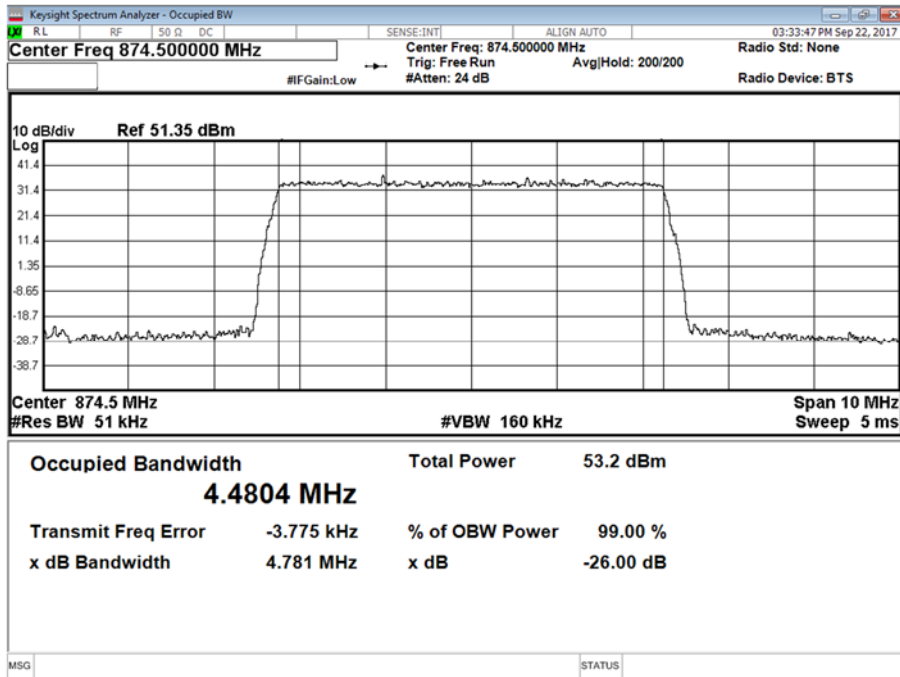


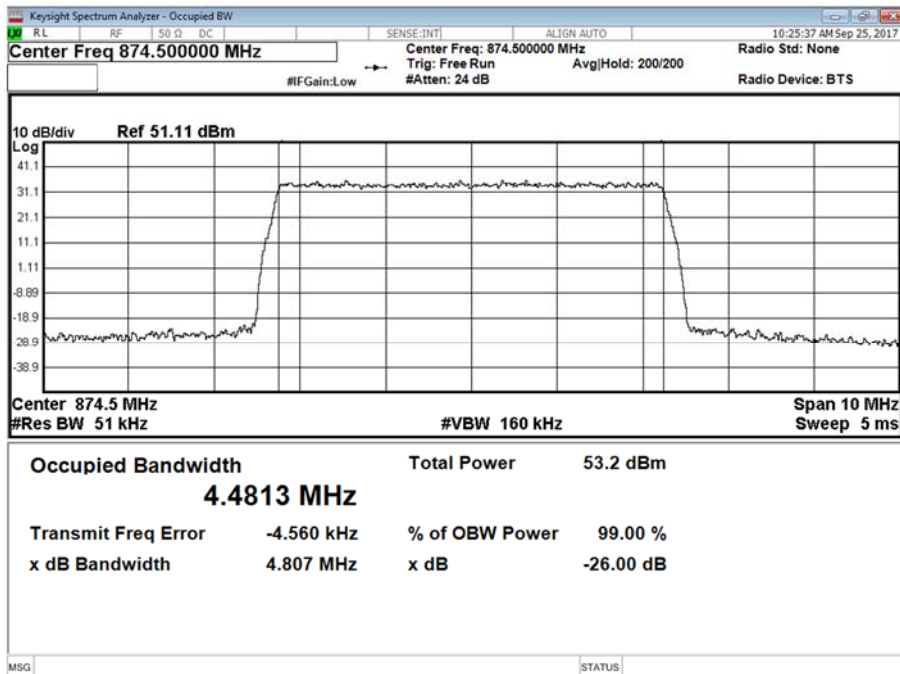


Product Service

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



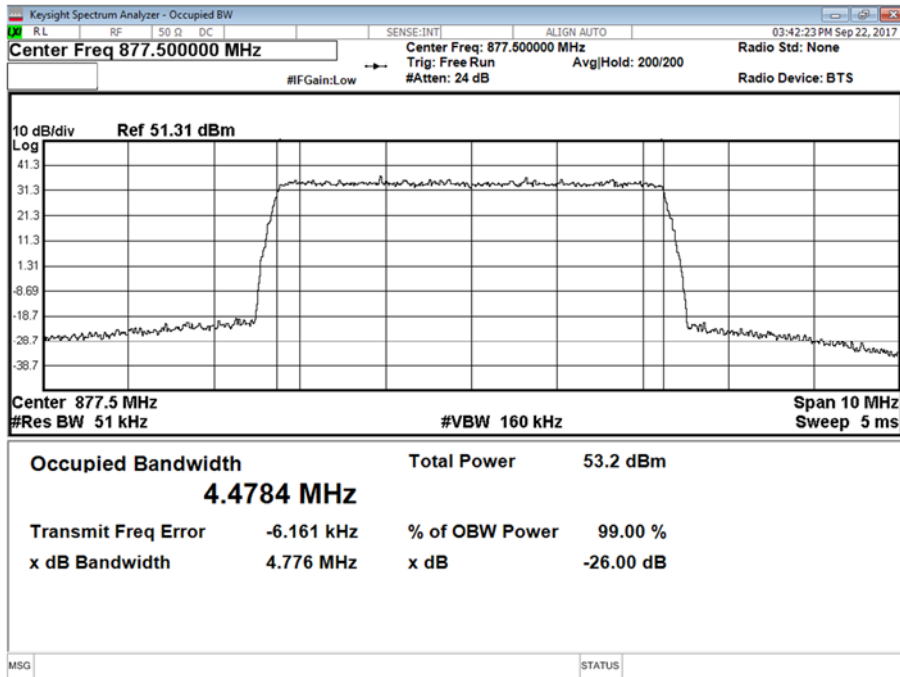
Antenna B - LTE Modulation QPSK - LTE Carrier Bandwidth 5.0 MHz - Channel Position M



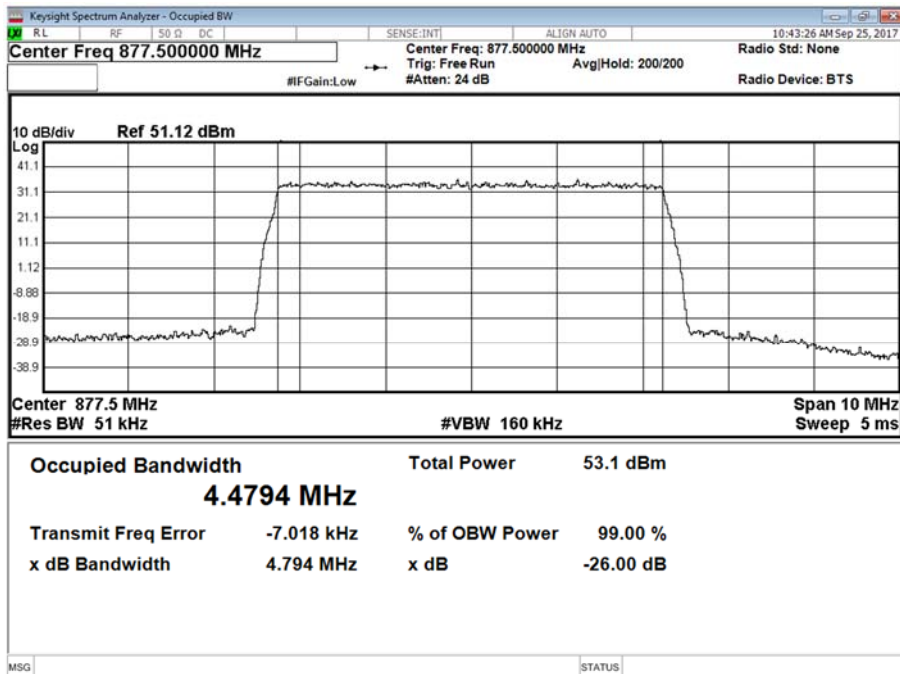


Product Service

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



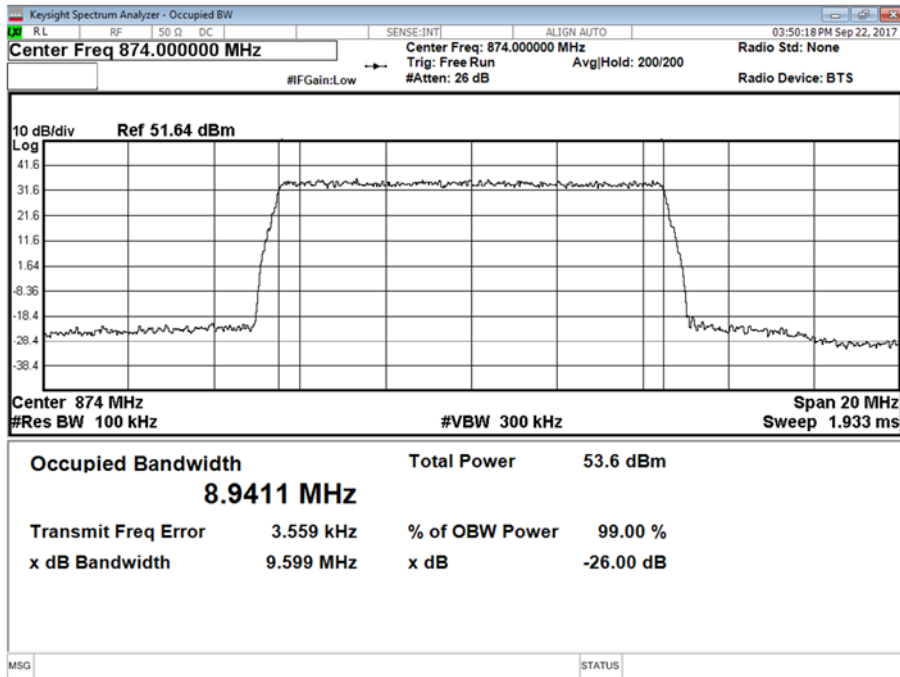
Antenna B - LTE Modulation QPSK - LTE Carrier Bandwidth 5.0 MHz - Channel Position T



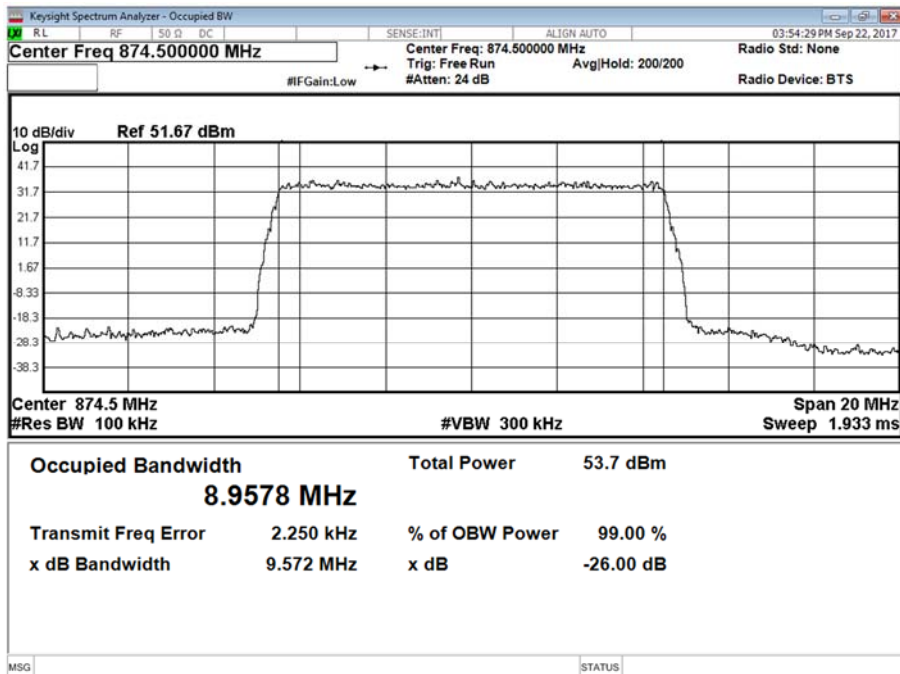


Product Service

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



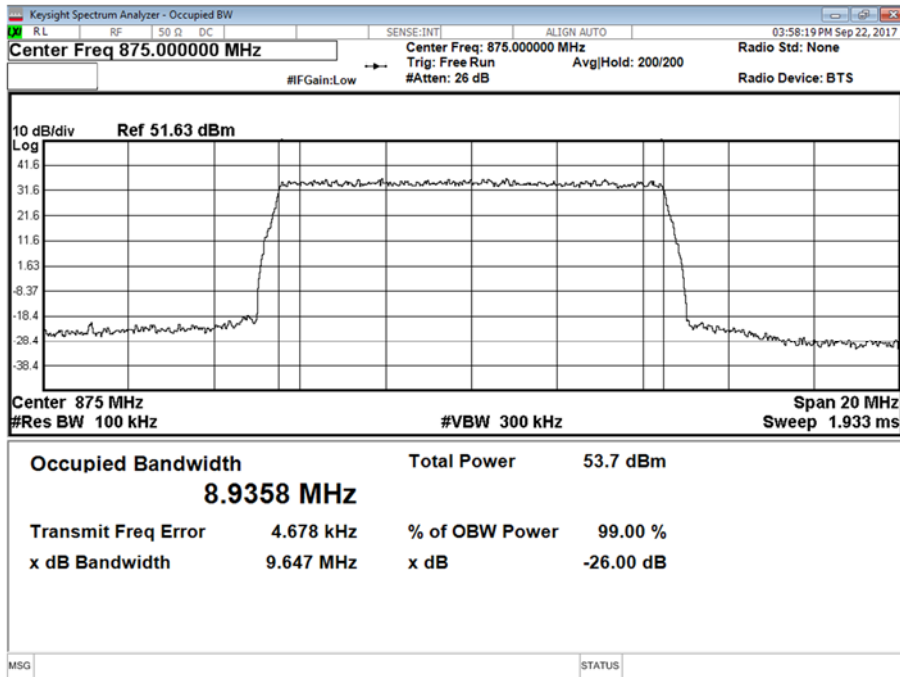
Antenna A - LTE Modulation QPSK - LTE Carrier Bandwidth 10.0 MHz - Channel Position M





Product Service

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



Configuration B

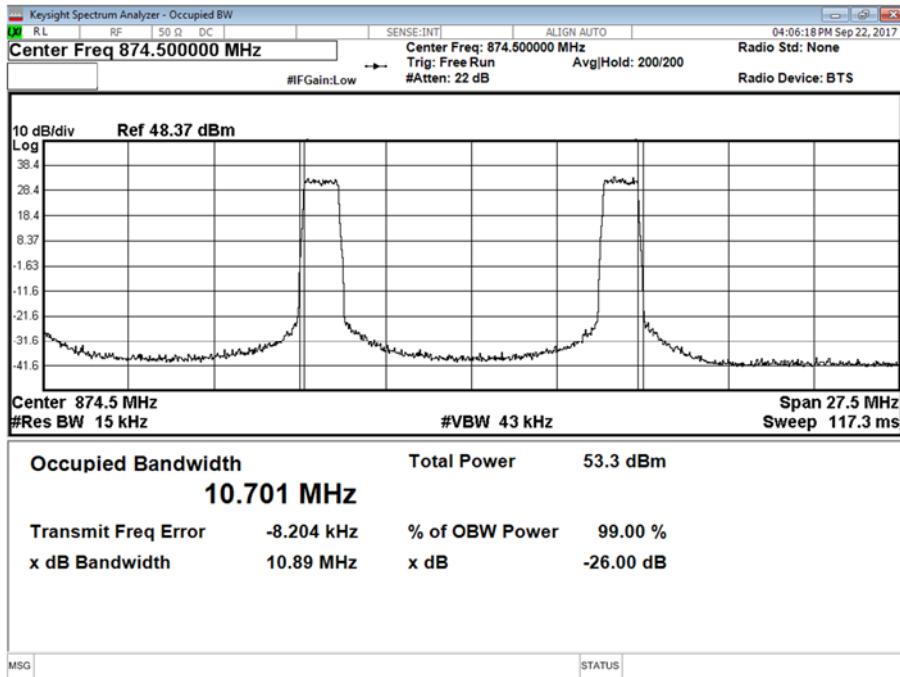
Maximum Output Power 46 dBm

Antenna	LTE Modulation	LTE Carrier Bandwidth	Result (KHz)	
			Channel Position M	
			Occupied Bandwidth	-26 dB Bandwidth
A	QPSK	1.4 MHz	10,701.32	10,887.08
A	QPSK	3.0 MHz	10,680.28	10,924.34
A	QPSK	5.0 MHz	10,431.79	10,822.59

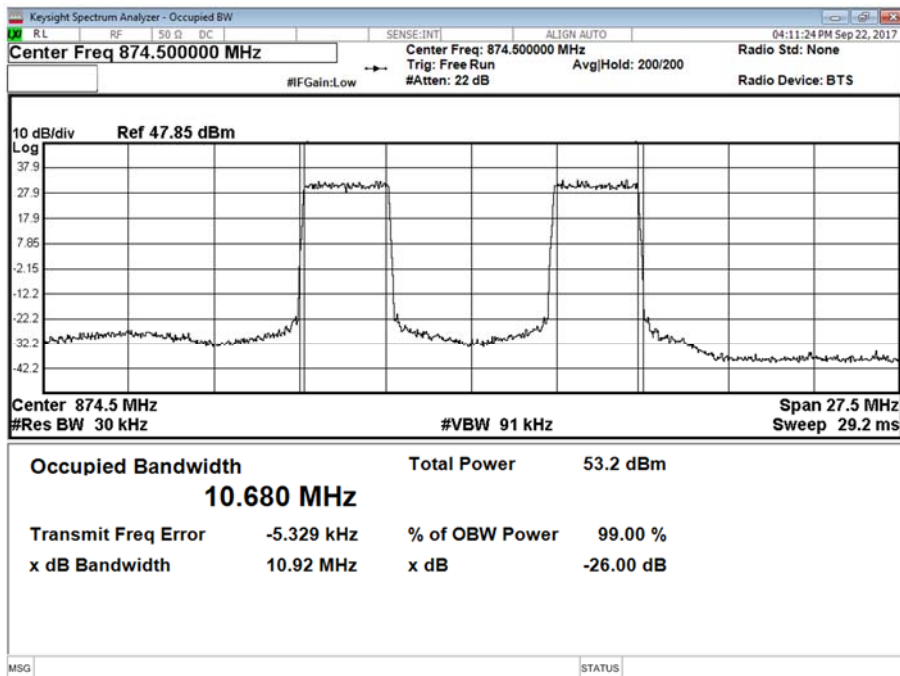


Product Service

Antenna A - LTE Modulation QPSK - LTE Carrier Bandwidth 1.4 MHz - Channel Position M



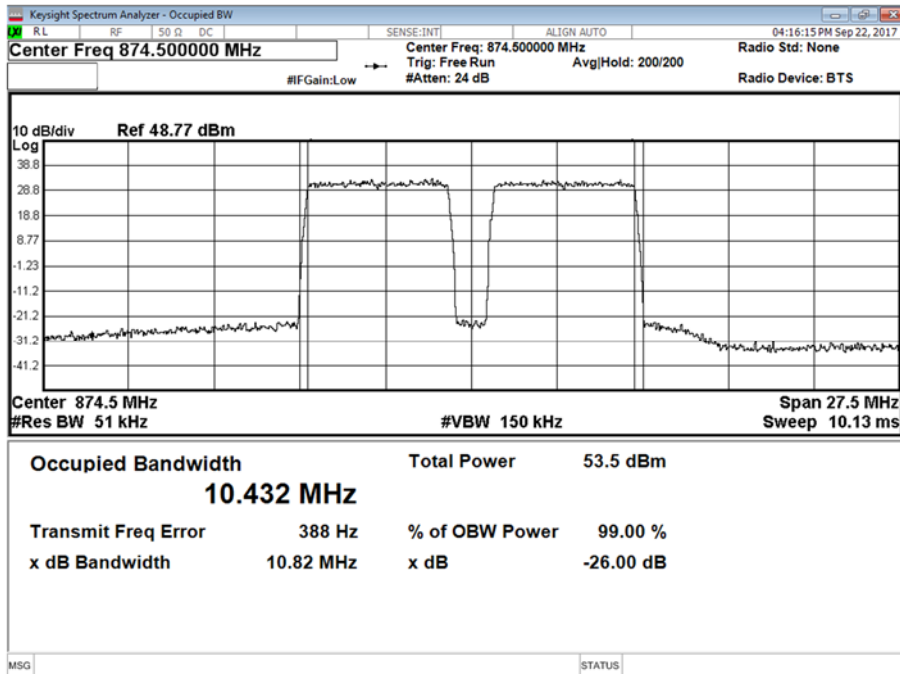
Antenna A - LTE Modulation QPSK - LTE Carrier Bandwidth 3.0 MHz - Channel Position M





Product Service

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



Configuration C

Maximum Output Power 46 dBm

Antenna	LTE Modulation	LTE Carrier Bandwidth	Result (KHz)	
			Channel Position M	
			Occupied Bandwidth	-26 dB Bandwidth
A	QPSK	1.4 MHz	10,680.47	10,887.68
A	QPSK	3.0 MHz	10,645.48	10,924.75





## 2.3 BAND EDGE

### 2.3.1 Specification Reference

FCC CFR 47 Part 2, Clause 2.1051  
FCC CFR 47 Part 22, Clause 22.917

### 2.3.2 Date of Test and Modification State

22, 26 and 27 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 21.2 - 22.5°C  
Relative Humidity 53.8 - 55.2%

### 2.3.5 Test Method

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

The EUT was connected to a Spectrum Analyser via 40 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  $43 + 10\log(P) - 10\log(2) = -16\text{dBm}$ .

Additional plots were shown for measurements from 1 – 5 MHz away from the Band Edge. A RBW of 51 kHz was used with the limit line corrected by  $10\log(100 \text{ kHz} / 51 \text{ kHz}) = 3 \text{ db}$ . Therefore, the limit line accounting for MIMO and the reduced RBW was set at -19 dBm.

### 2.3.6 Test Results

Configuration A

Maximum Output Power 46 dBm

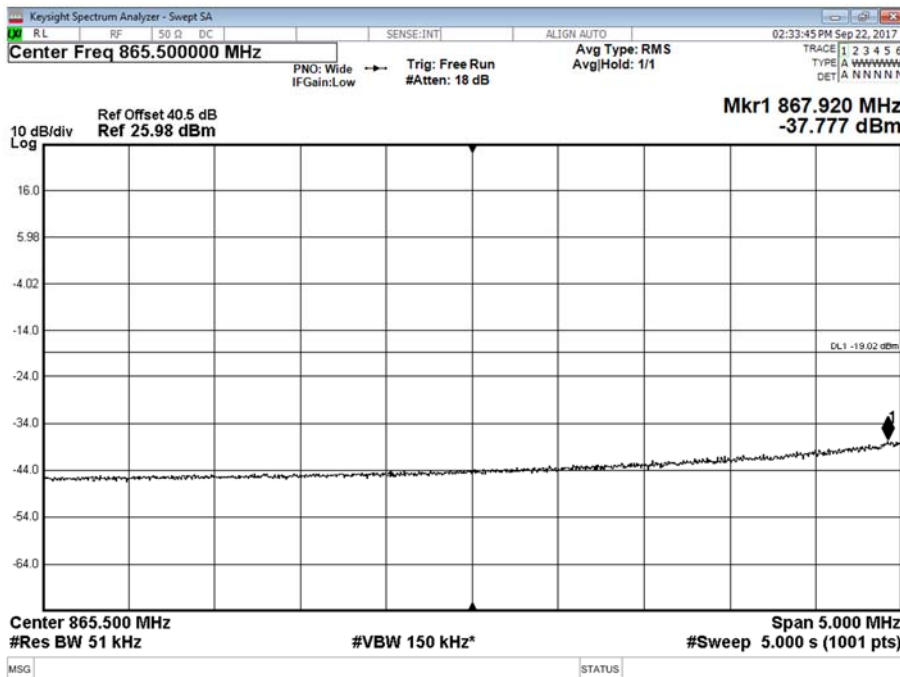
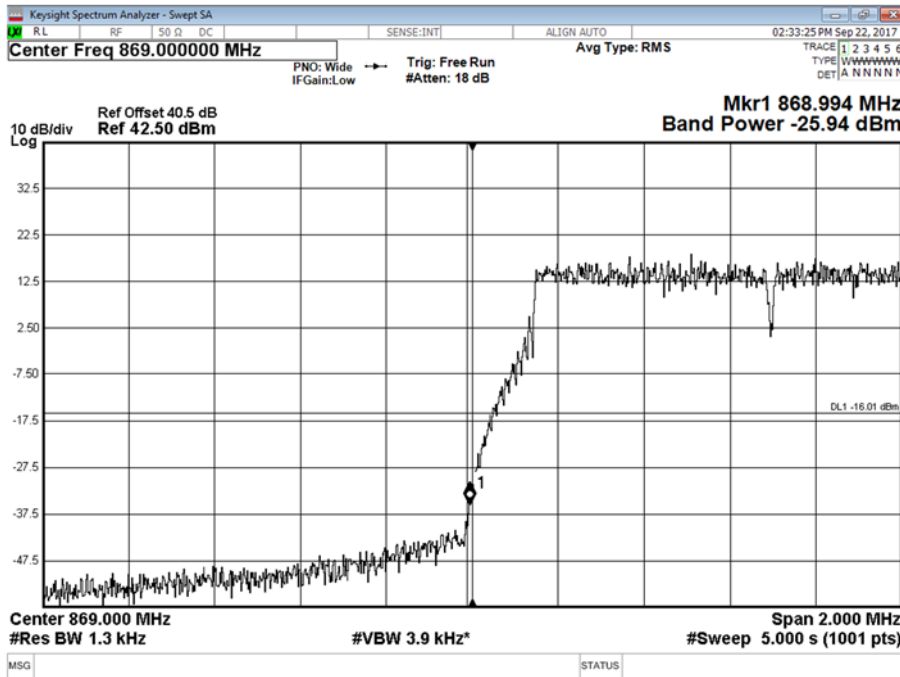
Antenna	LTE Modulation	LTE Carrier Bandwidth	Band Edge (MHz)	
			Channel Position B	Channel Position T
A	QPSK	1.4 MHz	869.7	879.3
A	QPSK	3.0 MHz	870.5	878.5
A	QPSK	5.0 MHz	871.5	877.5
B	QPSK	5.0 MHz	871.5	877.5
A	QPSK	10.0 MHz	874.0	875.0





Product Service

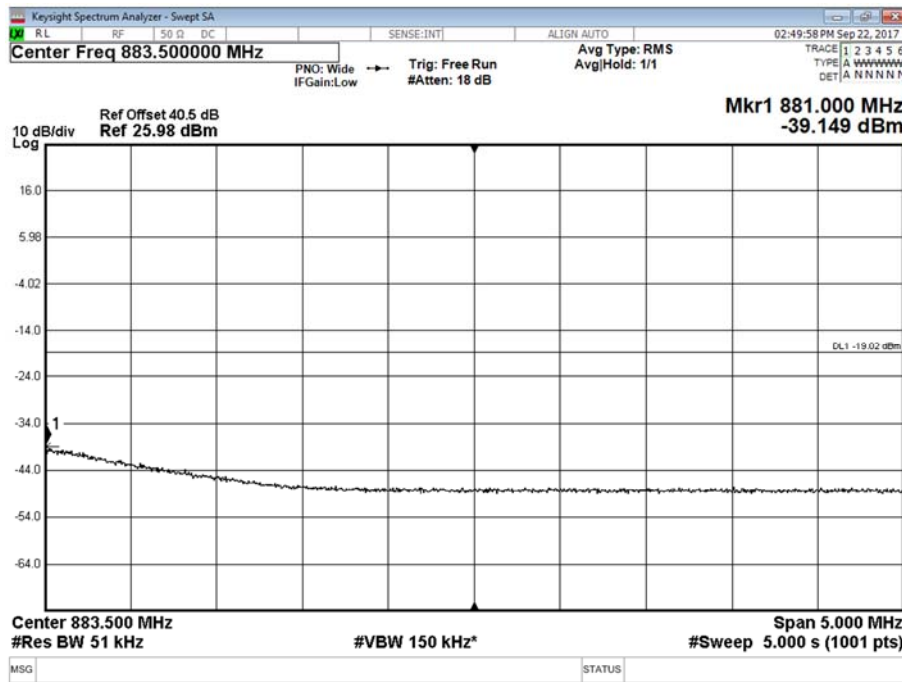
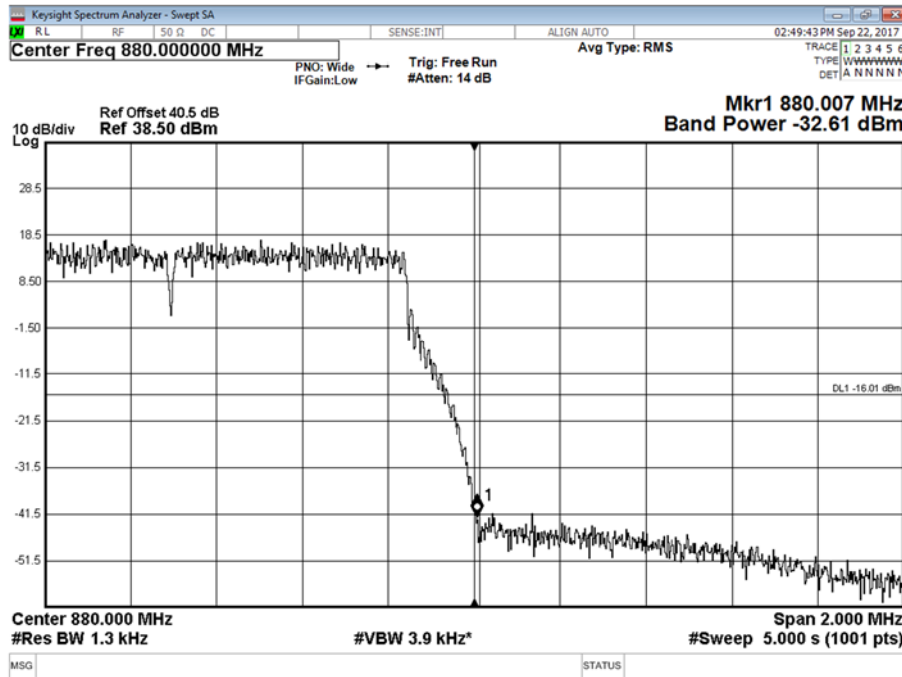
Antenna A - LTE Modulation QPSK - LTE Carrier Bandwidth 1.4 MHz - Channel Position B





Product Service

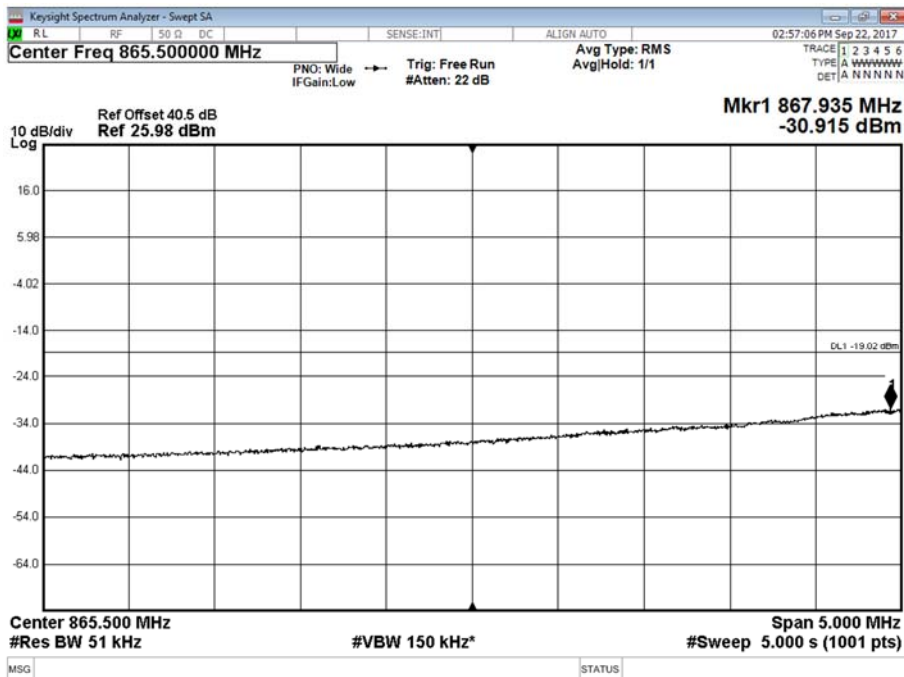
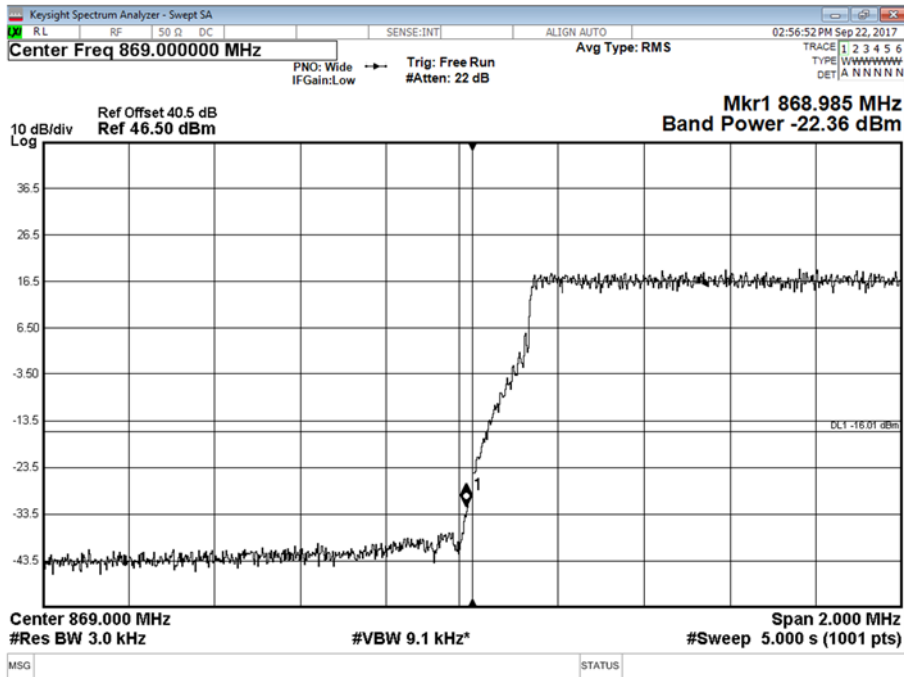
### Antenna A - LTE Modulation QPSK - LTE Carrier Bandwidth 1.4 MHz - Channel Position T





Product Service

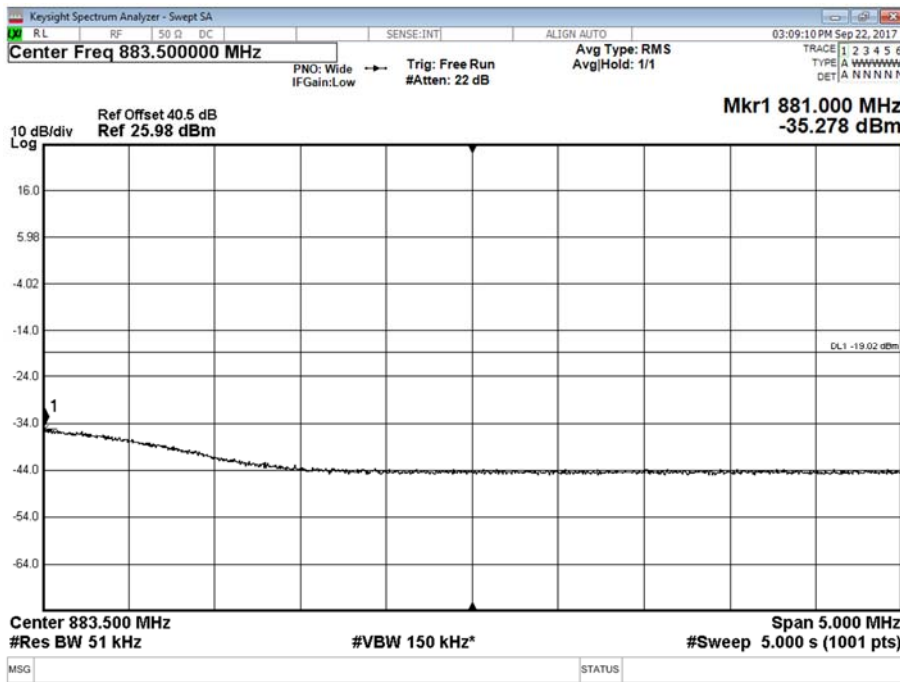
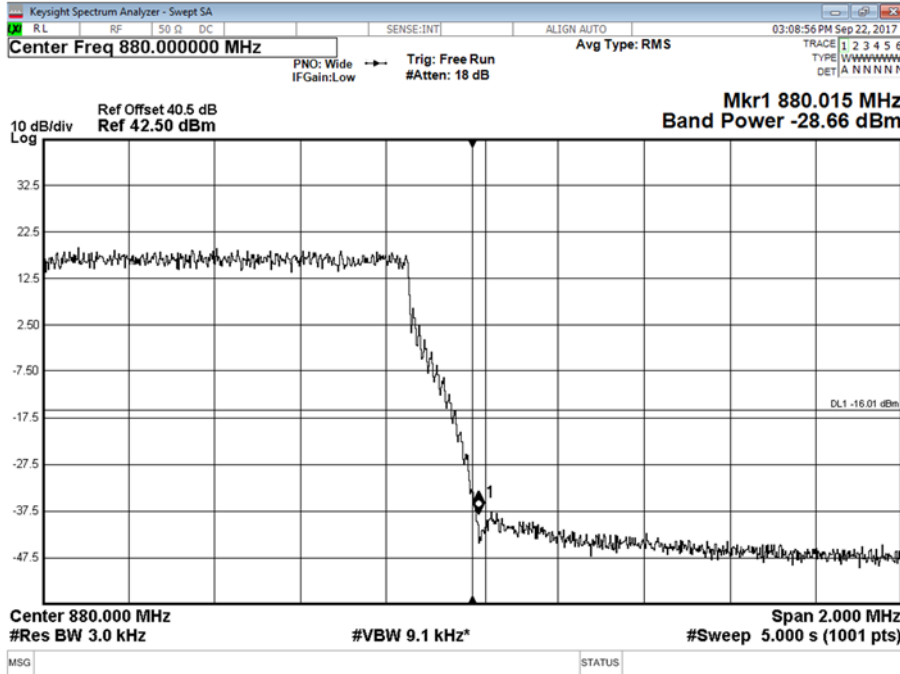
### Antenna A - LTE Modulation QPSK - LTE Carrier Bandwidth 3.0 MHz - Channel Position B





Product Service

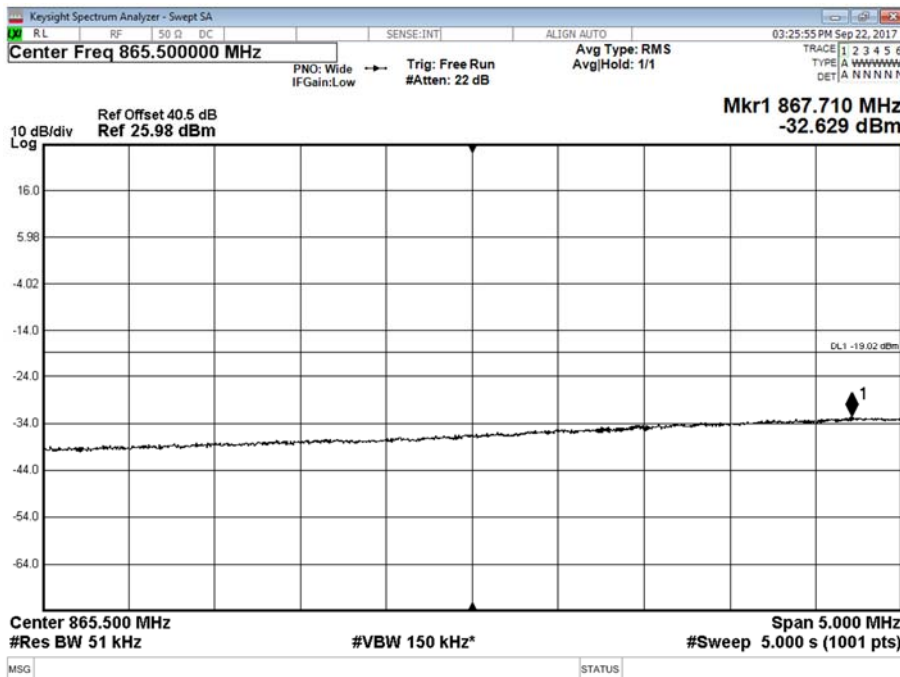
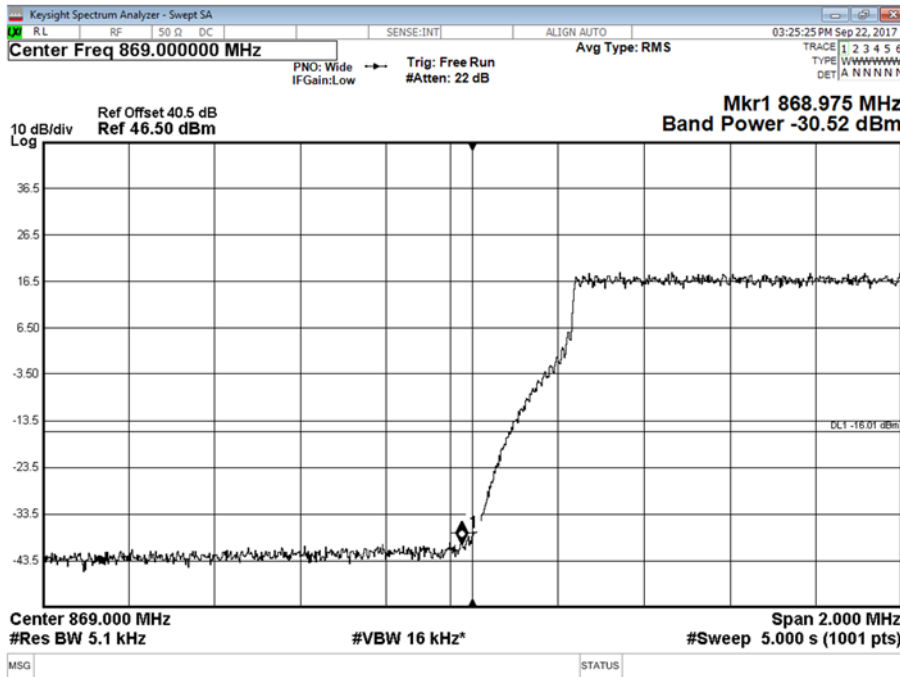
### Antenna A - LTE Modulation QPSK - LTE Carrier Bandwidth 3.0 MHz - Channel Position T





Product Service

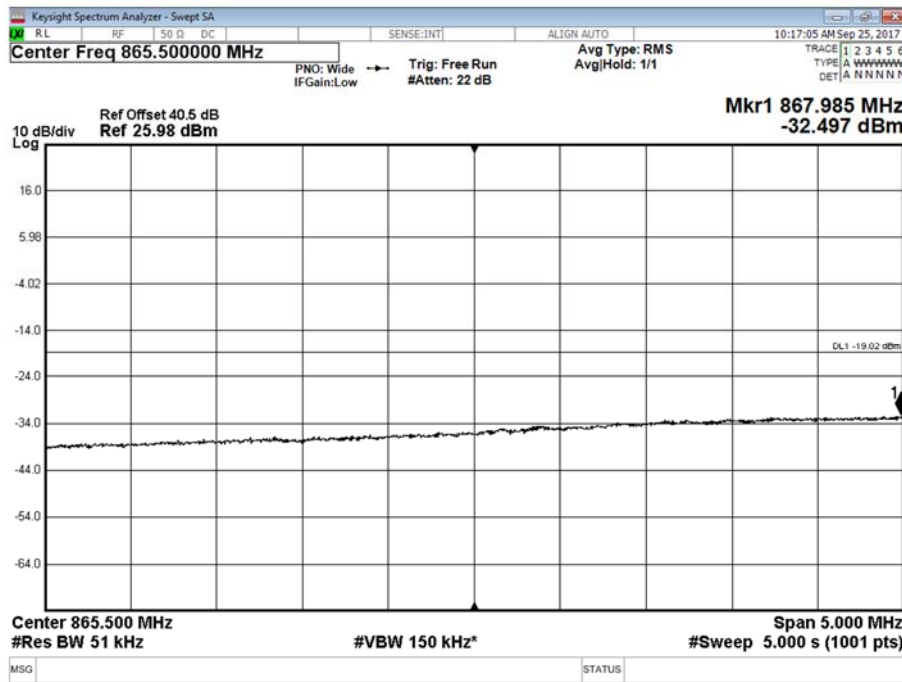
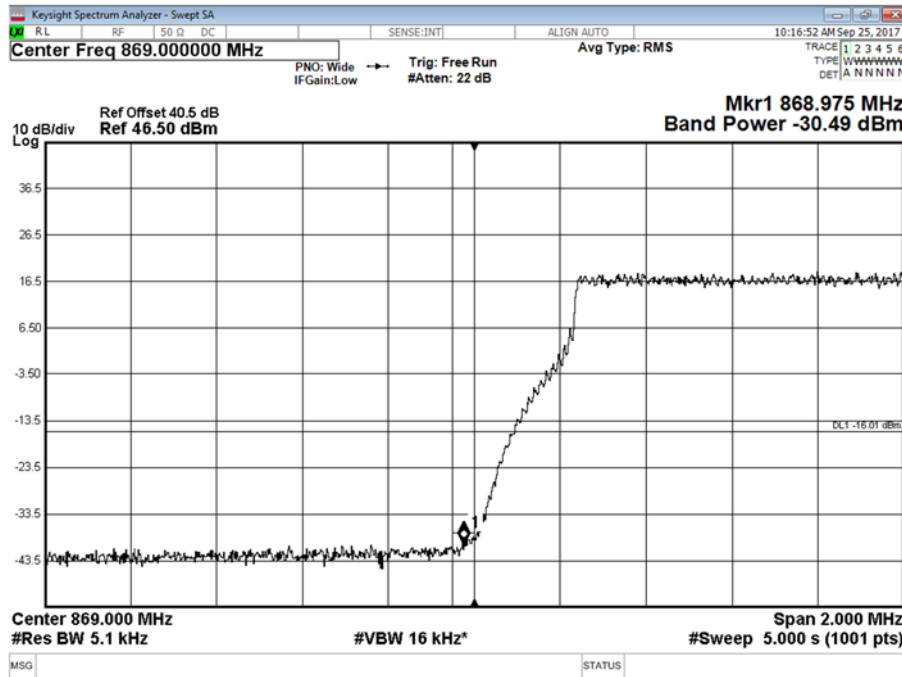
### Antenna A - LTE Modulation QPSK - LTE Carrier Bandwidth 5.0 MHz - Channel Position B





Product Service

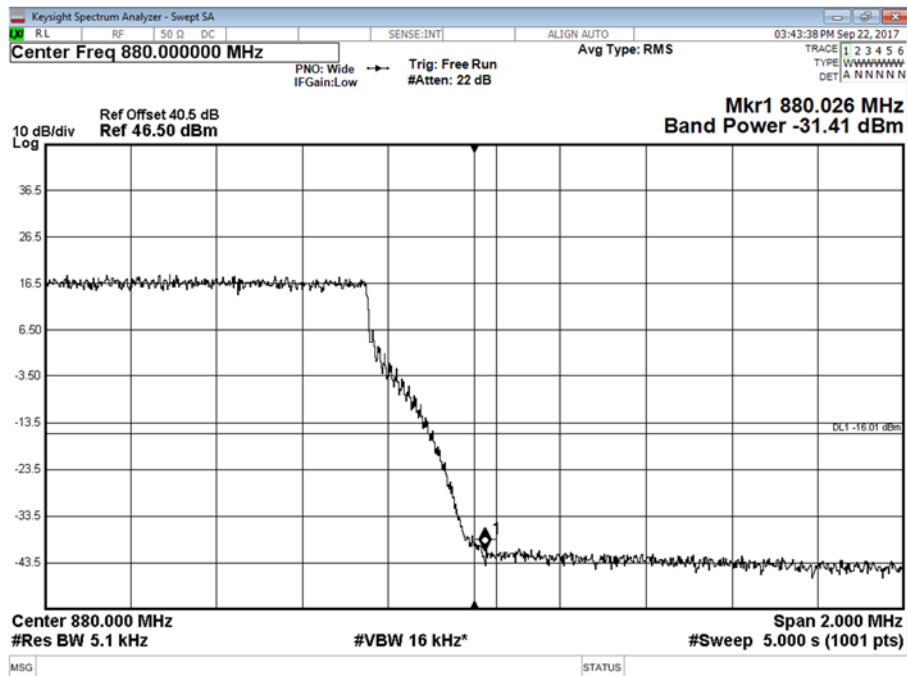
### Antenna B - LTE Modulation QPSK - LTE Carrier Bandwidth 5.0 MHz - Channel Position B





Product Service

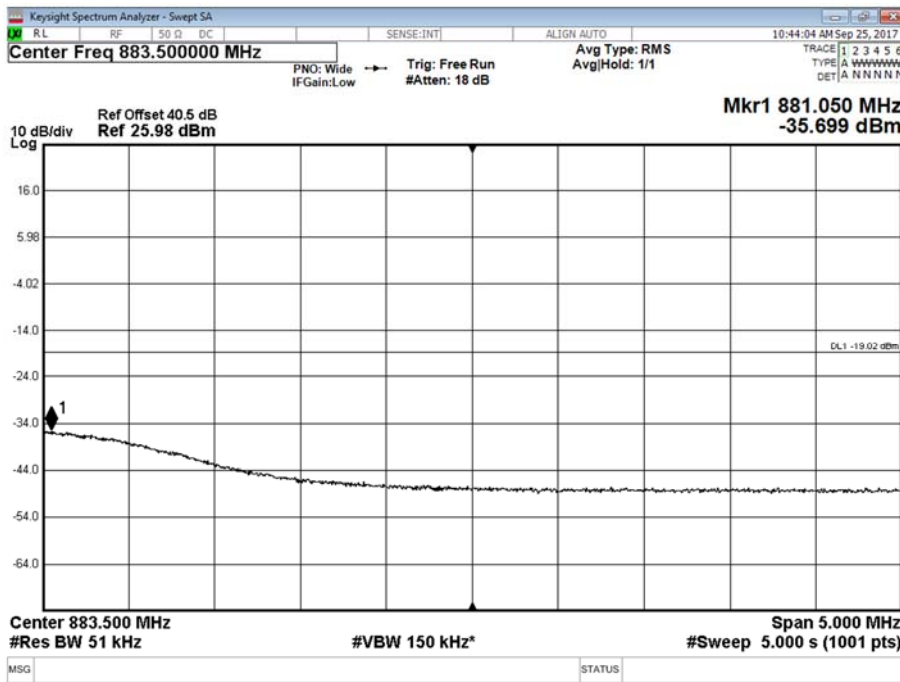
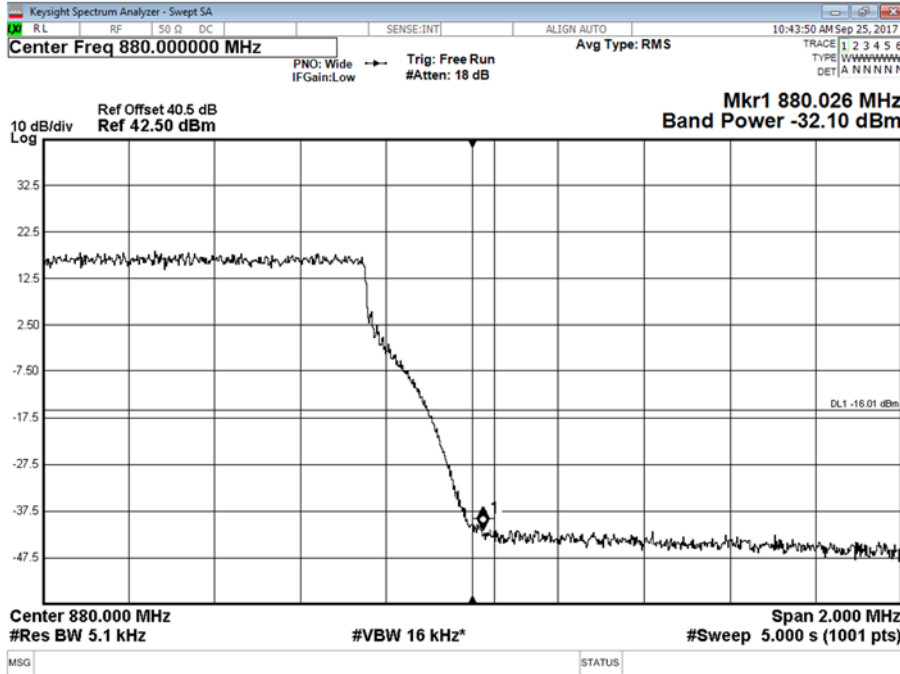
### Antenna A - LTE Modulation QPSK - LTE Carrier Bandwidth 5.0 MHz - Channel Position T





Product Service

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

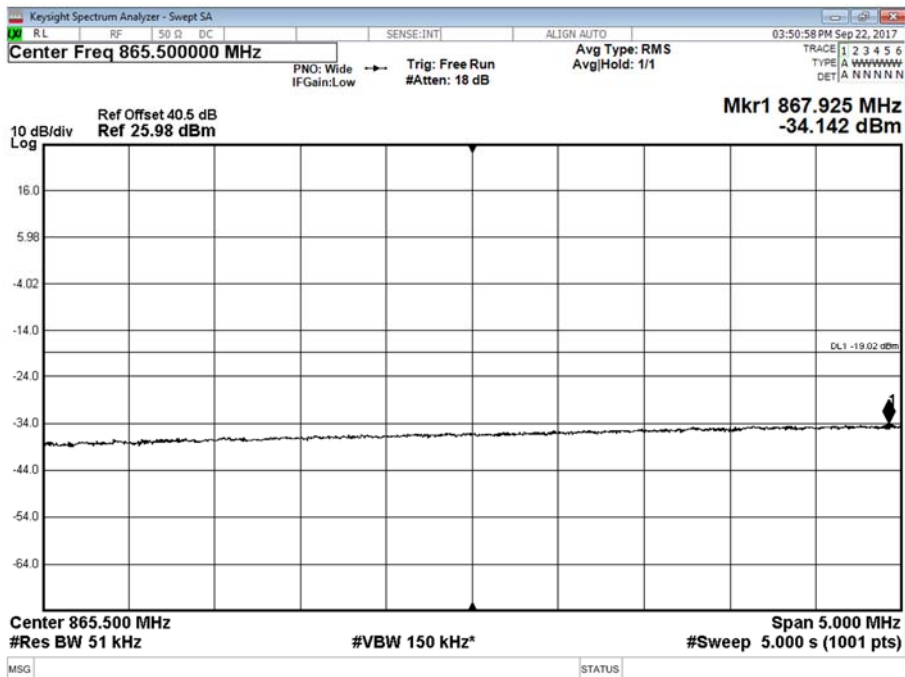
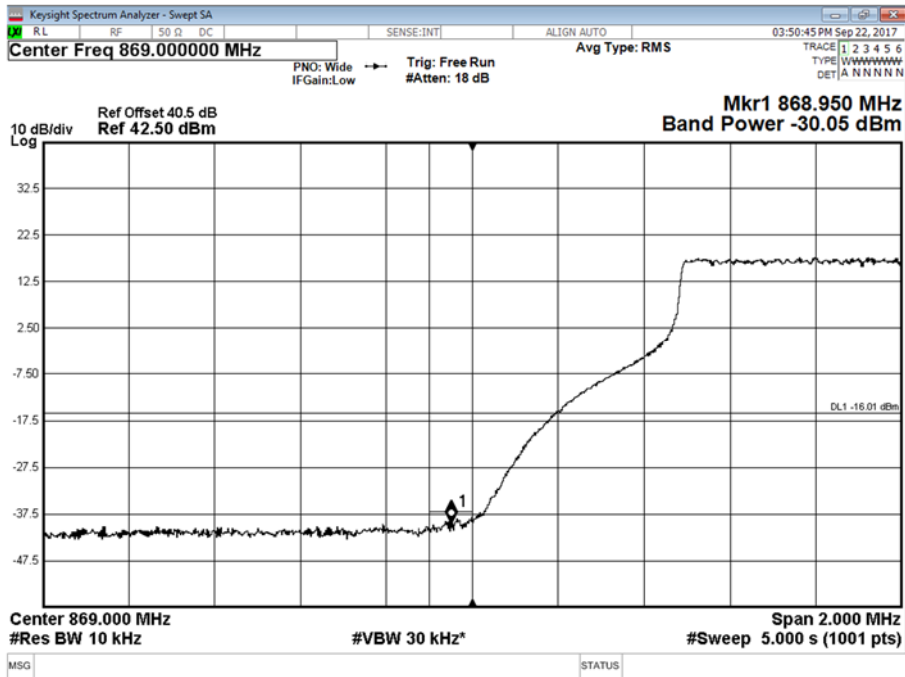






Product Service

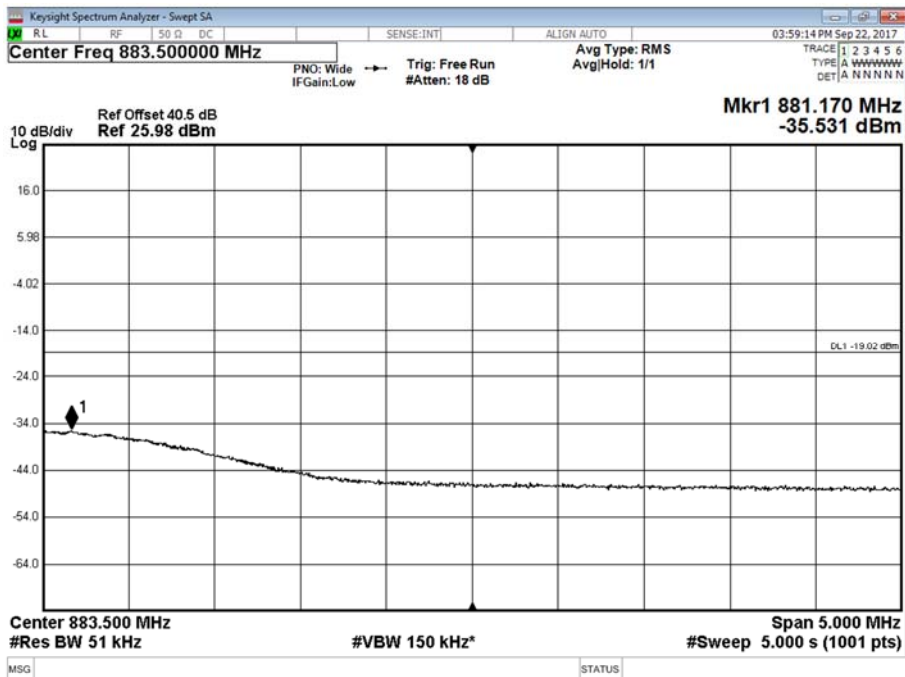
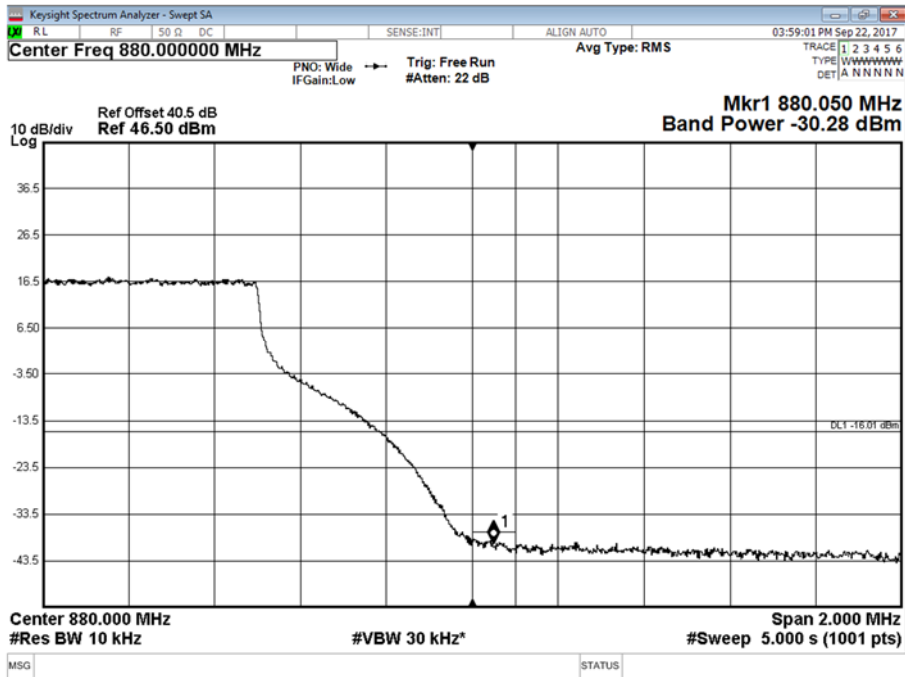
### Antenna A - LTE Modulation QPSK - LTE Carrier Bandwidth 10.0 MHz - Channel Position B





Product Service

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





Product Service

### Configuration B

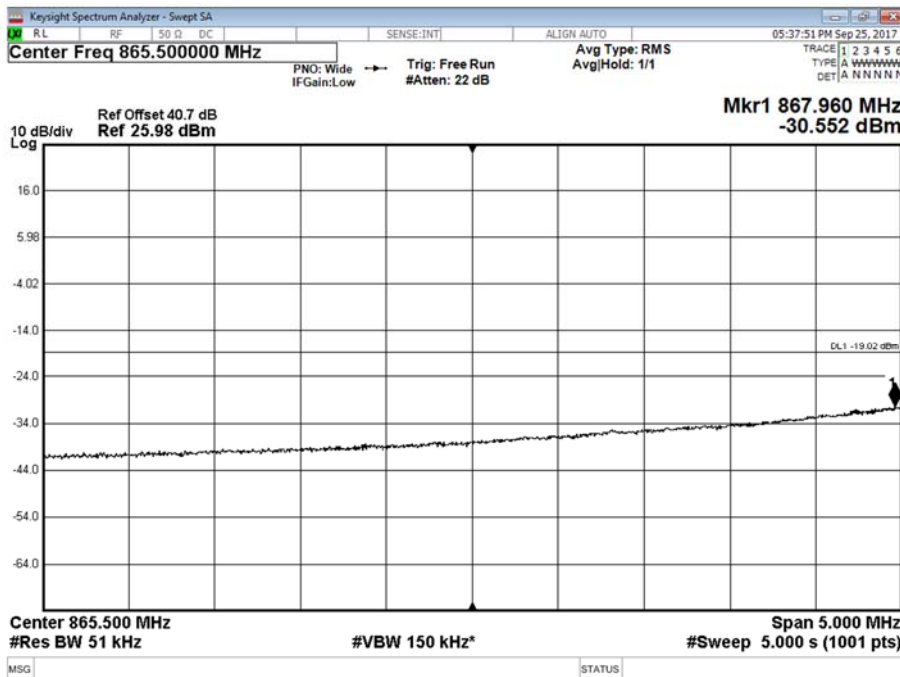
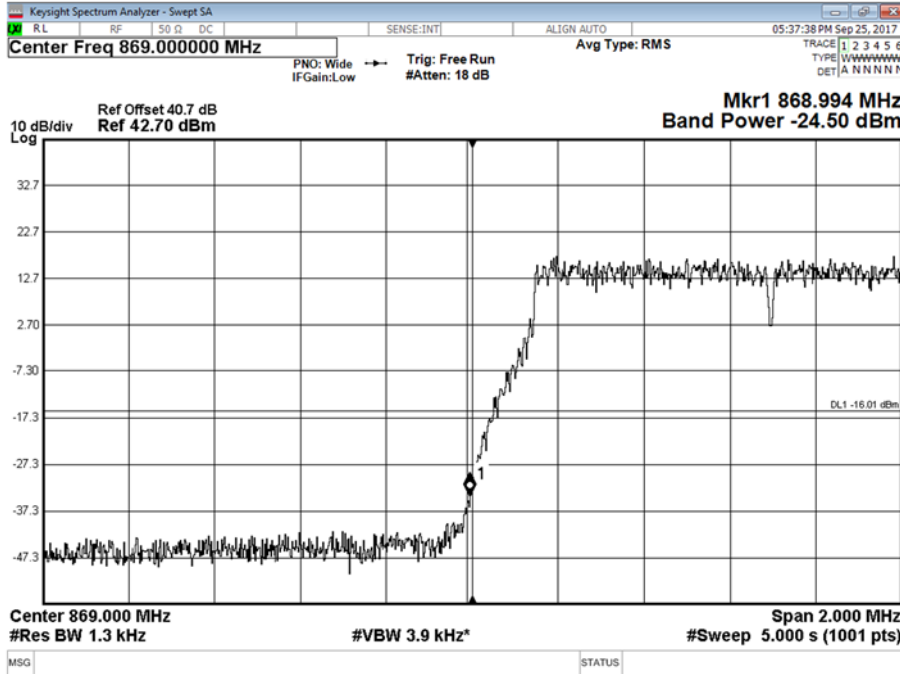
Maximum Output Power 46 dBm

Antenna	LTE Modulation	LTE Carrier Bandwidth	Band Edge (MHz)	
			Channel Position B	Channel Position T
A	QPSK	1.4 MHz	869.7+871.1	877.9+879.3
A	QPSK	3.0 MHz	870.5+873.5	875.5+878.5
A	QPSK	5.0 MHz	871.5+876.5	872.5+877.5



Product Service

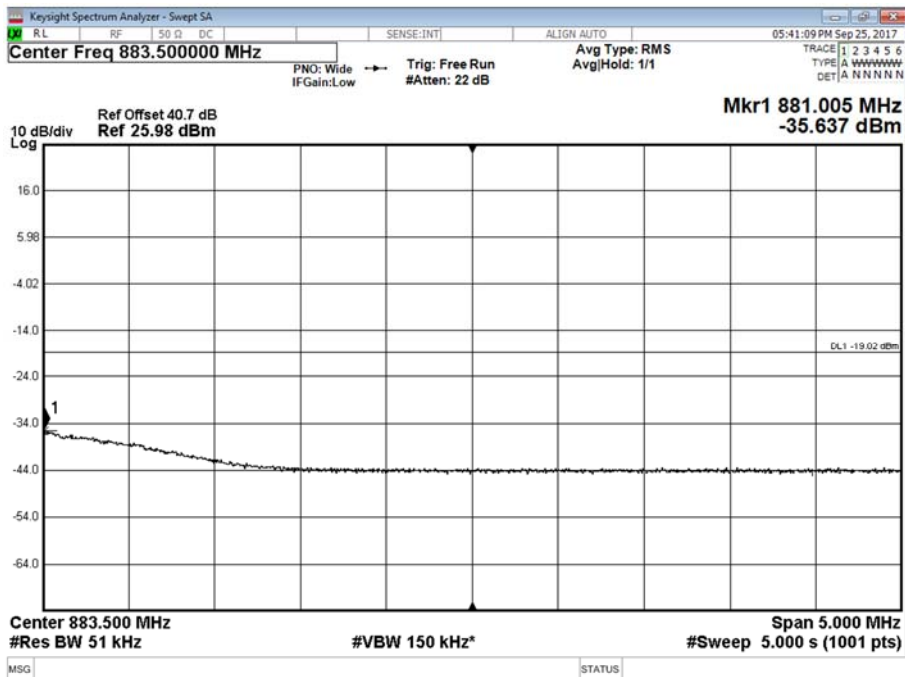
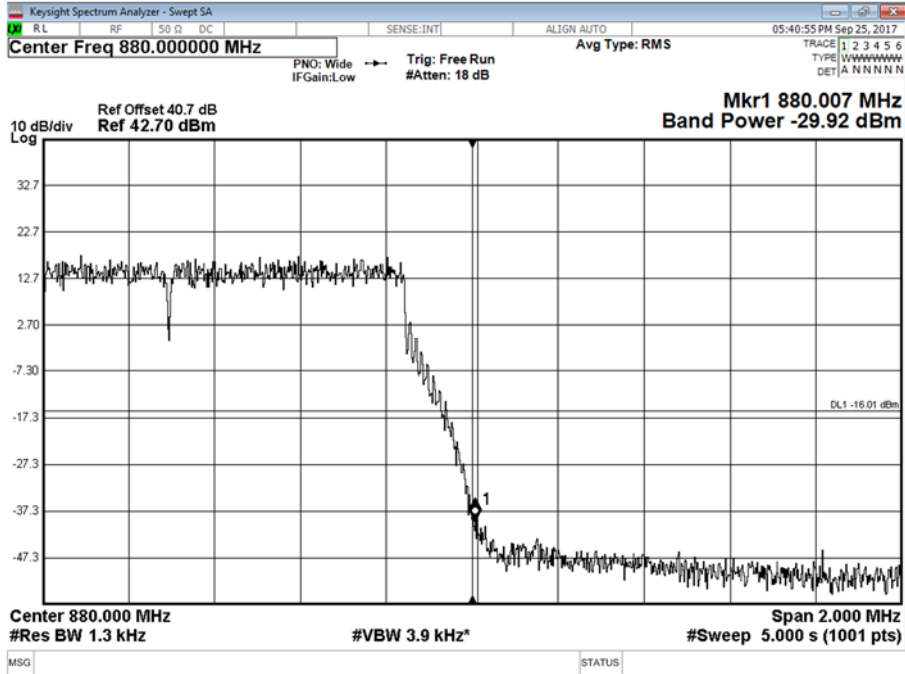
Antenna A - LTE Modulation QPSK - LTE Carrier Bandwidth 1.4 MHz - Channel Position B





Product Service

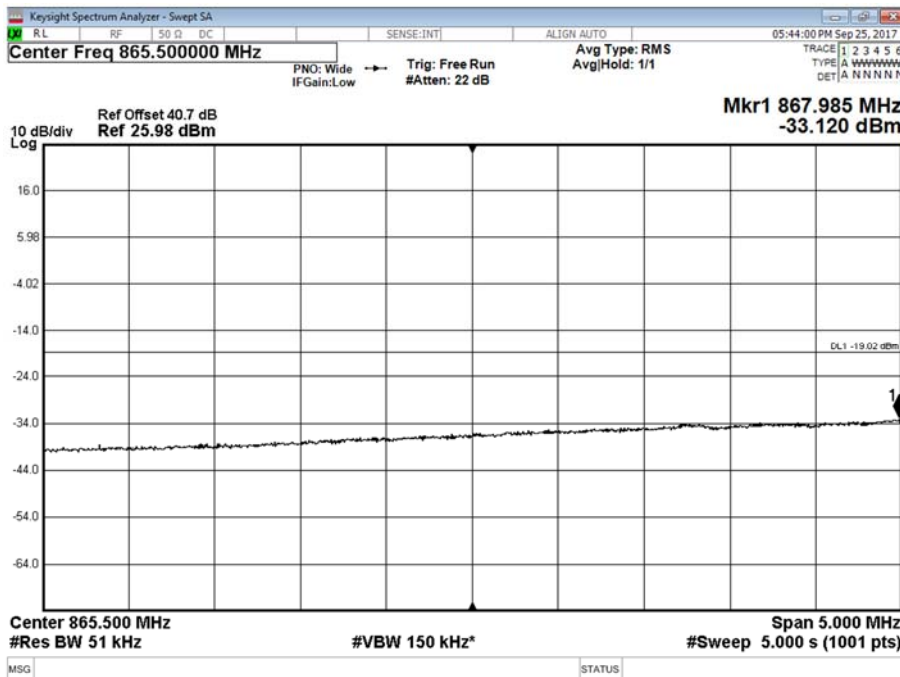
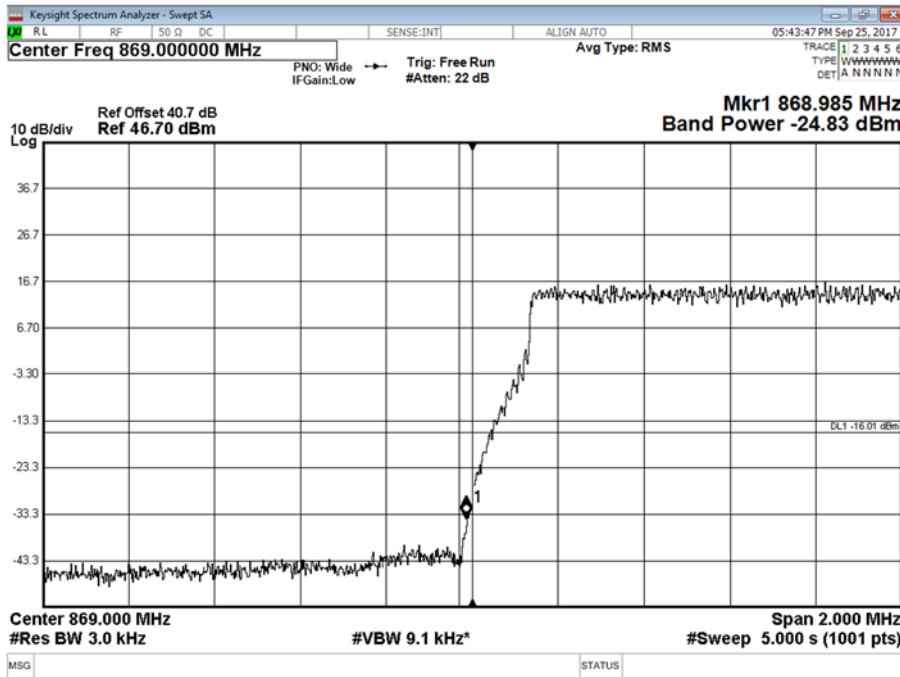
### Antenna A - LTE Modulation QPSK - LTE Carrier Bandwidth 1.4 MHz - Channel Position T





Product Service

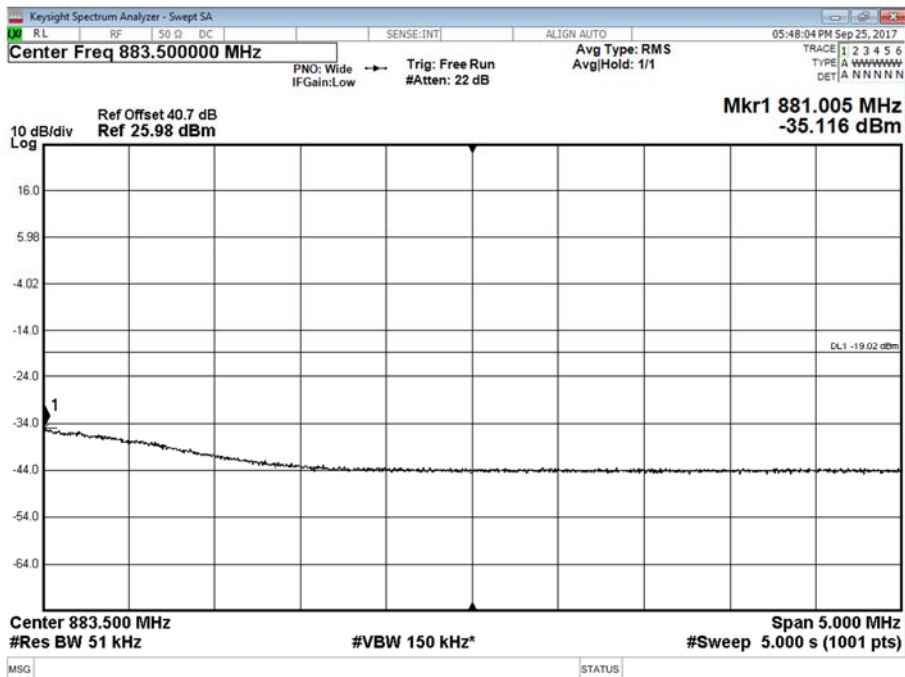
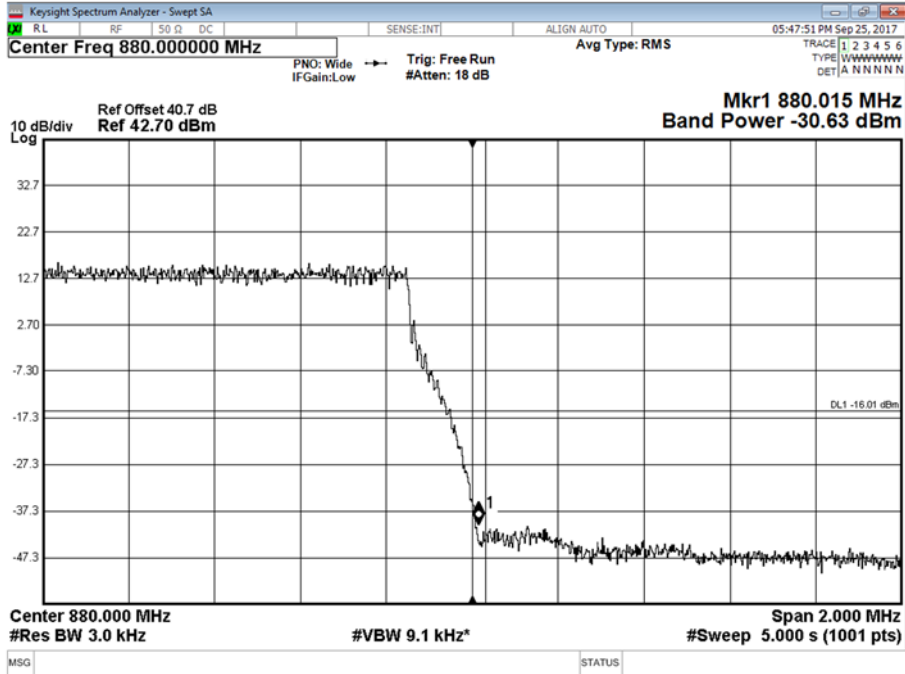
Antenna A - LTE Modulation QPSK - LTE Carrier Bandwidth 3.0 MHz - Channel Position B





Product Service

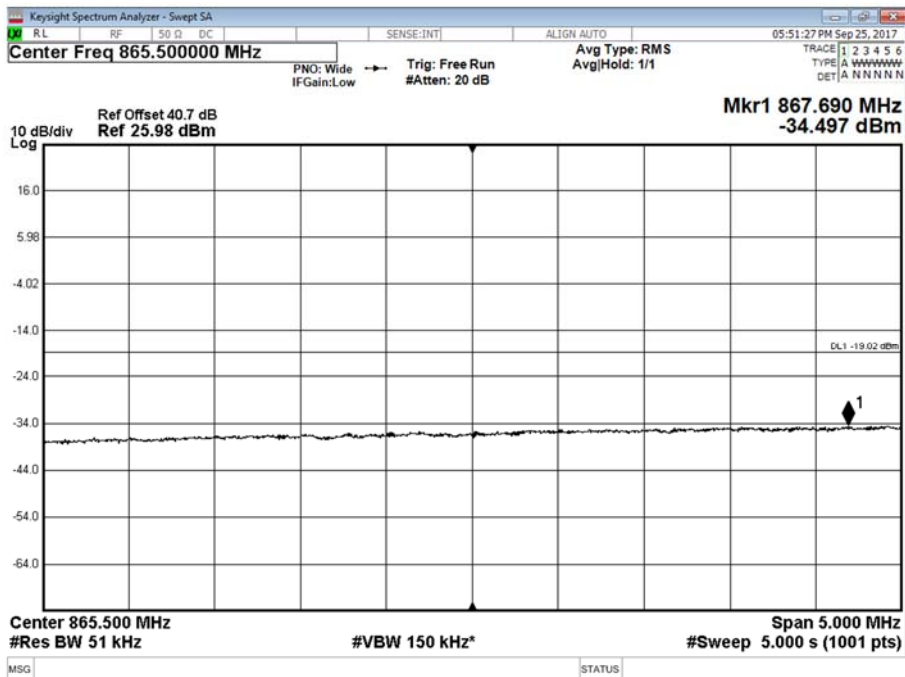
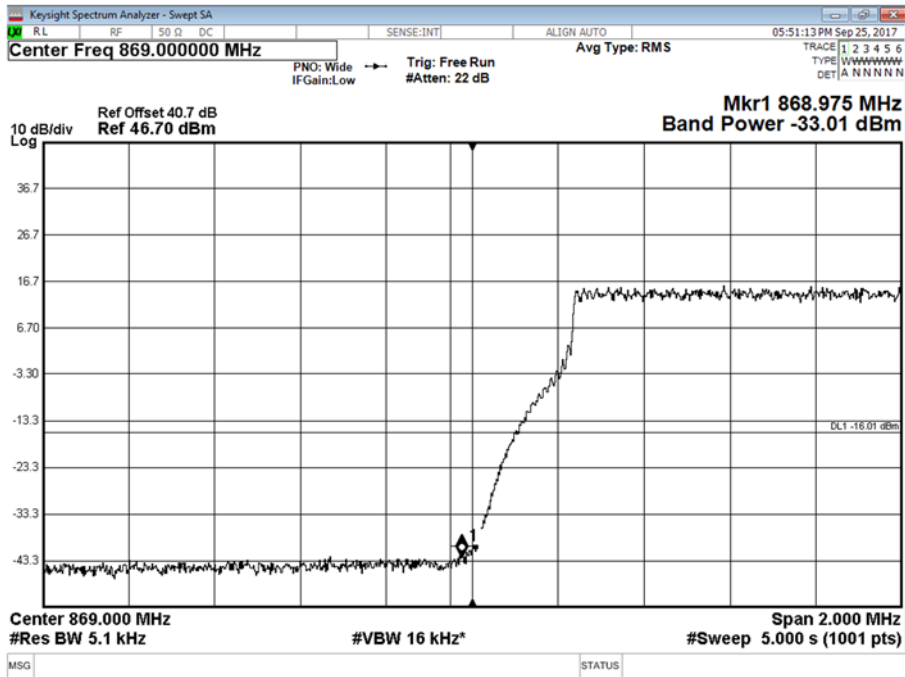
Antenna A - LTE Modulation QPSK - LTE Carrier Bandwidth 3.0 MHz - Channel Position T





Product Service

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

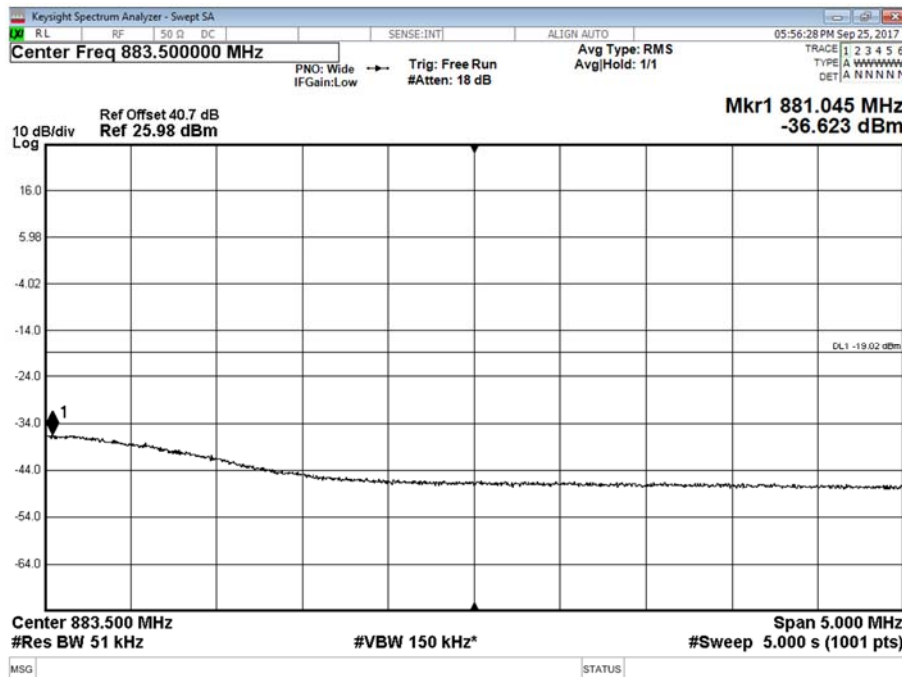
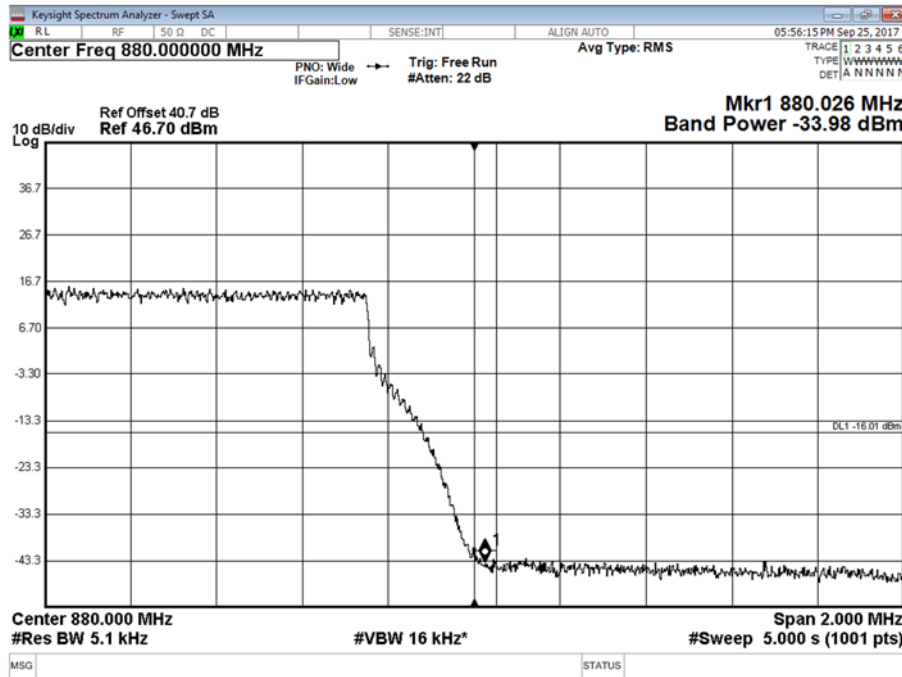






Product Service

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



Configuration C

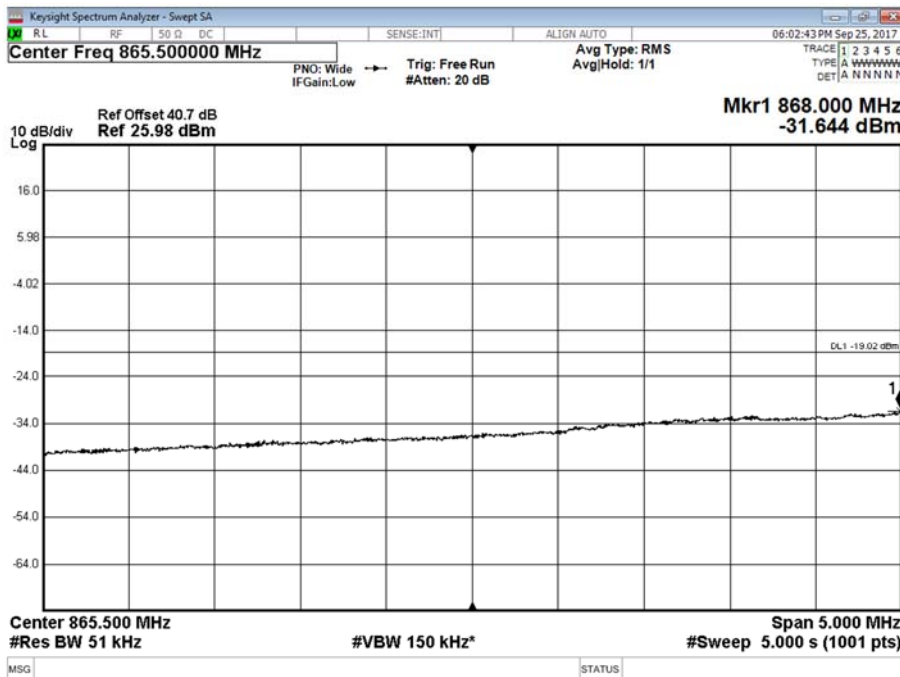
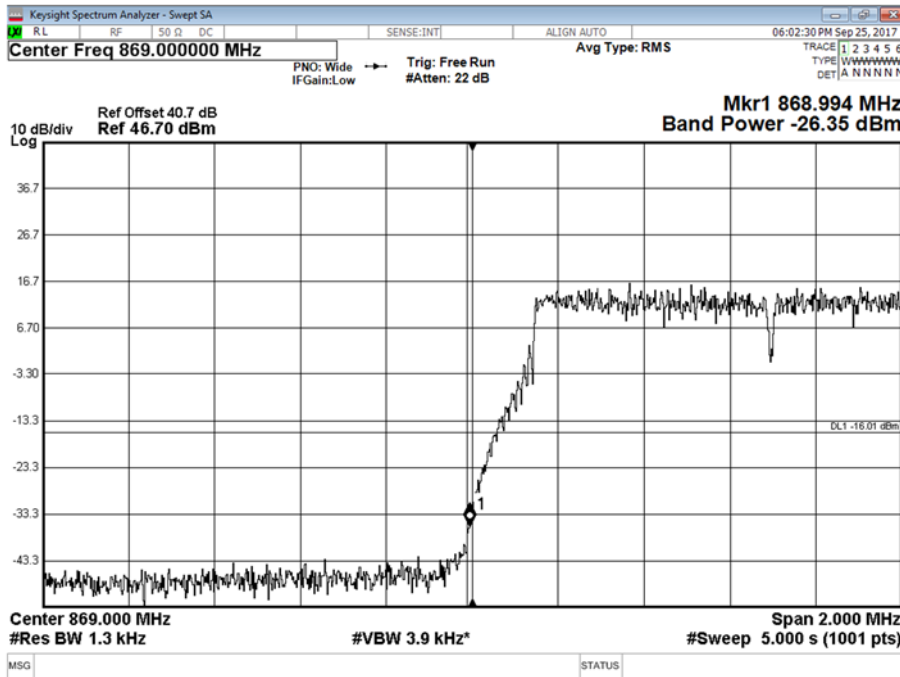
Maximum Output Power 46 dBm

Antenna	LTE Modulation	LTE Carrier Bandwidth	Band Edge (MHz)	
			Channel Position B	Channel Position T
A	QPSK	1.4 MHz	869.7+871.1+872.5	876.5+877.9+879.3
A	QPSK	3.0 MHz	870.5+873.5+876.5	871.5+874.5+877.5



Product Service

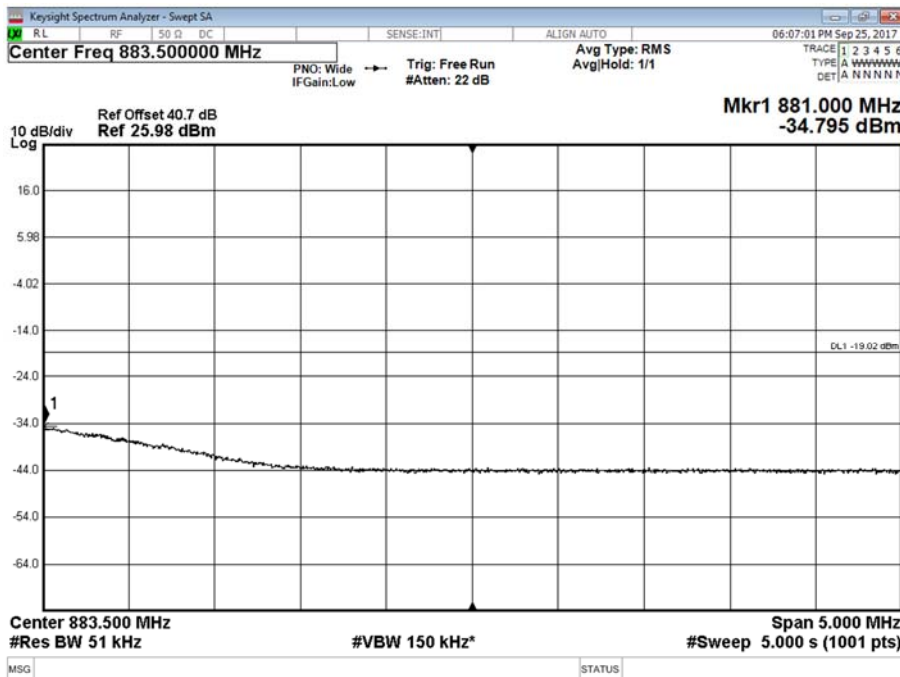
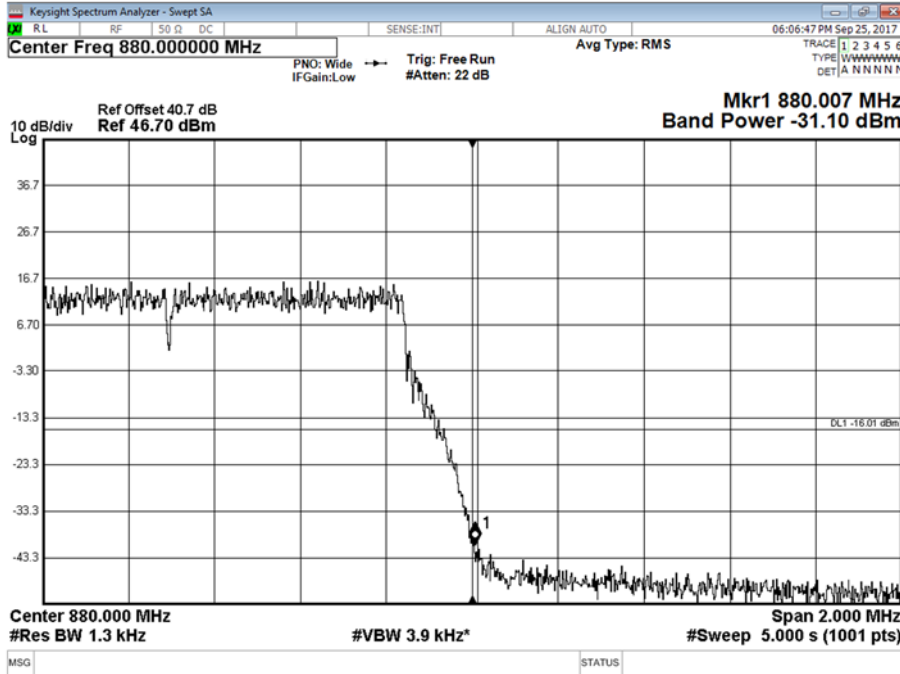
### Antenna A - LTE Modulation QPSK - LTE Carrier Bandwidth 1.4 MHz - Channel Position B





Product Service

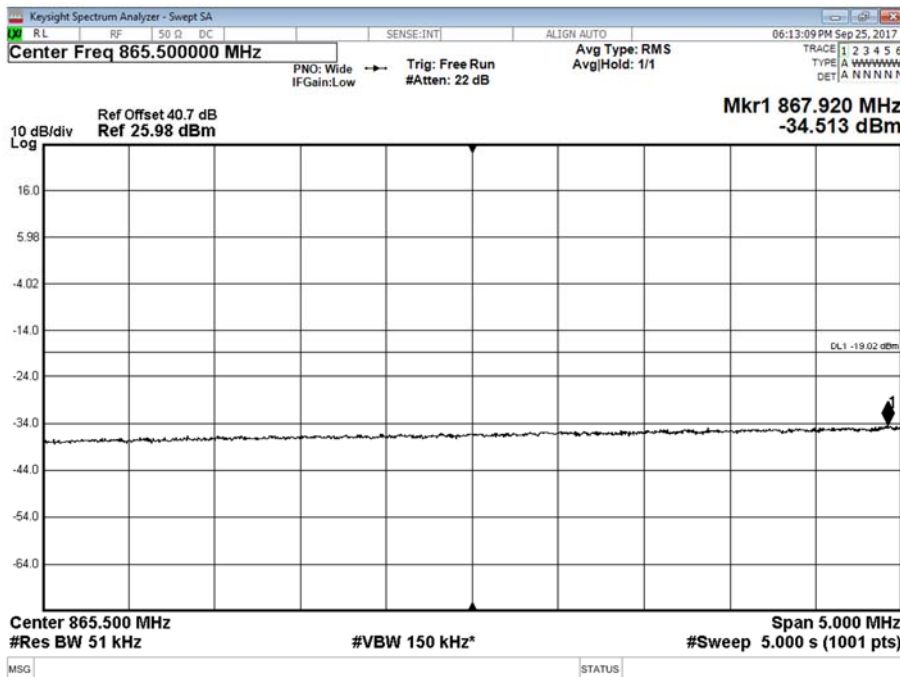
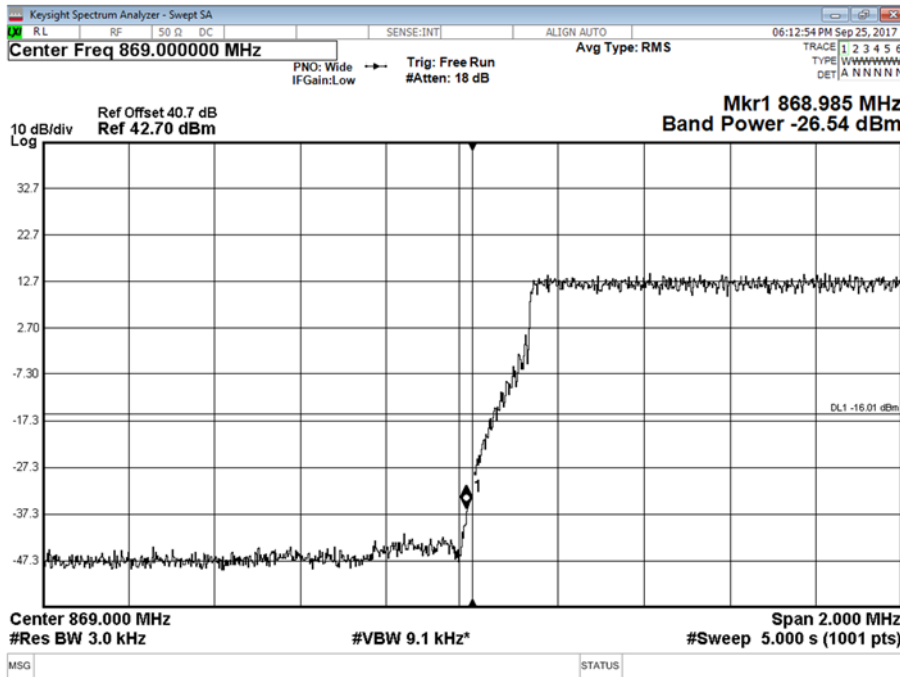
### Antenna A - LTE Modulation QPSK - LTE Carrier Bandwidth 1.4 MHz - Channel Position T





Product Service

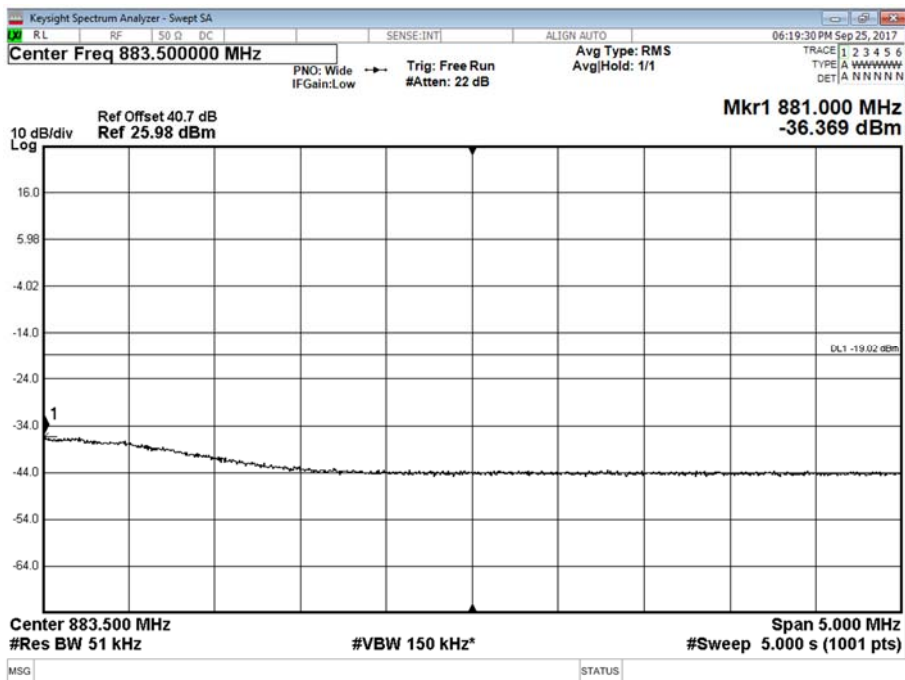
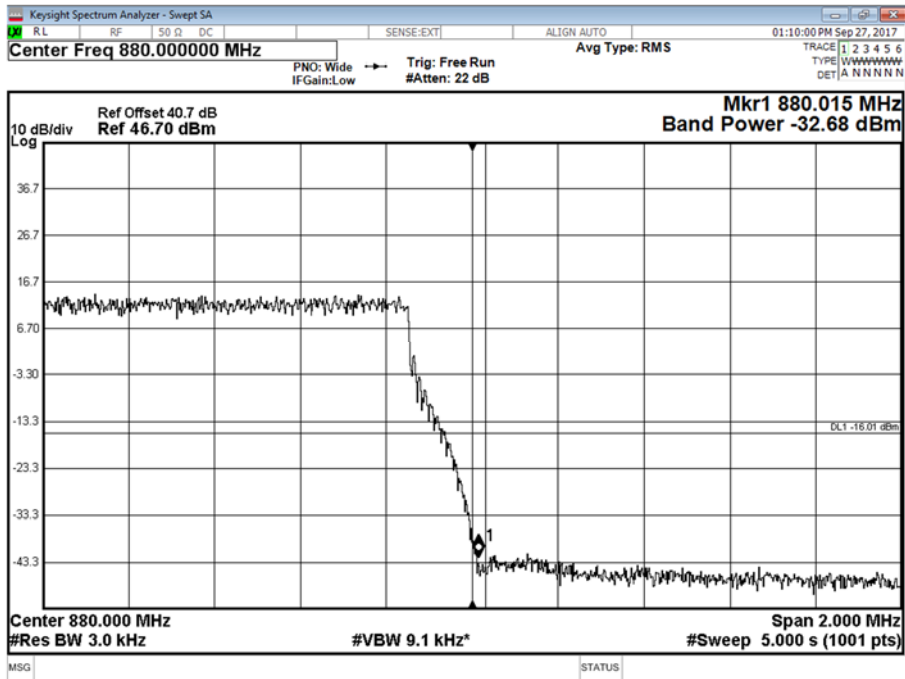
Antenna A - LTE Modulation QPSK - LTE Carrier Bandwidth 3.0 MHz - Channel Position B





Product Service

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



Limit	-13 dBm
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