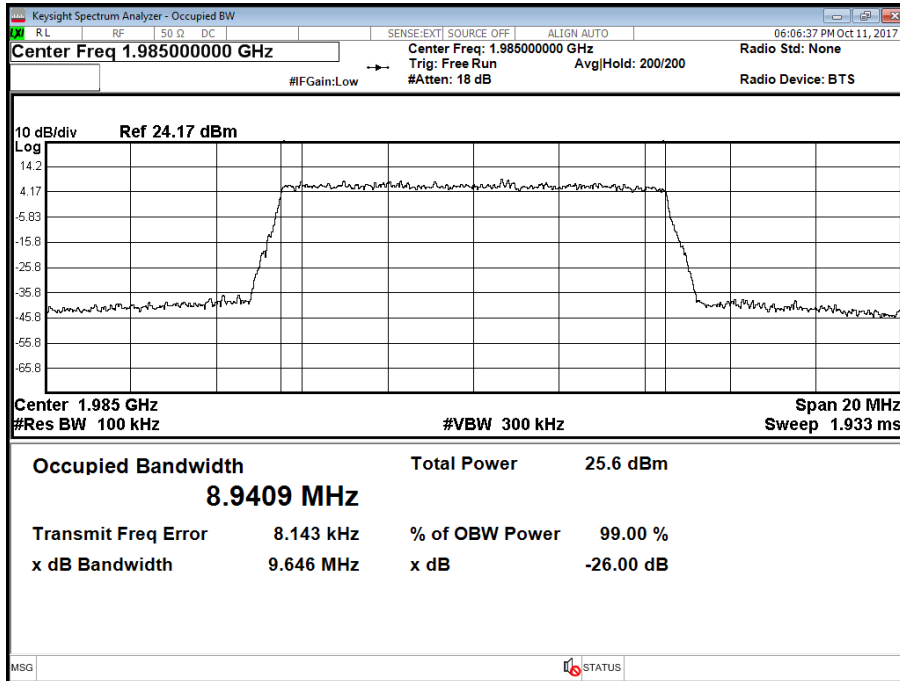


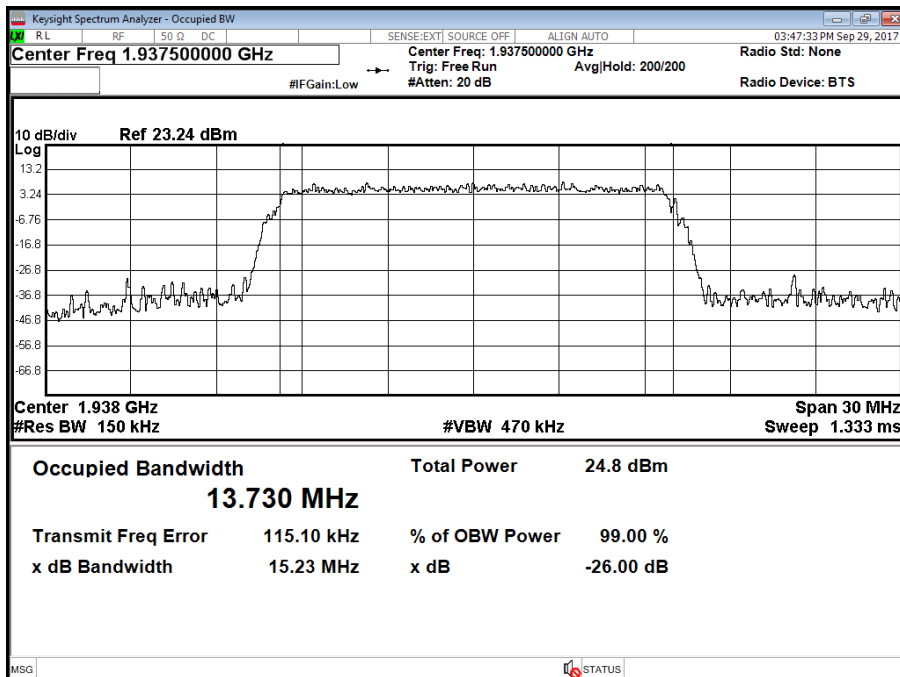


Product Service

Antenna A - LTE Modulation 64QAM - LTE Carrier Bandwidth 10.0 MHz - Channel Position T



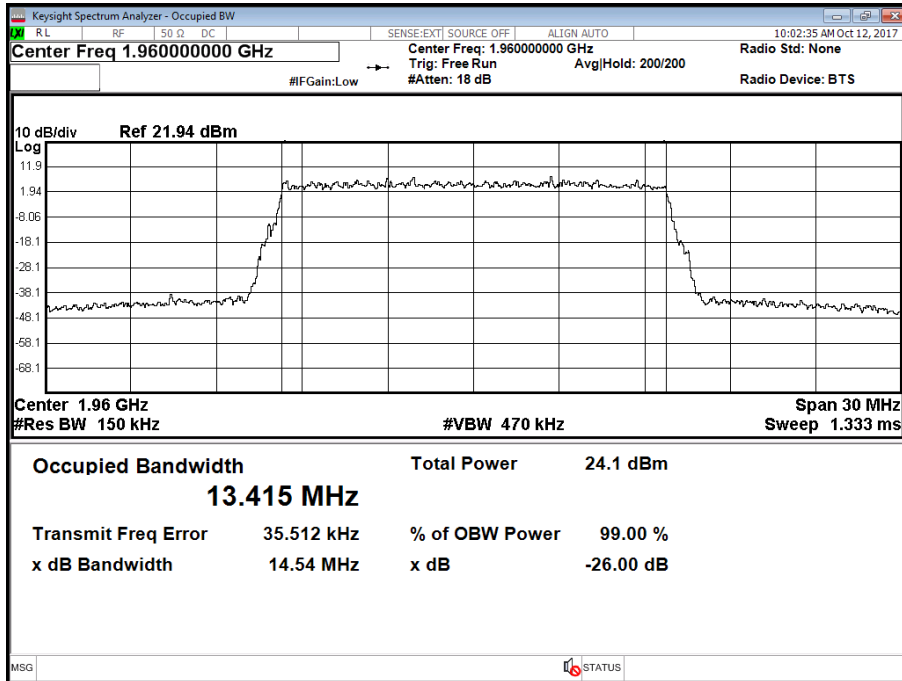
Antenna A - LTE Modulation QPSK - LTE Carrier Bandwidth 15.0 MHz - Channel Position B



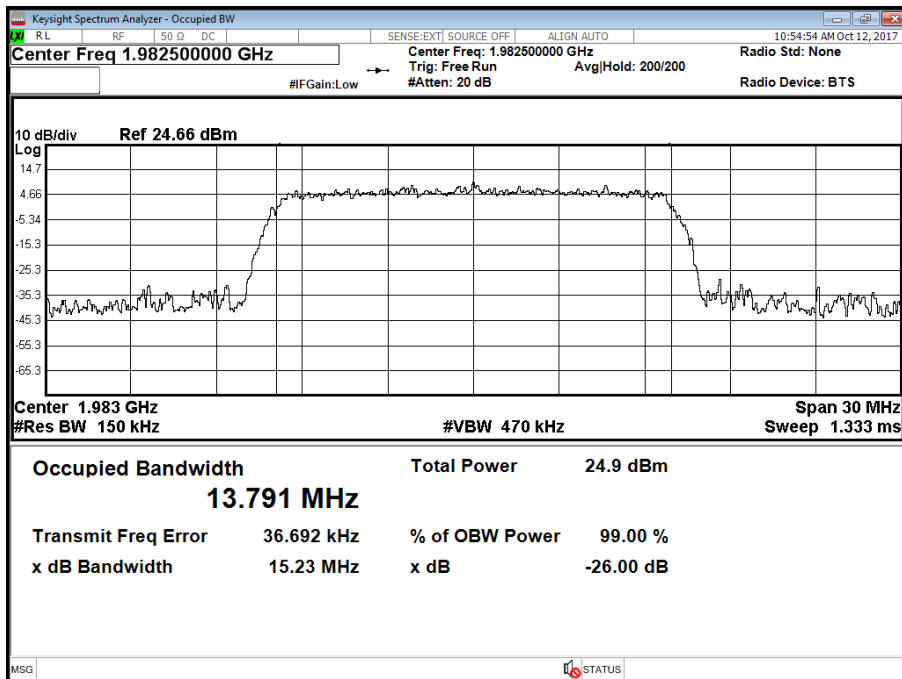


Product Service

Antenna A - LTE Modulation QPSK - LTE Carrier Bandwidth 15.0 MHz - Channel Position M



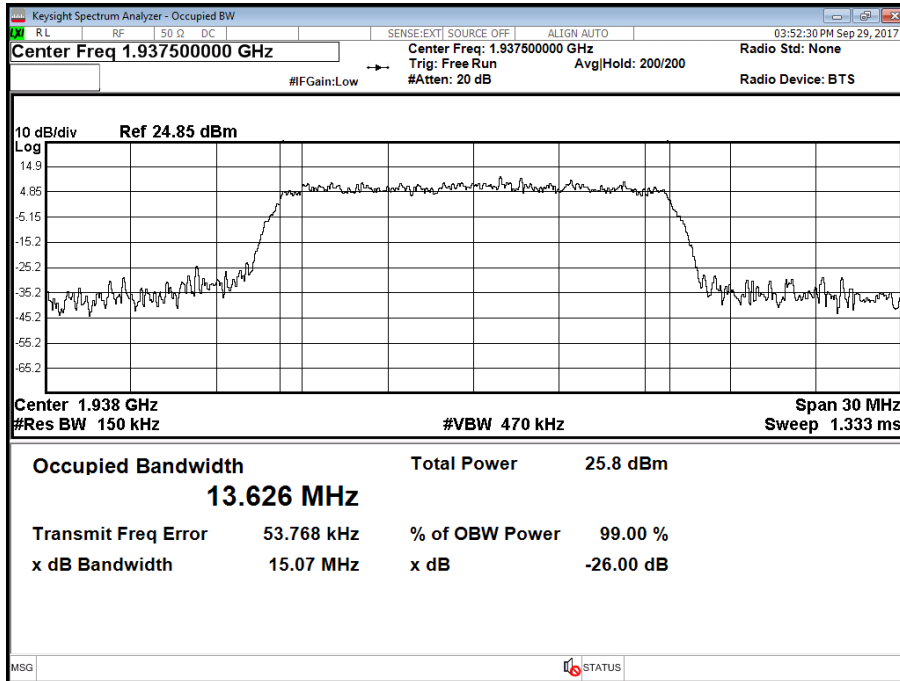
Antenna A - LTE Modulation QPSK - LTE Carrier Bandwidth 15.0 MHz - Channel Position T



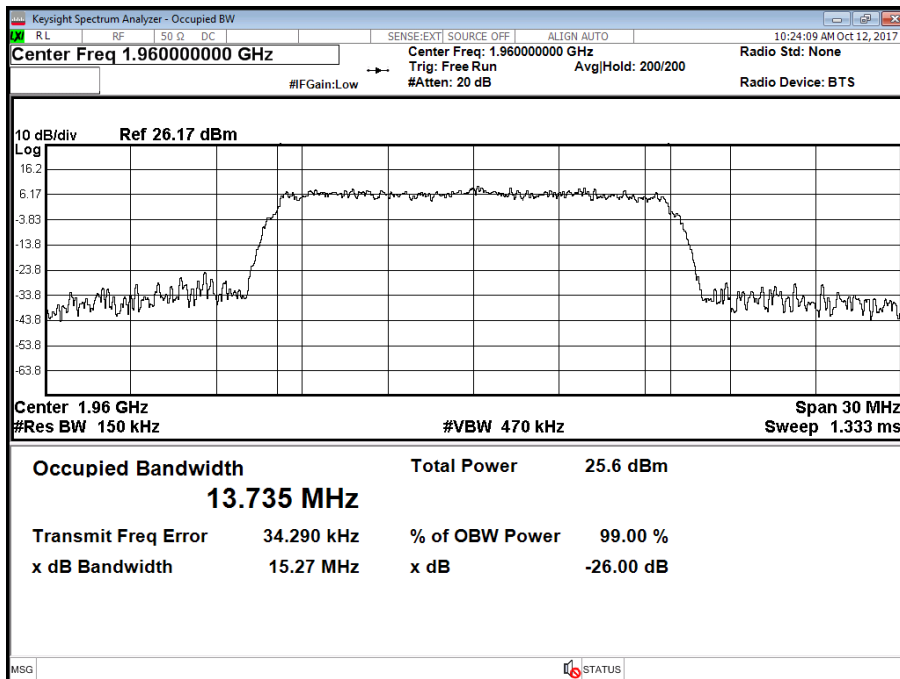


Product Service

Antenna A - LTE Modulation 16QAM - LTE Carrier Bandwidth 15.0 MHz - Channel Position B



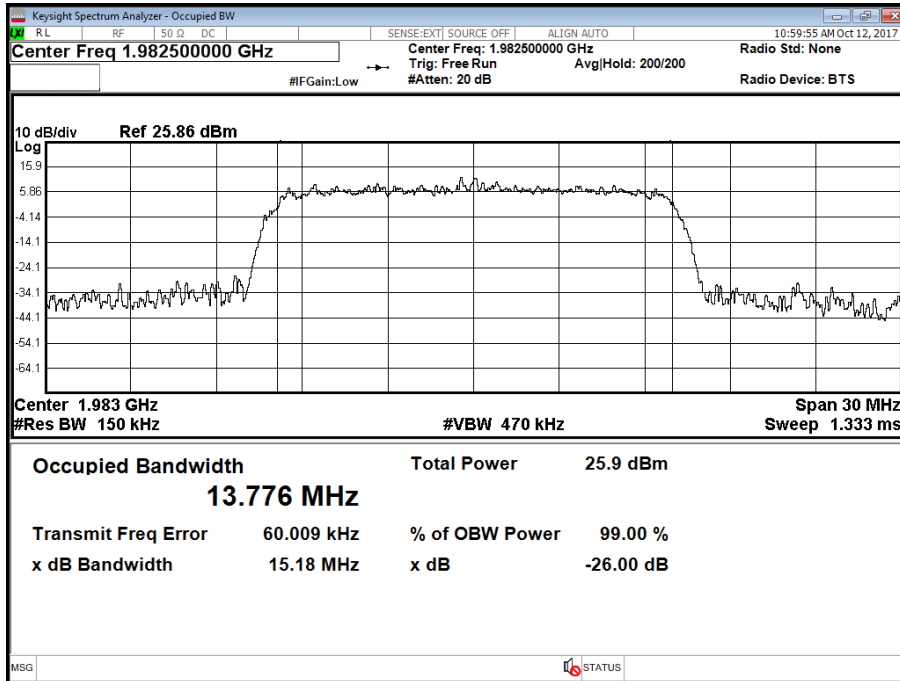
Antenna A - LTE Modulation 16QAM - LTE Carrier Bandwidth 15.0 MHz - Channel Position M



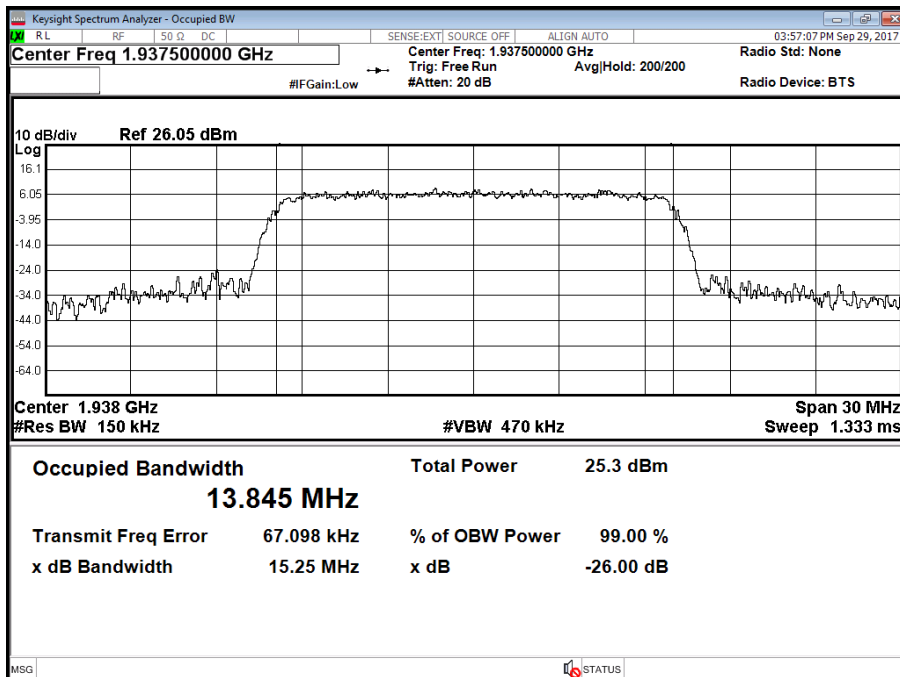


Product Service

Antenna A - LTE Modulation 16QAM - LTE Carrier Bandwidth 15.0 MHz - Channel Position T



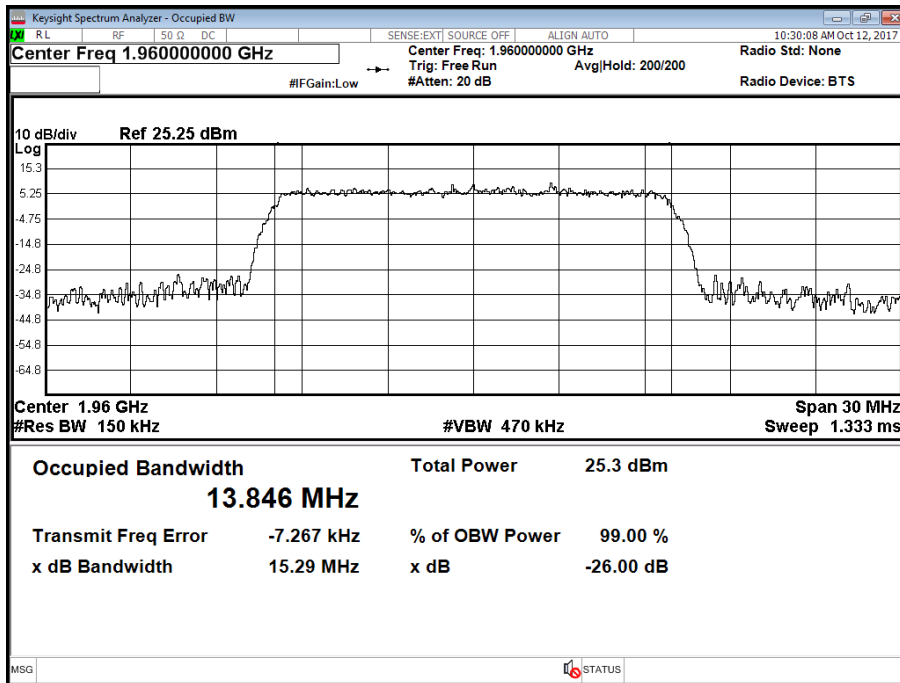
Antenna A - LTE Modulation 64QAM - LTE Carrier Bandwidth 15.0 MHz - Channel Position B



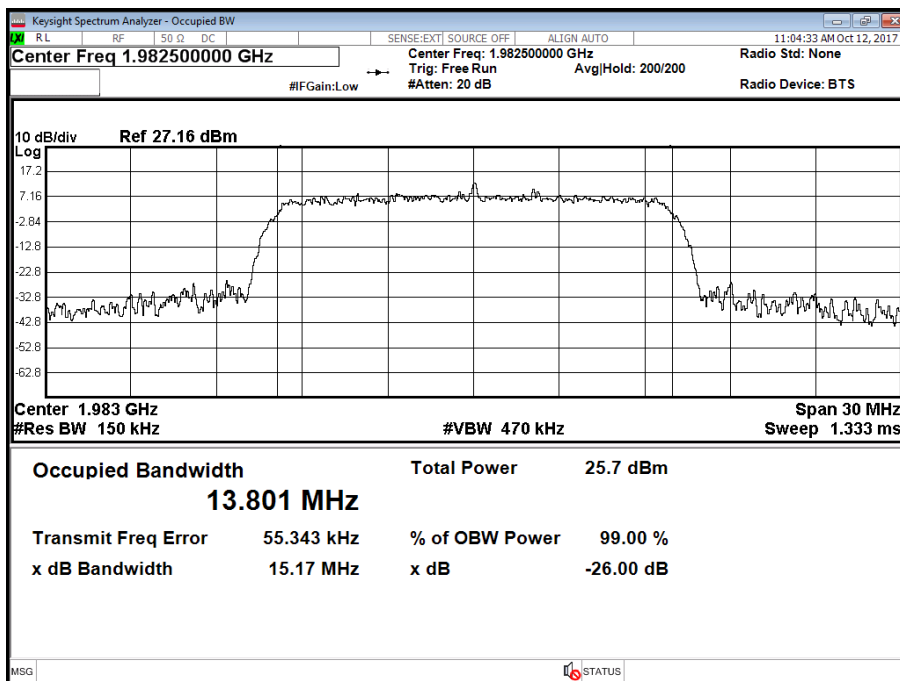


Product Service

Antenna A - LTE Modulation 64QAM - LTE Carrier Bandwidth 15.0 MHz - Channel Position M



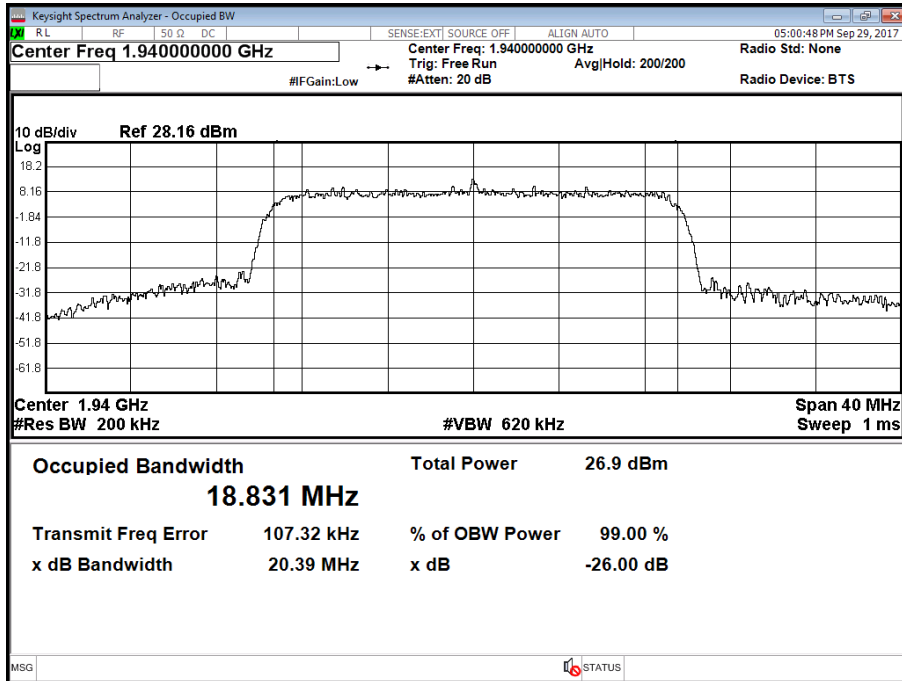
Antenna A - LTE Modulation 64QAM - LTE Carrier Bandwidth 15.0 MHz - Channel Position T



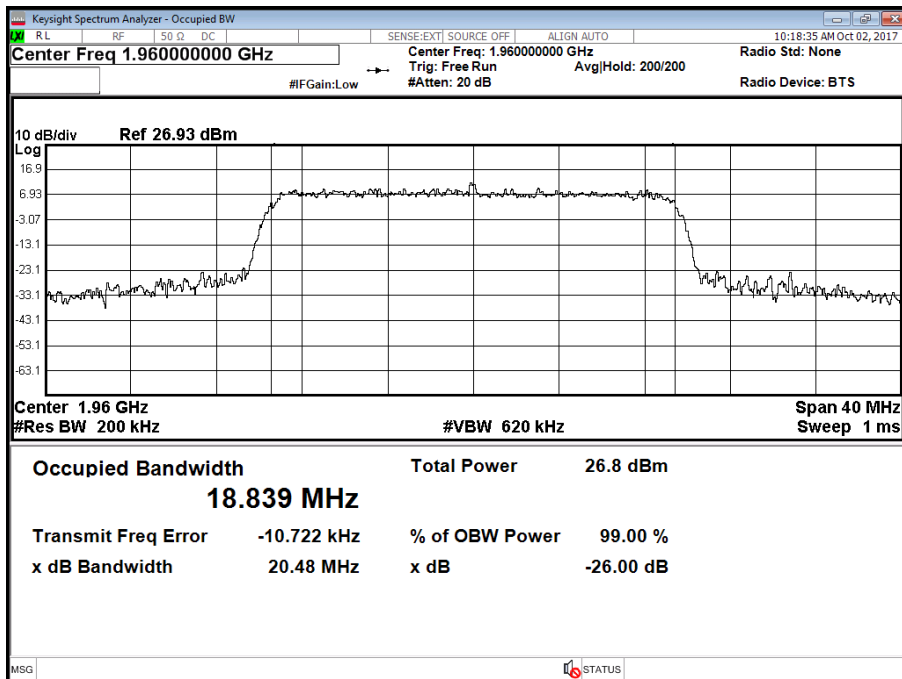


Product Service

Antenna A - LTE Modulation QPSK - LTE Carrier Bandwidth 20.0 MHz - Channel Position B



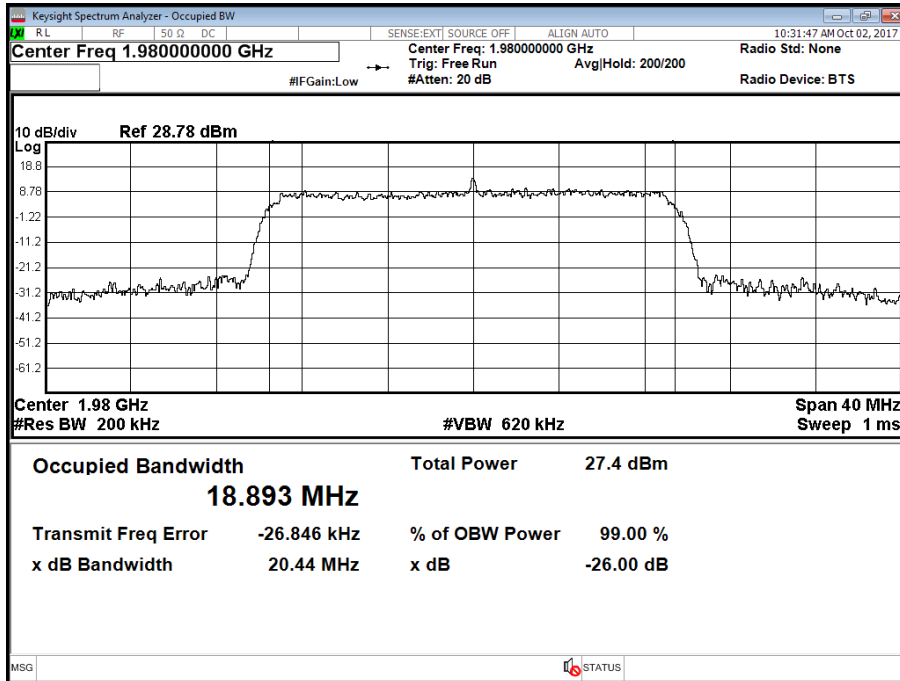
Antenna A - LTE Modulation QPSK - LTE Carrier Bandwidth 20.0 MHz - Channel Position M



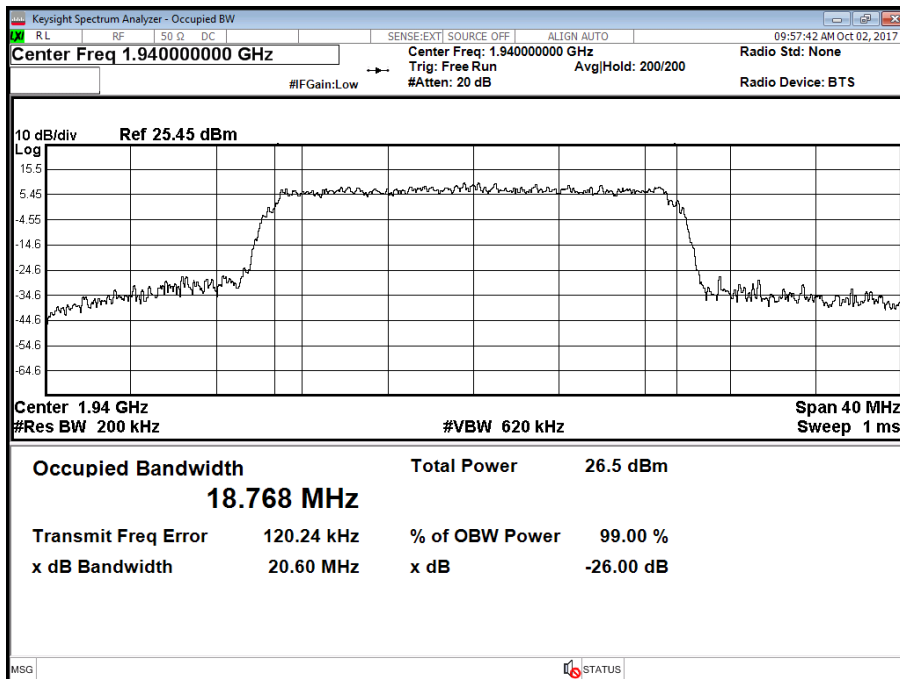


Product Service

Antenna A - LTE Modulation QPSK - LTE Carrier Bandwidth 20.0 MHz - Channel Position T



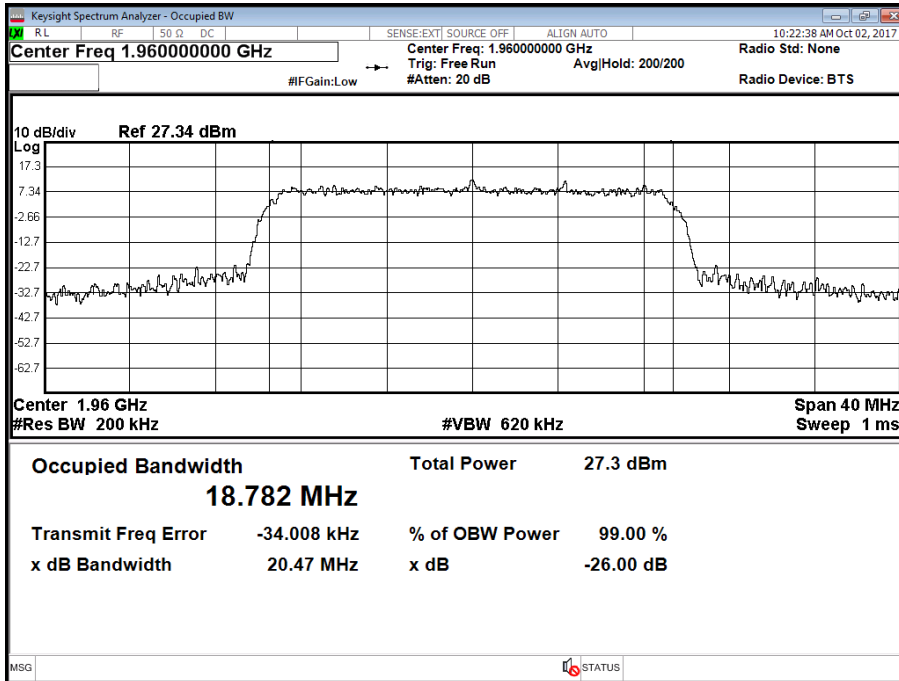
Antenna A - LTE Modulation 16QAM - LTE Carrier Bandwidth 20.0 MHz - Channel Position B



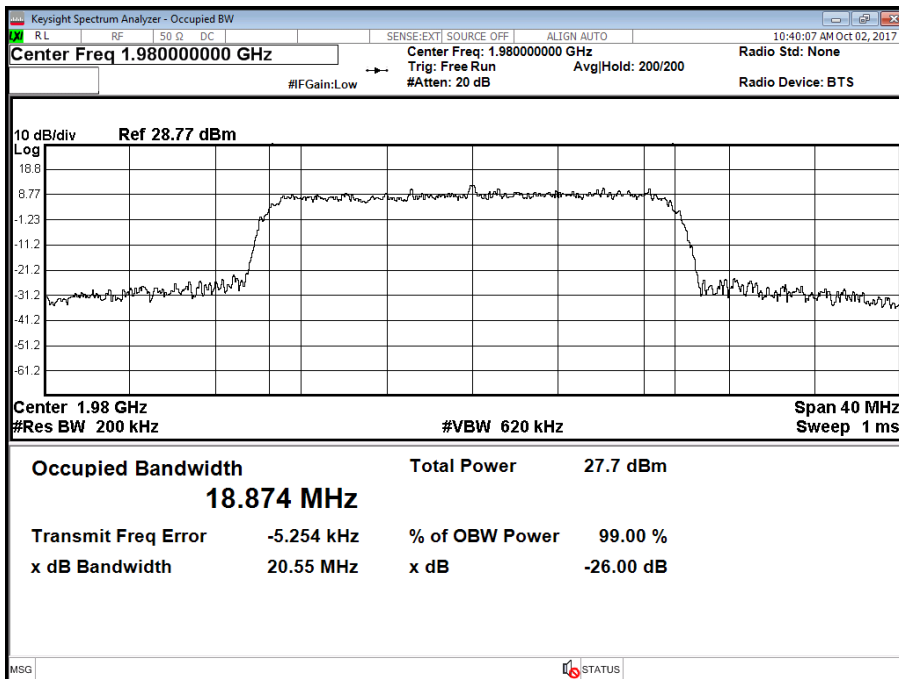


Product Service

Antenna A - LTE Modulation 16QAM - LTE Carrier Bandwidth 20.0 MHz - Channel Position M



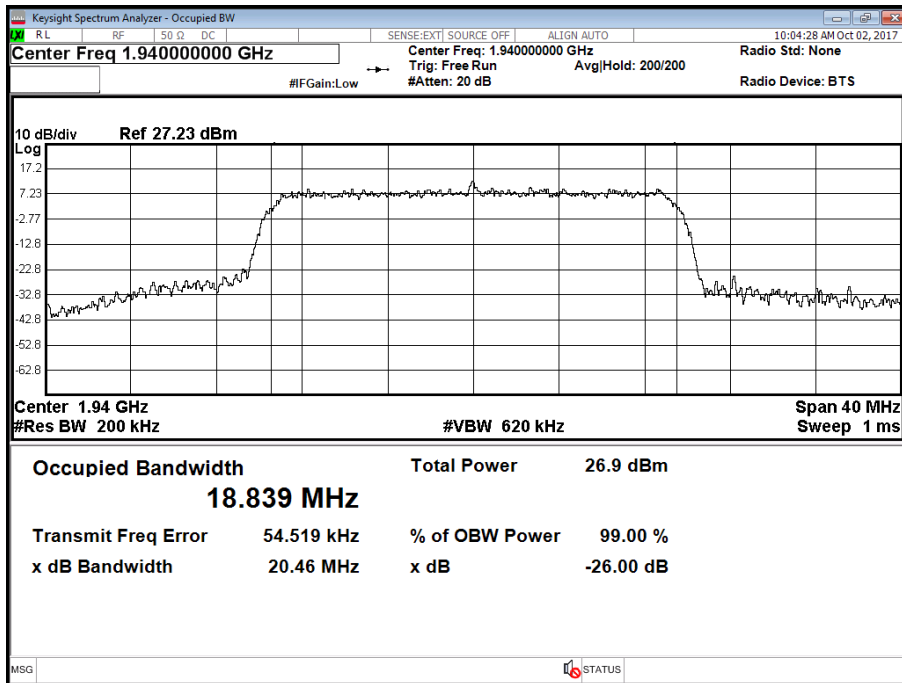
Antenna A - LTE Modulation 16QAM - LTE Carrier Bandwidth 20.0 MHz - Channel Position T



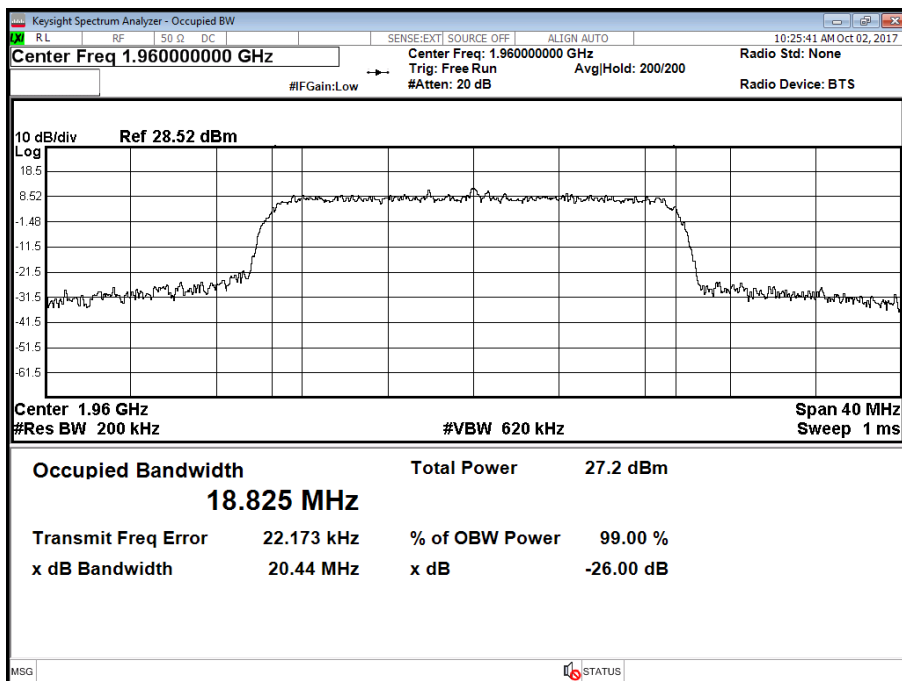


Product Service

Antenna A - LTE Modulation 64QAM - LTE Carrier Bandwidth 20.0 MHz - Channel Position B



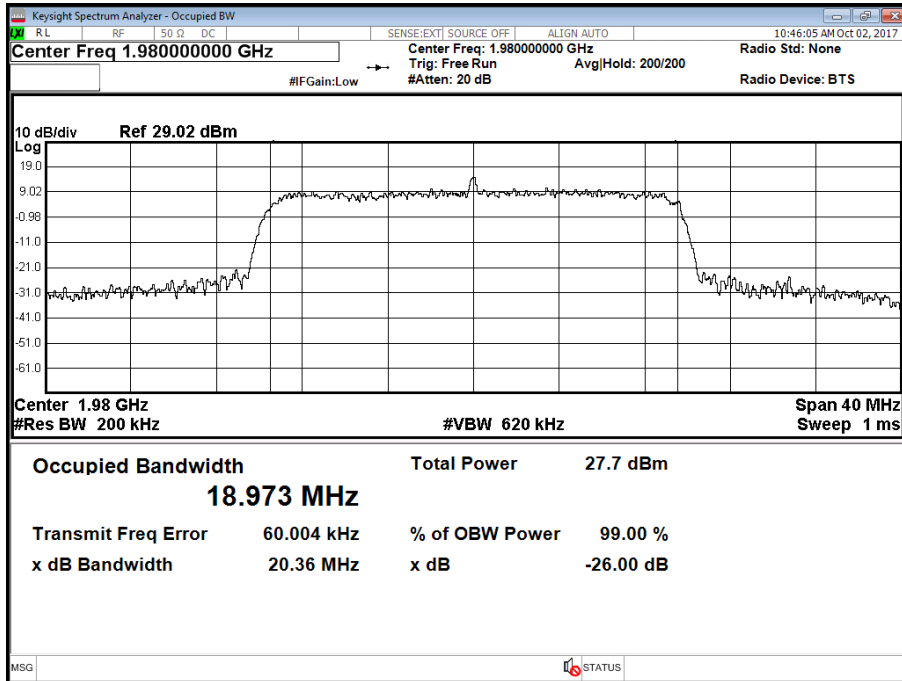
Antenna A - LTE Modulation 64QAM - LTE Carrier Bandwidth 20.0 MHz - Channel Position M





Product Service

Antenna A - LTE Modulation 64QAM - LTE Carrier Bandwidth 20.0 MHz - Channel Position T





Product Service

Configuration 1

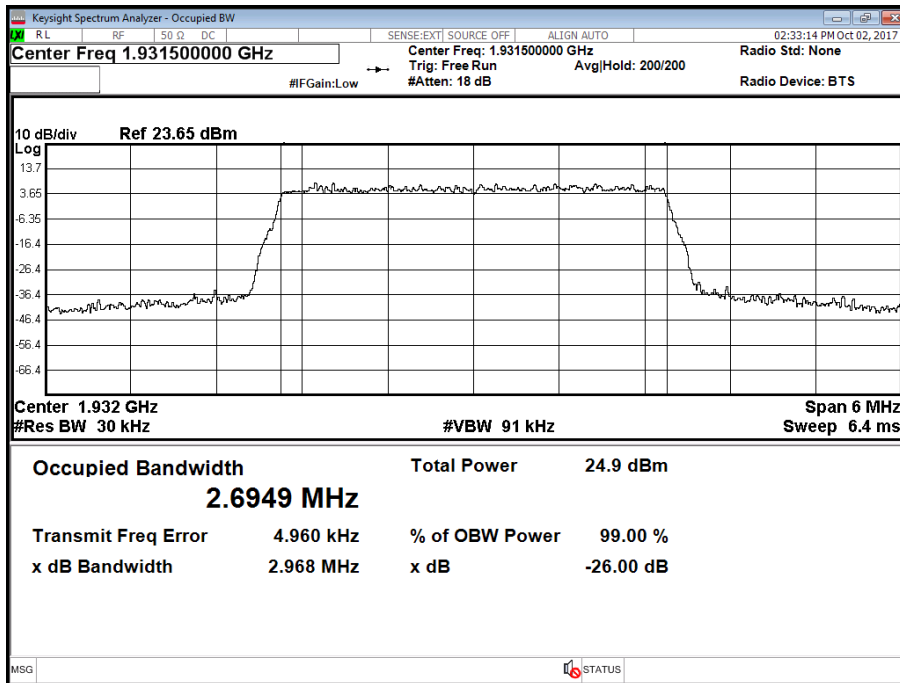
Maximum Output Power 20 dBm

Antenna	LTE Modulation	LTE Carrier Bandwidth	Result (kHz)					
			Channel Position B		Channel Position M		Channel Position T	
			Occupied Bandwidth	-26 dB Bandwidth	Occupied Bandwidth	-26 dB Bandwidth	Occupied Bandwidth	-26 dB Bandwidth
B	QPSK	3.0 MHz	2,694.91	2,968.48	2,693.92	2,961.24	2,700.39	2,966.52
B	16QAM	3.0 MHz	2,693.25	2,962.95	2,695.07	2,969.13	2,702.81	2,965.89
B	64QAM	3.0 MHz	2,699.85	2,950.88	2,703.50	2,953.48	2,702.35	2,956.87
B	QPSK	5.0 MHz	4,488.17	4,898.58	4,491.79	4,869.61	4,504.70	4,879.87
B	16QAM	5.0 MHz	4,479.90	4,901.00	4,479.81	4,863.71	4,474.71	4,887.96
B	64QAM	5.0 MHz	4,481.48	4,876.17	4,486.84	4,912.89	4,482.88	4,887.27
B	QPSK	10.0 MHz	8,947.63	9,779.05	8,956.19	9,761.40	8,937.26	9,741.73
B	16QAM	10.0 MHz	8,943.84	9,748.03	8,950.30	9,653.02	8,942.34	9,710.98
B	64QAM	10.0 MHz	8,951.41	9,597.93	8,935.42	9,734.69	8,943.87	9,736.78
B	QPSK	15.0 MHz	13,717.11	15,131.99	13,866.37	15,142.10	13,864.85	15,236.83
B	16QAM	15.0 MHz	13,760.14	15,175.60	13,877.35	15,172.90	13,927.74	15,105.92
B	64QAM	15.0 MHz	13,919.98	15,177.83	13,918.55	15,240.17	13,839.12	15,242.67
B	QPSK	20.0 MHz	18,816.80	20,526.31	17,918.72	19,980.43	18,794.12	20,393.65
B	16QAM	20.0 MHz	18,803.16	20,496.63	18,707.88	20,527.35	18,784.19	20,439.87
B	64QAM	20.0 MHz	18,865.67	20,533.01	18,796.25	20,440.35	18,831.09	20,425.66

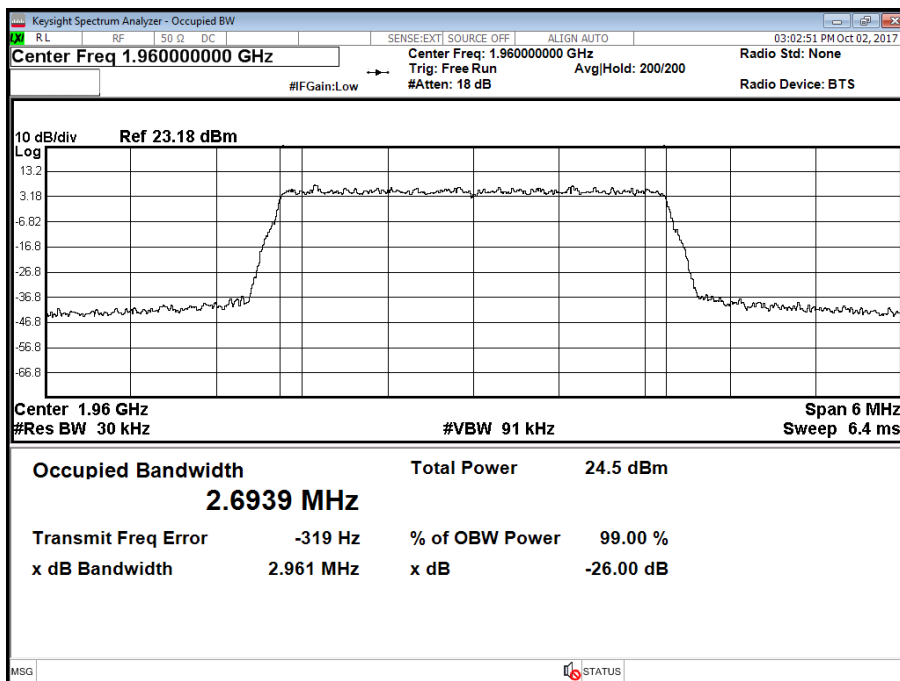


Product Service

Antenna B - LTE Modulation QPSK - LTE Carrier Bandwidth 3.0 MHz - Channel Position B



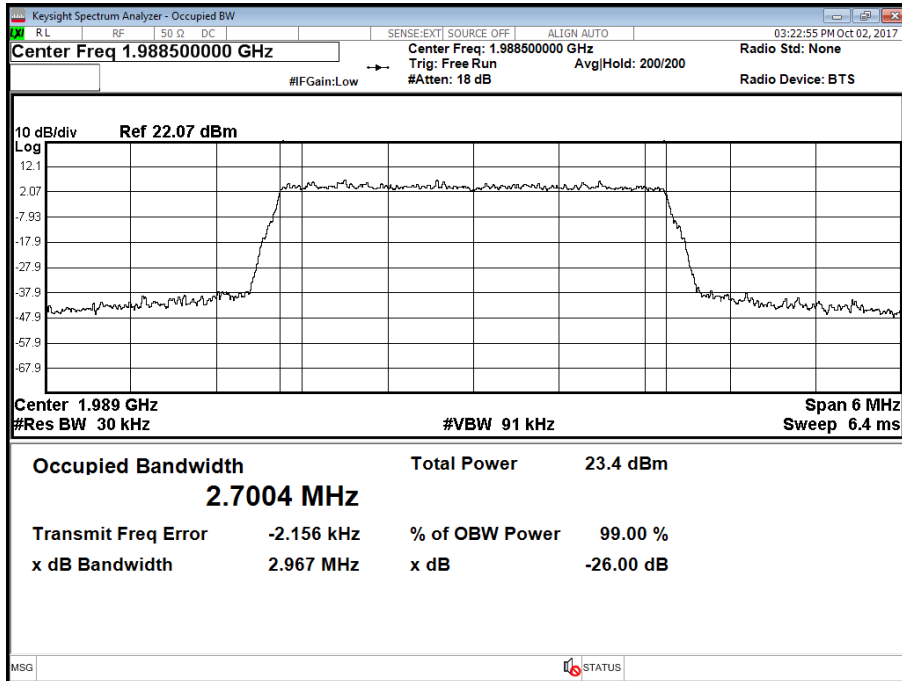
Antenna B - LTE Modulation QPSK - LTE Carrier Bandwidth 3.0 MHz - Channel Position M



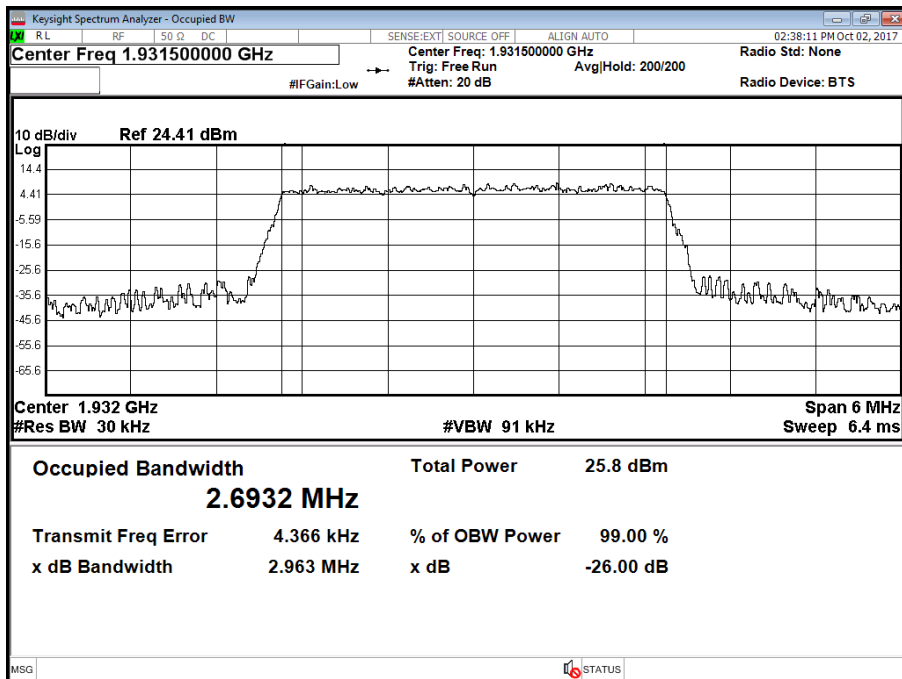


Product Service

Antenna B - LTE Modulation QPSK - LTE Carrier Bandwidth 3.0 MHz - Channel Position T



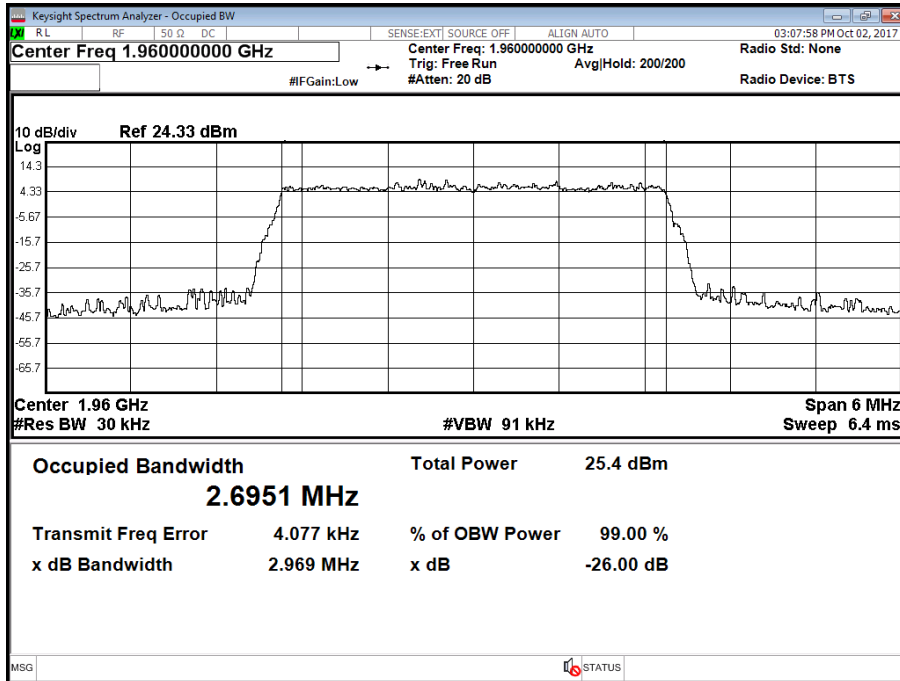
Antenna B - LTE Modulation 16QAM - LTE Carrier Bandwidth 3.0 MHz - Channel Position B



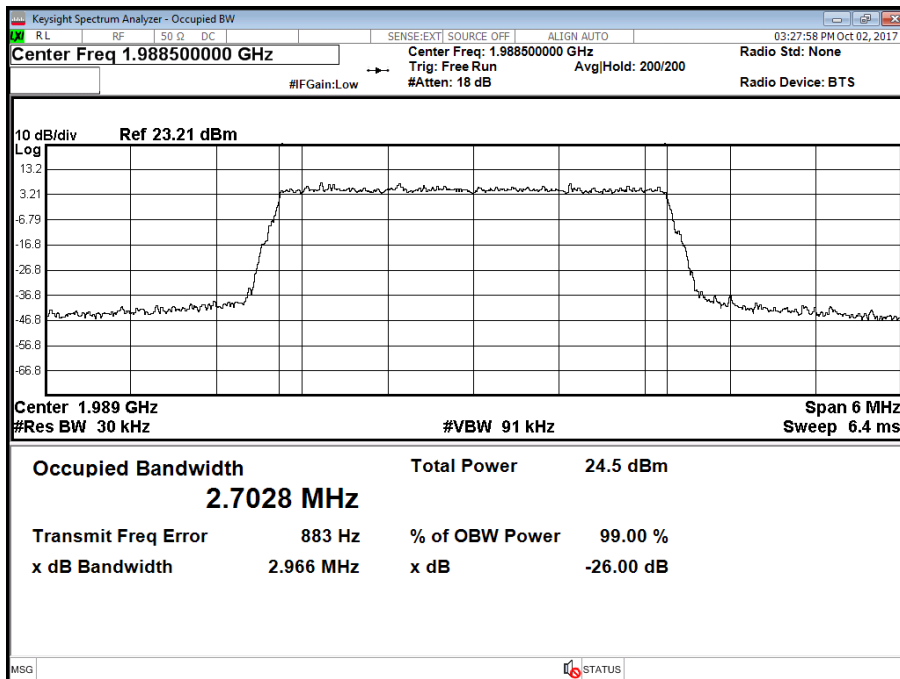


Product Service

Antenna B - LTE Modulation 16QAM - LTE Carrier Bandwidth 3.0 MHz - Channel Position M



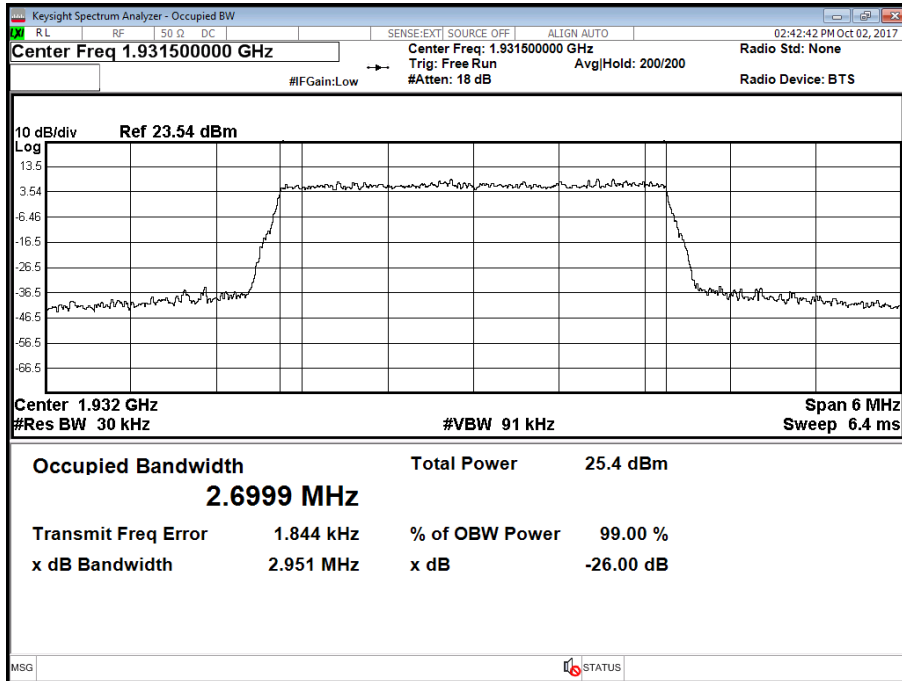
Antenna B - LTE Modulation 16QAM - LTE Carrier Bandwidth 3.0 MHz - Channel Position T



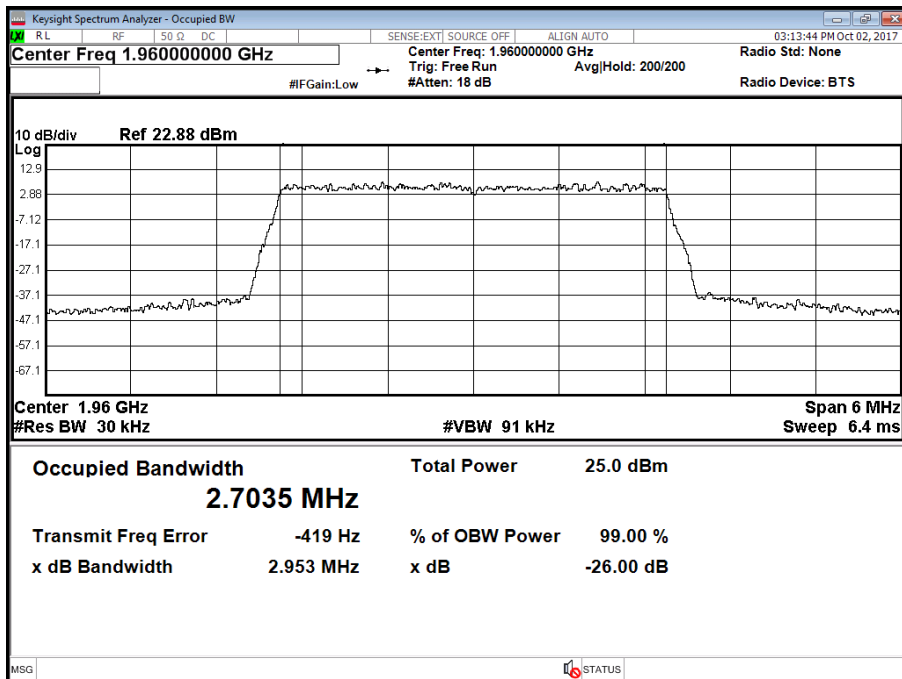


Product Service

Antenna B - LTE Modulation 64QAM - LTE Carrier Bandwidth 3.0 MHz - Channel Position B



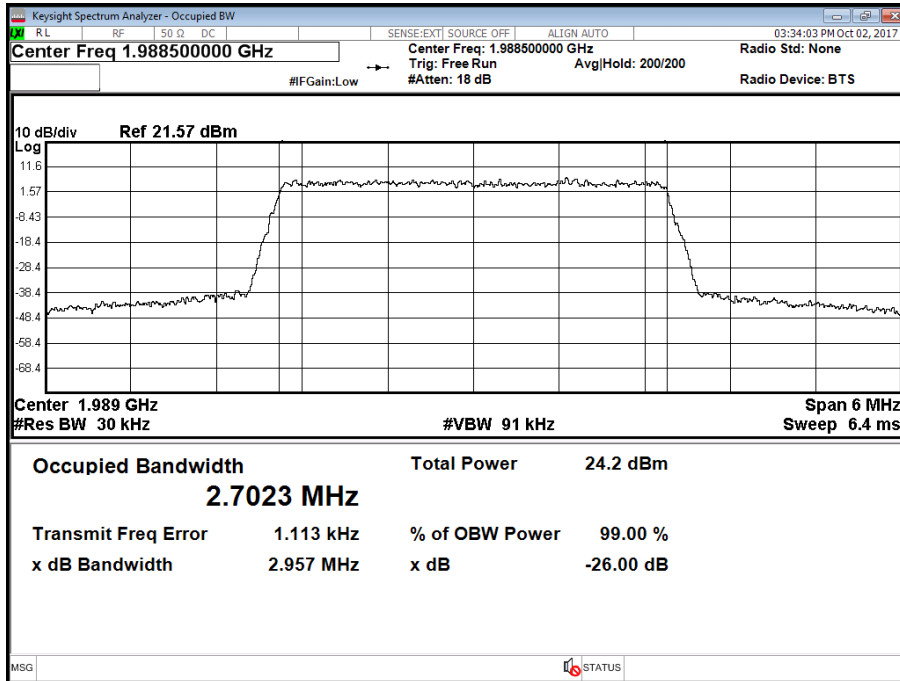
Antenna B - LTE Modulation 64QAM - LTE Carrier Bandwidth 3.0 MHz - Channel Position M



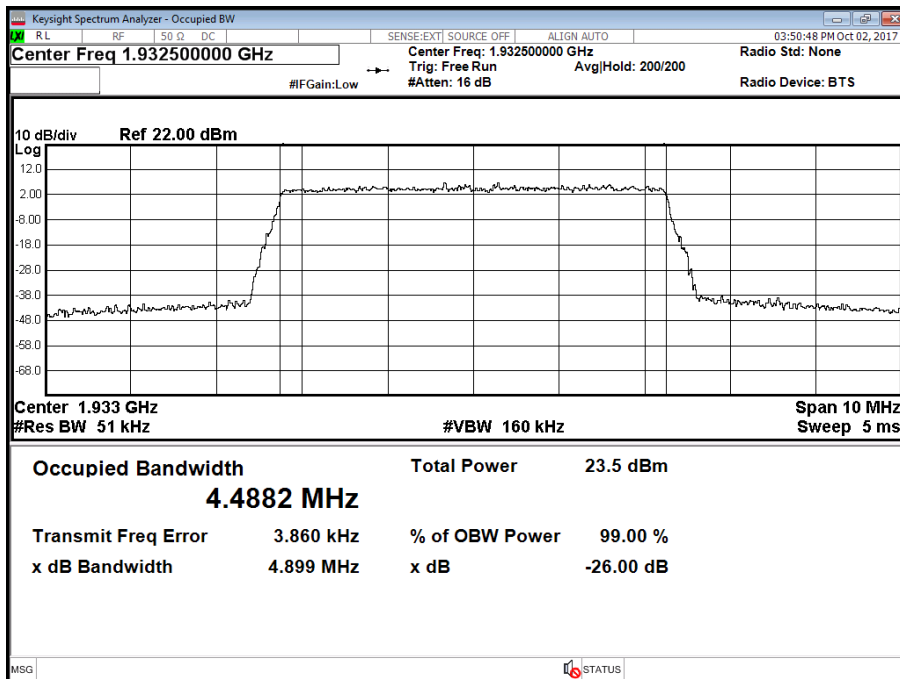


Product Service

Antenna B - LTE Modulation 64QAM - LTE Carrier Bandwidth 3.0 MHz - Channel Position T



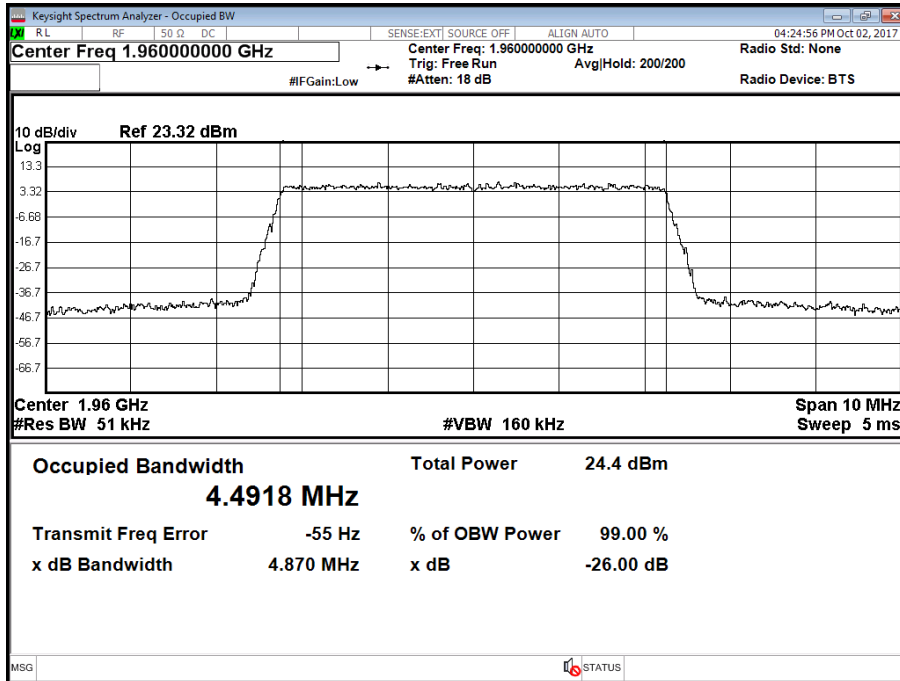
Antenna B - LTE Modulation QPSK - LTE Carrier Bandwidth 5.0 MHz - Channel Position B



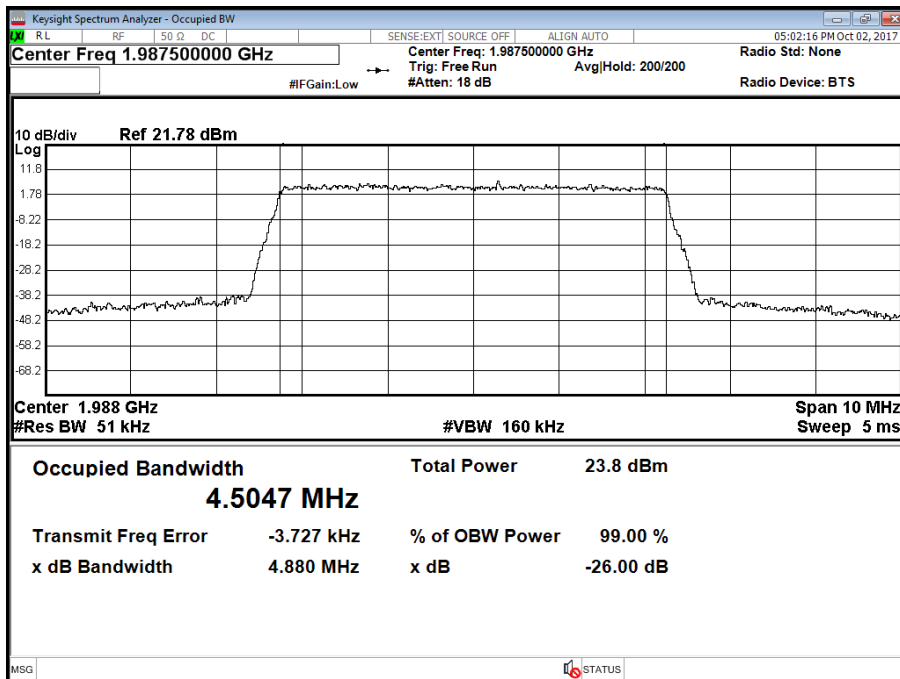


Product Service

Antenna B - LTE Modulation QPSK - LTE Carrier Bandwidth 5.0 MHz - Channel Position M



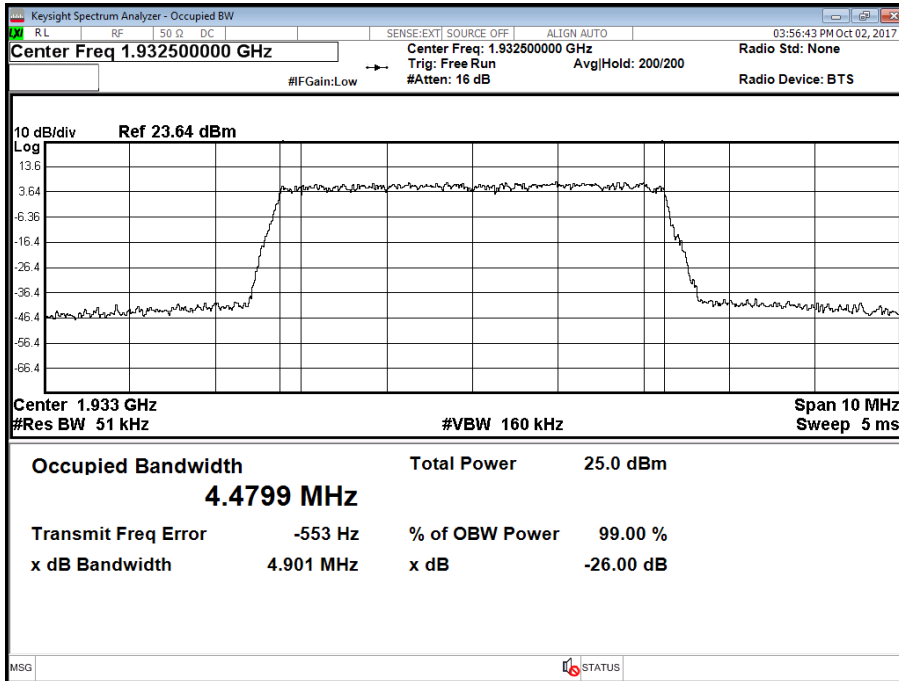
Antenna B - LTE Modulation QPSK - LTE Carrier Bandwidth 5.0 MHz - Channel Position T



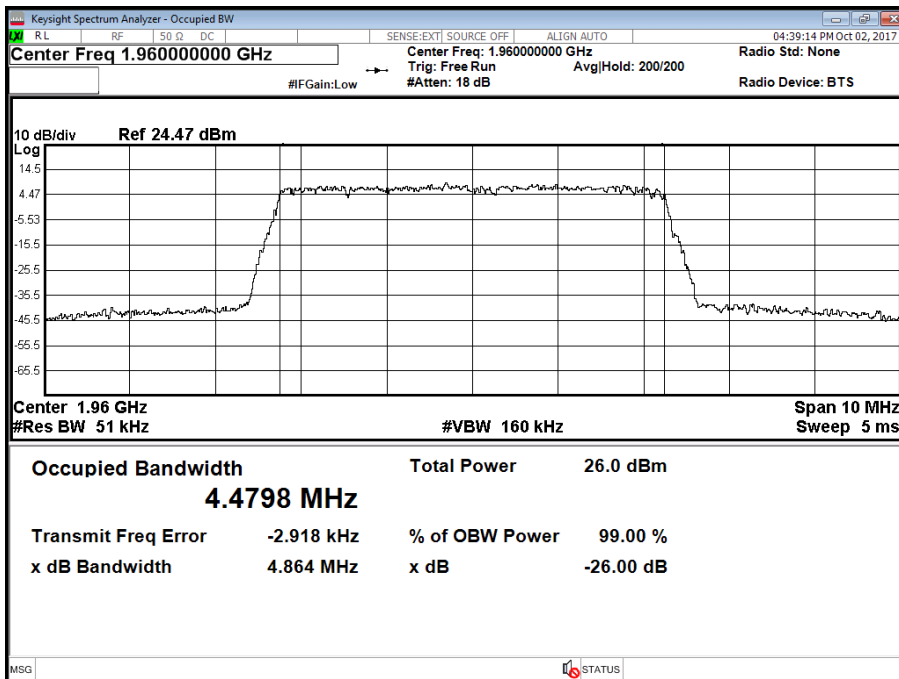


Product Service

Antenna B - LTE Modulation 16QAM - LTE Carrier Bandwidth 5.0 MHz - Channel Position B



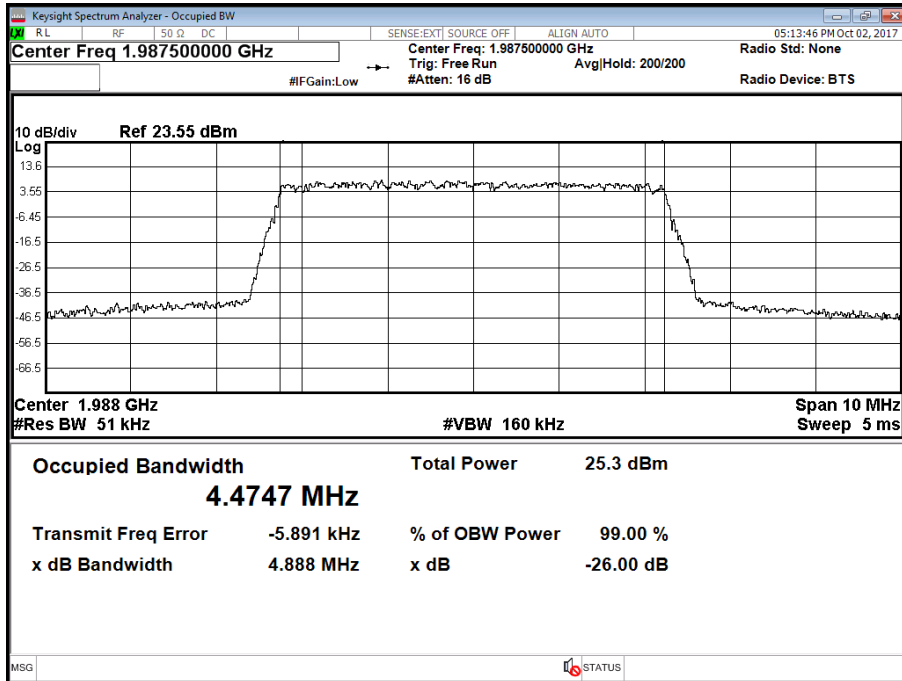
Antenna B - LTE Modulation 16QAM - LTE Carrier Bandwidth 5.0 MHz - Channel Position M



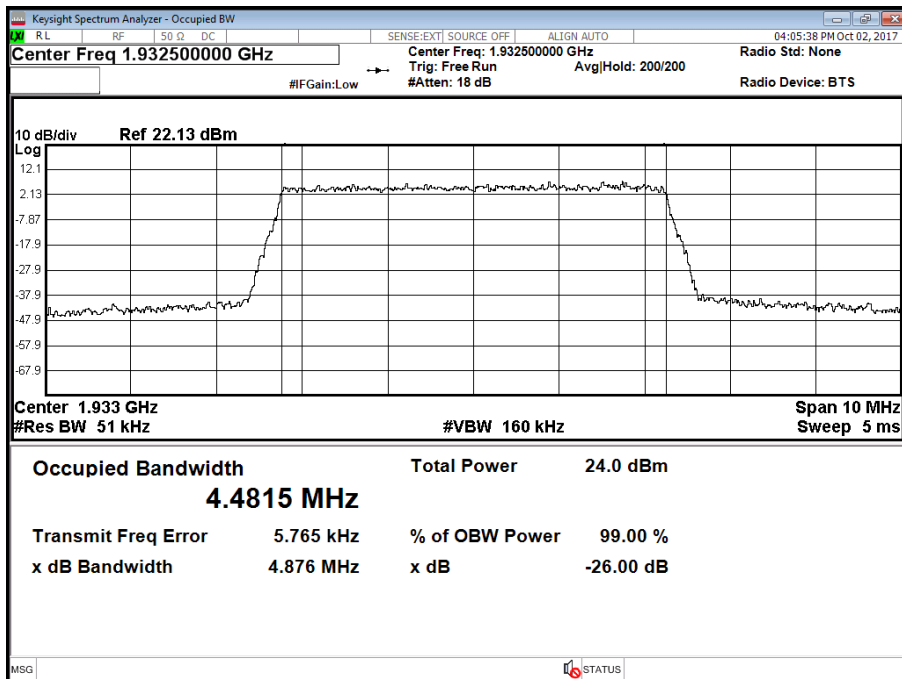


Product Service

Antenna B - LTE Modulation 16QAM - LTE Carrier Bandwidth 5.0 MHz - Channel Position T



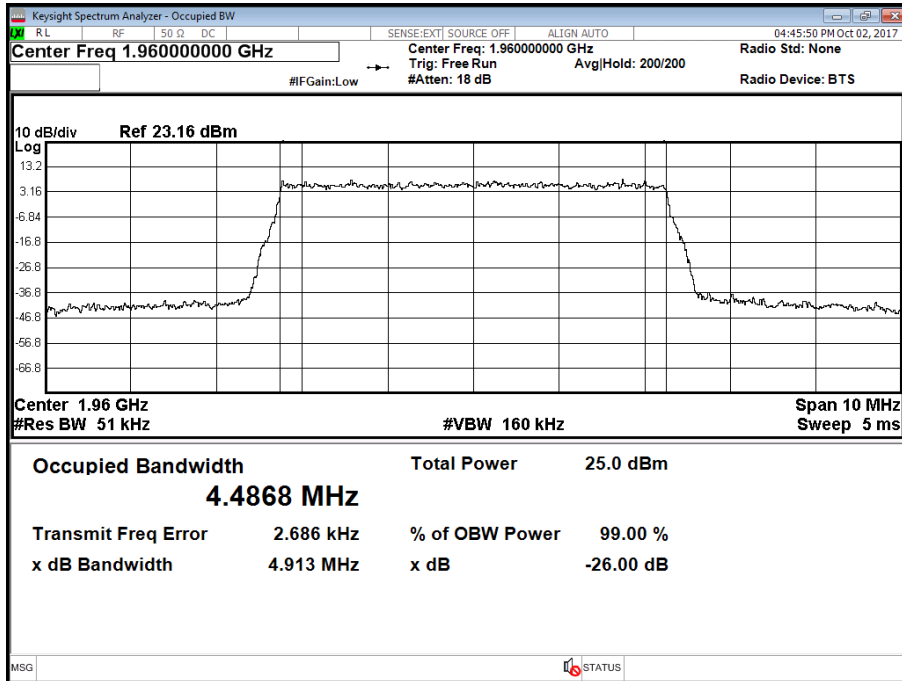
Antenna B - LTE Modulation 64QAM - LTE Carrier Bandwidth 5.0 MHz - Channel Position B



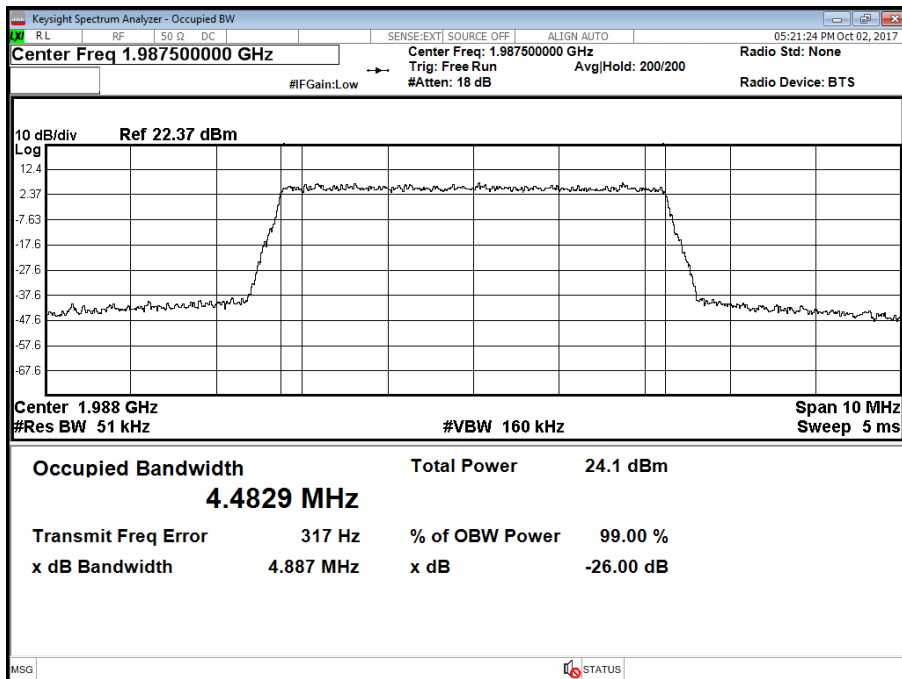


Product Service

Antenna B - LTE Modulation 64QAM - LTE Carrier Bandwidth 5.0 MHz - Channel Position M



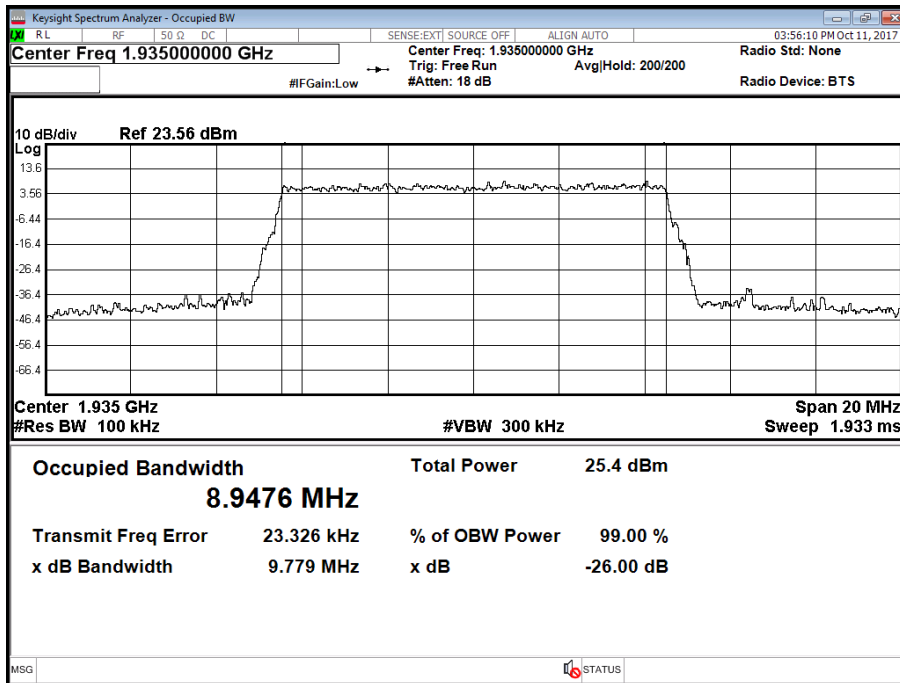
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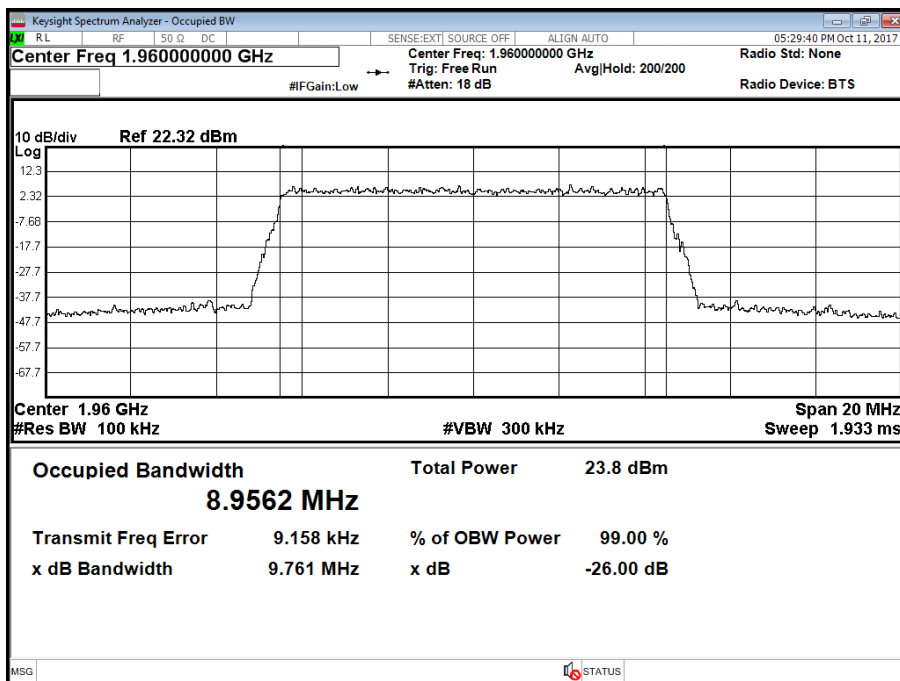


Product Service

Antenna B - LTE Modulation QPSK - LTE Carrier Bandwidth 10.0 MHz - Channel Position B



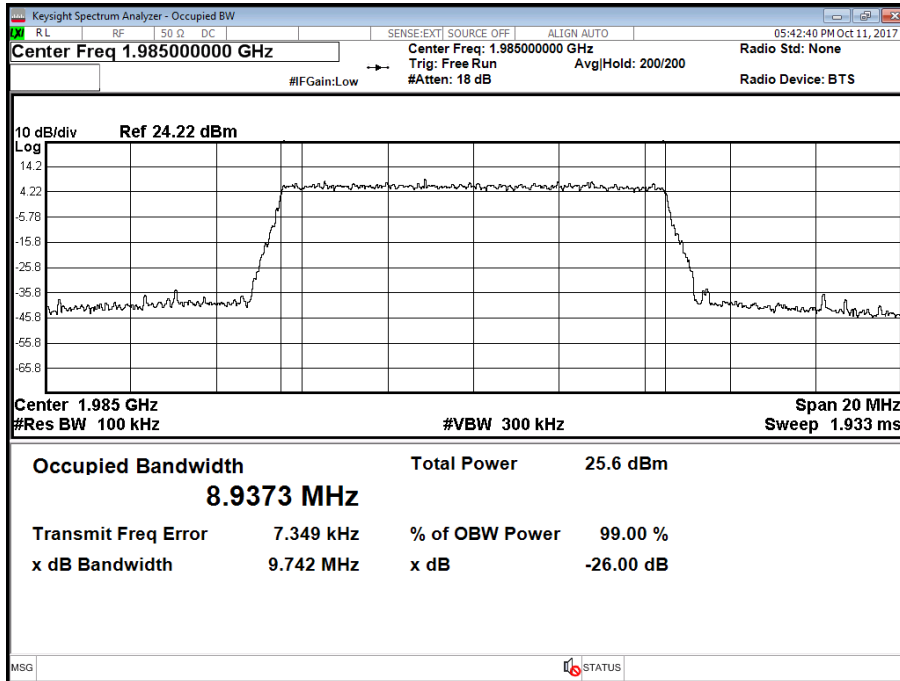
Antenna B - LTE Modulation QPSK - LTE Carrier Bandwidth 10.0 MHz - Channel Position M



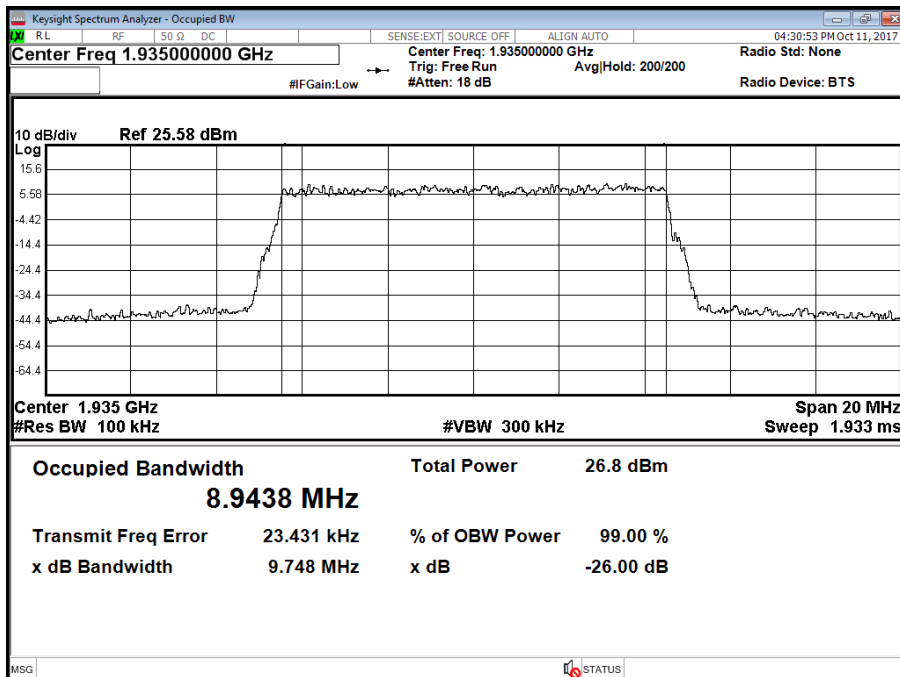


Product Service

Antenna B - LTE Modulation QPSK - LTE Carrier Bandwidth 10.0 MHz - Channel Position T



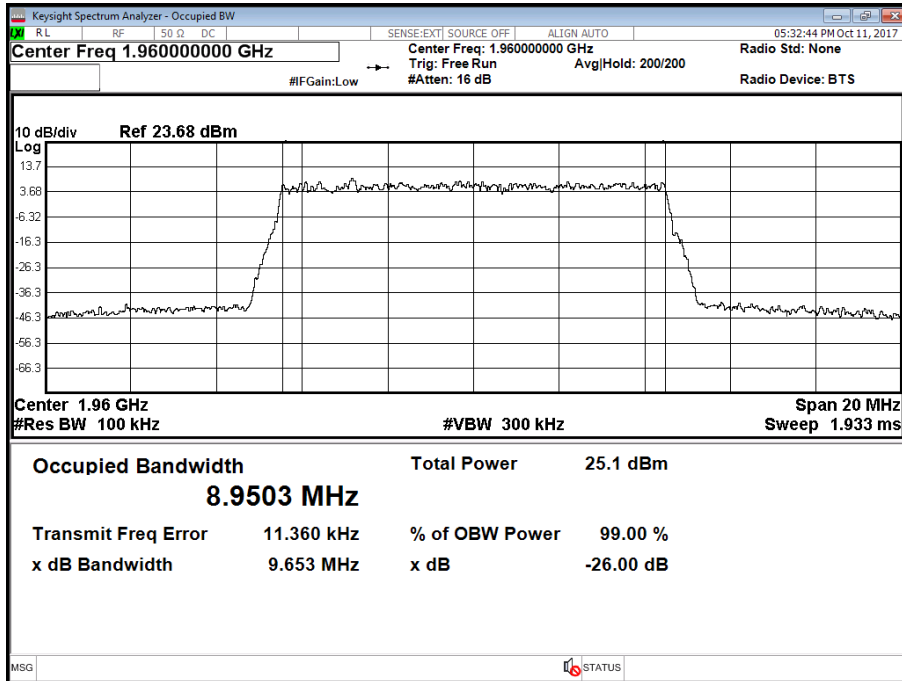
Antenna B - LTE Modulation 16QAM - LTE Carrier Bandwidth 10.0 MHz - Channel Position B



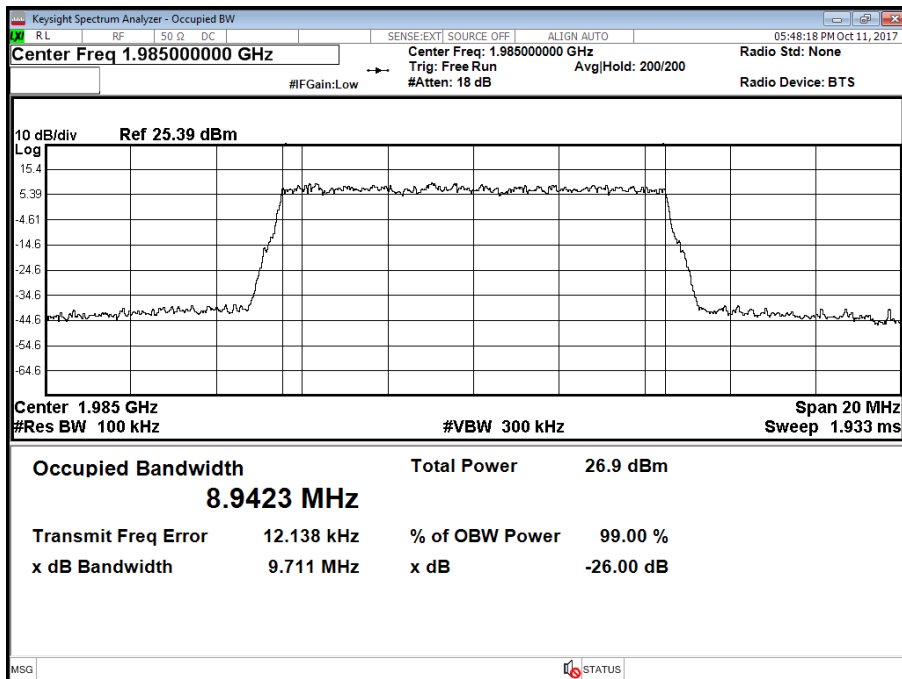


Product Service

Antenna B - LTE Modulation 16QAM - LTE Carrier Bandwidth 10.0 MHz - Channel Position M



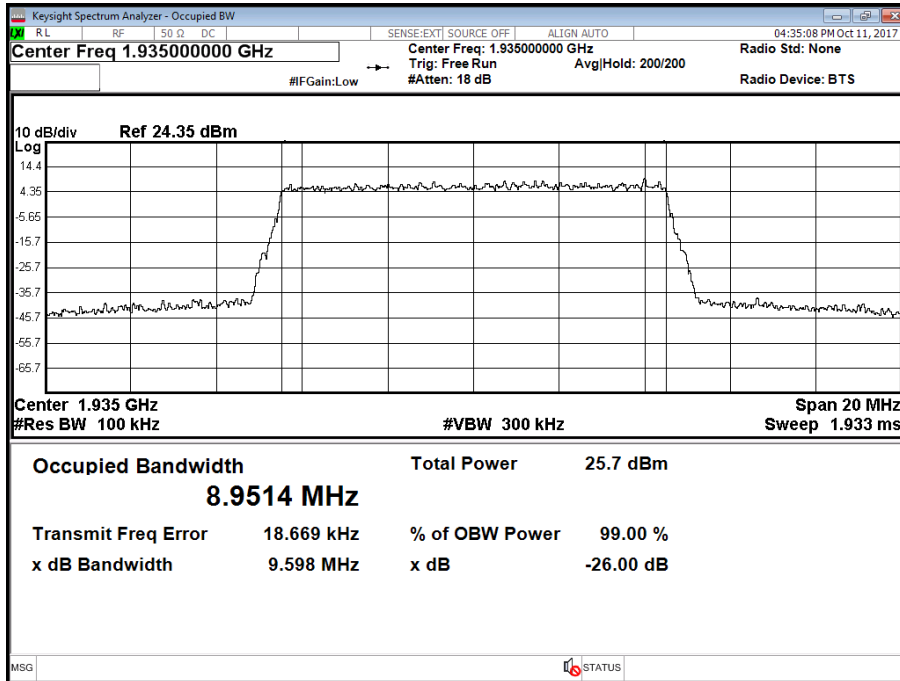
Antenna B - LTE Modulation 16QAM - LTE Carrier Bandwidth 10.0 MHz - Channel Position T



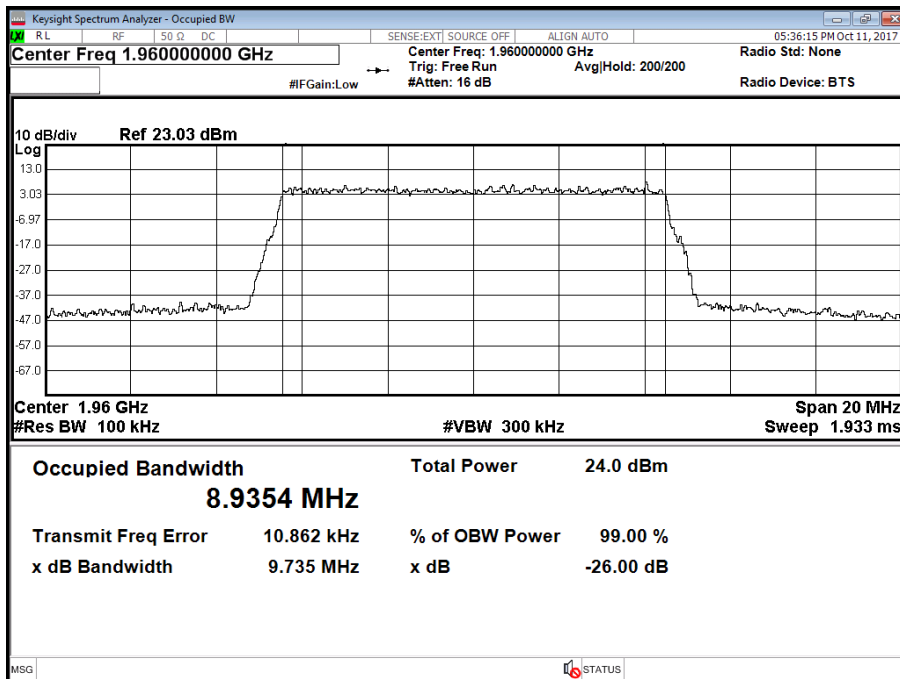


Product Service

Antenna B - LTE Modulation 64QAM - LTE Carrier Bandwidth 10.0 MHz - Channel Position B



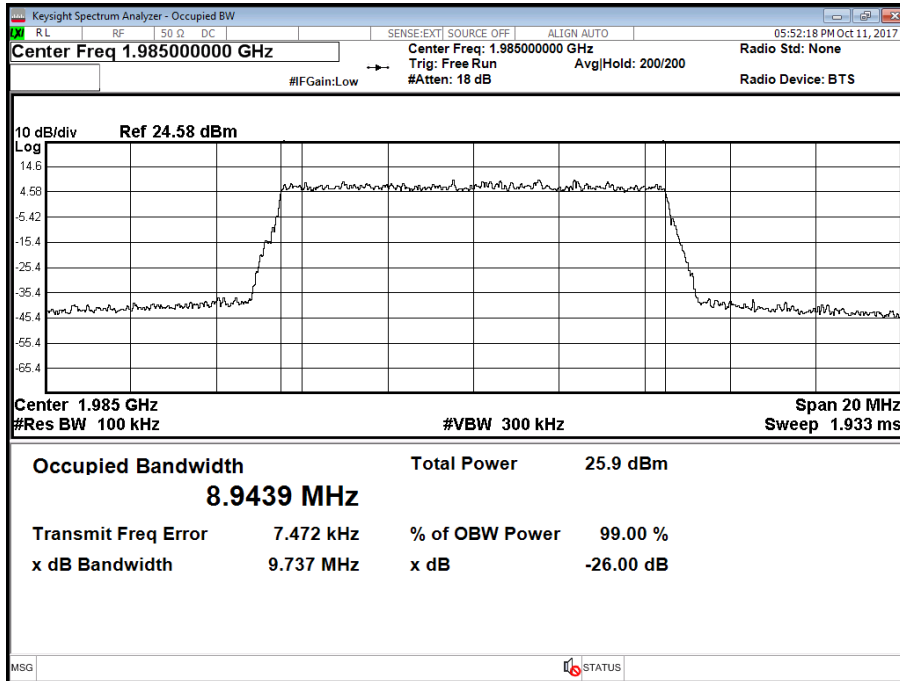
Antenna B - LTE Modulation 64QAM - LTE Carrier Bandwidth 10.0 MHz - Channel Position M



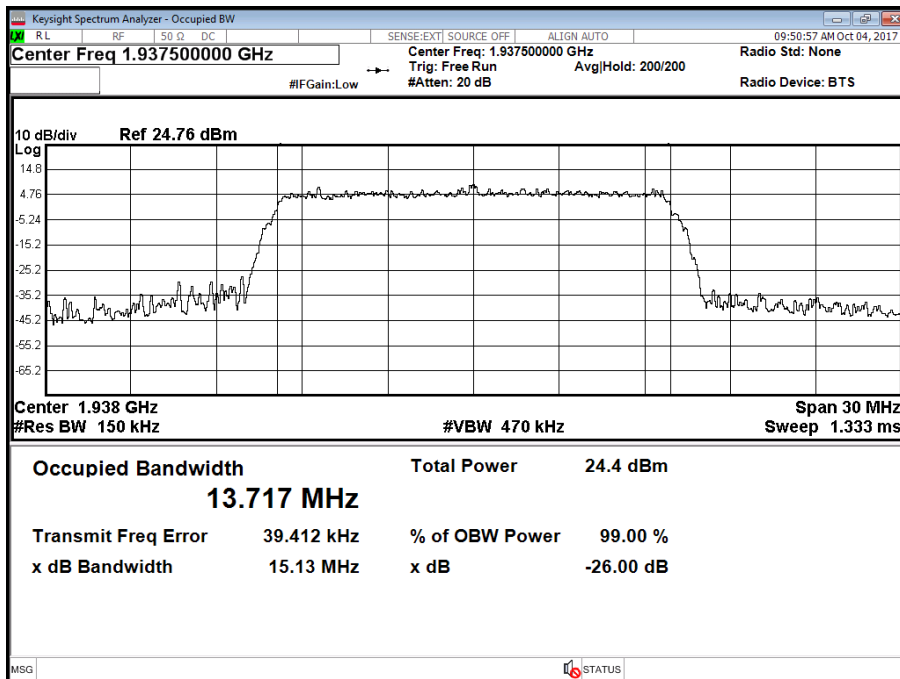


Product Service

Antenna B - LTE Modulation 64QAM - LTE Carrier Bandwidth 10.0 MHz - Channel Position T



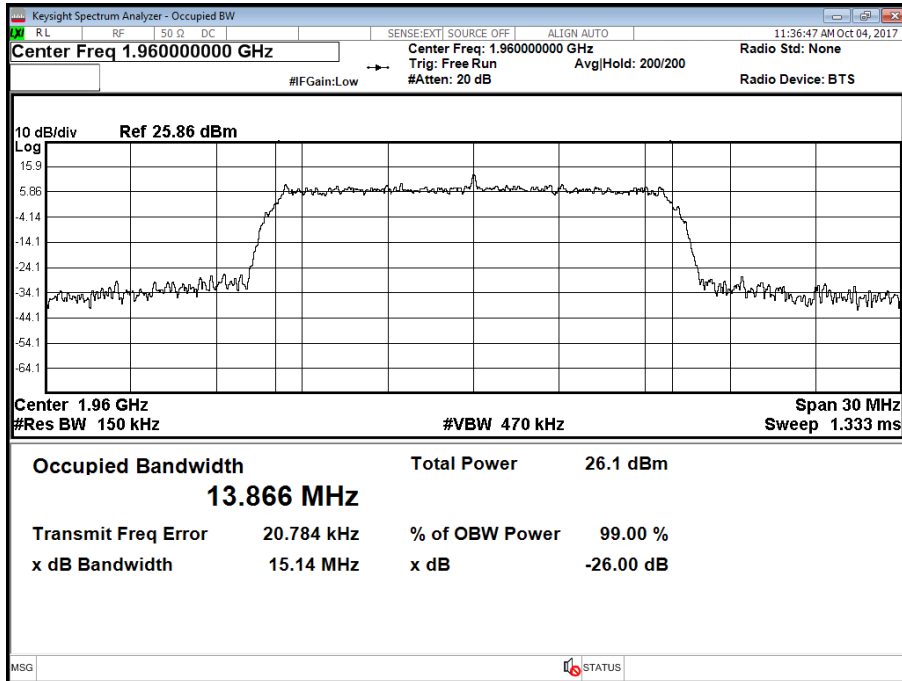
Antenna B - LTE Modulation QPSK - LTE Carrier Bandwidth 15.0 MHz - Channel Position B



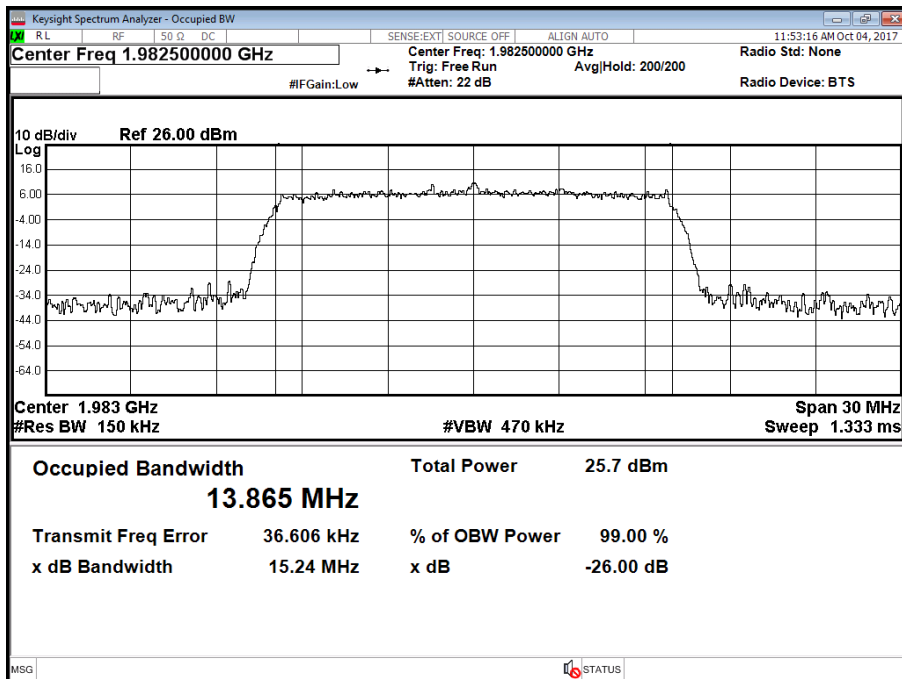


Product Service

Antenna B - LTE Modulation QPSK - LTE Carrier Bandwidth 15.0 MHz - Channel Position M



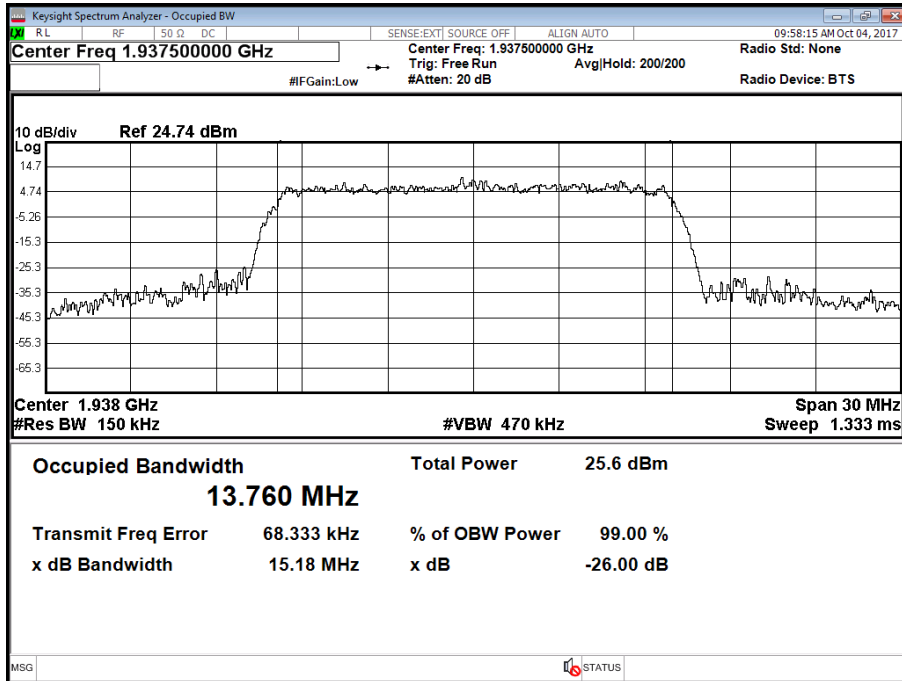
Antenna B - LTE Modulation QPSK - LTE Carrier Bandwidth 15.0 MHz - Channel Position T



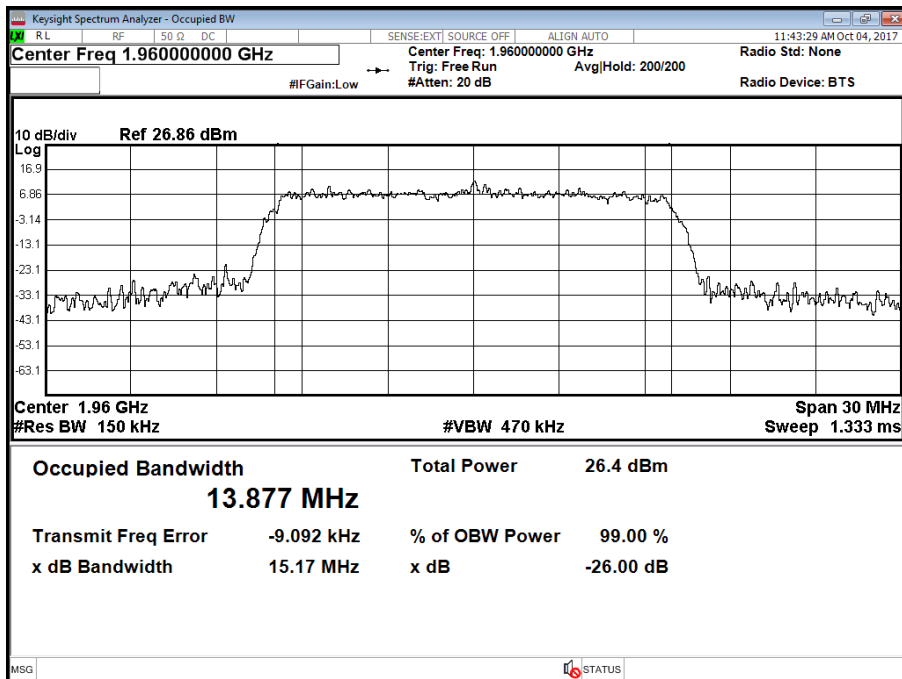


Product Service

Antenna B - LTE Modulation 16QAM - LTE Carrier Bandwidth 15.0 MHz - Channel Position B



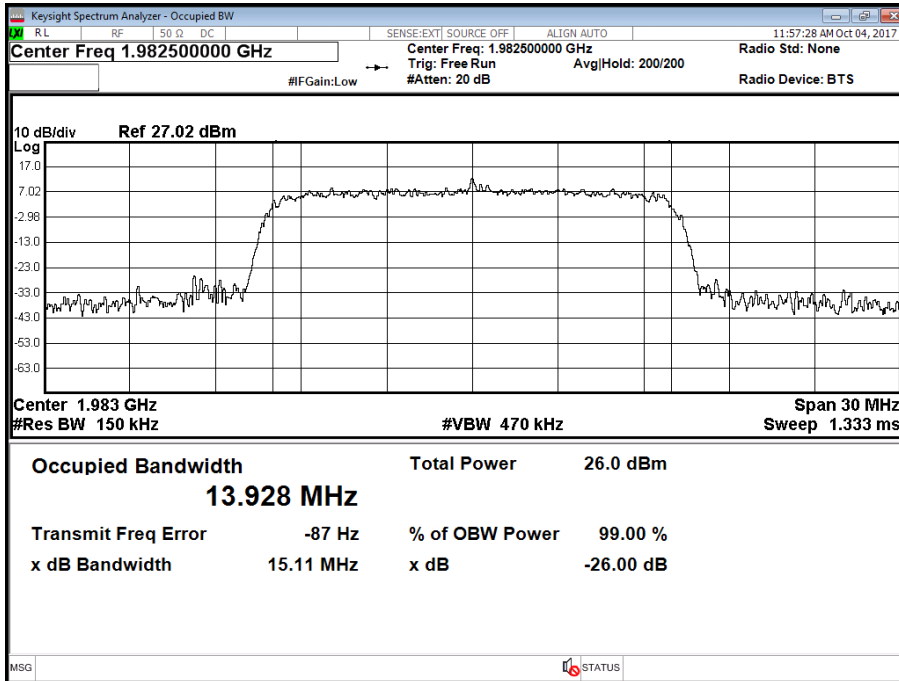
Antenna B - LTE Modulation 16QAM - LTE Carrier Bandwidth 15.0 MHz - Channel Position M



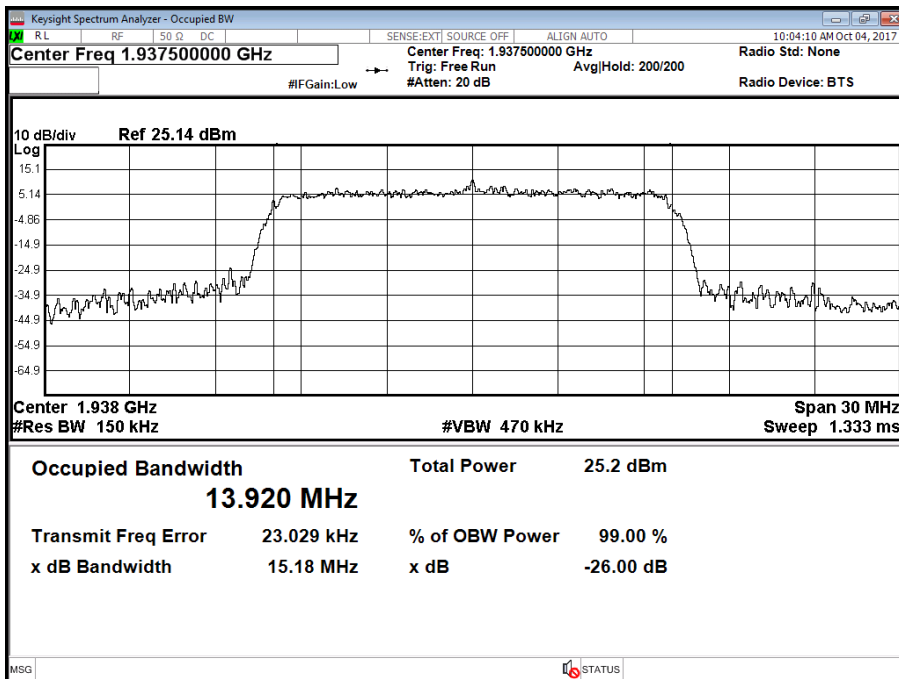


Product Service

Antenna B - LTE Modulation 16QAM - LTE Carrier Bandwidth 15.0 MHz - Channel Position T



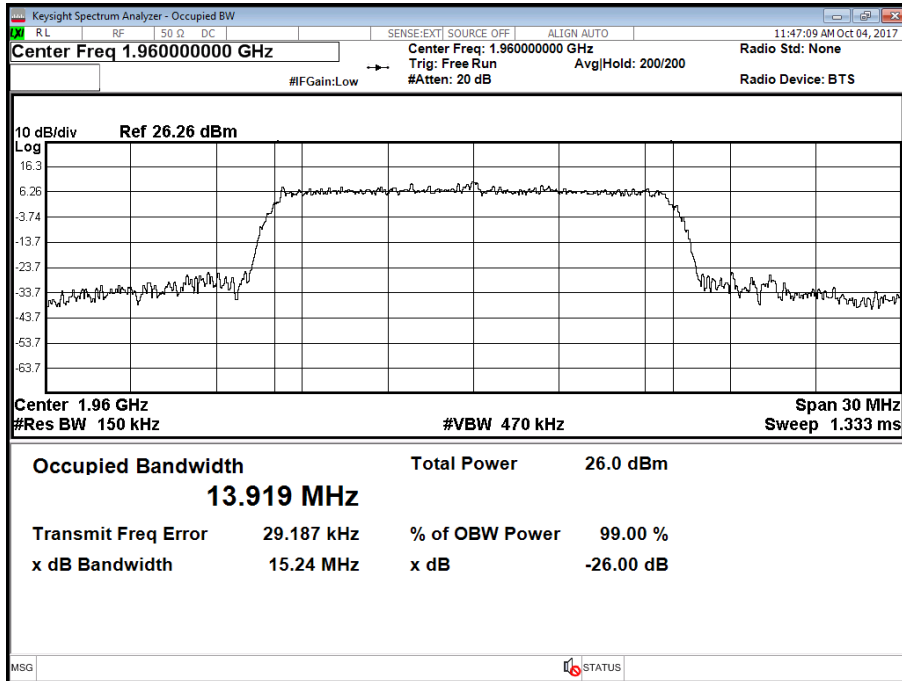
Antenna B - LTE Modulation 64QAM - LTE Carrier Bandwidth 15.0 MHz - Channel Position B



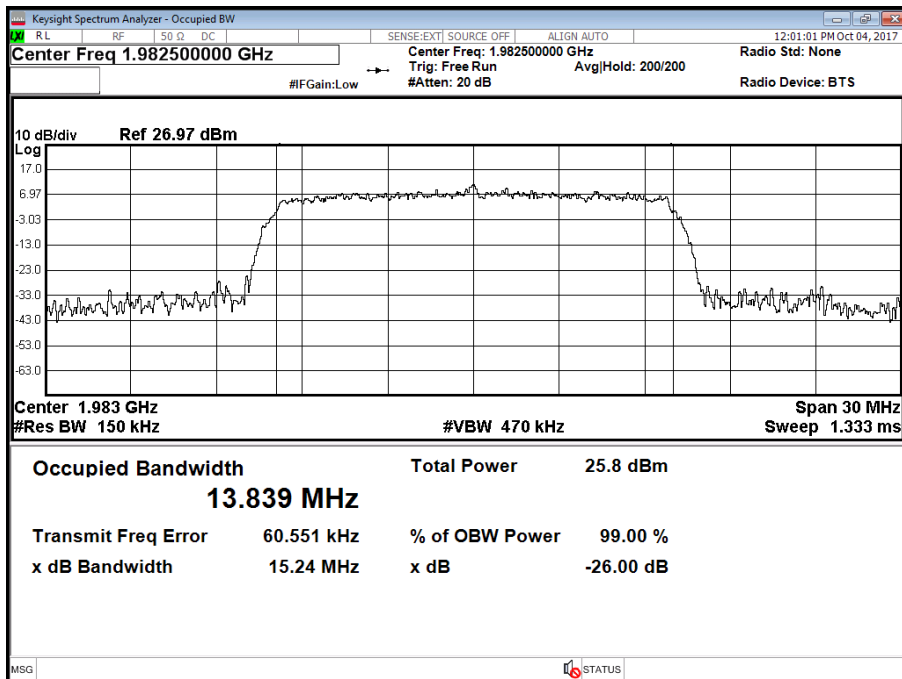


Product Service

Antenna B - LTE Modulation 64QAM - LTE Carrier Bandwidth 15.0 MHz - Channel Position M



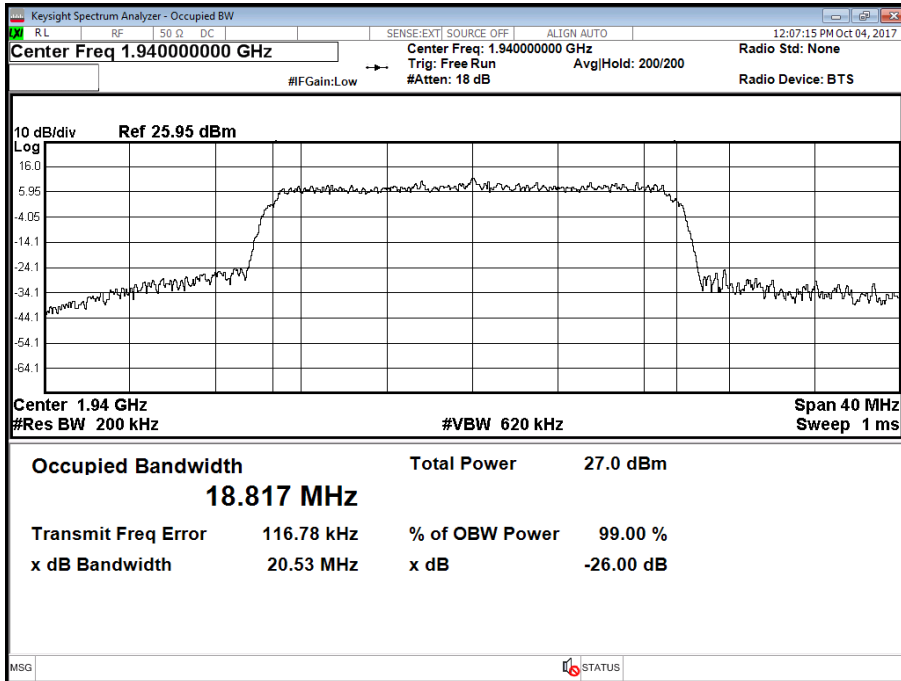
Antenna B - LTE Modulation 64QAM - LTE Carrier Bandwidth 15.0 MHz - Channel Position T



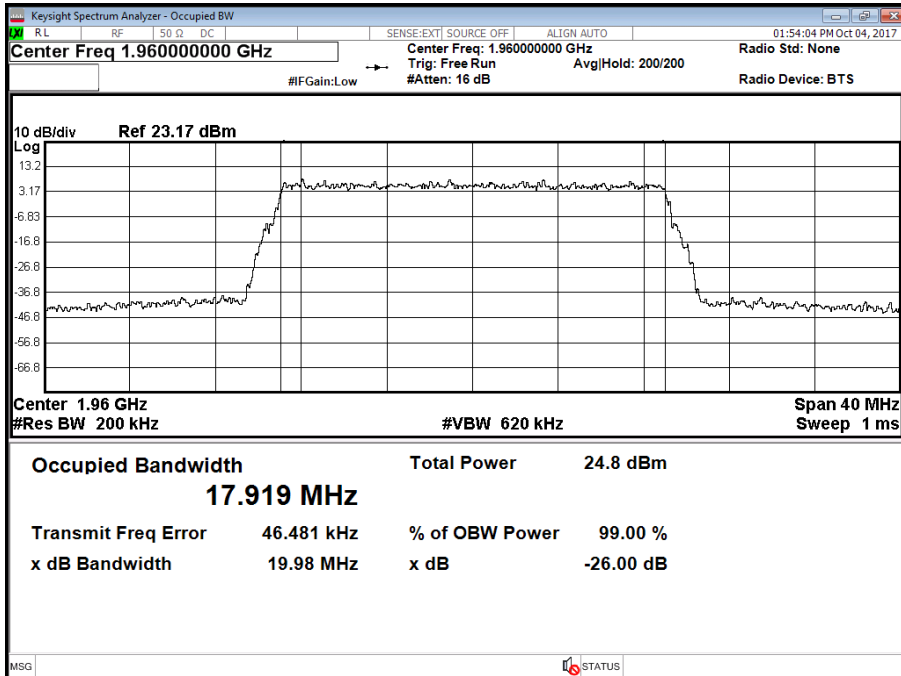


Product Service

Antenna B - LTE Modulation QPSK - LTE Carrier Bandwidth 20.0 MHz - Channel Position B



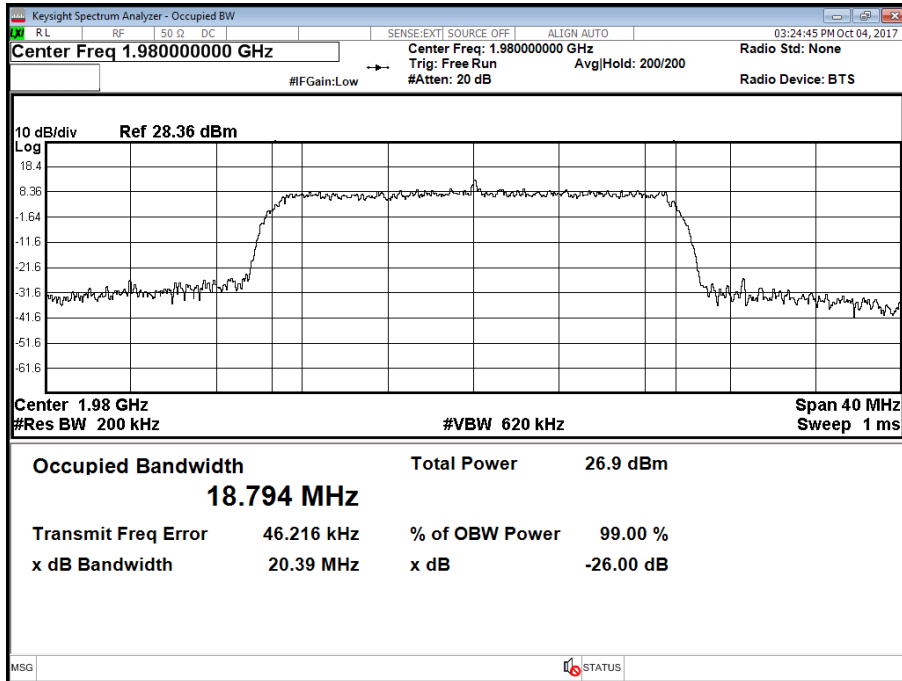
Antenna B - LTE Modulation QPSK - LTE Carrier Bandwidth 20.0 MHz - Channel Position M



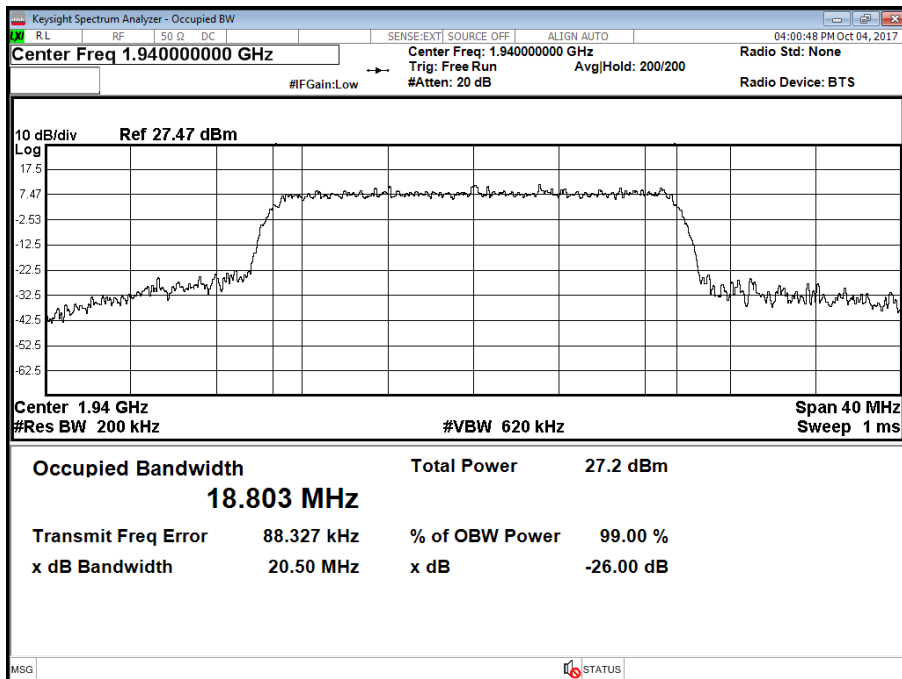


Product Service

Antenna B - LTE Modulation QPSK - LTE Carrier Bandwidth 20.0 MHz - Channel Position T



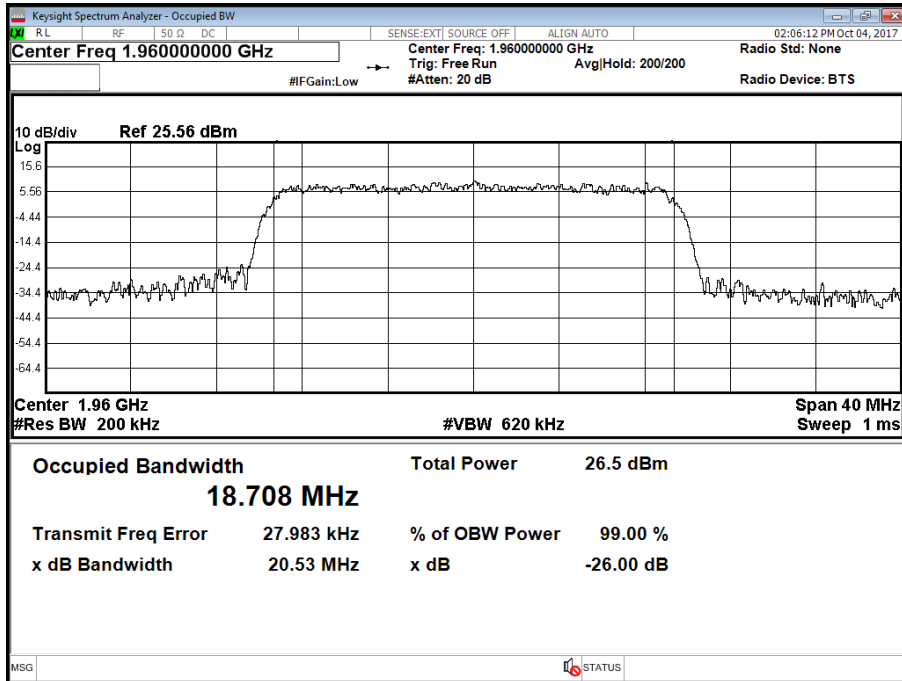
Antenna B - LTE Modulation 16QAM - LTE Carrier Bandwidth 20.0 MHz - Channel Position B



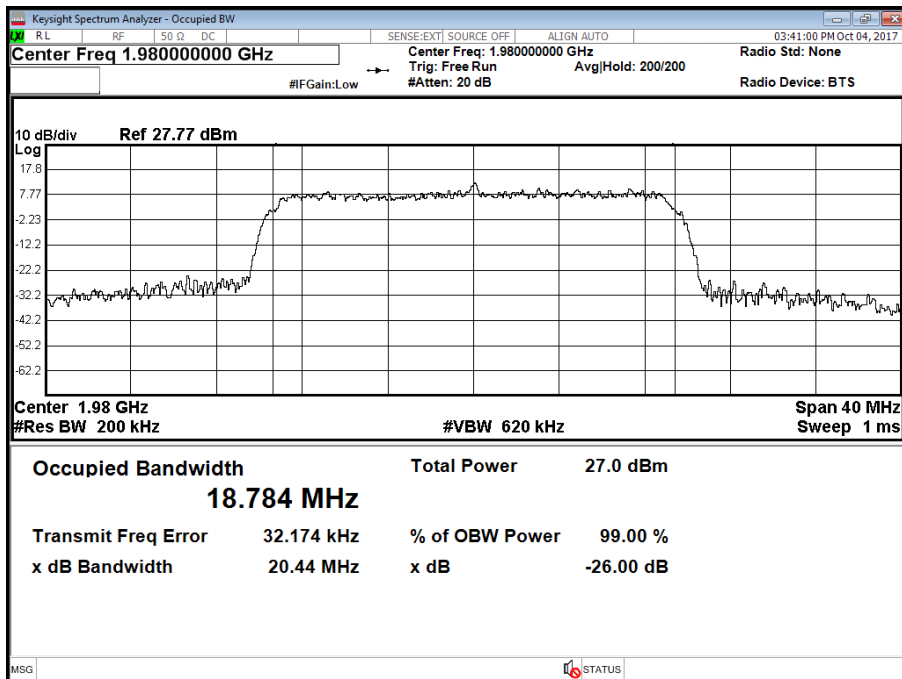


Product Service

Antenna B - LTE Modulation 16QAM - LTE Carrier Bandwidth 20.0 MHz - Channel Position M



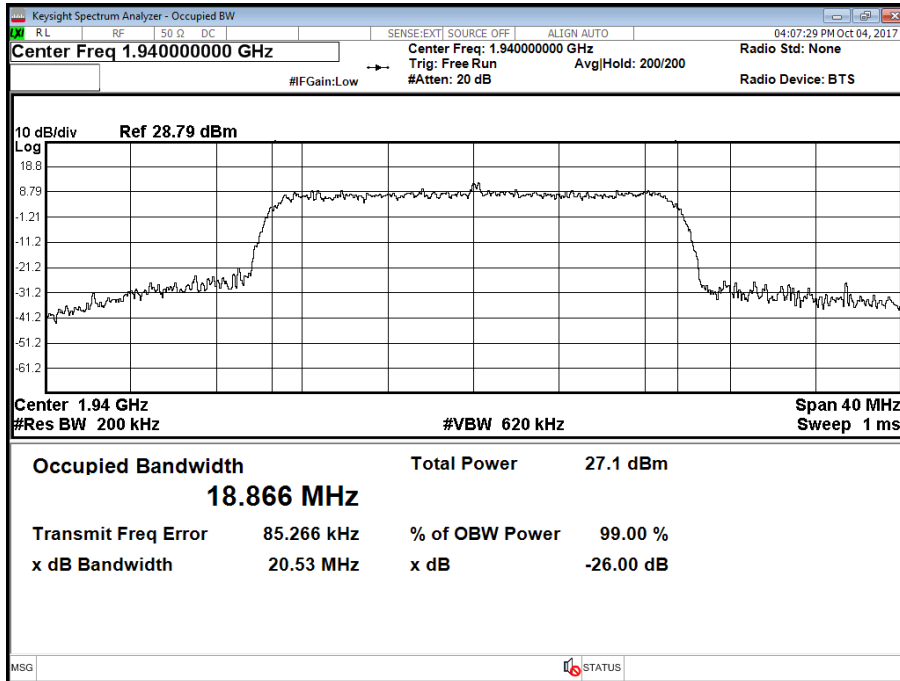
Antenna B - LTE Modulation 16QAM - LTE Carrier Bandwidth 20.0 MHz - Channel Position T



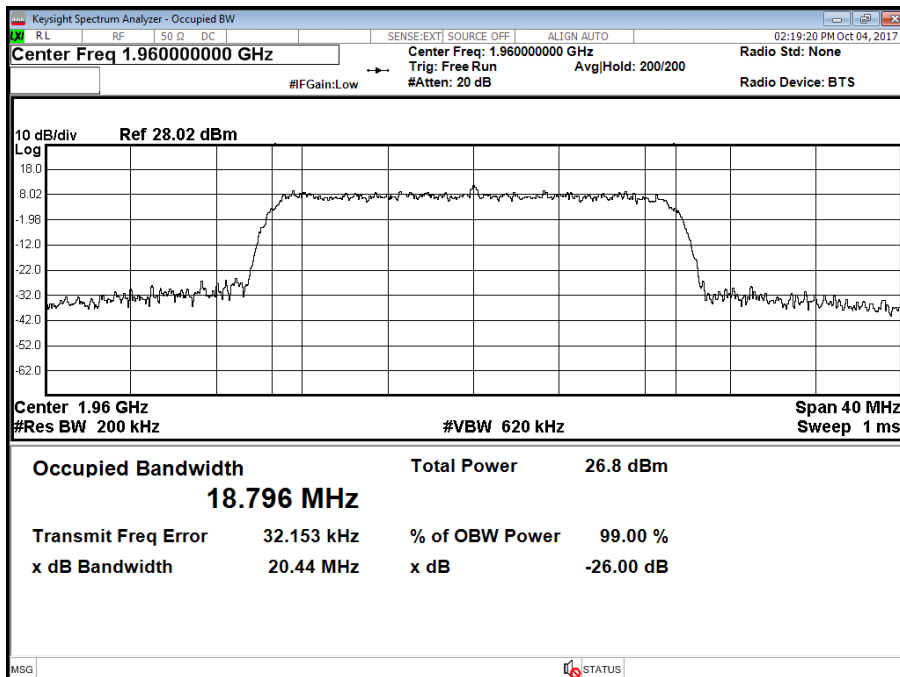


Product Service

Antenna B - LTE Modulation 64QAM - LTE Carrier Bandwidth 20.0 MHz - Channel Position B



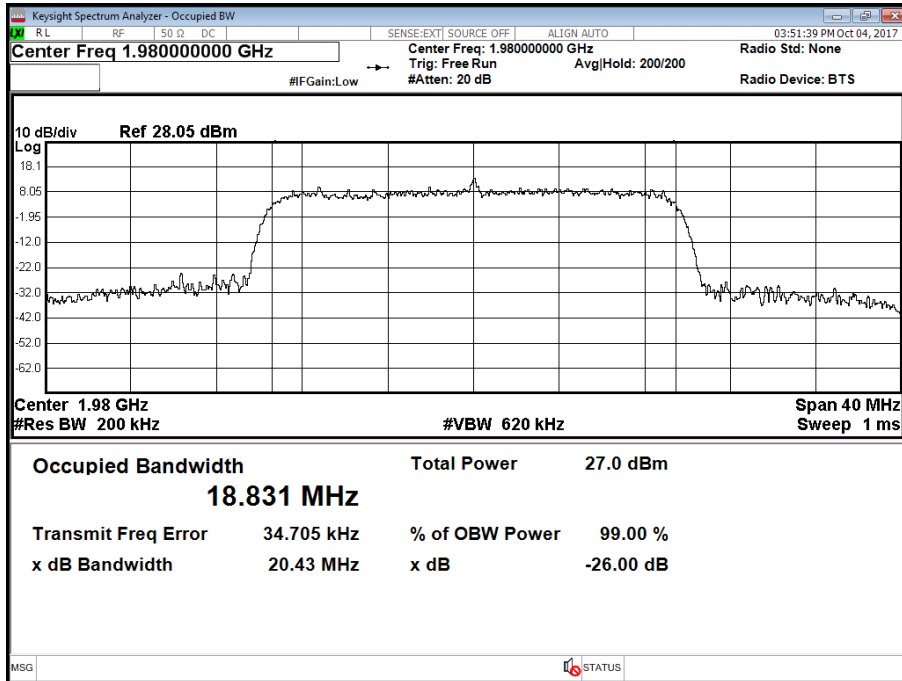
Antenna B - LTE Modulation 64QAM - LTE Carrier Bandwidth 20.0 MHz - Channel Position M





Product Service

Antenna B - LTE Modulation 64QAM - LTE Carrier Bandwidth 20.0 MHz - Channel Position T





Product Service

2.3 RADIATED SPURIOUS EMISSIONS

2.3.1 Specification Reference

FCC CFR 47 Part 2, Clause 2.1053
FCC CFR 47 Part 24, Clause 24.238 (a)

2.3.2 Date of Test and Modification State

19 and 20 September 2017 - Modification State 0

2.3.3 Test Equipment Used

The major items of test equipment used for the above tests are identified in Section 3.1.

2.3.4 Environmental Conditions

Ambient Temperature	19°C
Relative Humidity	57%

2.3.5 Test Method

The test was applied in accordance with test method requirements of FCC Part 24 and ANSI C63.26-2015 clause 5.5

Exploratory radiated measurements were performed in accordance with ANSI C63.26 clauses 5.5.2.3 and 5.5.2.4. The field strength limit line used when performing exploratory radiated measurements has been calculated from equation c) in clause ANSI C63.26 clause 5.2.7.

Emissions found within 20dB of the specification limit were formally measured using the substitution method detailed in ANSI C63.26 clause 5.5.3

The results are shown in the following plots.



2.3.6 Test Results

Note: Only the worst case results plots have been included as all of the emissions are greater than 10dB below the limit. A set of plots have been included to show the measurement system noise floor.

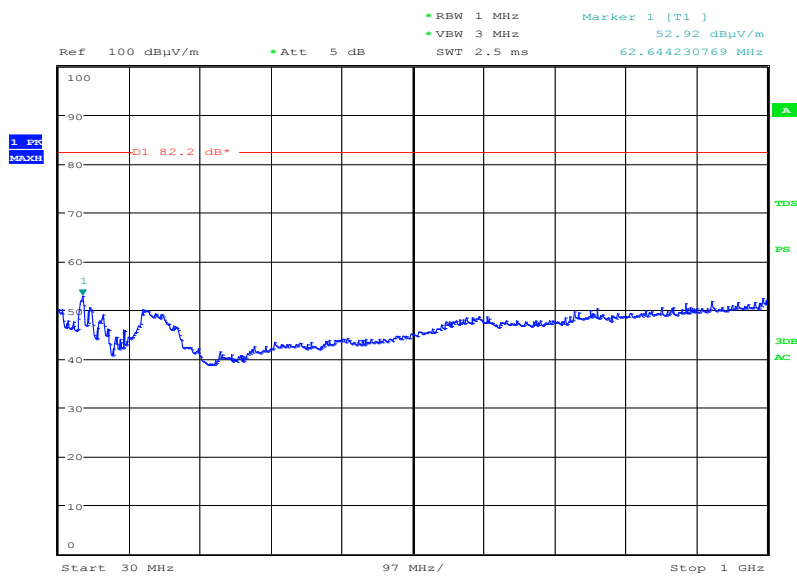
Configuration 1

Maximum Output Power 20 dBm per port

Frequency (GHz)	Level (dBm)	Limit (dBm)	Margin (dBm)	Angle (°)	Height (m)	Polarity
7.725152	-26.95	-13.0	-13.95	135	100	Vertical
7.838141	-24.34	-13.0	-11.34	312	100	Vertical
7.941426	-32.86	-13.0	-19.86	298	100	Vertical

LTE Modulation 16QAM - LTE Carrier Bandwidth 3.0 MHz - Channel Position B

30 MHz to 1 GHz

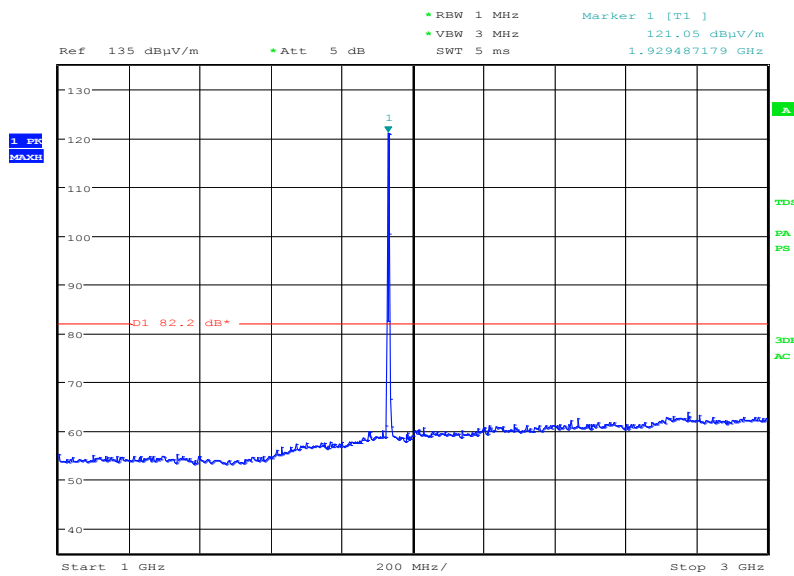


Date: 20.SEP.2017 18:00:42



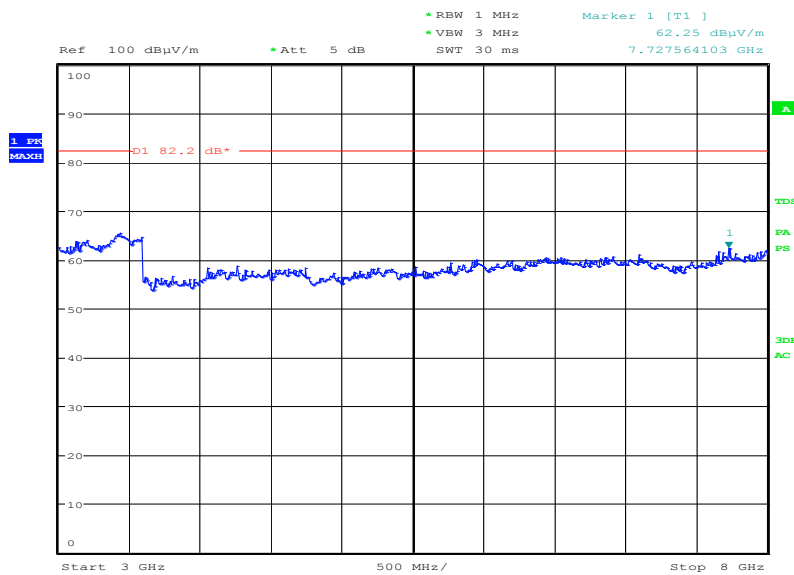
Product Service

1 GHz to 3 GHz



Date: 19.SEP.2017 19:27:44

3 GHz to 8 GHz

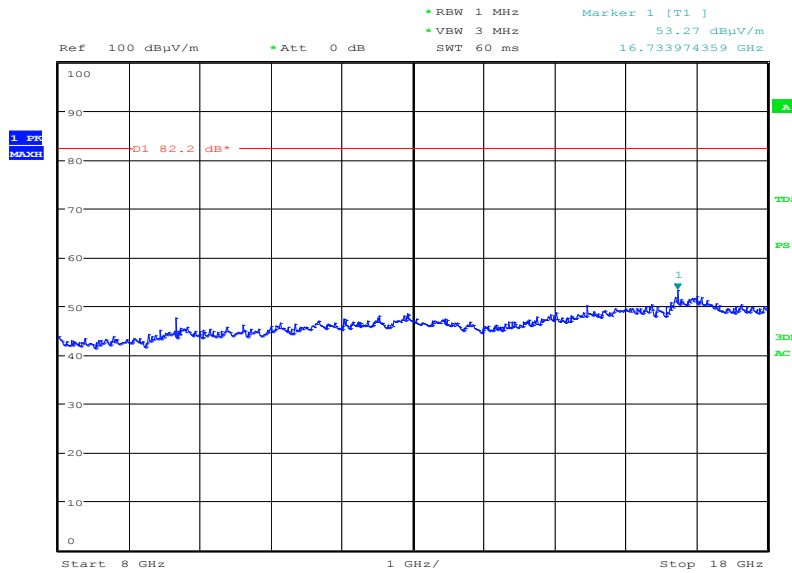


Date: 19.SEP.2017 19:35:24



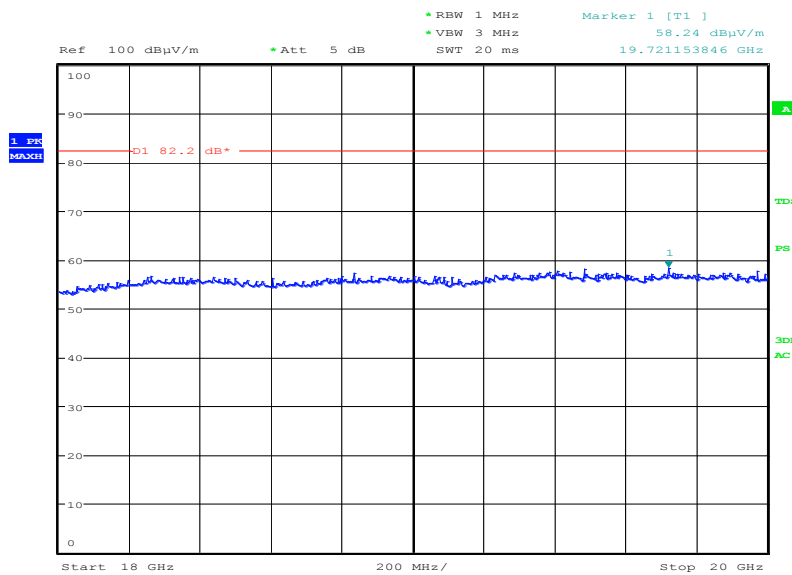
Product Service

8 GHz to 18 GHz



Date: 19.SEP.2017 22:48:14

18 GHz to 20 GHz



Date: 20.SEP.2017 18:52:04

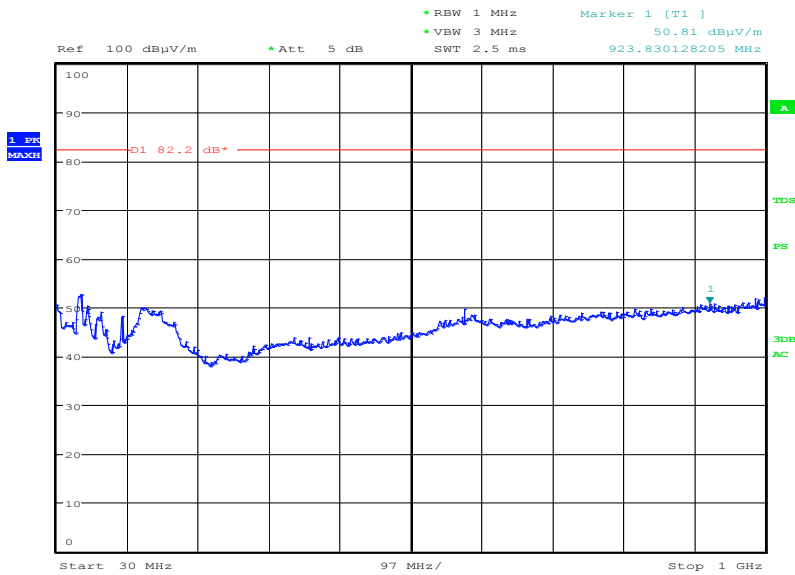
No emissions were detected within 10 dB of the limit.



Product Service

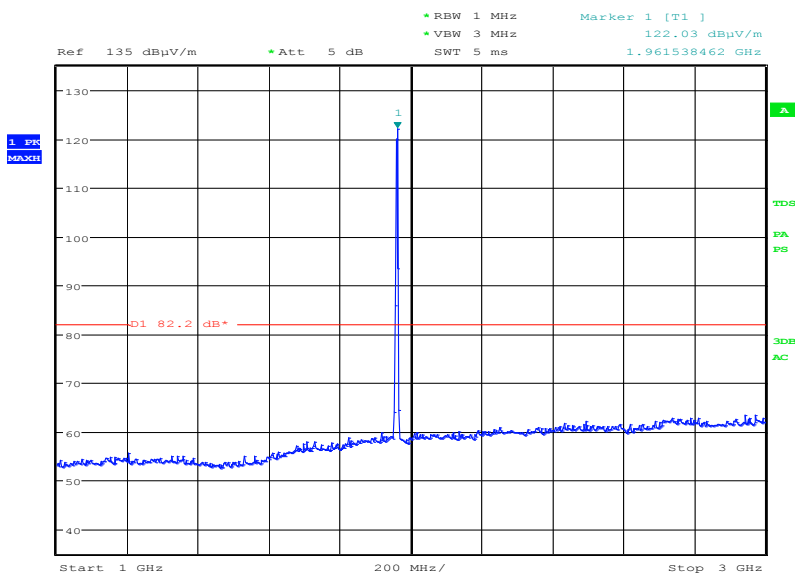
LTE Modulation 16QAM - LTE Carrier Bandwidth 3.0 MHz - Channel Position M

30 MHz to 1 GHz



Date: 20.SEP.2017 17:57:32

1 GHz to 3 GHz

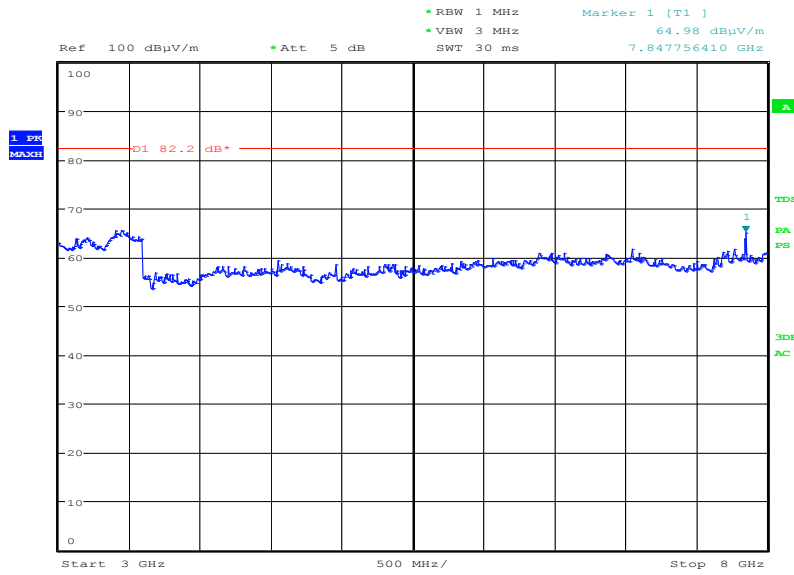


Date: 19.SEP.2017 20:49:26



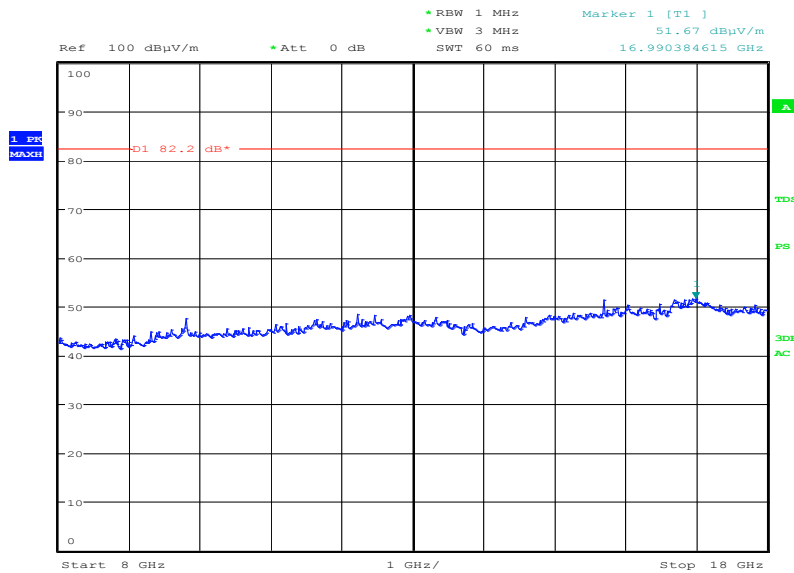
Product Service

3 GHz to 8 GHz



Date: 19.SEP.2017 20:45:38

8 GHz to 18 GHz

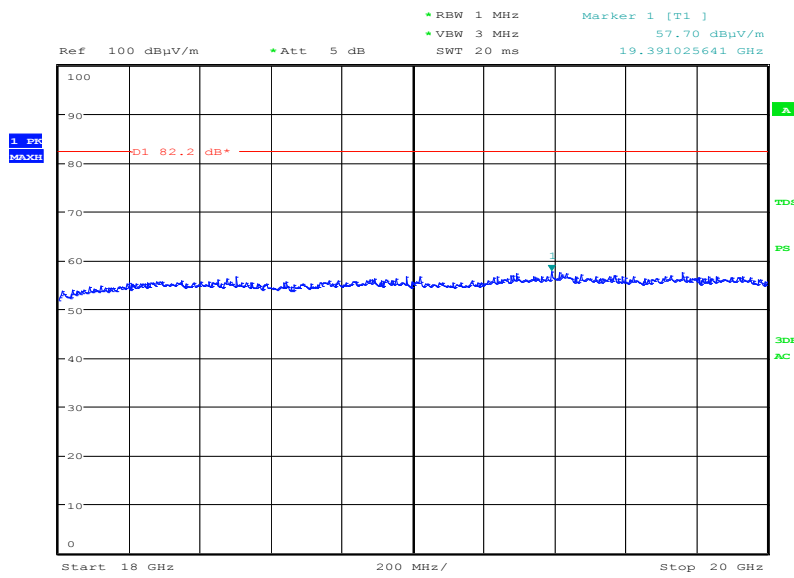


Date: 19.SEP.2017 22:39:42



Product Service

18 GHz to 20 GHz



Date: 20.SEP.2017 18:55:32

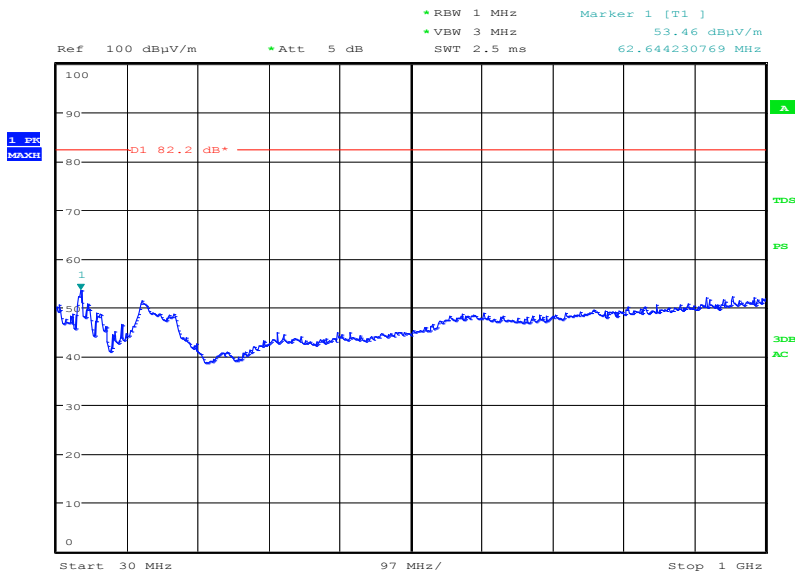
No emissions were detected within 10 dB of the limit.



Product Service

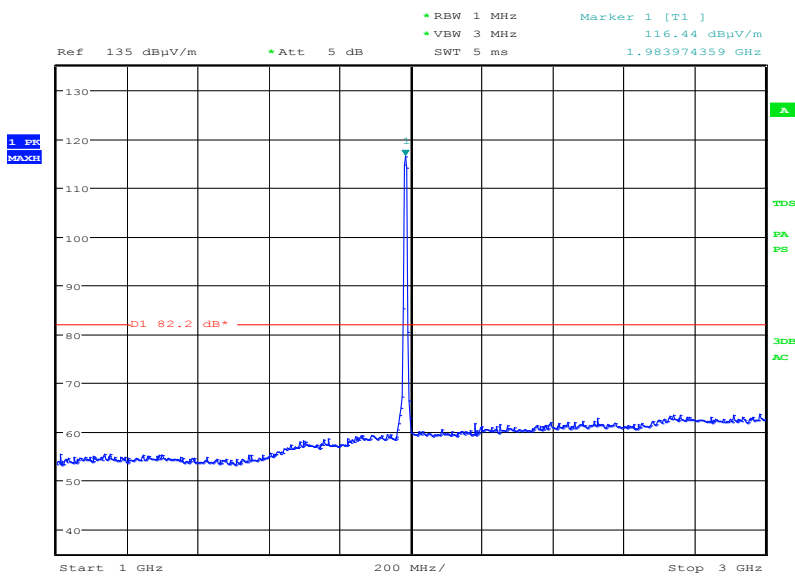
LTE Modulation 64QAM - LTE Carrier Bandwidth 10.0 MHz - Channel Position T

30 MHz to 1 GHz



Date: 20.SEP.2017 18:07:08

1 GHz to 3 GHz

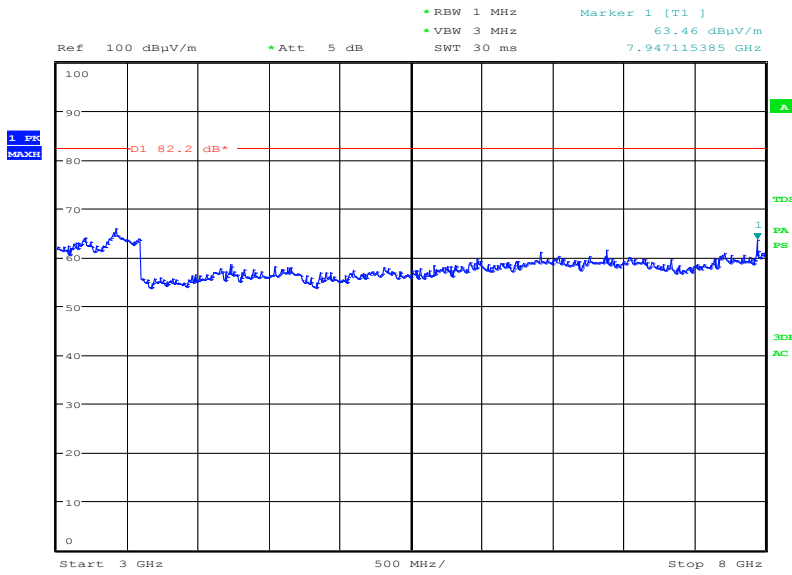


Date: 19.SEP.2017 21:15:48



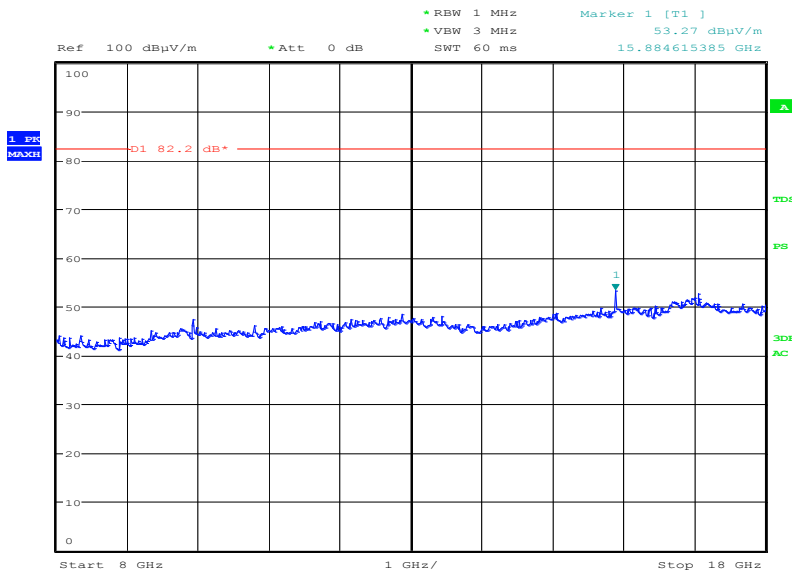
Product Service

3 GHz to 8 GHz



Date: 19.SEP.2017 21:17:47

8 GHz to 18 GHz

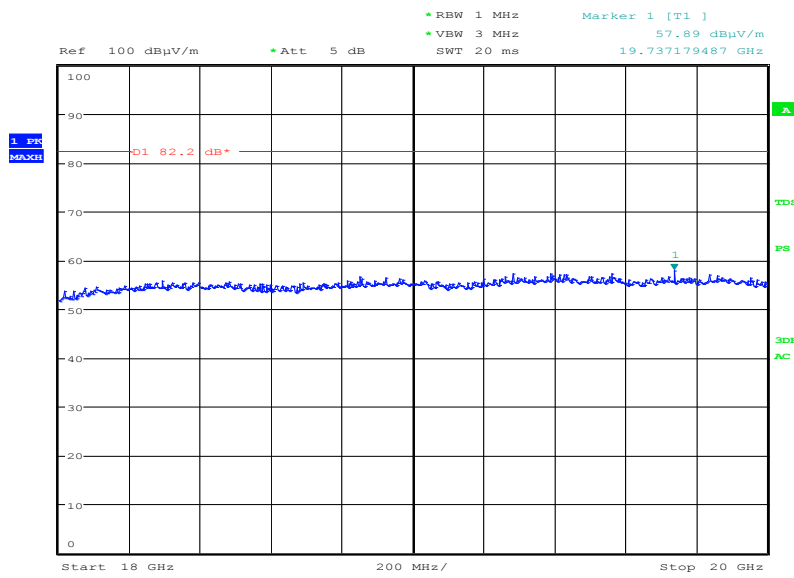


Date: 19.SEP.2017 22:31:12



Product Service

18 GHz to 20 GHz



Date: 20.SEP.2017 19:01:58

No emissions were detected within 10 dB of the limit.

Limit	-13dBm / 82.2 dBμV/m.
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Product Service

2.4 BAND EDGE

2.4.1 Specification Reference

FCC CFR 47 Part 2, Clause 2.1051
FCC CFR 47 Part 24, Clause 24.238 (b)

2.4.2 Date of Test and Modification State

15 September to 11 October 2017 - Modification State 0

2.4.3 Test Equipment Used

The major items of test equipment used for the above tests are identified in Section 3.1.
Environmental Conditions

2.4.4 Environmental Conditions

Ambient Temperature	22.5 - 23.3°C
Relative Humidity	55.2 - 41.9%

2.4.5 Test Method

All measurements were made in accordance with FCC KDB 971168 D01 Clause 6.

The EUT was connected to a Spectrum Analyser via 20 dB of attenuation. The path loss between the EUT and the Spectrum Analyser was measured using a Network Analyser. The measured path loss was entered as a Reference Level Offset in the Spectrum Analyser. All measurements were made using a RBW of <1 % of the 26 dB Bandwidth in conjunction with the Band Power function of the Spectrum Analyser. The Band Power span was configured to be at least 1 % of the 26 dB Bandwidth and was positioned in the 1MHz region above/below the band edge which gave the worst-case result. The result was an integration of the power giving the result as a value which was at least 1 % of the 26 dB Bandwidth. The display line was set to the worst case accounting for 2 Port MIMO operation in accordance with KDB 662911 D01. This equated to $43 + 10\log(P) - 10\log(2) = -16\text{dBm}$.



Product Service

2.4.6 Test Results

Configuration 1

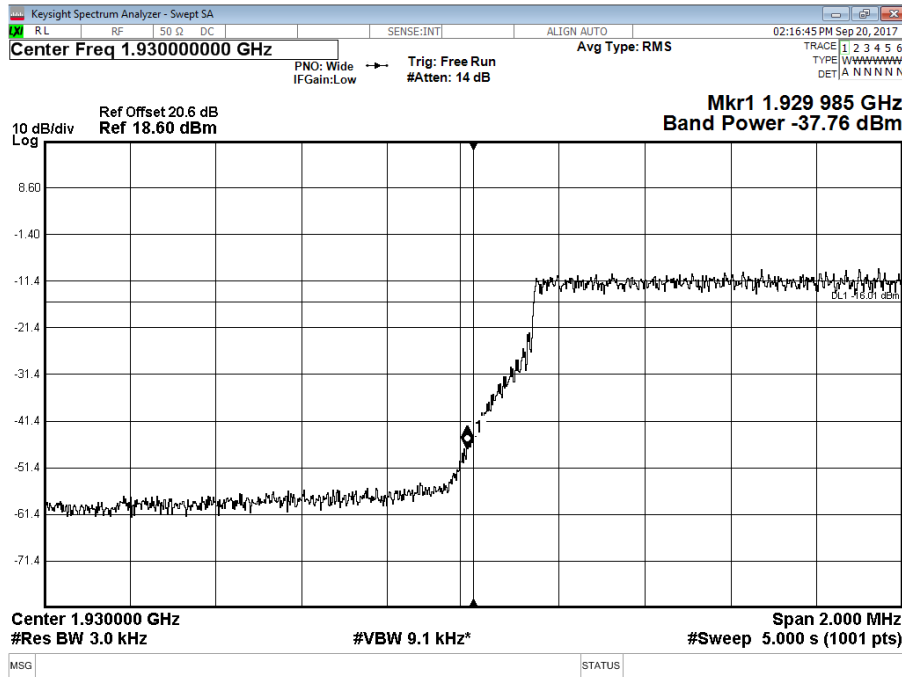
Maximum Output Power 20 dBm

Antenna	LTE Modulation	LTE Carrier Bandwidth	Band Edge (MHz)	
			Channel Position B	Channel Position T
A	QPSK	3.0 MHz	1,931.5	1,988.5
A	16QAM	3.0 MHz	1,931.5	1,988.5
A	64QAM	3.0 MHz	1,931.5	1,988.5
A	QPSK	5.0 MHz	1,932.5	1,987.5
A	16QAM	5.0 MHz	1,932.5	1,987.5
A	64QAM	5.0 MHz	1,932.5	1,987.5
A	QPSK	10.0 MHz	1,935.0	1,985.0
A	16QAM	10.0 MHz	1,935.0	1,985.0
A	64QAM	10.0 MHz	1,935.0	1,985.0
A	QPSK	15.0 MHz	1,937.5	1,982.5
A	16QAM	15.0 MHz	1,937.5	1,982.5
A	64QAM	15.0 MHz	1,937.5	1,982.5
A	QPSK	20.0 MHz	1,940.0	1,980.0
A	16QAM	20.0 MHz	1,940.0	1,980.0
A	64QAM	20.0 MHz	1,940.0	1,980.0

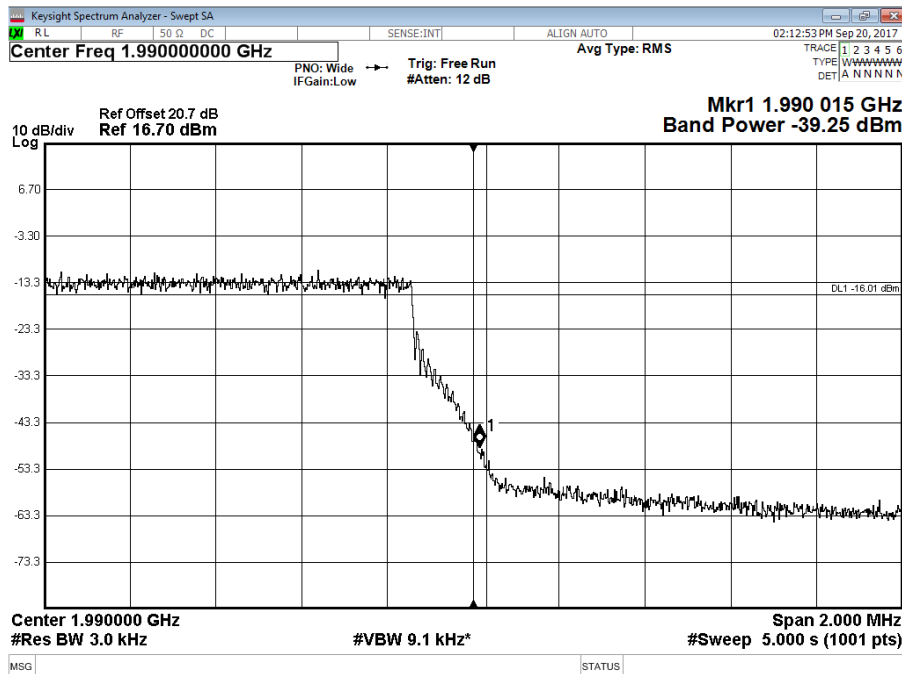


Product Service

Antenna A - LTE Modulation QPSK - LTE Carrier Bandwidth 3.0 MHz - Channel Position B



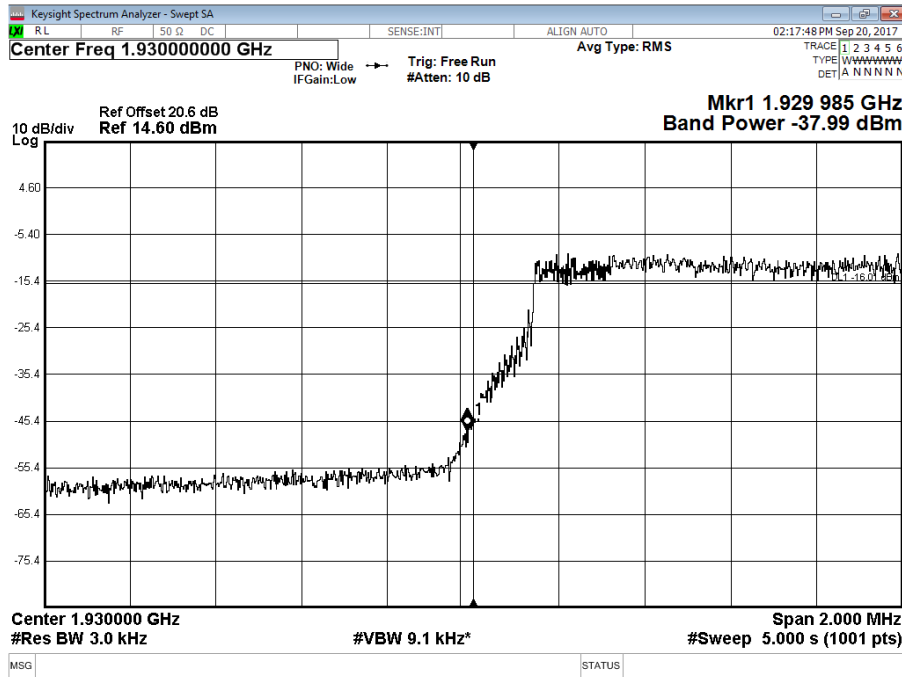
Antenna A - LTE Modulation QPSK - LTE Carrier Bandwidth 3.0 MHz - Channel Position T



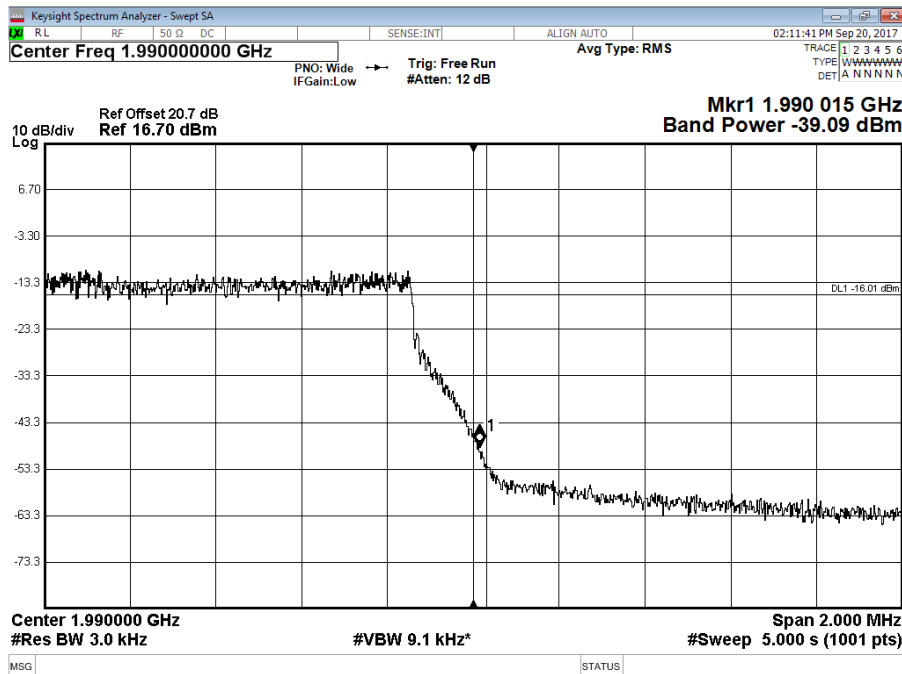


Product Service

Antenna A - LTE Modulation 16QAM - LTE Carrier Bandwidth 3.0 MHz - Channel Position B



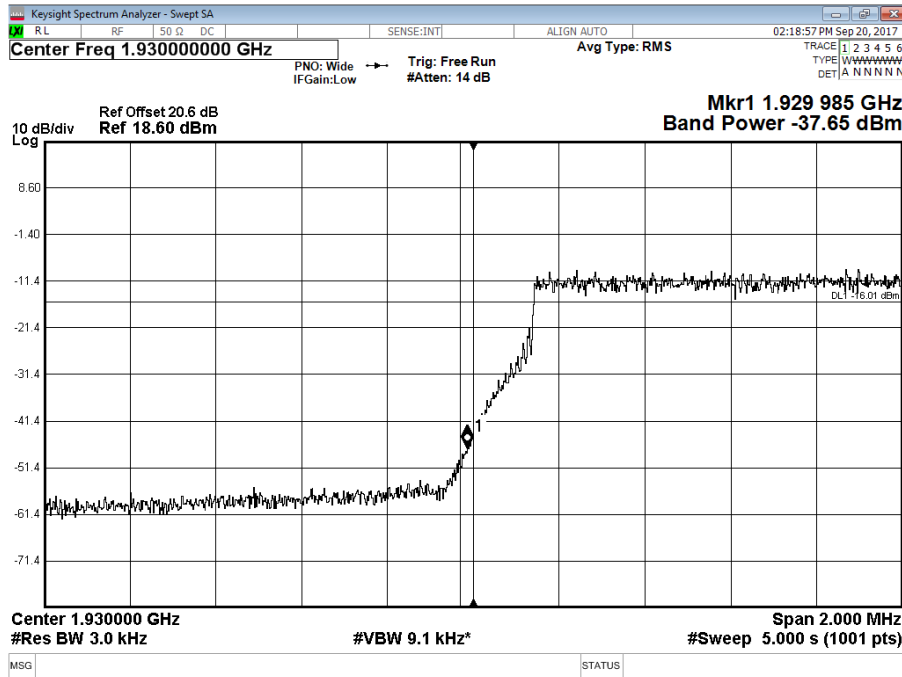
Antenna A - LTE Modulation 16QAM - LTE Carrier Bandwidth 3.0 MHz - Channel Position T



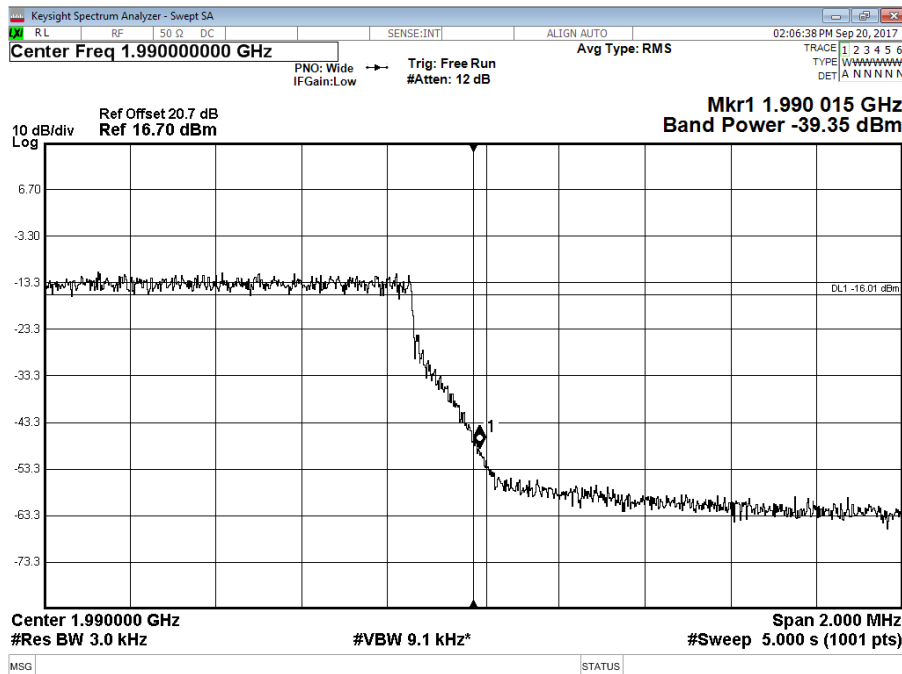


Product Service

Antenna A - LTE Modulation 64QAM - LTE Carrier Bandwidth 3.0 MHz - Channel Position B



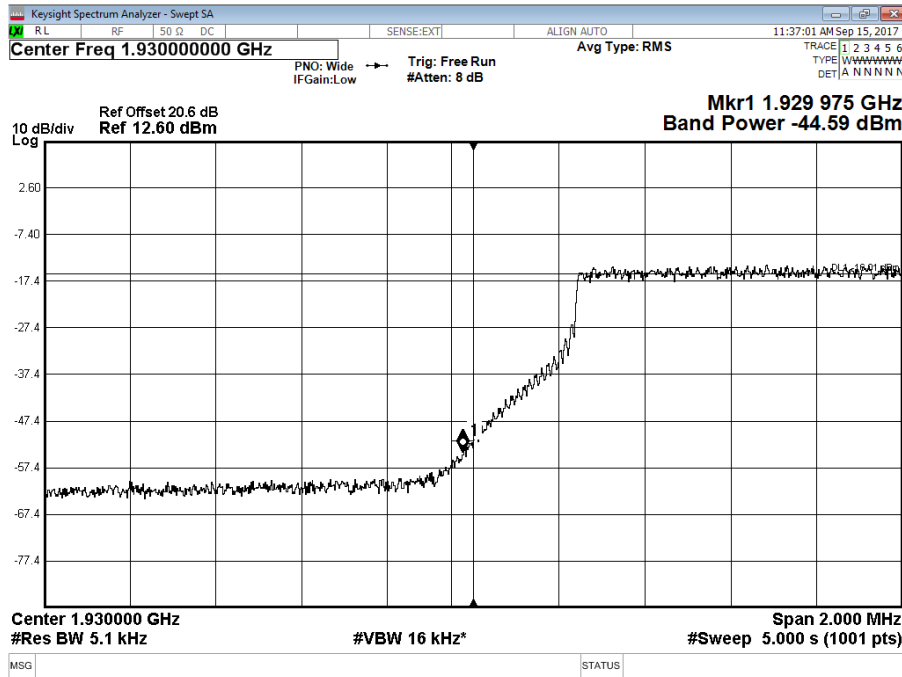
Antenna A - LTE Modulation 64QAM - LTE Carrier Bandwidth 3.0 MHz - Channel Position T



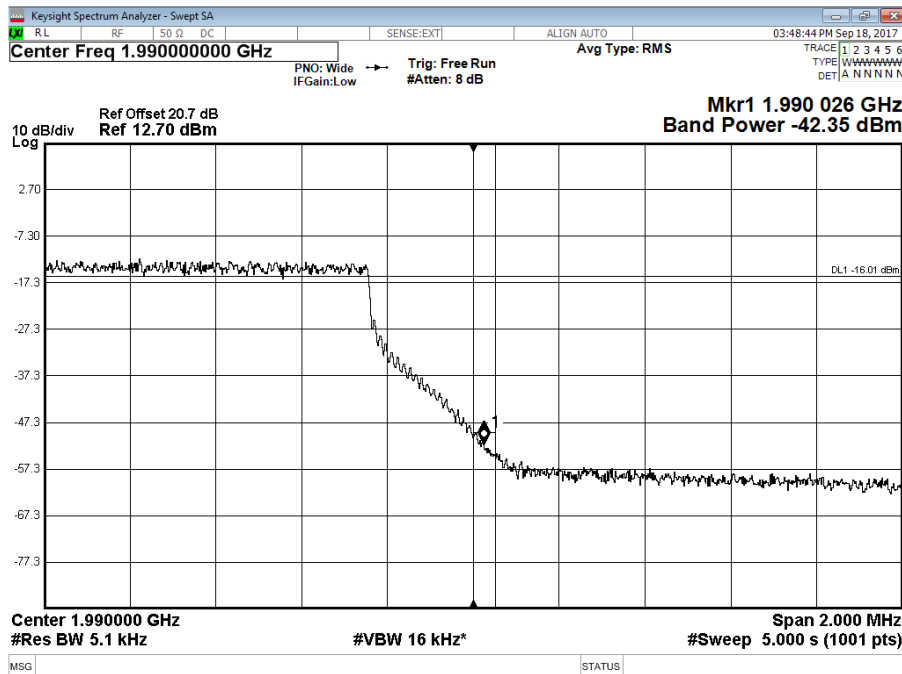


Product Service

Antenna A - LTE Modulation QPSK - LTE Carrier Bandwidth 5.0 MHz - Channel Position B



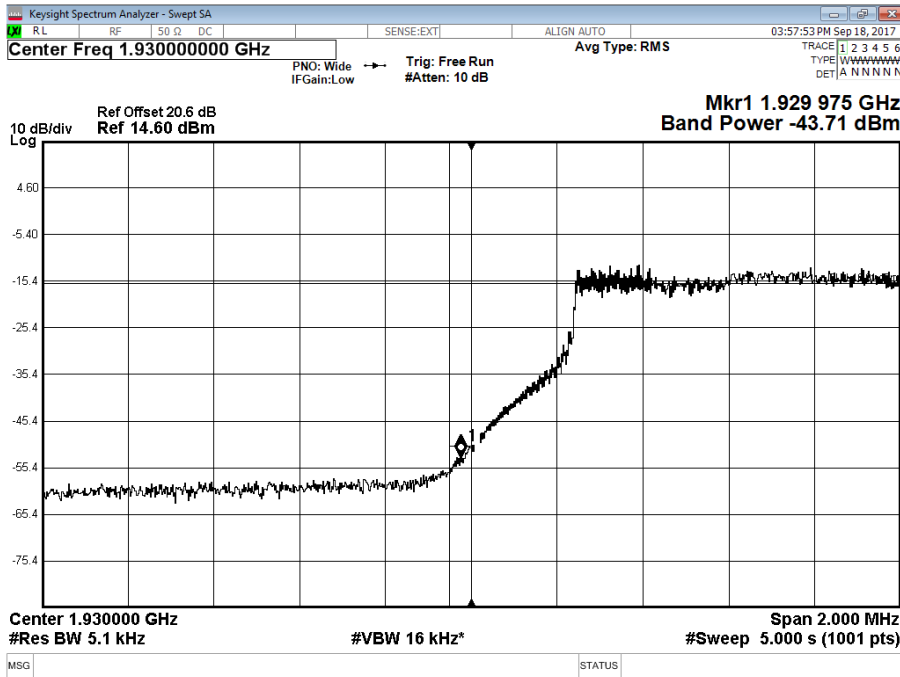
Antenna A - LTE Modulation QPSK - LTE Carrier Bandwidth 5.0 MHz - Channel Position T



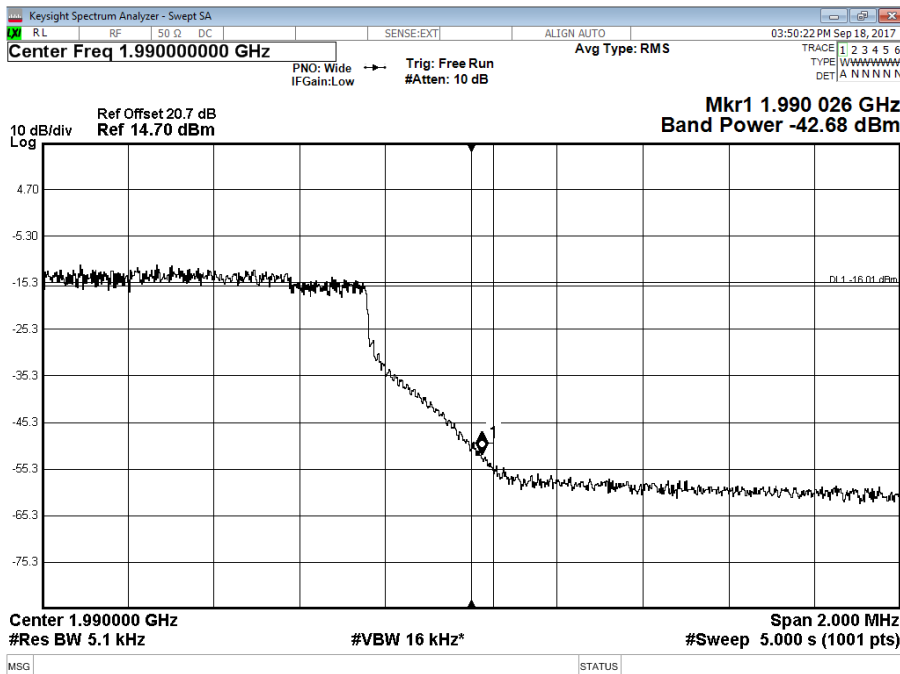


Product Service

Antenna A - LTE Modulation 16QAM - LTE Carrier Bandwidth 5.0 MHz - Channel Position B



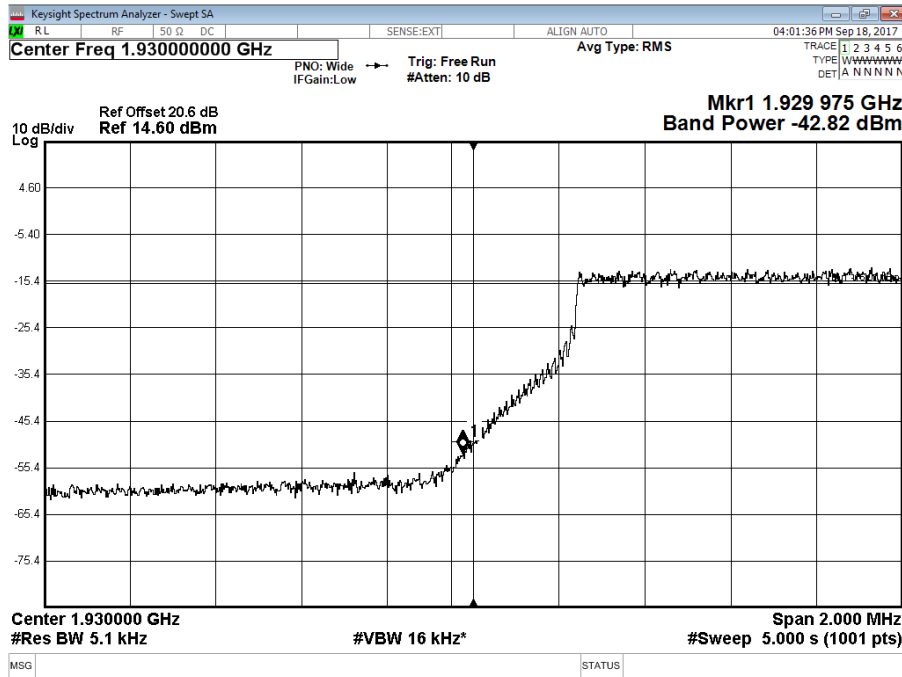
Antenna A - LTE Modulation 16QAM - LTE Carrier Bandwidth 5.0 MHz - Channel Position T



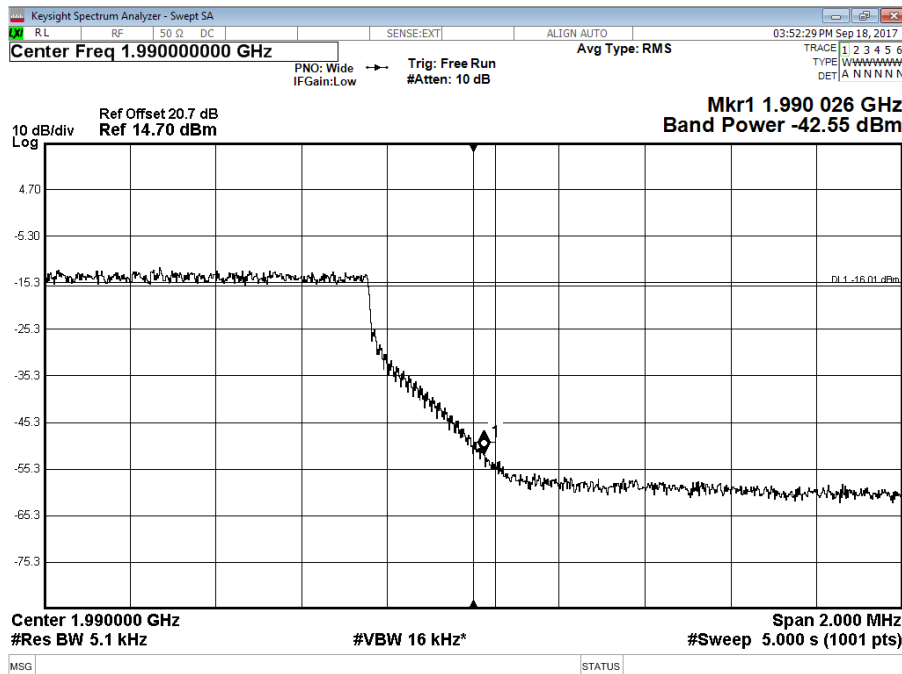


Product Service

Antenna A - LTE Modulation 64QAM - LTE Carrier Bandwidth 5.0 MHz - Channel Position B



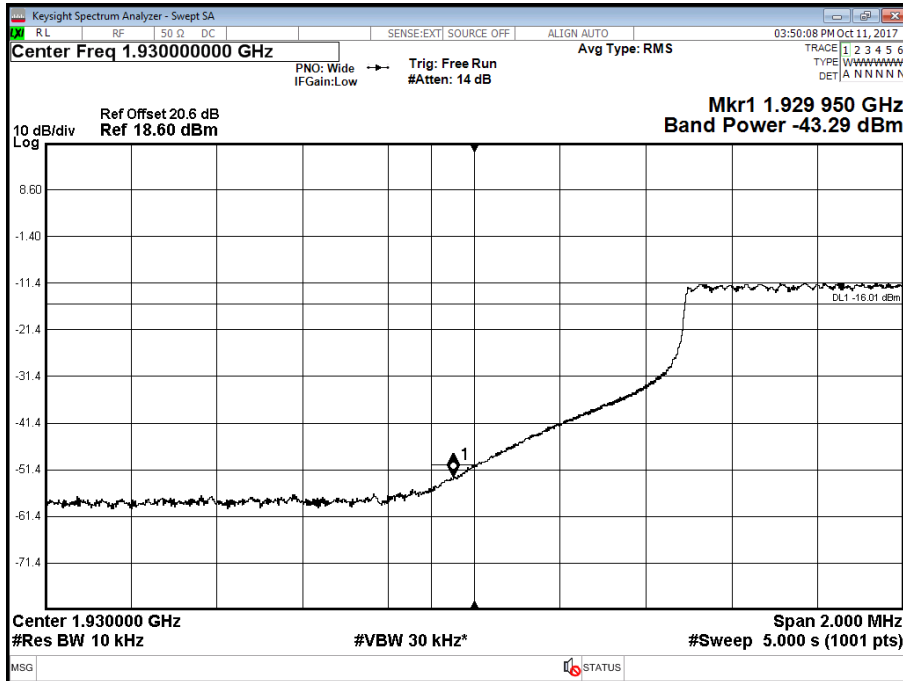
Antenna A - LTE Modulation 64QAM - LTE Carrier Bandwidth 5.0 MHz - Channel Position T



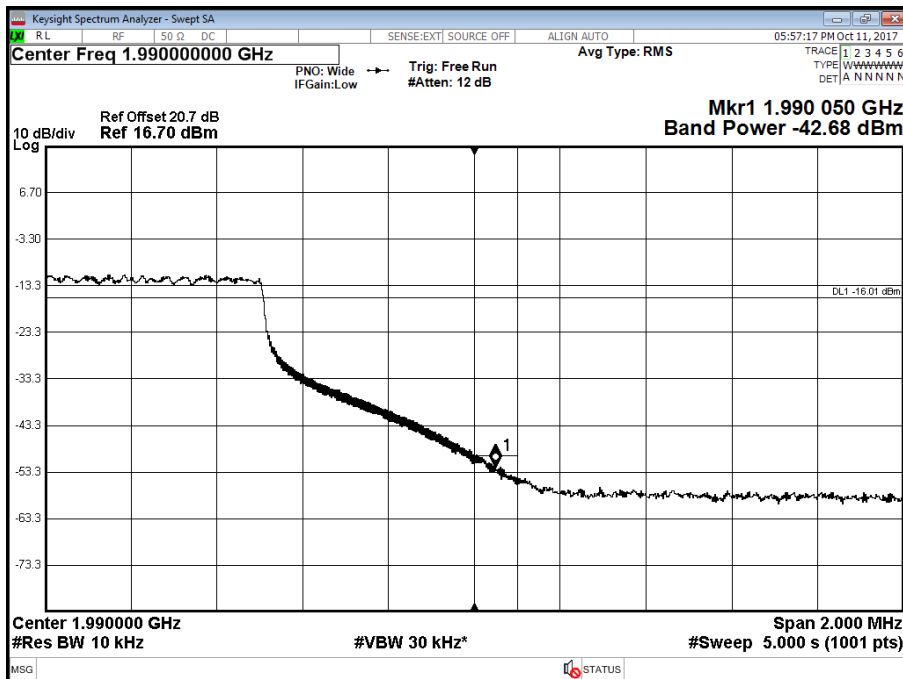


Product Service

Antenna A - LTE Modulation QPSK - LTE Carrier Bandwidth 10.0 MHz - Channel Position B



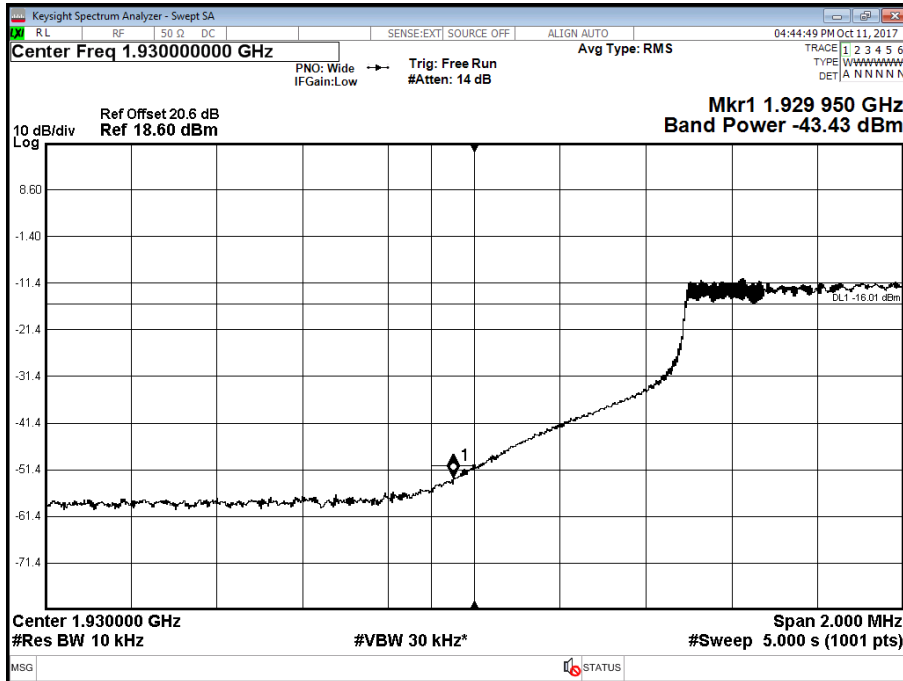
Antenna A - LTE Modulation QPSK - LTE Carrier Bandwidth 10.0 MHz - Channel Position T



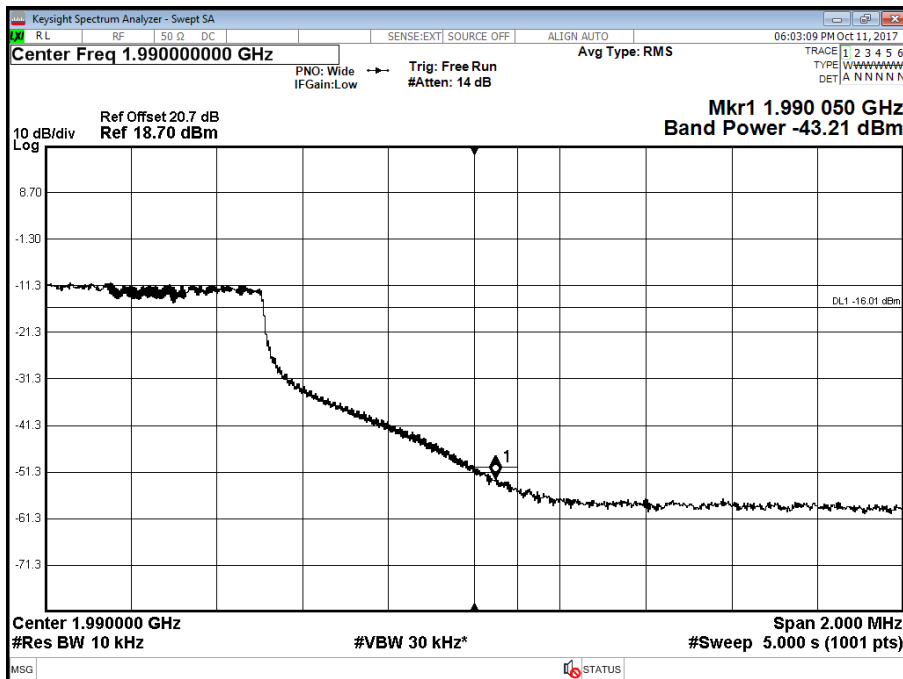


Product Service

Antenna A - LTE Modulation 16QAM - LTE Carrier Bandwidth 10.0 MHz - Channel Position B



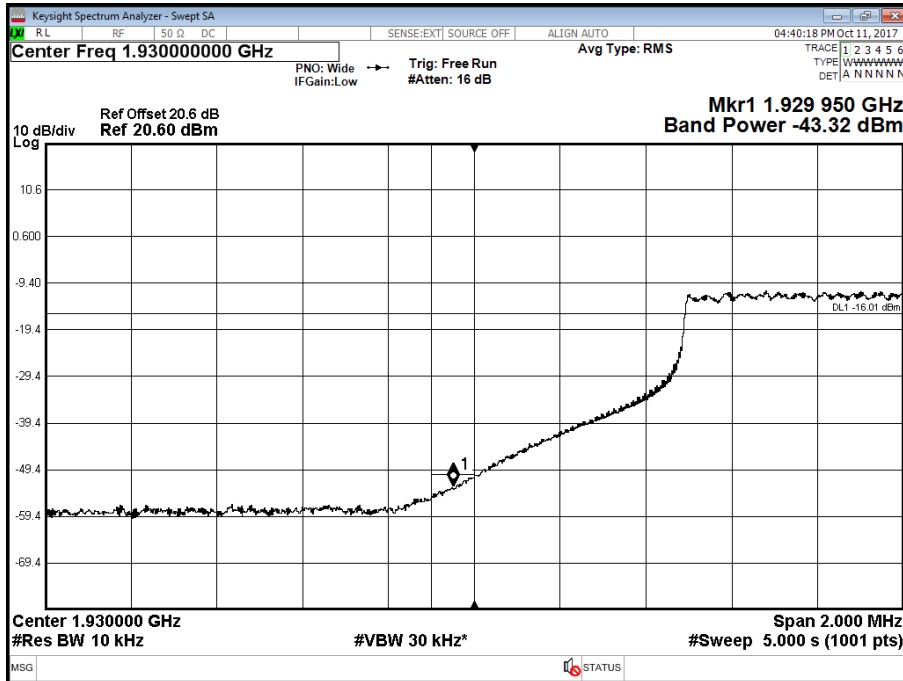
Antenna A - LTE Modulation 16QAM - LTE Carrier Bandwidth 10.0 MHz - Channel Position T



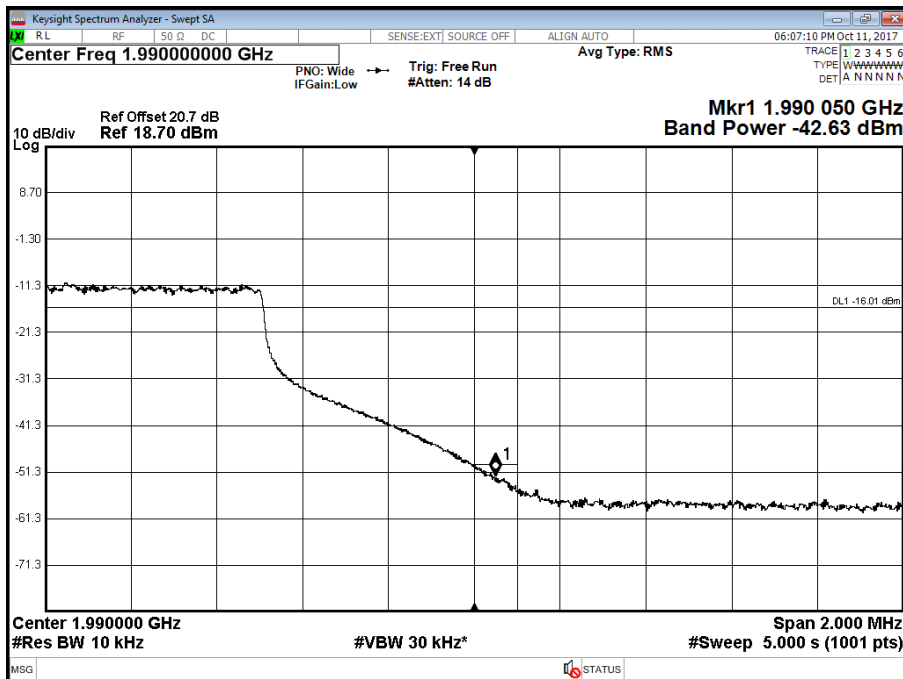


Product Service

Antenna A - LTE Modulation 64QAM - LTE Carrier Bandwidth 10.0 MHz - Channel Position B



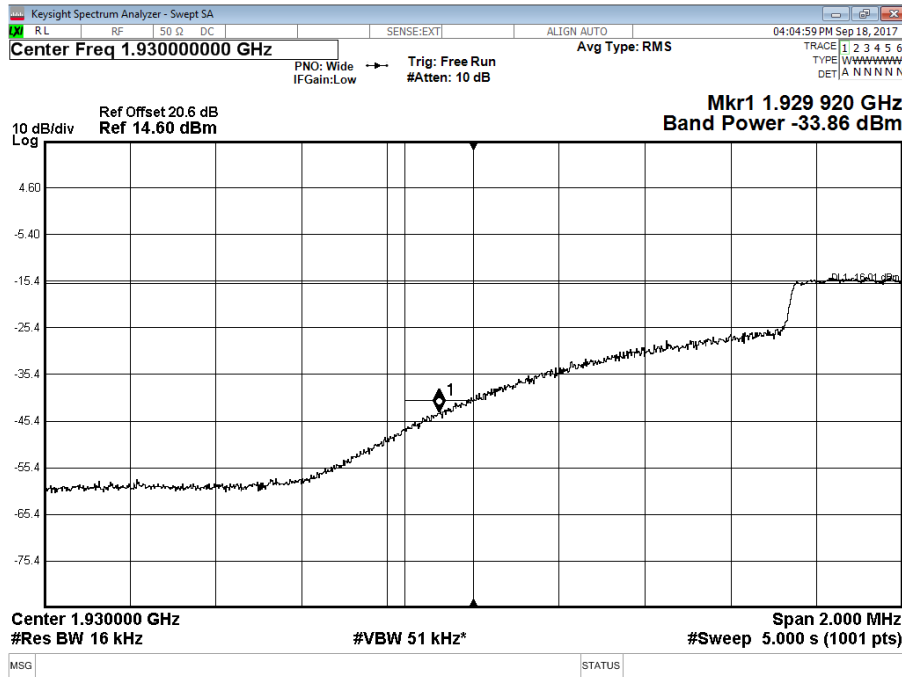
Antenna A - LTE Modulation 64QAM - LTE Carrier Bandwidth 10.0 MHz - Channel Position T



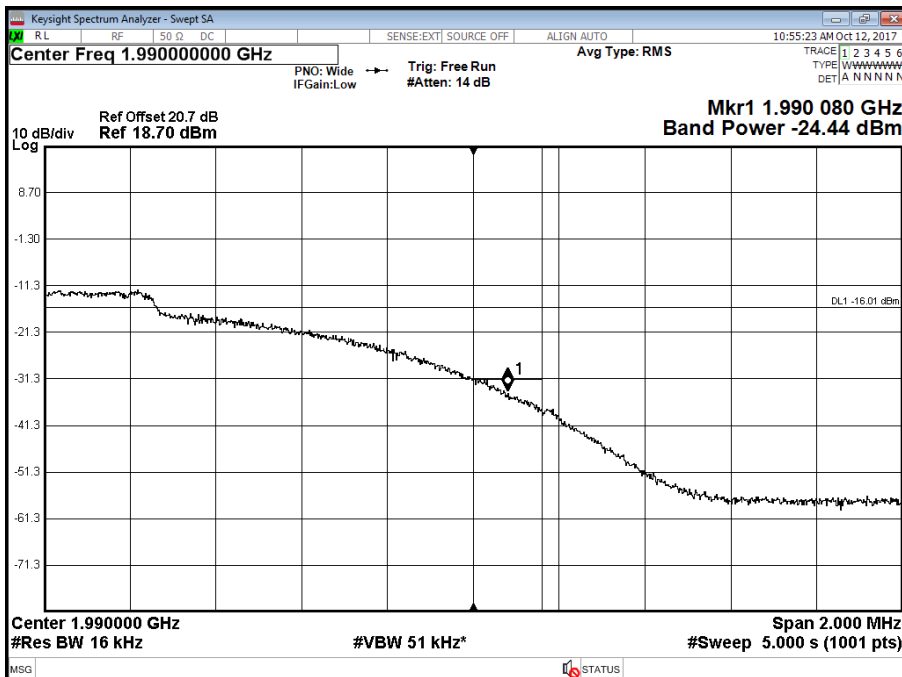


Product Service

Antenna A - LTE Modulation QPSK - LTE Carrier Bandwidth 15.0 MHz - Channel Position B



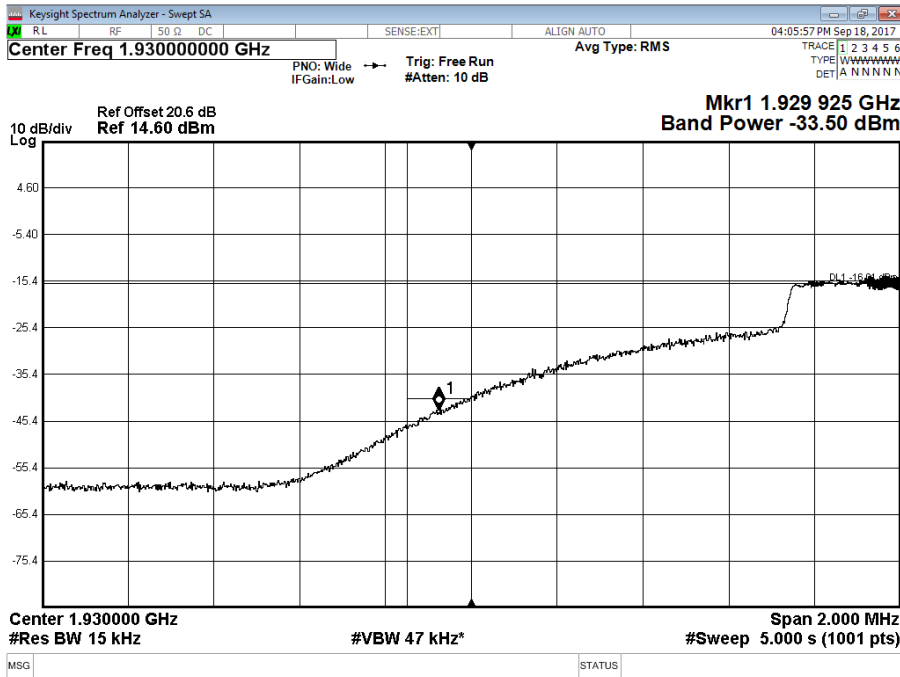
Antenna A - LTE Modulation QPSK - LTE Carrier Bandwidth 15.0 MHz - Channel Position T



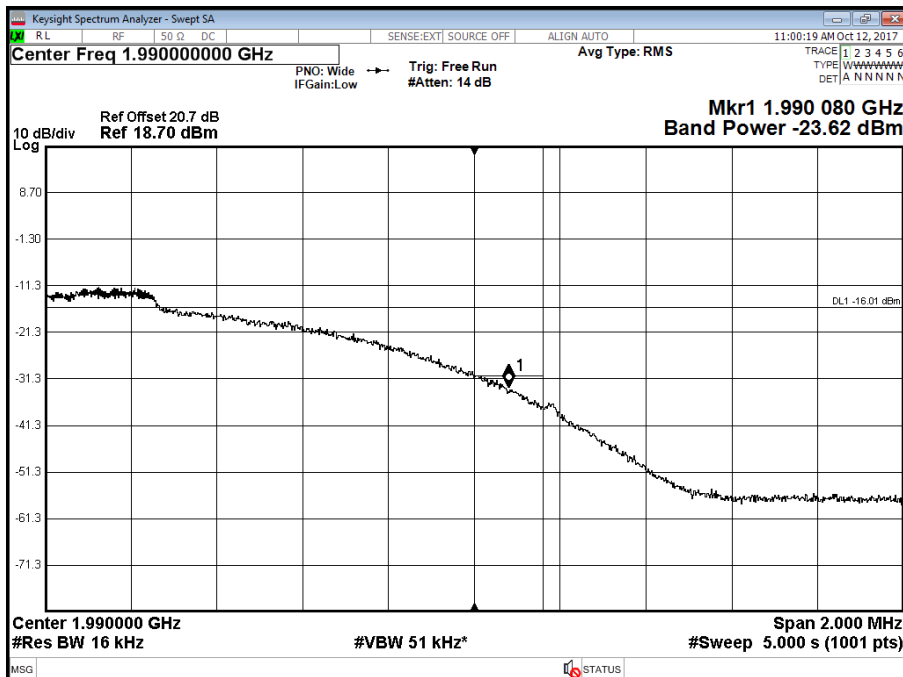


Product Service

Antenna A - LTE Modulation 16QAM - LTE Carrier Bandwidth 15.0 MHz - Channel Position B



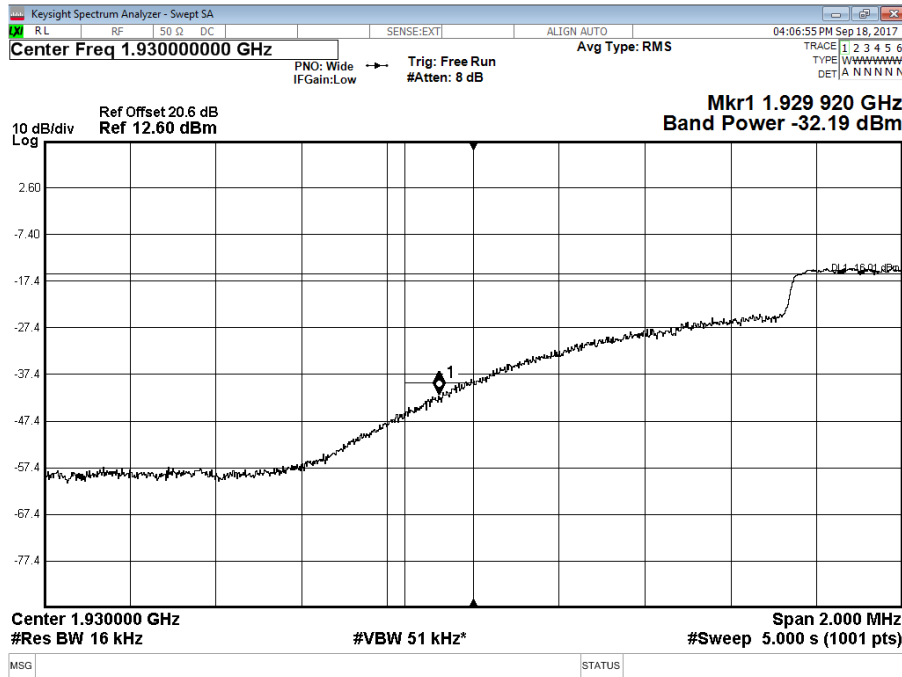
Antenna A - LTE Modulation 16QAM - LTE Carrier Bandwidth 15.0 MHz - Channel Position T



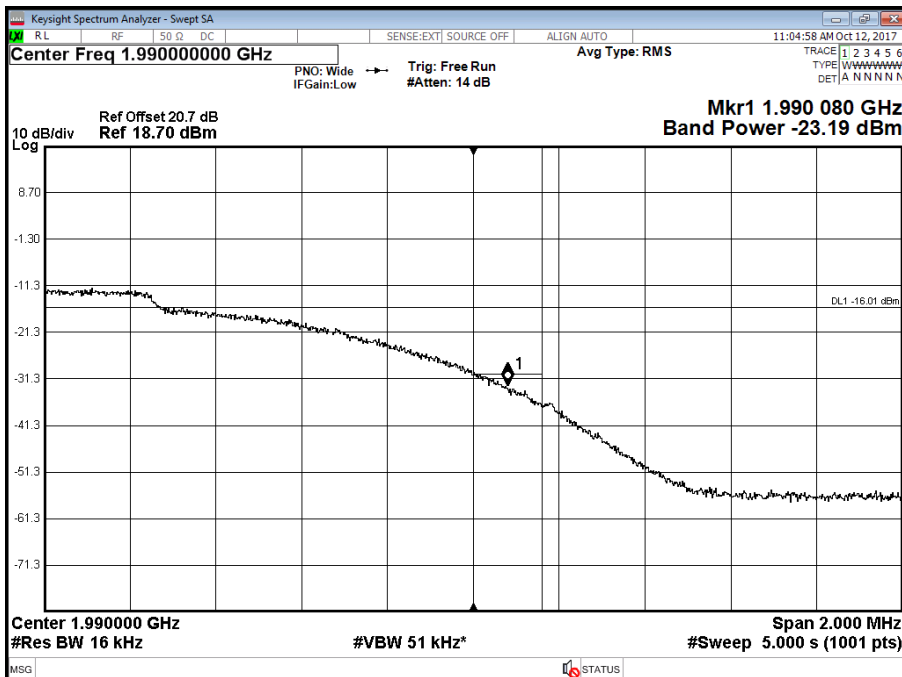


Product Service

Antenna A - LTE Modulation 64QAM - LTE Carrier Bandwidth 15.0 MHz - Channel Position B



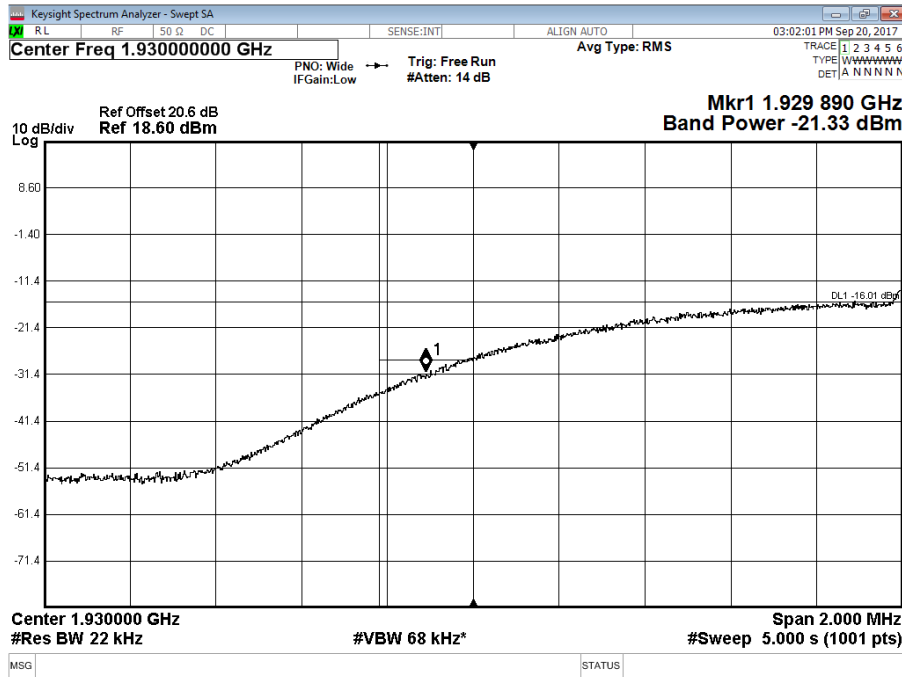
Antenna A - LTE Modulation 64QAM - LTE Carrier Bandwidth 15.0 MHz - Channel Position T



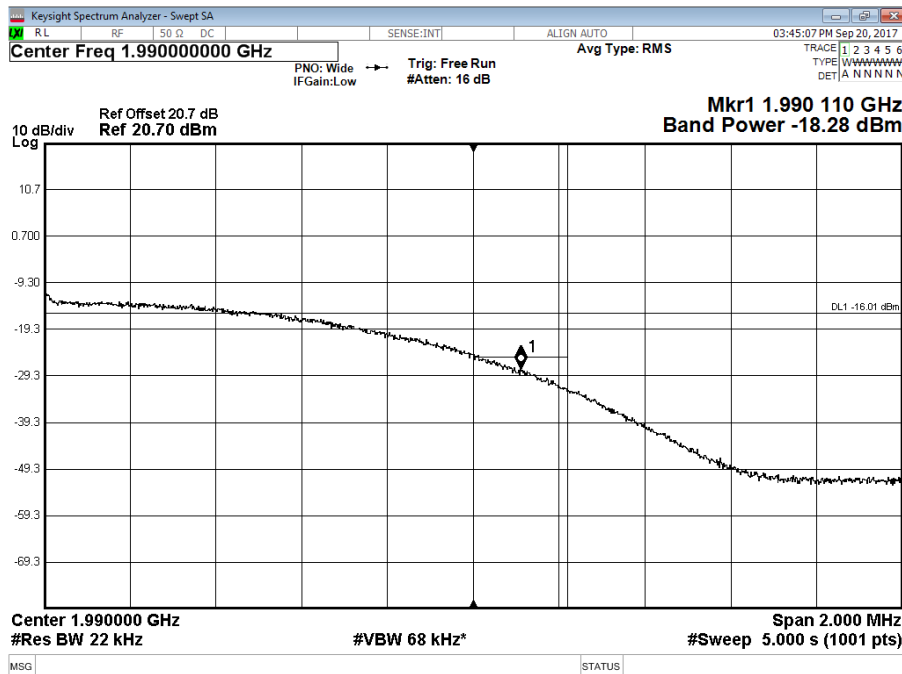


Product Service

Antenna A - LTE Modulation QPSK - LTE Carrier Bandwidth 20.0 MHz - Channel Position B



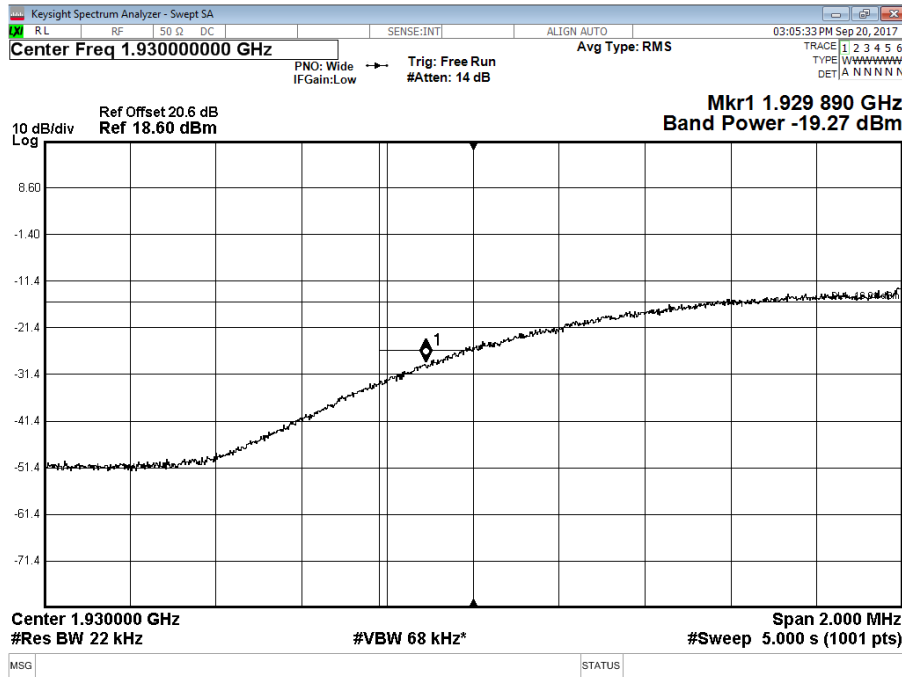
Antenna A - LTE Modulation QPSK - LTE Carrier Bandwidth 20.0 MHz - Channel Position T



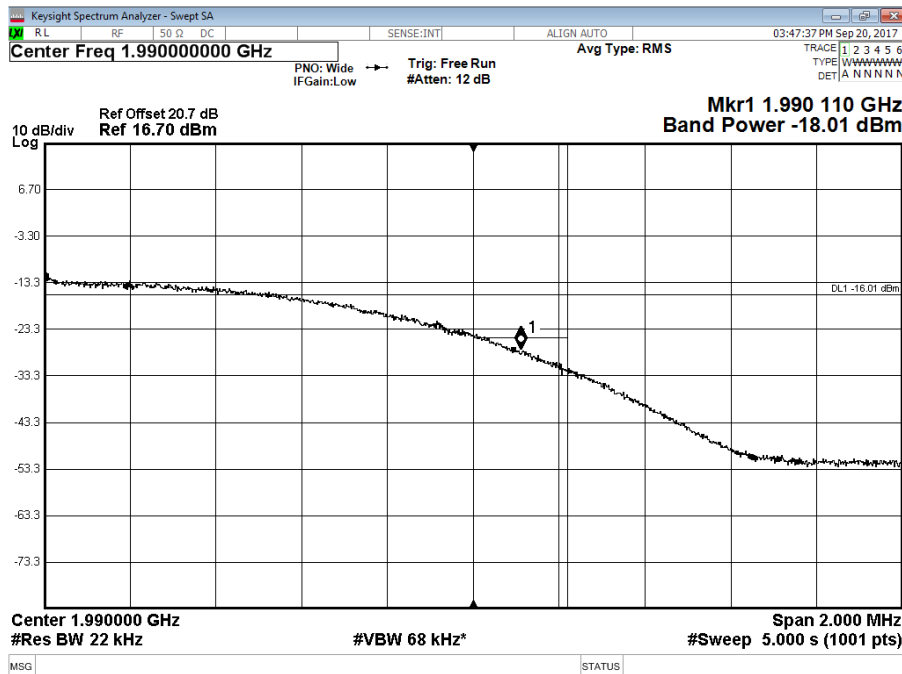


Product Service

Antenna A - LTE Modulation 16QAM - LTE Carrier Bandwidth 20.0 MHz - Channel Position B



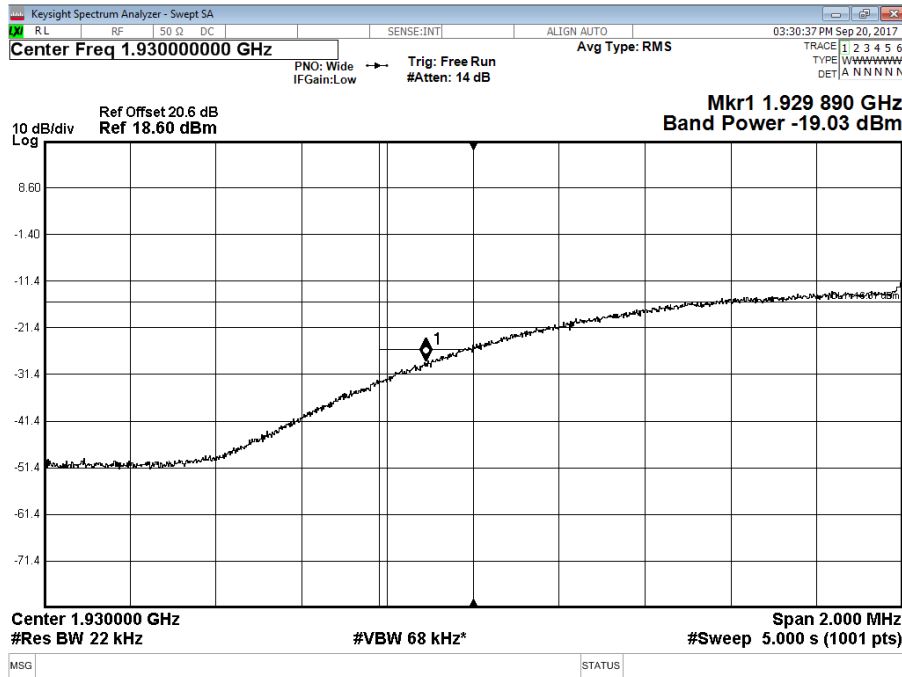
Antenna A - LTE Modulation 16QAM - LTE Carrier Bandwidth 20.0 MHz - Channel Position T



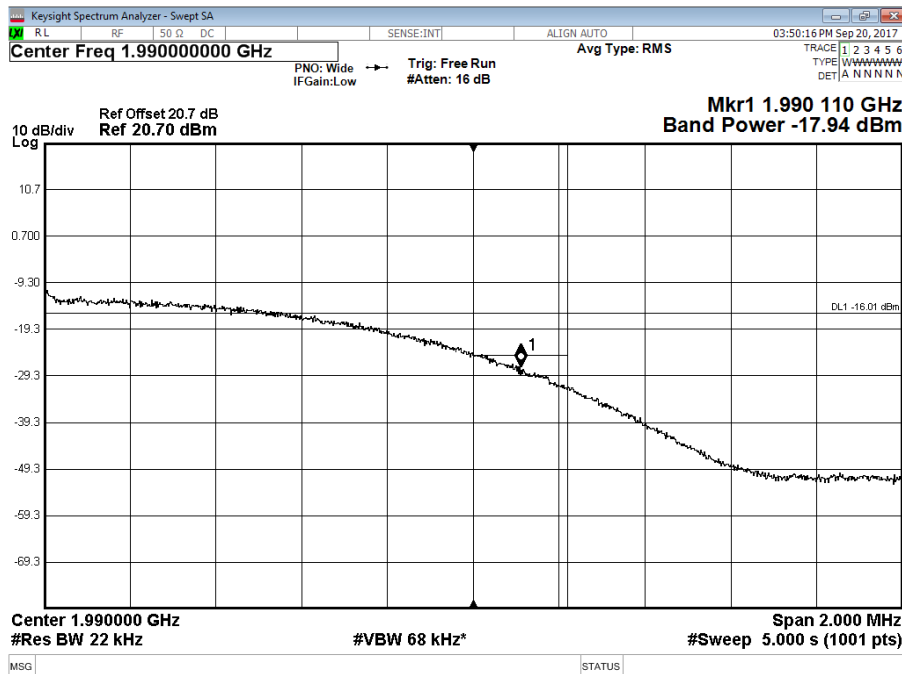


Product Service

Antenna A - LTE Modulation 64QAM - LTE Carrier Bandwidth 20.0 MHz - Channel Position B



Antenna A - LTE Modulation 64QAM - LTE Carrier Bandwidth 20.0 MHz - Channel Position T





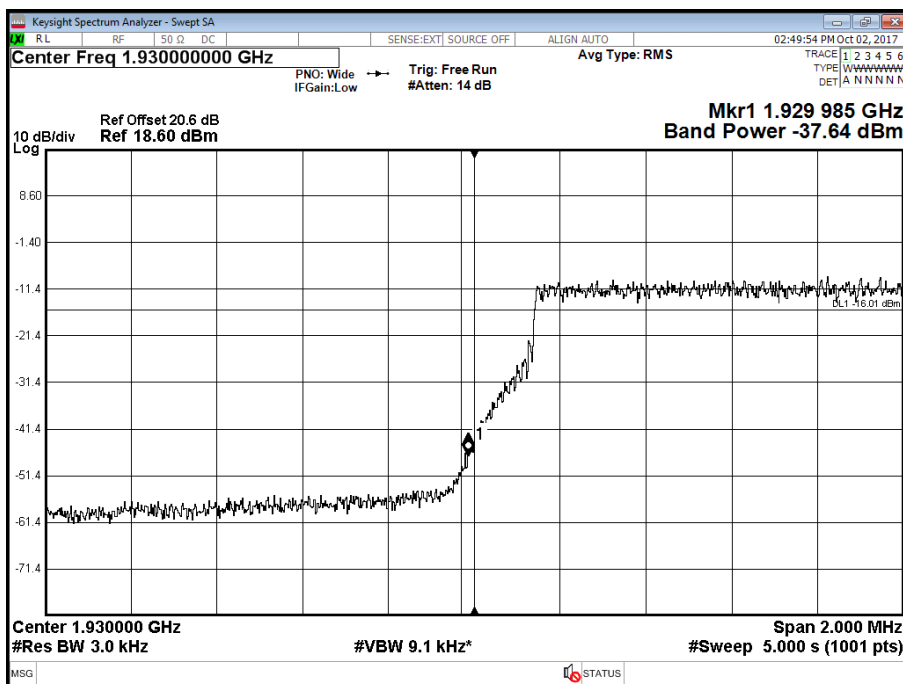
Product Service

Configuration 1

Maximum Output Power 20 dBm

Antenna	LTE Modulation	LTE Carrier Bandwidth	Band Edge (MHz)	
			Channel Position B	Channel Position T
B	QPSK	3.0 MHz	1,931.5	1,988.5
B	16QAM	3.0 MHz	1,931.5	1,988.5
B	64QAM	3.0 MHz	1,931.5	1,988.5
B	QPSK	5.0 MHz	1,932.5	1,987.5
B	16QAM	5.0 MHz	1,932.5	1,987.5
B	64QAM	5.0 MHz	1,932.5	1,987.5
B	QPSK	10.0 MHz	1,935.0	1,985.0
B	16QAM	10.0 MHz	1,935.0	1,985.0
B	64QAM	10.0 MHz	1,935.0	1,985.0
B	QPSK	15.0 MHz	1,937.5	1,982.5
B	16QAM	15.0 MHz	1,937.5	1,982.5
B	64QAM	15.0 MHz	1,937.5	1,982.5
B	QPSK	20.0 MHz	1,940.0	1,980.0
B	16QAM	20.0 MHz	1,940.0	1,980.0
B	64QAM	20.0 MHz	1,940.0	1,980.0

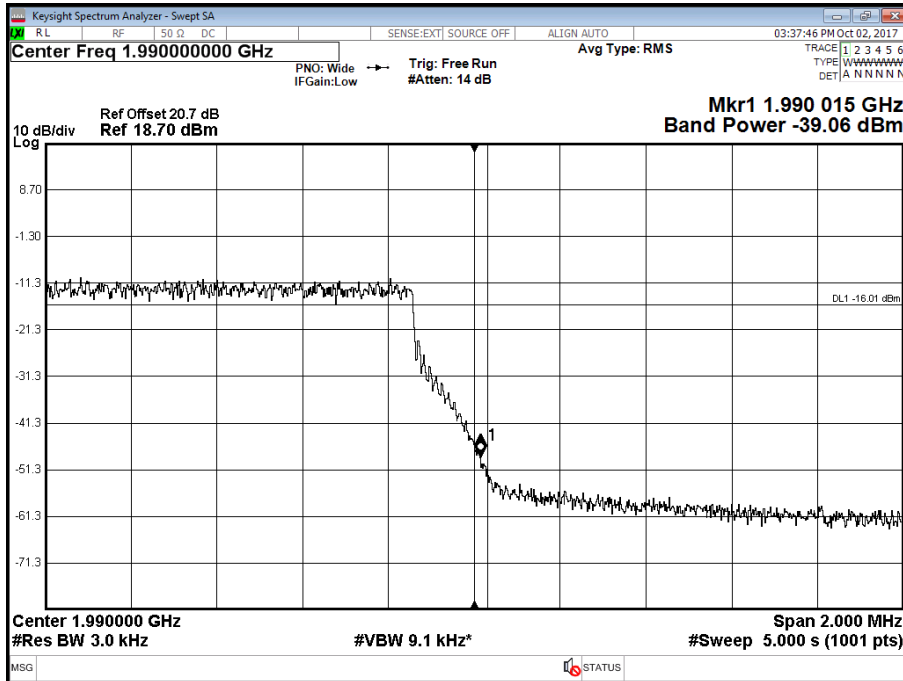
Antenna B - LTE Modulation QPSK - LTE Carrier Bandwidth 3.0 MHz - Channel Position B



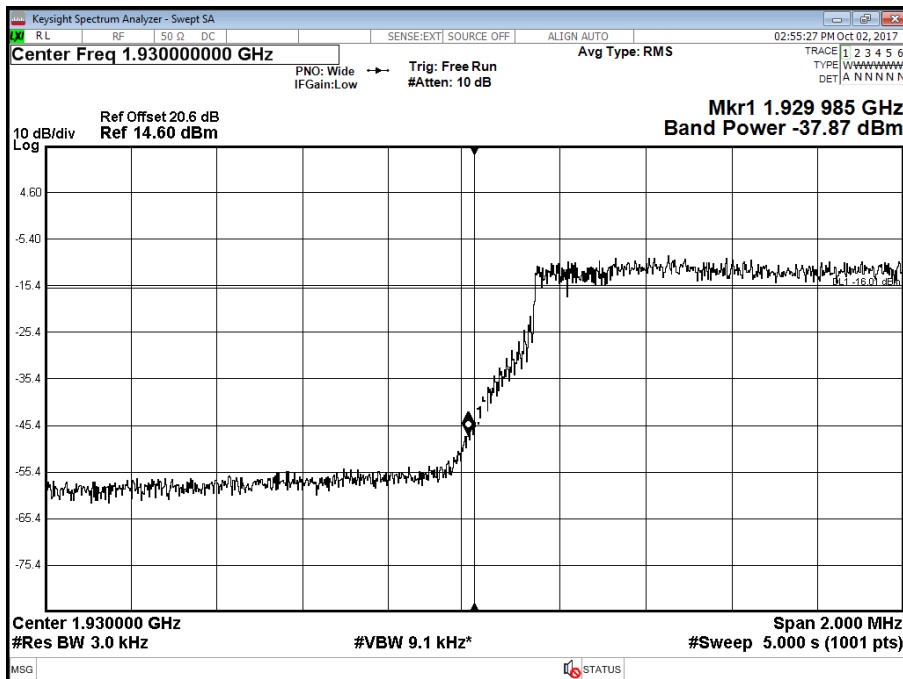


Product Service

Antenna B - LTE Modulation QPSK - LTE Carrier Bandwidth 3.0 MHz - Channel Position T



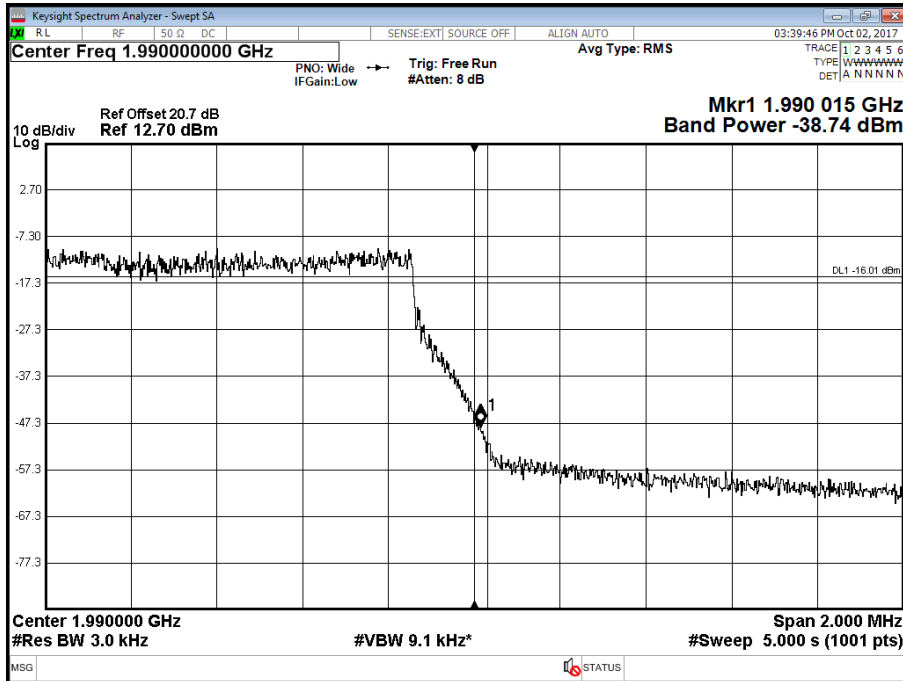
Antenna B - LTE Modulation 16QAM - LTE Carrier Bandwidth 3.0 MHz - Channel Position B



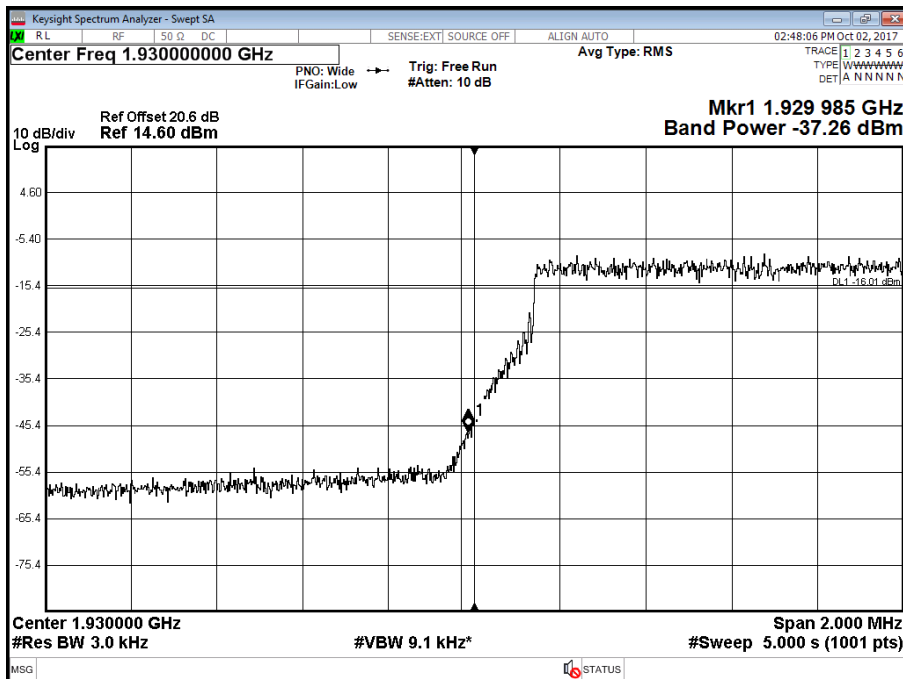


Product Service

Antenna B - LTE Modulation 16QAM - LTE Carrier Bandwidth 3.0 MHz - Channel Position T



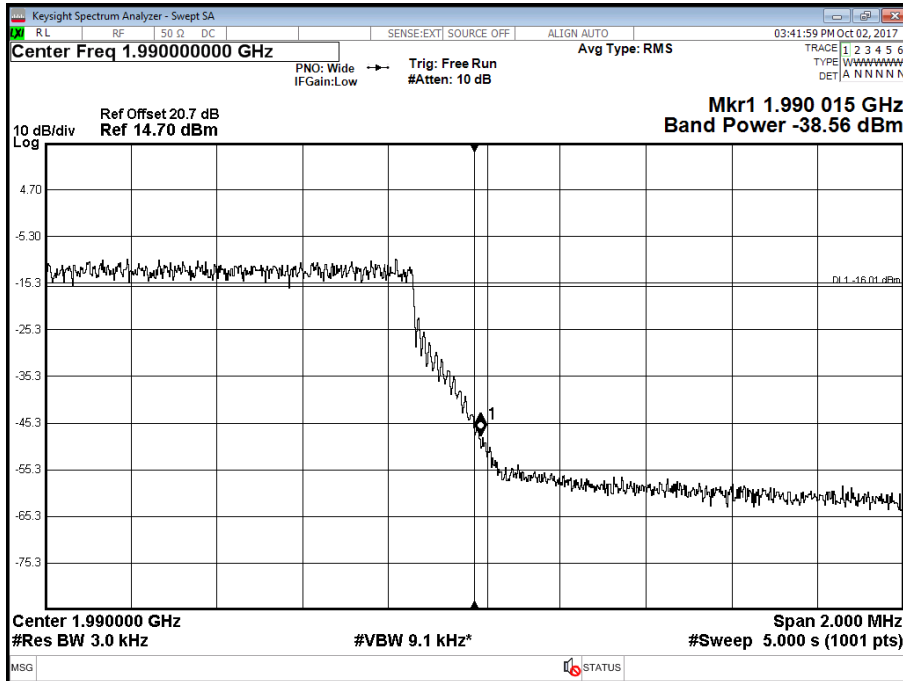
Antenna B - LTE Modulation 64QAM - LTE Carrier Bandwidth 3.0 MHz - Channel Position B



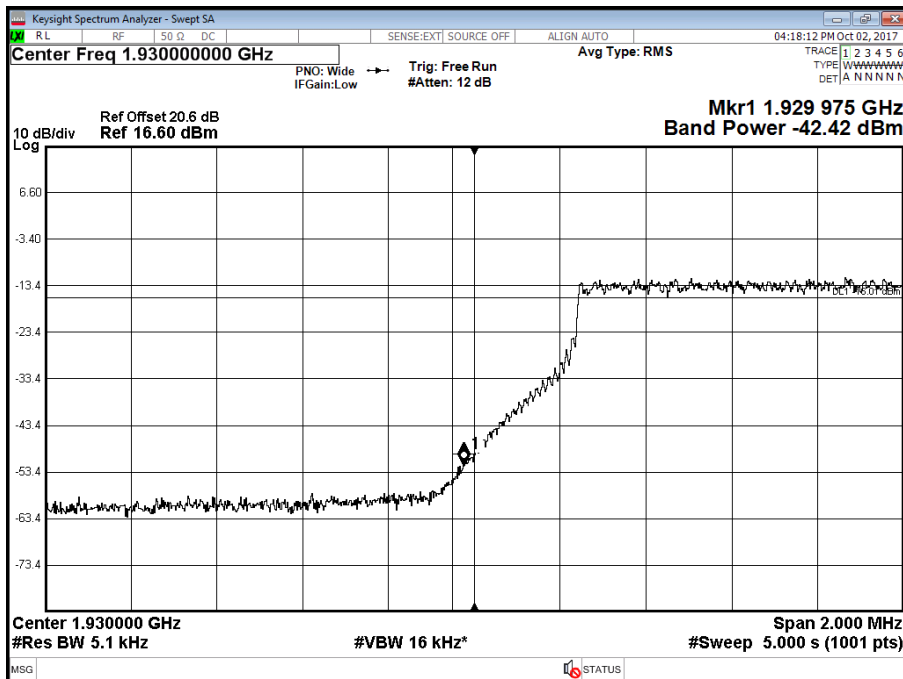


Product Service

Antenna B - LTE Modulation 64QAM - LTE Carrier Bandwidth 3.0 MHz - Channel Position T



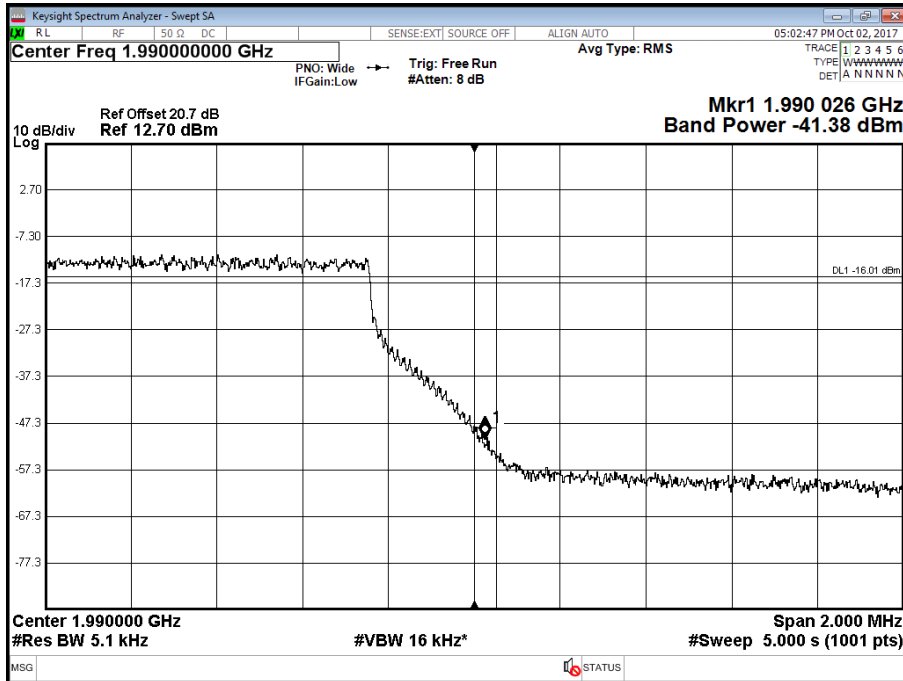
Antenna B - LTE Modulation QPSK - LTE Carrier Bandwidth 5.0 MHz - Channel Position B



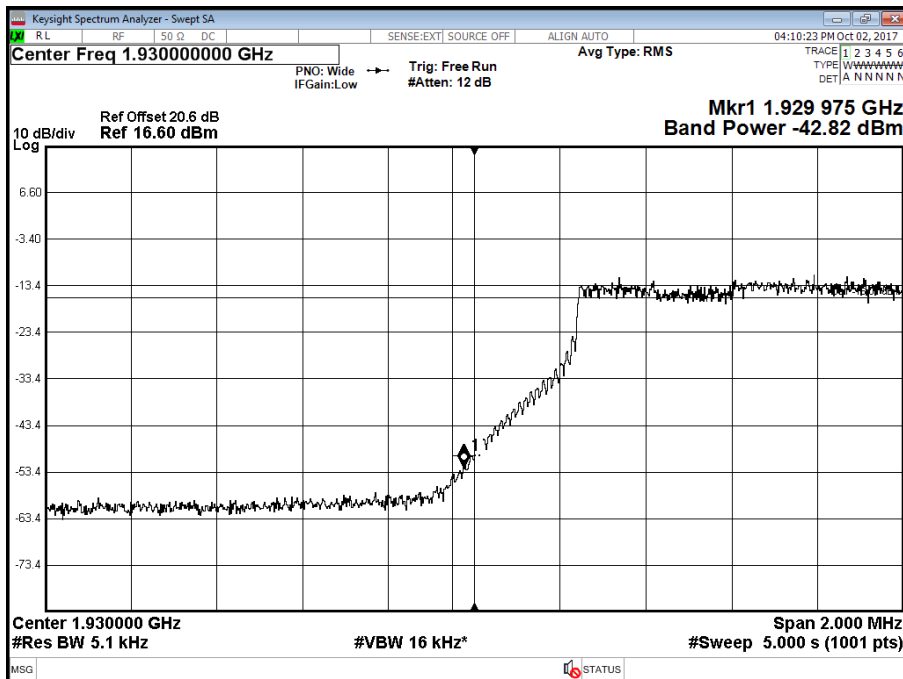


Product Service

Antenna B - LTE Modulation QPSK - LTE Carrier Bandwidth 5.0 MHz - Channel Position T



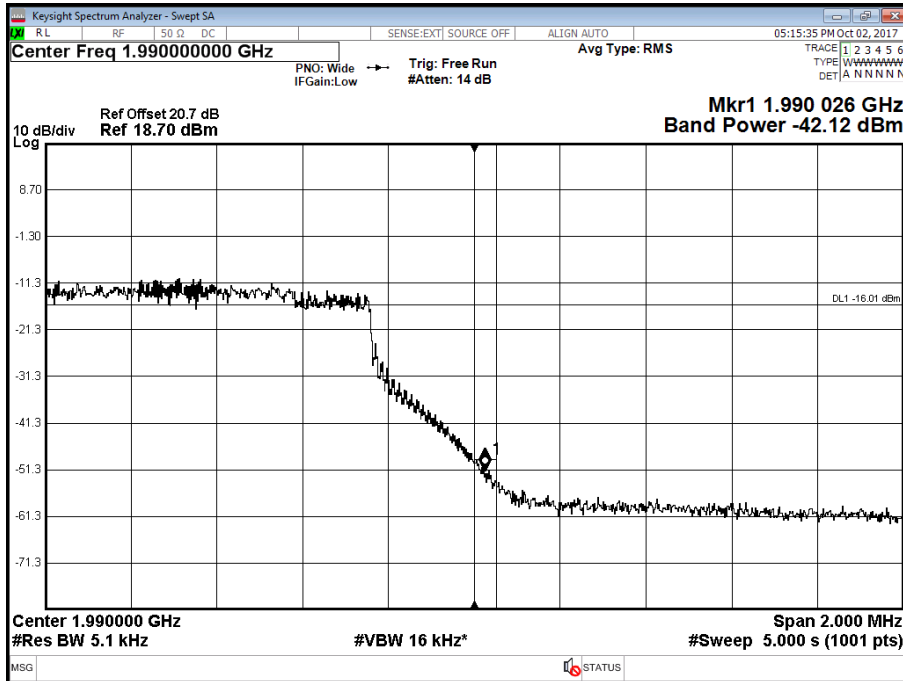
Antenna B - LTE Modulation 16QAM - LTE Carrier Bandwidth 5.0 MHz - Channel Position B



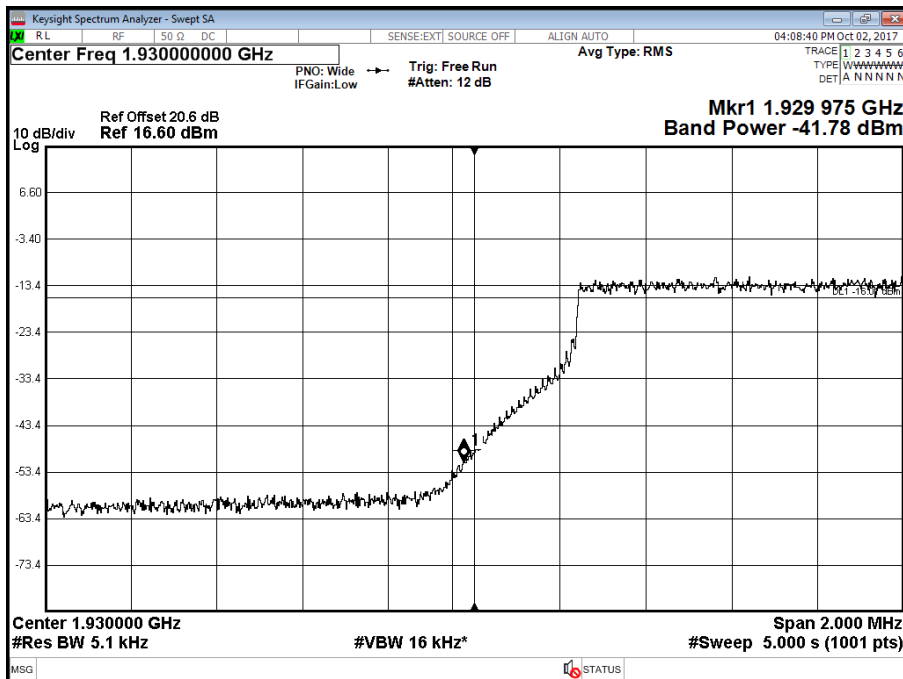


Product Service

Antenna B - LTE Modulation 16QAM - LTE Carrier Bandwidth 5.0 MHz - Channel Position T



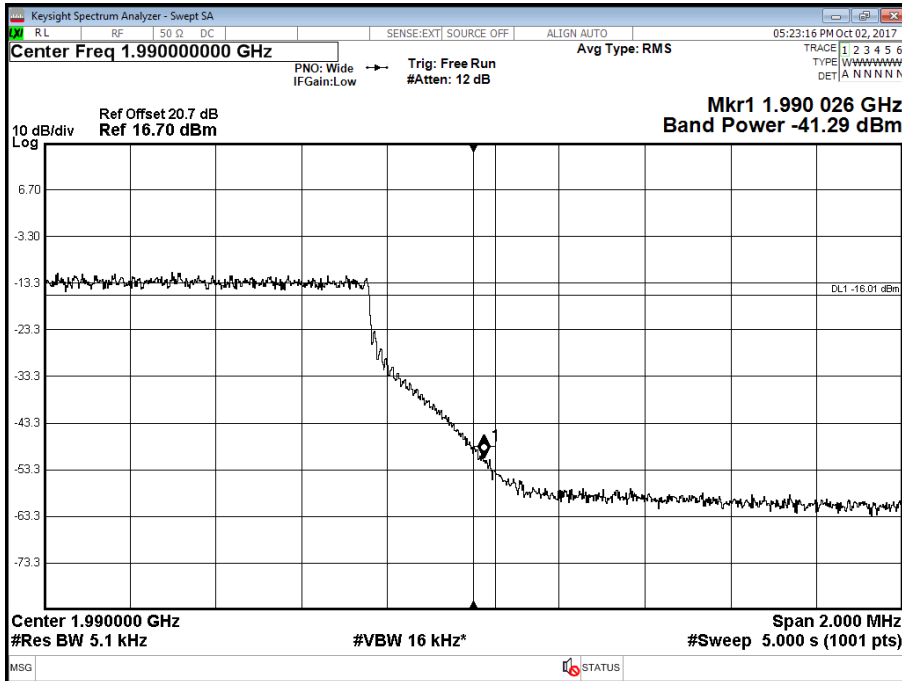
Antenna B - LTE Modulation 64QAM - LTE Carrier Bandwidth 5.0 MHz - Channel Position B



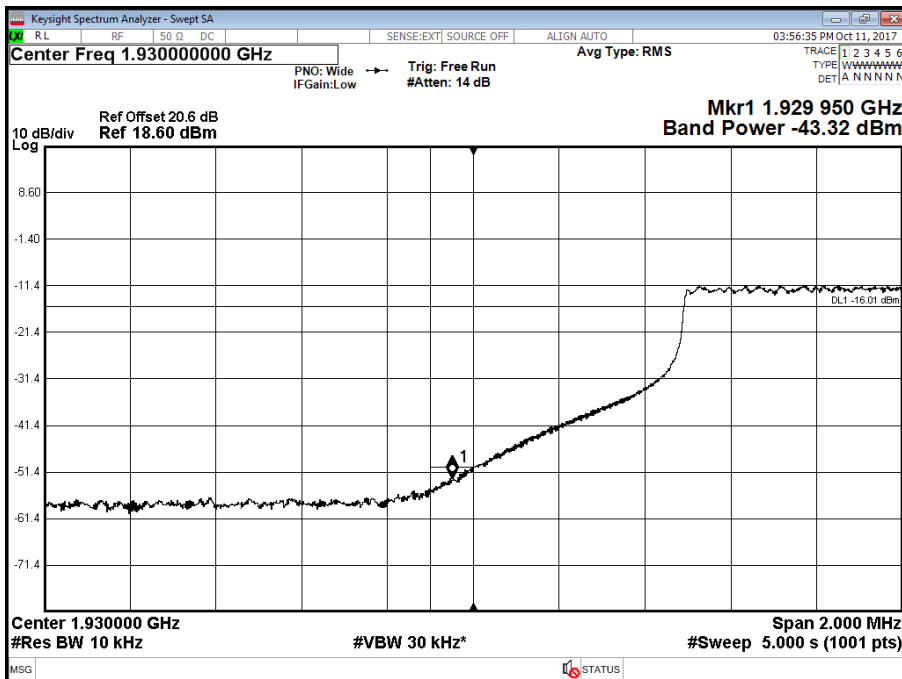


Product Service

Antenna B - LTE Modulation 64QAM - LTE Carrier Bandwidth 5.0 MHz - Channel Position T



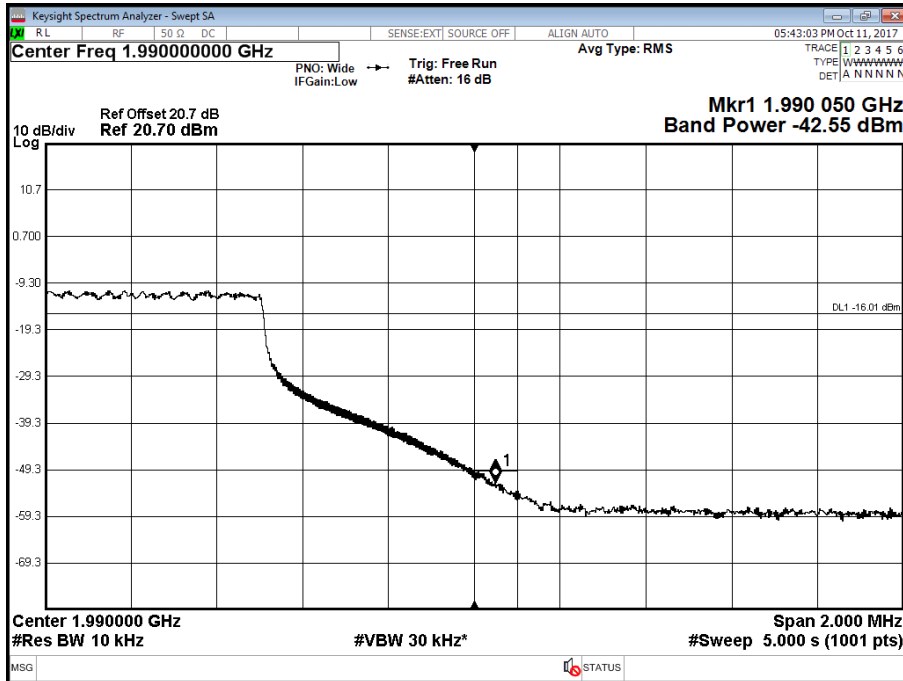
Antenna B - LTE Modulation QPSK - LTE Carrier Bandwidth 10.0 MHz - Channel Position B



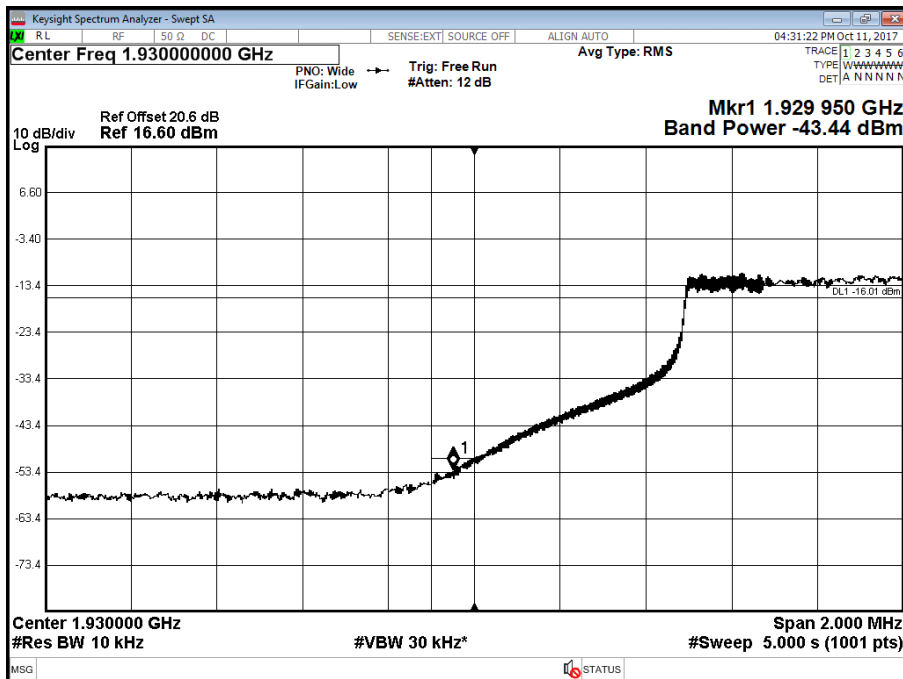


Product Service

Antenna B - LTE Modulation QPSK - LTE Carrier Bandwidth 10.0 MHz - Channel Position T



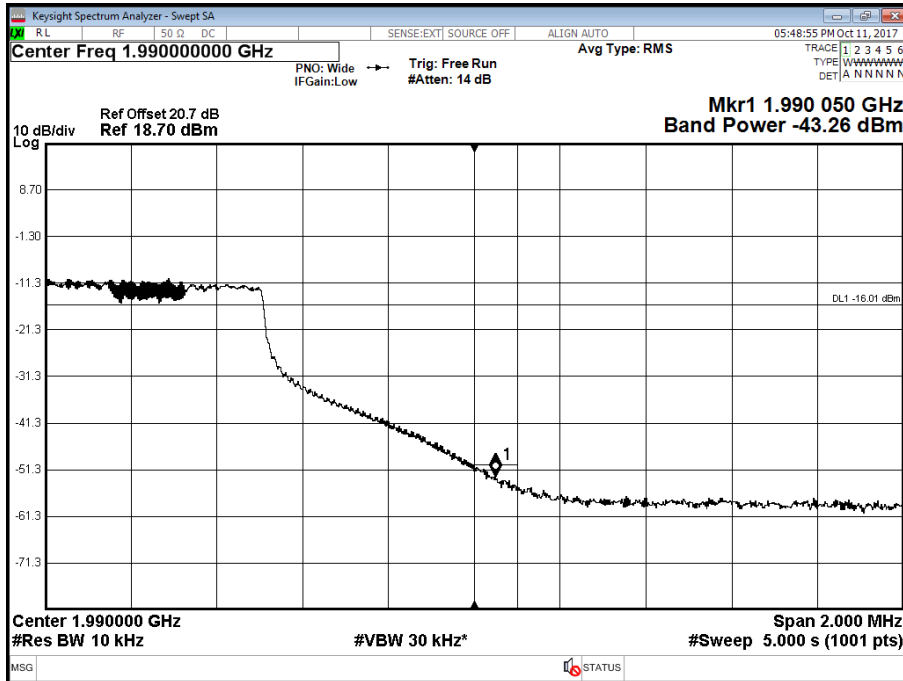
Antenna B - LTE Modulation 16QAM - LTE Carrier Bandwidth 10.0 MHz - Channel Position B



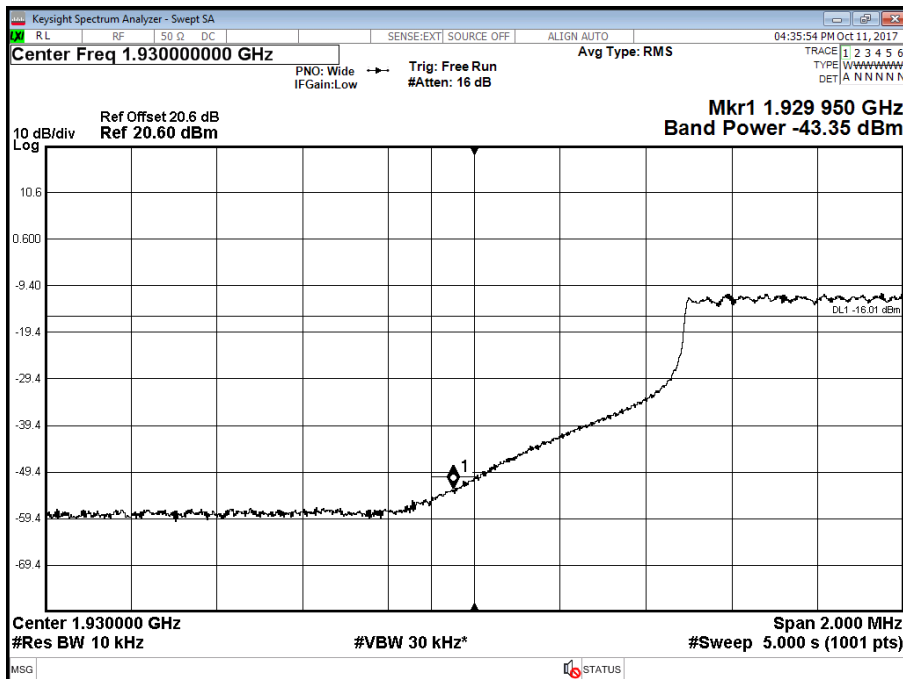


Product Service

Antenna B - LTE Modulation 16QAM - LTE Carrier Bandwidth 10.0 MHz - Channel Position T



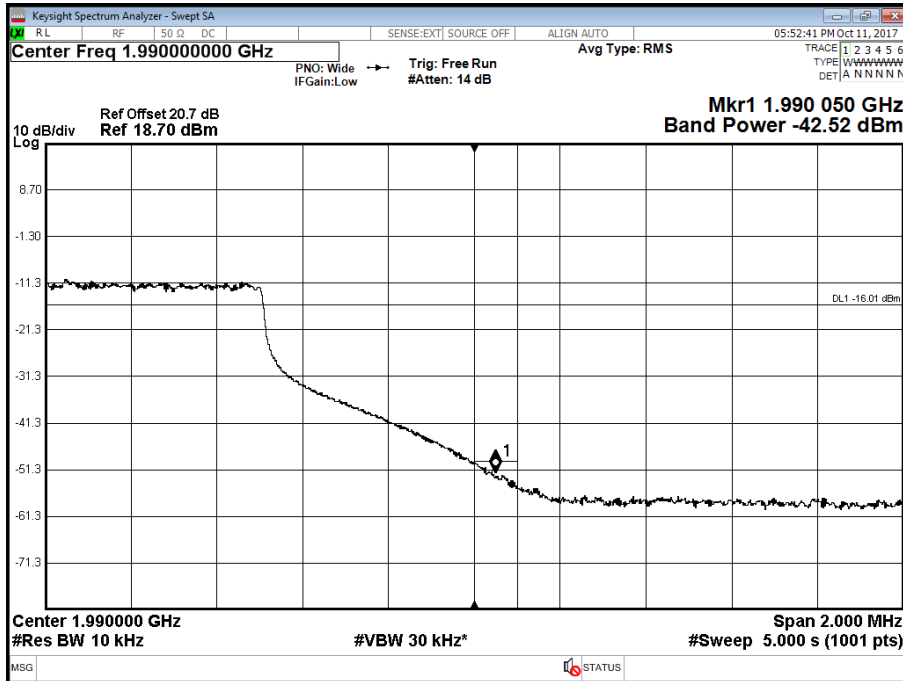
Antenna B - LTE Modulation 64QAM - LTE Carrier Bandwidth 10.0 MHz - Channel Position B



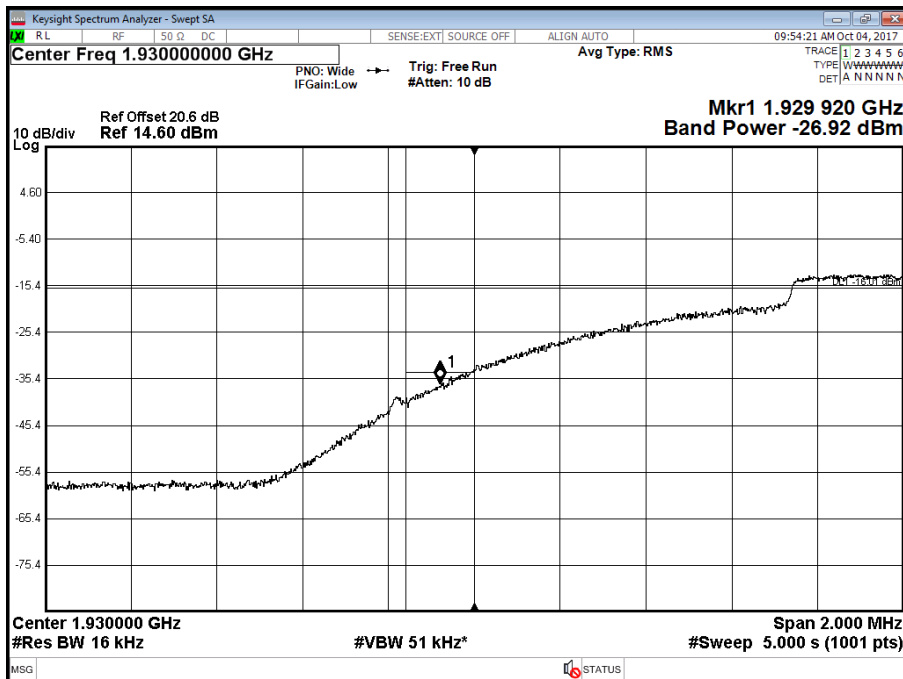


Product Service

Antenna B - LTE Modulation 64QAM - LTE Carrier Bandwidth 10.0 MHz - Channel Position T



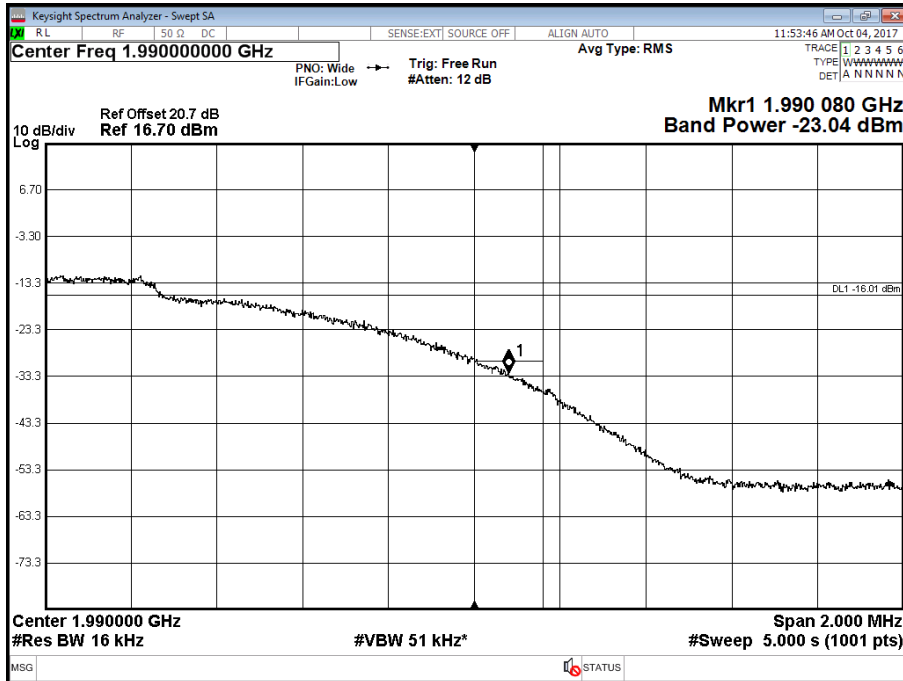
Antenna B - LTE Modulation QPSK - LTE Carrier Bandwidth 15.0 MHz - Channel Position B



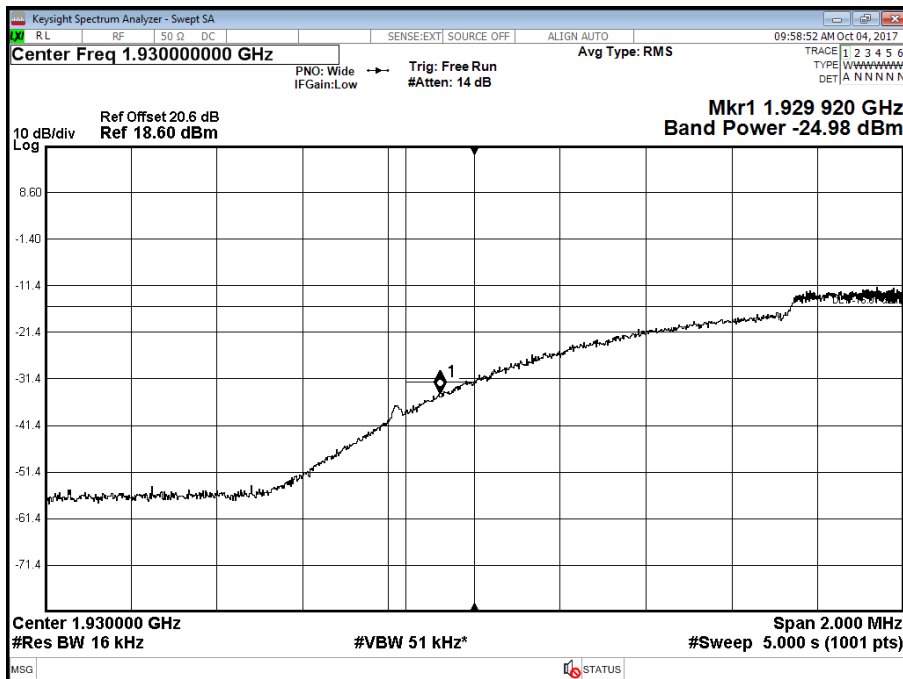


Product Service

Antenna B - LTE Modulation QPSK - LTE Carrier Bandwidth 15.0 MHz - Channel Position T



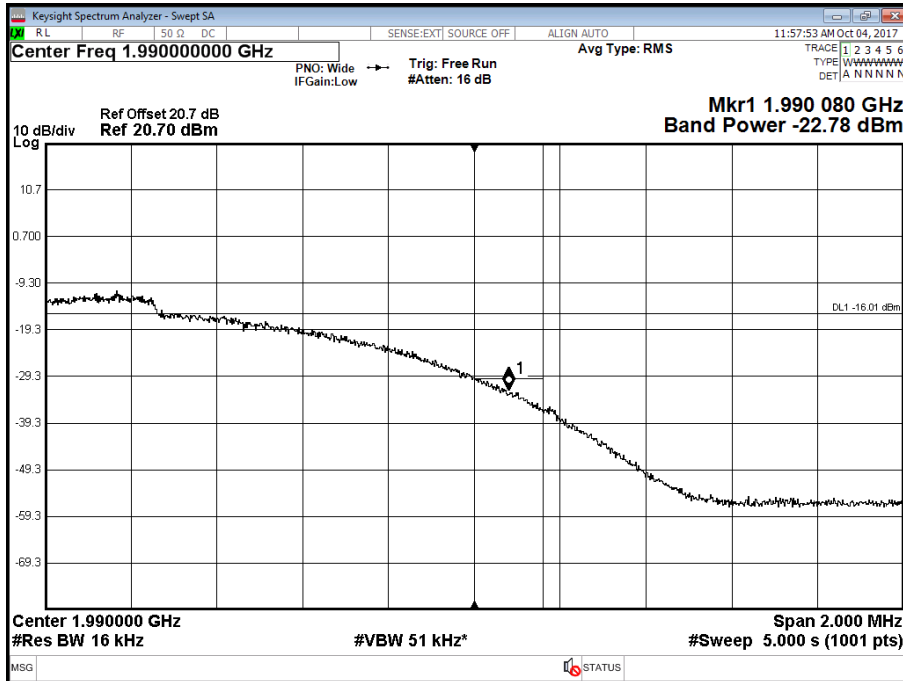
Antenna B - LTE Modulation 16QAM - LTE Carrier Bandwidth 15.0 MHz - Channel Position B



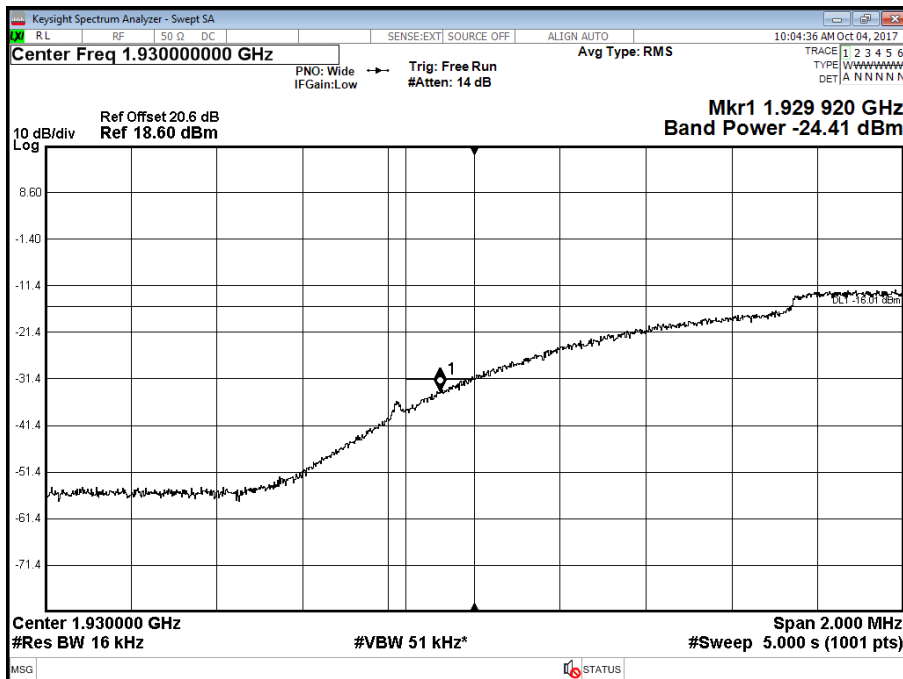


Product Service

Antenna B - LTE Modulation 16QAM - LTE Carrier Bandwidth 15.0 MHz - Channel Position T



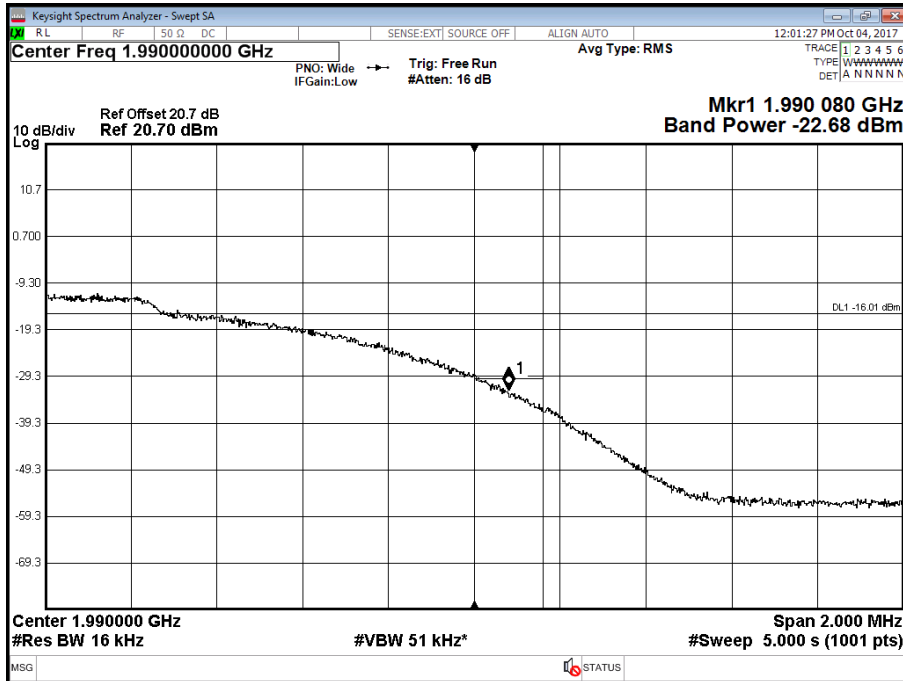
Antenna B - LTE Modulation 64QAM - LTE Carrier Bandwidth 15.0 MHz - Channel Position B



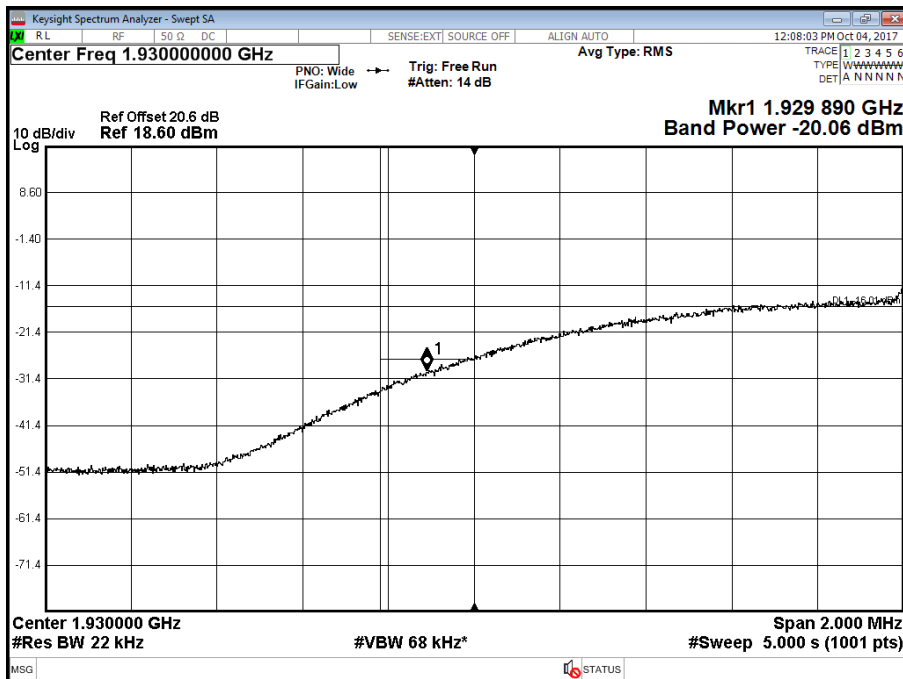


Product Service

Antenna B - LTE Modulation 64QAM - LTE Carrier Bandwidth 15.0 MHz - Channel Position T



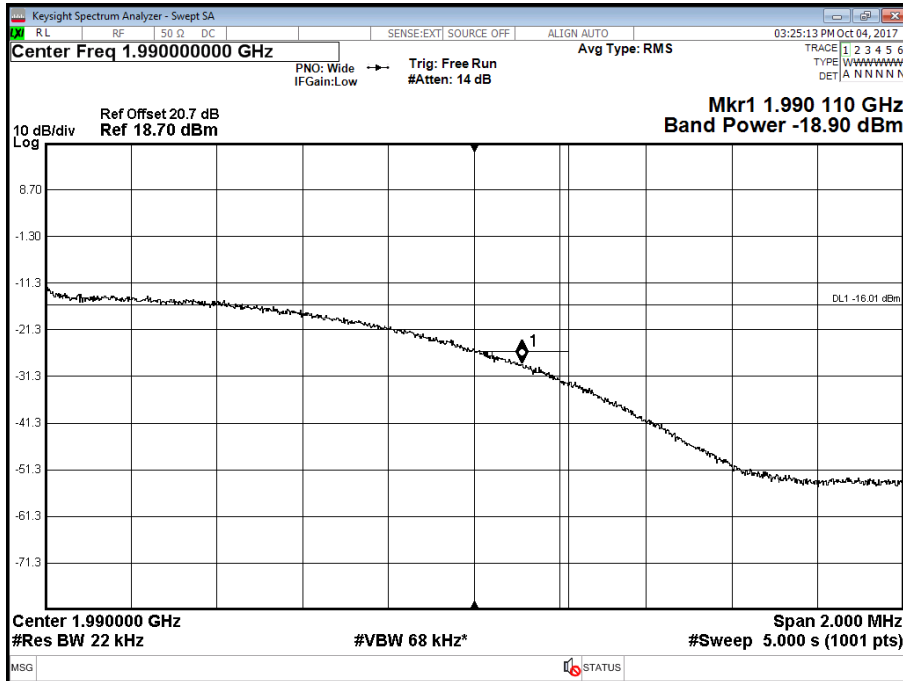
Antenna B - LTE Modulation QPSK - LTE Carrier Bandwidth 20.0 MHz - Channel Position B



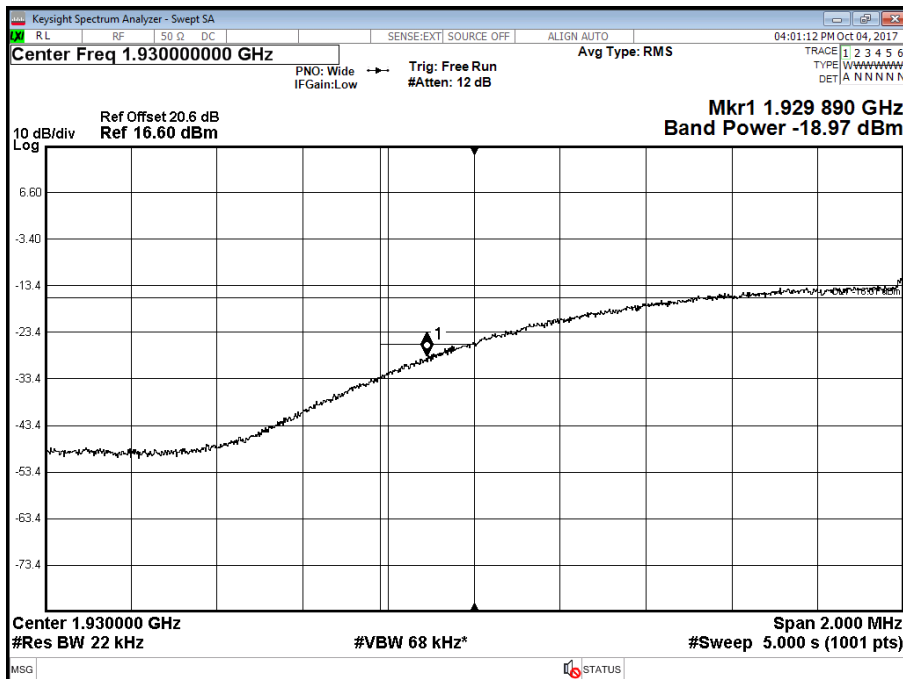


Product Service

Antenna B - LTE Modulation QPSK - LTE Carrier Bandwidth 20.0 MHz - Channel Position T



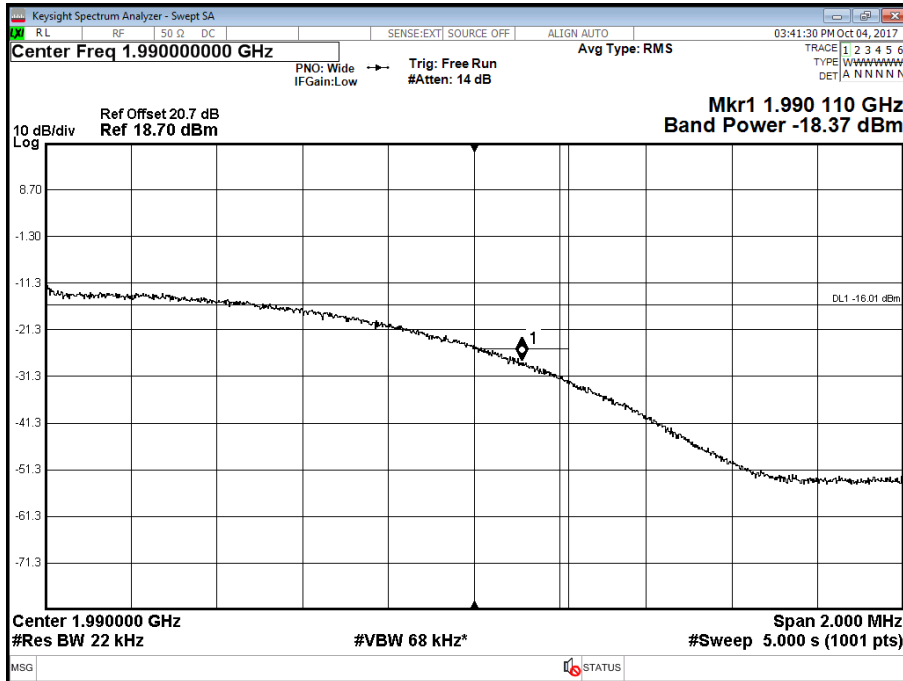
Antenna B - LTE Modulation 16QAM - LTE Carrier Bandwidth 20.0 MHz - Channel Position B



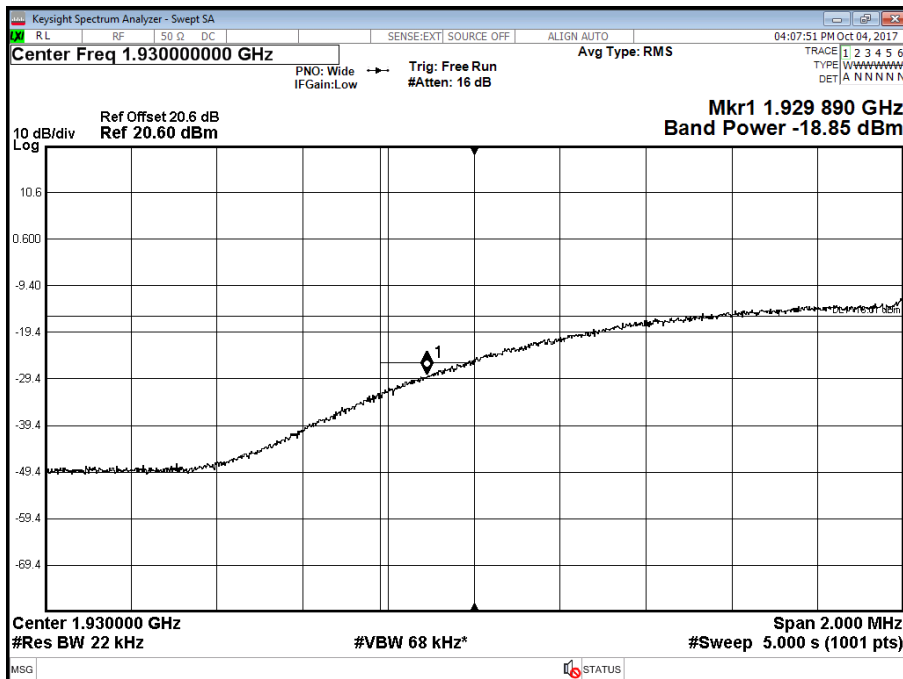


Product Service

Antenna B - LTE Modulation 16QAM - LTE Carrier Bandwidth 20.0 MHz - Channel Position T



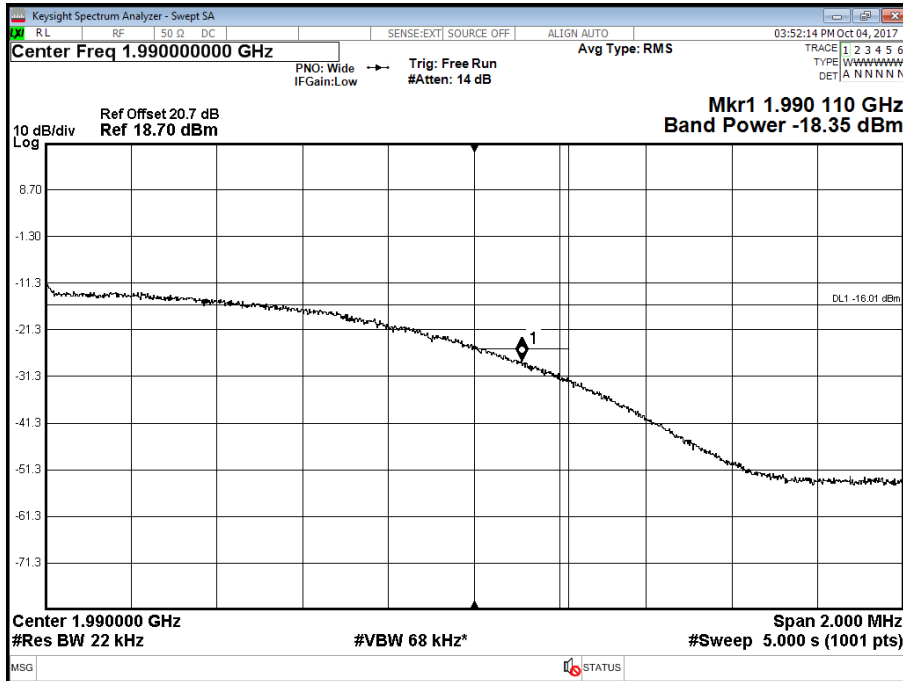
Antenna B - LTE Modulation 64QAM - LTE Carrier Bandwidth 20.0 MHz - Channel Position B





Product Service

Antenna B - LTE Modulation 64QAM - LTE Carrier Bandwidth 20.0 MHz - Channel Position T



Limit	-16 dBm: $(43 + 10\log(P) - 10\log(2))$
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Product Service

2.5 TRANSMITTER SPURIOUS EMISSIONS

2.5.1 Specification Reference

FCC CFR 47 Part 2, Clause 2.1051
FCC CFR 47 Part 24, Clause 24.238 (a)

2.5.2 Date of Test and Modification State

19 September to 17 October 2017 - Modification State 0

2.5.3 Test Equipment Used

The major items of test equipment used for the above tests are identified in Section 3.1.

2.5.4 Environmental Conditions

Ambient Temperature	22.5 - 23.3°C
Relative Humidity	55.2 - 41.9%

2.5.5 Test Method

All measurements were made in accordance with FCC KDB 971168 D01 Clause 6.

The EUT was connected to a Spectrum Analyser via 20dB of attenuation for measurements. Prior to testing, a Network Analyser was used to calibrate the path loss between the EUT and the Spectrum Analyser. The worst-case path loss in the measured ranges was entered as a reference level offset. Over the measured ranges, the RBW was set to 1MHz with a VBW of 3MHz. All measurement results are specified as average with an RMS detector being used in conjunction with a trace setting of Max Hold. Measurements were performed in configurations of the EUT as reported below.

The EUT can transmit with 1 or 2 ports simultaneously. Testing was performed on all ports with the test limits being reduced from the specification limit of $43+10\log(P)$ by a factor of $10\log(2)$ in accordance with KDB 662911 D01 v02r01 to cover all MIMO configurations. This equated to a limit of -16 dBm, (worst case).



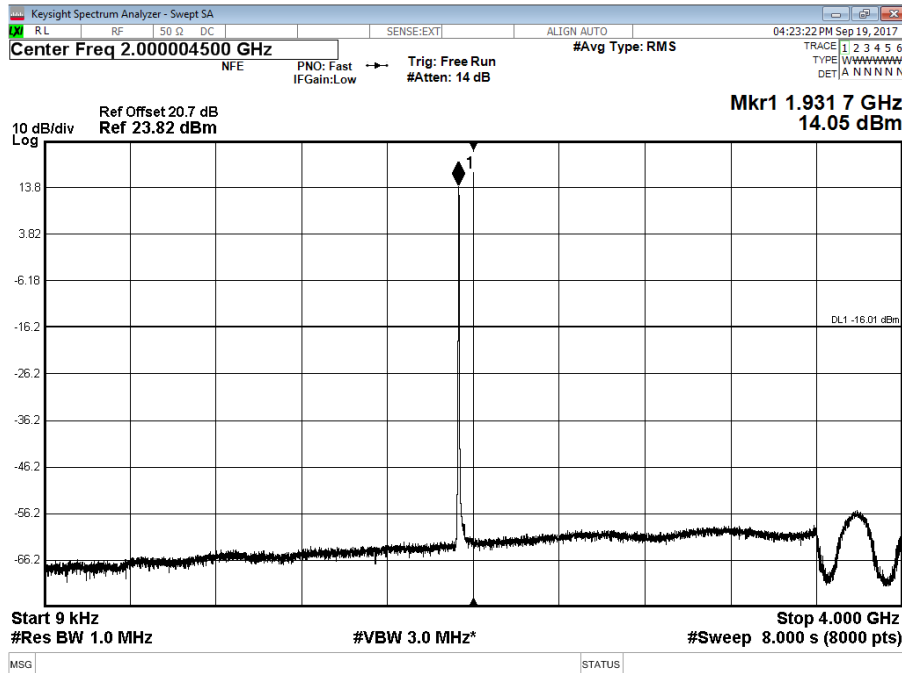
Product Service

2.5.6 Test Results

Configuration 1 – Antenna A

Maximum Output Power 20 dBm

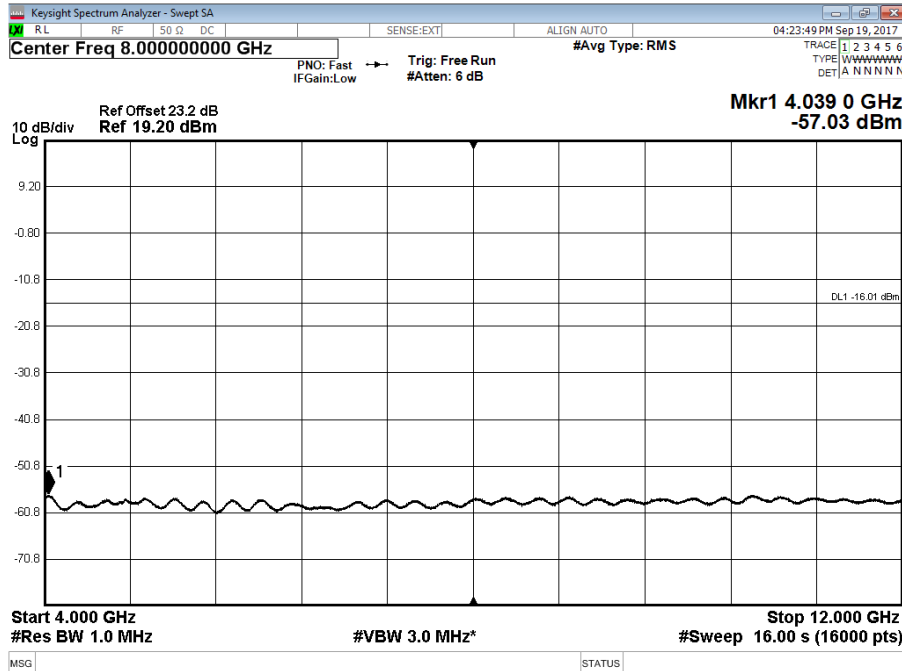
Antenna A - LTE Modulation QPSK - LTE Carrier Bandwidth 3.0 MHz - Channel Position B - Band 1 - Range 0.009 to 4000 MHz



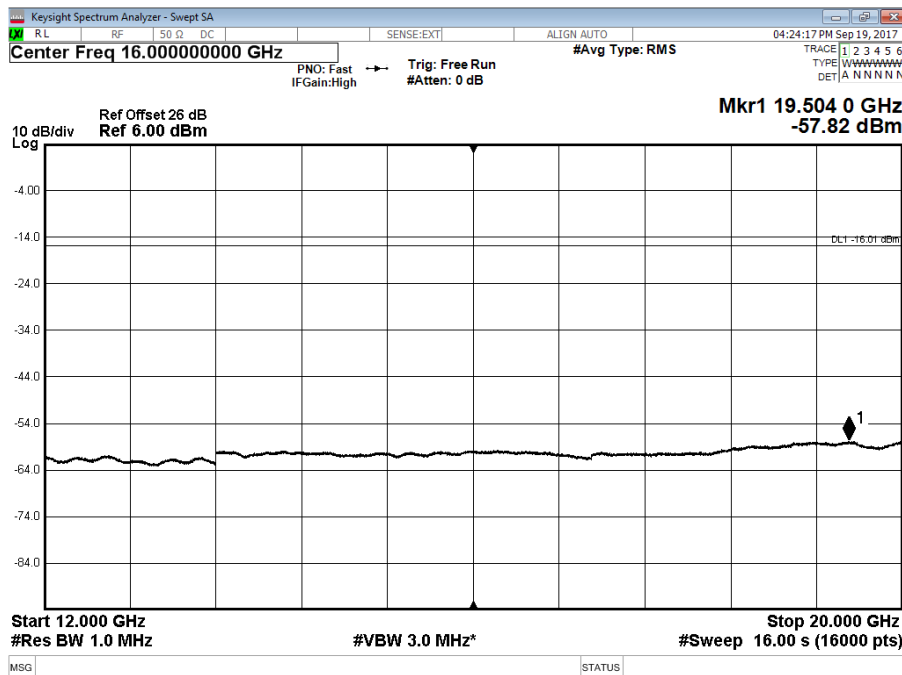


Product Service

Antenna A - LTE Modulation QPSK - LTE Carrier Bandwidth 3.0 MHz - Channel Position B - Band 2 - Range 4000 to 12000 MHz



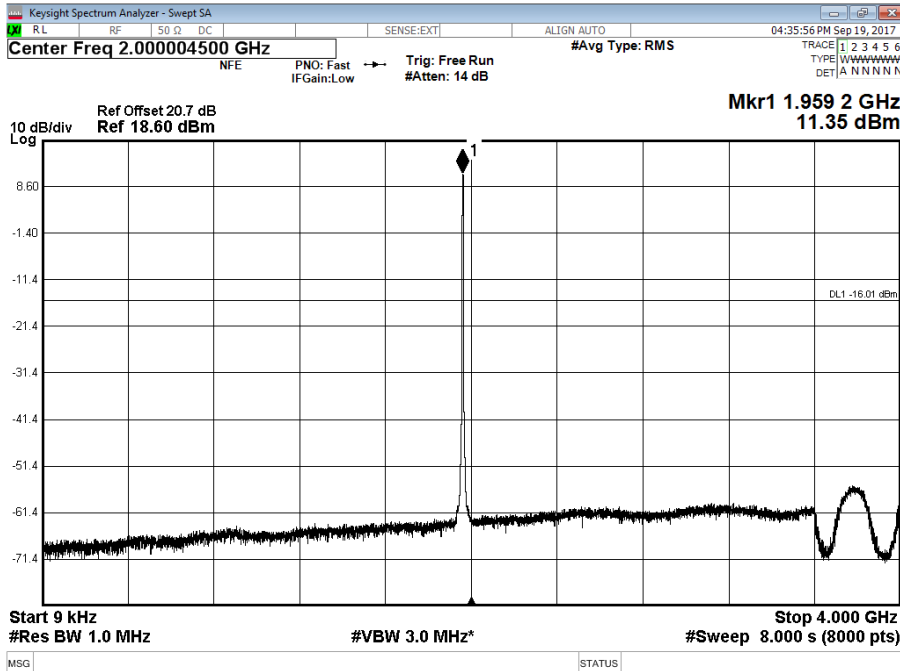
Antenna A - LTE Modulation QPSK - LTE Carrier Bandwidth 3.0 MHz - Channel Position B - Band 3 - Range 12000 to 20000 MHz



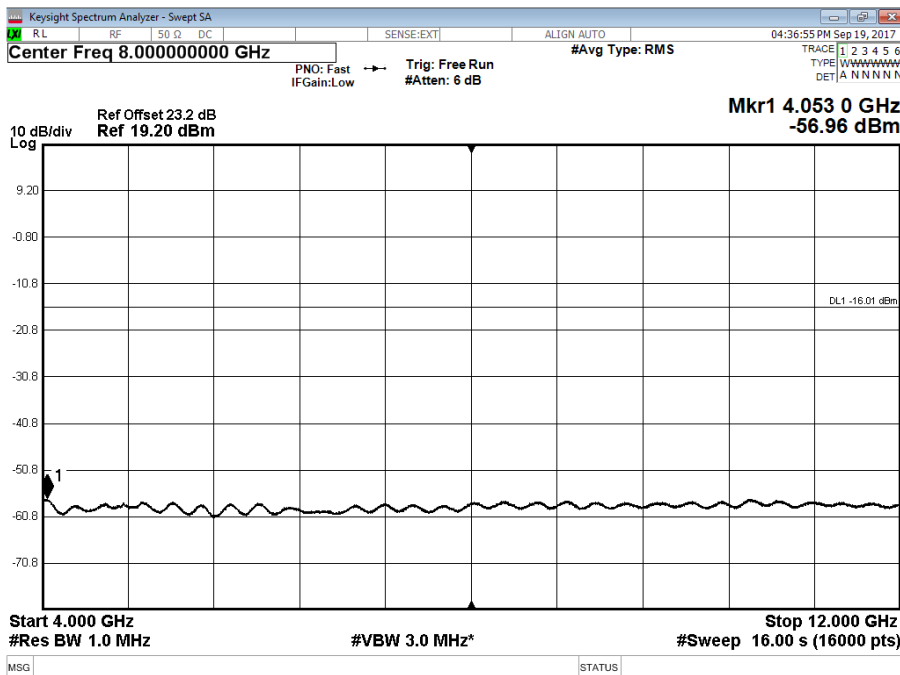


Product Service

Antenna A - LTE Modulation QPSK - LTE Carrier Bandwidth 3.0 MHz - Channel Position M - Band 1 - Range 0.009 to 4000 MHz



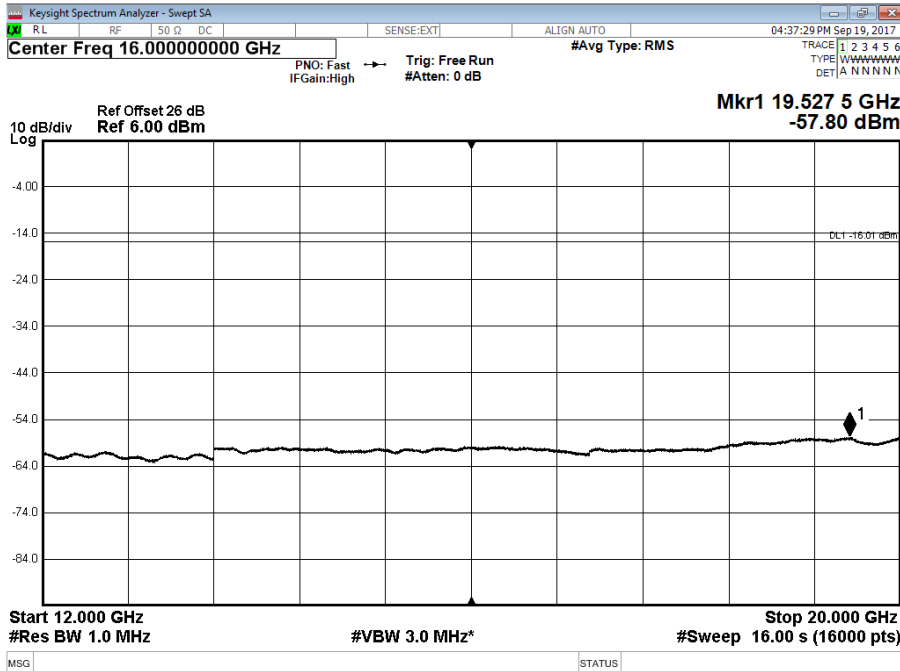
Antenna A - LTE Modulation QPSK - LTE Carrier Bandwidth 3.0 MHz - Channel Position M - Band 2 - Range 4000 to 12000 MHz



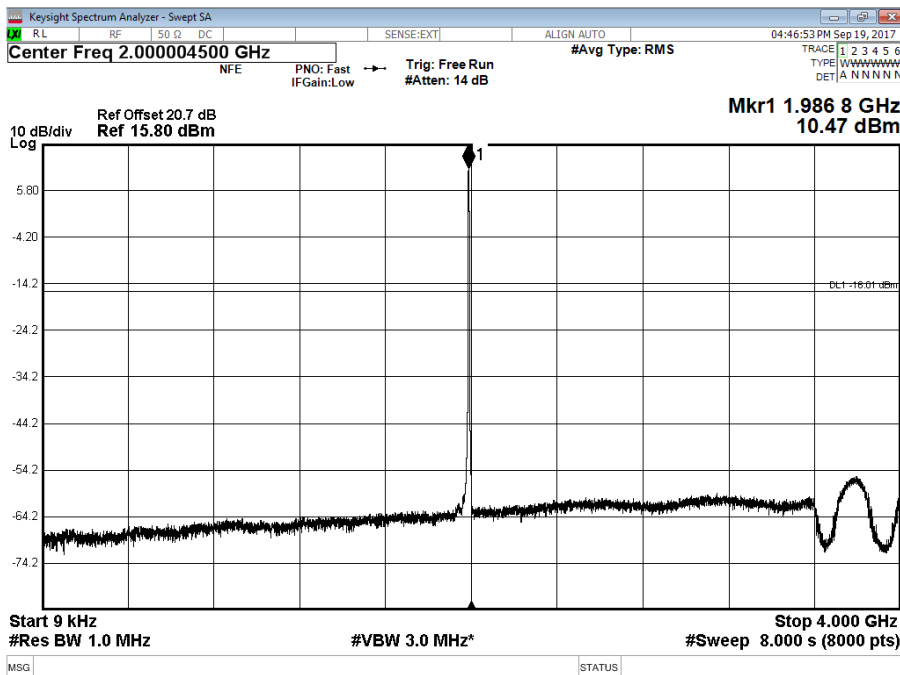


Product Service

Antenna A - LTE Modulation QPSK - LTE Carrier Bandwidth 3.0 MHz - Channel Position M - Band 3 - Range 12000 to 20000 MHz



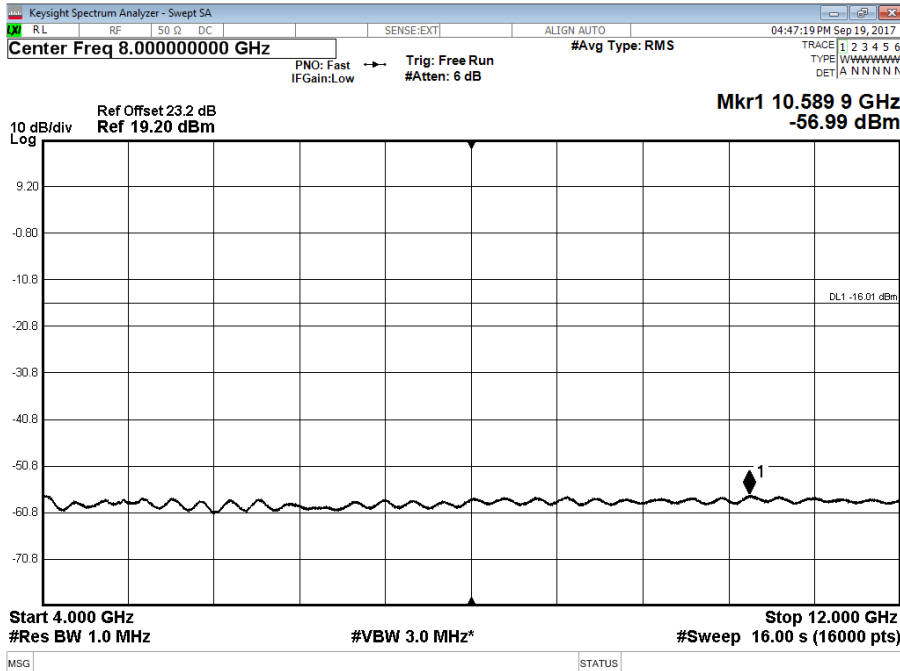
Antenna A - LTE Modulation QPSK - LTE Carrier Bandwidth 3.0 MHz - Channel Position T - Band 1 - Range 0.009 to 4000 MHz



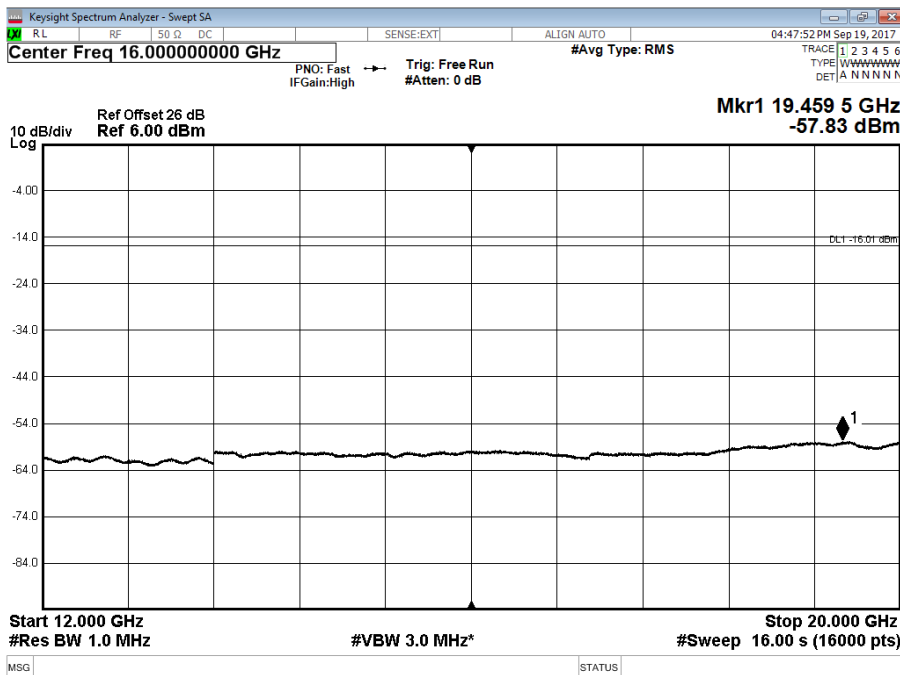


Product Service

Antenna A - LTE Modulation QPSK - LTE Carrier Bandwidth 3.0 MHz - Channel Position T - Band 2 - Range 4000 to 12000 MHz



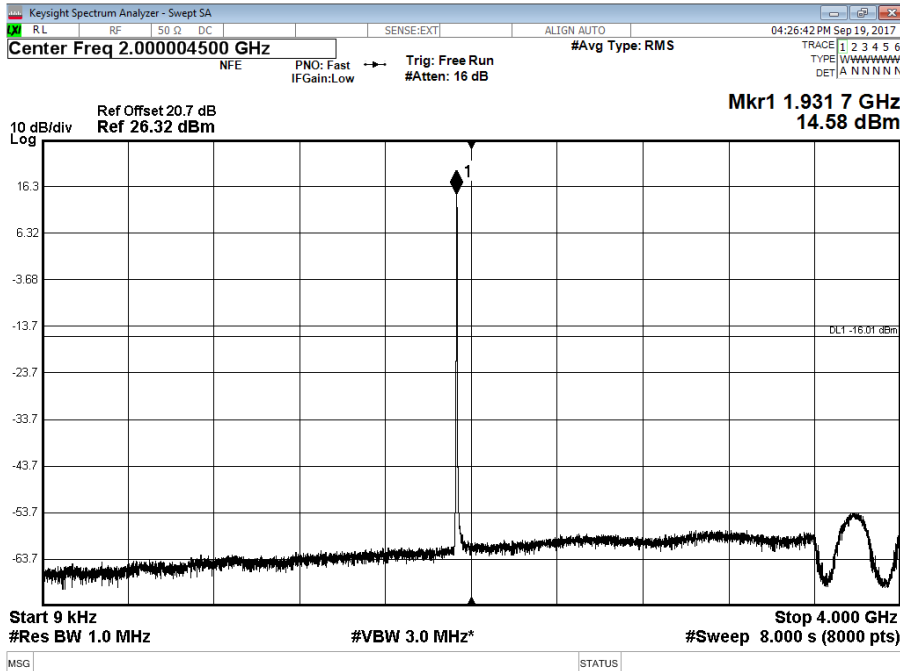
Antenna A - LTE Modulation QPSK - LTE Carrier Bandwidth 3.0 MHz - Channel Position T - Band 3 - Range 12000 to 20000 MHz



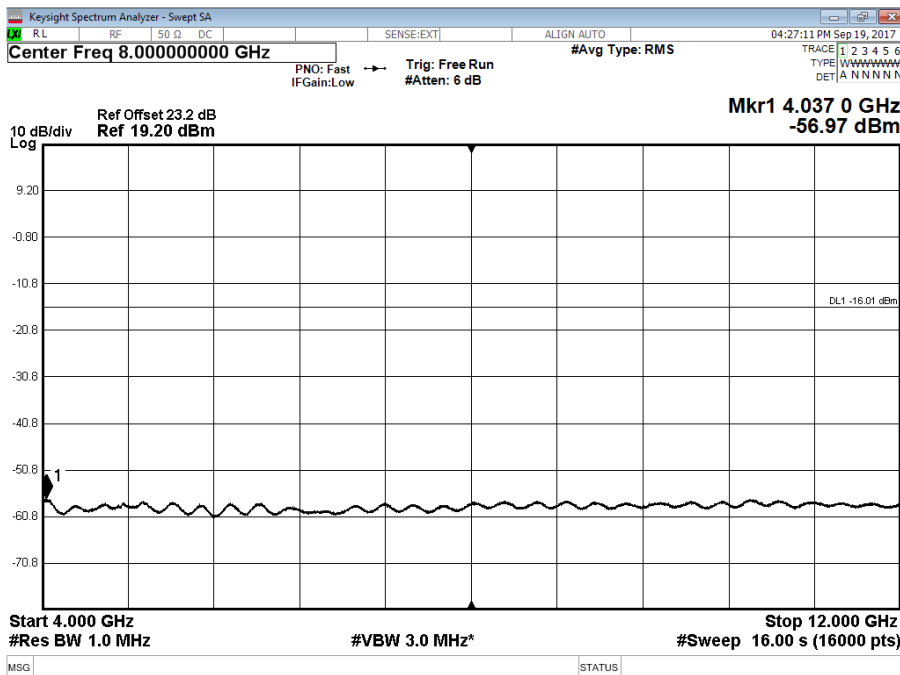


Product Service

Antenna A - LTE Modulation 16QAM - LTE Carrier Bandwidth 3.0 MHz - Channel Position B - Band 1 - Range 0.009 to 4000 MHz



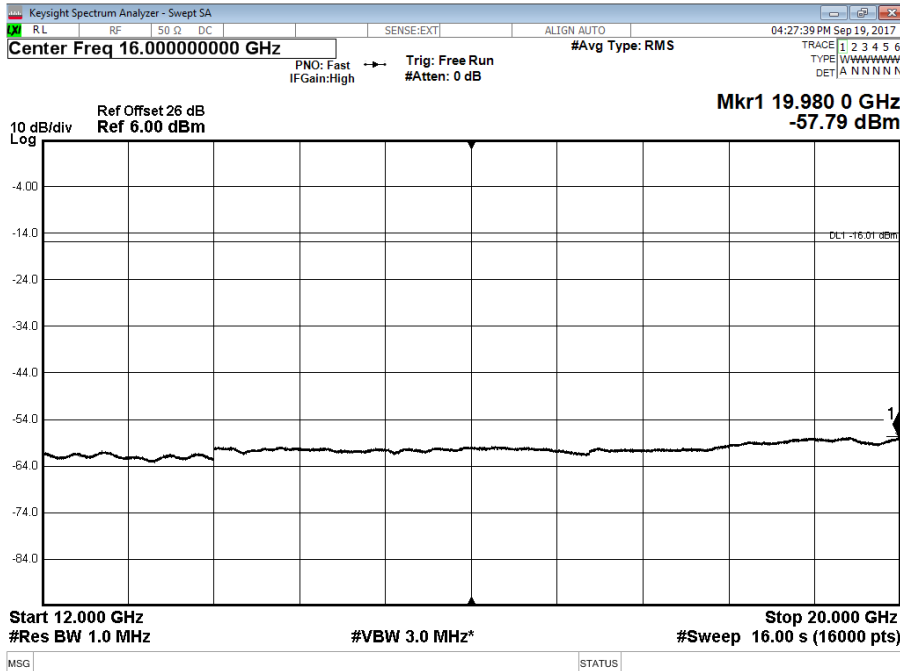
Antenna A - LTE Modulation 16QAM - LTE Carrier Bandwidth 3.0 MHz - Channel Position B - Band 2 - Range 4000 to 12000 MHz





Product Service

Antenna A - LTE Modulation 16QAM - LTE Carrier Bandwidth 3.0 MHz - Channel Position B - Band 3 - Range 12000 to 20000 MHz



Antenna A - LTE Modulation 16QAM - LTE Carrier Bandwidth 3.0 MHz - Channel Position M - Band 1 - Range 0.009 to 4000 MHz

