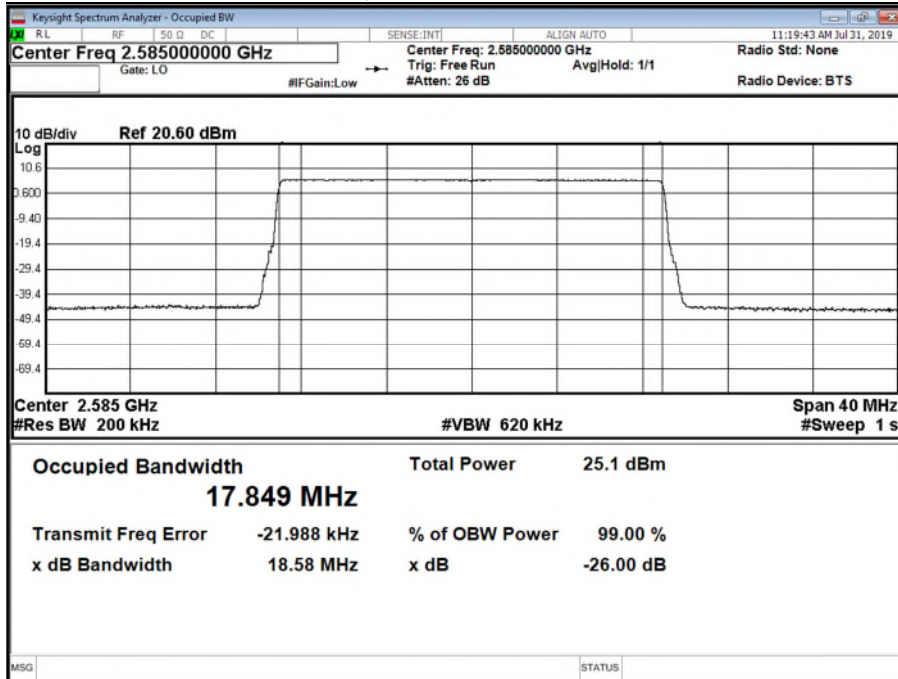


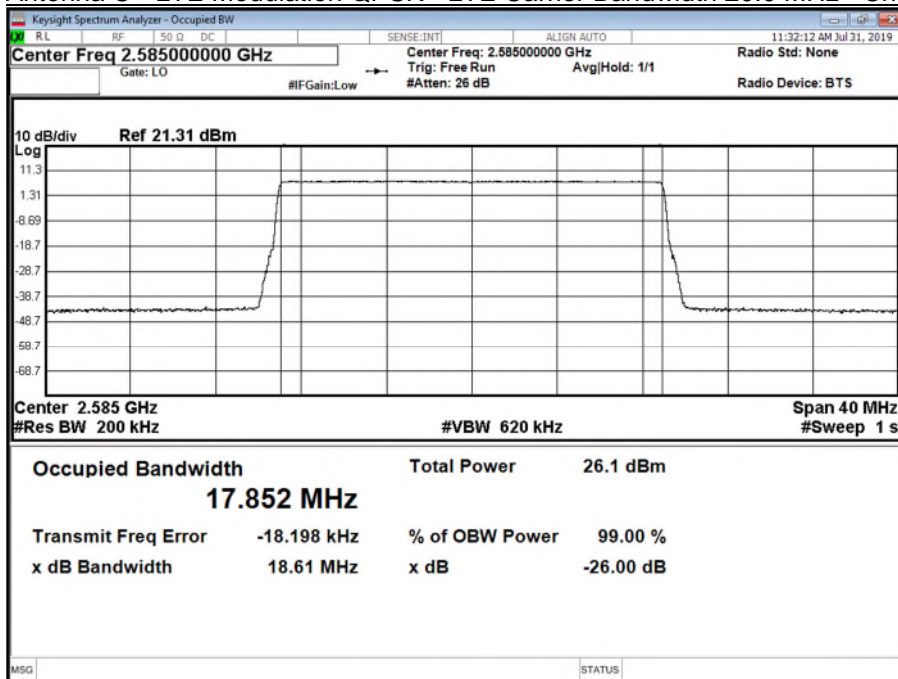


Product Service

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



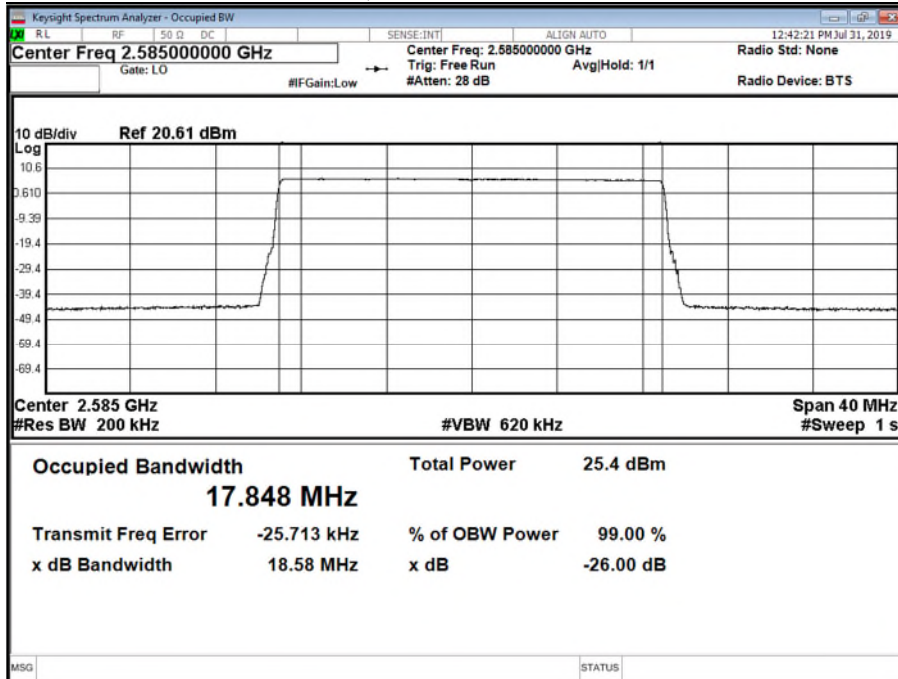
Antenna C - LTE Modulation QPSK - LTE Carrier Bandwidth 20.0 MHz - Channel Position M



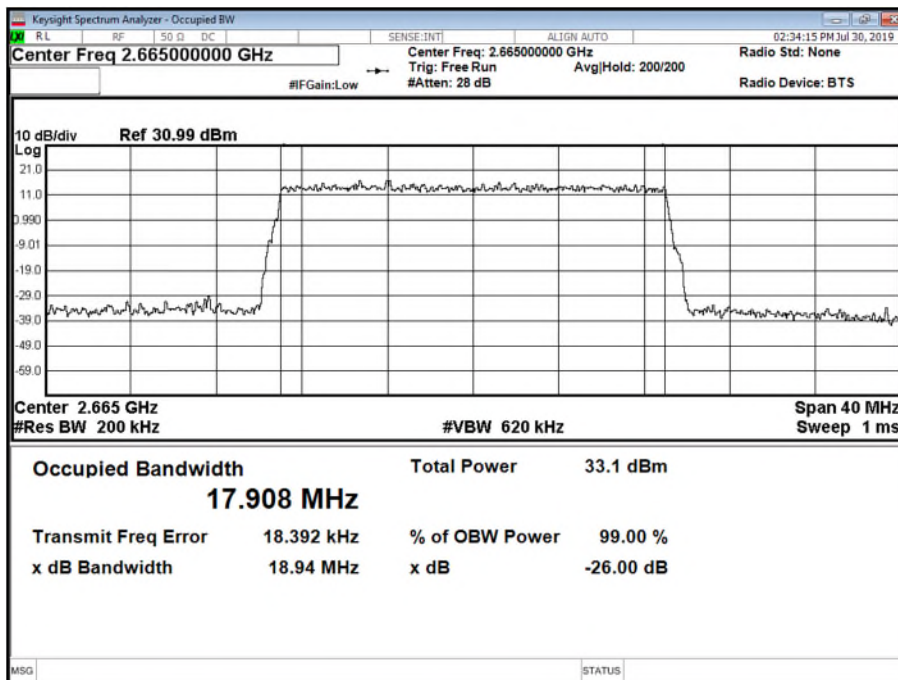


Product Service

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



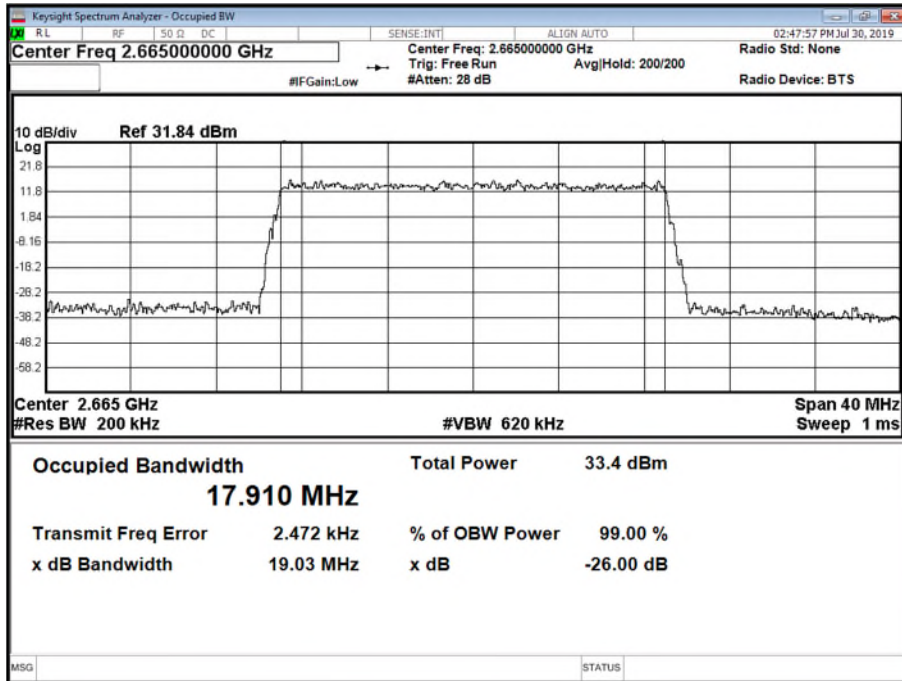
Antenna A - LTE Modulation QPSK - LTE Carrier Bandwidth 20.0 MHz - Channel Position T



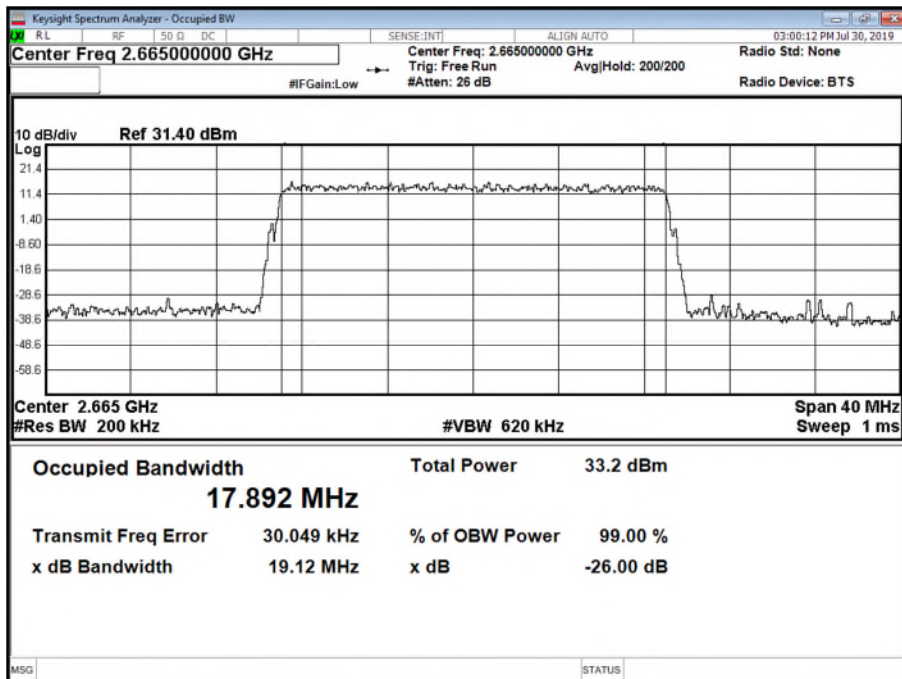


Product Service

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



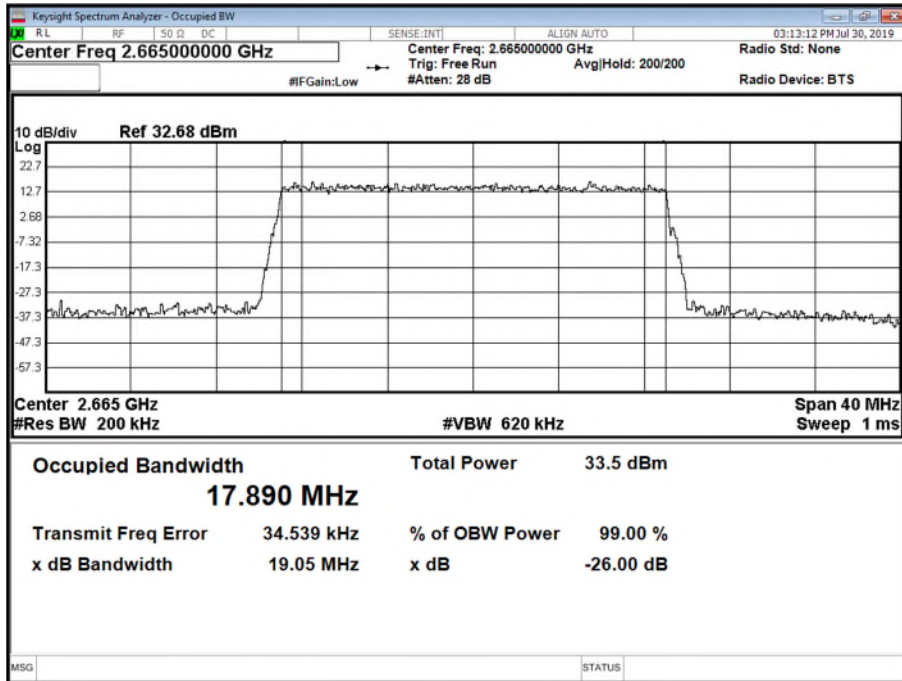
Antenna C - LTE Modulation QPSK - LTE Carrier Bandwidth 20.0 MHz - Channel Position T





Product Service

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



Configuration B

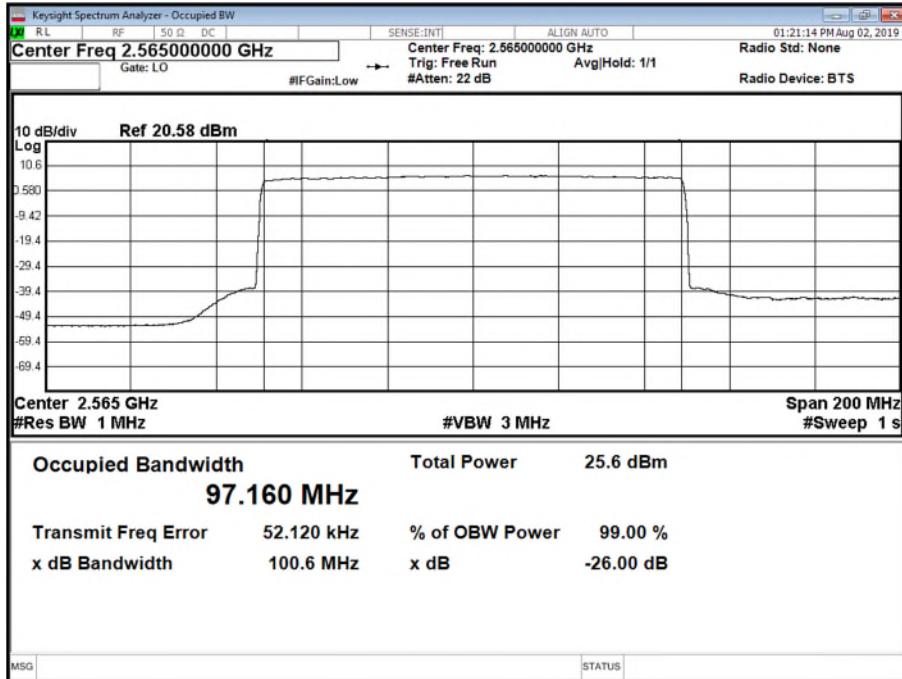
Maximum Output Power 26 dBm

Antenna	NR Modulation	NR 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
A	QPSK	100.0 MHz 60 kHz SCS	97,159.73	100,567.83	97,360	100,600	97,311.64	100,618.01
B	QPSK	100.0 MHz 60 kHz SCS	97,227.94	100,574.87	97,306	100,600	97,279.03	100,582.83
C	QPSK	100.0 MHz 60 kHz SCS	97,283.19	100,606.10	97,312	100,600	97,347.58	100,605.37
D	QPSK	100.0 MHz 60 kHz SCS	97,297.26	100,620.99	97,404	100,700	97,307.78	100,616.94
A	QPSK	20.0 MHz 30 kHz SCS	18,184.68	19,148.88	18,191	19,190	18,182.81	19,177.47
B	QPSK	20.0 MHz 30 kHz SCS	18,186.72	19,251.33	18,191	19,240	18,188.45	19,156.14
C	QPSK	20.0 MHz 30 kHz SCS	18,187.06	19,265.21	18,193	19,280	18,192.96	19,274.87
D	QPSK	20.0 MHz 30 kHz SCS	18,186.89	19,114.52	18,187	19,110	18,184.73	19,110.00

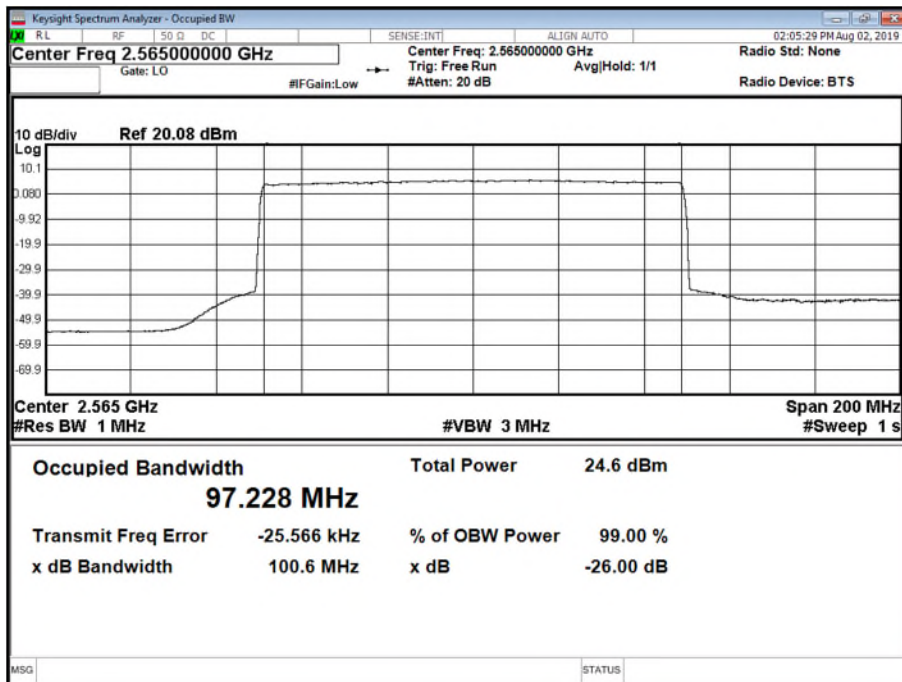


Product Service

Antenna A - NR Modulation QPSK - NR Carrier Bandwidth 100.0 MHz 60 kHz SCS - Channel Position B



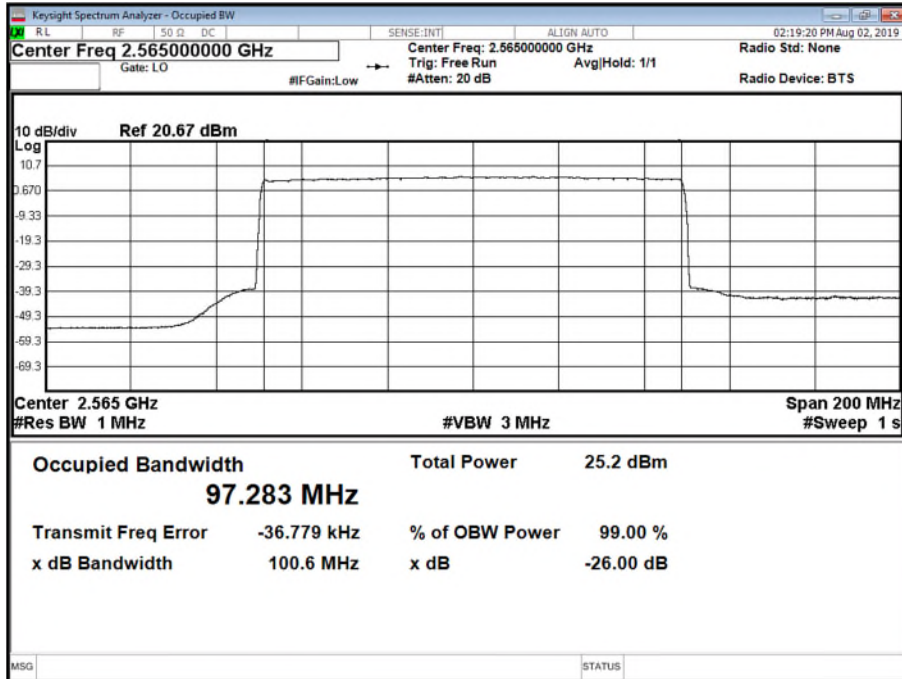
Antenna B - NR Modulation QPSK - NR Carrier Bandwidth 100.0 MHz 60 kHz SCS - Channel Position B



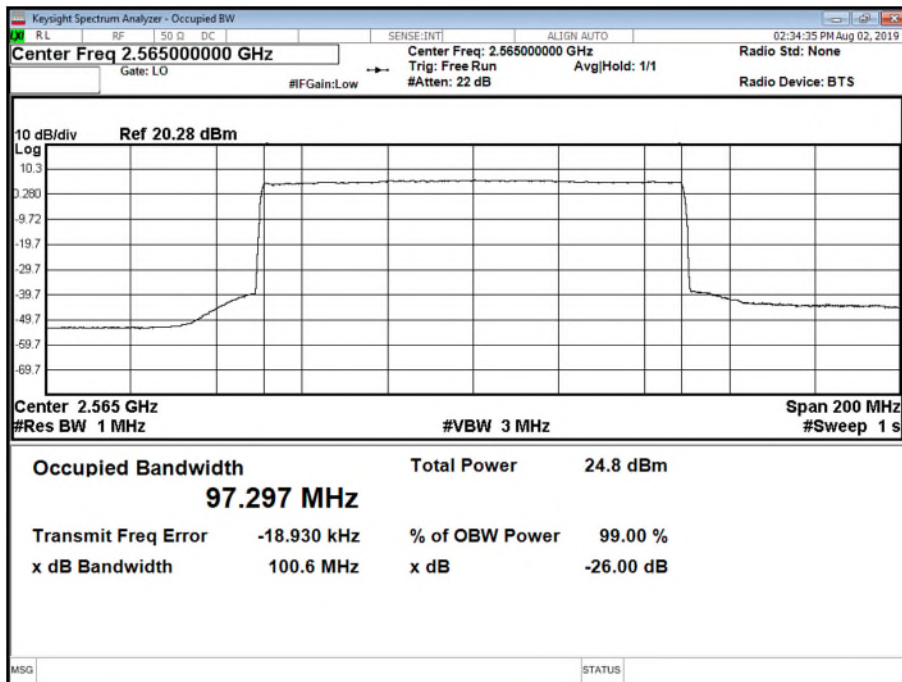


Product Service

Antenna C - NR Modulation QPSK - NR Carrier Bandwidth 100.0 MHz 60 kHz SCS - Channel Position B



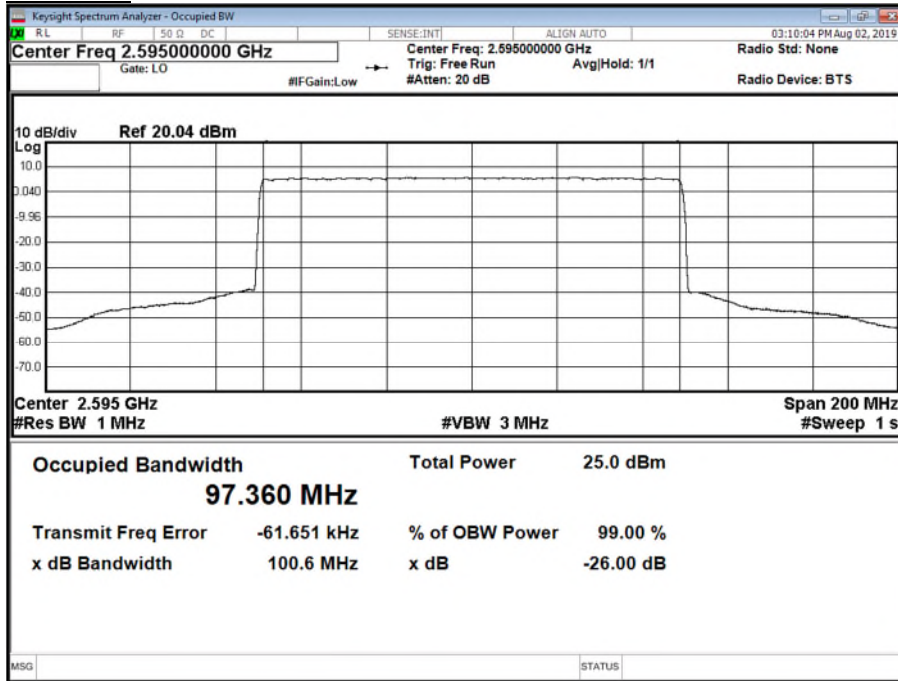
Antenna D - NR Modulation QPSK - NR Carrier Bandwidth 100.0 MHz 60 kHz SCS - Channel Position B



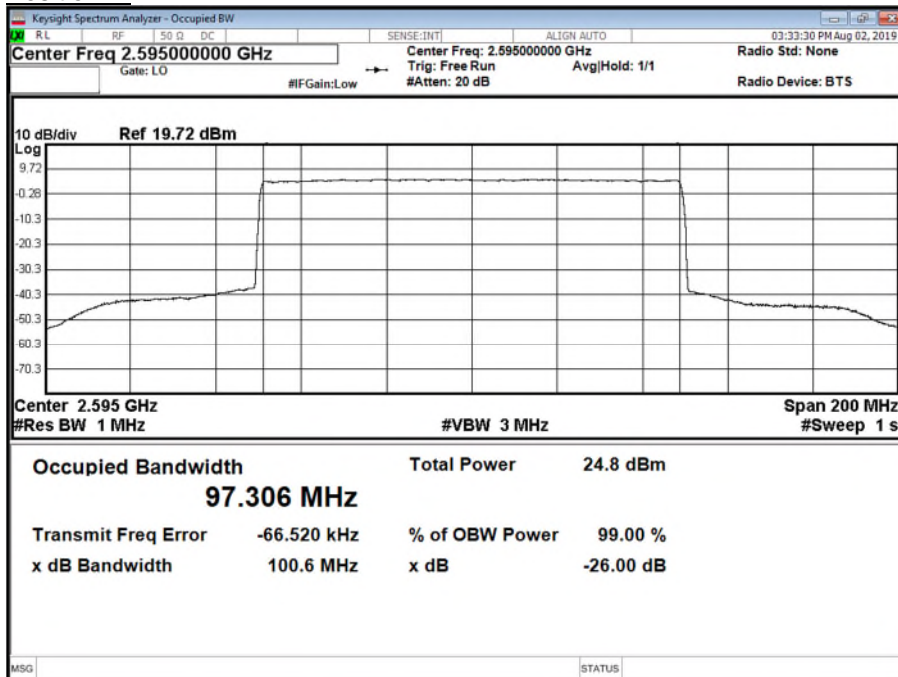


Product Service

Antenna A - NR Modulation QPSK - NR Carrier Bandwidth 100.0 MHz 60 kHz SCS - Channel Position M



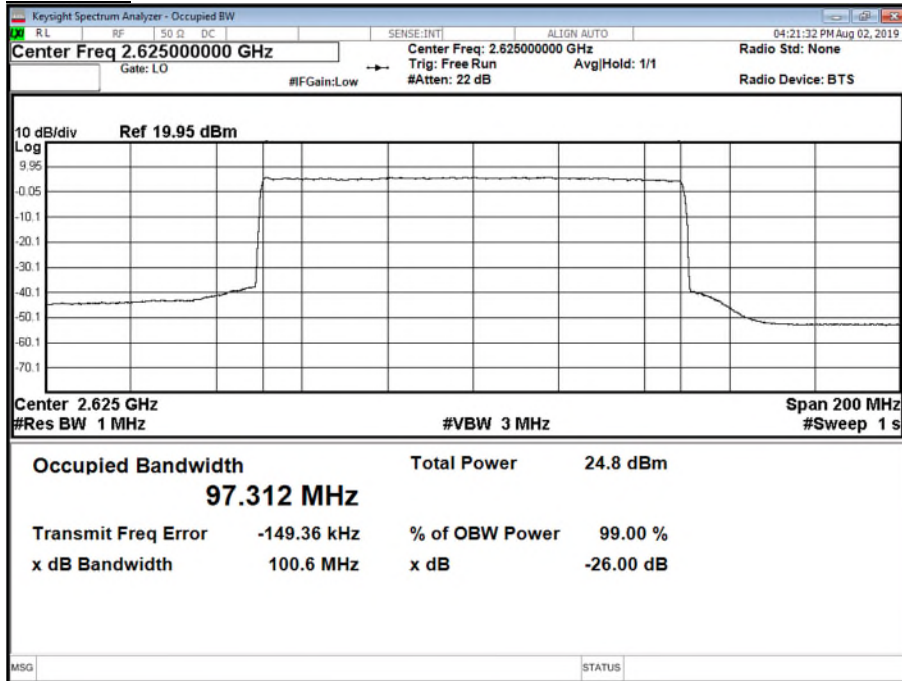
Antenna B - NR Modulation QPSK - NR Carrier Bandwidth 100.0 MHz 60 kHz SCS - Channel Position M



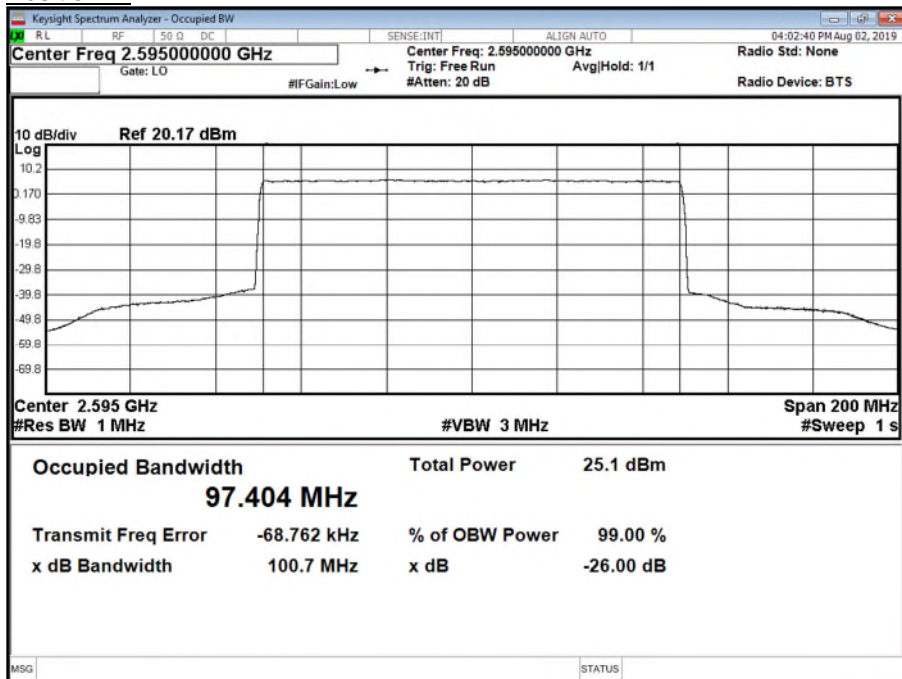


Product Service

Antenna C - NR Modulation QPSK - NR Carrier Bandwidth 100.0 MHz 60 kHz SCS - Channel Position M



Antenna D - NR Modulation QPSK - NR Carrier Bandwidth 100.0 MHz 60 kHz SCS - Channel Position M

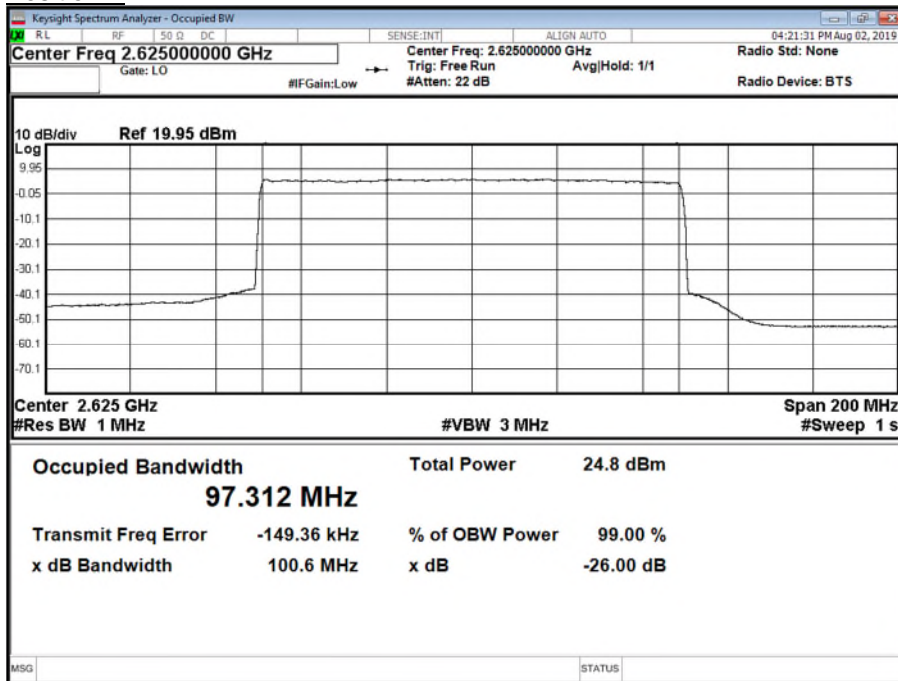






Product Service

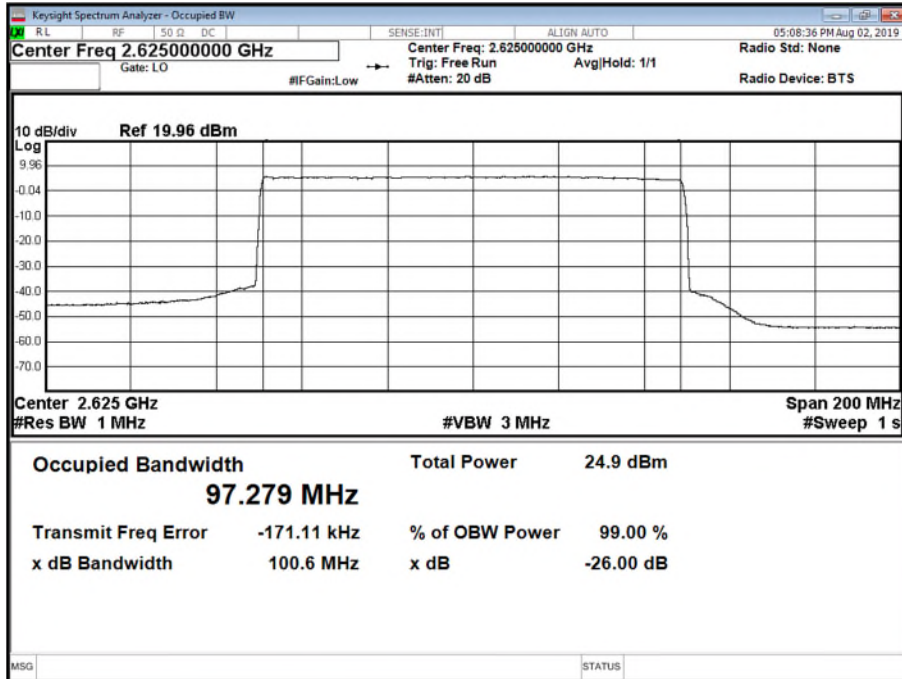
Antenna A - NR Modulation QPSK - NR Carrier Bandwidth 100.0 MHz 60 kHz SCS - Channel Position T



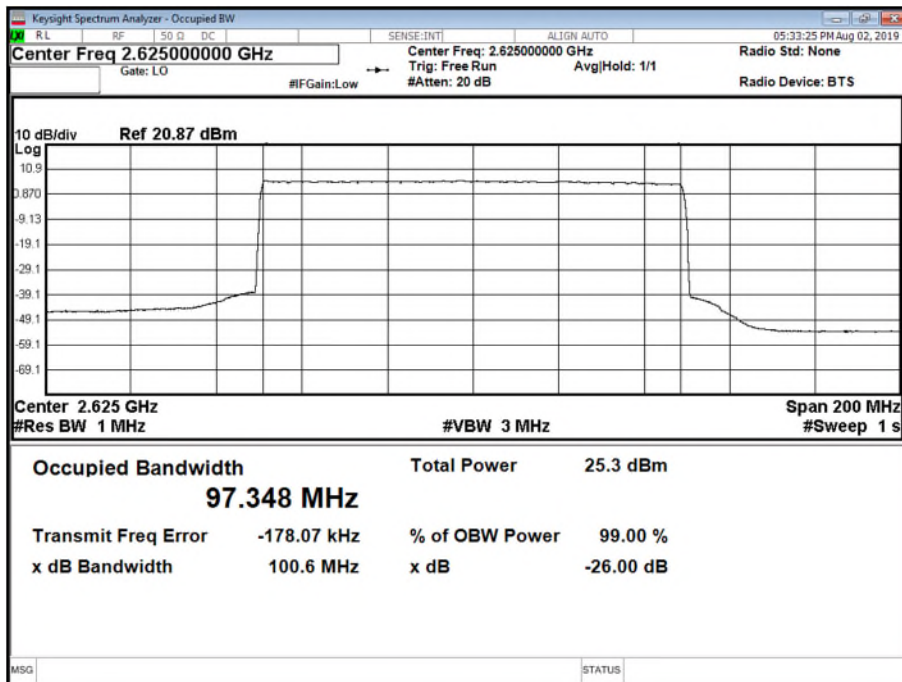


Product Service

Antenna B - NR Modulation QPSK - NR Carrier Bandwidth 100.0 MHz 60 kHz SCS - Channel Position T



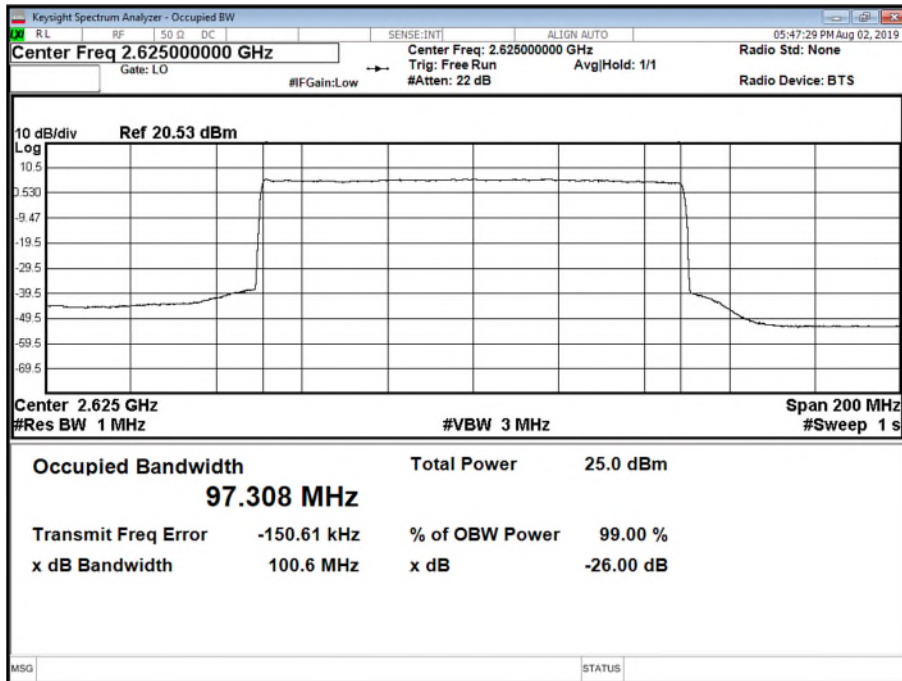
Antenna C - NR Modulation QPSK - NR Carrier Bandwidth 100.0 MHz 60 kHz SCS - Channel Position T



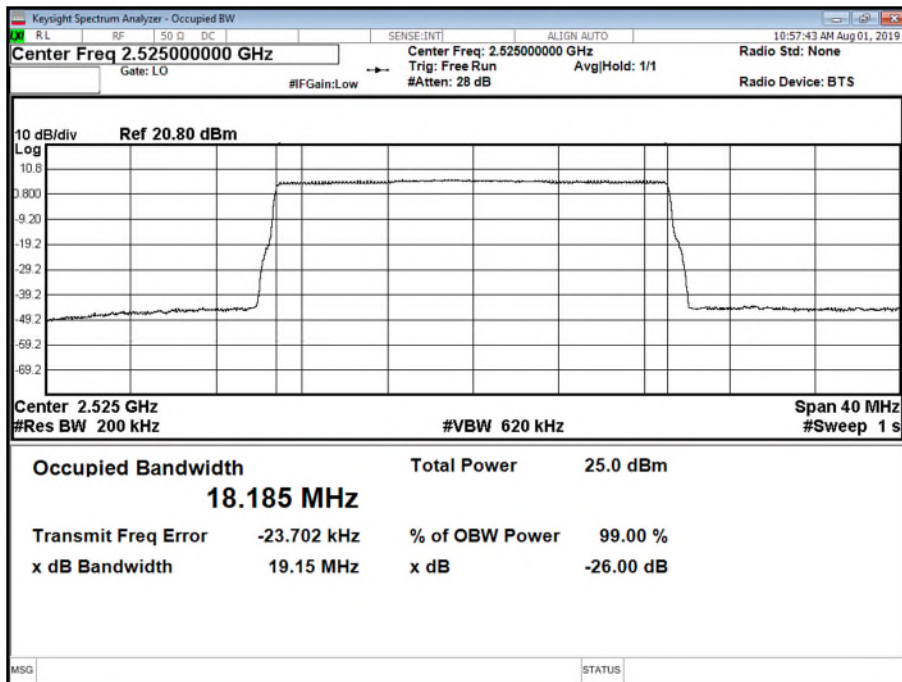


Product Service

Antenna D - NR Modulation QPSK - NR Carrier Bandwidth 100.0 MHz 60 kHz SCS - Channel Position T



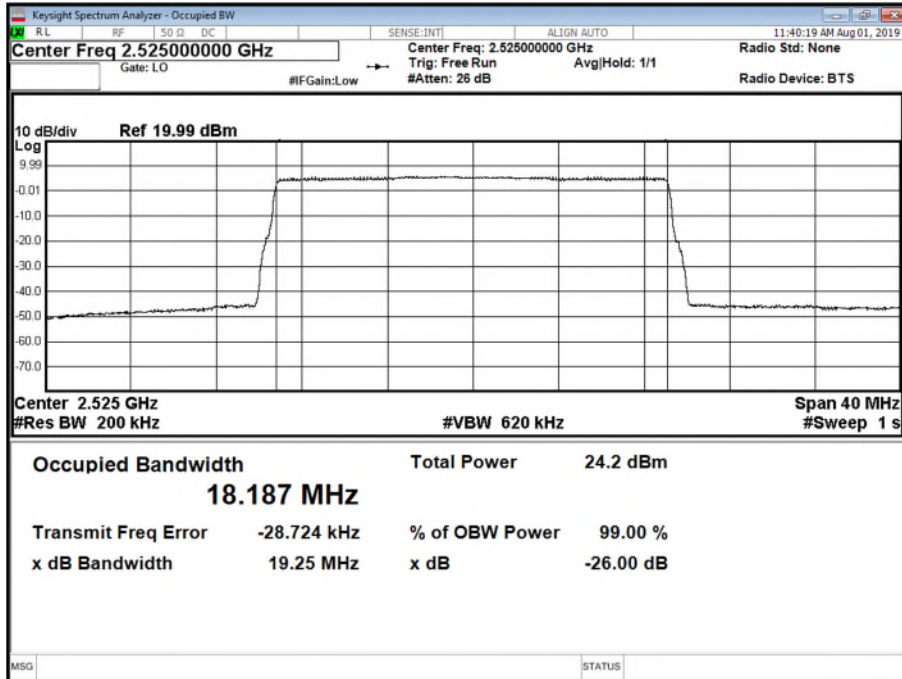
Antenna A - NR Modulation QPSK - NR Carrier Bandwidth 20.0 MHz 30 kHz SCS - Channel Position B



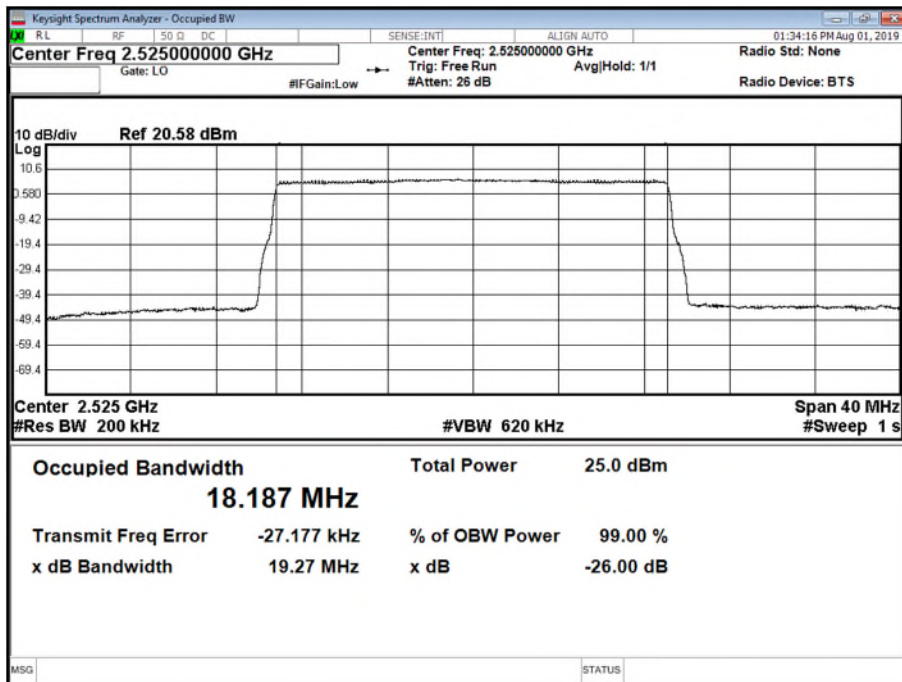


Product Service

Antenna B - NR Modulation QPSK - NR Carrier Bandwidth 20.0 MHz 30 kHz SCS - Channel Position B



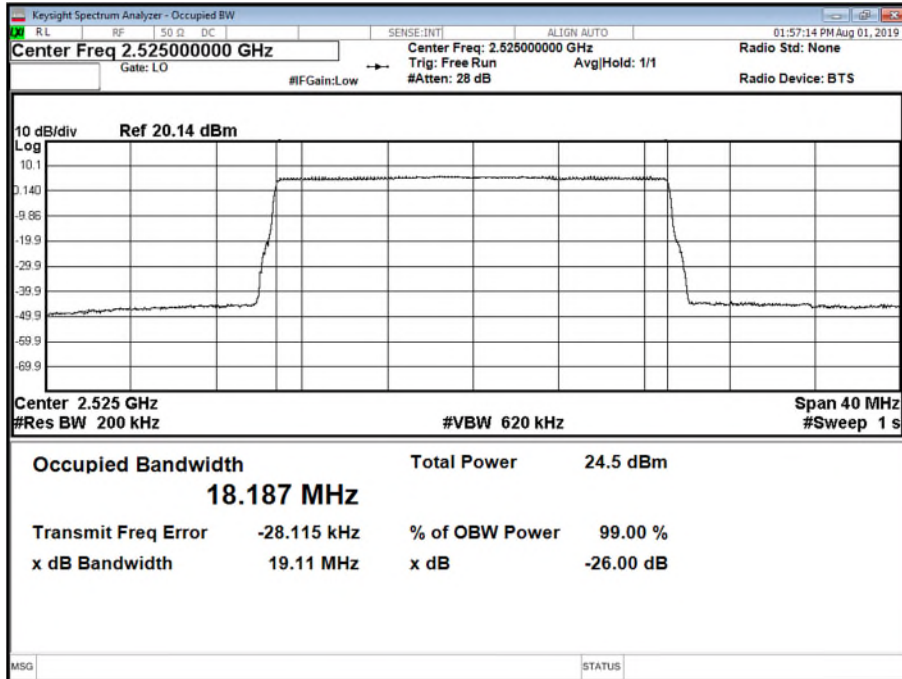
Antenna C - NR Modulation QPSK - NR Carrier Bandwidth 20.0 MHz 30 kHz SCS - Channel Position B



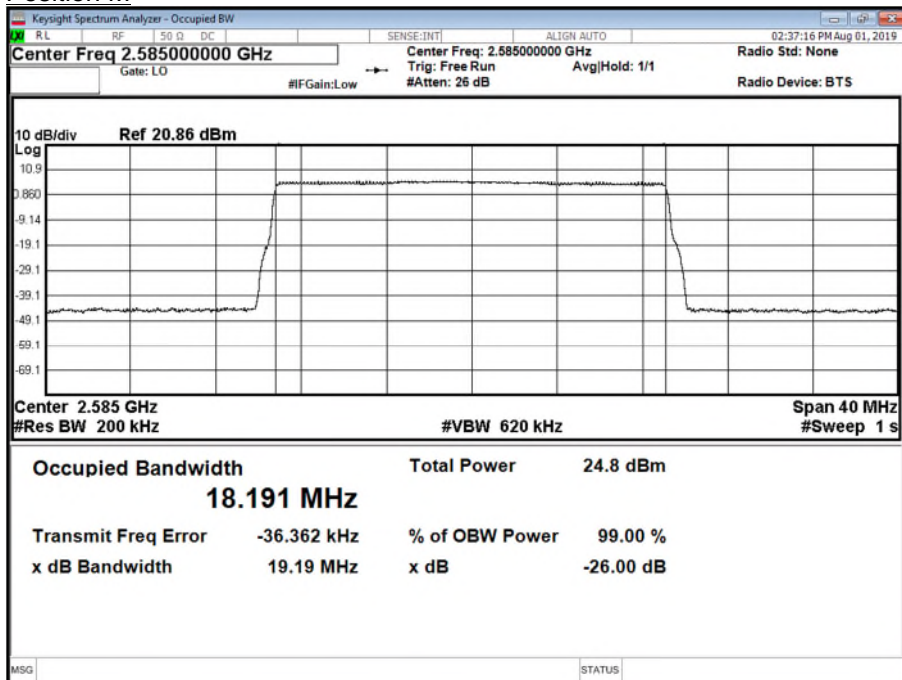


Product Service

Antenna D - NR Modulation QPSK - NR Carrier Bandwidth 20.0 MHz 30 kHz SCS - Channel Position B



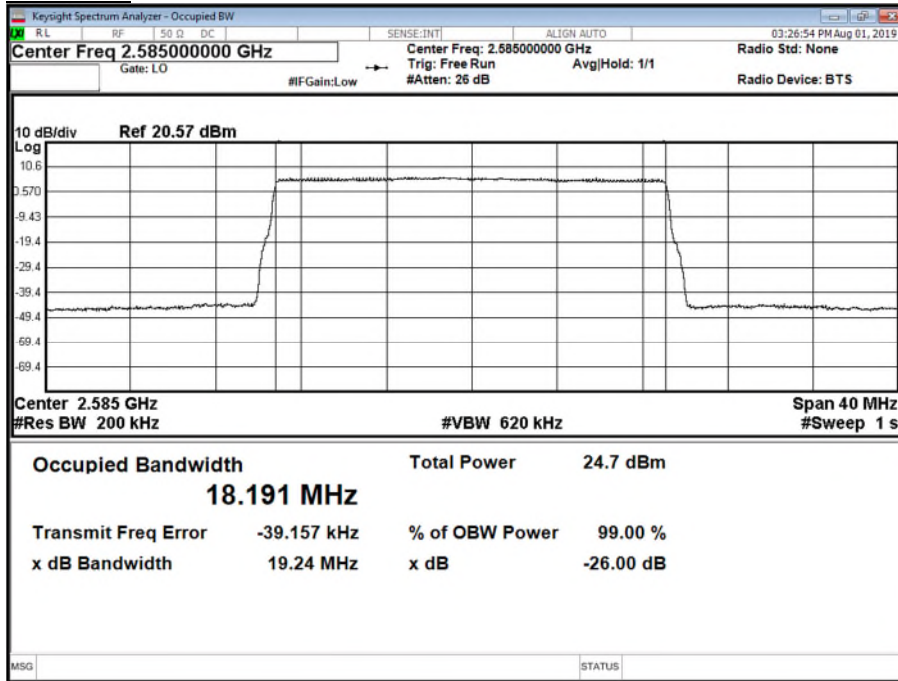
Antenna A - NR Modulation QPSK - NR Carrier Bandwidth 20.0 MHz 30 kHz SCS - Channel Position M



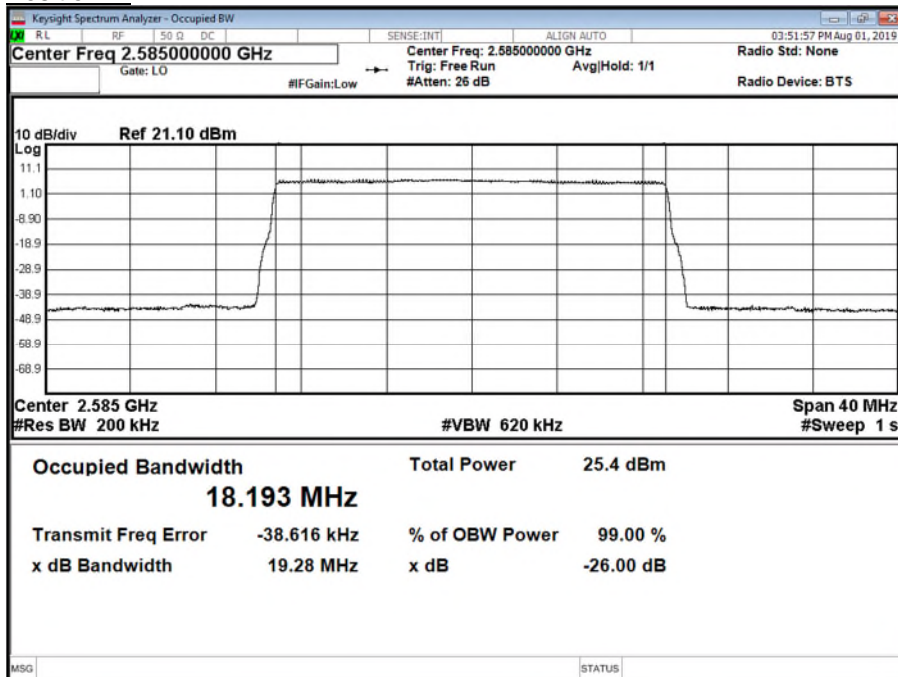


Product Service

Antenna B - NR Modulation QPSK - NR Carrier Bandwidth 20.0 MHz 30 kHz SCS - Channel Position M



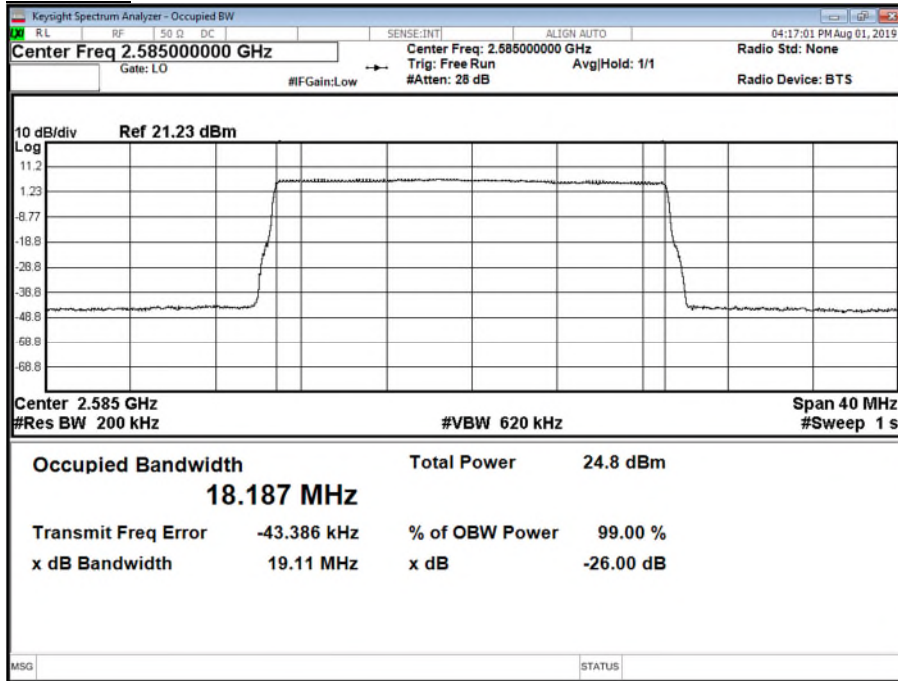
Antenna C - NR Modulation QPSK - NR Carrier Bandwidth 20.0 MHz 30 kHz SCS - Channel Position M





Product Service

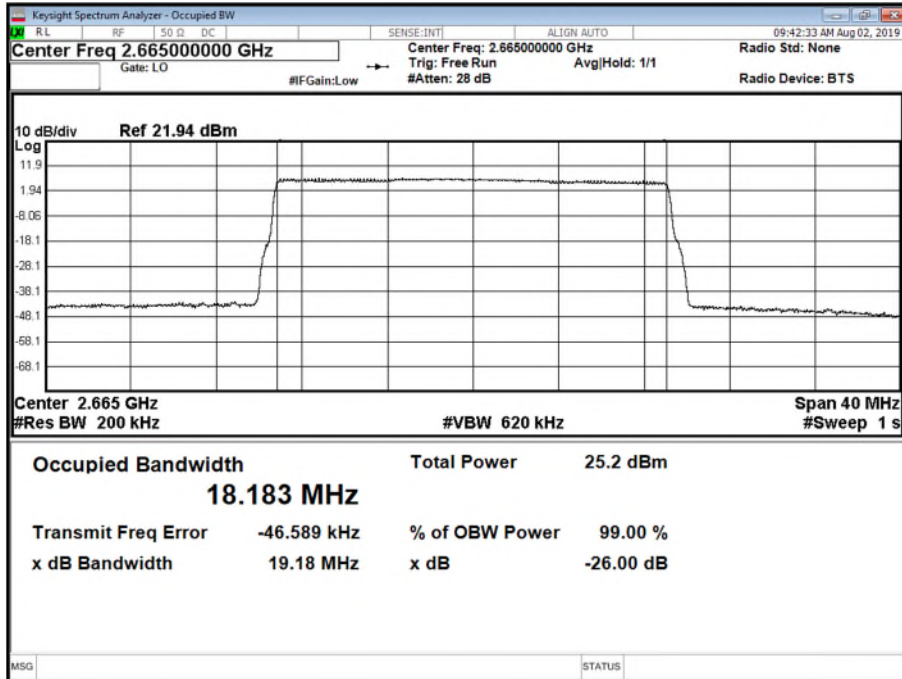
Antenna D - NR Modulation QPSK - NR Carrier Bandwidth 20.0 MHz 30 kHz SCS - Channel Position M



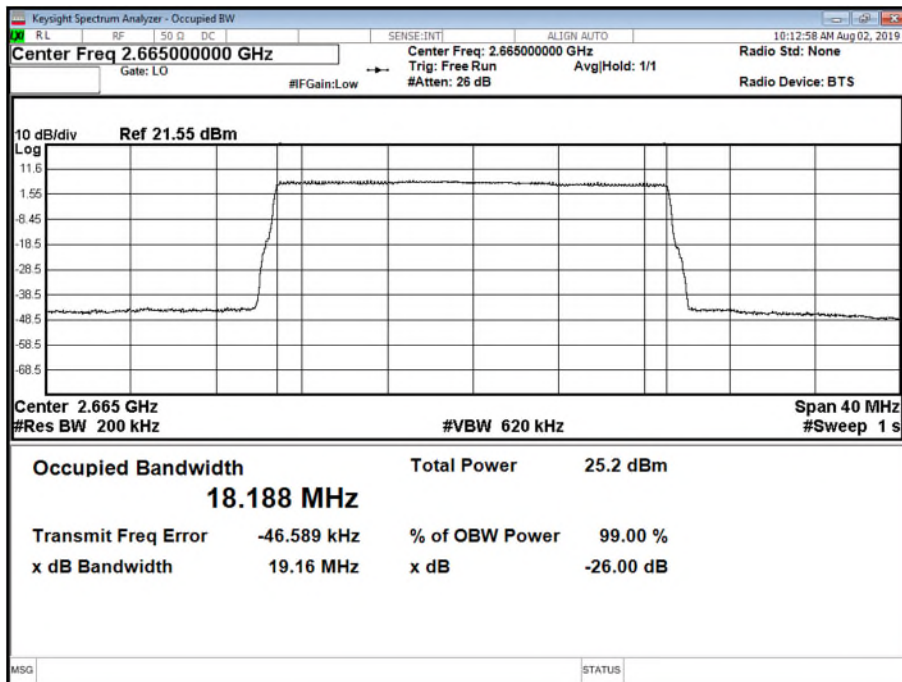


Product Service

Antenna A - NR Modulation QPSK - NR Carrier Bandwidth 20.0 MHz 30 kHz SCS - Channel Position T



Antenna B - NR Modulation QPSK - NR Carrier Bandwidth 20.0 MHz 30 kHz SCS - Channel Position T

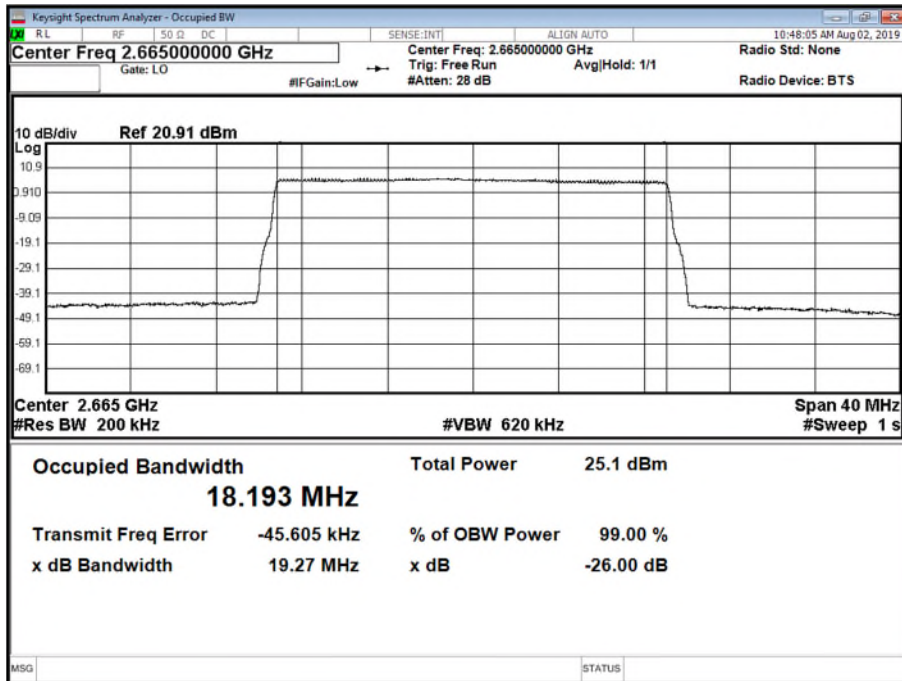




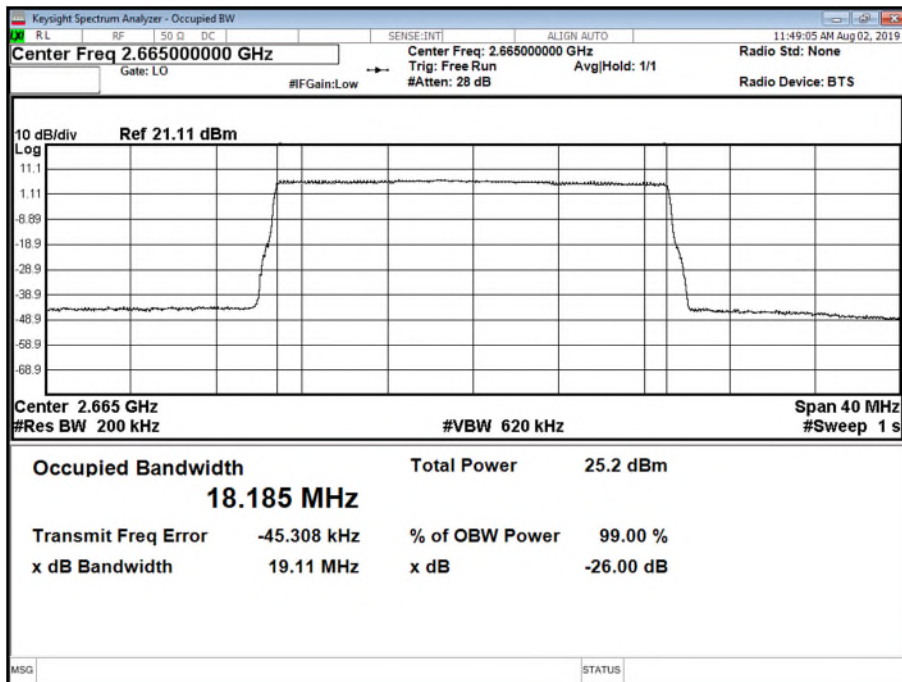


Product Service

Antenna C - NR Modulation QPSK - NR Carrier Bandwidth 20.0 MHz 30 kHz SCS - Channel Position T



Antenna D - NR Modulation QPSK - NR Carrier Bandwidth 20.0 MHz 30 kHz SCS - Channel Position T





Product Service

## 2.3 BAND EDGE

### 2.3.1 Specification Reference

FCC CFR 47 Part 2, Clause 2.1051  
FCC CFR 47 Part 27, Clause 27.53 (h)

### 2.3.2 Date of Test and Modification State

31 July and 02 August 2019 - 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 20-22°C  
Relative Humidity 45-55%

### 2.3.5 Test Method

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

The EUT has 4 transmit ports, therefore, the test limits used were calculated on a worst case basis accounting for an effective 4 port MIMO configuration. Testing was performed on this port with a test limit of

$$43+10\log(P) - 10\log(4) = -19 \text{ dBm}$$

### 2.3.6 Test Results

Configuration A

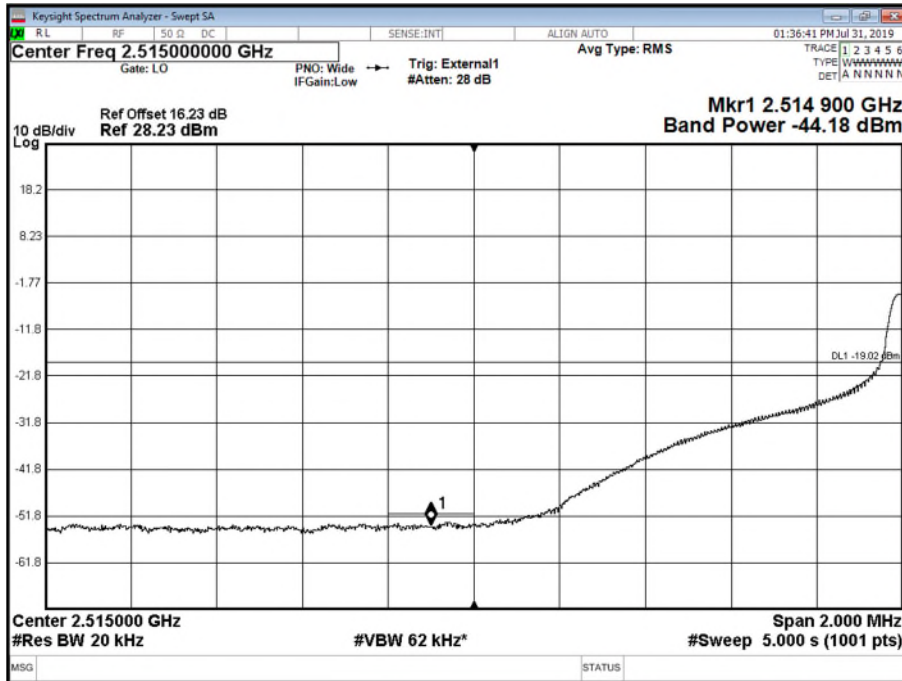
Maximum Output Power 26 dBm

Antenna	LTE Modulation	LTE Carrier Bandwidth	Band Edge (MHz)	
			Channel Position B	Channel Position T
A	QPSK	20.0 MHz	2,525.0	2,665.0
B	QPSK	20.0 MHz	2,525.0	2,665.0
C	QPSK	20.0 MHz	2,525.0	2,665.0
D	QPSK	20.0 MHz	2,525.0	2,665.0

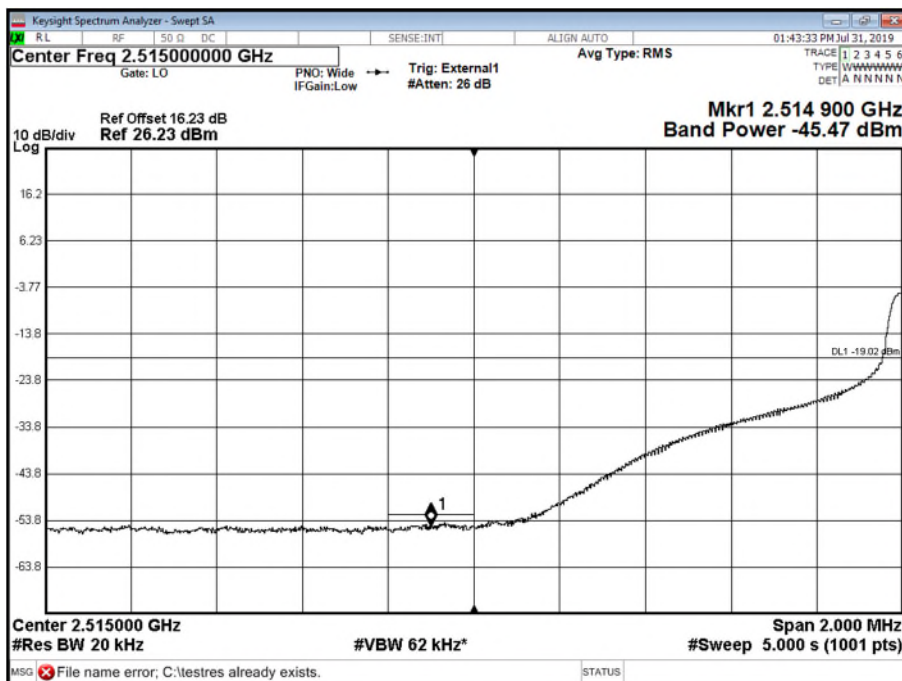


Product Service

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



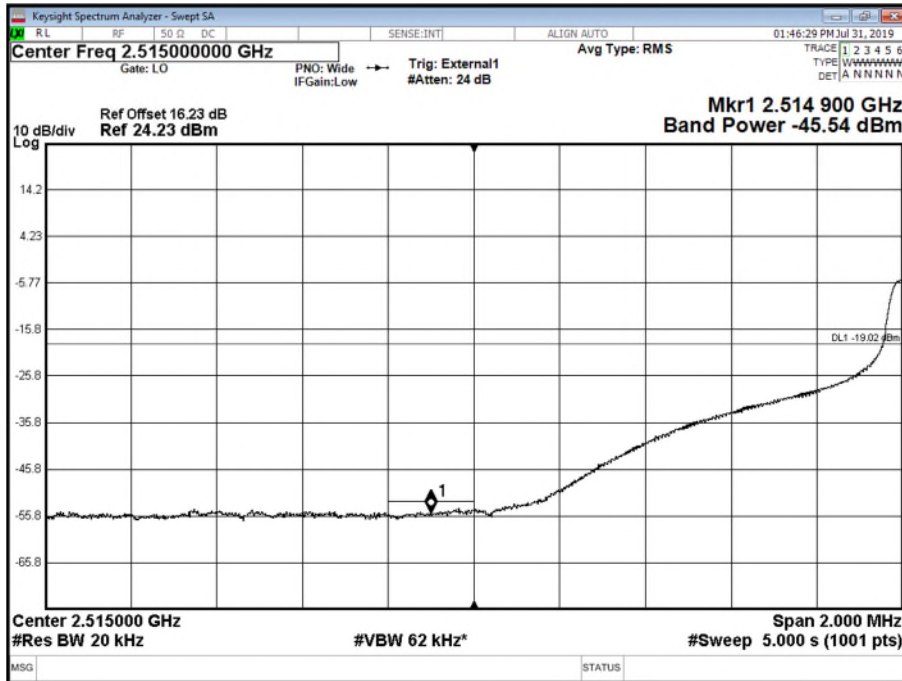
Antenna B - LTE Modulation QPSK - LTE Carrier Bandwidth 20.0 MHz - Channel Position B



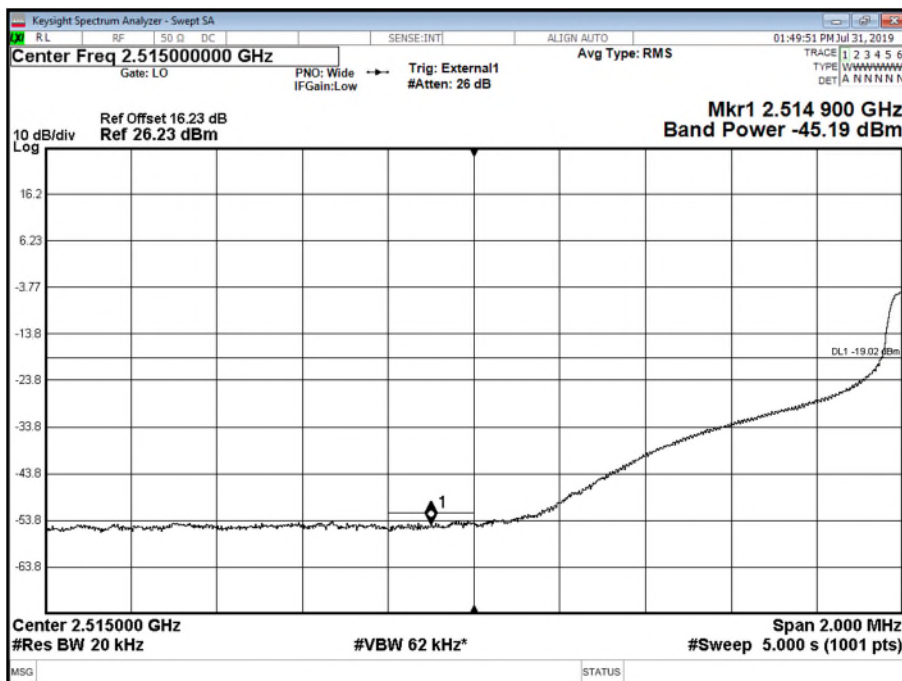


Product Service

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



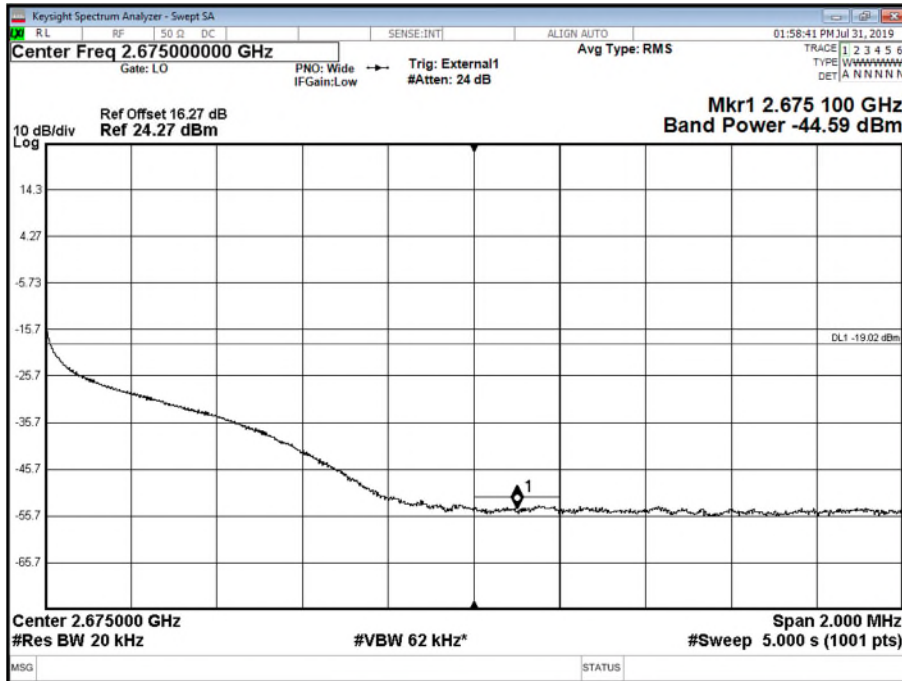
Antenna D - LTE Modulation QPSK - LTE Carrier Bandwidth 20.0 MHz - Channel Position B



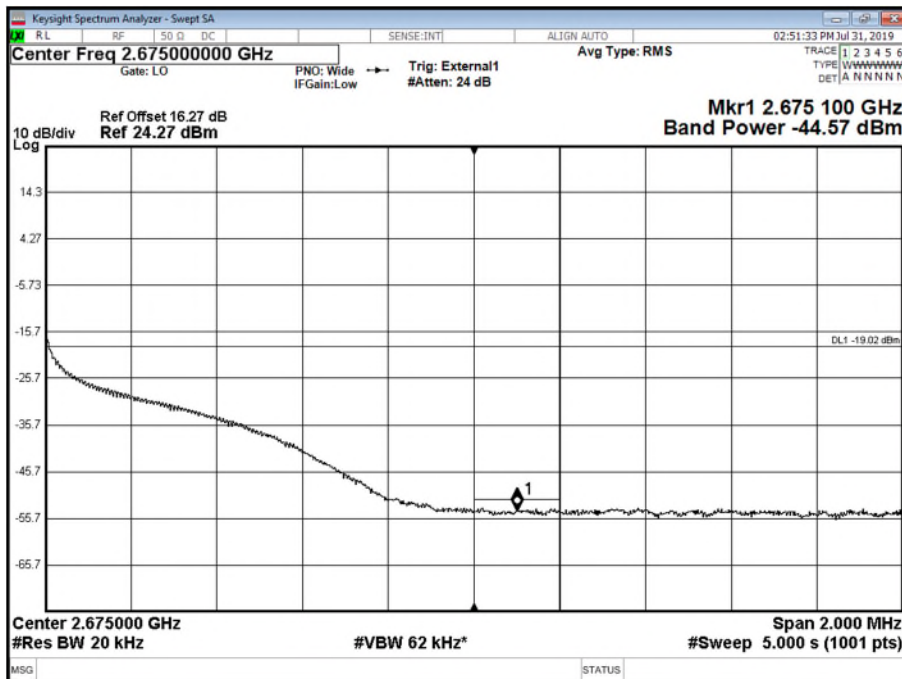


Product Service

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



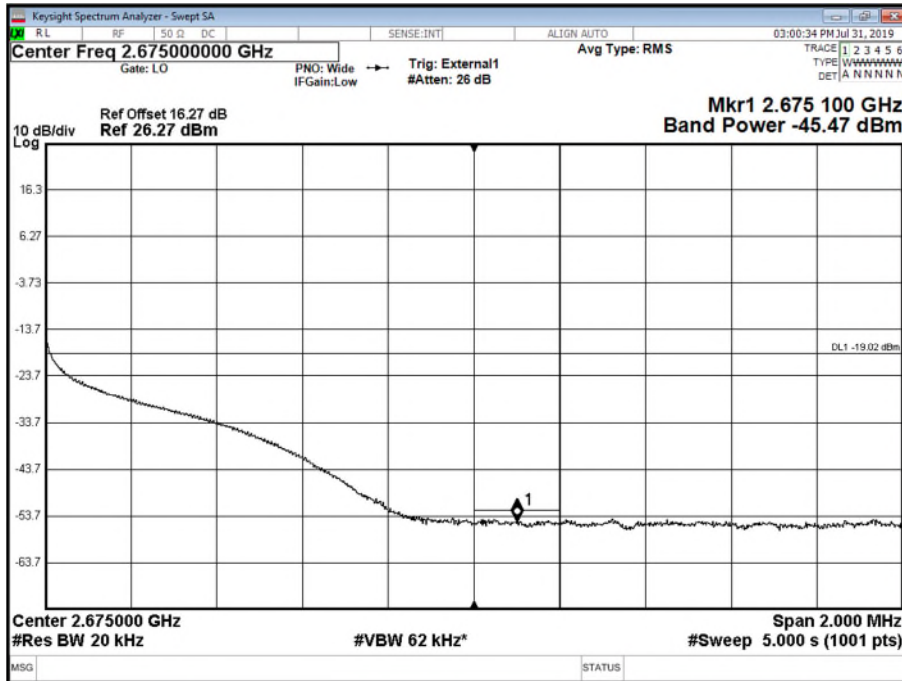
Antenna B - LTE Modulation QPSK - LTE Carrier Bandwidth 20.0 MHz - Channel Position T



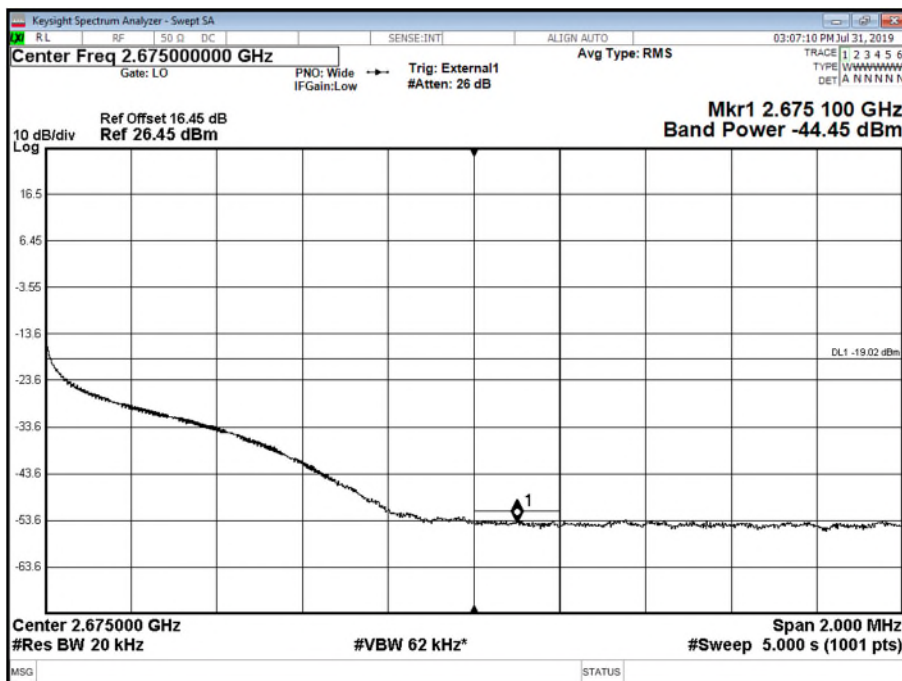


Product Service

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



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





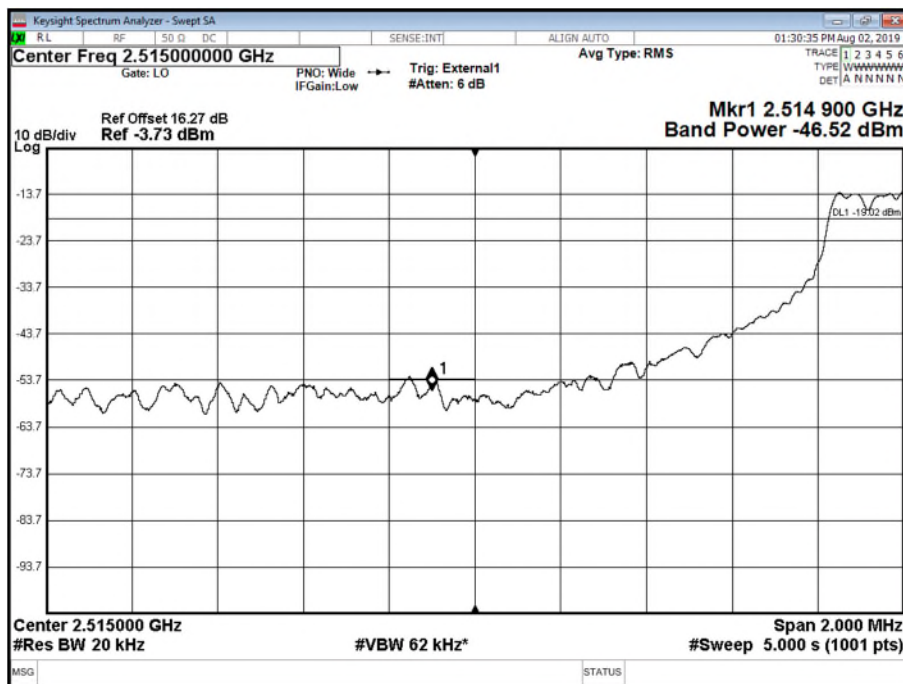
Product Service

Configuration B

Maximum Output Power 26 dBm

Antenna	NR Modulation	NR Carrier Bandwidth	Band Edge (MHz)	
			Channel Position B	Channel Position T
A	QPSK	100.0 MHz 60 kHz SCS	2,565.0	2,625.0
B	QPSK	100.0 MHz 60 kHz SCS	2,565.0	2,625.0
C	QPSK	100.0 MHz 60 kHz SCS	2,565.0	2,625.0
D	QPSK	100.0 MHz 60 kHz SCS	2,565.0	2,625.0
A	QPSK	20.0 MHz 30 kHz SCS	2,525.0	2,665.0
B	QPSK	20.0 MHz 30 kHz SCS	2,525.0	2,665.0
C	QPSK	20.0 MHz 30 kHz SCS	2,525.0	2,665.0
D	QPSK	20.0 MHz 30 kHz SCS	2,525.0	2,665.0

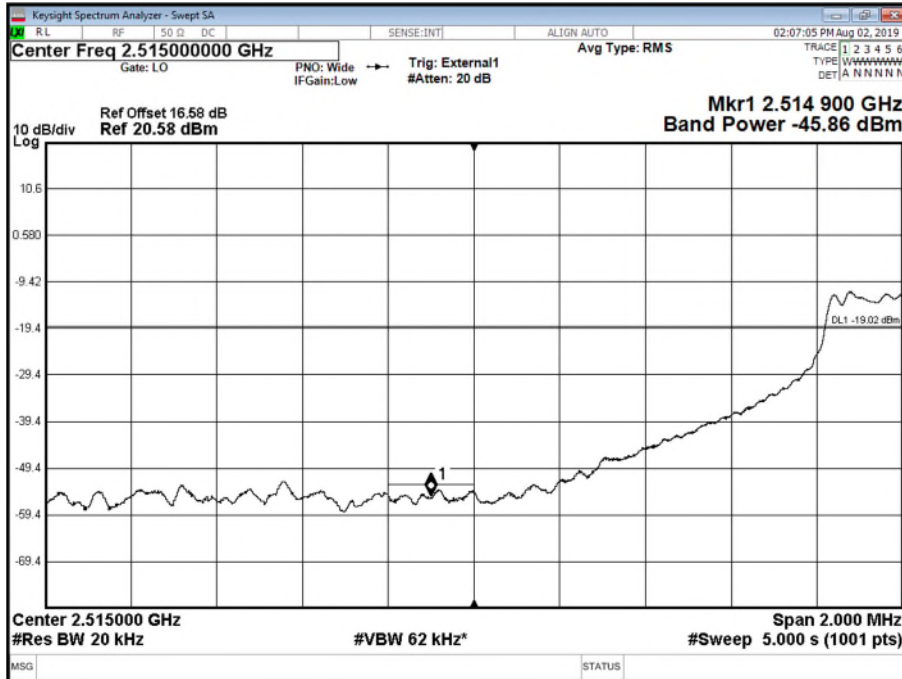
Antenna A - NR Modulation QPSK - NR Carrier Bandwidth 100.0 MHz 60 kHz SCS - Channel Position B



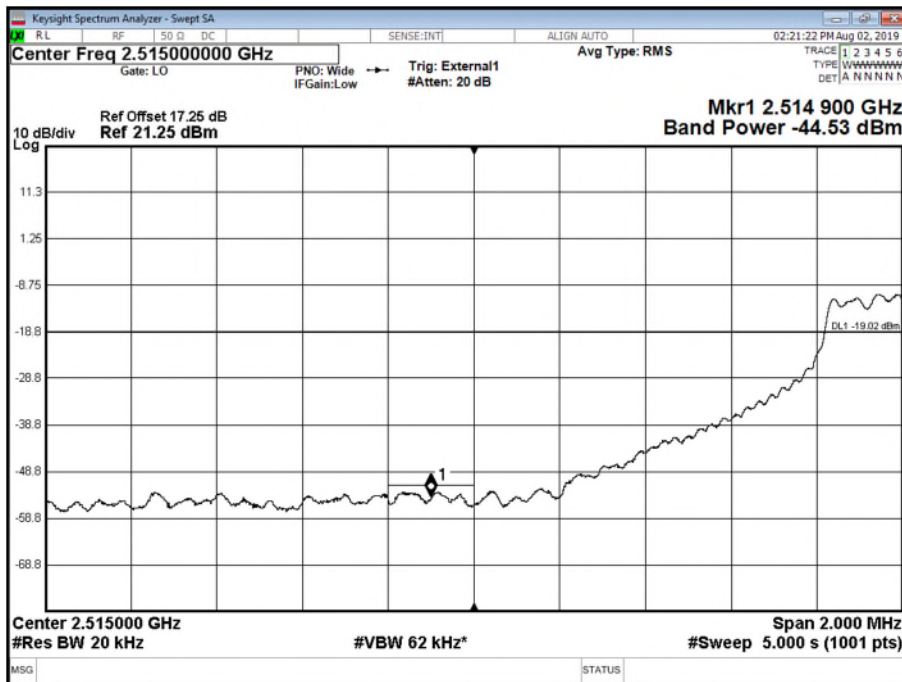


Product Service

Antenna B - NR Modulation QPSK - NR Carrier Bandwidth 100.0 MHz 60 kHz SCS - Channel Position B



Antenna C - NR Modulation QPSK - NR Carrier Bandwidth 100.0 MHz 60 kHz SCS - Channel Position B

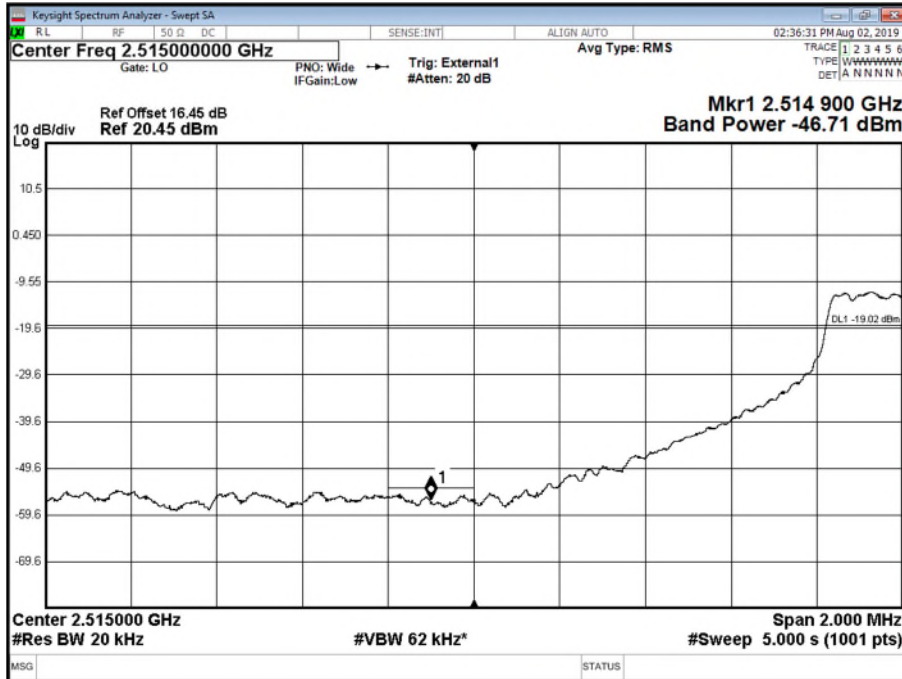




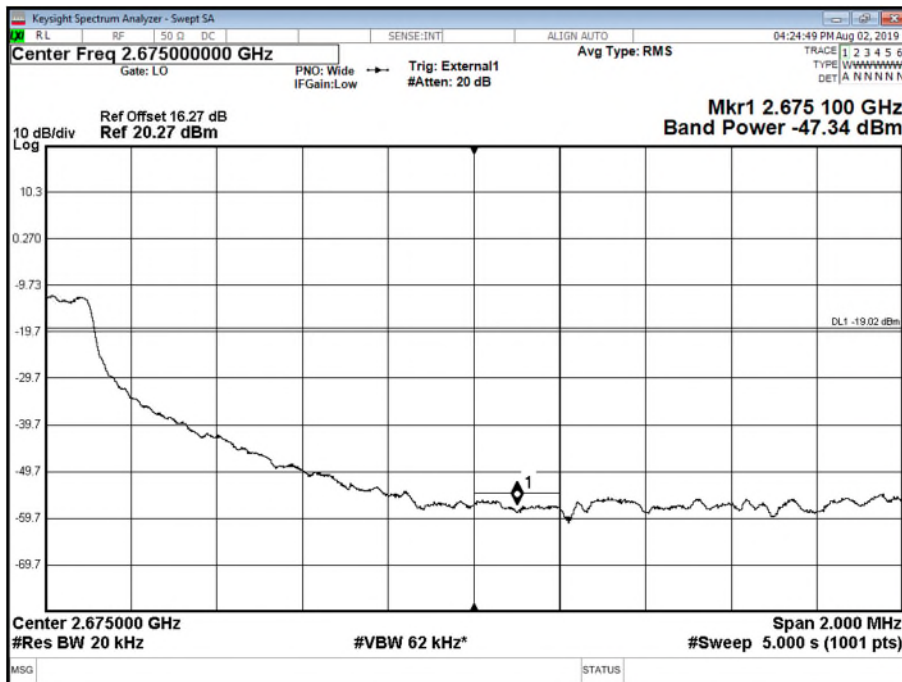


Product Service

Antenna D - NR Modulation QPSK - NR Carrier Bandwidth 100.0 MHz 60 kHz SCS - Channel Position B



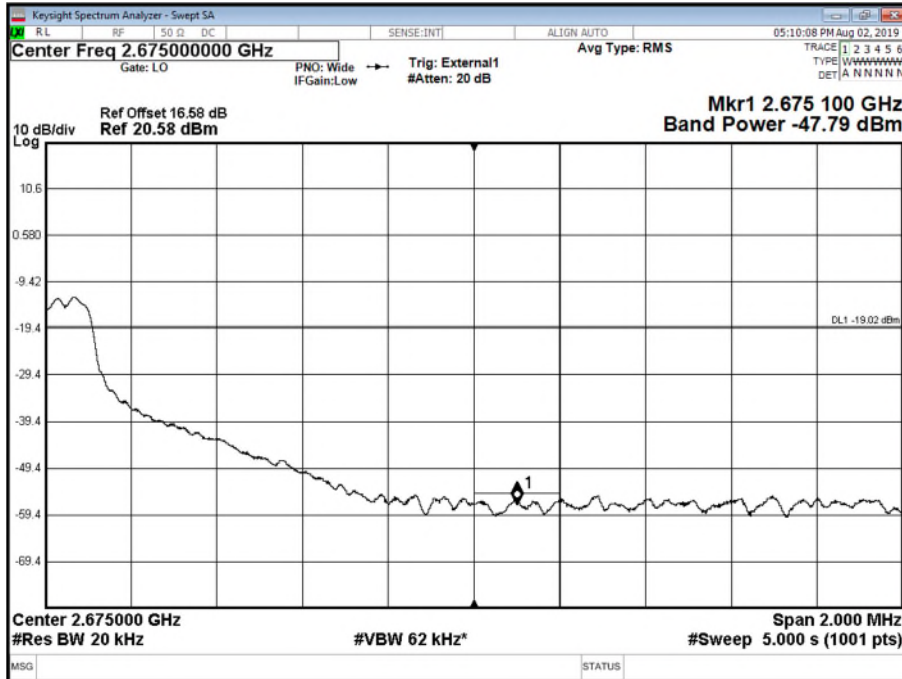
Antenna A - NR Modulation QPSK - NR Carrier Bandwidth 100.0 MHz 60 kHz SCS - Channel Position T



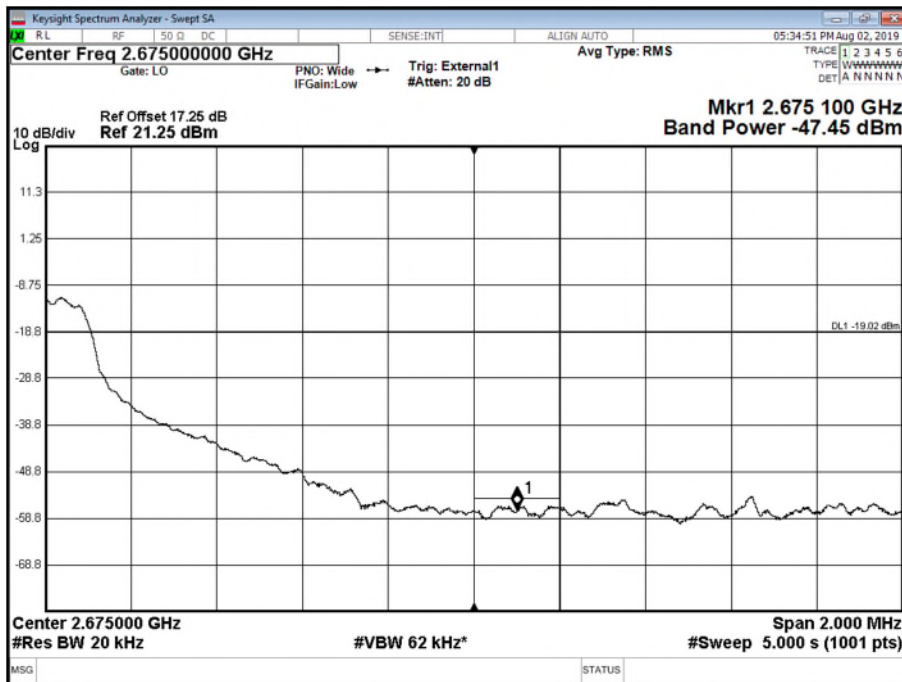


Product Service

Antenna B - NR Modulation QPSK - NR Carrier Bandwidth 100.0 MHz 60 kHz SCS - Channel Position T



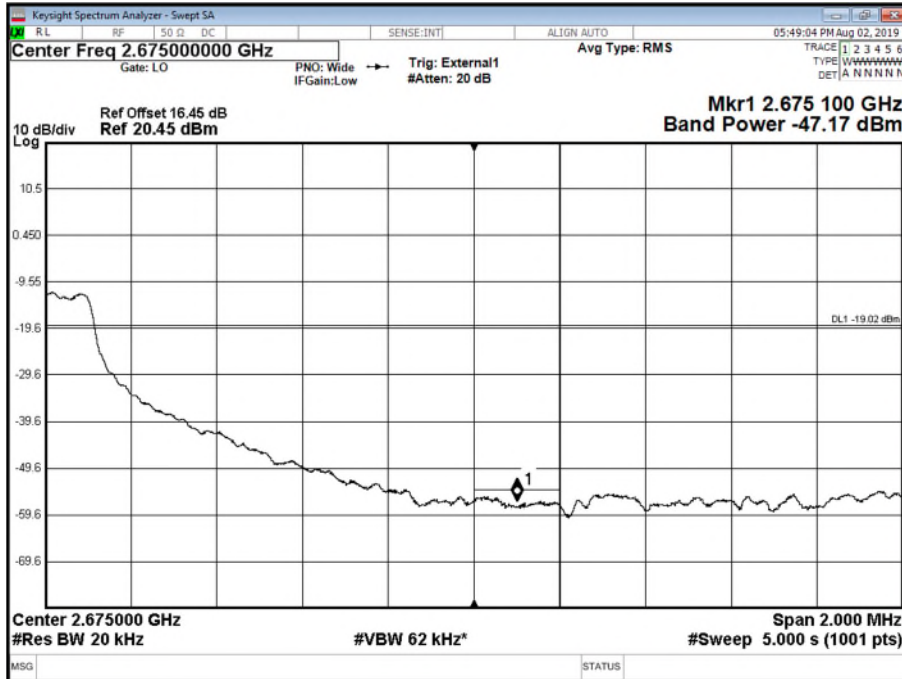
Antenna C - NR Modulation QPSK - NR Carrier Bandwidth 100.0 MHz 60 kHz SCS - Channel Position T



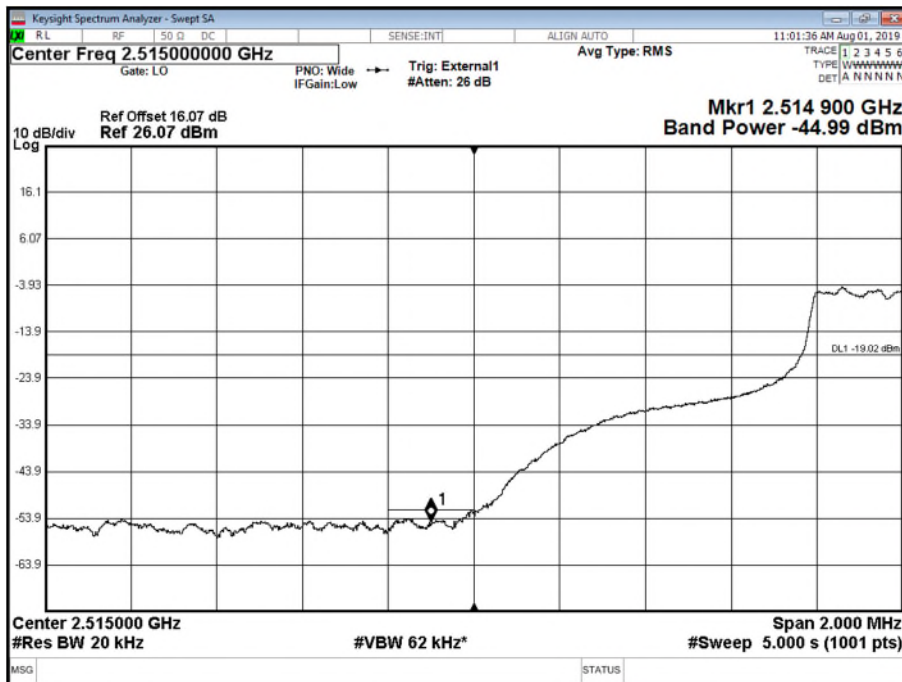


Product Service

Antenna D - NR Modulation QPSK - NR Carrier Bandwidth 100.0 MHz 60 kHz SCS - Channel Position T



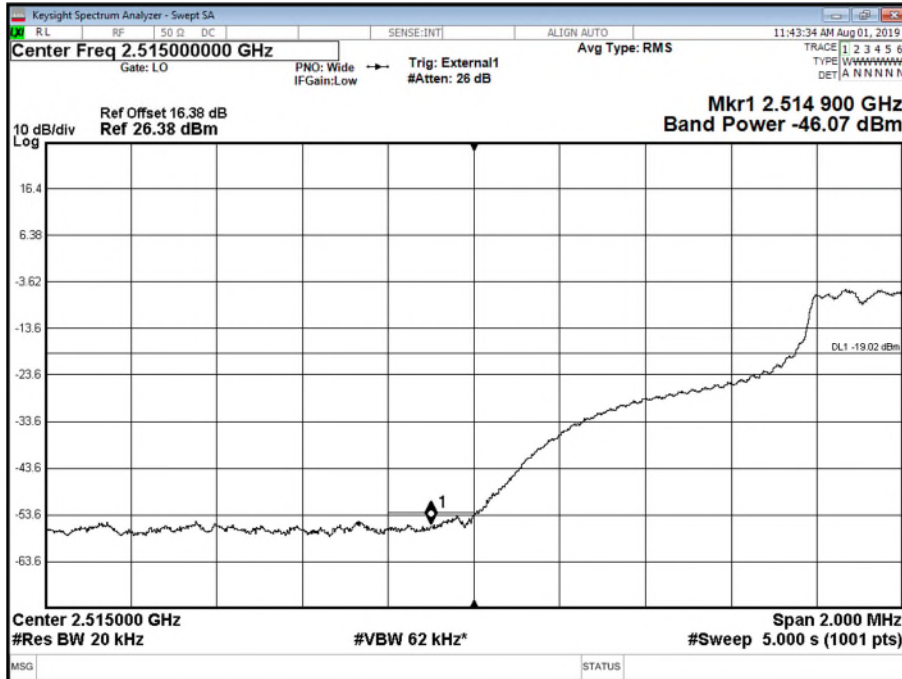
Antenna A - NR Modulation QPSK - NR Carrier Bandwidth 20.0 MHz 30 kHz SCS - Channel Position B



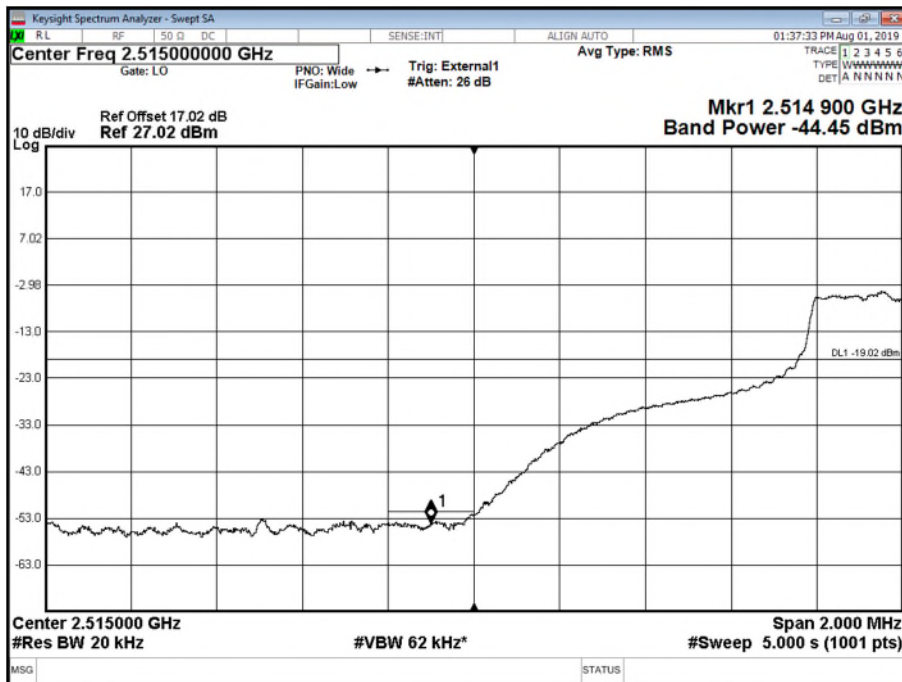


Product Service

Antenna B - NR Modulation QPSK - NR Carrier Bandwidth 20.0 MHz 30 kHz SCS - Channel Position B



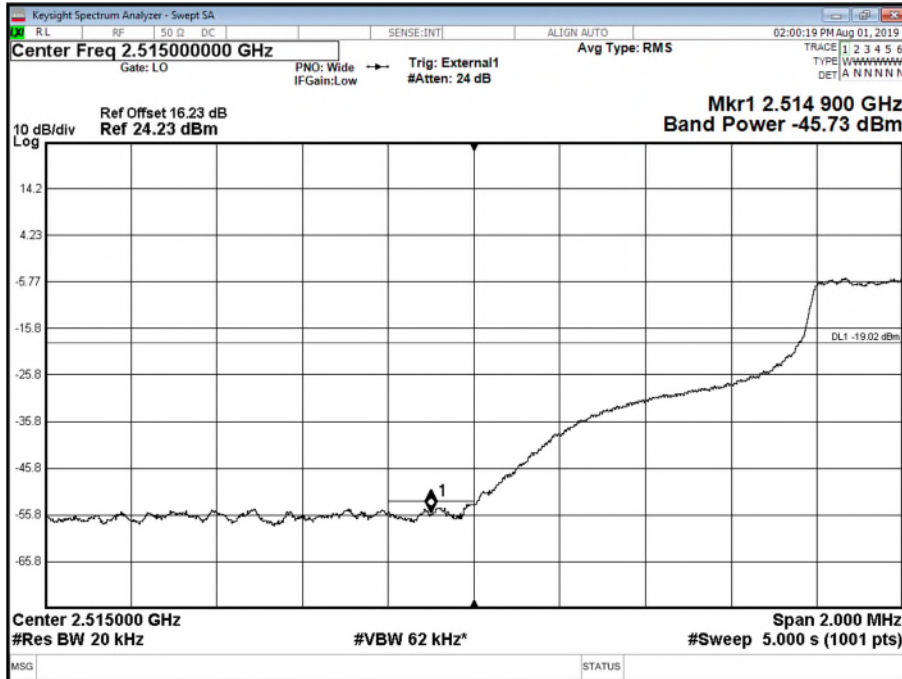
Antenna C - NR Modulation QPSK - NR Carrier Bandwidth 20.0 MHz 30 kHz SCS - Channel Position B



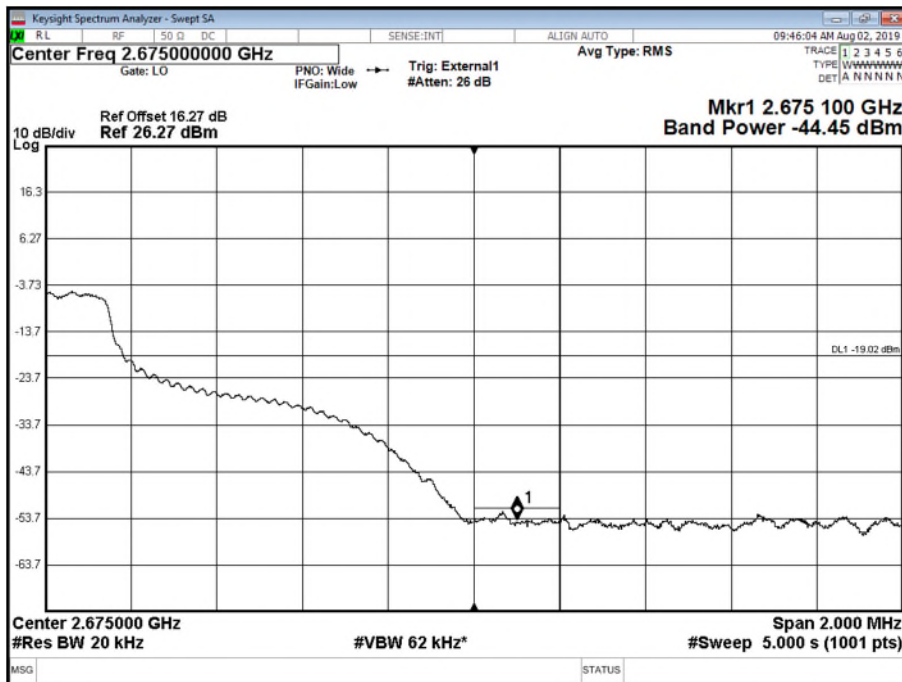


Product Service

Antenna D - NR Modulation QPSK - NR Carrier Bandwidth 20.0 MHz 30 kHz SCS - Channel Position B



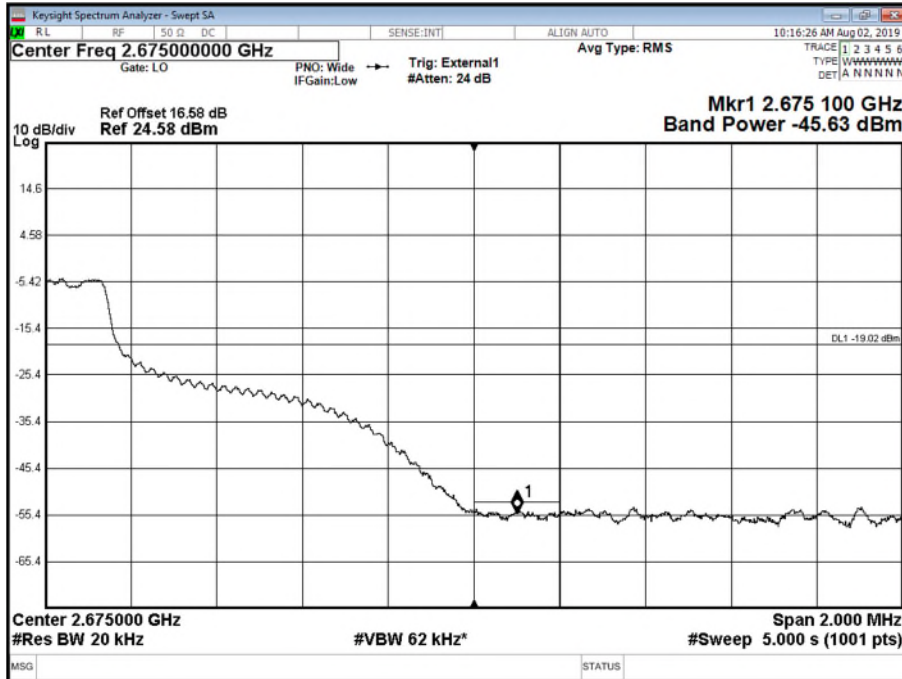
Antenna A - NR Modulation QPSK - NR Carrier Bandwidth 20.0 MHz 30 kHz SCS - Channel Position T



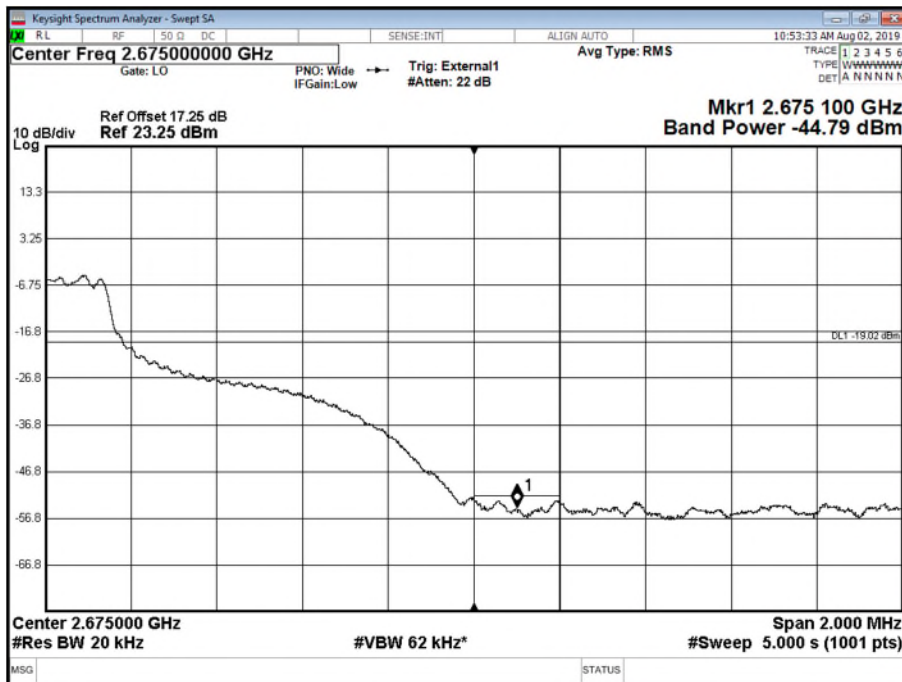


Product Service

Antenna B - NR Modulation QPSK - NR Carrier Bandwidth 20.0 MHz 30 kHz SCS - Channel Position T



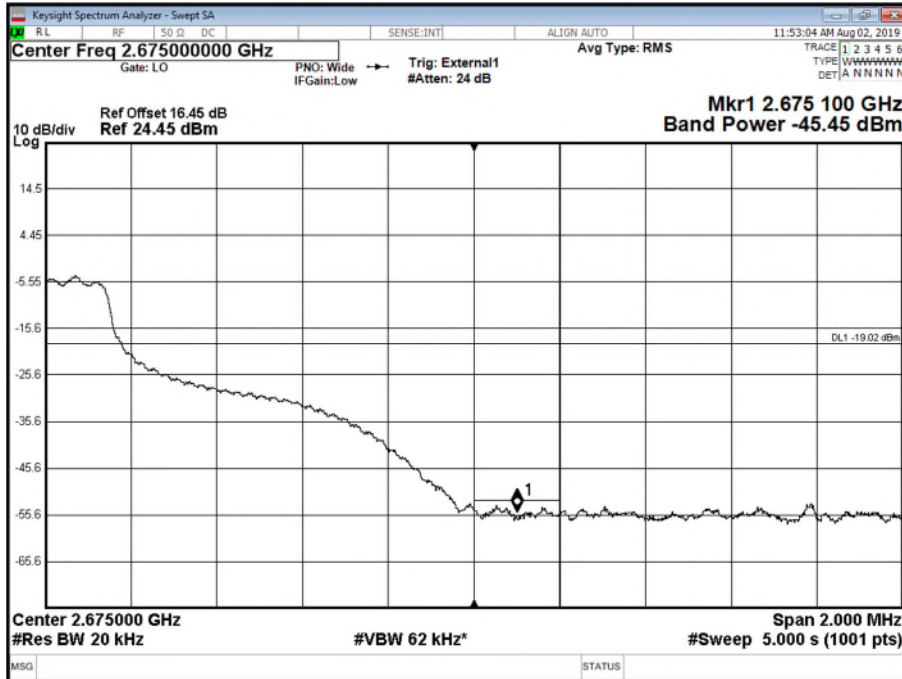
Antenna C - NR Modulation QPSK - NR Carrier Bandwidth 20.0 MHz 30 kHz SCS - Channel Position T





Product Service

Antenna D - NR Modulation QPSK - NR Carrier Bandwidth 20.0 MHz 30 kHz SCS - Channel Position T





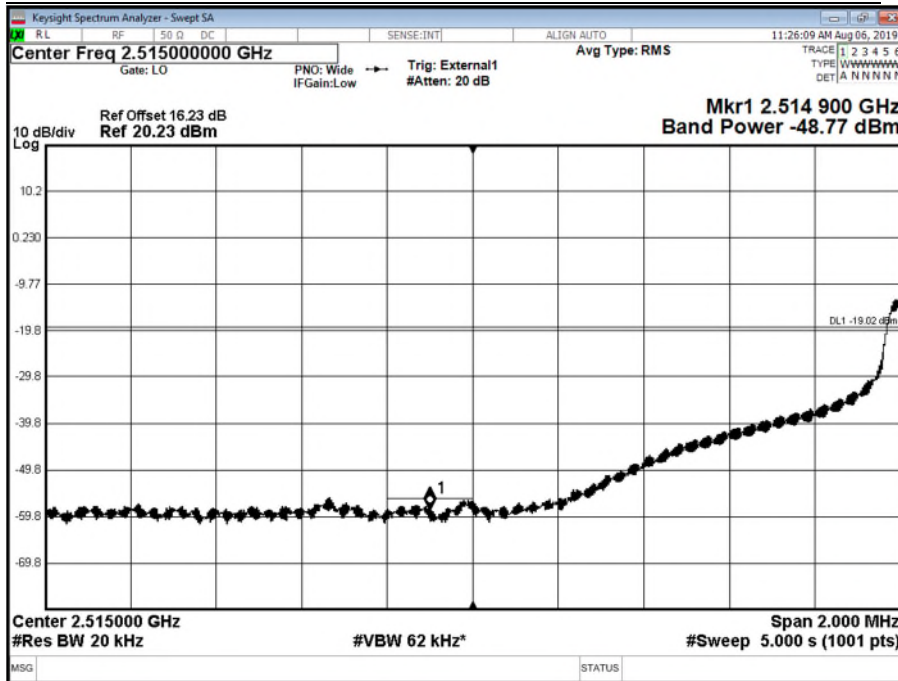
Product Service

Configuration C

Maximum Output Power 26 dBm

Antenna	NR / LTE Modulation	NR / LTE Carrier Bandwidth	Band Edge (MHz)	
			Channel Position B	Channel Position T
A / B / C / D	QPSK / QPSK	3 x LTE @ 20 MHz 1 x NR @ 20 MHz	2,555.0	2,635.0

Antenna A (representative) - NR / LTE Modulation QPSK / QPSK - NR / 3 x LTE Carrier Bandwidth 20.0 MHz / 1 x NR 20.0 MHz 15 kHz SCS - Channel Position B

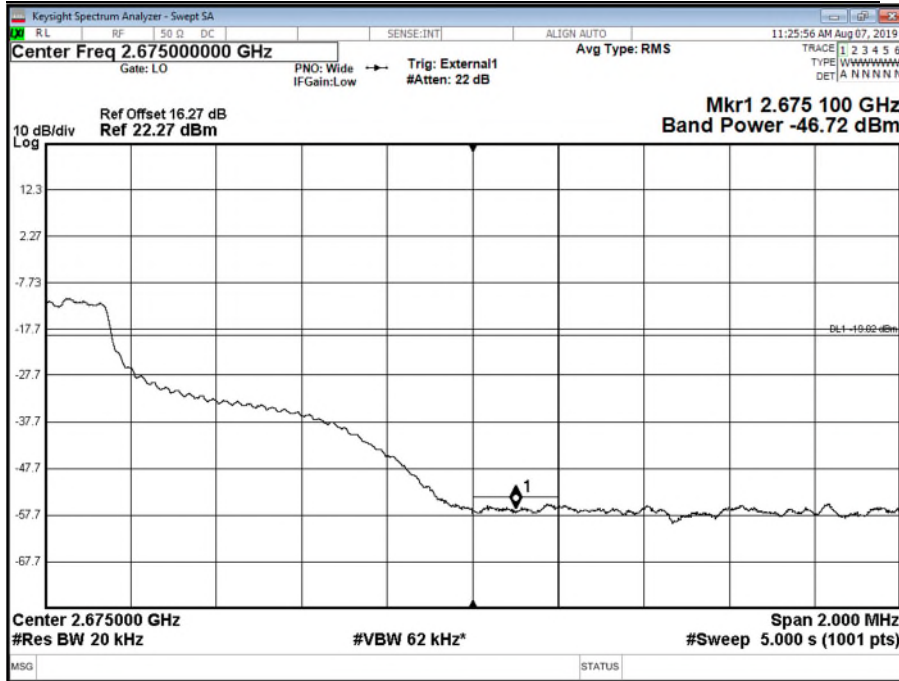






Product Service

Antenna A (representative)- NR / LTE Modulation QPSK / QPSK - NR / 3 x LTE Carrier  
Bandwidth 20.0 MHz / 1 x NR 20.0 MHz 15 kHz SCS - Channel Position T



Limit	-19 dBm
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Product Service

## **2.4 TRANSMITTER SPURIOUS EMISSIONS**

### **2.4.1 Specification Reference**

FCC CFR 47 Part 2, Clause 2.1051  
FCC CFR 47 Part 27, Clause 27.53 (h)

### **2.4.2 Date of Test and Modification State**

30 July and 02 August 2019 - 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.

### **2.4.4 Environmental Conditions**

Ambient Temperature	20-22°C
Relative Humidity	45-55%

### **2.4.5 Test Method**

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

The EUT has 4 transmit ports, therefore, the test limits used were calculated on a worst case basis accounting for an effective 4 port MIMO configuration. Testing was performed on this port with a test limit of  
 $43+10\log(P) - 10\log(4) = -19 \text{ dBm}$

### **2.4.6 Test Results**

Note: For all configurations the bottom and top channel data is representative of middle. Middle data is kept on file.

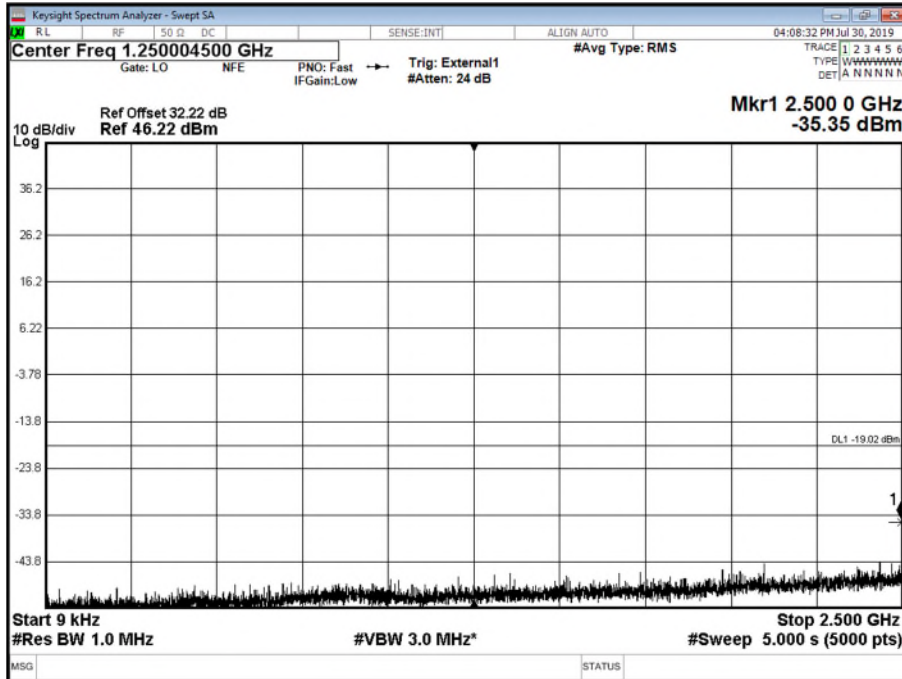
Configuration A

Maximum Output Power 26 dBm

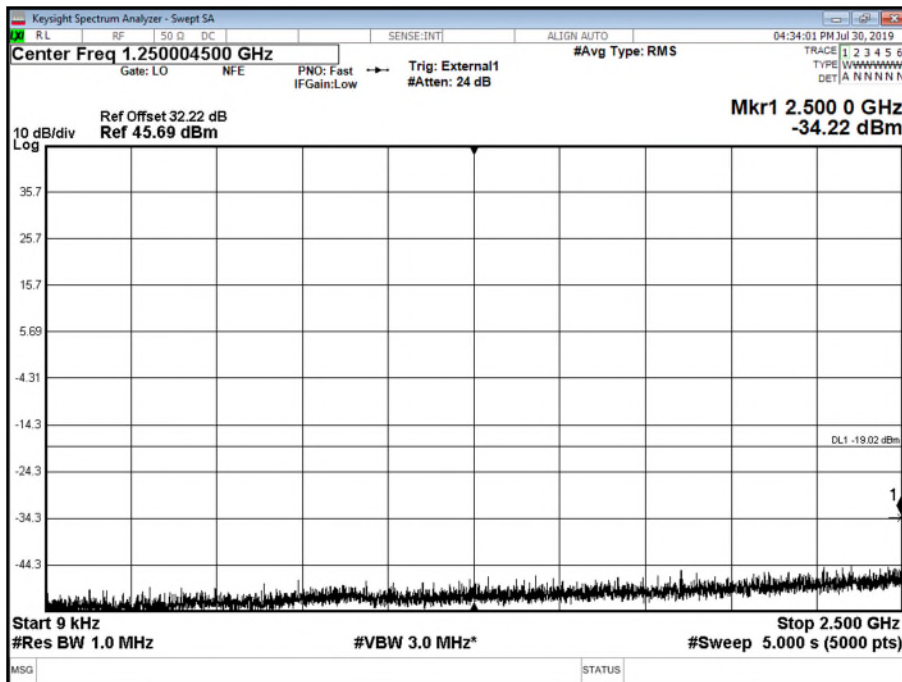


Product Service

Antenna A - LTE Modulation QPSK - LTE Carrier Bandwidth 20.0 MHz - Channel Position B - Band 1 - Range 0.009 to 2500 MHz



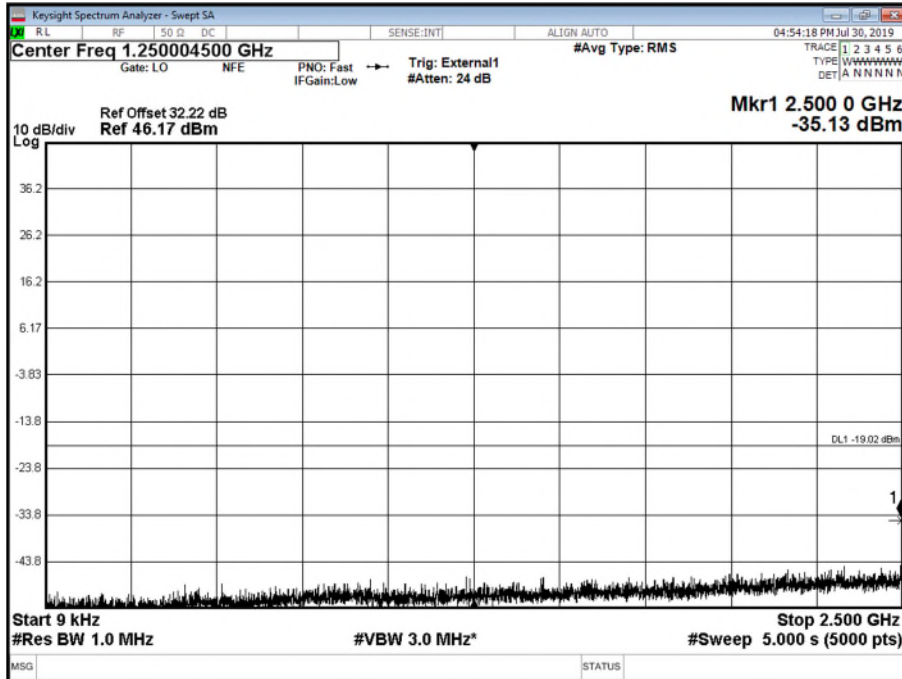
Antenna B - LTE Modulation QPSK - LTE Carrier Bandwidth 20.0 MHz - Channel Position B - Band 1 - Range 0.009 to 2500 MHz





Product Service

Antenna C - LTE Modulation QPSK - LTE Carrier Bandwidth 20.0 MHz - Channel Position B - Band 1 - Range 0.009 to 2500 MHz



Antenna D - LTE Modulation QPSK - LTE Carrier Bandwidth 20.0 MHz - Channel Position B - Band 1 - Range 0.009 to 2500 MHz

