

QPSK EIRP POWER FOR LTE BAND 5 (3.0MHZ BANDWIDTH)

High Frequency Substitution Measurement
UL Fremont Radiated Chamber

Company:
Project #: 14U19187
Date: 02/19/15
Test Engineer: F. Guamero
Configuration: EUT Only
Mode: LTE Band 5, 3MHz QPSK

Test Equipment:
 Substitution: Horn T59 Substitution, and 8ft SMA Cable

Chamber

Pre-amplifier

Filter

Limit

3m Chamber F

3m Chamber F

Filter

part 22

Frequency (GHz)	SA reading (dBm)	Ant. Pol. (H/V)	Distance	Path Loss @ SG End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta	Notes
Low Channel (825.5MHz)										
1.65	-57.4	H	3.0	-14.3	33.9	1.0	-47.1	-13.0	-34.1	
1.72	-59.1	H	3.0	-15.7	33.9	1.0	-48.5	-13.0	-35.5	
2.44	-63.7	H	3.0	-16.6	34.1	1.0	-49.7	-13.0	-36.7	
1.65	-58.8	V	3.0	-12.9	33.9	1.0	-45.8	-13.0	-32.8	
1.72	-56.7	V	3.0	-10.7	33.9	1.0	-43.5	-13.0	-30.5	
2.44	-64.0	V	3.0	-16.1	34.1	1.0	-49.2	-13.0	-36.2	
Mid Channel (836.5MHz)										
1.67	-57.2	H	3.0	-14.0	33.9	1.0	-46.8	-13.0	-33.8	
2.44	-64.6	H	3.0	-17.5	34.1	1.0	-50.5	-13.0	-37.5	
1.67	-60.4	V	3.0	-14.5	33.9	1.0	-47.3	-13.0	-34.3	
1.73	-58.7	V	3.0	-12.6	33.9	1.0	-45.5	-13.0	-32.5	
2.44	-62.5	V	3.0	-14.6	34.1	1.0	-47.7	-13.0	-34.7	
High Channel (847.5MHz)										
1.69	-66.1	H	3.0	-22.8	33.9	1.0	-55.7	-13.0	-42.7	
1.72	-57.0	H	3.0	-13.5	33.9	1.0	-46.4	-13.0	-33.4	
2.44	-65.5	H	3.0	-18.4	34.1	1.0	-51.4	-13.0	-38.4	
1.69	-67.7	V	3.0	-21.8	33.9	1.0	-54.6	-13.0	-41.6	
1.73	-54.4	V	3.0	-8.3	33.9	1.0	-41.2	-13.0	-28.2	
2.44	-63.4	V	3.0	-15.5	34.1	1.0	-48.5	-13.0	-35.5	

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16QAM EIRP POWER FOR LTE BAND 5 (3.0MHZ BANDWIDTH)

**High Frequency Substitution Measurement
 UL Fremont Radiated Chamber**

Company:
Project #: 14U19187
Date: 02/19/15
Test Engineer: F. Guarnero
Configuration: EUT Only
Mode: LTE Band 5, 3MHz 16QAM

Test Equipment:
 Substitution: Horn T59 Substitution, and 8ft SMA Cable

Chamber

Pre-amplifier

Filter

Limit

3m Chamber F

3m Chamber F

Filter

Part 22

Frequency (GHz)	SA reading (dBm)	Ant. Pol. (H/V)	Distance	Path Loss @ SG End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta	Notes
Low Channel (825.5MHz)										
1.65	-58.0	H	3.0	-14.2	33.7	1.0	46.9	-13.0	-33.9	
1.72	-59.1	H	3.0	-14.7	33.7	1.0	47.4	-13.0	-34.4	
2.44	-64.3	H	3.0	-16.9	34.2	1.0	50.0	-13.0	-37.0	
1.65	-59.3	V	3.0	-13.3	33.7	1.0	46.0	-13.0	-33.0	
1.72	-57.0	V	3.0	-10.8	33.7	1.0	43.5	-13.0	-30.5	
2.44	-64.8	V	3.0	-16.7	34.2	1.0	49.9	-13.0	-36.9	
Mid Channel (836.5MHz)										
1.67	-58.3	H	3.0	-14.4	33.7	1.0	47.1	-13.0	-34.1	
2.44	-65.7	H	3.0	-18.3	34.2	1.0	51.4	-13.0	-38.4	
1.67	-61.0	V	3.0	-14.9	33.7	1.0	47.6	-13.0	-34.6	
2.44	-62.9	V	3.0	-14.8	34.2	1.0	48.0	-13.0	-35.0	
High Channel (847.5MHz)										
1.69	-67.4	H	3.0	-23.2	33.7	1.0	55.9	-13.0	-42.9	
2.44	-65.2	H	3.0	-17.8	34.2	1.0	50.9	-13.0	-37.9	
1.69	-67.8	V	3.0	-21.7	33.7	1.0	54.4	-13.0	-41.4	
1.73	-58.0	V	3.0	-11.8	33.7	1.0	44.4	-13.0	-31.4	
2.44	-63.4	V	3.0	-15.3	34.2	1.0	48.4	-13.0	-35.4	

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QPSK EIRP POWER FOR LTE BAND 5 (5.0MHZ BANDWIDTH)

High Frequency Substitution Measurement UL Fremont Radiated Chamber										
Company:										
Project #: 14U19187										
Date: 02/19/15										
Test Engineer: F. Guarnero										
Configuration: EUT Only										
Mode: LTE Band 5, 5MHz QPSK										
Test Equipment:										
Substitution: Horn T69 Substitution, and 8ft SMA Cable										
Chamber		Pre-amplifier		Filter		Limit				
3m Chamber F		3m Chamber F		Filter		part 22				
Frequency (GHz)	SA reading (dBm)	Ant. Pol. (H/V)	Distance	Path Loss @ SG End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta	Notes
Low Channel (826.5MHz)										
1.65	-58.1	H	3.0	-15.0	33.9	1.0	-47.8	-13.0	-34.8	
1.73	-55.9	H	3.0	-12.4	33.9	1.0	-45.3	-13.0	-32.3	
2.44	-64.7	H	3.0	-17.6	34.1	1.0	-50.7	-13.0	-37.7	
1.65	-59.4	V	3.0	-13.5	33.9	1.0	-46.3	-13.0	-33.3	
1.73	-59.5	V	3.0	-13.5	33.9	1.0	-46.3	-13.0	-33.3	
2.44	-63.0	V	3.0	-15.1	34.1	1.0	-48.1	-13.0	-35.1	
Mid Channel (836.5MHz)										
1.67	-59.7	H	3.0	-16.5	33.9	1.0	-49.4	-13.0	-36.4	
1.72	-62.3	H	3.0	-18.8	33.9	1.0	-51.7	-13.0	-38.7	
1.88	-61.6	H	3.0	-17.3	33.9	1.0	-50.2	-13.0	-37.2	
2.44	-63.4	H	3.0	-16.2	34.1	1.0	-49.3	-13.0	-36.3	
1.67	-60.6	V	3.0	-14.6	33.9	1.0	-47.5	-13.0	-34.5	
1.72	-61.9	V	3.0	-15.8	33.9	1.0	-48.7	-13.0	-35.7	
2.44	-66.9	V	3.0	-18.9	34.1	1.0	-52.0	-13.0	-39.0	
High Channel (846.5MHz)										
1.71	-56.7	H	3.0	-13.3	33.9	1.0	-46.1	-13.0	-33.1	
2.44	-64.7	H	3.0	-17.6	34.1	1.0	-50.7	-13.0	-37.7	
1.72	-59.0	V	3.0	-13.0	33.9	1.0	-45.9	-13.0	-32.9	
2.45	-63.6	V	3.0	-15.6	34.1	1.0	-48.7	-13.0	-35.7	
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16QAM EIRP POWER FOR LTE BAND 5 (5.0MHZ BANDWIDTH)

**High Frequency Substitution Measurement
 UL Fremont Radiated Chamber**

Company:
Project #: 14U19187
Date: 02/19/15
Test Engineer: F. Guamero
Configuration: EUT Only
Mode: LTE Band 5, 5MHz 16QAM

Test Equipment:
 Substitution: Horn T59 Substitution, and 8ft SMA Cable

Chamber
3m Chamber F

Pre-amplifier
3m Chamber F

Filter
Filter

Limit
Part 22

Frequency (GHz)	SA reading (dBm)	Ant. Pol. (H/V)	Distance	Path Loss @ SG End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta	Notes
Low Channel (826.5MHz)										
1.65	-58.9	H	3.0	-15.1	33.7	1.0	-47.8	-13.0	-34.8	
1.73	-56.6	H	3.0	-12.1	33.7	1.0	-44.8	-13.0	-31.8	
2.44	-65.2	H	3.0	-17.8	34.2	1.0	-50.9	-13.0	-37.9	
1.65	-60.0	V	3.0	-14.0	33.7	1.0	-46.7	-13.0	-33.7	
1.73	-60.1	V	3.0	-13.9	33.7	1.0	-46.5	-13.0	-33.5	
2.44	-63.7	V	3.0	-15.6	34.2	1.0	-48.8	-13.0	-35.8	
Mid Channel (836.5MHz)										
1.67	-60.5	H	3.0	-16.5	33.7	1.0	-49.2	-13.0	-36.2	
1.72	-63.1	H	3.0	-18.7	33.7	1.0	-51.3	-13.0	-38.3	
1.88	-62.7	H	3.0	-16.7	33.5	1.0	-49.3	-13.0	-36.3	
2.44	-64.0	H	3.0	-16.6	34.2	1.0	-49.7	-13.0	-36.7	
1.67	-61.3	H	3.0	-17.4	33.7	1.0	-50.1	-13.0	-37.1	
1.72	-62.5	V	3.0	-16.2	33.7	1.0	-48.9	-13.0	-35.9	
2.44	-67.3	V	3.0	-19.2	34.2	1.0	-52.3	-13.0	-39.3	
High Channel (846.5MHz)										
1.71	-58.0	H	3.0	-13.6	33.7	1.0	-46.3	-13.0	-33.3	
2.44	-65.4	H	3.0	-18.0	34.2	1.0	-51.1	-13.0	-38.1	
1.73	-61.4	V	3.0	-15.1	33.7	1.0	-47.8	-13.0	-34.8	
2.44	-64.6	V	3.0	-16.5	34.2	1.0	-49.7	-13.0	-36.7	

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QPSK EIRP POWER FOR LTE BAND 5 (10.0MHZ BANDWIDTH)

**High Frequency Substitution Measurement
 UL Fremont Radiated Chamber**

Company:
Project #: 14U19187
Date: 02/19/15
Test Engineer: T Wang
Configuration: EUT Only
Mode: LTE Band 5, 10MHz QPSK

Test Equipment:
 Substitution: Horn T59 Substitution, and 8ft SMA Cable

Chamber

Pre-amplifier

Filter

Limit

3m Chamber F

3m Chamber F

Filter

Part 22

Frequency (GHz)	SA reading (dBm)	Ant. Pol. (H/V)	Distance	Path Loss @ SG End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta	Notes
Low Channel (829MHz)										
1.658	-65.6	H	3.0	-21.6	34.6	1.0	-55.1	-13.0	-42.1	
2.487	-65.7	H	3.0	-18.3	34.1	1.0	-51.4	-13.0	-38.4	
1.658	-65.0	V	3.0	-20.2	34.6	1.0	-53.8	-13.0	-40.8	
2.487	-65.2	V	3.0	-17.2	34.1	1.0	-50.3	-13.0	-37.3	
Mid Channel (836.5MHz)										
1.673	-66.0	H	3.0	-21.9	34.5	1.0	-55.5	-13.0	-42.5	
2.510	-65.4	H	3.0	-17.9	34.1	1.0	-51.0	-13.0	-38.0	
1.673	-66.2	V	3.0	-21.4	34.5	1.0	-54.9	-13.0	-41.9	
2.510	-65.0	V	3.0	-16.9	34.1	1.0	-50.0	-13.0	-37.0	
High Channel (844MHz)										
1.688	-65.4	H	3.0	-21.3	34.5	1.0	-54.8	-13.0	-41.8	
2.532	-65.7	H	3.0	-18.1	34.1	1.0	-51.3	-13.0	-38.3	
1.688	-65.7	V	3.0	-20.8	34.5	1.0	-54.4	-13.0	-41.4	
2.532	-67.0	V	3.0	-18.8	34.1	1.0	-52.0	-13.0	-39.0	

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16QAM EIRP POWER FOR LTE BAND 5 (10.0MHZ BANDWIDTH)

**High Frequency Substitution Measurement
 UL Fremont Radiated Chamber**

Company:
Project #: 14U19187
Date: 02/19/15
Test Engineer: T Wang
Configuration: EUT Only
Mode: LTE Band 5, 10MHz 16QAM

Test Equipment:
 Substitution: Horn T59 Substitution, and 8ft SMA Cable

Chamber
3m Chamber F

Pre-amplifier
3m Chamber F

Filter
Filter

Limit
Part 22

Frequency (GHz)	SA reading (dBm)	Ant. Pol. (H/V)	Distance	Path Loss @ SG End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta	Notes
Low Channel (829MHz)										
1.658	-66.6	H	3.0	-22.6	34.6	1.0	-56.1	-13.0	-43.1	
2.487	-66.8	H	3.0	-19.4	34.1	1.0	-52.5	-13.0	-39.5	
1.658	-66.1	V	3.0	-21.3	34.6	1.0	-54.9	-13.0	-41.9	
2.487	-66.5	V	3.0	-18.5	34.1	1.0	-51.6	-13.0	-38.6	
Mid Channel (836.5MHz)										
1.673	-66.9	H	3.0	-22.8	34.5	1.0	-56.4	-13.0	-43.4	
2.510	-66.5	H	3.0	-19.0	34.1	1.0	-52.1	-13.0	-39.1	
1.673	-67.1	V	3.0	-22.3	34.5	1.0	-55.8	-13.0	-42.8	
2.510	-66.2	V	3.0	-18.1	34.1	1.0	-51.2	-13.0	-38.2	
High Channel (844MHz)										
1.688	-66.5	H	3.0	-22.4	34.5	1.0	-55.9	-13.0	-42.9	
2.532	-66.4	H	3.0	-18.8	34.1	1.0	-52.0	-13.0	-39.0	
1.688	-66.8	V	3.0	-21.9	34.5	1.0	-55.5	-13.0	-42.5	
2.532	-68.1	V	3.0	-19.9	34.1	1.0	-53.1	-13.0	-40.1	

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9.3.4. LTE BAND 13

QPSK EIRP POWER FOR LTE BAND 13 (5.0MHZ BANDWIDTH)

High Frequency Substitution Measurement UL Fremont Radiated Chamber											
Company:											
Project #: 14U19187											
Date: 03/27/15											
Test Engineer: T Wang											
Configuration: EUT Only											
Mode: LTE Band 13, 5MHz QPSK											
Test Equipment:											
Substitution: Horn T59 Substitution, and 8ft SMA Cable											
Chamber			Pre-amplifier			Filter			Limit		
3m Chamber F			3m Chamber F			Filter			Part 27		
Frequency (GHz)	SA reading (dBm)	Ant. Pol. (H/V)	Distance	Path Loss @ SG End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta	Notes	
Low Channel (779.5MHz)											
1.559	-67.0	H	3.0	-22.5	33.7	1.0	-55.2	-40.0	-15.2	1559-1610MHz	
2.390	-64.3	H	3.0	-16.9	34.2	1.0	-50.0	-13.0	-37.0		
1.559	-66.3	V	3.0	-20.1	33.7	1.0	-52.7	-40.0	-12.7	1559-1610MHz	
2.390	-65.0	V	3.0	-16.9	34.2	1.0	-50.0	-13.0	-37.0		
Mid Channel (782MHz)											
1.564	-66.3	H	3.0	-23.4	33.8	1.0	-56.1	-40.0	-16.1	1559-1610MHz	
2.346	-64.8	H	3.0	-17.4	34.1	1.0	-50.5	-13.0	-37.5		
1.564	-66.2	V	3.0	-20.5	33.8	1.0	-53.3	-40.0	-13.3	1559-1610MHz	
2.346	-64.4	V	3.0	-16.4	34.1	1.0	-49.5	-13.0	-36.5		
High Channel (782MHz)											
1.569	-67.4	H	3.0	-22.9	33.7	1.0	-55.6	-40.0	-15.6	1559-1610MHz	
2.350	-63.7	H	3.0	-16.3	34.2	1.0	-49.4	-13.0	-36.4		
1.569	-66.1	V	3.0	-19.9	33.7	1.0	-52.5	-40.0	-12.5	1559-1610MHz	
2.350	-65.0	V	3.0	-16.9	34.2	1.0	-50.1	-13.0	-37.1		
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16QAM EIRP POWER FOR LTE BAND 13 (5.0MHZ BANDWIDTH)

**High Frequency Substitution Measurement
 UL Fremont Radiated Chamber**

Company:
Project #: 14U19187
Date: 03/27/15
Test Engineer: T Wang
Configuration: EUT Only
Mode: LTE Band 13, 5MHz 16QAM

Test Equipment:
 Substitution: Horn T59 Substitution, and 8ft SMA Cable

Chamber
3m Chamber F

Pre-amplifier
3m Chamber F

Filter
Filter

Limit
Part 27

Frequency (GHz)	SA reading (dBm)	Ant. Pol. (H/V)	Distance	Path Loss @ SG End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta	Notes
Low Channel (779.5MHz)										
1.559	-67.4	H	3.0	-22.9	33.7	1.0	-55.6	-40.0	-15.6	1559-1610MHz
2.390	-64.4	H	3.0	-17.0	34.2	1.0	-50.1	-13.0	-37.1	
1.559	-67.2	V	3.0	-21.0	33.7	1.0	-53.6	-40.0	-13.6	1559-1610MHz
2.390	-65.2	V	3.0	-17.1	34.2	1.0	-50.2	-13.0	-37.2	
Mid Channel (782MHz)										
1.564	-66.8	H	3.0	-23.9	33.8	1.0	-56.6	-40.0	-16.6	1559-1610MHz
2.346	-64.7	H	3.0	-17.3	34.1	1.0	-50.4	-13.0	-37.4	
1.564	-66.3	V	3.0	-20.6	33.8	1.0	-53.4	-40.0	-13.4	1559-1610MHz
2.346	-66.6	V	3.0	-18.6	34.1	1.0	-51.7	-13.0	-38.7	
Mid Channel (784.5MHz)										
1.569	-67.2	H	3.0	-22.7	33.7	1.0	-55.4	-40.0	-15.4	1559-1610MHz
2.350	-65.0	H	3.0	-17.6	34.2	1.0	-50.7	-13.0	-37.7	
1.569	-67.4	V	3.0	-21.2	33.7	1.0	-53.8	-40.0	-13.8	1559-1610MHz
2.350	-66.3	V	3.0	-18.2	34.2	1.0	-51.3	-13.0	-38.3	

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QPSK EIRP POWER FOR LTE BAND 13 (10.0MHZ BANDWIDTH)

High Frequency Substitution Measurement
UL Fremont Radiated Chamber

Company:
Project #: 14U19187
Date: 02/19/15
Test Engineer: F. Guarnero
Configuration: EUT Only
Mode: LTE Band 13, 10MHz QPSK

Test Equipment:
Substitution: Horn T59 Substitution, and 8ft SMA Cable

Chamber

3m Chamber F

Pre-amplifier

3m Chamber F

Filter

Filter

Limit

Part 27

Frequency (GHz)	SA reading (dBm)	Ant. Pol. (H/V)	Distance	Path Loss @ SG End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta	Notes
Mid Channel (782MHz)										
1.56	-67.5	H	3.0	-24.6	33.8	1.0	-57.3	-40.0	-17.3	
2.35	-64.7	H	3.0	-17.3	34.1	1.0	-50.4	-13.0	-37.4	
1.56	-66.7	V	3.0	-21.0	33.8	1.0	-53.8	-40.0	-13.8	
2.35	-64.8	V	3.0	-16.8	34.1	1.0	-49.9	-13.0	-36.9	

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16QAM EIRP POWER FOR LTE BAND 13 (10.0MHZ BANDWIDTH)

**High Frequency Substitution Measurement
 UL Fremont Radiated Chamber**

Company:
Project #: 14U19187
Date: 02/19/15
Test Engineer: F. Guarnero
Configuration: EUT Only
Mode: LTE Band 13, 10MHz 16QAM

Test Equipment:
 Substitution: Horn T59 Substitution, and 8ft SMA Cable

Chamber
3m Chamber F

Pre-amplifier
3m Chamber F

Filter
Filter

Limit
Part 27

Frequency (GHz)	SA reading (dBm)	Ant. Pol. (H/V)	Distance	Path Loss @ SG End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta	Notes
Mid Channel (782MHz)										
1.56	-67.7	H	3.0	-24.8	33.8	1.0	-57.5	-40.0	-17.5	
2.35	-64.9	H	3.0	-17.5	34.1	1.0	-50.6	-13.0	-37.6	
1.56	-67.0	V	3.0	-21.3	33.8	1.0	-54.1	-40.0	-14.1	
2.35	-64.9	V	3.0	-16.9	34.1	1.0	-50.0	-13.0	-37.0	

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9.3.5. LTE BAND 17

QPSK EIRP POWER FOR LTE BAND 17 (5.0MHZ BANDWIDTH)

High Frequency Substitution Measurement UL Fremont Radiated Chamber										
Company:										
Project #: 14U19187										
Date: 02/20/15										
Test Engineer: T Wang										
Configuration: EUT Only										
Mode: LTE Band 17, 5MHz QPSK										
Test Equipment:										
Substitution: Horn T59 Substitution, and 8ft SMA Cable										
Chamber			Pre-amplifier			Filter		Limit		
3m Chamber F			3m Chamber F			Filter		Part 27		
Frequency	SA reading (dBm)	Ant. Pol. (H/V)	Distance	Path Loss @ SG End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta	Notes
Low Channel (706.5MHz)										
1.413	-64.4	H	3.0	-22.3	34.0	1.0	-55.3	-13.0	-42.3	
2.119	-66.1	H	3.0	-20.6	34.0	1.0	-53.6	-13.0	-40.6	
2.435	-63.4	H	3.0	-16.3	34.1	1.0	-49.3	-13.0	-36.3	
1.413	-59.2	V	3.0	-14.3	34.0	1.0	-47.3	-13.0	-34.3	
2.119	-66.0	V	3.0	-18.9	34.0	1.0	-51.9	-13.0	-38.9	
2.437	-63.3	V	3.0	-15.4	34.1	1.0	-48.5	-13.0	-35.5	
Mid Channel (710MHz)										
1.420	-65.3	H	3.0	-23.1	34.0	1.0	-56.1	-13.0	-43.1	
2.130	-66.1	H	3.0	-20.5	34.0	1.0	-53.5	-13.0	-40.5	
2.460	-63.1	H	3.0	-15.9	34.1	1.0	-48.9	-13.0	-35.9	
1.420	-63.4	V	3.0	-18.4	34.0	1.0	-51.4	-13.0	-38.4	
2.130	-67.8	V	3.0	-20.7	34.0	1.0	-53.7	-13.0	-40.7	
2.576	-65.3	V	3.0	-17.0	34.2	1.0	-50.2	-13.0	-37.2	
High Channel (713.5)										
1.427	-64.9	H	3.0	-22.7	34.0	1.0	-55.7	-13.0	-42.7	
2.133	-66.6	H	3.0	-21.0	34.0	1.0	-54.0	-13.0	-41.0	
1.427	-58.4	V	3.0	-13.4	34.0	1.0	-46.4	-13.0	-33.4	
2.133	-65.1	V	3.0	-18.0	34.0	1.0	-51.0	-13.0	-38.0	
2.435	-62.7	V	3.0	-14.8	34.1	1.0	-47.9	-13.0	-34.9	
Rev. 09.04.14										

16QAM EIRP POWER FOR LTE BAND 17 (5.0MHZ BANDWIDTH)

High Frequency Substitution Measurement
UL Fremont Radiated Chamber

Company:
Project #: 14U19187
Date: 02/20/15
Test Engineer: T Wang
Configuration: EUT Only
Mode: LTE Band 17, 5MHz 16QAM

Test Equipment:
 Substitution: Horn T59 Substitution, and 8ft SMA Cable

Chamber
3m Chamber F

Pre-amplifier
3m Chamber F

Filter
Filter

Limit
Part 27

Frequency (GHz)	SA reading (dBm)	Ant. Pol. (H/V)	Distance	Path Loss @ SG End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta	Notes
Low Channel (706.5MHz)										
1.413	-65.5	H	3.0	-23.4	34.0	1.0	-56.4	-13.0	-43.4	
2.119	-67.2	H	3.0	-21.7	34.0	1.0	-54.7	-13.0	-41.7	
2.435	-64.3	H	3.0	-17.2	34.1	1.0	-50.2	-13.0	-37.2	
1.413	-60.3	V	3.0	-15.4	34.0	1.0	-48.4	-13.0	-35.4	
2.119	-66.9	V	3.0	-19.8	34.0	1.0	-52.8	-13.0	-39.8	
2.437	-64.4	V	3.0	-16.5	34.1	1.0	-49.6	-13.0	-36.6	
Mid Channel (710MHz)										
1.420	-66.3	H	3.0	-24.1	34.0	1.0	-57.1	-13.0	-44.1	
2.130	-67.0	H	3.0	-21.4	34.0	1.0	-54.4	-13.0	-41.4	
2.460	-64.2	H	3.0	-17.0	34.1	1.0	-50.0	-13.0	-37.0	
1.420	-64.4	V	3.0	-19.4	34.0	1.0	-52.4	-13.0	-39.4	
2.130	-68.5	V	3.0	-21.4	34.0	1.0	-54.4	-13.0	-41.4	
2.576	-66.2	V	3.0	-17.9	34.2	1.0	-51.1	-13.0	-38.1	
High Channel (713.5MHz)										
1.427	-65.8	H	3.0	-23.6	34.0	1.0	-56.6	-13.0	-43.6	
2.133	-67.7	H	3.0	-22.1	34.0	1.0	-55.1	-13.0	-42.1	
1.427	-59.3	V	3.0	-14.3	34.0	1.0	-47.3	-13.0	-34.3	
2.133	-66.2	V	3.0	-19.1	34.0	1.0	-52.1	-13.0	-39.1	
2.435	-63.6	V	3.0	-15.7	34.1	1.0	-48.8	-13.0	-35.8	

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QPSK EIRP POWER FOR LTE BAND 17 (10.0MHZ BANDWIDTH)

**High Frequency Substitution Measurement
 UL Fremont Radiated Chamber**

Company:
Project #: 14U19187
Date: 02/20/15
Test Engineer: T Wang
Configuration: EUT Only
Mode: LTE Band 17, 10MHz QPSK

Test Equipment:
 Substitution: Horn T59 Substitution, and 8ft SMA Cable

Chamber
3m Chamber F

Pre-amplifier
3m Chamber F

Filter
Filter

Limit
Part 27

Frequency (GHz)	SA reading (dBm)	Ant. Pol. (H/V)	Distance	Path Loss @ SG End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta	Notes
Low Channel (709MHz)										
1.418	-63.5	H	3.0	-21.3	34.0	1.0	-54.3	-13.0	-41.3	
2.127	-66.4	H	3.0	-20.9	34.0	1.0	-53.8	-13.0	-40.8	
2.435	-65.3	H	3.0	-18.2	34.1	1.0	-51.2	-13.0	-38.2	
1.418	-58.2	V	3.0	-13.3	34.0	1.0	-46.3	-13.0	-33.3	
2.127	-66.1	V	3.0	-19.0	34.0	1.0	-52.0	-13.0	-39.0	
2.659	-56.3	V	3.0	-7.7	34.3	1.0	-41.1	-13.0	-28.1	
Mid Channel (710MHz)										
1.420	-66.6	H	3.0	-24.4	34.0	1.0	-57.4	-13.0	-44.4	
2.130	-66.7	H	3.0	-21.1	34.0	1.0	-54.1	-13.0	-41.1	
2.440	-64.9	H	3.0	-17.8	34.1	1.0	-50.8	-13.0	-37.8	
1.420	-62.4	V	3.0	-17.4	34.0	1.0	-50.4	-13.0	-37.4	
2.130	-66.2	V	3.0	-19.1	34.0	1.0	-52.1	-13.0	-39.1	
2.437	-64.2	V	3.0	-16.3	34.1	1.0	-49.4	-13.0	-36.4	
High Channel (711MHz)										
1.422	-66.9	H	3.0	-24.7	34.0	1.0	-57.7	-13.0	-44.7	
2.133	-66.6	H	3.0	-21.0	34.0	1.0	-54.0	-13.0	-41.0	
2.437	-63.7	H	3.0	-16.6	34.1	1.0	-49.6	-13.0	-36.6	
1.422	-59.5	V	3.0	-14.5	34.0	1.0	-47.5	-13.0	-34.5	
2.133	-66.4	V	3.0	-19.3	34.0	1.0	-52.3	-13.0	-39.3	
2.439	-64.2	V	3.0	-16.3	34.1	1.0	-49.4	-13.0	-36.4	

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16QAM EIRP POWER FOR LTE BAND 17 (10.0MHZ BANDWIDTH)

High Frequency Substitution Measurement
UL Fremont Radiated Chamber

Company:
Project #: 14U19187
Date: 02/20/15
Test Engineer: T Wang
Configuration: EUT Only
Mode: LTE Band 17, 10MHz 16QAM

Test Equipment:
 Substitution: Horn T59 Substitution, and 8ft SMA Cable

Chamber
3m Chamber F

Pre-amplifier
3m Chamber F

Filter
Filter

Limit
Part 27

Frequency (GHz)	SA reading (dBm)	Ant. Pol. (H/V)	Distance	Path Loss @ SG End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta	Notes
Low Channel (709MHz)										
1.418	-64.4	H	3.0	-22.2	34.0	1.0	-55.2	-13.0	42.2	
2.217	-67.3	H	3.0	-21.3	34.0	1.0	-54.3	-13.0	41.3	
2.435	-66.4	H	3.0	-19.3	34.1	1.0	-52.3	-13.0	39.3	
1.418	-59.1	V	3.0	-14.2	34.0	1.0	47.2	-13.0	34.2	
2.217	-67.0	V	3.0	-19.7	34.0	1.0	-52.7	-13.0	39.7	
2.659	-57.6	V	3.0	-9.0	34.3	1.0	-42.4	-13.0	29.4	
Mid Channel (710MHz)										
1.420	-67.5	H	3.0	-25.3	34.0	1.0	-58.3	-13.0	45.3	
2.130	-67.6	H	3.0	-22.0	34.0	1.0	-55.0	-13.0	42.0	
2.440	-65.9	H	3.0	-18.8	34.1	1.0	-51.8	-13.0	38.8	
1.420	-63.5	V	3.0	-18.5	34.0	1.0	-51.5	-13.0	38.5	
2.130	-67.2	V	3.0	-20.1	34.0	1.0	-53.1	-13.0	40.1	
2.437	-65.3	V	3.0	-17.4	34.1	1.0	-50.5	-13.0	37.5	
High Channel (711MHz)										
1.422	-67.8	H	3.0	-25.6	34.0	1.0	-58.6	-13.0	45.6	
2.133	-67.6	H	3.0	-22.0	34.0	1.0	-55.0	-13.0	42.0	
2.437	-64.7	H	3.0	-17.6	34.1	1.0	-50.6	-13.0	37.6	
1.422	-60.5	V	3.0	-15.5	34.0	1.0	-48.5	-13.0	35.5	
2.133	-67.4	V	3.0	-20.3	34.0	1.0	-53.3	-13.0	40.3	
2.439	-65.1	V	3.0	-17.2	34.1	1.0	-50.3	-13.0	37.3	

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9.3.6. LTE BAND 25

QPSK EIRP POWER FOR LTE BAND 25 (1.4MHZ BANDWIDTH)

High Frequency Substitution Measurement
UL Fremont Radiated Chamber

Company:
Project #: 14U19187
Date: 02/19/15
Test Engineer: T Wang
Configuration: EUT Only
Mode: LTE Band 25, 1.4MHz QPSK

Test Equipment:
 Substitution: Horn T59 Substitution, and 8ft SMA Cable

Chamber

Pre-amplifier

Filter

Limit

3m Chamber F

3m Chamber F

Filter

Part 24

Frequency (GHz)	SA reading (dBm)	Ant. Pol. (H/V)	Distance	Path Loss @ SG End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta	Notes
Low Channel (1850.7MHz)										
3.701	-65.1	H	3.0	-14.1	34.4	1.0	-47.5	-13.0	-34.5	
5.552	-65.0	H	3.0	-11.3	34.1	1.0	-44.4	-13.0	-31.4	
3.701	-65.3	V	3.0	-14.2	34.4	1.0	-47.6	-13.0	-34.6	
5.552	-65.9	V	3.0	-12.0	34.1	1.0	-45.1	-13.0	-32.1	
Mid Channel (1882.5MHz)										
3.765	-65.0	H	3.0	-13.8	34.4	1.0	-47.2	-13.0	-34.2	
5.648	-66.4	H	3.0	-12.6	34.1	1.0	-45.7	-13.0	-32.7	
3.765	-64.6	V	3.0	-13.3	34.4	1.0	-46.7	-13.0	-33.7	
5.648	-65.4	V	3.0	-11.4	34.1	1.0	-44.5	-13.0	-31.5	
High Channel (1914.3MHz)										
3.829	-64.7	H	3.0	-13.4	34.4	1.0	-46.7	-13.0	-33.7	
5.743	-65.9	H	3.0	-11.9	34.1	1.0	-45.0	-13.0	-32.0	
3.829	-64.1	V	3.0	-12.7	34.4	1.0	-46.1	-13.0	-33.1	
5.743	-67.5	V	3.0	-13.4	34.1	1.0	-46.5	-13.0	-33.5	

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16QAM EIRP POWER FOR LTE BAND 25 (1.4MHZ BANDWIDTH)

High Frequency Substitution Measurement
UL Fremont Radiated Chamber

Company:
Project #: 14U19187
Date: 02/19/15
Test Engineer: T Wang
Configuration: EUT Only
Mode: LTE Band 25, 1.4MHz 16QAM

Test Equipment:
 Substitution: Horn T59 Substitution, and 8ft SMA Cable

Chamber
3m Chamber F

Pre-amplifier
3m Chamber F

Filter
Filter

Limit
Part 24

Frequency (GHz)	SA reading (dBm)	Ant. Pol. (H/V)	Distance	Path Loss @ SG End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta	Notes
Low Channel (1850.7MHz)										
3.701	-66.2	H	3.0	-15.2	34.4	1.0	-48.6	-13.0	-35.6	
5.552	-66.0	H	3.0	-12.3	34.1	1.0	-45.4	-13.0	-32.4	
3.701	-66.2	V	3.0	-15.1	34.4	1.0	-48.5	-13.0	-35.5	
5.552	-66.8	V	3.0	-12.9	34.1	1.0	-46.0	-13.0	-33.0	
Mid Channel (1882.5MHz)										
3.765	-66.1	H	3.0	-14.9	34.4	1.0	-48.3	-13.0	-35.3	
5.648	-67.3	H	3.0	-13.5	34.1	1.0	-46.6	-13.0	-33.6	
3.765	-65.7	V	3.0	-14.4	34.4	1.0	-47.8	-13.0	-34.8	
5.648	-66.4	V	3.0	-12.4	34.1	1.0	-45.5	-13.0	-32.5	
High Channel (1914.3MHz)										
3.829	-65.6	H	3.0	-14.3	34.4	1.0	-47.6	-13.0	-34.6	
5.743	-66.7	H	3.0	-12.7	34.1	1.0	-45.8	-13.0	-32.8	
3.829	-65.2	V	3.0	-13.8	34.4	1.0	-47.2	-13.0	-34.2	
5.743	-68.1	V	3.0	-14.0	34.1	1.0	-47.1	-13.0	-34.1	

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QPSK EIRP POWER FOR LTE BAND 25 (3.0MHZ BANDWIDTH)

High Frequency Substitution Measurement
UL Fremont Radiated Chamber

Company:
Project #: 14U19187
Date: 02/19/15
Test Engineer: T Wang
Configuration: EUT Only
Mode: LTE Band 25, 3MHz QPSK

Test Equipment:
 Substitution: Horn T59 Substitution, and 8ft SMA Cable

Chamber

Pre-amplifier

Filter

Limit

3m Chamber F

3m Chamber F

Filter

Part 24

Frequency (GHz)	SA reading (dBm)	Ant. Pol. (H/V)	Distance	Path Loss @ SG End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta	Notes
Low Channel (1851.5MHz)										
3.703	-65.1	H	3.0	-14.1	34.4	1.0	-47.5	-13.0	-34.5	
5.555	-65.4	H	3.0	-11.7	34.1	1.0	-44.8	-13.0	-31.8	
3.703	-65.0	V	3.0	-13.9	34.4	1.0	-47.3	-13.0	-34.3	
5.555	-66.2	V	3.0	-12.3	34.1	1.0	-45.4	-13.0	-32.4	
Mid Channel (1882.5MHz)										
3.765	-64.9	H	3.0	-13.7	34.4	1.0	-47.1	-13.0	-34.1	
5.648	-66.2	H	3.0	-12.4	34.1	1.0	-45.5	-13.0	-32.5	
3.765	-64.3	V	3.0	-13.0	34.4	1.0	-46.4	-13.0	-33.4	
5.648	-66.5	V	3.0	-12.5	34.1	1.0	-45.6	-13.0	-32.6	
High Channel (1913.5MHz)										
3.827	-65.2	H	3.0	-13.9	34.4	1.0	-47.2	-13.0	-34.2	
5.741	-66.5	H	3.0	-12.5	34.1	1.0	-45.6	-13.0	-32.6	
3.827	-64.4	V	3.0	-13.0	34.4	1.0	-46.4	-13.0	-33.4	
5.741	-67.0	V	3.0	-12.9	34.1	1.0	-46.0	-13.0	-33.0	

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16QAM EIRP POWER FOR LTE BAND 25 (3.0MHZ BANDWIDTH)

**High Frequency Substitution Measurement
 UL Fremont Radiated Chamber**

Company:
Project #: 14U19187
Date: 02/19/15
Test Engineer: T Wang
Configuration: EUT Only
Mode: LTE Band 25, 3MHz 16QAM

Test Equipment:
 Substitution: Horn T59 Substitution, and 8ft SMA Cable

Chamber
3m Chamber F

Pre-amplifier
3m Chamber F

Filter
Filter

Limit
Part 24

Frequency (GHz)	SA reading (dBm)	Ant. Pol. (H/V)	Distance	Path Loss @ SG End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta	Notes
Low Channel (1851.5MHz)										
3.703	-66.0	H	3.0	-15.0	34.4	1.0	-48.4	-13.0	-35.4	
5.555	-66.3	H	3.0	-12.6	34.1	1.0	-45.7	-13.0	-32.7	
3.703	-66.1	V	3.0	-15.0	34.4	1.0	-48.4	-13.0	-35.4	
5.555	-67.1	V	3.0	-13.2	34.1	1.0	-46.3	-13.0	-33.3	
Mid Channel (1882.5MHz)										
3.765	-65.9	H	3.0	-14.7	34.4	1.0	-48.1	-13.0	-35.1	
5.648	-67.0	H	3.0	-13.2	34.1	1.0	-46.3	-13.0	-33.3	
3.765	-65.4	V	3.0	-14.1	34.4	1.0	-47.5	-13.0	-34.5	
5.648	-67.3	V	3.0	-13.3	34.1	1.0	-46.4	-13.0	-33.4	
High Channel (1913.5MHz)										
3.827	-66.2	H	3.0	-14.9	34.4	1.0	-48.2	-13.0	-35.2	
5.741	-67.4	H	3.0	-13.4	34.1	1.0	-46.5	-13.0	-33.5	
3.827	-65.5	V	3.0	-14.1	34.4	1.0	-47.5	-13.0	-34.5	
5.741	-67.9	V	3.0	-13.8	34.1	1.0	-46.9	-13.0	-33.9	

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QPSK EIRP POWER FOR LTE BAND 25 (5.0MHZ BANDWIDTH)

High Frequency Substitution Measurement
UL Fremont Radiated Chamber

Company:
Project #: 14U19187
Date: 02/19/15
Test Engineer: T Wang
Configuration: EUT Only
Mode: LTE Band 25, 5MHz QPSK

Test Equipment:
 Substitution: Horn T59 Substitution, and 8ft SMA Cable

Chamber

Pre-amplifier

Filter

Limit

3m Chamber F

3m Chamber F

Filter

Part 24

Frequency (GHz)	SA reading (dBm)	Ant. Pol. (H/V)	Distance	Path Loss @ SG End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta	Notes
Low Channel (1852.5MHz)										
3.705	-64.9	H	3.0	-13.9	34.4	1.0	-47.3	-13.0	-34.3	
5.065	-65.5	H	3.0	-12.5	34.2	1.0	-45.6	-13.0	-32.6	
3.705	-64.4	V	3.0	-13.3	34.4	1.0	-46.7	-13.0	-33.7	
5.065	-65.1	V	3.0	-11.8	34.2	1.0	-45.0	-13.0	-32.0	
Mid Channel (1882.5MHz)										
3.765	-65.0	H	3.0	-13.8	34.4	1.0	-47.2	-13.0	-34.2	
5.648	-66.4	H	3.0	-12.6	34.1	1.0	-45.7	-13.0	-32.7	
3.765	-64.8	V	3.0	-13.5	34.4	1.0	-46.9	-13.0	-33.9	
5.648	-65.9	V	3.0	-11.9	34.1	1.0	-45.0	-13.0	-32.0	
High Channel (1912.5MHz)										
3.825	-64.7	H	3.0	-13.4	34.4	1.0	-46.7	-13.0	-33.7	
5.738	-67.1	H	3.0	-13.1	34.1	1.0	-46.2	-13.0	-33.2	
3.825	-63.5	V	3.0	-12.1	34.4	1.0	-45.5	-13.0	-32.5	
5.738	-67.4	V	3.0	-13.3	34.1	1.0	-46.4	-13.0	-33.4	

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16QAM EIRP POWER FOR LTE BAND 25 (5.0MHZ BANDWIDTH)

**High Frequency Substitution Measurement
 UL Fremont Radiated Chamber**

Company:
Project #: 14U19187
Date: 02/19/15
Test Engineer: T Wang
Configuration: EUT Only
Mode: LTE Band 25, 5MHz 16QAM

Test Equipment:
 Substitution: Horn T59 Substitution, and 8ft SMA Cable

Chamber

3m Chamber F

Pre-amplifier

3m Chamber F

Filter

Filter

Limit

Part 24

Frequency (GHz)	SA reading (dBm)	Ant. Pol. (H/V)	Distance	Path Loss @ SG End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta	Notes
Low Channel (1852.5MHz)										
3.705	-66.0	H	3.0	-15.0	34.4	1.0	-48.4	-13.0	-35.4	
5.065	-66.5	H	3.0	-13.5	34.2	1.0	-46.6	-13.0	-33.6	
3.705	-65.3	V	3.0	-14.2	34.4	1.0	-47.6	-13.0	-34.6	
5.065	-66.2	V	3.0	-12.9	34.2	1.0	-46.1	-13.0	-33.1	
Mid Channel (1882.5MHz)										
3.765	-66.1	H	3.0	-14.9	34.4	1.0	-48.3	-13.0	-35.3	
5.648	-67.3	H	3.0	-13.5	34.1	1.0	-46.6	-13.0	-33.6	
3.765	-65.8	V	3.0	-14.5	34.4	1.0	-47.9	-13.0	-34.9	
5.648	-66.8	V	3.0	-12.8	34.1	1.0	-45.9	-13.0	-32.9	
High Channel (1912.5MHz)										
3.825	-65.7	H	3.0	-14.4	34.4	1.0	-47.7	-13.0	-34.7	
5.738	-68.0	H	3.0	-14.0	34.1	1.0	-47.1	-13.0	-34.1	
3.825	-64.4	V	3.0	-13.0	34.4	1.0	-46.4	-13.0	-33.4	
5.738	-68.3	V	3.0	-14.2	34.1	1.0	-47.3	-13.0	-34.3	

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QPSK EIRP POWER FOR LTE BAND 25 (10.0MHZ BANDWIDTH)

**High Frequency Substitution Measurement
 UL Fremont Radiated Chamber**

Company:
Project #: 14U19187
Date: 02/19/15
Test Engineer: T Wang
Configuration: EUT Only
Mode: LTE Band 25, 10MHz QPSK

Test Equipment:
 Substitution: Horn T59 Substitution, and 8ft SMA Cable

Chamber
3m Chamber F

Pre-amplifier
3m Chamber F

Filter
Filter

Limit
Part 24

Frequency (GHz)	SA reading (dBm)	Ant. Pol. (H/V)	Distance	Path Loss @ SG End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta	Notes
Low Channel (1855MHz)										
3.710	-65.0	H	3.0	-14.0	34.4	1.0	-47.4	-13.0	-34.4	
5.565	-65.7	H	3.0	-12.0	34.1	1.0	-45.1	-13.0	-32.1	
3.710	-64.6	V	3.0	-13.4	34.4	1.0	-46.9	-13.0	-33.9	
5.565	-65.6	V	3.0	-11.7	34.1	1.0	-44.8	-13.0	-31.8	
Mid Channel (1882.5MHz)										
3.765	-64.9	H	3.0	-13.7	34.4	1.0	-47.1	-13.0	-34.1	
5.648	-65.8	H	3.0	-12.0	34.1	1.0	-45.1	-13.0	-32.1	
3.765	-64.6	V	3.0	-13.3	34.4	1.0	-46.7	-13.0	-33.7	
5.648	-66.0	V	3.0	-12.0	34.1	1.0	-45.1	-13.0	-32.1	
High Channel (1910MHz)										
3.820	-64.6	H	3.0	-13.3	34.4	1.0	-46.7	-13.0	-33.7	
5.730	-66.6	H	3.0	-12.6	34.1	1.0	-45.7	-13.0	-32.7	
3.820	-64.8	V	3.0	-13.4	34.4	1.0	-46.8	-13.0	-33.8	
5.730	-66.5	V	3.0	-12.4	34.1	1.0	-45.5	-13.0	-32.5	

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16QAM EIRP POWER FOR LTE BAND 25 (10.0MHZ BANDWIDTH)

High Frequency Substitution Measurement
UL Fremont Radiated Chamber

Company:
Project #: 14U19187
Date: 02/19/15
Test Engineer: T Wang
Configuration: EUT Only
Mode: LTE Band 25, 10MHz 16QAM

Test Equipment:
 Substitution: Horn T59 Substitution, and 8ft SMA Cable

Chamber

Pre-amplifier

Filter

Limit

3m Chamber F

3m Chamber F

Filter

Part 24

Frequency (GHz)	SA reading (dBm)	Ant. Pol. (H/V)	Distance	Path Loss @ SG End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta	Notes
Low Channel (1855MHz)										
3.710	-66.0	H	3.0	-15.0	34.4	1.0	-48.4	-13.0	-35.4	
5.565	-66.8	H	3.0	-13.1	34.1	1.0	-46.2	-13.0	-33.2	
3.710	-65.7	V	3.0	-14.5	34.4	1.0	-48.0	-13.0	-35.0	
5.565	-66.5	V	3.0	-12.6	34.1	1.0	-45.7	-13.0	-32.7	
Mid Channel (1882.5MHz)										
3.765	-65.9	H	3.0	-14.7	34.4	1.0	-48.1	-13.0	-35.1	
5.648	-66.7	H	3.0	-12.9	34.1	1.0	-46.0	-13.0	-33.0	
3.765	-65.7	V	3.0	-14.4	34.4	1.0	-47.8	-13.0	-34.8	
5.648	-66.9	V	3.0	-12.9	34.1	1.0	-46.0	-13.0	-33.0	
High Channel (1910MHz)										
3.820	-65.7	H	3.0	-14.4	34.4	1.0	-47.8	-13.0	-34.8	
5.730	-67.4	H	3.0	-13.4	34.1	1.0	-46.5	-13.0	-33.5	
3.820	-65.8	V	3.0	-14.4	34.4	1.0	-47.8	-13.0	-34.8	
5.730	-67.7	V	3.0	-13.6	34.1	1.0	-46.7	-13.0	-33.7	

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QPSK EIRP POWER FOR LTE BAND 25 (15.0MHZ BANDWIDTH)

High Frequency Substitution Measurement
UL Fremont Radiated Chamber

Company: 14U19187
Project #: 02/19/15
Date: T Wang
Test Engineer: EUT Only
Configuration: LTE Band 25, 15MHz QPSK
Mode: LTE Band 25, 15MHz QPSK

Test Equipment:
 Substitution: Horn T59 Substitution, and 8ft SMA Cable

Chamber
 3m Chamber F

Pre-amplifer
 3m Chamber F

Filter
 Filter

Limit
 Part 24

Frequency (GHz)	SA reading (dBm)	Ant. Pol. (H/V)	Distance	Path Loss @ SG End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta	Notes
Low Channel (1857.5MHz)										
3.715	-66.8	H	3.0	-15.7	34.4	1.0	-49.2	-13.0	-36.2	
5.573	-67.7	H	3.0	-14.0	34.1	1.0	-47.1	-13.0	-34.1	
3.715	-67.0	V	3.0	-15.8	34.4	1.0	-49.3	-13.0	-36.3	
5.573	-68.6	V	3.0	-14.7	34.1	1.0	-47.8	-13.0	-34.8	
Mid Channel (1882.5MHz)										
3.765	-67.1	H	3.0	-15.9	34.4	1.0	-49.3	-13.0	-36.3	
5.648	-67.8	H	3.0	-14.0	34.1	1.0	-47.1	-13.0	-34.1	
3.765	-66.5	V	3.0	-15.2	34.4	1.0	-48.6	-13.0	-35.6	
5.648	-68.3	V	3.0	-14.3	34.1	1.0	-47.4	-13.0	-34.4	
High Channel (1907.5MHz)										
3.815	-66.6	H	3.0	-15.3	34.4	1.0	-48.7	-13.0	-35.7	
5.723	-68.0	H	3.0	-14.1	34.1	1.0	-47.2	-13.0	-34.2	
3.815	-66.7	V	3.0	-15.3	34.4	1.0	-48.7	-13.0	-35.7	
5.723	-68.4	V	3.0	-14.3	34.1	1.0	-47.4	-13.0	-34.4	

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16QAM EIRP POWER FOR LTE BAND 25 (15.0MHZ BANDWIDTH)

**High Frequency Substitution Measurement
 UL Fremont Radiated Chamber**

Company:
Project #: 14U19187
Date: 02/19/15
Test Engineer: T Wang
Configuration: EUT Only
Mode: LTE Band 25, 15MHz 16QAM

Test Equipment:
 Substitution: Horn T59 Substitution, and 8ft SMA Cable

Chamber

Pre-amplifier

Filter

Limit

3m Chamber F

3m Chamber F

Filter

Part 24

Frequency (GHz)	SA reading (dBm)	Ant. Pol. (H/V)	Distance	Path Loss @ SG End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta	Notes
Low Channel (1857.5MHz)										
3.715	-67.9	H	3.0	-16.8	34.4	1.0	-50.3	-13.0	-37.3	
5.573	-68.8	H	3.0	-15.1	34.1	1.0	-48.2	-13.0	-35.2	
3.715	-68.1	V	3.0	-16.9	34.4	1.0	-50.4	-13.0	-37.4	
5.573	-69.5	V	3.0	-15.6	34.1	1.0	-48.7	-13.0	-35.7	
Mid Channel (1882.5MHz)										
3.765	-68.0	H	3.0	-16.8	34.4	1.0	-50.2	-13.0	-37.2	
5.648	-68.6	H	3.0	-14.8	34.1	1.0	-47.9	-13.0	-34.9	
3.765	-67.5	V	3.0	-16.2	34.4	1.0	-49.6	-13.0	-36.6	
5.648	-69.2	V	3.0	-15.2	34.1	1.0	-48.3	-13.0	-35.3	
High Channel (1907.5MHz)										
3.815	-67.7	H	3.0	-16.4	34.4	1.0	-49.8	-13.0	-36.8	
5.723	-68.9	H	3.0	-15.0	34.1	1.0	-48.1	-13.0	-35.1	
3.815	-67.8	V	3.0	-16.4	34.4	1.0	-49.8	-13.0	-36.8	
5.723	-69.5	V	3.0	-15.4	34.1	1.0	-48.5	-13.0	-35.5	
Rev. 09.04.14										

QPSK EIRP POWER FOR LTE BAND 25 (20.0MHZ BANDWIDTH)

**High Frequency Substitution Measurement
 UL Fremont Radiated Chamber**

Company:
Project #: 14U19187
Date: 02/19/15
Test Engineer: T Wang
Configuration: EUT Only
Mode: LTE Band 25, 20MHz QPSK

Test Equipment:
 Substitution: Horn T59 Substitution, and 8ft SMA Cable

Chamber

Pre-amplifier

Filter

Limit

3m Chamber F

3m Chamber F

Filter

Part 24

Frequency (GHz)	SA reading (dBm)	Ant. Pol. (H/V)	Distance	Path Loss @ SG End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta	Notes
Low Channel (1860MHz)										
3.720	-66.9	H	3.0	-15.8	34.4	1.0	-49.3	-13.0	-36.3	
5.580	-67.2	H	3.0	-13.5	34.1	1.0	-46.6	-13.0	-33.6	
3.720	-66.2	V	3.0	-15.0	34.4	1.0	-48.5	-13.0	-35.5	
5.580	-67.3	V	3.0	-13.4	34.1	1.0	-46.5	-13.0	-33.5	
Mid Channel (1882.5MHz)										
3.765	-66.5	H	3.0	-15.3	34.4	1.0	-48.7	-13.0	-35.7	
5.648	-67.4	H	3.0	-13.6	34.1	1.0	-46.7	-13.0	-33.7	
3.765	-66.1	V	3.0	-14.8	34.4	1.0	-48.2	-13.0	-35.2	
5.648	-67.7	V	3.0	-13.7	34.1	1.0	-46.8	-13.0	-33.8	
High Channel (1905MHz)										
3.810	-66.4	H	3.0	-15.1	34.4	1.0	-48.5	-13.0	-35.5	
5.715	-68.3	H	3.0	-14.4	34.1	1.0	-47.5	-13.0	-34.5	
3.810	-66.5	V	3.0	-15.1	34.4	1.0	-48.5	-13.0	-35.5	
5.715	-68.0	V	3.0	-13.9	34.1	1.0	-47.0	-13.0	-34.0	

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16QAM EIRP POWER FOR LTE BAND 25 (20.0MHZ BANDWIDTH)

**High Frequency Substitution Measurement
 UL Fremont Radiated Chamber**

Company:
Project #: 14U19187
Date: 02/19/15
Test Engineer: T Wang
Configuration: EUT Only
Mode: LTE Band 25, 20MHz 16QAM

Test Equipment:
 Substitution: Horn T59 Substitution, and 8ft SMA Cable

Chamber

Pre-amplifier

Filter

Limit

3m Chamber F

3m Chamber F

Filter

Part 24

Frequency (GHz)	SA reading (dBm)	Ant. Pol. (H/V)	Distance	Path Loss @ SG End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta	Notes
Low Channel (1860MHz)										
3.720	-68.0	H	3.0	-16.9	34.4	1.0	-50.4	-13.0	-37.4	
5.580	-68.1	H	3.0	-14.4	34.1	1.0	-47.5	-13.0	-34.5	
3.720	-67.3	V	3.0	-16.1	34.4	1.0	-49.6	-13.0	-36.6	
5.580	-68.4	V	3.0	-14.5	34.1	1.0	-47.6	-13.0	-34.6	
Mid Channel (1882.5MHz)										
3.765	-67.5	H	3.0	-16.3	34.4	1.0	-49.7	-13.0	-36.7	
5.648	-68.3	H	3.0	-14.5	34.1	1.0	-47.6	-13.0	-34.6	
3.765	-67.2	V	3.0	-15.9	34.4	1.0	-49.3	-13.0	-36.3	
5.648	-68.6	V	3.0	-14.6	34.1	1.0	-47.7	-13.0	-34.7	
High Channel (1905MHz)										
3.810	-67.5	H	3.0	-16.2	34.4	1.0	-49.6	-13.0	-36.6	
5.715	-69.0	H	3.0	-15.1	34.1	1.0	-48.2	-13.0	-35.2	
3.810	-67.6	V	3.0	-16.2	34.4	1.0	-49.6	-13.0	-36.6	
5.715	-69.1	V	3.0	-15.0	34.1	1.0	-48.1	-13.0	-35.1	

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9.3.7. LTE BAND 26

QPSK EIRP POWER FOR LTE BAND 26 (1.4MHZ BANDWIDTH)

High Frequency Substitution Measurement
UL Fremont Radiated Chamber

Company:
Project #: 14U19187
Date: 03/20/15
Test Engineer: T Wang
Configuration: EUT only
Mode: LTE Band 26, 1.4MHz QPSK

Test Equipment:
 Substitution: Horn T59 Substitution, and 8ft SMA Cable

Chamber

3m Chamber F

Pre-amplifier

3m Chamber F

Filter

Filter

Limit

Part 90

Frequency (GHz)	SA reading (dBm)	Ant. Pol. (H/V)	Distance	Path Loss @ SG End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta	Notes
Low Channel (814.7MHz)										
1.629	-62.6	H	3.0	-19.6	33.9	1.0	-52.5	-13.0	-39.5	
2.444	-65.2	H	3.0	-18.0	34.1	1.0	-51.1	-13.0	-38.1	
3.254	-65.8	H	3.0	-15.9	34.7	1.0	-49.6	-13.0	-36.6	
1.629	-61.2	V	3.0	-15.4	33.9	1.0	-48.2	-13.0	-35.2	
2.444	-65.3	V	3.0	-17.4	34.1	1.0	-50.5	-13.0	-37.5	
3.254	-65.9	V	3.0	-15.7	34.7	1.0	-49.4	-13.0	-36.4	
Mid Channel (819MHz)										
1.638	-63.9	H	3.0	-20.9	33.9	1.0	-53.7	-13.0	-40.7	
2.457	-65.5	H	3.0	-18.3	34.1	1.0	-51.3	-13.0	-38.3	
3.276	-66.0	H	3.0	-16.0	34.7	1.0	-49.7	-13.0	-36.7	
1.638	-59.4	V	3.0	-13.6	33.9	1.0	-46.4	-13.0	-33.4	
2.457	-65.6	V	3.0	-17.6	34.1	1.0	-50.7	-13.0	-37.7	
3.276	-66.5	V	3.0	-16.3	34.7	1.0	-50.0	-13.0	-37.0	
High Channel (823.3MHz)										
1.647	-62.4	H	3.0	-19.3	33.9	1.0	-52.2	-13.0	-39.2	
2.470	-65.8	H	3.0	-18.5	34.1	1.0	-51.6	-13.0	-38.6	
3.293	-65.8	H	3.0	-15.8	34.7	1.0	-49.5	-13.0	-36.5	
1.647	-60.9	V	3.0	-15.0	33.9	1.0	-47.9	-13.0	-34.9	
2.470	-65.5	V	3.0	-17.5	34.1	1.0	-50.6	-13.0	-37.6	
3.293	-65.9	V	3.0	-15.7	34.7	1.0	-49.3	-13.0	-36.3	

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16QAM EIRP POWER FOR LTE BAND 26 (1.4MHZ BANDWIDTH)

**High Frequency Substitution Measurement
 UL Fremont Radiated Chamber**

Company:
Project #: 14U19187
Date: 03/20/15
Test Engineer: T Wang
Configuration: EUT only
Mode: LTE Band 26, 1.4MHz 16QAM

Test Equipment:
 Substitution: Horn T59 Substitution, and 8ft SMA Cable

Chamber

Pre-amplifier

Filter

Limit

3m Chamber F

3m Chamber F

Filter

Part 90

Frequency (GHz)	SA reading (dBm)	Ant. Pol. (H/V)	Distance	Path Loss @ SG End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta	Notes
Low Channel (814.7MHz)										
1.629	-62.4	H	3.0	-19.4	33.9	1.0	-52.3	-13.0	-39.3	
2.444	-66.2	H	3.0	-19.0	34.1	1.0	-52.1	-13.0	-39.1	
3.254	-66.4	H	3.0	-16.5	34.7	1.0	-50.2	-13.0	-37.2	
1.629	-61.6	V	3.0	-15.8	33.9	1.0	-48.6	-13.0	-35.6	
2.444	-66.1	V	3.0	-18.2	34.1	1.0	-51.3	-13.0	-38.3	
3.254	-65.4	V	3.0	-15.2	34.7	1.0	-48.9	-13.0	-35.9	
Mid Channel (819MHz)										
1.638	-63.7	H	3.0	-20.7	33.9	1.0	-53.5	-13.0	-40.5	
2.457	-66.1	H	3.0	-18.9	34.1	1.0	-51.9	-13.0	-38.9	
3.276	-66.6	H	3.0	-16.6	34.7	1.0	-50.3	-13.0	-37.3	
1.638	-58.8	V	3.0	-13.0	33.9	1.0	-45.8	-13.0	-32.8	
2.457	-66.3	V	3.0	-18.3	34.1	1.0	-51.4	-13.0	-38.4	
3.276	-66.2	V	3.0	-16.0	34.7	1.0	-49.7	-13.0	-36.7	
High Channel (823.3MHz)										
1.647	-62.4	H	3.0	-19.3	33.9	1.0	-52.2	-13.0	-39.2	
2.470	-65.8	H	3.0	-18.5	34.1	1.0	-51.6	-13.0	-38.6	
3.293	-65.8	H	3.0	-15.8	34.7	1.0	-49.5	-13.0	-36.5	
1.647	-61.8	V	3.0	-15.9	33.9	1.0	-48.8	-13.0	-35.8	
2.470	-66.1	V	3.0	-18.1	34.1	1.0	-51.2	-13.0	-38.2	
3.293	-65.9	V	3.0	-15.7	34.7	1.0	-49.3	-13.0	-36.3	

Rev. 09.04.14

QPSK EIRP POWER FOR LTE BAND 26 (3.0MHZ BANDWIDTH)

**High Frequency Substitution Measurement
 UL Fremont Radiated Chamber**

Company:
Project #: 14U19187
Date: 03/20/15
Test Engineer: T Wang
Configuration: EUT only
Mode: LTE Band 26, 3MHz QPSK

Test Equipment:
 Substitution: Horn T59 Substitution, and 8ft SMA Cable

Chamber

Pre-amplifier

Filter

Limit

3m Chamber F

3m Chamber F

Filter

Part 90

Frequency (GHz)	SA reading (dBm)	Ant. Pol. (H/V)	Distance	Path Loss @ SG End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta	Notes
Low Channel (815.5MHz)										
1.631	-60.5	H	3.0	-17.5	33.9	1.0	-50.4	-13.0	-37.4	
2.446	-66.1	H	3.0	-18.9	34.1	1.0	-52.0	-13.0	-39.0	
3.232	-65.9	H	3.0	-16.1	34.7	1.0	-49.7	-13.0	-36.7	
1.631	-59.7	V	3.0	-13.9	33.9	1.0	-46.7	-13.0	-33.7	
2.446	-66.2	V	3.0	-18.3	34.1	1.0	-51.3	-13.0	-38.3	
3.232	-65.7	V	3.0	-15.6	34.7	1.0	-49.3	-13.0	-36.3	
Mid Channel (819MHz)										
1.638	-62.3	H	3.0	-19.3	33.9	1.0	-52.1	-13.0	-39.1	
2.457	-66.0	H	3.0	-18.8	34.1	1.0	-51.8	-13.0	-38.8	
3.276	-66.1	H	3.0	-16.1	34.7	1.0	-49.8	-13.0	-36.8	
1.638	-59.2	V	3.0	-13.4	33.9	1.0	-46.2	-13.0	-33.2	
2.457	-65.2	V	3.0	-17.2	34.1	1.0	-50.3	-13.0	-37.3	
3.276	-66.3	V	3.0	-16.1	34.7	1.0	-49.8	-13.0	-36.8	
High Channel (822.5MHz)										
1.645	-62.1	H	3.0	-19.0	33.9	1.0	-51.9	-13.0	-38.9	
2.468	-66.1	H	3.0	-18.8	34.1	1.0	-51.9	-13.0	-38.9	
3.290	-66.4	H	3.0	-16.4	34.7	1.0	-50.1	-13.0	-37.1	
1.645	-61.4	V	3.0	-15.5	33.9	1.0	-48.4	-13.0	-35.4	
2.468	-65.9	V	3.0	-17.9	34.1	1.0	-51.0	-13.0	-38.0	
3.290	-66.0	V	3.0	-15.8	34.7	1.0	-49.4	-13.0	-36.4	

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16QAM EIRP POWER FOR LTE BAND 26 (3.0MHZ BANDWIDTH)

High Frequency Substitution Measurement
UL Fremont Radiated Chamber

14U19187
 03/20/15
 er: T Wang
 n: EUT only
 LTE Band 26, 3MHz 16QAM

ent:
 Horn T59 Substitution, and 8ft SMA Cable

Chamber

Pre-amplifier

Filter

Limit

Chamber F

3m Chamber F

Filter

Part 90

SA reading (dBm)	Ant. Pol. (H/V)	Distance	Path Loss @ SG End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta	Notes
815.5MHz)									
-61.5	H	3.0	-18.5	33.9	1.0	-51.4	-13.0	-38.4	
-65.5	H	3.0	-18.3	34.1	1.0	-51.4	-13.0	-38.4	
-66.2	H	3.0	-16.4	34.7	1.0	-50.0	-13.0	-37.0	
-59.9	V	3.0	-14.1	33.9	1.0	-46.9	-13.0	-33.9	
-66.2	V	3.0	-18.3	34.1	1.0	-51.3	-13.0	-38.3	
-66.6	V	3.0	-16.5	34.7	1.0	-50.2	-13.0	-37.2	
319MHz)									
-63.1	H	3.0	-20.1	33.9	1.0	-52.9	-13.0	-39.9	
-66.4	H	3.0	-19.2	34.1	1.0	-52.2	-13.0	-39.2	
-66.1	H	3.0	-16.1	34.7	1.0	-49.8	-13.0	-36.8	
-58.3	V	3.0	-12.5	33.9	1.0	-45.3	-13.0	-32.3	
-66.0	V	3.0	-18.0	34.1	1.0	-51.1	-13.0	-38.1	
-66.6	V	3.0	-16.4	34.7	1.0	-50.1	-13.0	-37.1	
(822.5MHz)									
-61.4	H	3.0	-18.3	33.9	1.0	-51.2	-13.0	-38.2	
-66.2	H	3.0	-18.9	34.1	1.0	-52.0	-13.0	-39.0	
-66.2	H	3.0	-16.2	34.7	1.0	-49.9	-13.0	-36.9	
-60.5	V	3.0	-14.6	33.9	1.0	-47.5	-13.0	-34.5	
-66.0	V	3.0	-18.0	34.1	1.0	-51.1	-13.0	-38.1	
-65.8	V	3.0	-15.6	34.7	1.0	-49.2	-13.0	-36.2	

QPSK EIRP POWER FOR LTE BAND 26 (5.0MHZ BANDWIDTH)

High Frequency Substitution Measurement
UL Fremont Radiated Chamber

Company:
Project #: 14U19187
Date: 03/20/15
Test Engineer: T Wang
Configuration: EUT only
Mode: LTE Band 26, 5MHz QPSK

Test Equipment:
 Substitution: Horn T59 Substitution, and 8ft SMA Cable

Chamber

3m Chamber F

Pre-amplifier

3m Chamber F

Filter

Filter

Limit

Part 90

Frequency (GHz)	SA reading (dBm)	Ant. Pol. (H/V)	Distance	Path Loss @ SG End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta	Notes
Low Channel (816.5MHz)										
1.633	-62.5	H	3.0	-19.5	33.9	1.0	-52.4	-13.0	-39.4	
2.450	-65.8	H	3.0	-18.6	34.1	1.0	-51.7	-13.0	-38.7	
3.266	-65.7	H	3.0	-15.8	34.7	1.0	-49.4	-13.0	-36.4	
1.633	-60.5	V	3.0	-14.7	33.9	1.0	-47.5	-13.0	-34.5	
2.450	-65.6	V	3.0	-17.7	34.1	1.0	-50.7	-13.0	-37.7	
3.266	-66.2	V	3.0	-16.0	34.7	1.0	-49.7	-13.0	-36.7	
Mid Channel (819MHz)										
1.638	-63.3	H	3.0	-20.3	33.9	1.0	-53.1	-13.0	-40.1	
2.457	-66.0	H	3.0	-18.8	34.1	1.0	-51.8	-13.0	-38.8	
3.276	-66.1	H	3.0	-16.1	34.7	1.0	-49.8	-13.0	-36.8	
1.638	-61.8	V	3.0	-16.0	33.9	1.0	-48.8	-13.0	-35.8	
2.457	-65.8	V	3.0	-17.8	34.1	1.0	-50.9	-13.0	-37.9	
3.276	-65.6	V	3.0	-15.4	34.7	1.0	-49.1	-13.0	-36.1	
High Channel (821.5MHz)										
1.638	-62.9	H	3.0	-19.9	33.9	1.0	-52.7	-13.0	-39.7	
2.457	-65.5	H	3.0	-18.3	34.1	1.0	-51.3	-13.0	-38.3	
3.276	-65.4	H	3.0	-15.4	34.7	1.0	-49.1	-13.0	-36.1	
1.638	-61.2	V	3.0	-15.4	33.9	1.0	-48.2	-13.0	-35.2	
2.457	-65.5	V	3.0	-17.5	34.1	1.0	-50.6	-13.0	-37.6	
3.276	-65.6	V	3.0	-15.4	34.7	1.0	-49.1	-13.0	-36.1	

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16QAM EIRP POWER FOR LTE BAND 26 (5.0MHZ BANDWIDTH)

**High Frequency Substitution Measurement
 UL Fremont Radiated Chamber**

Company:
Project #: 14U19187
Date: 03/20/15
Test Engineer: T Wang
Configuration: EUT only
Mode: LTE Band 26, 5MHz 16QAM

Test Equipment:
 Substitution: Horn T59 Substitution, and 8ft SMA Cable

Chamber

Pre-amplifier

Filter

Limit

3m Chamber F

3m Chamber F

Filter

Part 90

Frequency (GHz)	SA reading (dBm)	Ant. Pol. (H/V)	Distance	Path Loss @ SG End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta	Notes
Low Channel (816.5MHz)										
1.633	-62.2	H	3.0	-19.2	33.9	1.0	-52.1	-13.0	-39.1	
2.450	-66.1	H	3.0	-18.9	34.1	1.0	-52.0	-13.0	-39.0	
3.266	-65.7	H	3.0	-15.8	34.7	1.0	-49.4	-13.0	-36.4	
1.633	-59.3	V	3.0	-13.5	33.9	1.0	-46.3	-13.0	-33.3	
2.450	-66.0	V	3.0	-18.1	34.1	1.0	-51.1	-13.0	-38.1	
3.266	-66.5	V	3.0	-16.3	34.7	1.0	-50.0	-13.0	-37.0	
Mid Channel (819MHz)										
1.638	-63.4	H	3.0	-20.4	33.9	1.0	-53.2	-13.0	-40.2	
2.457	-66.2	H	3.0	-19.0	34.1	1.0	-52.0	-13.0	-39.0	
3.276	-66.0	H	3.0	-16.0	34.7	1.0	-49.7	-13.0	-36.7	
1.638	-62.2	V	3.0	-16.4	33.9	1.0	-49.2	-13.0	-36.2	
2.457	-65.8	V	3.0	-17.8	34.1	1.0	-50.9	-13.0	-37.9	
3.276	-65.6	V	3.0	-15.4	34.7	1.0	-49.1	-13.0	-36.1	
High Channel (821.5MHz)										
1.638	-63.2	H	3.0	-20.2	33.9	1.0	-53.0	-13.0	-40.0	
2.457	-65.5	H	3.0	-18.3	34.1	1.0	-51.3	-13.0	-38.3	
3.276	-65.4	H	3.0	-15.4	34.7	1.0	-49.1	-13.0	-36.1	
1.638	-61.7	V	3.0	-15.9	33.9	1.0	-48.7	-13.0	-35.7	
2.457	-65.5	V	3.0	-17.5	34.1	1.0	-50.6	-13.0	-37.6	
3.276	-65.6	V	3.0	-15.4	34.7	1.0	-49.1	-13.0	-36.1	

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QPSK EIRP POWER FOR LTE BAND 26 (10.0MHZ BANDWIDTH)

High Frequency Substitution Measurement
UL Fremont Radiated Chamber

Company:
Project #: 14U19187
Date: 02/20/15
Test Engineer: T Wang
Configuration: EUT Only
Mode: LTE Band 26, 10MHz QPSK

Test Equipment:
 Substitution: Horn T59 Substitution, and 8ft SMA Cable

Chamber

Pre-amplifer

Filter

Limit

3m Chamber F

3m Chamber F

Filter

Part 90

Frequency (GHz)	SA reading (dBm)	Ant. Pol. (H/V)	Distance	Path Loss @ SG End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta	Notes
Mid Channel (819MHz)										
1.654	-60.3	H	3.0	-16.5	33.7	1.0	-49.2	-13.0	-36.2	
2.183	-65.4	H	3.0	-18.2	33.8	1.0	-51.0	-13.0	-38.0	
2.451	-66.1	H	3.0	-18.6	34.2	1.0	-51.8	-13.0	-38.8	
1.654	-59.4	V	3.0	-13.4	33.7	1.0	-46.1	-13.0	-33.1	
2.436	-64.5	V	3.0	-16.3	34.2	1.0	-49.5	-13.0	-36.5	

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16QAM EIRP POWER FOR LTE BAND 26 (10.0MHZ BANDWIDTH)

**High Frequency Substitution Measurement
 UL Fremont Radiated Chamber**

Company:
Project #: 14U19187
Date: 02/20/15
Test Engineer: T Wang
Configuration: EUT Only
Mode: LTE Band 26, 10MHz 16QAM

Test Equipment:
 Substitution: Horn T59 Substitution, and 8ft SMA Cable

Chamber

Pre-amplifier

Filter

Limit

3m Chamber F

3m Chamber F

Filter

Part 90

Frequency (GHz)	SA reading (dBm)	Ant. Pol. (H/V)	Distance	Path Loss @ SG End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta	Notes
Mid Channel (831.5MHz)										
1.654	-60.3	H	3.0	-16.5	33.7	1.0	-49.2	-13.0	-36.2	
2.183	-65.4	H	3.0	-18.2	33.8	1.0	-51.0	-13.0	-38.0	
2.451	-66.1	H	3.0	-18.6	34.2	1.0	-51.8	-13.0	-38.8	
1.654	-59.4	V	3.0	-13.4	33.7	1.0	-46.1	-13.0	-33.1	
2.436	-64.5	V	3.0	-16.3	34.2	1.0	-49.5	-13.0	-36.5	

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9.3.8. LTE BAND 41

QPSK EIRP POWER FOR LTE BAND 41 (5.0MHZ BANDWIDTH)

**High Frequency Substitution Measurement
 UL Fremont Radiated Chamber**

Company:
Project #: 14U19187
Date: 02/19/15
Test Engineer: F. Guarero
Configuration: EUT Only
Mode: LTE Band 41, 5MHz QPSK

Test Equipment:
 Substitution: Horn T59 Substitution, and 8ft SMA Cable

Chamber

Pre-amplifier

Filter

Limit

3m Chamber F

3m Chamber F

Filter

Part 27

Frequency (GHz)	SA reading (dBm)	Ant. Pol. (H/V)	Distance	Path Loss @ SG End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta	Notes
Low Channel (2502.5MHz)										
5.005	-69.1	H	3.0	-16.1	34.2	1.0	-49.3	-25.0	-24.3	
7.508	-70.2	H	3.0	-13.9	33.5	1.0	-46.4	-25.0	-21.4	
5.005	-69.1	V	3.0	-15.8	34.2	1.0	-49.0	-25.0	-24.0	
7.508	-70.9	V	3.0	-14.7	33.5	1.0	-47.3	-25.0	-22.3	
Mid Channel (2593MHz)										
5.186	-69.4	H	3.0	-16.2	34.2	1.0	-49.3	-25.0	-24.3	
7.779	-70.4	H	3.0	-13.8	33.3	1.0	-46.1	-25.0	-21.1	
5.186	-69.9	V	3.0	-16.4	34.2	1.0	-49.6	-25.0	-24.6	
7.779	-70.5	V	3.0	-14.0	33.3	1.0	-46.3	-25.0	-21.3	
High Channel (2687.5MHz)										
5.375	-69.3	H	3.0	-15.9	34.2	1.0	-49.0	-25.0	-24.0	
8.063	-70.3	H	3.0	-13.3	33.1	1.0	-45.4	-25.0	-20.4	
5.375	-69.8	V	3.0	-16.1	34.2	1.0	-49.2	-25.0	-24.2	
8.063	-70.1	V	3.0	-13.3	33.1	1.0	-45.4	-25.0	-20.4	

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16QAM EIRP POWER FOR LTE BAND 41 (5.0MHZ BANDWIDTH)

**High Frequency Substitution Measurement
 UL Fremont Radiated Chamber**

Company:
Project #: 14U19187
Date: 02/19/15
Test Engineer: F. Guamero
Configuration: EUT Only
Mode: LTE Band 41, 5MHz 16QAM

Test Equipment:
 Substitution: Horn T59 Substitution, and 8ft SMA Cable

Chamber
 3m Chamber F

Pre-amplifier
 3m Chamber F

Filter
 Filter

Limit
 Part 27

Frequency (GHz)	SA reading (dBm)	Ant. Pol. (H/V)	Distance	Path Loss @ SG End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta	Notes
Low Channel (2498.5MHz)										
5.01	-69.6	H	3.0	-16.6	34.2	1.0	-49.8	-25.0	-24.8	
7.51	-70.6	H	3.0	-14.2	33.5	1.0	-46.8	-25.0	-21.8	
5.01	-69.4	V	3.0	-16.2	34.2	1.0	-49.4	-25.0	-24.4	
7.51	-71.1	V	3.0	-15.0	33.5	1.0	-47.5	-25.0	-22.5	
Mid Channel (2593MHz)										
5.19	-69.8	H	3.0	-16.6	34.2	1.0	-49.7	-25.0	-24.7	
7.78	-70.7	H	3.0	-14.1	33.3	1.0	-46.4	-25.0	-21.4	
5.19	-69.9	V	3.0	-16.4	34.2	1.0	-49.6	-25.0	-24.6	
7.78	-70.8	V	3.0	-14.4	33.3	1.0	-46.7	-25.0	-21.7	
High Channel (2687.5MHz)										
5.38	-69.7	H	3.0	-16.2	34.2	1.0	-49.4	-25.0	-24.4	
8.06	-70.5	H	3.0	-13.5	33.1	1.0	-45.6	-25.0	-20.6	
5.38	-70.0	V	3.0	-16.3	34.2	1.0	-49.4	-25.0	-24.4	
8.06	-70.4	V	3.0	-13.6	33.1	1.0	-45.7	-25.0	-20.7	
Rev. 09.04.14										

QPSK EIRP POWER FOR LTE BAND 41 (10.0MHZ BANDWIDTH)

**High Frequency Substitution Measurement
 UL Fremont Radiated Chamber**

Company:
Project #: 14U19187
Date: 02/20/15
Test Engineer: F. Guarnero
Configuration: EUT Only
Mode: LTE Band 41, 10MHz QPSK

Test Equipment:
 Substitution: Horn T59 Substitution, and 8ft SMA Cable

Chamber

Pre-amplifier

Filter

Limit

3m Chamber F

3m Chamber F

Filter

Part 27

Frequency (GHz)	SA reading (dBm)	Ant. Pol. (H/V)	Distance	Path Loss @ SG End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta	Notes
Low Channel (2505MHz)										
5.010	-68.0	H	3.0	-15.0	34.2	1.0	-48.2	-25.0	-23.2	
7.515	-68.7	H	3.0	-12.3	33.5	1.0	-44.8	-25.0	-19.8	
5.010	-67.5	V	3.0	-14.2	34.2	1.0	-47.4	-25.0	-22.4	
7.515	-70.4	V	3.0	-14.2	33.5	1.0	-46.8	-25.0	-21.8	
Mid Channel (2593MHz)										
5.186	-68.8	H	3.0	-15.6	34.2	1.0	-48.7	-25.0	-23.7	
7.779	-70.4	H	3.0	-13.7	33.3	1.0	-46.1	-25.0	-21.1	
5.186	-69.4	V	3.0	-15.9	34.2	1.0	-49.1	-25.0	-24.1	
7.779	-70.5	V	3.0	-14.1	33.3	1.0	-46.4	-25.0	-21.4	
High Channel (2685MHz)										
5.370	-69.9	H	3.0	-16.4	34.2	1.0	-49.6	-25.0	-24.6	
8.055	-70.9	H	3.0	-13.9	33.1	1.0	-46.0	-25.0	-21.0	
5.370	-69.9	V	3.0	-16.2	34.2	1.0	-49.4	-25.0	-24.4	
8.055	-71.3	V	3.0	-14.5	33.1	1.0	-46.6	-25.0	-21.6	

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16QAM EIRP POWER FOR LTE BAND 41 (10.0MHZ BANDWIDTH)

**High Frequency Substitution Measurement
 UL Fremont Radiated Chamber**

Company:
Project #: 14U19187
Date: 02/20/15
Test Engineer: F. Guarero
Configuration: EUT Only
Mode: LTE Band 41, 10MHz 16QAM

Test Equipment:
 Substitution: Horn T59 Substitution, and 8ft SMA Cable

Chamber

3m Chamber F

Pre-amplifier

3m Chamber F

Filter

Filter

Limit

Part 24

Frequency (GHz)	SA reading (dBm)	Ant. Pol. (H/V)	Distance	Path Loss @ SG End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta	Notes
Low Channel (2501MHz)										
5.01	-68.4	H	3.0	-15.4	34.2	1.0	-48.6	-25.0	-23.6	
7.52	-68.9	H	3.0	-12.5	33.5	1.0	-45.1	-25.0	-20.1	
5.01	-67.9	V	3.0	-14.6	34.2	1.0	-47.8	-25.0	-22.8	
7.52	-70.6	V	3.0	-14.4	33.5	1.0	-46.9	-25.0	-21.9	
Mid Channel (2593MHz)										
5.19	-69.1	H	3.0	-15.9	34.2	1.0	-49.1	-25.0	-24.1	
7.78	-70.6	H	3.0	-14.0	33.3	1.0	-46.3	-25.0	-21.3	
5.19	-69.5	V	3.0	-16.0	34.2	1.0	-49.2	-25.0	-24.2	
7.78	-70.9	V	3.0	-14.4	33.3	1.0	-46.7	-25.0	-21.7	
High Channel (2685MHz)										
5.37	-70.2	H	3.0	-16.7	34.2	1.0	-49.9	-25.0	-24.9	
8.06	-71.0	H	3.0	-14.0	33.1	1.0	-46.1	-25.0	-21.1	
5.37	-70.3	V	3.0	-16.6	34.2	1.0	-49.7	-25.0	-24.7	
8.06	-71.5	V	3.0	-14.7	33.1	1.0	-46.9	-25.0	-21.9	

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QPSK EIRP POWER FOR LTE BAND 41 (15.0MHZ BANDWIDTH)

High Frequency Substitution Measurement
UL Fremont Radiated Chamber

Company:
Project #: 14U19187
Date: 02/20/15
Test Engineer: F. Guarnero
Configuration: EUT Only
Mode: LTE Band 41, 15MHz QPSK

Test Equipment:
 Substitution: Horn T59 Substitution, and 8ft SMA Cable

Chamber

Pre-amplifier

Filter

Limit

3m Chamber F

3m Chamber F

Filter

Part 27

Frequency (GHz)	SA reading (dBm)	Ant. Pol. (H/V)	Distance	Path Loss @ SG End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta	Notes
Low Channel (2507.5MHz)										
5.015	-68.5	H	3.0	-15.5	34.2	1.0	-48.7	-25.0	-23.7	
7.523	-68.2	H	3.0	-11.9	33.5	1.0	-44.4	-25.0	-19.4	
5.015	-67.8	V	3.0	-14.6	34.2	1.0	-47.7	-25.0	-22.7	
7.523	-70.6	V	3.0	-14.4	33.5	1.0	-46.9	-25.0	-21.9	
Mid Channel (2593MHz)										
5.186	-68.2	H	3.0	-15.0	34.2	1.0	-48.1	-25.0	-23.1	
7.779	-70.88	H	3.0	-14.2	33.3	1.0	-46.6	-25.0	-21.6	
5.186	-69.8	V	3.0	-16.4	34.2	1.0	-49.5	-25.0	-24.5	
7.779	-70.9	V	3.0	-14.4	33.3	1.0	-46.8	-25.0	-21.8	
High Channel (2682.5MHz)										
5.365	-68.9	H	3.0	-15.4	34.2	1.0	-48.6	-25.0	-23.6	
8.048	-70.2	H	3.0	-13.2	33.1	1.0	-45.4	-25.0	-20.4	
5.365	-69.7	V	3.0	-16.0	34.2	1.0	-49.1	-25.0	-24.1	
8.048	-71.5	V	3.0	-14.7	33.1	1.0	-46.8	-25.0	-21.8	

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QPSK EIRP POWER FOR LTE BAND 41 (20.0MHZ BANDWIDTH)

**High Frequency Substitution Measurement
 UL Fremont Radiated Chamber**

Company:
Project #: 14U19187
Date: 02/20/15
Test Engineer: F. Guamero
Configuration: EUT Only
Mode: LTE Band 41, 20MHz QPSK

Test Equipment:
 Substitution: Horn T59 Substitution, and 8ft SMA Cable

Chamber

Pre-amplifier

Filter

Limit

3m Chamber F

3m Chamber F

Filter

Part 27

Frequency (GHz)	SA reading (dBm)	Ant. Pol. (H/V)	Distance	Path Loss @ SG End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta	Notes
Low Channel (2510MHz)										
5.020	-68.9	H	3.0	-15.9	34.2	1.0	-49.1	-25.0	-24.1	
7.530	-70.9	H	3.0	-14.5	33.5	1.0	-47.1	-25.0	-22.1	
5.020	-69.3	V	3.0	-16.1	34.2	1.0	-49.3	-25.0	-24.3	
7.530	-71.1	V	3.0	-14.9	33.5	1.0	-47.4	-25.0	-22.4	
Mid Channel (2593MHz)										
5.186	-68.2	H	3.0	-15.0	34.2	1.0	-48.1	-25.0	-23.1	
7.779	-70.9	H	3.0	-14.2	33.3	1.0	-46.6	-25.0	-21.6	
5.186	-69.9	V	3.0	-16.4	34.2	1.0	-49.5	-25.0	-24.5	
7.779	-70.4	V	3.0	-14.0	33.3	1.0	-46.3	-25.0	-21.3	
High Channel (2680MHz)										
5.360	-68.2	H	3.0	-14.7	34.2	1.0	-47.9	-25.0	-22.9	
8.040	-70.1	H	3.0	-13.2	33.1	1.0	-45.3	-25.0	-20.3	
5.360	-69.6	V	3.0	-15.9	34.2	1.0	-49.0	-25.0	-24.0	
8.040	-70.5	V	3.0	-13.7	33.1	1.0	-45.8	-25.0	-20.8	

Rev. 09.04.14

16QAM EIRP POWER FOR LTE BAND 41 (20.0MHZ BANDWIDTH)

**High Frequency Substitution Measurement
 UL Fremont Radiated Chamber**

Company:
Project #: 14U19187
Date: 02/19/15
Test Engineer: F. Guarero
Configuration: EUT Only
Mode: LTE Band 41, 20MHz 16QAM

Test Equipment:
 Substitution: Horn T59 Substitution, and 8ft SMA Cable

Chamber
3m Chamber F

Pre-amplifier
3m Chamber F

Filter
Filter

Limit
Part 27

Frequency (GHz)	SA reading (dBm)	Ant. Pol. (H/V)	Distance	Path Loss @ SG End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta	Notes
Low Channel (2506MHz)										
5.02	-69.0	H	3.0	-16.0	34.2	1.0	-49.2	-25.0	-24.2	
7.53	-71.1	H	3.0	-14.8	33.5	1.0	-47.3	-25.0	-22.3	
5.02	-69.9	V	3.0	-16.6	34.2	1.0	-49.8	-25.0	-24.8	
7.53	-71.6	V	3.0	-15.4	33.5	1.0	-47.9	-25.0	-22.9	
Mid Channel (2593MHz)										
5.19	-68.3	H	3.0	-15.1	34.2	1.0	-48.3	-25.0	-23.3	
7.78	-71.0	H	3.0	-14.4	33.3	1.0	-46.7	-25.0	-21.7	
5.19	-70.1	V	3.0	-16.7	34.2	1.0	-49.8	-25.0	-24.8	
7.78	-70.9	V	3.0	-14.4	33.3	1.0	-46.7	-25.0	-21.7	
High Channel (2680MHz)										
5.36	-68.7	H	3.0	-15.3	34.2	1.0	-48.4	-25.0	-23.4	
8.04	-70.5	H	3.0	-13.5	33.1	1.0	-45.7	-25.0	-20.7	
5.36	-69.8	V	3.0	-16.1	34.2	1.0	-49.3	-25.0	-24.3	
8.04	-70.8	V	3.0	-14.0	33.1	1.0	-46.1	-25.0	-21.1	
Rev. 09.04.14										