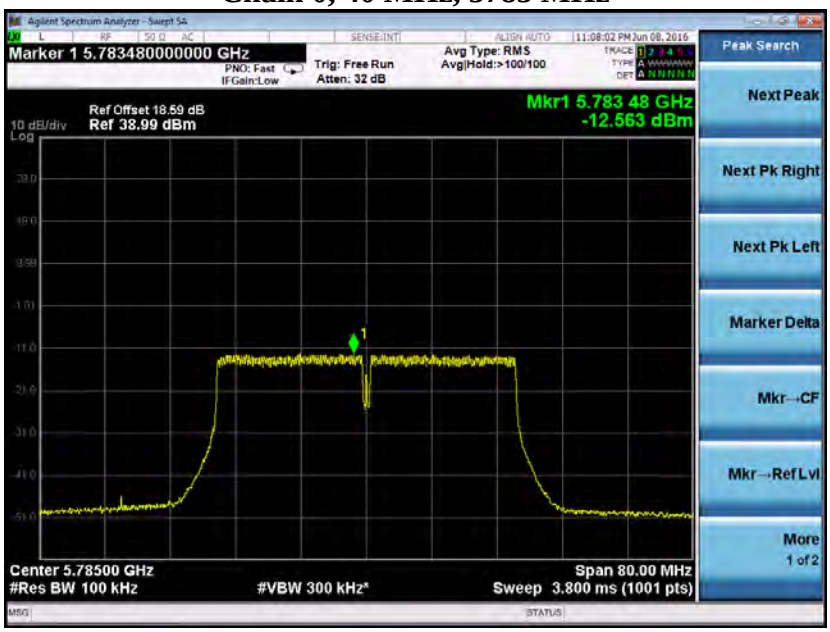
Chain 1, 40 MHz, 5755 MHz

EMT ELECTRO MAGNETIC TEST, INC.
1547 Plymouth Street, Mountain View, CA 94043 Tel: (650) 965-4000 Fax: (650) 965-3000

Maximum Power Spectral Density Test Data (Conducted)



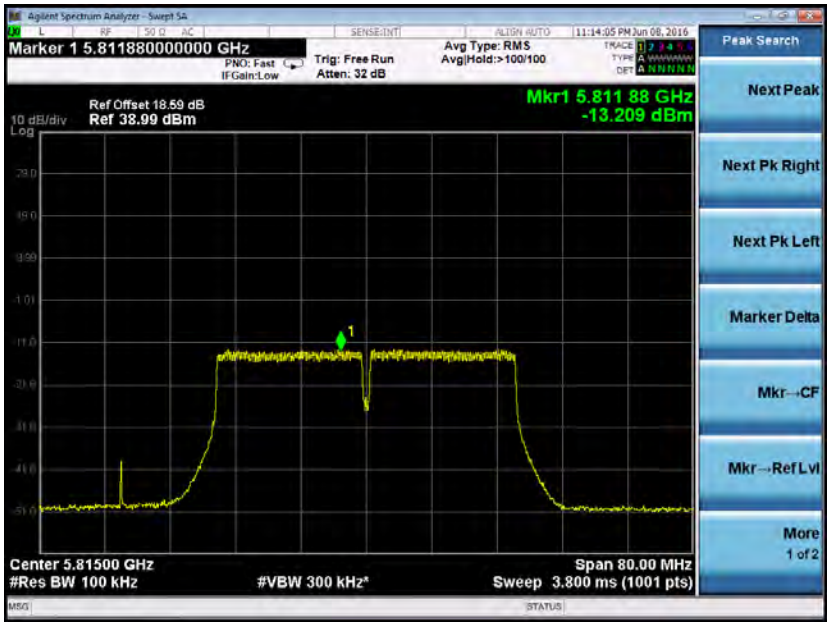
Chain 0, 40 MHz, 5785 MHz



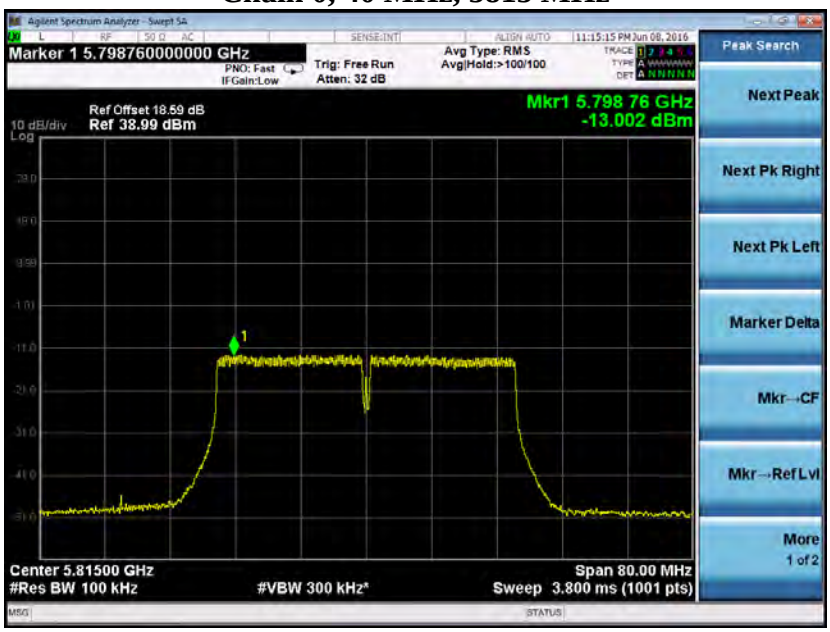
Chain 1, 40 MHz, 5785 MHz

EMT ELECTRO MAGNETIC TEST, INC.
1547 Plymouth Street, Mountain View, CA 94043 Tel: (650) 965-4000 Fax: (650) 965-3000

Maximum Power Spectral Density Test Data (Conducted)



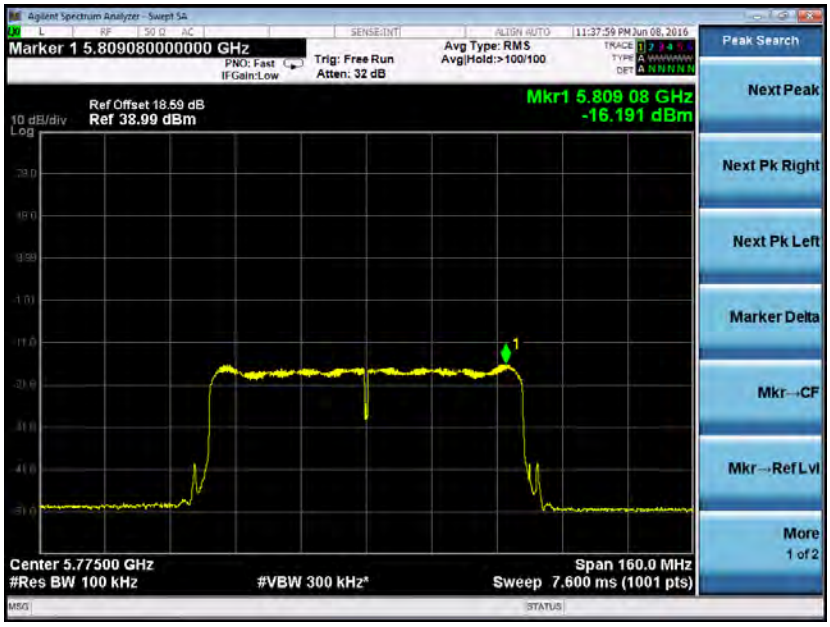
Chain 0, 40 MHz, 5815 MHz



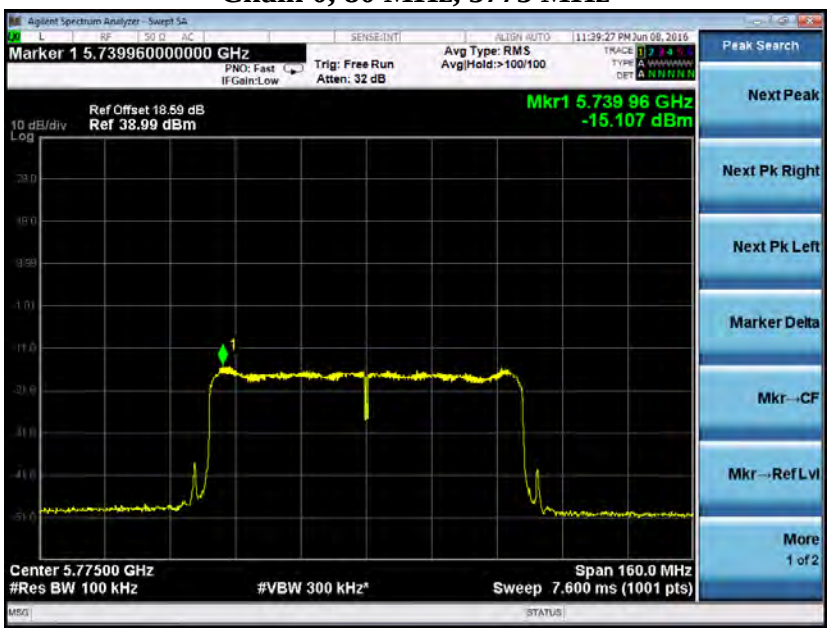
Chain 1, 40 MHz, 5815 MHz

EMT ELECTRO MAGNETIC TEST, INC.
1547 Plymouth Street, Mountain View, CA 94043 Tel: (650) 965-4000 Fax: (650) 965-3000

Maximum Power Spectral Density Test Data (Conducted)



Chain 0, 80 MHz, 5775 MHz



Chain 1, 80 MHz, 5775 MHz

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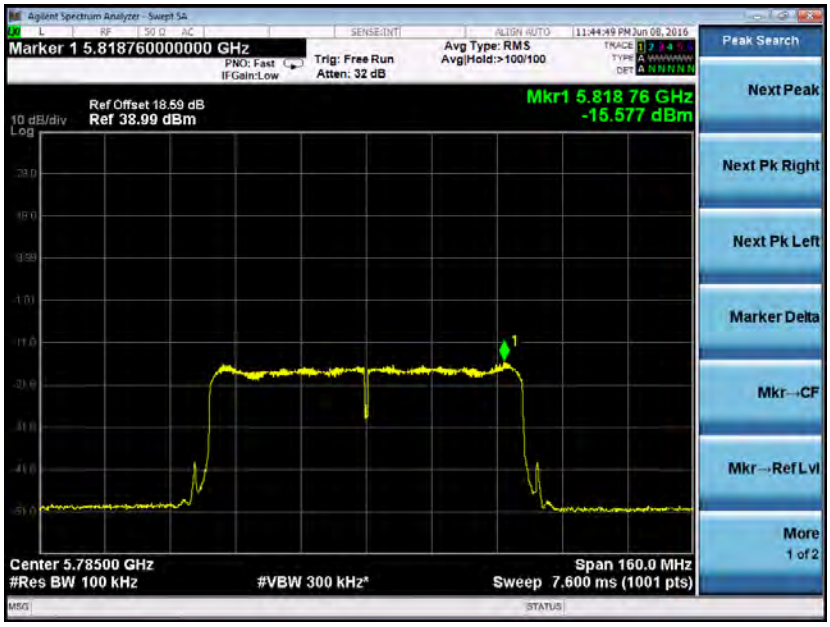
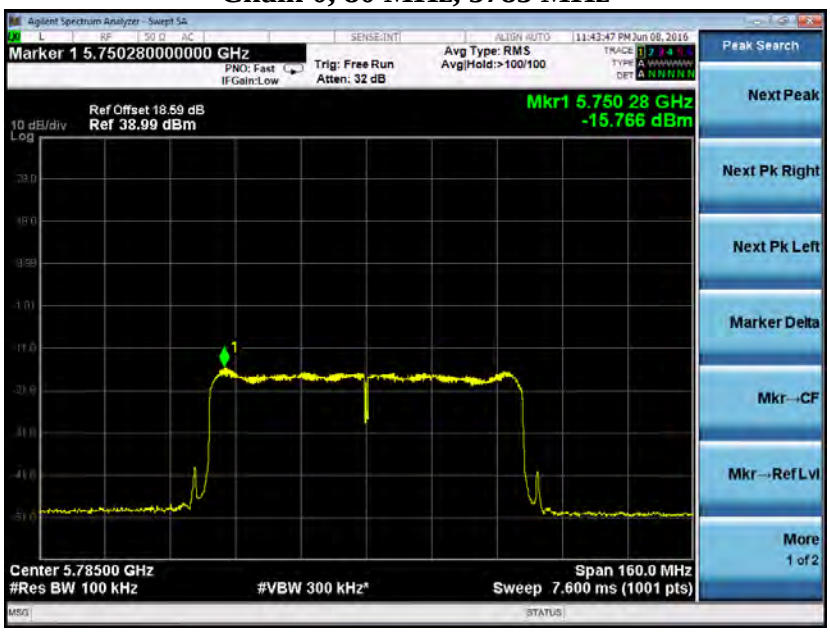
Maximum Power Spectral Density Test Data (Conducted)



Chain 0, 80 MHz, 5785 MHz



Chain 1, 80 MHz, 5785 MHz

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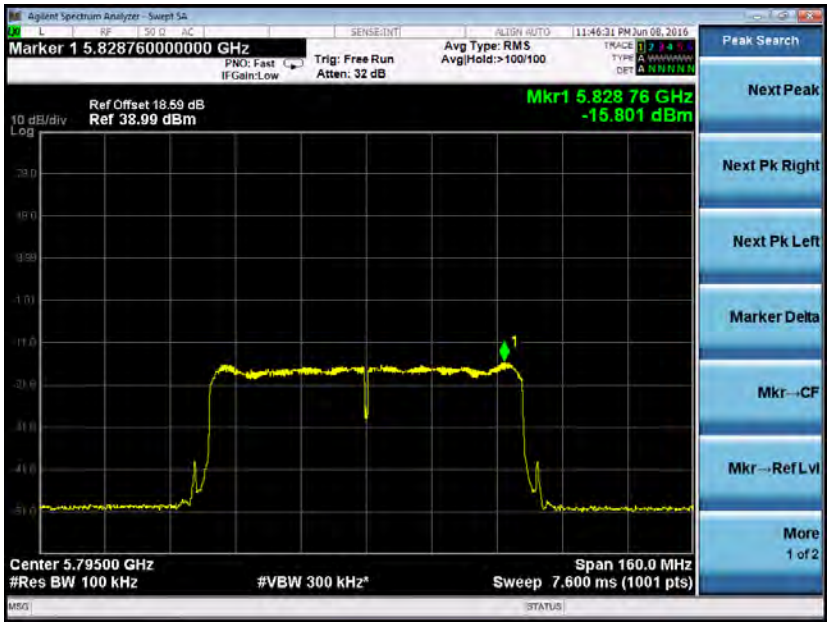
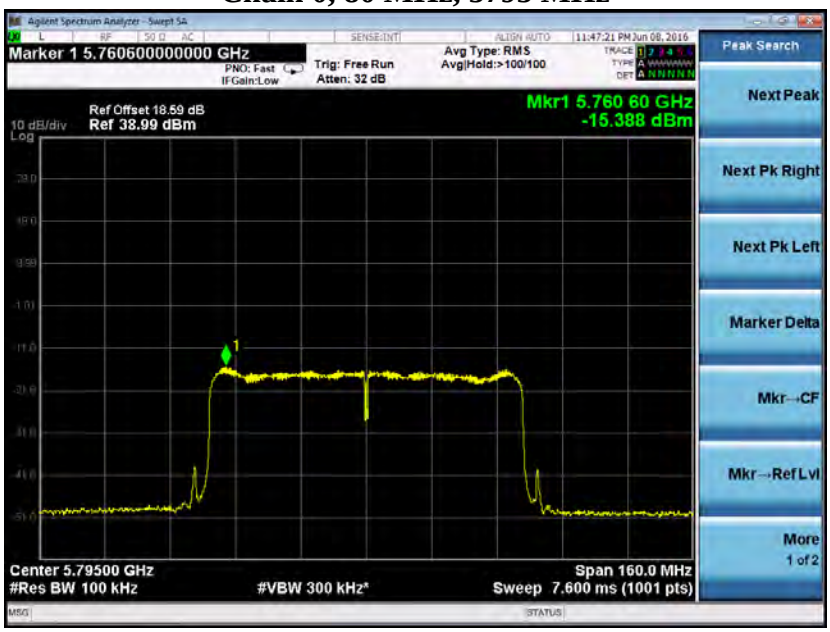
1547 Plymouth Street, Mountain View, CA 94043 Tel: (650) 965-4000 Fax: (650) 965-3000

Maximum Power Spectral Density Test Data (Conducted)



Chain 0, 80 MHz, 5795 MHz



Chain 1, 80 MHz, 5795 MHz

EMT ELECTRO MAGNETIC TEST, INC.
1547 Plymouth Street, Mountain View, CA 94043 Tel: (650) 965-4000 Fax: (650) 965-3000

Maximum Power Spectral Density
(Bandwidth Correction Factor Already Added to Analyzer Offset)

Company:	Mimosa Networks	**Test Date:**	4/4/16
EUT Name:	Point to Multipoint Device	**Test Engineer:**	George Hsu
Model:	B5C	**Test Result:**	PASS
Operating Mode:	TX Mode		

Mode	Test CH	Frequency (MHz)	Chain 2 PSD (dBm)	Chain 3 PSD (dBm)	Total PSD (dBm)	Limit (dBm)***	Conclusion
20 MHz	33	5165	-13.78	-14.14	-10.95	≤ -2 /MHz	Pass
	40	5200	-14.00	-14.77	-11.36	≤ -2 /MHz	Pass
	48	5240	-14.04	-14.61	-11.30	≤ -2 /MHz	Pass
40 MHz	35	5175	-16.92	-17.27	-14.08	≤ -2 /MHz	Pass
	40	5200	-17.29	-17.98	-14.61	≤ -2 /MHz	Pass
	46	5230	-17.21	-18.20	-14.67	≤ -2 /MHz	Pass
80 MHz	39	5195	-20.00	-20.84	-17.39	≤ -2 /MHz	Pass
	40	5200	-19.96	-20.64	-17.28	≤ -2 /MHz	Pass
	42	5210	-21.71	-20.61	-18.12	≤ -2 /MHz	Pass
20 MHz	149	5745	-9.230	-8.691	-5.94	≤ 11 /500 KHz	Pass
	157	5785	-9.810	-9.297	-6.54	≤ 11 /500 KHz	Pass
	165	5825	-10.164	-10.337	-7.24	≤ 11 /500 KHz	Pass
40 MHz	151	5755	-13.051	-13.840	-10.42	≤ 11 /500 KHz	Pass
	157	5785	-12.142	-12.857	-9.47	≤ 11 /500 KHz	Pass
	163	5815	-12.380	-12.015	-9.18	≤ 11 /500 KHz	Pass
80 MHz	155	5775	-14.473	-15.679	-12.02	≤ 11 /500 KHz	Pass
	157	5785	-15.206	-15.766	-12.47	≤ 11 /500 KHz	Pass
	159	5795	-15.284	-15.050	-12.16	≤ 11 /500 KHz	Pass

Test Equipment: Please refer to section 5.2

***Limit Derivation:
(Original Limit) – [(EUT Antenna Gain)- (Antenna Gain Limit)] = Limit
(30dBm) – [(25dBi) – (6dBi)] =Limit (UNII-3)
11 dBm = Limit (UNII-3)
(17dBm) – [(25dBi) – (6dBi)] =Limit (UNII-1)
-2 dBm = Limit (UNII-1)

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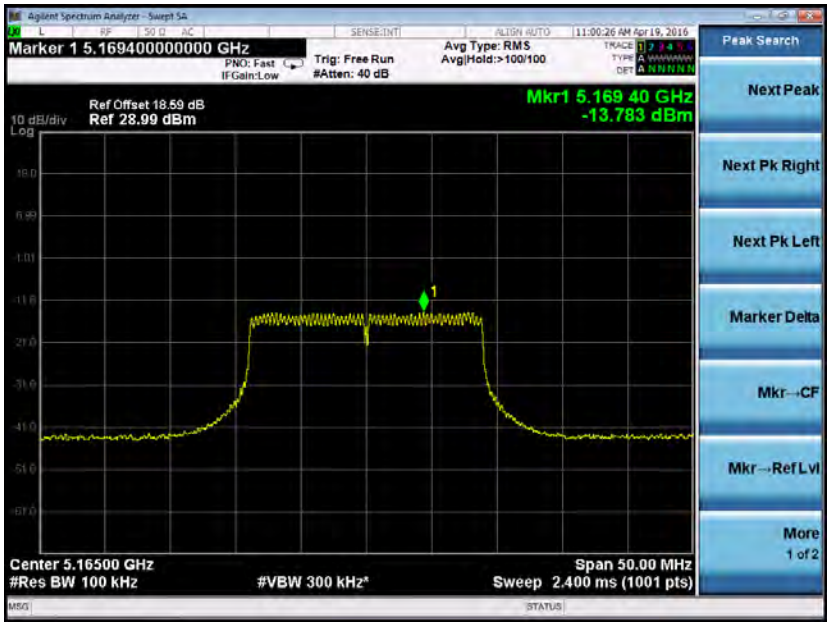
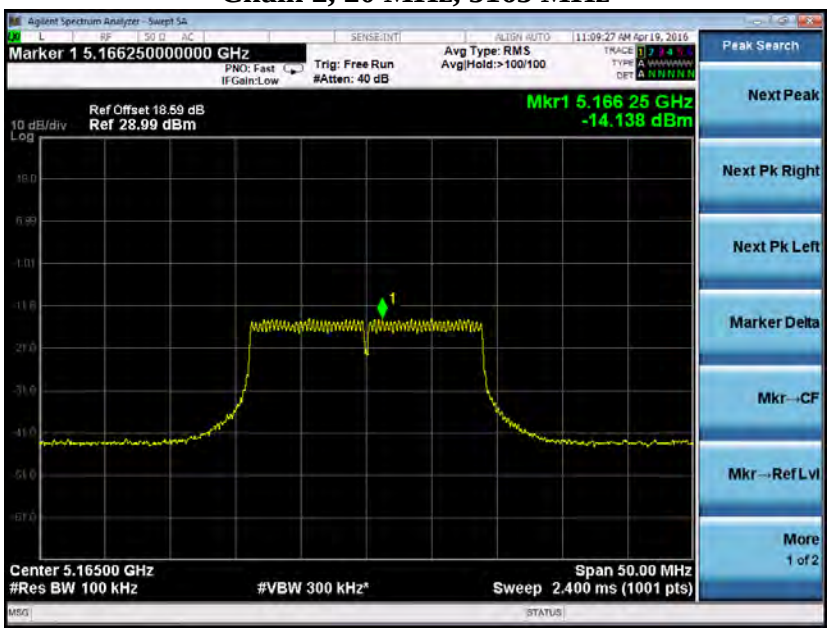
Maximum Power Spectral Density Test Data (Conducted)



Chain 2, 20 MHz, 5165 MHz



Chain 3, 20 MHz, 5165 MHz

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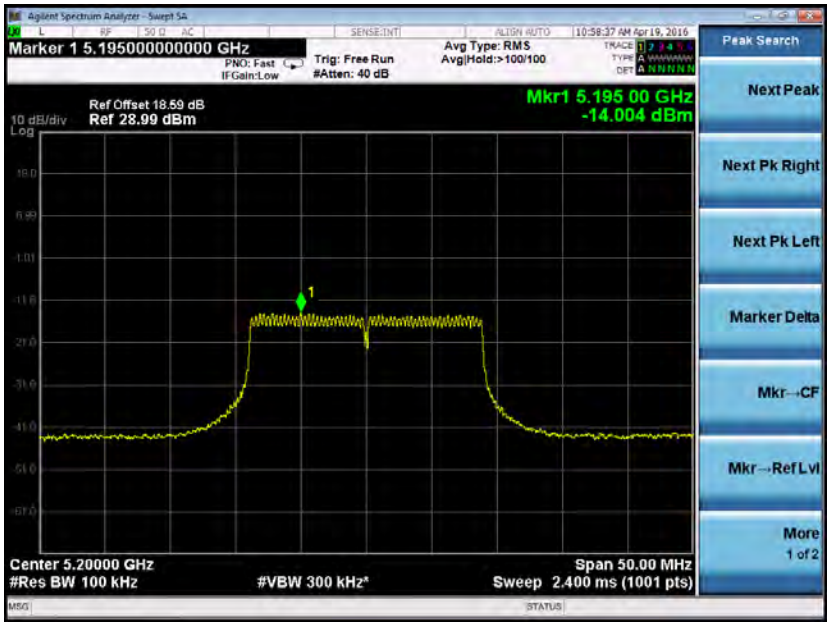
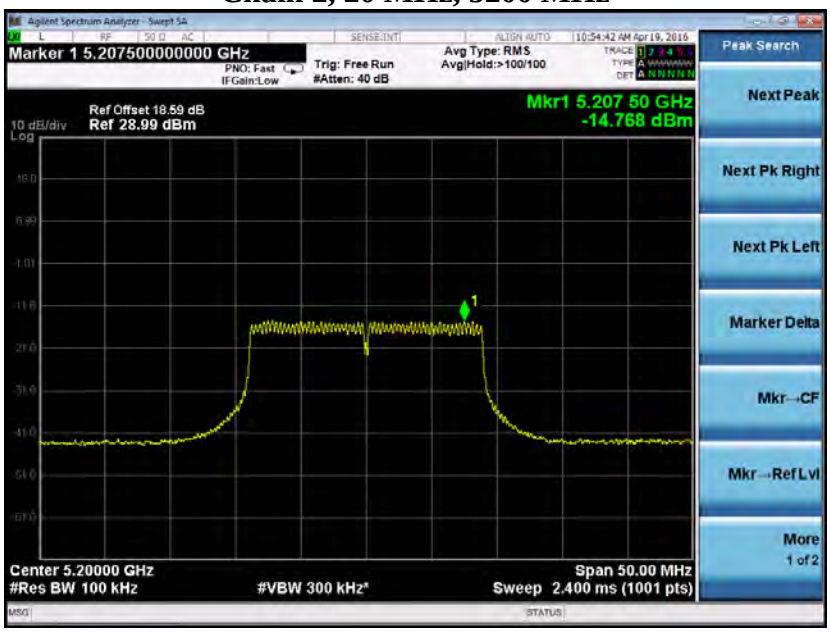
Maximum Power Spectral Density Test Data (Conducted)



Chain 2, 20 MHz, 5200 MHz



Chain 3, 20 MHz, 5200 MHz

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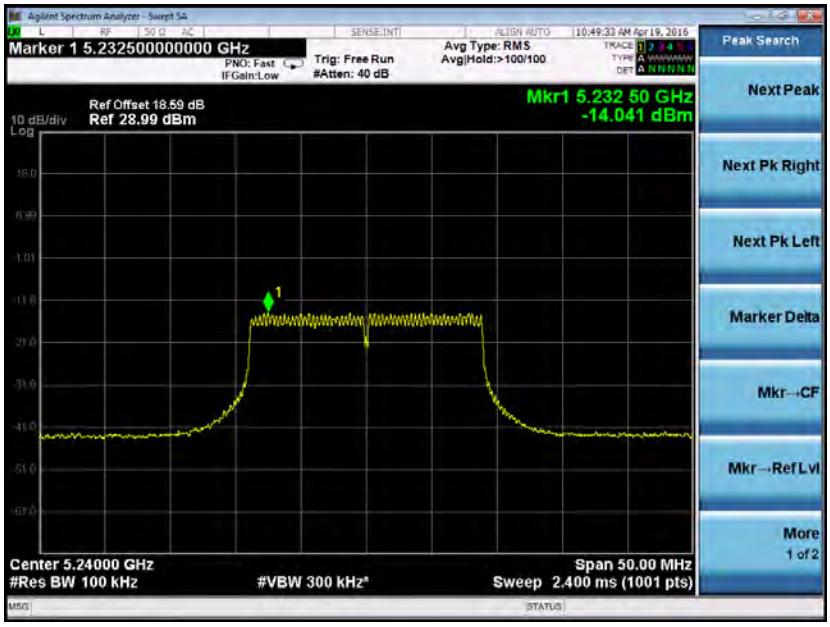
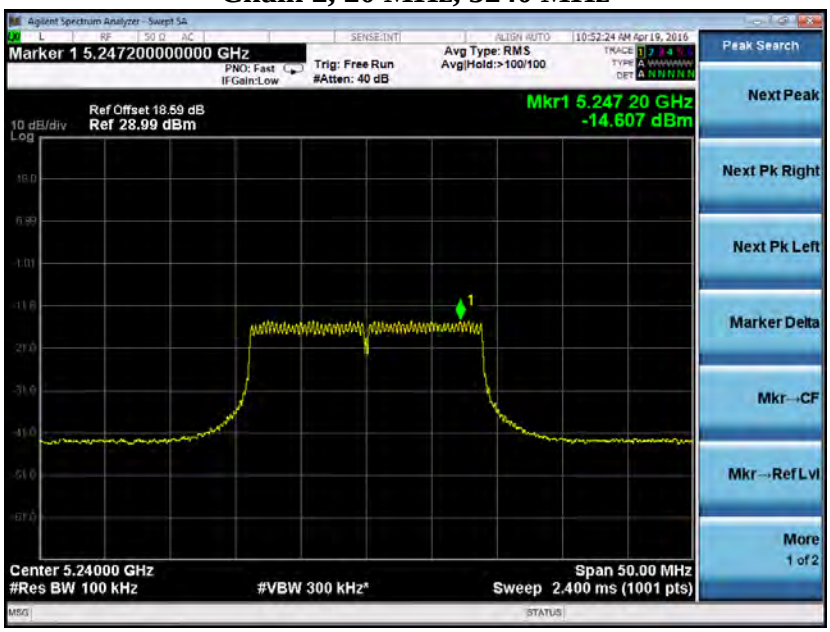
Maximum Power Spectral Density Test Data (Conducted)



Chain 2, 20 MHz, 5240 MHz



Chain 3, 20 MHz, 5240 MHz

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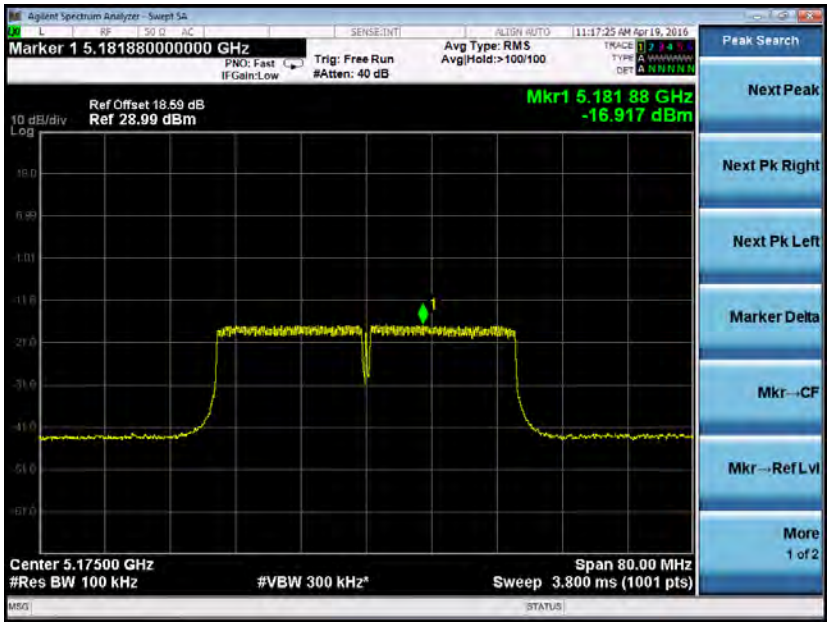
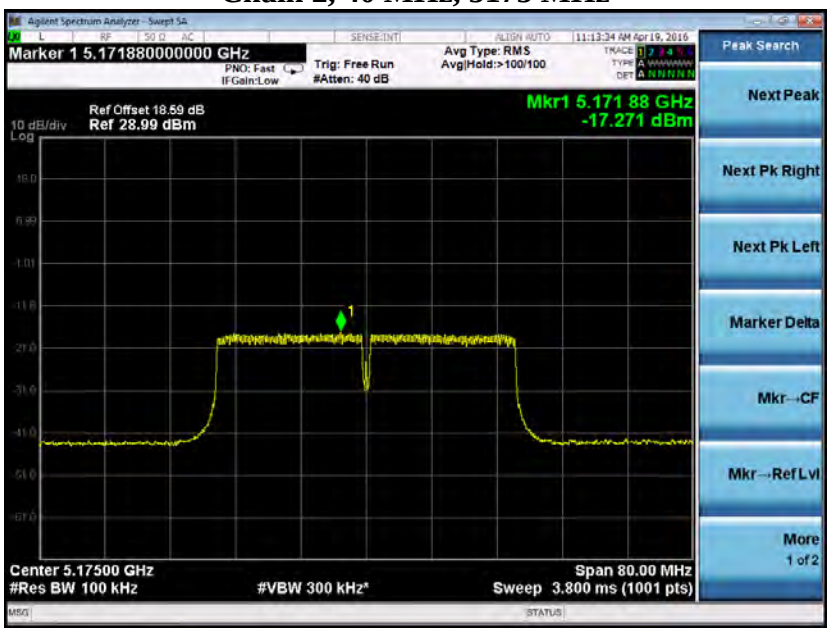
1547 Plymouth Street, Mountain View, CA 94043 Tel: (650) 965-4000 Fax: (650) 965-3000

Maximum Power Spectral Density Test Data (Conducted)



Chain 2, 40 MHz, 5175 MHz



Chain 3, 40 MHz, 5175 MHz

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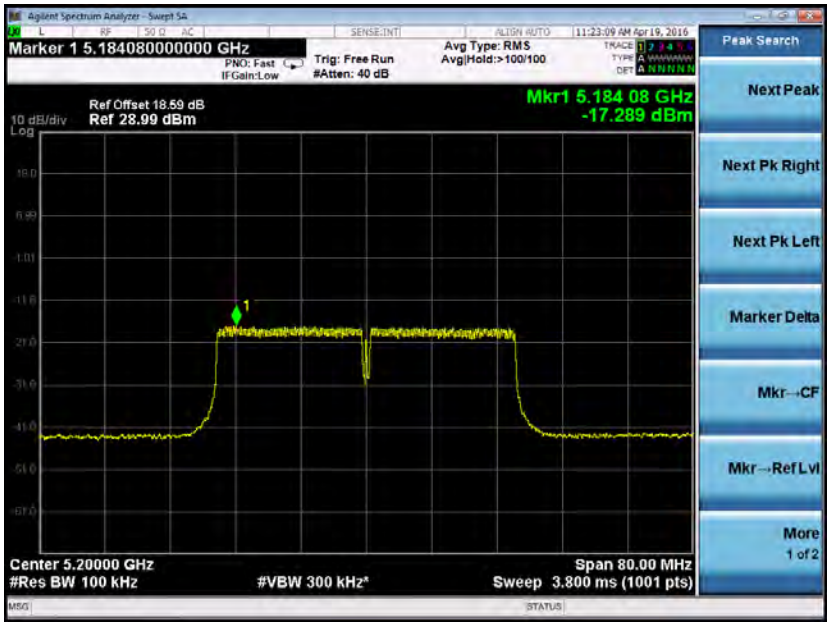
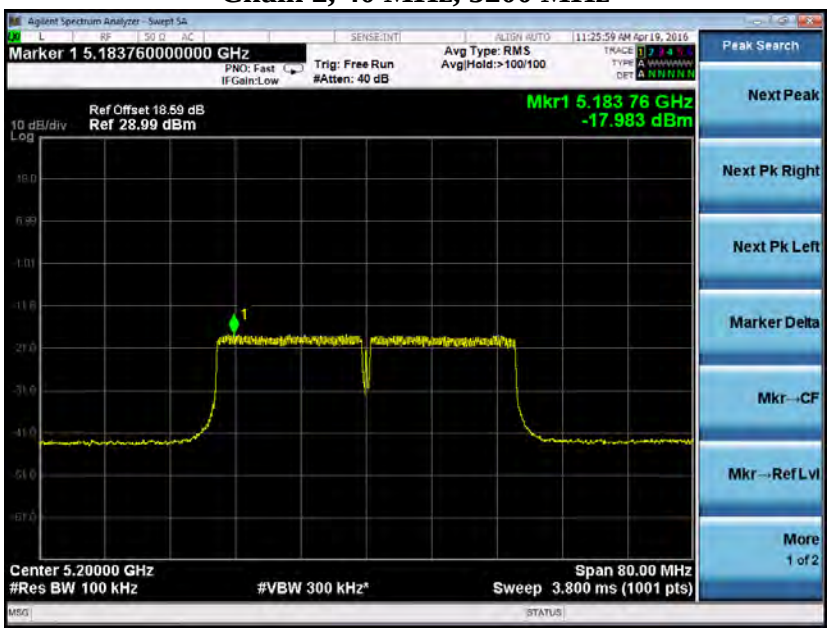
1547 Plymouth Street, Mountain View, CA 94043 Tel: (650) 965-4000 Fax: (650) 965-3000

Maximum Power Spectral Density Test Data (Conducted)



Chain 2, 40 MHz, 5200 MHz



Chain 3, 40 MHz, 5200 MHz

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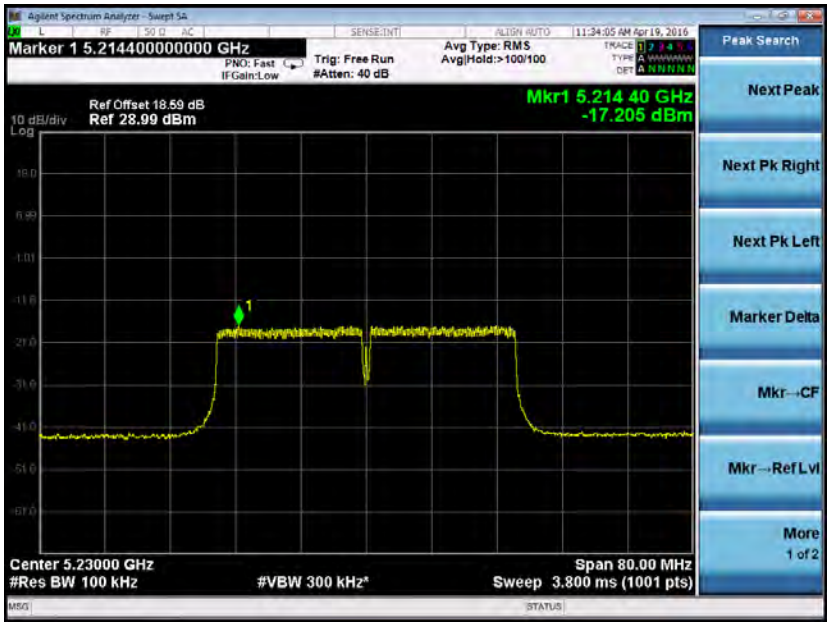
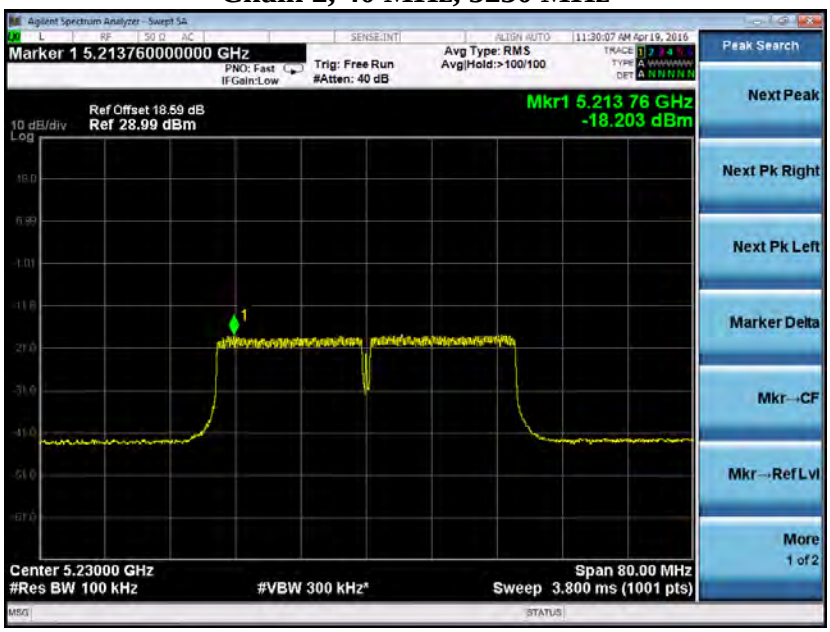
Maximum Power Spectral Density Test Data (Conducted)



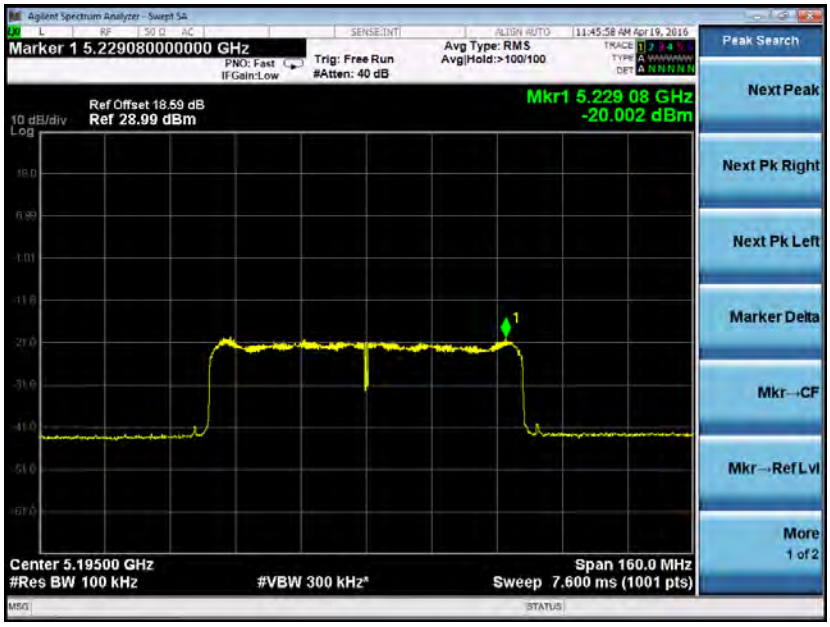
Chain 2, 40 MHz, 5230 MHz



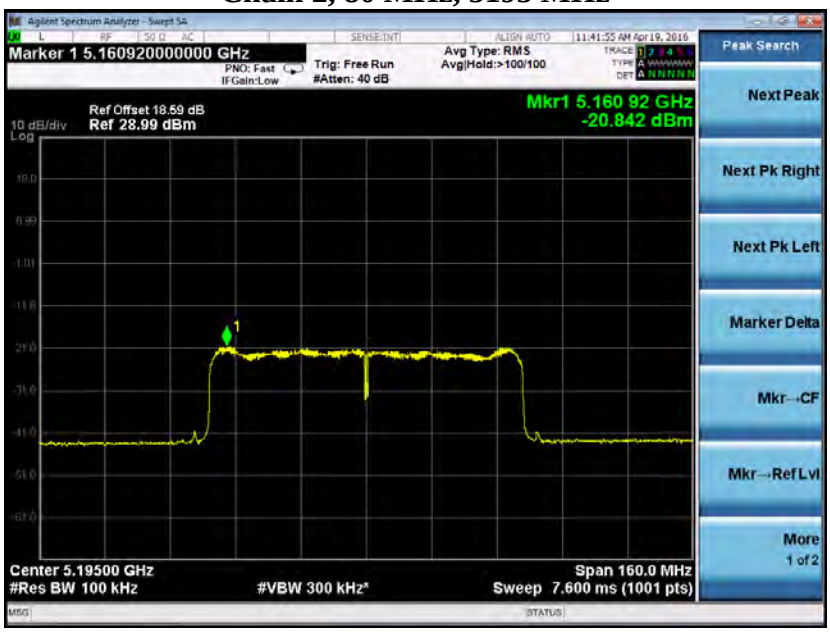
Chain 3, 40 MHz, 5230 MHz

EMT ELECTRO MAGNETIC TEST, INC.
1547 Plymouth Street, Mountain View, CA 94043 Tel: (650) 965-4000 Fax: (650) 965-3000

Maximum Power Spectral Density Test Data (Conducted)



Chain 2, 80 MHz, 5195 MHz



Chain 3, 80 MHz, 5195 MHz

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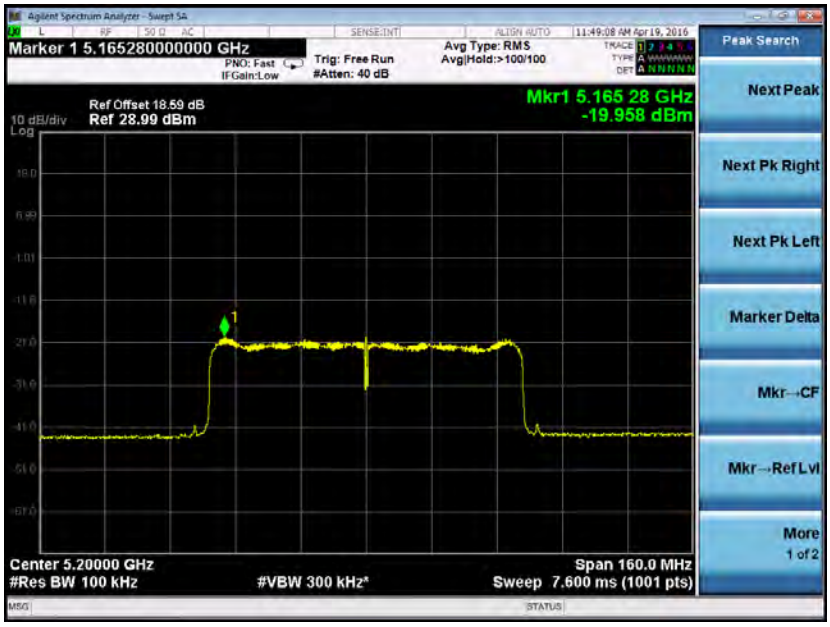
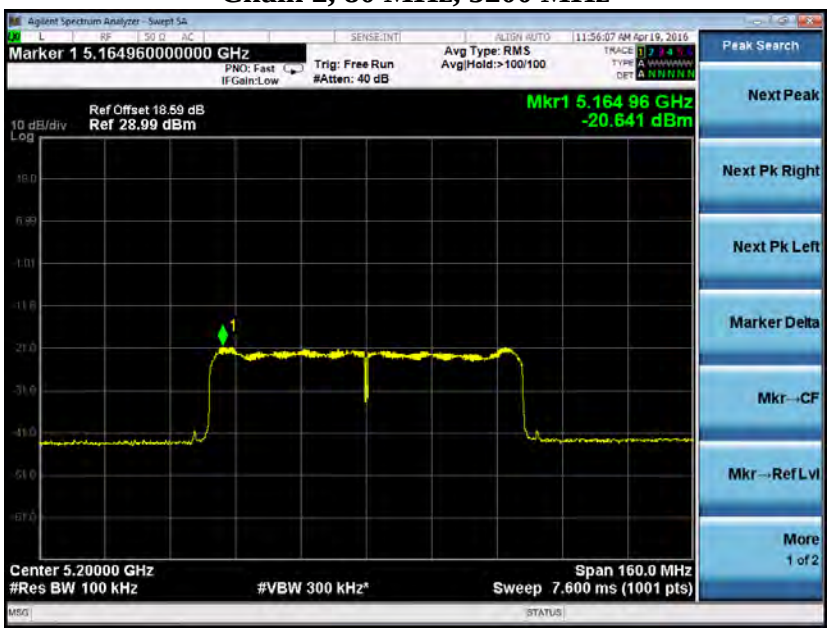
Maximum Power Spectral Density Test Data (Conducted)



Chain 2, 80 MHz, 5200 MHz



Chain 3, 80 MHz, 5200 MHz

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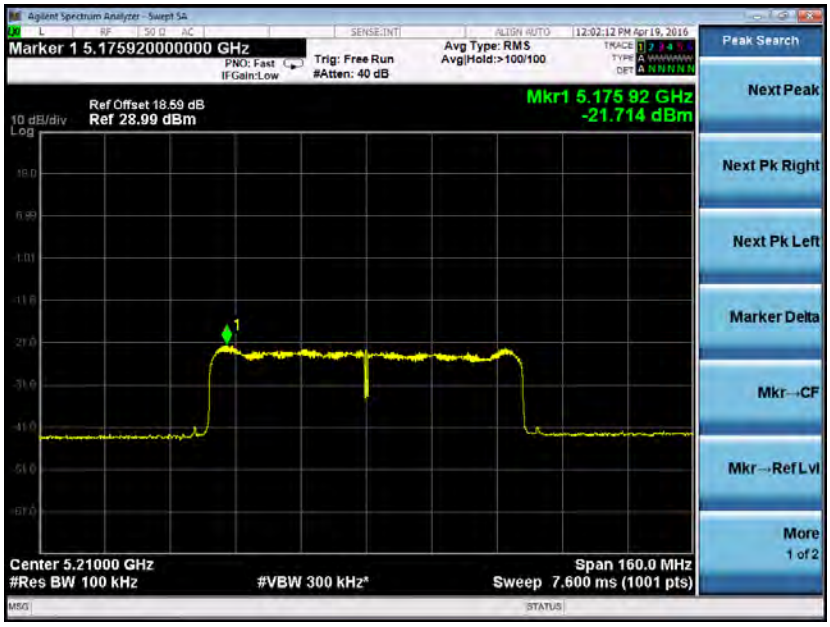
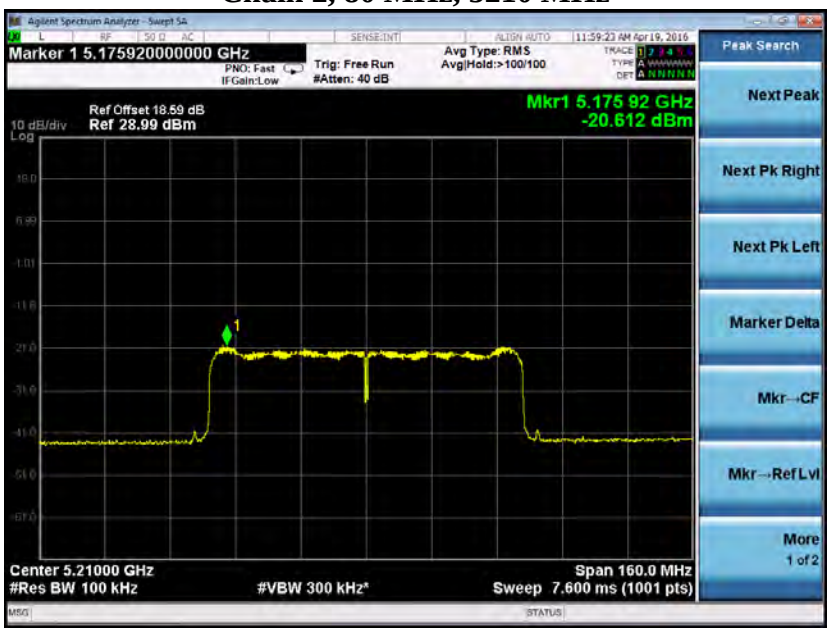
Maximum Power Spectral Density Test Data (Conducted)



Chain 2, 80 MHz, 5210 MHz



Chain 3, 80 MHz, 5210 MHz

EMT ELECTRO MAGNETIC TEST, INC.
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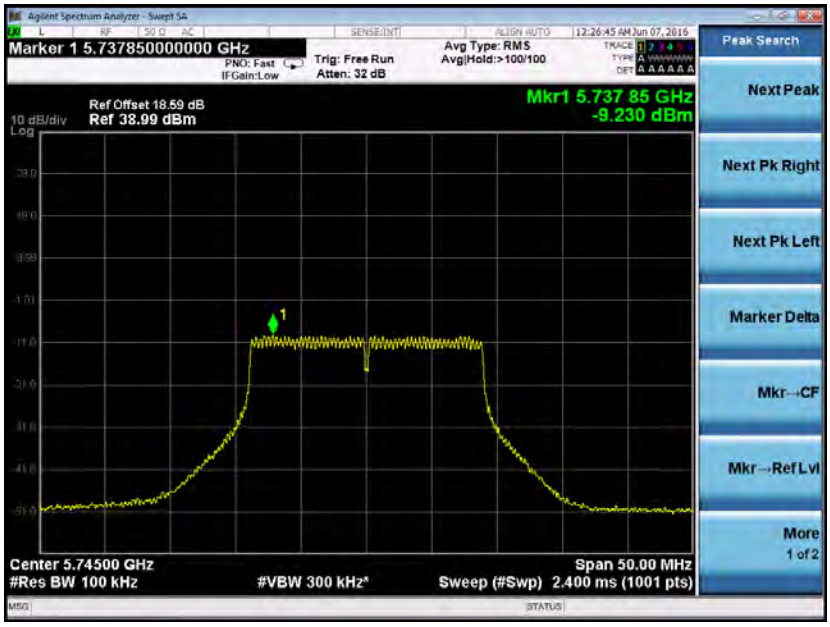
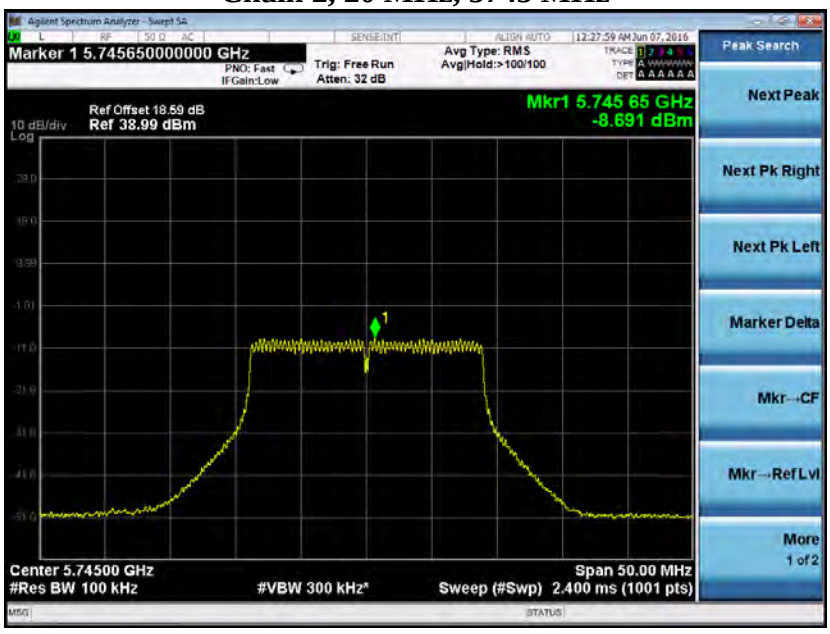
Maximum Power Spectral Density Test Data (Conducted)



Chain 2, 20 MHz, 5745 MHz



Chain 3, 20 MHz, 5745 MHz

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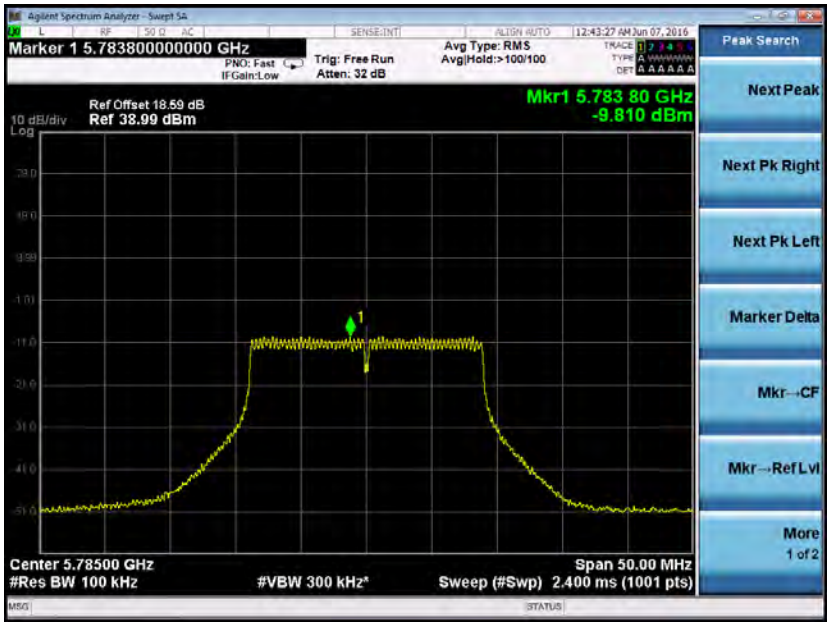
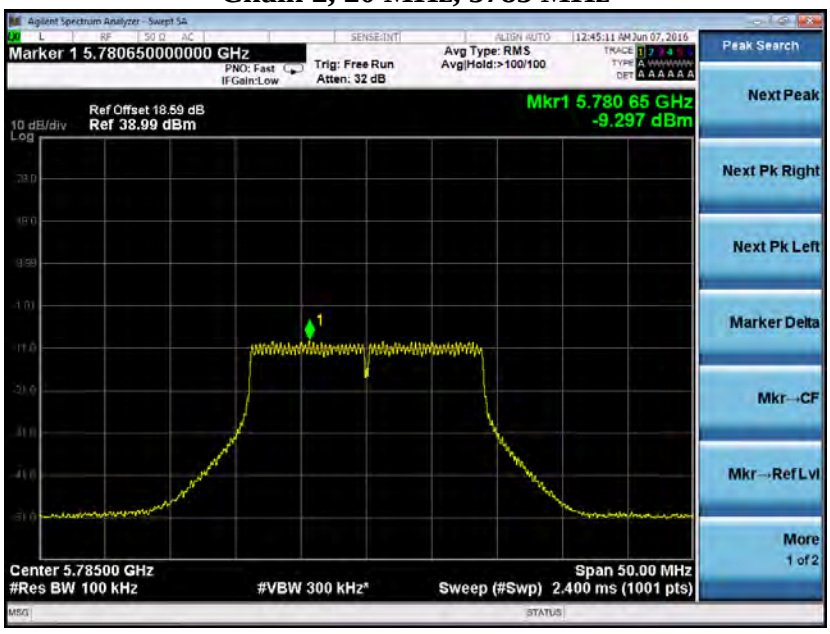
Maximum Power Spectral Density Test Data (Conducted)



Chain 2, 20 MHz, 5785 MHz



Chain 3, 20 MHz, 5785 MHz

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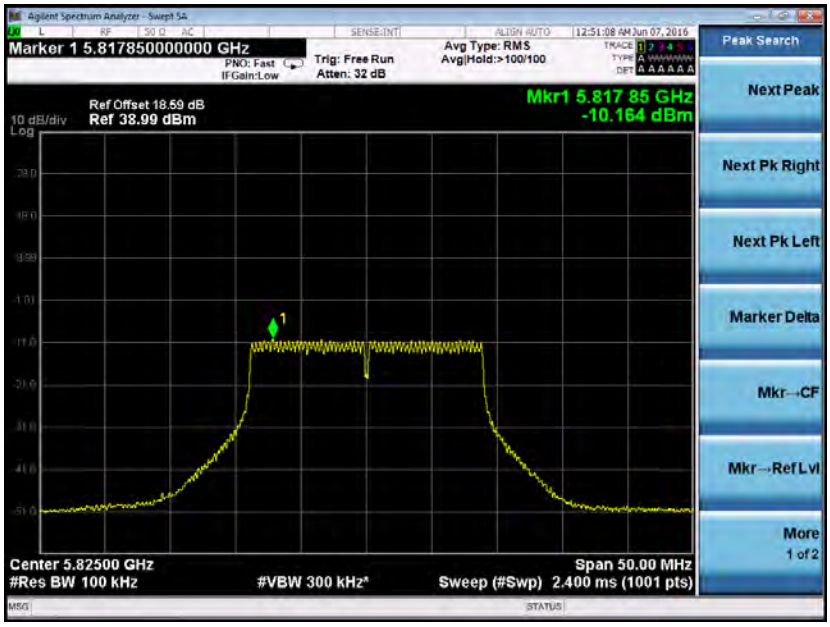
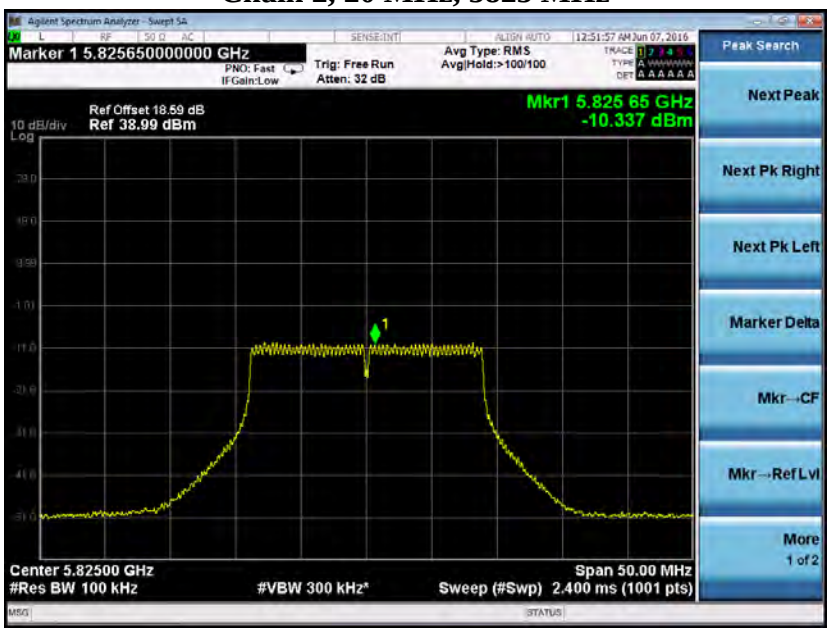
Maximum Power Spectral Density Test Data (Conducted)



Chain 2, 20 MHz, 5825 MHz



Chain 3, 20 MHz, 5825 MHz

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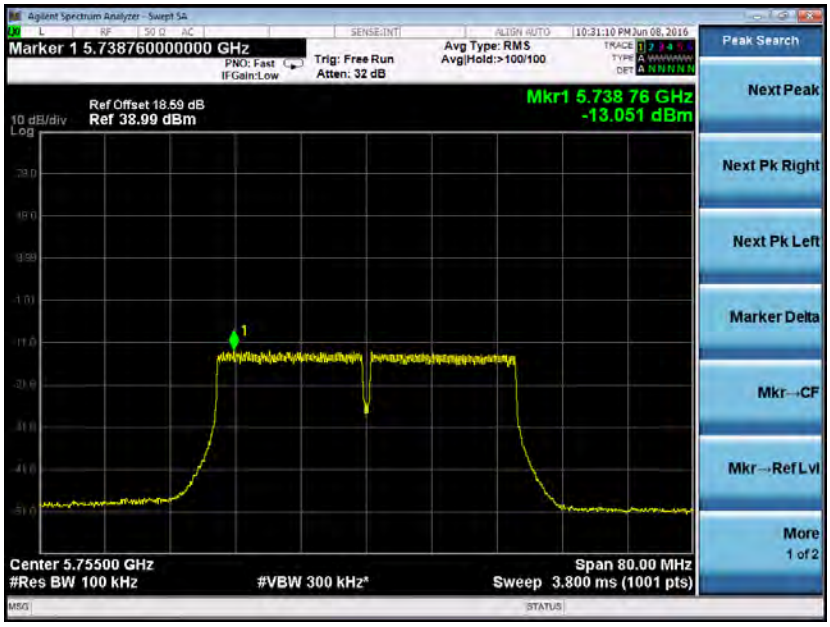
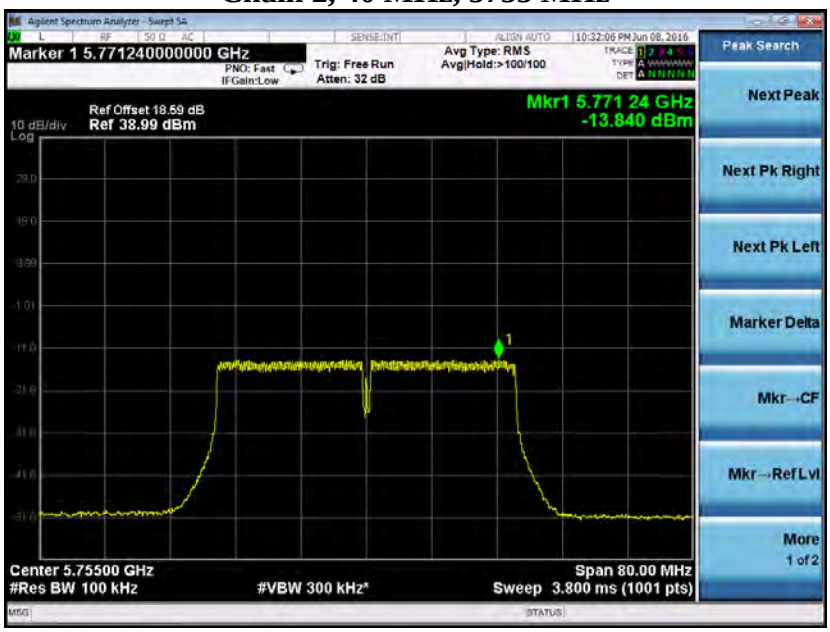
1547 Plymouth Street, Mountain View, CA 94043 Tel: (650) 965-4000 Fax: (650) 965-3000

Maximum Power Spectral Density Test Data (Conducted)



Chain 2, 40 MHz, 5755 MHz



Chain 3, 40 MHz, 5755 MHz

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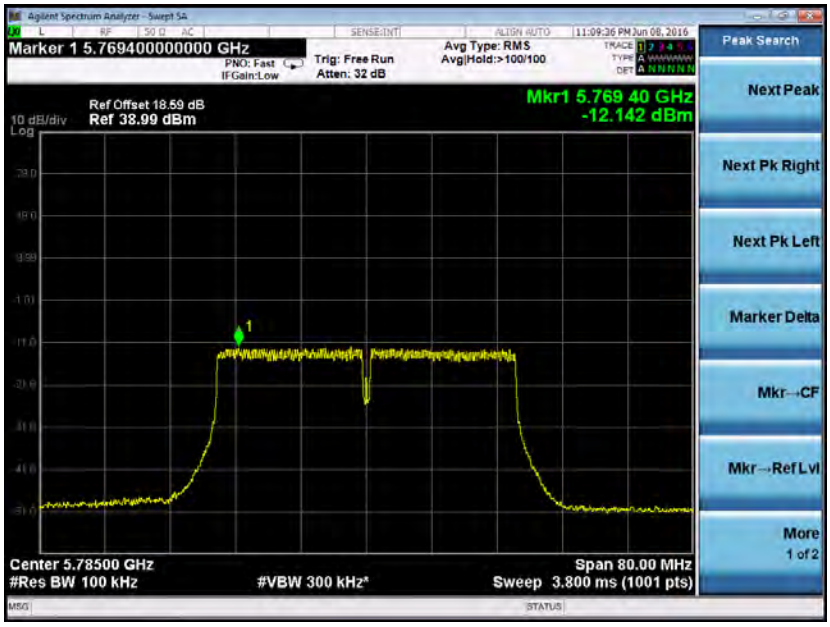
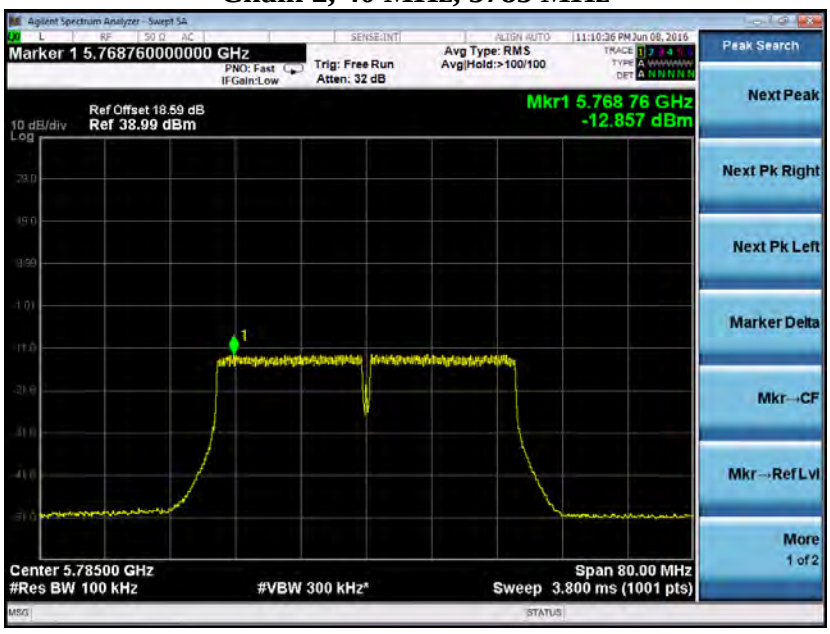
1547 Plymouth Street, Mountain View, CA 94043 Tel: (650) 965-4000 Fax: (650) 965-3000

Maximum Power Spectral Density Test Data (Conducted)



Chain 2, 40 MHz, 5785 MHz



Chain 3, 40 MHz, 5785 MHz

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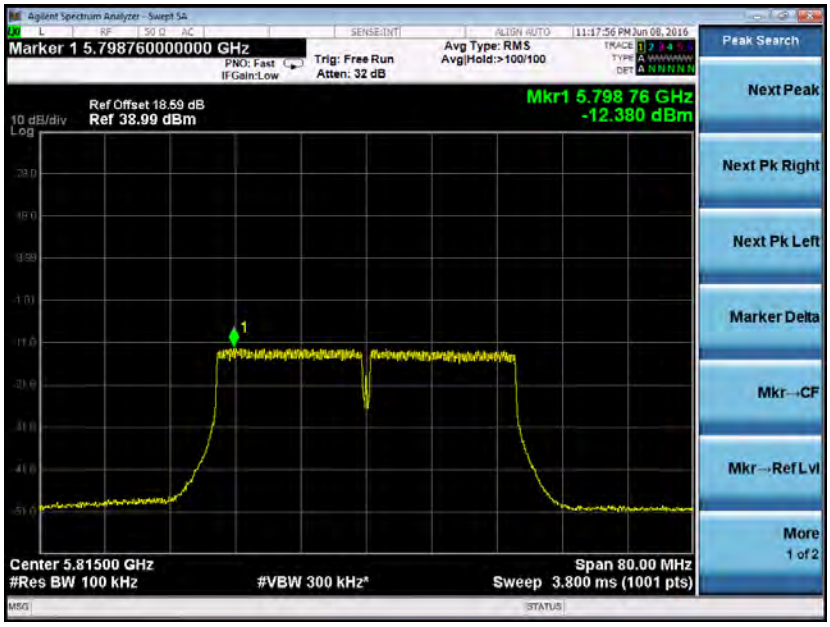
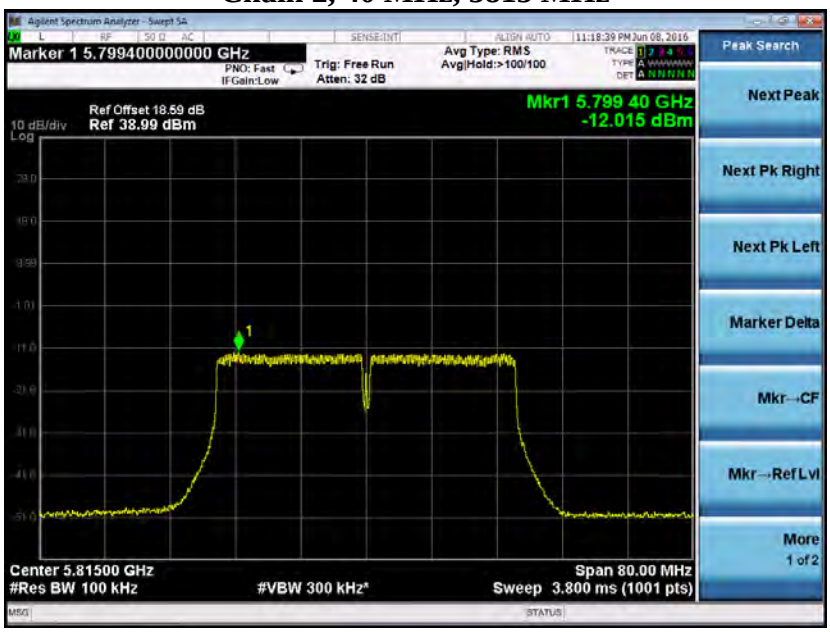
Maximum Power Spectral Density Test Data (Conducted)



Chain 2, 40 MHz, 5815 MHz



Chain 3, 40 MHz, 5815 MHz

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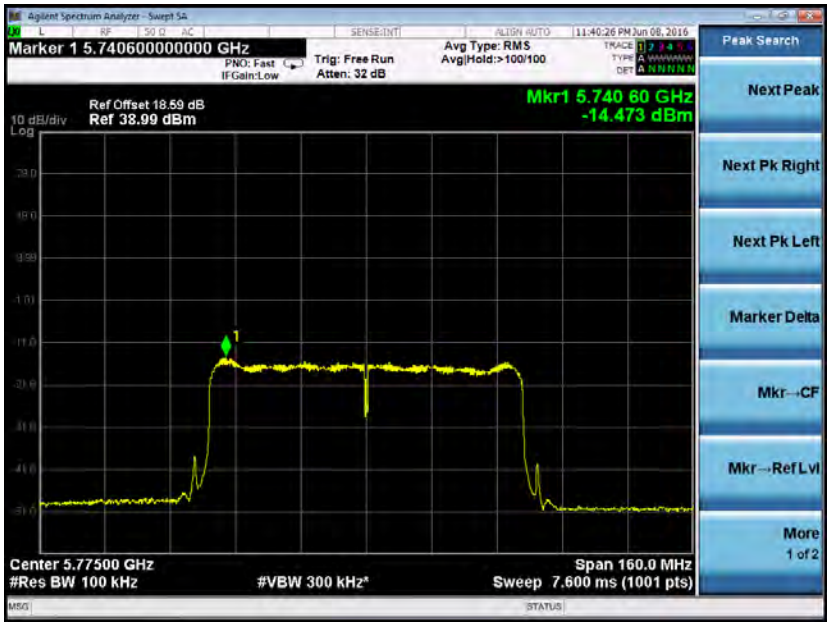
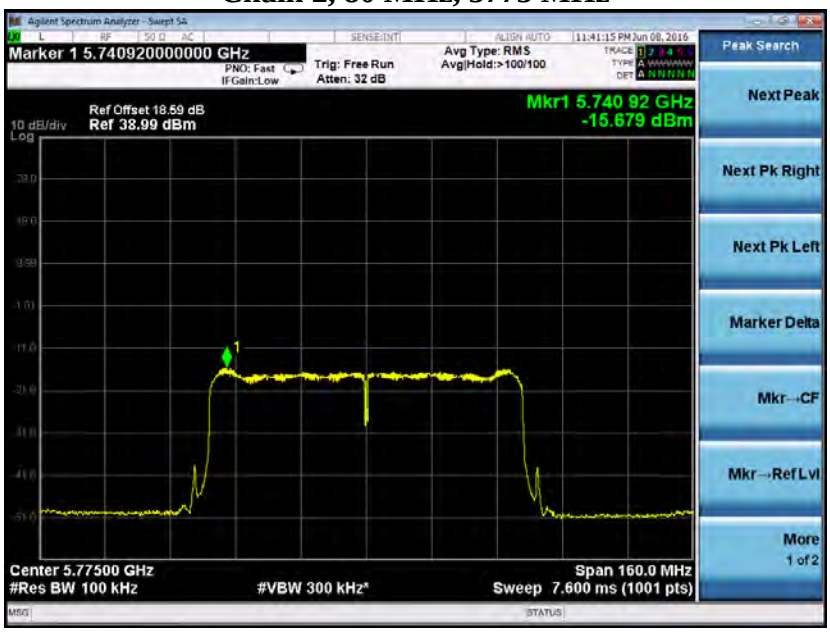
1547 Plymouth Street, Mountain View, CA 94043 Tel: (650) 965-4000 Fax: (650) 965-3000

Maximum Power Spectral Density Test Data (Conducted)



Chain 2, 80 MHz, 5775 MHz



Chain 3, 80 MHz, 5775 MHz

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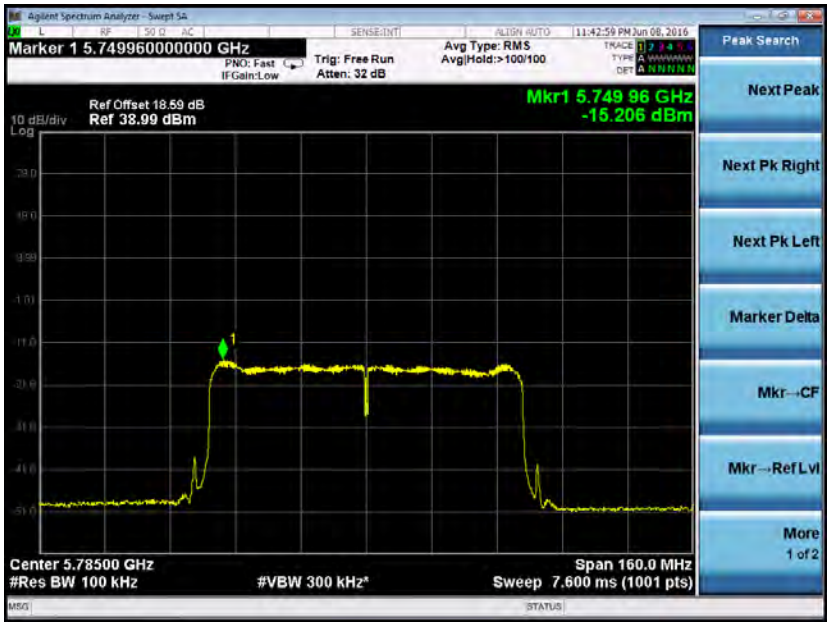
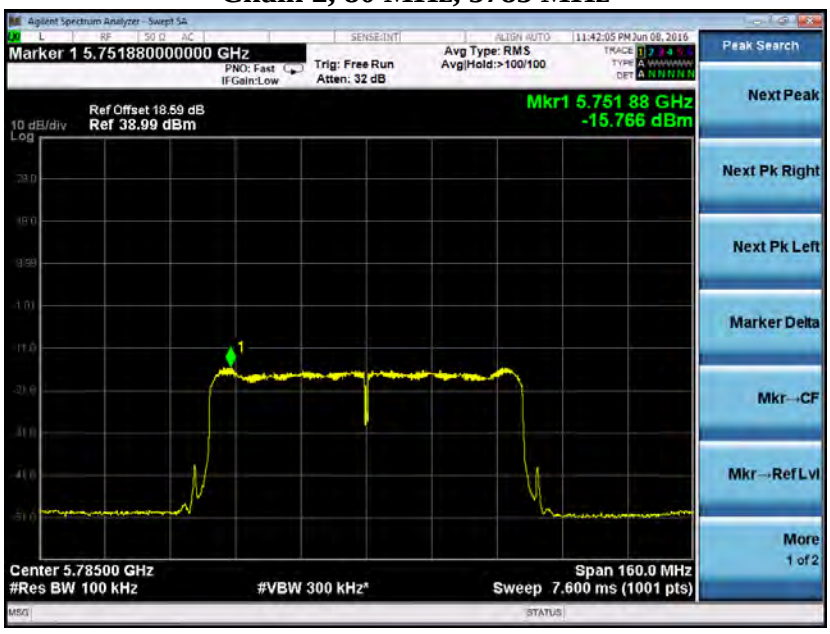
Maximum Power Spectral Density Test Data (Conducted)



Chain 2, 80 MHz, 5785 MHz



Chain 3, 80 MHz, 5785 MHz

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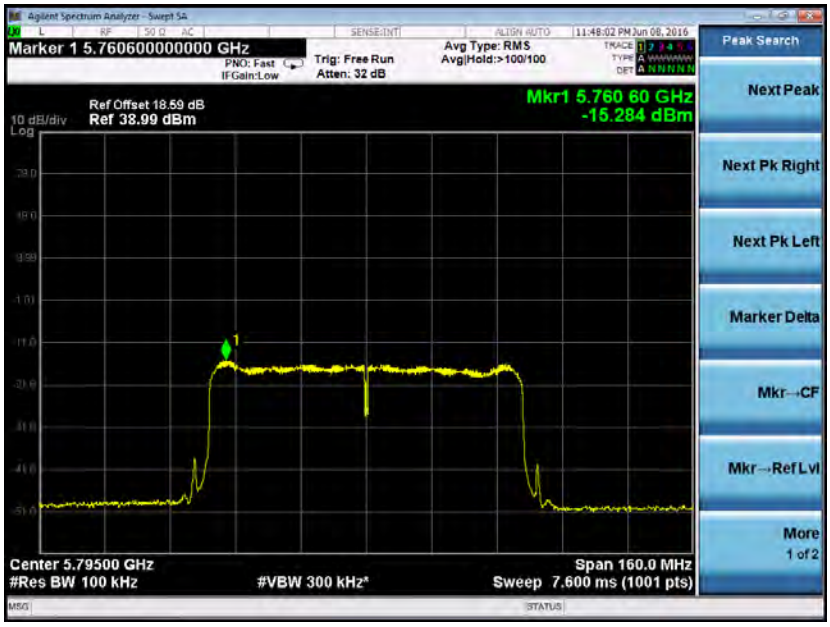
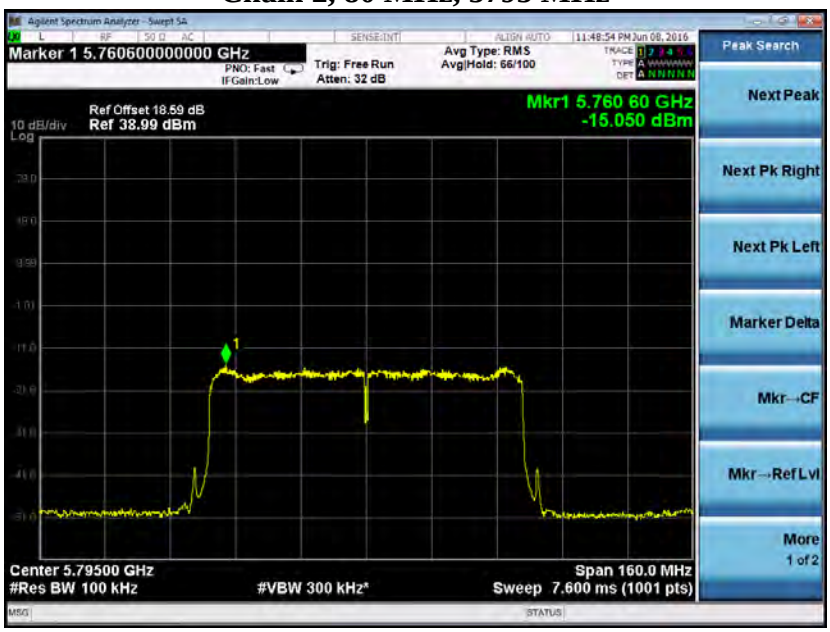
Maximum Power Spectral Density Test Data (Conducted)



Chain 2, 80 MHz, 5795 MHz



Chain 3, 80 MHz, 5795 MHz

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APPENDIX B

TEST SETUP DIAGRAMS

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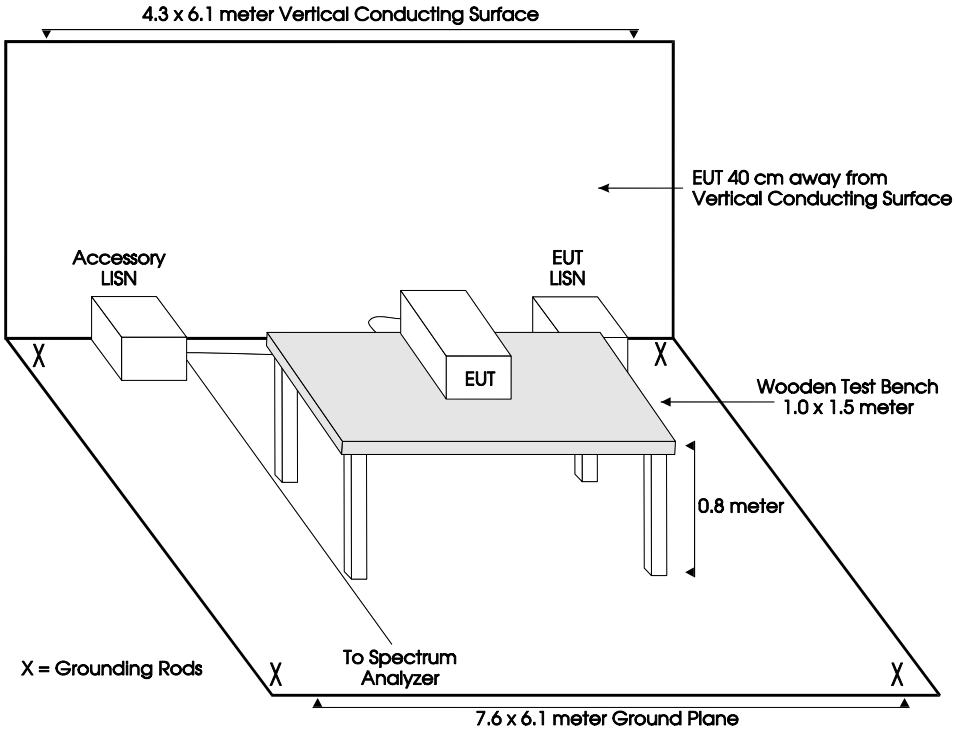

FIGURE 1 – TABLETOP CONDUCTED EMISSIONS TEST SETUP – SITE "A"

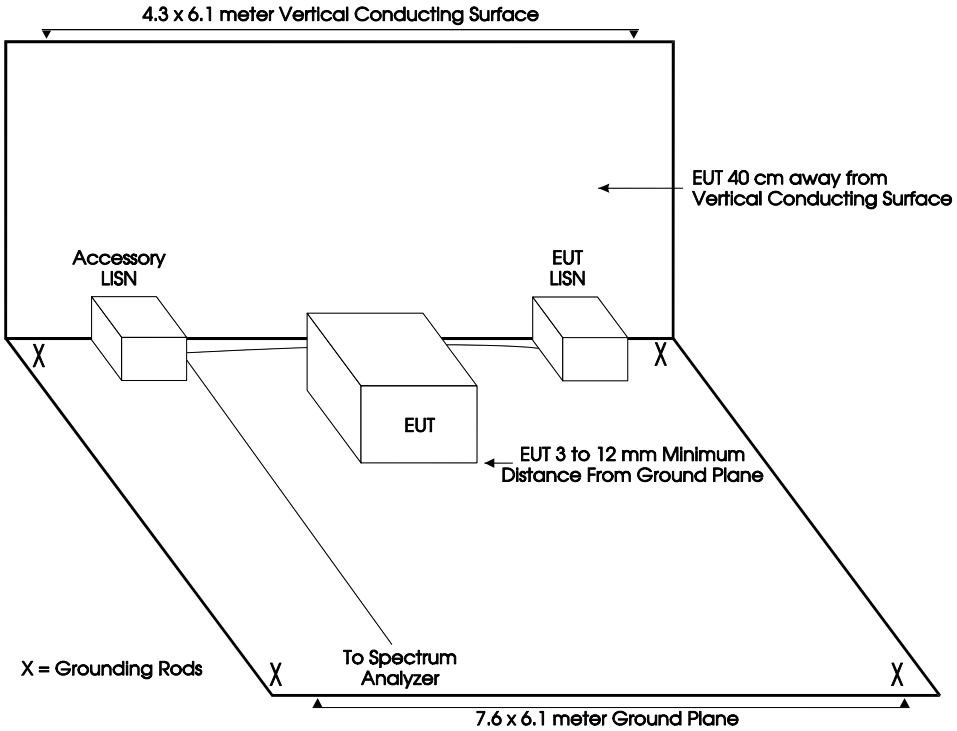

FIGURE 1a – FLOORSTANDING CONDUCTED EMISSIONS TEST SETUP – SITE "A"

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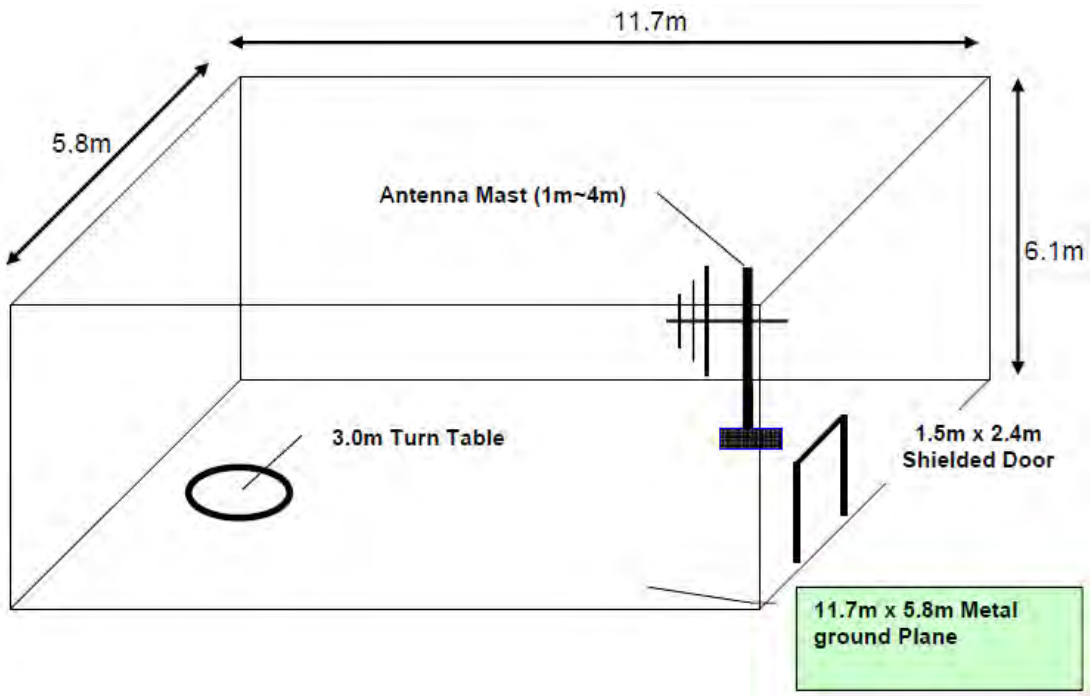

FIGURE 3 - LAYOUT OF 5 METER SEMI-ANECHOIC CHAMBER

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APPENDIX C

MODIFICATIONS TO THE EUT

EMT ELECTRO MAGNETIC TEST, INC.
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MODIFICATIONS TO THE EUT

No modifications were made to the EUT by Electro Magnetic Test, Inc. personnel during the testing.

EMT ELECTRO MAGNETIC TEST, INC.
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APPENDIX D

ADDITIONAL MODELS COVERED UNDER THIS REPORT

EMT ELECTRO MAGNETIC TEST, INC.
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ADDITIONAL MODELS COVERED UNDER THIS REPORT

There are no addtional models covered under this report.