LAT EIRP POWER FOR LTE BAND 2 (1.4MHZ BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP (Average)	
			dBm	mW
1.4MHz Band QPSK	6/0	1850.7	25.46	351.56
		1880.0	**26.44**	440.55
		1909.3	26.12	409.26
1.4MHz Band 16QAM	6/0	1850.7	24.56	285.76
		1880.0	**25.44**	349.95
		1909.3	25.12	325.09

LAT EIRP POWER FOR LTE BAND 2 (3.0MHZ BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP (Average)	
			dBm	mW
3.0MHz Band QPSK	15/0	1851.5	25.46	351.56
		1880.0	**26.64**	461.32
		1908.5	26.22	418.79
3.0MHz Band 16QAM	15/0	1851.5	24.56	285.76
		1880.0	**25.54**	358.10
		1908.5	25.12	325.09

LAT EIRP POWER FOR LTE BAND 2 (5.0MHZ BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP (Average)	
			dBm	mW
5.0MHz Band QPSK	25/0	1852.5	25.56	359.75
		1880.0	**26.34**	430.53
		1907.5	26.22	418.79
5.0MHz Band 16QAM	25/0	1852.5	24.46	279.25
		1880.0	**25.54**	358.10
		1907.5	25.42	348.34

LAT EIRP POWER FOR LTE BAND 2 (10.0MHZ BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP (Average)	
			dBm	mW
10.0MHz Band QPSK	50/0	1855.0	25.46	351.56
		1880.0	**26.54**	450.82
		1905.0	26.42	438.53
10.0MHz Band 16QAM	50/0	1855.0	24.66	292.42
		1880.0	**25.64**	366.44
		1905.0	25.62	364.75

LAT EIRP POWER FOR LTE BAND 2 (15.0MHZ BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP (Average)	
			dBm	mW
15MHz Band QPSK	75/0	1857.5	26.16	413.05
		1880.0	26.34	430.53
		1902.5	**26.82**	480.84
15MHz Band 16QAM	75/0	1857.5	25.26	335.74
		1880.0	25.84	383.71
		1902.5	**26.02**	399.94

LAT EIRP POWER FOR LTE BAND 2 (20.0MHZ BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP (Average)	
			dBm	mW
20.0MHz Band QPSK	100/0	1860.0	25.26	335.74
		1880.0	25.54	358.10
		1900.0	**27.02**	503.50
20MHz Band 16QAM	100/0	1860.0	24.26	266.69
		1880.0	24.24	265.46
		1900.0	**26.32**	428.55

UAT EIRP POWER FOR LTE BAND 2 (1.4MHZ BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP (Average)	
			dBm	mW
1.4MHz Band QPSK	6/0	1850.7	19.83	96.16
		1880.0	19.40	87.10
		1909.3	**21.04**	127.06
1.4MHz Band 16QAM	6/0	1850.7	19.03	79.98
		1880.0	18.30	67.61
		1909.3	**20.17**	103.99

UAT EIRP POWER FOR LTE BAND 2 (3.0MHZ BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP (Average)	
			dBm	mW
3.0MHz Band QPSK	15/0	1851.5	19.63	91.83
		1880.0	20.60	114.82
		1908.5	**21.30**	134.90
3.0MHz Band 16QAM	15/0	1851.5	19.23	83.75
		1880.0	19.80	95.50
		1908.5	**20.36**	108.64

UAT EIRP POWER FOR LTE BAND 2 (5.0MHZ BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP (Average)	
			dBm	mW
5.0MHz Band QPSK	25/0	1852.5	19.73	93.97
		1880.0	20.40	109.65
		1907.5	**20.68**	116.95
5.0MHz Band 16QAM	25/0	1852.5	19.43	87.70
		1880.0	19.50	89.13
		1907.5	**20.36**	108.64

UAT EIRP POWER FOR LTE BAND 2 (10.0MHZ BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP (Average)	
			dBm	mW
10.0MHz Band QPSK	50/0	1855.0	20.53	112.98
		1880.0	20.50	112.20
		1905.0	**21.33**	135.83
10.0MHz Band 16QAM	50/0	1855.0	19.73	93.97
		1880.0	20.00	100.00
		1905.0	**20.63**	115.61

UAT EIRP POWER FOR LTE BAND 2 (15.0MHZ BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP (Average)	
			dBm	mW
15MHz Band QPSK	75/0	1857.5	20.03	100.69
		1880.0	20.20	104.71
		1902.5	**21.01**	126.18
15MHz Band 16QAM	75/0	1857.5	20.09	102.09
		1880.0	**20.43**	110.41
		1902.5	19.83	96.16

UAT EIRP POWER FOR LTE BAND 2 (20.0MHZ BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP (Average)	
			dBm	mW
20.0MHz Band QPSK	100/0	1860.0	19.73	93.97
		1880.0	20.20	104.71
		1900.0	**20.86**	121.90
20MHz Band 16QAM	100/0	1860.0	18.83	76.38
		1880.0	19.40	87.10
		1900.0	**19.84**	96.38

LAT EIRP POWER FOR LTE BAND 4 (1.4MHZ BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP(Average)	
			dBm	mW
1.4 MHZ BAND QPSK	6/0	1710.7	**24.46**	279.25
		1732.5	24.42	276.69
		1754.3	24.37	273.53
1.4 MHZ BAND 16QAM	6/0	1710.7	**23.56**	226.99
		1732.5	23.42	219.79
		1754.3	23.47	222.33

LAT EIRP POWER FOR LTE BAND 4 (3.0MHZ BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP(Average)	
			dBm	mW
3.0 MHZ BAND QPSK	15/0	1711.5	**24.86**	306.20
		1732.5	24.22	264.24
		1753.5	24.67	293.09
3.0 MHZ BAND 16QAM	15/0	1711.5	**23.76**	237.68
		1732.5	23.60	229.09
		1753.5	23.56	226.99

LAT EIRP POWER FOR LTE BAND 4 (5.0MHZ BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP(Average)	
			dBm	mW
5.0 MHZ BAND QPSK	25/0	1712.5	24.61	289.07
		1732.5	24.22	264.24
		1752.5	**24.89**	308.32
5.0 MHZ BAND 16QAM	25/0	1712.5	23.63	230.67
		1732.5	23.72	235.50
		1752.5	**24.07**	255.27

LAT EIRP POWER FOR LTE BAND 4 (10.0MHZ BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP(Average)	
			dBm	mW
10.0 MHZ BAND QPSK	50/0	1715.0	**25.01**	316.96
		1732.5	24.22	264.24
		1750.0	24.37	273.53
10.0 MHZ BAND 16QAM	50/0	1715.0	23.86	243.22
		1732.5	23.02	200.45
		1750.0	**23.87**	243.78

LAT EIRP POWER FOR LTE BAND 4 (15.0MHZ BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP(Average)	
			dBm	mW
15.0 MHZ BAND QPSK	75/0	1717.5	**25.38**	345.14
		1732.5	24.42	276.69
		1747.5	24.87	306.90
15.0 MHZ BAND 16QAM	75/0	1717.5	**24.49**	281.19
		1732.5	23.52	224.91
		1747.5	23.90	245.47

LAT EIRP POWER FOR LTE BAND 4 (20.0MHZ BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP(Average)	
			dBm	mW
20.0 MHZ BAND QPSK	100/0	1720.0	**25.23**	333.43
		1732.5	24.42	276.69
		1745.0	24.37	273.53
20.0 MHZ BAND 16QAM	100/0	1720.0	**24.26**	266.69
		1732.5	23.62	230.14
		1745.0	23.57	227.51

UAT EIRP POWER FOR LTE BAND 4 (1.4MHZ BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP(Average)	
			dBm	mW
1.4 MHZ BAND QPSK	6/0	1710.7	20.05	101.16
		1732.5	19.71	93.54
		1754.3	**20.13**	103.04
1.4 MHZ BAND 16QAM	6/0	1710.7	19.08	80.91
		1732.5	18.80	75.86
		1754.3	**19.33**	85.70

UAT EIRP POWER FOR LTE BAND 4 (3.0MHZ BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP(Average)	
			dBm	mW
3.0 MHZ BAND QPSK	15/0	1711.5	20.11	102.57
		1732.5	19.35	86.10
		1753.5	**20.13**	103.04
3.0 MHZ BAND 16QAM	15/0	1711.5	19.18	82.79
		1732.5	18.41	69.34
		1753.5	**19.43**	87.70

UAT EIRP POWER FOR LTE BAND 4 (5.0MHZ BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP(Average)	
			dBm	mW
5.0 MHZ BAND QPSK	25/0	1712.5	19.91	97.95
		1732.5	19.06	80.54
		1752.5	**20.63**	115.61
5.0 MHZ BAND 16QAM	25/0	1712.5	19.04	80.17
		1732.5	18.11	64.71
		1752.5	**19.75**	94.41

UAT EIRP POWER FOR LTE BAND 4 (10.0MHZ BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP(Average)	
			dBm	mW
10.0 MHZ BAND QPSK	50/0	1715.0	20.36	108.64
		1732.5	20.09	102.09
		1750.0	**20.83**	121.06
10.0 MHZ BAND 16QAM	50/0	1715.0	19.32	85.51
		1732.5	19.20	83.18
		1750.0	**19.90**	97.72

UAT EIRP POWER FOR LTE BAND 4 (15.0MHZ BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP(Average)	
			dBm	mW
15.0 MHZ BAND QPSK	75/0	1717.5	21.03	126.77
		1732.5	19.88	97.27
		1747.5	**21.23**	132.74
15.0 MHZ BAND 16QAM	75/0	1717.5	20.12	102.80
		1732.5	19.51	89.33
		1747.5	**20.53**	112.98

UAT EIRP POWER FOR LTE BAND 4 (20.0MHZ BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP(Average)	
			dBm	mW
20.0 MHZ BAND QPSK	100/0	1720.0	20.28	106.66
		1732.5	20.01	100.23
		1745.0	**20.85**	121.62
20.0 MHZ BAND 16QAM	100/0	1720.0	19.45	88.10
		1732.5	19.14	82.04
		1745.0	**19.95**	98.86

LAT EIRP POWER FOR LTE BAND 5 (1.4MHZ BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP (Average)	
			dBm	mW
1.4MHz Band QPSK	1/0	824.7	22.01	158.85
		836.5	**21.58**	143.88
		848.3	21.52	141.91
1.4MHz Band 16QAM	1/0	824.7	20.59	114.55
		836.5	**20.62**	115.35
		848.3	20.59	114.55

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

Mode	RB/RB SIZE	f (MHz)	EIRP (Average)	
			dBm	mW
3.0 MHZ BAND QPSK	1/0	825.5	**22.04**	159.96
		836.5	21.61	144.88
		847.5	21.72	148.59
3.0 MHZ BAND 16QAM	1/0	825.5	**21.02**	126.47
		836.5	20.47	111.43
		847.5	20.81	120.50

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

Mode	RB/RB SIZE	f (MHz)	EIRP (Average)	
			dBm	mW
5MHz Band QPSK	1/0	826.5	21.09	128.53
		836.5	21.43	139.00
		846.5	**21.70**	147.91
5MHz Band 16QAM	1/0	826.5	20.09	102.09
		836.5	20.52	112.72
		846.5	**20.78**	119.67

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

Mode	RB/RB SIZE	f (MHz)	EIRP (Average)	
			dBm	mW
10.0 MHZ BAND QPSK	1/0	829.0	21.59	144.21
		836.5	**21.75**	149.62
		844.0	21.42	138.68
10.0 MHZ BAND 16QAM	1/0	829.0	**20.69**	117.22
		836.5	20.55	113.50
		844.0	20.56	113.76

UAT EIRP POWER FOR LTE BAND 5 (1.4MHZ BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP (Average)	
			dBm	mW
1.4MHz Band QPSK	1/0	824.7	20.29	106.91
		836.5	20.25	105.93
		848.3	**20.42**	110.15
1.4MHz Band 16QAM	1/0	824.7	19.29	84.92
		836.5	19.32	85.51
		848.3	**19.53**	89.74

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

Mode	RB/RB SIZE	f (MHz)	EIRP (Average)	
			dBm	mW
3.0 MHZ BAND QPSK	1/0	825.5	20.39	109.40
		836.5	20.50	112.20
		847.5	**20.67**	116.68
3.0 MHZ BAND 16QAM	1/0	825.5	19.49	88.92
		836.5	19.38	86.70
		847.5	**19.92**	98.17

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

Mode	RB/RB SIZE	f (MHz)	EIRP (Average)	
			dBm	mW
5MHz Band QPSK	1/0	826.5	20.58	114.29
		836.5	20.28	106.66
		846.5	**20.83**	121.06
5MHz Band 16QAM	1/0	826.5	19.48	88.72
		836.5	19.14	82.04
		846.5	**19.52**	89.54

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

Mode	RB/RB SIZE	f (MHz)	EIRP (Average)	
			dBm	mW
10.0 MHZ BAND QPSK	1/0	829.0	**20.85**	121.62
		836.5	20.20	104.71
		844.0	20.64	115.88
10.0 MHZ BAND 16QAM	1/0	829.0	**19.39**	86.90
		836.5	19.14	82.04
		844.0	19.22	83.56

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

Mode	RB/RB SIZE	f (MHz)	EIRP (Average)	
			dBm	mW
5.0 MHZ BAND QPSK	1/0	779.5	20.28	106.66
		782.0	19.77	94.84
		784.5	**20.33**	107.89
5.0 MHZ BAND 16QAM	1/0	779.5	**19.28**	84.72
		782.0	19.02	79.80
		784.5	19.22	83.56

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

Mode	RB/RB SIZE	f (MHz)	EIRP (Average)	
			dBm	mW
10 MHZ BAND QPSK	1/0	782.0	**20.06**	101.39
10 MHz BAND 16QAM	1/0		**19.02**	79.80

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

Mode	RB/RB SIZE	f (MHz)	EIRP (Average)	
			dBm	mW
5.0 MHZ BAND QPSK	1/0	779.5	17.78	59.98
		782.0	19.57	90.57
		784.5	**19.84**	96.38
5.0 MHZ BAND 16QAM	1/0	779.5	16.88	48.75
		782.0	**18.37**	68.71
		784.5	18.04	63.68

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

Mode	RB/RB SIZE	f (MHz)	EIRP (Average)	
			dBm	mW
10 MHZ BAND QPSK	1/0	782.0	**19.37**	86.50
10 MHz BAND 16QAM	1/0		**18.37**	68.71

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

Mode	RB/RB SIZE	f (MHz)	EIRP (Average)	
			dBm	mW
5MHz Band QPSK	1/0	706.5	**20.63**	115.61
		710.0	20.47	111.43
		713.5	20.01	100.23
5MHz Band 16QAM	1/0	706.5	**19.60**	91.20
		710.0	19.47	88.51
		713.5	19.41	87.30

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

Mode	RB/RB SIZE	f (MHz)	EIRP (Average)	
			dBm	mW
10.0 MHZ BAND QPSK	1/0	709.0	**20.83**	121.06
		710.0	20.57	114.02
		711.0	20.41	109.90
10.0 MHZ BAND 16QAM	1/0	709.0	**19.63**	91.83
		710.0	19.57	90.57
		711.0	18.91	77.80

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

Mode	RB/RB SIZE	f (MHz)	EIRP (Average)	
			dBm	mW
5MHz Band QPSK	1/0	706.5	16.13	41.02
		710.0	16.27	42.36
		713.5	**16.71**	46.88
5MHz Band 16QAM	1/0	706.5	15.23	33.34
		710.0	15.27	33.65
		713.5	**15.41**	34.75

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

Mode	RB/RB SIZE	f (MHz)	EIRP (Average)	
			dBm	mW
10.0 MHZ BAND QPSK	1/0	709.0	16.35	43.15
		710.0	16.47	44.36
		711.0	**16.85**	48.42
10.0 MHZ BAND 16QAM	1/0	709.0	15.13	32.58
		710.0	15.17	32.89
		711.0	**15.76**	37.67

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

Mode	RB/RB SIZE	f (MHz)	EIRP(Average)	
			dBm	mW
1.4 MHZ BAND QPSK	6/0	1850.7	25.76	376.70
		1880.0	25.64	366.44
		1914.3	**26.22**	418.79
1.4 MHZ BAND 16QAM	6/0	1850.7	24.66	292.42
		1880.0	24.34	271.64
		1914.3	**25.22**	332.66

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

Mode	RB/RB SIZE	f (MHz)	EIRP(Average)	
			dBm	mW
3.0 MHZ BAND QPSK	15/0	1851.5	25.49	354.00
		1880.0	25.54	358.10
		1913.5	**26.42**	438.53
3.0 MHZ BAND 16QAM	15/0	1851.5	24.39	274.79
		1880.0	24.44	277.97
		1913.5	**25.42**	348.34

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

Mode	RB/RB SIZE	f (MHz)	EIRP(Average)	
			dBm	mW
5.0 MHZ BAND QPSK	25/0	1852.5	25.49	354.00
		1880.0	**26.34**	430.53
		1912.5	26.12	409.26
5.0 MHZ BAND 16QAM	25/0	1852.5	24.49	281.19
		1880.0	**25.44**	349.95
		1912.5	25.32	340.41

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

Mode	RB/RB SIZE	f (MHz)	EIRP(Average)	
			dBm	mW
10.0 MHZ BAND QPSK	50/0	1855.0	**26.59**	456.04
		1880.0	26.44	440.55
		1910.0	26.42	438.53
10.0 MHZ BAND 16QAM	50/0	1855.0	25.59	362.24
		1880.0	**25.64**	366.44
		1910.0	25.52	356.45

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

Mode	RB/RB SIZE	f (MHz)	EIRP(Average)	
			dBm	mW
15.0 MHZ BAND QPSK	75/0	1857.5	**26.59**	456.04
		1880.0	26.02	399.94
		1907.5	26.42	438.53
15.0 MHZ BAND 16QAM	75/0	1857.5	**25.84**	383.71
		1880.0	25.32	340.41
		1907.5	25.36	343.56

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

Mode	RB/RB SIZE	f (MHz)	EIRP(Average)	
			dBm	mW
20.0 MHZ BAND QPSK	100/0	1860.0	26.49	445.66
		1880.0	26.00	398.11
		1905.0	**26.59**	456.04
20.0 MHZ BAND 16QAM	100/0	1860.0	**25.77**	377.57
		1880.0	25.04	319.15
		1905.0	25.59	362.24

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

Mode	RB/RB SIZE	f (MHz)	EIRP(Average)	
			dBm	mW
1.4 MHZ BAND QPSK	6/0	1850.7	21.12	129.42
		1880.0	**21.57**	143.55
		1914.3	21.47	140.28
1.4 MHZ BAND 16QAM	6/0	1850.7	20.11	102.57
		1880.0	**20.78**	119.67
		1914.3	20.57	114.02

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

Mode	RB/RB SIZE	f (MHz)	EIRP(Average)	
			dBm	mW
3.0 MHZ BAND QPSK	15/0	1851.5	21.25	133.35
		1880.0	**21.52**	141.91
		1913.5	21.17	130.92
3.0 MHZ BAND 16QAM	15/0	1851.5	20.30	107.15
		1880.0	**20.56**	113.76
		1913.5	20.27	106.41

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

Mode	RB/RB SIZE	f (MHz)	EIRP(Average)	
			dBm	mW
5.0 MHZ BAND QPSK	25/0	1852.5	19.88	97.27
		1880.0	**20.67**	116.68
		1912.5	20.40	109.65
5.0 MHZ BAND 16QAM	25/0	1852.5	19.58	90.78
		1880.0	**19.77**	94.84
		1912.5	19.64	92.04

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

Mode	RB/RB SIZE	f (MHz)	EIRP(Average)	
			dBm	mW
10.0 MHZ BAND QPSK	50/0	1855.0	20.21	104.95
		1880.0	20.67	116.68
		1910.0	**21.46**	139.96
10.0 MHZ BAND 16QAM	50/0	1855.0	19.31	85.31
		1880.0	19.77	94.84
		1910.0	**20.49**	111.94

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

Mode	RB/RB SIZE	f (MHz)	EIRP(Average)	
			dBm	mW
15.0 MHZ BAND QPSK	75/0	1857.5	19.81	95.72
		1880.0	20.57	114.02
		1907.5	**20.67**	116.68
15.0 MHZ BAND 16QAM	75/0	1857.5	18.51	70.96
		1880.0	19.57	90.57
		1907.5	**19.86**	96.83

UAT EIRP POWER FOR LTE BAND 25 (20.MHZ BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP(Average)	
			dBm	mW
20.0 MHZ BAND QPSK	100/0	1860.0	20.60	114.82
		1880.0	**21.77**	150.31
		1905.0	20.72	118.03
20.0 MHZ BAND 16QAM	100/0	1860.0	19.73	93.97
		1880.0	**20.69**	117.22
		1905.0	19.71	93.54

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

Mode	RB/RB SIZE	f (MHz)	EIRP(Average)	
			dBm	mW
3.0 MHZ BAND QPSK	1/0	820.3	20.30	107.15
		821.3	20.33	107.89
		822.3	**20.61**	115.08
3.0 MHZ BAND 16QAM	1/0	820.3	19.37	86.50
		821.3	19.32	85.51
		822.3	**19.68**	92.90

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

Mode	RB/RB SIZE	f (MHz)	EIRP(Average)	
			dBm	mW
5.0 MHZ BAND QPSK	1/0	821.3	**20.53**	112.98
5.0 MHZ BAND 16QAM	1/0	821.3	**19.61**	91.41

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

Mode	RB/RB SIZE	f (MHz)	EIRP(Average)	
			dBm	mW
10.0 MHZ BAND QPSK	1/0	819.0	**20.57**	114.02
10.0 MHZ BAND 16QAM	1/0	819.0	**19.31**	85.31

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

Mode	RB/RB SIZE	f (MHz)	EIRP(Average)	
			dBm	mW
3.0 MHZ BAND QPSK	1/0	820.3	**18.59**	72.28
		821.3	18.35	68.39
		822.3	18.42	69.50
3.0 MHZ BAND 16QAM	1/0	820.3	**17.62**	57.81
		821.3	17.38	54.70
		822.3	17.53	56.62

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

Mode	RB/RB SIZE	f (MHz)	EIRP(Average)	
			dBm	mW
5.0 MHZ BAND QPSK	1/0	821.3	**18.23**	66.53
5.0 MHZ BAND 16QAM	1/0	821.3	**17.31**	53.83

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

Mode	RB/RB SIZE	f (MHz)	EIRP(Average)	
			dBm	mW
10.0 MHZ BAND QPSK	1/0	819.0	**18.45**	69.98
10.0 MHZ BAND 16QAM	1/0	819.0	**17.54**	56.75

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

Mode	RB/RB SIZE	f (MHz)	EIRP(Peak)	
			dBm	mW
5.0 MHZ BAND QPSK	25/0	2498.5	**31.44**	1393.16
		2593.0	31.01	1261.83
		2687.5	29.07	807.24
5.0 MHZ BAND 16QAM	25/0	24.98.5	**30.54**	1132.40
		2593.0	30.11	1025.65
		2687.5	28.17	656.15

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

Mode	RB/RB SIZE	f (MHz)	EIRP(Peak)	
			dBm	mW
10.0 MHZ BAND QPSK	50/0	2501.0	**31.01**	1261.83
		2593.0	30.79	1199.50
		2685.0	28.77	753.36
10.0 MHZ BAND 16QAM	50/0	2501.0	**30.11**	1025.65
		2593.0	29.89	974.99
		2685.0	27.87	612.35

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

Mode	RB/RB SIZE	f (MHz)	EIRP(Peak)	
			dBm	mW
15.0 MHZ BAND QPSK	75/0	2503.5	**31.17**	1309.18
		2593.0	30.70	1174.90
		2682.5	28.77	753.36
15.0 MHZ BAND 16QAM	75/0	2503.5	**30.17**	1039.92
		2593.0	29.70	933.25
		2682.5	27.77	598.41

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

Mode	RB/RB SIZE	f (MHz)	EIRP(Peak)	
			dBm	mW
20.0 MHZ BAND QPSK	100/0	2506.0	**31.27**	1339.68
		2593.0	31.13	1297.18
		2680.0	28.97	788.86
20.0 MHZ BAND 16QAM	100/0	2506.0	**30.27**	1064.14
		2593.0	30.13	1030.39
		2680.0	27.97	626.61

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

Mode	RB/RB SIZE	f (MHz)	EIRP(Peak)	
			dBm	mW
5.0 MHZ BAND QPSK	25/0	2498.5	**26.65**	462.38
		2593.0	26.23	419.76
		2687.5	25.24	334.20
5.0 MHZ BAND 16QAM	25/0	24.98.5	**25.85**	384.59
		2593.0	25.43	349.14
		2687.5	24.24	265.46

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

Mode	RB/RB SIZE	f (MHz)	EIRP(Peak)	
			dBm	mW
10.0 MHZ BAND QPSK	50/0	2501.0	**26.65**	462.38
		2593.0	26.43	439.54
		2685.0	26.15	412.10
10.0 MHZ BAND 16QAM	50/0	2501.0	**25.75**	375.84
		2593.0	25.53	357.27
		2685.0	25.25	334.97

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

Mode	RB/RB SIZE	f (MHz)	EIRP(Peak)	
			dBm	mW
15.0 MHZ BAND QPSK	75/0	2503.5	26.45	441.57
		2593.0	**26.58**	454.99
		2682.5	26.14	411.15
15.0 MHZ BAND 16QAM	75/0	2503.5	25.60	363.08
		2593.0	**25.73**	374.11
		2682.5	25.29	338.06

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

Mode	RB/RB SIZE	f (MHz)	EIRP(Peak)	
			dBm	mW
20.0 MHZ BAND QPSK	100/0	2506.0	26.29	425.60
		2593.0	**26.39**	435.51
		2680.0	25.74	374.97
20.0 MHZ BAND 16QAM	100/0	2506.0	25.39	345.94
		2593.0	**25.49**	354.00
		2680.0	24.84	304.79

9.1.1. LTE BAND 2

LAT QPSK EIRP POWER FOR LTE BAND 2 (1.4MHZ BANDWIDTH)

High Frequency Substitution Measurement
UL Fremont Radiated Chamber D

Company: Apple
Project #: 14U17673
Date: 06/07/14
Test Engineer: M. Hua
Configuration: EUT Only
Mode: LTE Band 2 QPSK 1.4MHz BW

Test Equipment:
Receiving: Horn T344 and Chamber D SMA Cables
Substitution: Horn T60 Substitution, and 8ft SMA Cable

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Notes
Low Ch								
1.851	18.5	V	0.98	7.88	25.39	33.0	-7.6	
1.851	18.6	H	0.98	7.88	25.46	33.0	-7.5	
Mid Ch								
1.880	17.8	V	0.98	7.86	24.72	33.0	-8.3	
1.880	19.6	H	0.98	7.86	26.44	33.0	-6.6	
High Ch								
1.909	17.8	V	0.98	7.84	24.64	33.0	-8.4	
1.909	19.3	H	0.98	7.84	26.12	33.0	-6.9	

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LAT 16QAM EIRP POWER FOR LTE BAND 2 (1.4MHZ BANDWIDTH)

High Frequency Substitution Measurement
UL Fremont Radiated Chamber D

Company: Apple
Project #: 14U17673
Date: 06/07/14
Test Engineer: M. Hua
Configuration: EUT Only
Mode: LTE Band 2 16QAM 1.4MHz BW

Test Equipment:
Receiving: Horn T344 and Chamber D SMA Cables
Substitution: Horn T60 Substitution, and 8ft SMA Cable

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Notes
Low Ch								
1.851	17.6	V	0.98	7.88	24.49	33.0	-8.5	
1.851	17.7	H	0.98	7.88	24.56	33.0	-8.4	
Mid Ch								
1.880	16.7	V	0.98	7.86	23.62	33.0	-9.4	
1.880	18.6	H	0.98	7.86	25.44	33.0	-7.6	
High Ch								
1.909	16.8	V	0.98	7.84	23.64	33.0	-9.4	
1.909	18.3	H	0.98	7.84	25.12	33.0	-7.9	

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LAT QPSK EIRP POWER FOR LTE BAND 2 (3.0MHZ BANDWIDTH)

High Frequency Substitution Measurement
UL Fremont Radiated Chamber D

Company: Apple
Project #: 14U17673
Date: 06/07/14
Test Engineer: M. Hua
Configuration: EUT Only
Mode: LTE Band 2 QPSK 3MHz BW

Test Equipment:
Receiving: Horn T344 and Chamber D SMA Cables
Substitution: Horn T60 Substitution, and 8ft SMA Cable

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Notes
Low Ch								
1.852	18.5	V	0.98	7.88	25.39	33.0	-7.6	
1.852	18.6	H	0.98	7.88	25.46	33.0	-7.5	
Mid Ch								
1.880	17.9	V	0.98	7.86	24.82	33.0	-8.2	
1.880	19.8	H	0.98	7.86	26.64	33.0	-6.4	
High Ch								
1.909	17.9	V	0.98	7.84	24.74	33.0	-8.3	
1.909	19.4	H	0.98	7.84	26.22	33.0	-6.8	

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LAT 16QAM EIRP POWER FOR LTE BAND 2 (3.0MHZ BANDWIDTH)

High Frequency Substitution Measurement
UL Fremont Radiated Chamber D

Company: Apple
Project #: 14U17673
Date: 06/07/14
Test Engineer: M. Hua
Configuration: EUT Only
Mode: LTE Band 2 16QAM 3MHz BW

Test Equipment:
Receiving: Horn T344 and Chamber D SMA Cables
Substitution: Horn T60 Substitution, and 8ft SMA Cable

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Notes
Low Ch								
1.852	17.6	V	0.98	7.88	24.49	33.0	-8.5	
1.852	17.7	H	0.98	7.88	24.56	33.0	-8.4	
Mid Ch								
1.880	16.8	V	0.98	7.86	23.72	33.0	-9.3	
1.880	18.7	H	0.98	7.86	25.54	33.0	-7.5	
High Ch								
1.909	16.9	V	0.98	7.84	23.74	33.0	-9.3	
1.909	18.3	H	0.98	7.84	25.12	33.0	-7.9	

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LAT QPSK EIRP POWER FOR LTE BAND 2 (5.0MHZ BANDWIDTH)

High Frequency Substitution Measurement
UL Fremont Radiated Chamber D

Company: Apple
Project #: 14U17673
Date: 06/07/14
Test Engineer: M. Hua
Configuration: EUT Only
Mode: LTE Band 2 QPSK 5MHz BW

Test Equipment:
Receiving: Horn T344 and Chamber D SMA Cables
Substitution: Horn T60 Substitution, and 8ft SMA Cable

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Notes
Low Ch								
1.853	18.2	V	0.98	7.88	25.09	33.0	-7.9	
1.853	18.7	H	0.98	7.88	25.56	33.0	-7.4	
Mid Ch								
1.880	17.4	V	0.98	7.86	24.32	33.0	-8.7	
1.880	19.5	H	0.98	7.86	26.34	33.0	-6.7	
High Ch								
1.908	17.7	V	0.98	7.84	24.54	33.0	-8.5	
1.908	19.4	H	0.98	7.84	26.22	33.0	-6.8	

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LAT 16QAM EIRP POWER FOR LTE BAND 2 (5.0MHZ BANDWIDTH)

High Frequency Substitution Measurement
UL Fremont Radiated Chamber D

Company: Apple
Project #: 14U17673
Date: 06/07/14
Test Engineer: M. Hua
Configuration: EUT Only
Mode: LTE Band 2 16QAM 5MHz BW

Test Equipment:
Receiving: Horn T344 and Chamber D SMA Cables
Substitution: Horn T60 Substitution, and 8ft SMA Cable

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Notes
Low Ch								
1.853	17.2	V	0.98	7.88	24.09	33.0	-8.9	
1.853	17.6	H	0.98	7.88	24.46	33.0	-8.5	
Mid Ch								
1.880	16.5	V	0.98	7.86	23.42	33.0	-9.6	
1.880	18.7	H	0.98	7.86	25.54	33.0	-7.5	
High Ch								
1.908	16.7	V	0.98	7.84	23.54	33.0	-9.5	
1.908	18.6	H	0.98	7.84	25.42	33.0	-7.6	

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LAT QPSK EIRP POWER FOR LTE BAND 2 (10.0MHZ BANDWIDTH)

High Frequency Substitution Measurement
UL Fremont Radiated Chamber D

Company: Apple
Project #: 14U17673
Date: 06/07/14
Test Engineer: M. Hua
Configuration: EUT Only
Mode: LTE Band 2 QPSK 10MHz BW

Test Equipment:
Receiving: Horn T344 and Chamber D SMA Cables
Substitution: Horn T60 Substitution, and 8ft SMA Cable

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Notes
Low Ch								
1.855	18.5	V	0.98	7.88	25.39	33.0	-7.6	
1.855	18.6	H	0.98	7.88	25.46	33.0	-7.5	
Mid Ch								
1.880	17.6	V	0.98	7.86	24.52	33.0	-8.5	
1.880	19.7	H	0.98	7.86	26.54	33.0	-6.5	
High Ch								
1.905	18.4	V	0.98	7.84	25.24	33.0	-7.8	
1.905	19.6	H	0.98	7.84	26.42	33.0	-6.6	

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LAT 16QAM EIRP POWER FOR LTE BAND 2 (10.0MHZ BANDWIDTH)

High Frequency Substitution Measurement
UL Fremont Radiated Chamber D

Company: Apple
Project #: 14U17673
Date: 06/07/14
Test Engineer: M. Hua
Configuration: EUT Only
Mode: LTE Band 2 16QAM 10MHz BW

Test Equipment:
Receiving: Horn T344 and Chamber D SMA Cables
Substitution: Horn T60 Substitution, and 8ft SMA Cable

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Notes
Low Ch								
1.855	17.6	V	0.98	7.88	24.49	33.0	-8.5	
1.855	17.8	H	0.98	7.88	24.66	33.0	-8.3	
Mid Ch								
1.880	16.6	V	0.98	7.86	23.52	33.0	-9.5	
1.880	18.8	H	0.98	7.86	25.64	33.0	-7.4	
High Ch								
1.905	17.4	V	0.98	7.84	24.24	33.0	-8.8	
1.905	18.8	H	0.98	7.84	25.62	33.0	-7.4	

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LAT QPSK EIRP POWER FOR LTE BAND 2 (15.0MHZ BANDWIDTH)

High Frequency Substitution Measurement
UL Fremont Radiated Chamber D

Company: Apple
Project #: 14U17673
Date: 06/07/14
Test Engineer: M. Hua
Configuration: EUT Only
Mode: LTE Band 2 QPSK 15MHz BW

Test Equipment:
Receiving: Horn T344 and Chamber D SMA Cables
Substitution: Horn T60 Substitution, and 8ft SMA Cable

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Notes
Low Ch								
1.858	18.7	V	0.98	7.88	25.59	33.0	-7.4	
1.858	19.3	H	0.98	7.88	26.16	33.0	-6.8	
Mid Ch								
1.880	17.7	V	0.98	7.86	24.62	33.0	-8.4	
1.880	19.5	H	0.98	7.86	26.34	33.0	-6.7	
High Ch								
1.903	18.3	V	0.98	7.84	25.14	33.0	-7.9	
1.903	20.0	H	0.98	7.84	26.82	33.0	-6.2	

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LAT 16QAM EIRP POWER FOR LTE BAND 2 (15.0MHZ BANDWIDTH)

High Frequency Substitution Measurement
UL Fremont Radiated Chamber D

Company: Apple
Project #: 14U17673
Date: 06/07/14
Test Engineer: M. Hua
Configuration: EUT Only
Mode: LTE Band 2 16QAM 15MHz BW

Test Equipment:
Receiving: Horn T344 and Chamber D SMA Cables
Substitution: Horn T60 Substitution, and 8ft SMA Cable

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Notes
Low Ch								
1.858	17.8	V	0.98	7.88	24.69	33.0	-8.3	
1.858	18.4	H	0.98	7.88	25.26	33.0	-7.7	
Mid Ch								
1.880	17.0	V	0.98	7.86	23.92	33.0	-9.1	
1.880	19.0	H	0.98	7.86	25.84	33.0	-7.2	
High Ch								
1.903	17.5	V	0.98	7.84	24.34	33.0	-8.7	
1.903	19.2	H	0.98	7.84	26.02	33.0	-7.0	

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LAT QPSK EIRP POWER FOR LTE BAND 2 (20.0MHZ BANDWIDTH)

High Frequency Substitution Measurement
UL Fremont Radiated Chamber D

Company: Apple
Project #: 14U17673
Date: 06/07/14
Test Engineer: M. Hua
Configuration: EUT Only
Mode: LTE Band 2 QPSK 20MHz BW

Test Equipment:
Receiving: Horn T344 and Chamber D SMA Cables
Substitution: Horn T60 Substitution, and 8ft SMA Cable

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Notes
Low Ch								
1.860	17.4	V	0.98	7.88	24.26	33.0	-8.7	
1.860	18.4	H	0.98	7.88	25.26	33.0	-7.7	
Mid Ch								
1.880	17.1	V	0.98	7.86	24.00	33.0	-9.0	
1.880	18.7	H	0.98	7.86	25.54	33.0	-7.5	
High Ch								
1.900	17.5	V	0.98	7.84	24.37	33.0	-8.6	
1.900	20.2	H	0.98	7.84	27.02	33.0	-6.0	

Rev. 10.24.13

LAT 16QAM EIRP POWER FOR LTE BAND 2 (20.0MHZ BANDWIDTH)

High Frequency Substitution Measurement
UL Fremont Radiated Chamber D

Company: Apple
Project #: 14U17673
Date: 06/07/14
Test Engineer: M. Hua
Configuration: EUT Only
Mode: LTE Band 2 16QAM 20MHz BW

Test Equipment:
Receiving: Horn T344 and Chamber D SMA Cables
Substitution: Horn T60 Substitution, and 8ft SMA Cable

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Notes
Low Ch								
1.860	16.9	V	0.98	7.88	23.79	33.0	-9.2	
1.860	17.4	H	0.98	7.88	24.26	33.0	-8.7	
Mid Ch								
1.880	16.5	V	0.98	7.86	23.42	33.0	-9.6	
1.880	17.4	H	0.98	7.86	24.24	33.0	-8.8	
High Ch								
1.900	16.6	V	0.98	7.84	23.43	33.0	-9.6	
1.900	19.5	H	0.98	7.84	26.32	33.0	-6.7	

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UAT QPSK EIRP POWER FOR LTE BAND 2 (1.4MHZ BANDWIDTH)

High Frequency Substitution Measurement
UL Fremont Radiated Chamber F

Company: Apple
Project #: 14U17673
Date: 06/09/14
Test Engineer: R.Zheng
Configuration: EUT only
Mode: LTE Band 2 QPSK 1.4MHz BW

Test Equipment:
Receiving: Horn T120 and Chamber F SMA Cables
Substitution: Horn T60 Substitution, and 8ft SMA Cable

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Notes
Low Ch								
1.851	10.9	V	0.98	8.61	18.49	33.0	-14.5	
1.851	12.0	H	0.98	8.81	19.83	33.0	-13.2	
Mid Ch								
1.880	10.7	V	0.98	8.53	18.23	33.0	-14.8	
1.880	11.7	H	0.98	8.68	19.40	33.0	-13.6	
High Ch								
1.909	11.7	V	0.98	8.45	19.18	33.0	-13.8	
1.909	13.5	H	0.98	8.55	21.04	33.0	-12.0	

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UAT 16QAM EIRP POWER FOR LTE BAND 2 (1.4MHZ BANDWIDTH)

High Frequency Substitution Measurement
UL Fremont Radiated Chamber F

Company: Apple
Project #: 14U17673
Date: 06/09/14
Test Engineer: R.Zheng
Configuration: EUT only
Mode: LTE Band 2 16QAM 1.4MHz BW

Test Equipment:
Receiving: Horn T120 and Chamber F SMA Cables
Substitution: Horn T60 Substitution, and 8ft SMA Cable

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Notes
Low Ch								
1.851	10.0	V	0.98	8.61	17.59	33.0	-15.4	
1.851	11.2	H	0.98	8.81	19.03	33.0	-14.0	
Mid Ch								
1.880	10.0	V	0.98	8.53	17.53	33.0	-15.5	
1.880	10.6	H	0.98	8.68	18.30	33.0	-14.7	
High Ch								
1.909	10.5	V	0.98	8.45	17.98	33.0	-15.0	
1.909	12.6	H	0.98	8.55	20.17	33.0	-12.8	

Rev. 10.24.13

UAT QPSK EIRP POWER FOR LTE BAND 2 (3.0MHZ BANDWIDTH)

High Frequency Substitution Measurement
UL Fremont Radiated Chamber F

Company: Apple
Project #: 14U17673
Date: 06/09/14
Test Engineer: R.Zheng
Configuration: EUT only
Mode: LTE Band 2 QPSK 3MHz BW

Test Equipment:
Receiving: Horn T120 and Chamber F SMA Cables
Substitution: Horn T60 Substitution, and 8ft SMA Cable

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Notes
Low Ch								
1.852	11.0	V	0.98	8.61	18.59	33.0	-14.4	
1.852	11.8	H	0.98	8.81	19.63	33.0	-13.4	
Mid Ch								
1.880	10.6	V	0.98	8.53	18.13	33.0	-14.9	
1.880	12.9	H	0.98	8.68	20.60	33.0	-12.4	
High Ch								
1.909	11.1	V	0.98	8.45	18.58	33.0	-14.4	
1.909	13.7	H	0.98	8.55	21.30	33.0	-11.7	

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UAT 16QAM EIRP POWER FOR LTE BAND 2 (3.0MHZ BANDWIDTH)

High Frequency Substitution Measurement
UL Fremont Radiated Chamber F

Company: Apple
Project #: 14U17673
Date: 06/09/14
Test Engineer: R.Zheng
Configuration: EUT only
Mode: LTE Band 2 16QAM 3MHz BW

Test Equipment:
Receiving: Horn T120 and Chamber F SMA Cables
Substitution: Horn T60 Substitution, and 8ft SMA Cable

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Notes
Low Ch								
1.852	11.0	V	0.98	8.61	18.59	33.0	-14.4	
1.852	11.4	H	0.98	8.81	19.23	33.0	-13.8	
Mid Ch								
1.880	10.0	V	0.98	8.53	17.53	33.0	-15.5	
1.880	12.1	H	0.98	8.68	19.80	33.0	-13.2	
High Ch								
1.909	10.2	V	0.98	8.45	17.68	33.0	-15.3	
1.909	12.8	H	0.98	8.55	20.36	33.0	-12.6	

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UAT QPSK EIRP POWER FOR LTE BAND 2 (5.0MHZ BANDWIDTH)

High Frequency Substitution Measurement
UL Fremont Radiated Chamber F

Company: Apple
Project #: 14U17673
Date: 06/09/14
Test Engineer: R.Zheng
Configuration: EUT only
Mode: LTE Band 2 QPSK 5MHz BW

Test Equipment:
Receiving: Horn T120 and Chamber F SMA Cables
Substitution: Horn T60 Substitution, and 8ft SMA Cable

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Notes
Low Ch								
1.853	10.8	V	0.98	8.61	18.39	33.0	-14.6	
1.853	11.9	H	0.98	8.81	19.73	33.0	-13.3	
Mid Ch								
1.880	10.9	V	0.98	8.53	18.43	33.0	-14.6	
1.880	12.7	H	0.98	8.68	20.40	33.0	-12.6	
High Ch								
1.908	11.0	V	0.98	8.45	18.48	33.0	-14.5	
1.908	13.1	H	0.98	8.55	20.68	33.0	-12.3	

Rev. 10.24.13

UAT 16QAM EIRP POWER FOR LTE BAND 2 (5.0MHZ BANDWIDTH)

High Frequency Substitution Measurement
UL Fremont Radiated Chamber F

Company: Apple
Project #: 14U17673
Date: 06/09/14
Test Engineer: R.Zheng
Configuration: EUT only
Mode: LTE Band 2 16QAM 5MHz BW

Test Equipment:
Receiving: Horn T120 and Chamber F SMA Cables
Substitution: Horn T60 Substitution, and 8ft SMA Cable

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Notes
Low Ch								
1.853	10.5	V	0.98	8.61	18.09	33.0	-14.9	
1.853	11.6	H	0.98	8.81	19.43	33.0	-13.6	
Mid Ch								
1.880	9.9	V	0.98	8.53	17.43	33.0	-15.6	
1.880	11.8	H	0.98	8.68	19.50	33.0	-13.5	
High Ch								
1.908	10.1	V	0.98	8.45	17.58	33.0	-15.4	
1.908	12.8	H	0.98	8.55	20.36	33.0	-12.6	

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UAT QPSK EIRP POWER FOR LTE BAND 2 (10.0MHZ BANDWIDTH)

High Frequency Substitution Measurement
UL Fremont Radiated Chamber F

Company: Apple
Project #: 14U17673
Date: 06/09/14
Test Engineer: R.Zheng
Configuration: EUT only
Mode: LTE Band 2 QPSK 10MHz BW

Test Equipment:
Receiving: Horn T120 and Chamber F SMA Cables
Substitution: Horn T60 Substitution, and 8ft SMA Cable

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Notes
Low Ch								
1.855	11.9	V	0.98	8.61	19.48	33.0	-13.5	
1.855	12.7	H	0.98	8.81	20.53	33.0	-12.5	
Mid Ch								
1.880	11.0	V	0.98	8.53	18.53	33.0	-14.5	
1.880	12.8	H	0.98	8.68	20.50	33.0	-12.5	
High Ch								
1.905	11.2	V	0.98	8.45	18.67	33.0	-14.3	
1.905	13.8	H	0.98	8.55	21.33	33.0	-11.7	

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UAT 16QAM EIRP POWER FOR LTE BAND 2 (10.0MHZ BANDWIDTH)

High Frequency Substitution Measurement
UL Fremont Radiated Chamber F

Company: Apple
Project #: 14U17673
Date: 06/09/14
Test Engineer: R.Zheng
Configuration: EUT only
Mode: LTE Band 2 16QAM 10MHz BW

Test Equipment:
Receiving: Horn T120 and Chamber F SMA Cables
Substitution: Horn T60 Substitution, and 8ft SMA Cable

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Notes
Low Ch								
1.855	10.8	V	0.98	8.61	18.38	33.0	-14.6	
1.855	11.9	H	0.98	8.81	19.73	33.0	-13.3	
Mid Ch								
1.880	10.1	V	0.98	8.53	17.63	33.0	-15.4	
1.880	12.3	H	0.98	8.68	20.00	33.0	-13.0	
High Ch								
1.905	10.2	V	0.98	8.45	17.67	33.0	-15.3	
1.905	13.1	H	0.98	8.55	20.63	33.0	-12.4	

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UAT QPSK EIRP POWER FOR LTE BAND 2 (15.0MHZ BANDWIDTH)

High Frequency Substitution Measurement
UL Fremont Radiated Chamber F

Company: Apple
Project #: 14U17673
Date: 06/09/14
Test Engineer: R.Zheng
Configuration: EUT only
Mode: LTE Band 2 QPSK 15MHz BW

Test Equipment:
Receiving: Horn T120 and Chamber F SMA Cables
Substitution: Horn T60 Substitution, and 8ft SMA Cable

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Notes
Low Ch								
1.858	11.3	V	0.98	8.61	18.88	33.0	-14.1	
1.858	12.2	H	0.98	8.81	20.03	33.0	-13.0	
Mid Ch								
1.880	11.2	V	0.98	8.53	18.73	33.0	-14.3	
1.880	12.5	H	0.98	8.68	20.20	33.0	-12.8	
High Ch								
1.903	11.5	V	0.98	8.45	18.97	33.0	-14.0	
1.903	13.4	H	0.98	8.55	21.01	33.0	-12.0	

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UAT 16QAM EIRP POWER FOR LTE BAND 2 (15.0MHZ BANDWIDTH)

High Frequency Substitution Measurement
UL Fremont Radiated Chamber F

Company: Apple
Project #: 14U17673
Date: 06/09/14
Test Engineer: R.Zheng
Configuration: EUT only
Mode: LTE Band 2 16QAM 15MHz BW

Test Equipment:
Receiving: Horn T120 and Chamber F SMA Cables
Substitution: Horn T60 Substitution, and 8ft SMA Cable

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Notes
Low Ch								
1.858	10.3	V	0.98	8.61	17.88	33.0	-15.1	
1.858	12.3	H	0.98	8.81	20.09	33.0	-12.9	
Mid Ch								
1.880	10.1	V	0.98	8.53	17.63	33.0	-15.4	
1.880	12.7	H	0.98	8.68	20.43	33.0	-12.6	
High Ch								
1.903	10.4	V	0.98	8.45	17.87	33.0	-15.1	
1.903	12.3	H	0.98	8.55	19.83	33.0	-13.2	

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UAT QPSK EIRP POWER FOR LTE BAND 2 (20.0MHZ BANDWIDTH)

High Frequency Substitution Measurement
UL Fremont Radiated Chamber F

Company: Apple
Project #: 14U17673
Date: 06/09/14
Test Engineer: R.Zheng
Configuration: EUT only
Mode: LTE Band 2 QPSK 20MHz BW

Test Equipment:
Receiving: Horn T120 and Chamber F SMA Cables
Substitution: Horn T60 Substitution, and 8ft SMA Cable

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Notes
Low Ch								
1.860	10.5	V	0.98	8.61	18.11	33.0	-14.9	
1.860	11.9	H	0.98	8.81	19.73	33.0	-13.3	
Mid Ch								
1.880	10.6	V	0.98	8.53	18.13	33.0	-14.9	
1.880	12.5	H	0.98	8.68	20.20	33.0	-12.8	
High Ch								
1.900	11.2	V	0.98	8.45	18.62	33.0	-14.4	
1.900	13.3	H	0.98	8.55	20.86	33.0	-12.1	

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UAT 16QAM EIRP POWER FOR LTE BAND 2 (20.0MHZ BANDWIDTH)

High Frequency Substitution Measurement
UL Fremont Radiated Chamber F

Company: Apple
Project #: 14U17673
Date: 06/09/14
Test Engineer: R.Zheng
Configuration: EUT only
Mode: LTE Band 2 16QAM 20MHz BW

Test Equipment:
Receiving: Horn T120 and Chamber F SMA Cables
Substitution: Horn T60 Substitution, and 8ft SMA Cable

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Notes
Low Ch								
1.860	9.5	V	0.98	8.61	17.11	33.0	-15.9	
1.860	11.0	H	0.98	8.81	18.83	33.0	-14.2	
Mid Ch								
1.880	9.6	V	0.98	8.53	17.13	33.0	-15.9	
1.880	11.7	H	0.98	8.68	19.40	33.0	-13.6	
High Ch								
1.900	10.2	V	0.98	8.45	17.62	33.0	-15.4	
1.900	12.3	H	0.98	8.55	19.84	33.0	-13.2	

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9.1.2. LTE BAND 4

LAT QPSK EIRP POWER FOR LTE BAND 4 (1.4MHZ BANDWIDTH)

High Frequency Substitution Measurement
UL Fremont Radiated Chamber D

Company: Apple
Project #: 14U17673
Date: 06/07/14
Test Engineer: M. Hua
Configuration: EUT Only
Mode: LTE Band 4 QPSK 1.4MHz BW

Test Equipment:
Receiving: Horn T344 and Chamber D SMA Cables
Substitution: Horn T60 Substitution, and 8ft SMA Cable

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Notes
Low Ch								
1.711	14.9	V	0.95	8.25	22.18	30.0	-7.8	
1.711	17.2	H	0.95	8.25	24.46	30.0	-5.5	
Mid Ch								
1.733	16.5	V	0.95	8.17	23.71	30.0	-6.3	
1.733	17.2	H	0.95	8.17	24.42	30.0	-5.6	
High Ch								
1.754	17.1	V	0.95	8.09	24.21	30.0	-5.8	
1.754	17.2	H	0.95	8.09	24.37	30.0	-5.6	

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LAT 16QAM EIRP POWER FOR LTE BAND 4 (1.4MHZ BANDWIDTH)

High Frequency Substitution Measurement
UL Fremont Radiated Chamber D

Company: Apple
Project #: 14U17673
Date: 06/07/14
Test Engineer: M. Hua
Configuration: EUT Only
Mode: LTE Band 4 16QAM 1.4MHz BW

Test Equipment:
Receiving: Horn T344 and Chamber D SMA Cables
Substitution: Horn T60 Substitution, and 8ft SMA Cable

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Notes
Low Ch								
1.711	14.3	V	0.95	8.25	21.58	30.0	-8.4	
1.711	16.3	H	0.95	8.25	23.56	30.0	-6.4	
Mid Ch								
1.733	15.5	V	0.95	8.17	22.71	30.0	-7.3	
1.733	16.2	H	0.95	8.17	23.42	30.0	-6.6	
High Ch								
1.754	16.1	V	0.95	8.09	23.21	30.0	-6.8	
1.754	16.3	H	0.95	8.09	23.47	30.0	-6.5	

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LAT QPSK EIRP POWER FOR LTE BAND 4 (3.0MHZ BANDWIDTH)

High Frequency Substitution Measurement
UL Fremont Radiated Chamber D

Company: Apple
Project #: 14U17673
Date: 06/07/14
Test Engineer: M. Hua
Configuration: EUT Only
Mode: LTE Band 4 QPSK 3MHz BW

Test Equipment:
Receiving: Horn T344 and Chamber D SMA Cables
Substitution: Horn T60 Substitution, and 8ft SMA Cable

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Notes
Low Ch								
1.712	15.3	V	0.95	8.25	22.58	30.0	-7.4	
1.712	17.6	H	0.95	8.25	24.86	30.0	-5.1	
Mid Ch								
1.733	15.4	V	0.95	8.17	22.61	30.0	-7.4	
1.733	17.0	H	0.95	8.17	24.22	30.0	-5.8	
High Ch								
1.754	16.9	V	0.95	8.09	24.01	30.0	-6.0	
1.754	17.5	H	0.95	8.09	24.67	30.0	-5.3	

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LAT 16QAM EIRP POWER FOR LTE BAND 4 (3.0MHZ BANDWIDTH)

High Frequency Substitution Measurement
UL Fremont Radiated Chamber D

Company: Apple
Project #: 14U17673
Date: 06/07/14
Test Engineer: M. Hua
Configuration: EUT Only
Mode: LTE Band 4 16QAM 3MHz BW

Test Equipment:
Receiving: Horn T344 and Chamber D SMA Cables
Substitution: Horn T60 Substitution, and 8ft SMA Cable

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Notes
Low Ch								
1.712	14.4	V	0.95	8.25	21.68	30.0	-8.3	
1.712	16.5	H	0.95	8.25	23.76	30.0	-6.2	
Mid Ch								
1.733	15.9	V	0.95	8.17	23.11	30.0	-6.9	
1.733	16.4	H	0.95	8.17	23.60	30.0	-6.4	
High Ch								
1.754	16.2	V	0.95	8.09	23.31	30.0	-6.7	
1.754	16.4	H	0.95	8.09	23.56	30.0	-6.4	

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LAT QPSK EIRP POWER FOR LTE BAND 4 (5.0MHZ BANDWIDTH)

High Frequency Substitution Measurement
UL Fremont Radiated Chamber D

Company: Apple
Project #: 14U17673
Date: 06/07/14
Test Engineer: M. Hua
Configuration: EUT Only
Mode: LTE Band 4 QPSK 5MHz BW

Test Equipment:
Receiving: Horn T344 and Chamber D SMA Cables
Substitution: Horn T60 Substitution, and 8ft SMA Cable

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Notes
Low Ch								
1.713	14.9	V	0.95	8.25	22.18	30.0	-7.8	
1.713	17.3	H	0.95	8.25	24.61	30.0	-5.4	
Mid Ch								
1.733	16.3	V	0.95	8.17	23.51	30.0	-6.5	
1.733	17.0	H	0.95	8.17	24.22	30.0	-5.8	
High Ch								
1.753	16.9	V	0.95	8.09	24.01	30.0	-6.0	
1.753	17.7	H	0.95	8.09	24.89	30.0	-5.1	

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LAT 16QAM EIRP POWER FOR LTE BAND 4 (5.0MHZ BANDWIDTH)

High Frequency Substitution Measurement
UL Fremont Radiated Chamber D

Company: Apple
Project #: 14U17673
Date: 06/07/14
Test Engineer: M. Hua
Configuration: EUT Only
Mode: LTE Band 4 16QAM 5MHz BW

Test Equipment:
Receiving: Horn T344 and Chamber D SMA Cables
Substitution: Horn T60 Substitution, and 8ft SMA Cable

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Notes
Low Ch								
1.713	14.0	V	0.95	8.25	21.28	30.0	-8.7	
1.713	16.3	H	0.95	8.25	23.63	30.0	-6.4	
Mid Ch								
1.733	15.3	V	0.95	8.17	22.55	30.0	-7.5	
1.733	16.5	H	0.95	8.17	23.72	30.0	-6.3	
High Ch								
1.753	16.0	V	0.95	8.09	23.11	30.0	-6.9	
1.753	16.9	H	0.95	8.09	24.07	30.0	-5.9	

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LAT QPSK EIRP POWER FOR LTE BAND 4 (10.0MHZ BANDWIDTH)

High Frequency Substitution Measurement
UL Fremont Radiated Chamber D

Company: Apple
Project #: 14U17673
Date: 06/07/14
Test Engineer: M. Hua
Configuration: EUT Only
Mode: LTE Band 4 QPSK 10MHz BW

Test Equipment:
Receiving: Horn T344 and Chamber D SMA Cables
Substitution: Horn T60 Substitution, and 8ft SMA Cable

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Notes
Low Ch								
1.715	15.5	V	0.95	8.25	22.78	30.0	-7.2	
1.715	17.7	H	0.95	8.25	25.01	30.0	-5.0	
Mid Ch								
1.733	15.9	V	0.95	8.17	23.11	30.0	-6.9	
1.733	17.0	H	0.95	8.17	24.22	30.0	-5.8	
High Ch								
1.750	16.5	V	0.95	8.09	23.61	30.0	-6.4	
1.750	17.2	H	0.95	8.09	24.37	30.0	-5.6	

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LAT 16QAM EIRP POWER FOR LTE BAND 4 (10.0MHZ BANDWIDTH)

High Frequency Substitution Measurement
UL Fremont Radiated Chamber D

Company: Apple
Project #: 14U17673
Date: 06/07/14
Test Engineer: M. Hua
Configuration: EUT Only
Mode: LTE Band 4 16QAM 10MHz BW

Test Equipment:
Receiving: Horn T344 and Chamber D SMA Cables
Substitution: Horn T60 Substitution, and 8ft SMA Cable

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Notes
Low Ch								
1.715	14.5	V	0.95	8.25	21.78	30.0	-8.2	
1.715	16.6	H	0.95	8.25	23.86	30.0	-6.1	
Mid Ch								
1.733	15.0	V	0.95	8.17	22.21	30.0	-7.8	
1.733	15.8	H	0.95	8.17	23.02	30.0	-7.0	
High Ch								
1.750	15.5	V	0.95	8.09	22.61	30.0	-7.4	
1.750	16.7	H	0.95	8.09	23.87	30.0	-6.1	

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LAT QPSK EIRP POWER FOR LTE BAND 4 (15.0MHZ BANDWIDTH)

High Frequency Substitution Measurement
UL Fremont Radiated Chamber D

Company: Apple
Project #: 14U17673
Date: 06/07/14
Test Engineer: M. Hua
Configuration: EUT Only
Mode: LTE Band 4 QPSK 15MHz BW

Test Equipment:
Receiving: Horn T344 and Chamber D SMA Cables
Substitution: Horn T60 Substitution, and 8ft SMA Cable

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Notes
Low Ch								
1.718	15.5	V	0.95	8.25	22.77	30.0	-7.2	
1.718	18.1	H	0.95	8.25	25.38	30.0	-4.6	
Mid Ch								
1.733	15.0	V	0.95	8.17	22.22	30.0	-7.8	
1.733	17.2	H	0.95	8.17	24.42	30.0	-5.6	
High Ch								
1.748	15.9	V	0.95	8.09	23.01	30.0	-7.0	
1.748	17.7	H	0.95	8.09	24.87	30.0	-5.1	

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LAT 16QAM EIRP POWER FOR LTE BAND 4 (15.0MHZ BANDWIDTH)

High Frequency Substitution Measurement
UL Fremont Radiated Chamber D

Company: Apple
Project #: 14U17673
Date: 06/07/14
Test Engineer: M. Hua
Configuration: EUT Only
Mode: LTE Band 4 16QAM 15MHz BW

Test Equipment:
Receiving: Horn T344 and Chamber D SMA Cables
Substitution: Horn T60 Substitution, and 8ft SMA Cable

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Notes
Low Ch								
1.718	14.7	V	0.95	8.25	21.98	30.0	-8.0	
1.718	17.2	H	0.95	8.25	24.49	30.0	-5.5	
Mid Ch								
1.733	14.7	V	0.95	8.17	21.91	30.0	-8.1	
1.733	16.3	H	0.95	8.17	23.52	30.0	-6.5	
High Ch								
1.748	16.2	V	0.95	8.09	23.31	30.0	-6.7	
1.748	16.8	H	0.95	8.09	23.90	30.0	-6.1	

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LAT QPSK EIRP POWER FOR LTE BAND 4 (20.0MHZ BANDWIDTH)

High Frequency Substitution Measurement
UL Fremont Radiated Chamber D

Company: Apple
Project #: 14U17673
Date: 06/07/14
Test Engineer: M. Hua
Configuration: EUT Only
Mode: LTE Band 4 QPSK 20MHz BW

Test Equipment:
Receiving: Horn T344 and Chamber D SMA Cables
Substitution: Horn T60 Substitution, and 8ft SMA Cable

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Notes
Low Ch								
1.720	15.4	V	0.95	8.25	22.74	30.0	-7.3	
1.720	17.9	H	0.95	8.25	25.23	30.0	-4.8	
Mid Ch								
1.733	15.9	V	0.95	8.17	23.10	30.0	-6.9	
1.733	17.2	H	0.95	8.17	24.42	30.0	-5.6	
High Ch								
1.745	16.3	V	0.95	8.09	23.41	30.0	-6.6	
1.745	17.2	H	0.95	8.09	24.37	30.0	-5.6	

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LAT 16QAM EIRP POWER FOR LTE BAND 4 (20.0MHZ BANDWIDTH)

High Frequency Substitution Measurement
UL Fremont Radiated Chamber D

Company: Apple
Project #: 14U17673
Date: 06/07/14
Test Engineer: M. Hua
Configuration: EUT Only
Mode: LTE Band 4 16QAM 20MHz BW

Test Equipment:
Receiving: Horn T344 and Chamber D SMA Cables
Substitution: Horn T60 Substitution, and 8ft SMA Cable

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Notes
Low Ch								
1.720	14.4	V	0.95	8.25	21.73	30.0	-8.3	
1.720	17.0	H	0.95	8.25	24.26	30.0	-5.7	
Mid Ch								
1.733	15.2	V	0.95	8.17	22.41	30.0	-7.6	
1.733	16.4	H	0.95	8.17	23.62	30.0	-6.4	
High Ch								
1.745	15.1	V	0.95	8.09	22.21	30.0	-7.8	
1.745	16.4	H	0.95	8.09	23.57	30.0	-6.4	

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UAT QPSK EIRP POWER FOR LTE BAND 4 (1.4MHZ BANDWIDTH)

High Frequency Substitution Measurement
UL Fremont Radiated Chamber F

Company: Apple
Project #: 14U17673
Date: 06/09/14
Test Engineer: R.Zheng
Configuration: EUT only
Mode: LTE Band 4 QPSK 1.4MHz BW

Test Equipment:
Receiving: Horn T120 and Chamber F SMA Cables
Substitution: Horn T60 Substitution, and 8ft SMA Cable

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Notes
Low Ch								
1.711	11.9	V	0.95	8.42	19.33	30.0	-10.7	
1.711	12.4	H	0.95	8.60	20.05	30.0	-10.0	
Mid Ch								
1.733	11.4	V	0.95	8.50	18.95	30.0	-11.1	
1.733	12.0	H	0.95	8.70	19.71	30.0	-10.3	
High Ch								
1.754	12.4	V	0.95	8.57	20.02	30.0	-10.0	
1.754	12.3	H	0.95	8.80	20.13	30.0	-9.9	

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UAT 16QAM EIRP POWER FOR LTE BAND 4 (1.4MHZ BANDWIDTH)

High Frequency Substitution Measurement
UL Fremont Radiated Chamber F

Company: Apple
Project #: 14U17673
Date: 06/09/14
Test Engineer: R.Zheng
Configuration: EUT only
Mode: LTE Band 4 16QAM 1.4MHz BW

Test Equipment:
Receiving: Horn T120 and Chamber F SMA Cables
Substitution: Horn T60 Substitution, and 8ft SMA Cable

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Notes
Low Ch								
1.711	10.9	V	0.95	8.42	18.38	30.0	-11.6	
1.711	11.4	H	0.95	8.60	19.08	30.0	-10.9	
Mid Ch								
1.733	10.5	V	0.95	8.50	18.07	30.0	-11.9	
1.733	11.1	H	0.95	8.70	18.80	30.0	-11.2	
High Ch								
1.754	11.6	V	0.95	8.57	19.17	30.0	-10.8	
1.754	11.5	H	0.95	8.80	19.33	30.0	-10.7	

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UAT QPSK EIRP POWER FOR LTE BAND 4 (3.0MHZ BANDWIDTH)

High Frequency Substitution Measurement
UL Fremont Radiated Chamber F

Company: Apple
Project #: 14U17673
Date: 06/09/14
Test Engineer: R.Zheng
Configuration: EUT only
Mode: LTE Band 4 QPSK 3MHz BW

Test Equipment:
Receiving: Horn T120 and Chamber F SMA Cables
Substitution: Horn T60 Substitution, and 8ft SMA Cable

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
1.712	12.4	V	0.95	8.42	19.83	30.0	-10.2	
1.712	12.5	H	0.95	8.60	20.11	30.0	-9.9	
Mid Ch								
1.733	11.5	V	0.95	8.50	19.05	30.0	-11.0	
1.733	11.6	H	0.95	8.70	19.35	30.0	-10.7	
High Ch								
1.754	11.9	V	0.95	8.57	19.52	30.0	-10.5	
1.754	12.3	H	0.95	8.80	20.13	30.0	-9.9	

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UAT 16QAM EIRP POWER FOR LTE BAND 4 (3.0MHZ BANDWIDTH)

High Frequency Substitution Measurement
UL Fremont Radiated Chamber F

Company: Apple
Project #: 14U17673
Date: 06/09/14
Test Engineer: R.Zheng
Configuration: EUT only
Mode: LTE Band 4 16QAM 3MHz BW

Test Equipment:
Receiving: Horn T120 and Chamber F SMA Cables
Substitution: Horn T60 Substitution, and 8ft SMA Cable

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Notes
Low Ch								
1.712	11.5	V	0.95	8.42	18.96	30.0	-11.0	
1.712	11.5	H	0.95	8.60	19.18	30.0	-10.8	
Mid Ch								
1.733	10.6	V	0.95	8.50	18.17	30.0	-11.8	
1.733	10.7	H	0.95	8.70	18.41	30.0	-11.6	
High Ch								
1.754	11.3	V	0.95	8.57	18.88	30.0	-11.1	
1.754	11.6	H	0.95	8.80	19.43	30.0	-10.6	

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UAT QPSK EIRP POWER FOR LTE BAND 4 (5.0MHZ BANDWIDTH)

High Frequency Substitution Measurement
UL Fremont Radiated Chamber F

Company: Apple
Project #: 14U17673
Date: 06/09/14
Test Engineer: R.Zheng
Configuration: EUT only
Mode: LTE Band 4 QPSK 5MHz BW

Test Equipment:
Receiving: Horn T120 and Chamber F SMA Cables
Substitution: Horn T60 Substitution, and 8ft SMA Cable

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Notes
Low Ch								
1.713	12.1	V	0.95	8.42	19.57	30.0	-10.4	
1.713	12.3	H	0.95	8.60	19.91	30.0	-10.1	
Mid Ch								
1.733	11.2	V	0.95	8.50	18.75	30.0	-11.3	
1.733	11.3	H	0.95	8.70	19.06	30.0	-10.9	
High Ch								
1.753	10.7	V	0.95	8.57	18.32	30.0	-11.7	
1.753	12.8	H	0.95	8.80	20.63	30.0	-9.4	

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UAT 16QAM EIRP POWER FOR LTE BAND 4 (5.0MHZ BANDWIDTH)

High Frequency Substitution Measurement
UL Fremont Radiated Chamber F

Company: Apple
Project #: 14U17673
Date: 06/09/14
Test Engineer: R.Zheng
Configuration: EUT only
Mode: LTE Band 4 16QAM 5MHz BW

Test Equipment:
Receiving: Horn T120 and Chamber F SMA Cables
Substitution: Horn T60 Substitution, and 8ft SMA Cable

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Notes
Low Ch								
1.713	11.1	V	0.95	8.42	18.55	30.0	-11.5	
1.713	11.4	H	0.95	8.60	19.04	30.0	-11.0	
Mid Ch								
1.733	10.4	V	0.95	8.50	17.91	30.0	-12.1	
1.733	10.4	H	0.95	8.70	18.11	30.0	-11.9	
High Ch								
1.753	9.8	V	0.95	8.57	17.41	30.0	-12.6	
1.753	11.9	H	0.95	8.80	19.75	30.0	-10.2	

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UAT QPSK EIRP POWER FOR LTE BAND 4 (10.0MHZ BANDWIDTH)

High Frequency Substitution Measurement
UL Fremont Radiated Chamber F

Company: Apple
Project #: 14U17673
Date: 06/09/14
Test Engineer: R.Zheng
Configuration: EUT only
Mode: LTE Band 4 QPSK 10MHz BW

Test Equipment:
Receiving: Horn T120 and Chamber F SMA Cables
Substitution: Horn T60 Substitution, and 8ft SMA Cable

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
1.715	11.8	V	0.95	8.42	19.24	30.0	-10.8	
1.715	12.7	H	0.95	8.60	20.36	30.0	-9.6	
Mid Ch								
1.733	11.3	V	0.95	8.50	18.85	30.0	-11.2	
1.733	12.3	H	0.95	8.70	20.09	30.0	-9.9	
High Ch								
1.750	10.7	V	0.95	8.57	18.32	30.0	-11.7	
1.750	13.0	H	0.95	8.80	20.83	30.0	-9.2	

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UAT 16QAM EIRP POWER FOR LTE BAND 4 (10.0MHZ BANDWIDTH)

High Frequency Substitution Measurement
UL Fremont Radiated Chamber F

Company: Apple
Project #: 14U17673
Date: 06/09/14
Test Engineer: R.Zheng
Configuration: EUT only
Mode: LTE Band 4 16QAM 10MHz BW

Test Equipment:
Receiving: Horn T120 and Chamber F SMA Cables
Substitution: Horn T60 Substitution, and 8ft SMA Cable

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Notes
Low Ch								
1.715	10.7	V	0.95	8.42	18.16	30.0	-11.8	
1.715	11.7	H	0.95	8.60	19.32	30.0	-10.7	
Mid Ch								
1.733	10.4	V	0.95	8.50	17.93	30.0	-12.1	
1.733	11.5	H	0.95	8.70	19.20	30.0	-10.8	
High Ch								
1.750	9.8	V	0.95	8.57	17.41	30.0	-12.6	
1.750	12.1	H	0.95	8.80	19.90	30.0	-10.1	

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UAT QPSK EIRP POWER FOR LTE BAND 4 (15.0MHZ BANDWIDTH)

High Frequency Substitution Measurement
UL Fremont Radiated Chamber F

Company: Apple
Project #: 14U17673
Date: 06/09/14
Test Engineer: R.Zheng
Configuration: EUT only
Mode: LTE Band 4 QPSK 15MHz BW

Test Equipment:
Receiving: Horn T120 and Chamber F SMA Cables
Substitution: Horn T60 Substitution, and 8ft SMA Cable

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
1.718	12.1	V	0.95	8.42	19.54	30.0	-10.5	
1.718	13.4	H	0.95	8.60	21.03	30.0	-9.0	
Mid Ch								
1.733	11.5	V	0.95	8.50	19.05	30.0	-11.0	
1.733	12.1	H	0.95	8.70	19.88	30.0	-10.1	
High Ch								
1.748	10.7	V	0.95	8.57	18.32	30.0	-11.7	
1.748	13.4	H	0.95	8.80	21.23	30.0	-8.8	

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UAT 16QAM EIRP POWER FOR LTE BAND 4 (15.0MHZ BANDWIDTH)

High Frequency Substitution Measurement
UL Fremont Radiated Chamber F

Company: Apple
Project #: 14U17673
Date: 06/09/14
Test Engineer: R.Zheng
Configuration: EUT only
Mode: LTE Band 4 QPSK 15MHz BW

Test Equipment:
Receiving: Horn T120 and Chamber F SMA Cables
Substitution: Horn T60 Substitution, and 8ft SMA Cable

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Notes
Low Ch								
1.718	11.2	V	0.95	8.42	18.65	30.0	-11.4	
1.718	12.5	H	0.95	8.60	20.12	30.0	-9.9	
Mid Ch								
1.733	10.6	V	0.95	8.50	18.12	30.0	-11.9	
1.733	11.8	H	0.95	8.70	19.51	30.0	-10.5	
High Ch								
1.748	9.8	V	0.95	8.57	17.44	30.0	-12.6	
1.748	12.7	H	0.95	8.80	20.53	30.0	-9.5	

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UAT QPSK EIRP POWER FOR LTE BAND 4 (20.0MHZ BANDWIDTH)

High Frequency Substitution Measurement
UL Fremont Radiated Chamber F

Company: Apple
Project #: 14U17673
Date: 06/09/14
Test Engineer: R.Zheng
Configuration: EUT only
Mode: LTE Band 4 QPSK 20MHz BW

Test Equipment:
Receiving: Horn T120 and Chamber F SMA Cables
Substitution: Horn T60 Substitution, and 8ft SMA Cable

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
1.720	11.7	V	0.95	8.42	19.17	30.0	-10.8	
1.720	12.6	H	0.95	8.60	20.28	30.0	-9.7	
Mid Ch								
1.733	11.1	V	0.95	8.50	18.65	30.0	-11.4	
1.733	12.3	H	0.95	8.70	20.01	30.0	-10.0	
High Ch								
1.745	10.9	V	0.95	8.57	18.50	30.0	-11.5	
1.745	13.0	H	0.95	8.80	20.85	30.0	-9.2	

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UAT 16QAM EIRP POWER FOR LTE BAND 4 (20.0MHZ BANDWIDTH)

High Frequency Substitution Measurement
UL Fremont Radiated Chamber F

Company: Apple
Project #: 14U17673
Date: 06/09/14
Test Engineer: R.Zheng
Configuration: EUT only
Mode: LTE Band 4 16QAM 20MHz BW

Test Equipment:
Receiving: Horn T120 and Chamber F SMA Cables
Substitution: Horn T60 Substitution, and 8ft SMA Cable

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Notes
Low Ch								
1.720	10.8	V	0.95	8.42	18.22	30.0	-11.8	
1.720	11.8	H	0.95	8.60	19.45	30.0	-10.6	
Mid Ch								
1.733	10.3	V	0.95	8.50	17.82	30.0	-12.2	
1.733	11.4	H	0.95	8.70	19.14	30.0	-10.9	
High Ch								
1.745	10.0	V	0.95	8.57	17.62	30.0	-12.4	
1.745	12.1	H	0.95	8.80	19.95	30.0	-10.1	

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9.1.3. LTE BAND 5

LAT QPSK EIRP POWER FOR LTE BAND 5 (1.4MHZ BANDWIDTH)

High Frequency Substitution Measurement
UL Fremont Radiated Chamber D

Company: Apple
Project #: 14U17673
Date: 06/07/14
Test Engineer: R.Zheng
Configuration: EUT Only
Mode: LTE Band 5 QPSK 1.4MHz BW

Test Equipment:
Receiving: Sunol T407, and Chamber D Cable
Substitution: Dipole S/N: 00022117, and 8ft SMA Cable

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	ERIP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes
Low Ch										
824.70	14.87	V	0.6	0.0	14.25	16.40	38.45	40.60	-24.2	
824.70	20.48	H	0.6	0.0	19.86	22.01	38.45	40.60	-18.6	
Mid Ch										
836.50	13.55	V	0.6	0.0	12.93	15.08	38.45	40.60	-25.5	
836.50	20.05	H	0.6	0.0	19.43	21.58	38.45	40.60	-19.0	
High Ch										
848.30	13.25	V	0.6	0.0	12.63	14.78	38.45	40.60	-25.8	
848.30	19.99	H	0.6	0.0	19.37	21.52	38.45	40.60	-19.1	

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LAT 16QAM EIRP POWER FOR LTE BAND 5 (1.4MHZ BANDWIDTH)

High Frequency Substitution Measurement
UL Fremont Radiated Chamber D

Company: Apple
Project #: 14U17673
Date: 06/07/14
Test Engineer: R.Zheng
Configuration: EUT Only
Mode: LTE Band 5 16QAM 1.4MHz BW

Test Equipment:
Receiving: Sunol T407, and Chamber D Cable
Substitution: Dipole S/N: 00022117, and 8ft SMA Cable

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes
Low Ch										
824.70	13.88	V	0.6	0.0	13.26	15.41	38.45	40.60	-25.2	
824.70	19.06	H	0.6	0.0	18.44	20.59	38.45	40.60	-20.0	
Mid Ch										
836.50	12.58	V	0.6	0.0	11.96	14.11	38.45	40.60	-26.5	
836.50	19.09	H	0.6	0.0	18.47	20.62	38.45	40.60	-20.0	
High Ch										
848.30	12.34	V	0.6	0.0	11.72	13.87	38.45	40.60	-26.7	
848.30	19.06	H	0.6	0.0	18.44	20.59	38.45	40.60	-20.0	

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber D

Company: Apple
Project #: 14U17673
Date: 06/07/14
Test Engineer: R.Zheng
Configuration: EUT Only
Mode: LTE Band 5 QPSK 3MHz BW

Test Equipment:
Receiving: Sunol T407, and Chamber D Cable
Substitution: Dipole S/N: 00022117, and 8ft SMA Cable

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes
Low Ch										
825.50	15.30	V	0.6	0.0	14.68	16.83	38.45	40.60	-23.8	
825.50	20.51	H	0.6	0.0	19.89	22.04	38.45	40.60	-18.6	
Mid Ch										
836.50	13.83	V	0.6	0.0	13.21	15.36	38.45	40.60	-25.2	
836.50	20.08	H	0.6	0.0	19.46	21.61	38.45	40.60	-19.0	
High Ch										
847.50	13.15	V	0.6	0.0	12.53	14.68	38.45	40.60	-25.9	
847.50	20.19	H	0.6	0.0	19.57	21.72	38.45	40.60	-18.9	

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber D

Company: Apple
Project #: 14U17673
Date: 06/07/14
Test Engineer: R.Zheng
Configuration: EUT Only
Mode: LTE Band 5 16QAM 3MHz BW

Test Equipment:
Receiving: Sunol T407, and Chamber D Cable
Substitution: Dipole S/N: 00022117, and 8ft SMA Cable

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes
Low Ch										
825.50	14.40	V	0.6	0.0	13.78	15.93	38.45	40.60	-24.7	
825.50	19.49	H	0.6	0.0	18.87	21.02	38.45	40.60	-19.6	
Mid Ch										
836.50	12.97	V	0.6	0.0	12.35	14.50	38.45	40.60	-26.1	
836.50	19.21	H	0.6	0.0	18.59	20.74	38.45	40.60	-19.9	
High Ch										
847.50	12.18	V	0.6	0.0	11.56	13.71	38.45	40.60	-26.9	
847.50	19.28	H	0.6	0.0	18.66	20.81	38.45	40.60	-19.8	

Rev. 10.24.13

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber D

Company: Apple
Project #: 14U17673
Date: 06/07/14
Test Engineer: R.Zheng
Configuration: EUT Only
Mode: LTE Band 5 QPSK 5MHz BW

Test Equipment:
Receiving: Sunol T407, and Chamber D Cable
Substitution: Dipole S/N: 00022117, and 8ft SMA Cable

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes
Low Ch										
826.50	14.33	V	0.6	0.0	13.71	15.86	38.45	40.60	-24.7	
826.50	19.56	H	0.6	0.0	18.94	21.09	38.45	40.60	-19.5	
Mid Ch										
836.50	14.05	V	0.6	0.0	13.43	15.58	38.45	40.60	-25.0	
836.50	19.90	H	0.6	0.0	19.28	21.43	38.45	40.60	-19.2	
High Ch										
846.50	13.95	V	0.6	0.0	13.33	15.48	38.45	40.60	-25.1	
846.50	20.17	H	0.6	0.0	19.55	21.70	38.45	40.60	-18.9	

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LAT 16QAM EIRP POWER FOR LTE BAND 5 (5.0MHZ BANDWIDTH)

High Frequency Substitution Measurement
UL Fremont Radiated Chamber D

Company: Apple
Project #: 14U17673
Date: 06/07/14
Test Engineer: R.Zheng
Configuration: EUT Only
Mode: LTE Band 5 16QAM 5MHz BW

Test Equipment:
Receiving: Sunol T407, and Chamber D Cable
Substitution: Dipole S/N: 00022117, and 8ft SMA Cable

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes
Low Ch										
826.50	13.33	V	0.6	0.0	12.71	14.86	38.45	40.60	-25.7	
826.50	18.56	H	0.6	0.0	17.94	20.09	38.45	40.60	-20.5	
Mid Ch										
836.50	13.21	V	0.6	0.0	12.59	14.74	38.45	40.60	-25.9	
836.50	18.99	H	0.6	0.0	18.37	20.52	38.45	40.60	-20.1	
High Ch										
846.50	12.54	V	0.6	0.0	11.92	14.07	38.45	40.60	-26.5	
846.50	19.25	H	0.6	0.0	18.63	20.78	38.45	40.60	-19.8	

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber D

Company: Apple
Project #: 14U17673
Date: 06/07/14
Test Engineer: R.Zheng
Configuration: EUT Only
Mode: LTE Band 5 QPSK 10MHz BW

Test Equipment:
Receiving: Sunol T407, and Chamber D Cable
Substitution: Dipole S/N: 00022117, and 8ft SMA Cable

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes
Low Ch										
829.00	14.33	V	0.6	0.0	13.71	15.86	38.45	40.60	-24.7	
829.00	20.06	H	0.6	0.0	19.44	21.59	38.45	40.60	-19.0	
Mid Ch										
836.50	14.19	V	0.6	0.0	13.57	15.72	38.45	40.60	-24.9	
836.50	20.22	H	0.6	0.0	19.60	21.75	38.45	40.60	-18.8	
High Ch										
844.00	13.65	V	0.6	0.0	13.03	15.18	38.45	40.60	-25.4	
844.00	19.89	H	0.6	0.0	19.27	21.42	38.45	40.60	-19.2	

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber D

Company: Apple
Project #: 14U17673
Date: 06/07/14
Test Engineer: R.Zheng
Configuration: EUT Only
Mode: LTE Band 5 16QAM 10MHz BW

Test Equipment:
Receiving: Sunol T407, and Chamber D Cable
Substitution: Dipole S/N: 00022117, and 8ft SMA Cable

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes
Low Ch										
829.00	12.83	V	0.6	0.0	12.21	14.36	38.45	40.60	-26.2	
829.00	19.16	H	0.6	0.0	18.54	20.69	38.45	40.60	-19.9	
Mid Ch										
836.50	13.18	V	0.6	0.0	12.56	14.71	38.45	40.60	-25.9	
836.50	19.02	H	0.6	0.0	18.40	20.55	38.45	40.60	-20.0	
High Ch										
844.00	12.71	V	0.6	0.0	12.09	14.24	38.45	40.60	-26.4	
844.00	19.03	H	0.6	0.0	18.41	20.56	38.45	40.60	-20.0	

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UAT QPSK EIRP POWER FOR LTE BAND 5 (1.4MHZ BANDWIDTH)

High Frequency Substitution Measurement
UL Fremont Radiated Chamber D

Company: Apple
Project #: 14U17673
Date: 06/10/14
Test Engineer: M. Hua
Configuration: EUT Only
Mode: LTE Band 5 QPSK 1.4MHz BW

Test Equipment:
Receiving: Sunol T407, and Chamber D Cable
Substitution: Dipole S/N: 00022117, and 8ft SMA Cable

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	ERIP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes
Low Ch										
824.70	11.33	V	0.6	0.0	10.71	12.86	38.45	40.60	-27.7	
824.70	18.76	H	0.6	0.0	18.14	20.29	38.45	40.60	-20.3	
Mid Ch										
836.50	10.25	V	0.6	0.0	9.63	11.78	38.45	40.60	-28.8	
836.50	18.72	H	0.6	0.0	18.10	20.25	38.45	40.60	-20.3	
High Ch										
848.30	10.45	V	0.6	0.0	9.83	11.98	38.45	40.60	-28.6	
848.30	18.89	H	0.6	0.0	18.27	20.42	38.45	40.60	-20.2	

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UAT 16QAM EIRP POWER FOR LTE BAND 5 (1.4MHZ BANDWIDTH)

High Frequency Substitution Measurement
UL Fremont Radiated Chamber D

Company: Apple
Project #: 14U17673
Date: 06/10/14
Test Engineer: M. Hua
Configuration: EUT Only
Mode: LTE Band 5 16QAM 1.4MHz BW

Test Equipment:
Receiving: Sunol T407, and Chamber D Cable
Substitution: Dipole S/N: 00022117, and 8ft SMA Cable

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes
Low Ch										
824.70	10.43	V	0.6	0.0	9.81	11.96	38.45	40.60	-28.6	
824.70	17.76	H	0.6	0.0	17.14	19.29	38.45	40.60	-21.3	
Mid Ch										
836.50	9.25	V	0.6	0.0	8.63	10.78	38.45	40.60	-29.8	
836.50	17.79	H	0.6	0.0	17.17	19.32	38.45	40.60	-21.3	
High Ch										
848.30	9.35	V	0.6	0.0	8.73	10.88	38.45	40.60	-29.7	
848.30	18.00	H	0.6	0.0	17.38	19.53	38.45	40.60	-21.1	

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber D

Company: Apple
Project #: 14U17673
Date: 06/10/14
Test Engineer: M. Hua
Configuration: EUT Only
Mode: LTE Band 5 QPSK 3MHz BW

Test Equipment:
Receiving: Sunol T407, and Chamber D Cable
Substitution: Dipole S/N: 00022117, and 8ft SMA Cable

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes
Low Ch										
825.50	8.83	V	0.6	0.0	8.21	10.36	38.45	40.60	-30.2	
825.50	18.86	H	0.6	0.0	18.24	20.39	38.45	40.60	-20.2	
Mid Ch										
836.50	9.55	V	0.6	0.0	8.93	11.08	38.45	40.60	-29.5	
836.50	18.97	H	0.6	0.0	18.35	20.50	38.45	40.60	-20.1	
High Ch										
847.50	9.95	V	0.6	0.0	9.33	11.48	38.45	40.60	-29.1	
847.50	19.14	H	0.6	0.0	18.52	20.67	38.45	40.60	-19.9	

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber D

Company: Apple
Project #: 14U17673
Date: 06/10/14
Test Engineer: M. Hua
Configuration: EUT Only
Mode: LTE Band 5 16QAM 3MHz BW

Test Equipment:
Receiving: Sunol T407, and Chamber D Cable
Substitution: Dipole S/N: 00022117, and 8ft SMA Cable

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes
Low Ch										
825.50	9.23	V	0.6	0.0	8.61	10.76	38.45	40.60	-29.8	
825.50	17.96	H	0.6	0.0	17.34	19.49	38.45	40.60	-21.1	
Mid Ch										
836.50	9.35	V	0.6	0.0	8.73	10.88	38.45	40.60	-29.7	
836.50	17.85	H	0.6	0.0	17.23	19.38	38.45	40.60	-21.2	
High Ch										
847.50	9.55	V	0.6	0.0	8.93	11.08	38.45	40.60	-29.5	
847.50	18.39	H	0.6	0.0	17.77	19.92	38.45	40.60	-20.7	

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber D

Company: Apple
Project #: 14U17673
Date: 06/10/14
Test Engineer: M. Hua
Configuration: EUT Only
Mode: LTE Band 5 QPSK 5MHz BW

Test Equipment:
Receiving: Sunol T407, and Chamber D Cable
Substitution: Dipole S/N: 00022117, and 8ft SMA Cable

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes
Low Ch										
826.50	10.33	V	0.6	0.0	9.71	11.86	38.45	40.60	-28.7	
826.50	19.05	H	0.6	0.0	18.43	20.58	38.45	40.60	-20.0	
Mid Ch										
836.50	10.15	V	0.6	0.0	9.53	11.68	38.45	40.60	-28.9	
836.50	18.75	H	0.6	0.0	18.13	20.28	38.45	40.60	-20.3	
High Ch										
846.50	9.65	V	0.6	0.0	9.03	11.18	38.45	40.60	-29.4	
846.50	19.30	H	0.6	0.0	18.68	20.83	38.45	40.60	-19.8	

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UAT 16QAM EIRP POWER FOR LTE BAND 5 (5.0MHZ BANDWIDTH)

High Frequency Substitution Measurement
UL Fremont Radiated Chamber D

Company: Apple
Project #: 14U17673
Date: 06/10/14
Test Engineer: M. Hua
Configuration: EUT Only
Mode: LTE Band 5 16QAM 5MHz BW

Test Equipment:
Receiving: Sunol T407, and Chamber D Cable
Substitution: Dipole S/N: 00022117, and 8ft SMA Cable

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes
Low Ch										
826.50	10.13	V	0.6	0.0	9.51	11.66	38.45	40.60	-28.9	
826.50	17.95	H	0.6	0.0	17.33	19.48	38.45	40.60	-21.1	
Mid Ch										
836.50	10.15	V	0.6	0.0	9.53	11.68	38.45	40.60	-28.9	
836.50	17.61	H	0.6	0.0	16.99	19.14	38.45	40.60	-21.5	
High Ch										
846.50	9.55	V	0.6	0.0	8.93	11.08	38.45	40.60	-29.5	
846.50	17.99	H	0.6	0.0	17.37	19.52	38.45	40.60	-21.1	

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber D

Company: Apple
Project #: 14U17673
Date: 06/10/14
Test Engineer: M. Hua
Configuration: EUT Only
Mode: LTE Band 5 QPSK 10MHz BW

Test Equipment:
Receiving: Sunol T407, and Chamber D Cable
Substitution: Dipole S/N: 00022117, and 8ft SMA Cable

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes
Low Ch										
829.00	10.53	V	0.6	0.0	9.91	12.06	38.45	40.60	-28.5	
829.00	19.26	H	0.6	0.0	18.64	20.79	38.45	40.60	-19.8	
Mid Ch										
836.50	10.15	V	0.6	0.0	9.53	11.68	38.45	40.60	-28.9	
836.50	18.72	H	0.6	0.0	18.10	20.25	38.45	40.60	-20.3	
High Ch										
844.00	10.05	V	0.6	0.0	9.43	11.58	38.45	40.60	-29.0	
844.00	19.11	H	0.6	0.0	18.49	20.64	38.45	40.60	-20.0	

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber D

Company: Apple
Project #: 14U17673
Date: 06/10/14
Test Engineer: M. Hua
Configuration: EUT Only
Mode: LTE Band 5 16QAM 10MHz BW

Test Equipment:
Receiving: Sunol T407, and Chamber D Cable
Substitution: Dipole S/N: 00022117, and 8ft SMA Cable

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes
Low Ch										
829.00	10.43	V	0.6	0.0	9.81	11.96	38.45	40.60	-28.6	
829.00	17.86	H	0.6	0.0	17.24	19.39	38.45	40.60	-21.2	
Mid Ch										
836.50	8.15	V	0.6	0.0	7.53	9.68	38.45	40.60	-30.9	
836.50	17.61	H	0.6	0.0	16.99	19.14	38.45	40.60	-21.5	
High Ch										
844.00	8.95	V	0.6	0.0	8.33	10.48	38.45	40.60	-30.1	
844.00	17.69	H	0.6	0.0	17.07	19.22	38.45	40.60	-21.4	

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9.1.4. LTE BAND 13

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber D

Company: Apple
Project #: 14U17673
Date: 06/07/14
Test Engineer: R.Zheng
Configuration: EUT Only
Mode: LTE Band 13 QPSK 5MHz BW

Test Equipment:
Receiving: Sunol T407, and Chamber D Cable
Substitution: Dipole S/N: 00022117, and 8ft SMA Cable

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes
Low Ch										
779.50	11.73	V	0.55	0.0	11.18	13.33	34.77	36.99	-23.7	
779.50	18.68	H	0.55	0.0	18.13	20.28	34.77	36.99	-16.7	
Mid Ch										
782.00	13.70	V	0.55	0.0	13.15	15.30	34.77	36.99	-21.7	
782.00	18.17	H	0.55	0.0	17.62	19.77	34.77	36.99	-17.2	
High Ch										
784.50	14.24	V	0.55	0.0	13.69	15.84	34.77	36.99	-21.2	
784.50	18.73	H	0.55	0.0	18.18	20.33	34.77	36.99	-16.7	

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LAT 16QAM EIRP POWER FOR LTE BAND 13 (5.0MHZ BANDWIDTH)

High Frequency Substitution Measurement
UL Fremont Radiated Chamber D

Company: Apple
Project #: 14U17673
Date: 06/07/14
Test Engineer: R.Zheng
Configuration: EUT Only
Mode: LTE Band 13 16QAM 5MHz BW

Test Equipment:
Receiving: Sunol T407, and Chamber D Cable
Substitution: Dipole S/N: 00022117, and 8ft SMA Cable

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes
Low Ch										
779.50	13.99	V	0.55	0.0	13.44	15.59	34.77	36.99	-21.4	
779.50	17.68	H	0.55	0.0	17.13	19.28	34.77	36.99	-17.7	
Mid Ch										
782.00	13.80	V	0.55	0.0	13.25	15.40	34.77	36.99	-21.6	
782.00	17.42	H	0.55	0.0	16.87	19.02	34.77	36.99	-18.0	
High Ch										
784.50	13.29	V	0.55	0.0	12.74	14.89	34.77	36.99	-22.1	
784.50	17.62	H	0.55	0.0	17.07	19.22	34.77	36.99	-17.8	

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber D

Company: Apple
Project #: 14U17673
Date: 06/07/14
Test Engineer: R.Zheng
Configuration: EUT Only
Mode: LTE Band 13 QPSK 10MHz BW

Test Equipment:
Receiving: Sunol T407, and Chamber D Cable
Substitution: Dipole S/N: 00022117, and 8ft SMA Cable

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes
782.00	14.69	V	0.55	0.0	14.14	16.29	34.77	36.99	-20.7	
782.00	18.46	H	0.55	0.0	17.91	20.06	34.77	36.99	-16.9	

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber D

Company: Apple
Project #: 14U17673
Date: 06/07/14
Test Engineer: R.Zheng
Configuration: EUT Only
Mode: LTE Band 13 16QAM 10MHz BW

Test Equipment:
Receiving: Sunol T407, and Chamber D Cable
Substitution: Dipole S/N: 00022117, and 8ft SMA Cable

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes
782.00	13.78	V	0.55	0.0	13.23	15.38	34.77	36.99	-21.6	
782.00	17.42	H	0.55	0.0	16.87	19.02	34.77	36.99	-18.0	

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber D

Company: Apple
Project #: 14U17673
Date: 06/10/14
Test Engineer: M. Hua
Configuration: EUT Only
Mode: LTE Band 13 QPSK 5MHz BW

Test Equipment:
Receiving: Sunol T407, and Chamber D Cable
Substitution: Dipole S/N: 00022117, and 8ft SMA Cable

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes
Low Ch										
779.50	9.93	V	0.55	0.0	9.38	11.53	34.77	36.99	-25.5	
779.50	16.18	H	0.55	0.0	15.63	17.78	34.77	36.99	-19.2	
Mid Ch										
782.00	9.61	V	0.55	0.0	9.06	11.21	34.77	36.99	-25.8	
782.00	17.97	H	0.55	0.0	17.42	19.57	34.77	36.99	-17.4	
High Ch										
784.50	9.99	V	0.55	0.0	9.44	11.59	34.77	36.99	-25.4	
784.50	18.24	H	0.55	0.0	17.69	19.84	34.77	36.99	-17.2	

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UAT 16QAM EIRP POWER FOR LTE BAND 13 (5.0MHZ BANDWIDTH)

High Frequency Substitution Measurement
UL Fremont Radiated Chamber D

Company: Apple
Project #: 14U17673
Date: 06/10/14
Test Engineer: M. Hua
Configuration: EUT Only
Mode: LTE Band 13 16QAM 5MHz BW

Test Equipment:
Receiving: Sunol T407, and Chamber D Cable
Substitution: Dipole S/N: 00022117, and 8ft SMA Cable

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes
Low Ch										
779.50	8.73	V	0.55	0.0	8.18	10.33	34.77	36.99	-26.7	
779.50	15.28	H	0.55	0.0	14.73	16.88	34.77	36.99	-20.1	
Mid Ch										
782.00	7.61	V	0.55	0.0	7.06	9.21	34.77	36.99	-27.8	
782.00	16.77	H	0.55	0.0	16.22	18.37	34.77	36.99	-18.6	
High Ch										
784.50	8.89	V	0.55	0.0	8.34	10.49	34.77	36.99	-26.5	
784.50	16.44	H	0.55	0.0	15.89	18.04	34.77	36.99	-19.0	

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber D

Company: Apple
Project #: 14U17673
Date: 06/10/14
Test Engineer: M. Hua
Configuration: EUT Only
Mode: LTE Band 13 QPSK 10MHz BW

Test Equipment:
Receiving: Sunol T407, and Chamber D Cable
Substitution: Dipole S/N: 00022117, and 8ft SMA Cable

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes
782.00	8.51	V	0.55	0.0	7.96	10.11	34.77	36.99	-26.9	
782.00	17.77	H	0.55	0.0	17.22	19.37	34.77	36.99	-17.6	

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber D

Company:	Apple
Project #:	14U17673
Date:	06/10/14
Test Engineer:	M. Hua
Configuration:	EUT Only
Mode:	LTE Band 13 16QAM 10MHz BW

Test Equipment:
Receiving: Sunol T407, and Chamber D Cable
Substitution: Dipole S/N: 00022117, and 8ft SMA Cable

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	ERP Limit (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes
782.00	8.51	V	0.55	0.0	7.96	10.11	34.77	36.99	-26.9	
782.00	16.77	H	0.55	0.0	16.22	18.37	34.77	36.99	-18.6	

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9.1.5. LTE BAND 17

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber D

Company: Apple
Project #: 14U17673
Date: 06/07/14
Test Engineer: R.Zheng
Configuration: EUT Only
Mode: LTE Band 17 QPSK 5MHz BW

Test Equipment:
Receiving: Sunol T407, and Chamber D Cable
Substitution: Dipole S/N: 00022117, and 8ft SMA Cable

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes
Low Ch										
706.50	10.52	V	0.55	0.0	9.97	12.12	34.77	36.99	-24.9	
706.50	19.03	H	0.55	0.0	18.48	20.63	34.77	36.99	-16.4	
Mid Ch										
710.00	10.47	V	0.55	0.0	9.92	12.07	34.77	36.99	-24.9	
710.00	18.87	H	0.55	0.0	18.32	20.47	34.77	36.99	-16.5	
High Ch										
713.50	11.42	V	0.55	0.0	10.87	13.02	34.77	36.99	-24.0	
713.50	18.41	H	0.55	0.0	17.86	20.01	34.77	36.99	-17.0	

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber D

Company: Apple
Project #: 14U17673
Date: 06/07/14
Test Engineer: R.Zheng
Configuration: EUT Only
Mode: LTE Band 17 16QAM 5MHz BW

Test Equipment:
Receiving: Sunol T407, and Chamber D Cable
Substitution: Dipole S/N: 00022117, and 8ft SMA Cable

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes
Low Ch										
706.50	9.57	V	0.55	0.0	9.02	11.17	34.77	36.99	-25.8	
706.50	18.00	H	0.55	0.0	17.45	19.60	34.77	36.99	-17.4	
Mid Ch										
710.00	9.53	V	0.55	0.0	8.98	11.13	34.77	36.99	-25.9	
710.00	17.87	H	0.55	0.0	17.32	19.47	34.77	36.99	-17.5	
High Ch										
713.50	9.82	V	0.55	0.0	9.27	11.42	34.77	36.99	-25.6	
713.50	17.81	H	0.55	0.0	17.26	19.41	34.77	36.99	-17.6	

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber D

Company: Apple
Project #: 14U17673
Date: 06/07/14
Test Engineer: R.Zheng
Configuration: EUT Only
Mode: LTE Band 17 QPSK 10MHz BW

Test Equipment:
Receiving: Sunol T407, and Chamber D Cable
Substitution: Dipole S/N: 00022117, and 8ft SMA Cable

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes
Low Ch										
709.00	10.82	V	0.55	0.0	10.27	12.42	34.77	36.99	-24.6	
709.00	19.23	H	0.55	0.0	18.68	20.83	34.77	36.99	-16.2	
Mid Ch										
710.00	10.85	V	0.55	0.0	10.30	12.45	34.77	36.99	-24.5	
710.00	18.97	H	0.55	0.0	18.42	20.57	34.77	36.99	-16.4	
High Ch										
711.00	10.62	V	0.55	0.0	10.07	12.22	34.77	36.99	-24.8	
711.00	18.81	H	0.55	0.0	18.26	20.41	34.77	36.99	-16.6	

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber D

Company: Apple
Project #: 14U17673
Date: 06/07/14
Test Engineer: R.Zheng
Configuration: EUT Only
Mode: LTE Band 17 16QAM 10MHz BW

Test Equipment:
Receiving: Sunol T407, and Chamber D Cable
Substitution: Dipole S/N: 00022117, and 8ft SMA Cable

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes
Low Ch										
709.00	9.89	V	0.55	0.0	9.34	11.49	34.77	36.99	-25.5	
709.00	18.03	H	0.55	0.0	17.48	19.63	34.77	36.99	-17.4	
Mid Ch										
710.00	9.83	V	0.55	0.0	9.28	11.43	34.77	36.99	-25.6	
710.00	17.97	H	0.55	0.0	17.42	19.57	34.77	36.99	-17.4	
High Ch										
711.00	9.72	V	0.55	0.0	9.17	11.32	34.77	36.99	-25.7	
711.00	17.31	H	0.55	0.0	16.76	18.91	34.77	36.99	-18.1	

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber D

Company: Apple
Project #: 14U17673
Date: 06/10/14
Test Engineer: M. Hua
Configuration: EUT Only
Mode: LTE Band 17 QPSK 5MHz BW

Test Equipment:
Receiving: Sunol T407, and Chamber D Cable
Substitution: Dipole S/N: 00022117, and 8ft SMA Cable

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes
Low Ch										
706.50	6.50	V	0.55	0.0	5.95	8.10	34.77	36.99	-28.9	
706.50	14.53	H	0.55	0.0	13.98	16.13	34.77	36.99	-20.9	
Mid Ch										
710.00	8.11	V	0.55	0.0	7.56	9.71	34.77	36.99	-27.3	
710.00	14.67	H	0.55	0.0	14.12	16.27	34.77	36.99	-20.7	
High Ch										
713.50	8.27	V	0.55	0.0	7.72	9.87	34.77	36.99	-27.1	
713.50	15.11	H	0.55	0.0	14.56	16.71	34.77	36.99	-20.3	

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber D

Company: Apple
Project #: 14U17673
Date: 06/10/14
Test Engineer: M. Hua
Configuration: EUT Only
Mode: LTE Band 17 16QAM 5MHz BW

Test Equipment:
Receiving: Sunol T407, and Chamber D Cable
Substitution: Dipole S/N: 00022117, and 8ft SMA Cable

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes
Low Ch										
706.50	6.30	V	0.55	0.0	5.75	7.90	34.77	36.99	-29.1	
706.50	13.63	H	0.55	0.0	13.08	15.23	34.77	36.99	-21.8	
Mid Ch										
710.00	6.81	V	0.55	0.0	6.26	8.41	34.77	36.99	-28.6	
710.00	13.67	H	0.55	0.0	13.12	15.27	34.77	36.99	-21.7	
High Ch										
713.50	8.22	V	0.55	0.0	7.67	9.82	34.77	36.99	-27.2	
713.50	13.81	H	0.55	0.0	13.26	15.41	34.77	36.99	-21.6	

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber D

Company: Apple
Project #: 14U17673
Date: 06/10/14
Test Engineer: M. Hua
Configuration: EUT Only
Mode: LTE Band 17 QPSK 10MHz BW

Test Equipment:
Receiving: Sunol T407, and Chamber D Cable
Substitution: Dipole S/N: 00022117, and 8ft SMA Cable

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes
Low Ch										
709.00	7.30	V	0.55	0.0	6.75	8.90	34.77	36.99	-28.1	
709.00	14.75	H	0.55	0.0	14.20	16.35	34.77	36.99	-20.6	
Mid Ch										
710.00	7.49	V	0.55	0.0	6.94	9.09	34.77	36.99	-27.9	
710.00	14.87	H	0.55	0.0	14.32	16.47	34.77	36.99	-20.5	
High Ch										
711.00	7.59	V	0.55	0.0	7.04	9.19	34.77	36.99	-27.8	
711.00	15.25	H	0.55	0.0	14.70	16.85	34.77	36.99	-20.1	

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber D

Company: Apple
Project #: 14U17673
Date: 06/10/14
Test Engineer: M. Hua
Configuration: EUT Only
Mode: LTE Band 17 16QAM 10MHz BW

Test Equipment:
Receiving: Sunol T407, and Chamber D Cable
Substitution: Dipole S/N: 00022117, and 8ft SMA Cable

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes
Low Ch										
709.00	6.60	V	0.55	0.0	6.05	8.20	34.77	36.99	-28.8	
709.00	13.53	H	0.55	0.0	12.98	15.13	34.77	36.99	-21.9	
Mid Ch										
710.00	6.91	V	0.55	0.0	6.36	8.51	34.77	36.99	-28.5	
710.00	13.57	H	0.55	0.0	13.02	15.17	34.77	36.99	-21.8	
High Ch										
711.00	6.44	V	0.55	0.0	5.89	8.04	34.77	36.99	-29.0	
711.00	14.16	H	0.55	0.0	13.61	15.76	34.77	36.99	-21.2	

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9.1.6. LTE BAND 25

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber D

Company: Apple
Project #: 14U17673
Date: 06/07/14
Test Engineer: M. Hua
Configuration: EUT Only
Mode: LTE Band 25 QPSK 1.4MHz BW

Test Equipment:
Receiving: Horn T344, and Chamber D SMA Cables
Substitution: Horn T60 Substitution, and 8ft SMA Cable

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Notes
Low Ch								
1.851	18.5	V	0.98	7.88	25.39	33.0	-7.6	
1.851	18.9	H	0.98	7.88	25.76	33.0	-7.2	
Mid Ch								
1.883	18.3	V	0.98	7.86	25.22	33.0	-7.8	
1.883	18.8	H	0.98	7.86	25.64	33.0	-7.4	
High Ch								
1.914	18.3	V	0.98	7.84	25.14	33.0	-7.9	
1.914	19.4	H	0.98	7.84	26.22	33.0	-6.8	

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber D

Company: Apple
Project #: 14U17673
Date: 06/07/14
Test Engineer: M. Hua
Configuration: EUT Only
Mode: LTE Band 25 16QAM 1.4MHz BW

Test Equipment:
Receiving: Horn T344, and Chamber D SMA Cables
Substitution: Horn T60 Substitution, and 8ft SMA Cable

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Notes
Low Ch								
1.851	17.5	V	0.98	7.88	24.39	33.0	-8.6	
1.851	17.8	H	0.98	7.88	24.66	33.0	-8.3	
Mid Ch								
1.883	17.9	V	0.98	7.86	24.82	33.0	-8.2	
1.883	17.5	H	0.98	7.86	24.34	33.0	-8.7	
High Ch								
1.914	17.2	V	0.98	7.84	24.04	33.0	-9.0	
1.914	18.4	H	0.98	7.84	25.22	33.0	-7.8	

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber D

Company: Apple
Project #: 14U17673
Date: 06/07/14
Test Engineer: M. Hua
Configuration: EUT Only
Mode: LTE Band 25 QPSK 3MHz BW

Test Equipment:
Receiving: Horn T344, and Chamber D SMA Cables
Substitution: Horn T60 Substitution, and 8ft SMA Cable

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Notes
Low Ch								
1.852	18.6	V	0.98	7.88	25.49	33.0	-7.5	
1.852	18.3	H	0.98	7.88	25.16	33.0	-7.8	
Mid Ch								
1.883	18.3	V	0.98	7.86	25.22	33.0	-7.8	
1.883	18.7	H	0.98	7.86	25.54	33.0	-7.5	
High Ch								
1.914	18.3	V	0.98	7.84	25.14	33.0	-7.9	
1.914	19.6	H	0.98	7.84	26.42	33.0	-6.6	

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber D

Company: Apple
Project #: 14U17673
Date: 06/07/14
Test Engineer: M. Hua
Configuration: EUT Only
Mode: LTE Band 25 16QAM 3MHz BW

Test Equipment:
Receiving: Horn T344, and Chamber D SMA Cables
Substitution: Horn T60 Substitution, and 8ft SMA Cable

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Notes
Low Ch								
1.852	17.5	V	0.98	7.88	24.39	33.0	-8.6	
1.852	17.4	H	0.98	7.88	24.26	33.0	-8.7	
Mid Ch								
1.883	17.3	V	0.98	7.86	24.22	33.0	-8.8	
1.883	17.6	H	0.98	7.86	24.44	33.0	-8.6	
High Ch								
1.914	17.4	V	0.98	7.84	24.24	33.0	-8.8	
1.914	18.6	H	0.98	7.84	25.42	33.0	-7.6	

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber D

Company: Apple
Project #: 14U17673
Date: 06/07/14
Test Engineer: M. Hua
Configuration: EUT Only
Mode: LTE Band 25 QPSK 5MHz BW

Test Equipment:
Receiving: Horn T344, and Chamber D SMA Cables
Substitution: Horn T60 Substitution, and 8ft SMA Cable

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Notes
Low Ch								
1.853	18.6	V	0.98	7.88	25.49	33.0	-7.5	
1.853	18.3	H	0.98	7.88	25.25	33.0	-7.8	
Mid Ch								
1.883	18.4	V	0.98	7.86	25.32	33.0	-7.7	
1.883	19.5	H	0.98	7.86	26.34	33.0	-6.7	
High Ch								
1.913	18.4	V	0.98	7.84	25.24	33.0	-7.8	
1.913	19.3	H	0.98	7.84	26.12	33.0	-6.9	

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber D

Company: Apple
Project #: 14U17673
Date: 06/07/14
Test Engineer: M. Hua
Configuration: EUT Only
Mode: LTE Band 25 16QAM 5MHz BW

Test Equipment:
Receiving: Horn T344, and Chamber D SMA Cables
Substitution: Horn T60 Substitution, and 8ft SMA Cable

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Notes
Low Ch								
1.853	17.6	V	0.98	7.88	24.49	33.0	-8.5	
1.853	17.4	H	0.98	7.88	24.31	33.0	-8.7	
Mid Ch								
1.883	17.6	V	0.98	7.86	24.52	33.0	-8.5	
1.883	18.6	H	0.98	7.86	25.44	33.0	-7.6	
High Ch								
1.913	17.8	V	0.98	7.84	24.64	33.0	-8.4	
1.913	18.5	H	0.98	7.84	25.32	33.0	-7.7	

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