Report No.: AGC09966200404FE07 Page 76 of149

25	4.40	-11.20	-0.004231
25	3.45	-9.16	-0.003458

Note: Based on the results of the frequency stability test at the center channel the frequency deviation results measured are very samll. As such it is determined that channels at the band edge would remain in-band when the maximum measured frequency deviation noted duing the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperture and voltage range as tested.

The EUT doesn't work below -10°C

Page 77 of149

9. OCCUPIED BANDWIDTH

9.1 MEASUREMENT METHOD

The test set up and general procedure is similar to conducted peak output power test. Only different for setting the measurement configuration of the measuring instrument of Spectrum Analyzer.

9.2 PROVISIONS APPLICABLE

The emission bandwidth is defined as two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26dB below the transmitter power

9.3 MEASUREMENT RESULT

The occupied bandwidth, that is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers radiated are each equal to 0.5 percent of the total mean power radiated by a given emission shall be measured. All modes of operation were investigated and the worst case configuration results are reported in this section.

Page 78 of149

LTEBand 7
Channel Bandwidth: 5MHz

Channel Bandwidth: 5 MHz								
NA - ded - di	Channel	RB Confi	guration	Committed Deviation (MILE)	Vo veli et			
Modulation	Chamilei	Size	Offset	Occupied Bandwidth(MHz)	Verdict			
	LCH	25	0	4.4754	PASS			
QPSK	MCH	25	0	4.4750	PASS			
	HCH	25	0	4.4867	PASS			
	LCH	25	0	4.4695	PASS			
16QAM	MCH	25	0	4.4734	PASS			
	HCH	25	0	4.4734	PASS			

Channel Bandwidth: 10 MHz

Channel Bandwidth: 10 MHz								
Modulation	Channel	RB Confi Size	guration Offset	Occupied Bandwidth (MHz)	Verdict			
	LCH	50	0	8.9634	PASS			
QPSK	MCH	50	0	8.9541	PASS			
	HCH	50	0	8.9560	PASS			
	LCH	50	0	8.9438	PASS			
16QAM	MCH	50	0	8.9354	PASS			
	HCH	50	0	8.9493	PASS			

Channel Bandwidth: 15 MHz								
	Channal	RB Confi	guration	Occupied Dandwidth (MLI=)	Verdict			
Modulation	Channel	Size	Offset	Occupied Bandwidth(MHz)				
	LCH	75	0	13.433	PASS			
QPSK	MCH	75	0	13.434	PASS			
	HCH	75	0	13.450	PASS			
	LCH	75	0	13.410	PASS			
16QAM	MCH	75	0	13.412	PASS			
	HCH	75	0	13.429	PASS			

Page 79 of149

Channel Bandwidth: 20 MHz							
NA LLC	Channel	RB Configuration		Occupied Bandwidth(MHz)	Mar Park		
Modulation	Charmer	Size	Offset	Occupied Bandwidth(MHz)	Verdict		
	LCH	100	0	17.877	PASS		
QPSK	MCH	100	0	17.875	PASS		
	HCH	100	0	17.875	PASS		
	LCH	100	0	17.885	PASS		
16QAM	MCH	100	0	17.872	PASS		
	HCH	100	0	17.870	PASS		

Page 80 of149

LTEBand 38

Channel Bandwidth: 5MHz

Channel Bandwidth: 5 MHz								
Madulatian	Channel	RB Confi	guration	Occupied Randwidth(MHz)	Manaliat			
Modulation	Criannei	Size	Offset	Occupied Bandwidth(MHz)	Verdict			
	LCH	25	0	4.4715	PASS			
QPSK	MCH	25	0	4.4663	PASS			
	HCH	25	0	4.4764	PASS			
	LCH	25	0	4.4639	PASS			
16QAM	MCH	25	0	4.4787	PASS			
	HCH	25	0	4.4564	PASS			

Channel Bandwidth: 10 MHz

Channel Bandwidth: 10 MHz							
Modulation	Channel	RB Configuration Size Offset		Occupied Bandwidth (MHz)	Verdict		
		OIZE	Oliset				
	LCH	50	0	8.9275	PASS		
QPSK	MCH	50	0	8.9181	PASS		
	HCH	50	0	8.9400	PASS		
	LCH	50	0	8.9096	PASS		
16QAM	MCH	50	0	8.9318	PASS		
	HCH	50	0	8.9402	PASS		

Channel Bandwidth: 15 MHz								
NA - ded ations	Channel	RB Confi	guration	Occupied Pandwidth(MHz)	Manaliat			
Modulation	Channel	Size	Offset	Occupied Bandwidth(MHz)	Verdict			
	LCH	75	0	13.374	PASS			
QPSK	MCH	75	0	13.382	PASS			
	HCH	75	0	13.422	PASS			
	LCH	75	0	13.377	PASS			
16QAM	MCH	75	0	13.421	PASS			
	HCH	75	0	13.421	PASS			

Page 81 of149

Channel Bandwidth: 20 MHz							
NA . I I de Com	Channel	RB Confi	guration	Occupied Bandwidth/MUz)	Verdict		
Modulation	Charmer	Size	Offset	Occupied Bandwidth(MHz)	verdict		
	LCH	100	0	17.844	PASS		
QPSK	MCH	100	0	17.819	PASS		
	HCH	100	0	17.859	PASS		
	LCH	100	0	17.841	PASS		
16QAM	MCH	100	0	17.839	PASS		
	HCH	100	0	17.861	PASS		

Page 82 of149

LTEBand 40(1)

Channel Bandwidth: 5MHz

Channel Bandwidth: 5 MHz								
Modulation	Channal	RB Confi	guration	Occupied Bandwidth (MLI=)	Verdict			
Modulation	Channel	Size	Offset	Occupied Bandwidth(MHz)				
	LCH	25	0	4.5049	PASS			
QPSK	MCH	25	0	4.5158	PASS			
	HCH	25	0	4.5016	PASS			
	LCH	25	0	4.5046	PASS			
16QAM	MCH	25	0	4.5040	PASS			
	HCH	25	0	4.5016	PASS			

Channel Bandwidth: 10 MHz							
Modulation Channel	Channel	RB Configuration		Occupied Bandwidth (MHz)	Verdict		
	Chamilei	Size	Offset	Occupied Baridwidth (Wiriz)	Verdict		
QPSK	MCH	50	0	8.9802	PASS		
16QAM	MCH	50	0	8.9944	PASS		

Page 83 of149

LTEBand 40(2)

Channel Bandwidth: 5 MHz

Channel Bandwidth: 5 MHz							
Maria La Cara	Channal	RB Confi	guration	Occupied Randwidth(MHz)	\		
Modulation	Channel	Size	Offset	Occupied Bandwidth(MHz)	Verdict		
	LCH	25	0	4.5048	PASS		
QPSK	MCH	25	0	4.5109	PASS		
	HCH	25	0	4.5023	PASS		
	LCH	25	0	4.5048	PASS		
16QAM	MCH	25	0	4.5002	PASS		
	HCH	25	0	4.4926	PASS		

Channel Bandwidth: 10 MHz								
Modulation Cha	Channel	RB Confi	guration	Occupied Bandwidth (MHz)	Verdict			
	Charmer	Size	Offset	Occupied Baridwidth (Mi 12)	Verdict			
QPSK	MCH	50	0	9.0019	PASS			
16QAM	MCH	50	0	8.9811	PASS			

Page 84 of149

LTEBand 41
Channel Bandwidth: 5MHz

Channel Bandwidth: 5 MHz								
NA . I I de C	Channal	RB Confi	guration	Occupied Bandwidth/MII=	Verdict			
Modulation	Channel	Size	Offset	Occupied Bandwidth(MHz)				
	LCH	25	0	4.4746	PASS			
QPSK	MCH	25	0	4.4629	PASS			
	HCH	25	0	4.4755	PASS			
	LCH	25	0	4.4735	PASS			
16QAM	MCH	25	0	4.4692	PASS			
	HCH	25	0	4.4649	PASS			

Channel Bandwidth: 10 MHz								
Modulation	Channel	RB Confi	guration	Occupied Bandwidth (MHz)	Verdict			
Modulation	Chamilei	Size	Offset	Occupied Baridwidth (Williz)	verdict			
	LCH	50	0	8.9403	PASS			
QPSK	MCH	50	0	8.9365	PASS			
	HCH	50	0	8.9485	PASS			
	LCH	50	0	8.9481	PASS			
16QAM	MCH	50	0	8.9463	PASS			
	HCH	50	0	8.9338	PASS			

Page 85 of149

Channel Bandwidth: 15 MHz

Channel Bandwidth: 15 MHz								
Modulation	Channel	RB Configuration		Occupied Bandwidth/MLI=	Mar Bar			
		Size	Offset	Occupied Bandwidth(MHz)	Verdict			
	LCH	75	0	13.413	PASS			
QPSK	MCH	75	0	13.416	PASS			
	HCH	75	0	13.391	PASS			
	LCH	75	0	13.413	PASS			
16QAM	MCH	75	0	13.408	PASS			
	HCH	75	0	13.399	PASS			

Channel Bandwidth: 20 MHz

Channel Bandwidth: 20 MHz								
NA LIGGE	Channal	RB Confi	guration	Occupied Bandwidth/MUz)	V P C			
Modulation	Channel	Size	Offset	Occupied Bandwidth(MHz)	Verdict			
	LCH	100	0	17.851	PASS			
QPSK	MCH	100	0	17.854	PASS			
	HCH	100	0	17.844	PASS			
	LCH	100	0	17.857	PASS			
16QAM	MCH	100	0	17.856	PASS			
	HCH	100	0	17.829	PASS			

Note:Please refers to Appendix B for compliance test plots for Occupied Bandwidth (99%)

Page 86 of149

10. EMISSION BANDWIDTH

10.1 MEASUREMENT METHOD

The test set up and general procedure is similar to conducted peak output power test. Only different for setting the measurement configuration of the measuring instrument of Spectrum Analyzer.

10.2 PROVISIONS APPLICABLE

The emission bandwidth is defined as two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26dB below the transmitter power.

10.3 MEASUREMENT RESULT

The occupied bandwidth, that is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers radiated are each equal to 0.5 percent of the total mean power radiated by a given emission shall be measured. All modes of operation were investigated and the worst case configuration results are reported in this section.

Page 87 of149

LTEBand 7
Channel Bandwidth: 5 MHz

Channel Bandwidth: 5MHz								
Modulation	Channal	RB Confi	guration	26dP Pandwidth (MUz)	Manallat			
Modulation	Channel	Size	Offset	26dB Bandwidth (MHz)	Verdict			
	LCH	25	0	4.736	PASS			
QPSK	MCH	25	0	4.729	PASS			
	HCH	25	0	4.758	PASS			
	LCH	25	0	4.722	PASS			
16QAM	MCH	25	0	4.743	PASS			
	HCH	25	0	4.779	PASS			

Channel Bandwidth: 10MHz								
	Channal	RB Confi	guration	OCAD Doodwidth (MILE)	V P . (
Modulation	Channel	Size	Offset	26dB Bandwidth (MHz)	Verdict			
	LCH	50	0	9.409	PASS			
QPSK	MCH	50	0	9.388	PASS			
	HCH	50	0	9.877	PASS			
	LCH	50	0	9.363	PASS			
16QAM	MCH	50	0	9.349	PASS			
	HCH	50	0	9.398	PASS			

Page 88 of149

Channel Bandwidth: 15 MHz

Channel Bandwidth: 15MHz									
NA LLCC	Channel	RB Configuration		OCAD Donatwidth (MIII-)	VI. P. C				
Modulation		Size	Offset	26dB Bandwidth (MHz)	Verdict				
	LCH	75	0	14.05	PASS				
QPSK	MCH	75	0	14.04	PASS				
	HCH	75	0	21.58	PASS				
	LCH	75	0	14.02	PASS				
16QAM	MCH	75	0	14.01	PASS				
	HCH	75	0	16.80	PASS				

Channel Bandwidth: 20MHz								
NA LLC	Channal	RB Configuration		OCAD Donahuidth (MIII-)	V P C			
Modulation	Channel	Size	Offset	26dB Bandwidth (MHz)	Verdict			
	LCH	100	0	18.52	PASS			
QPSK	MCH	100	0	18.59	PASS			
	HCH	100	0	18.78	PASS			
	LCH	100	0	18.56	PASS			
16QAM	MCH	100	0	18.59	PASS			
	HCH	100	0	18.58	PASS			

Page 89 of149

LTEBand 38
Channel Bandwidth: 5 MHz

Channel Bandwidth: 5MHz								
NA - ded ation	Channel	RB Confi	guration	26dP Pandwidth (MUz)	\			
Modulation		Size	Offset	26dB Bandwidth (MHz)	Verdict			
	LCH	25	0	4.692	PASS			
QPSK	MCH	25	0	4.657	PASS			
	HCH	25	0	4.727	PASS			
	LCH	25	0	4.716	PASS			
16QAM	MCH	25	0	4.762	PASS			
	HCH	25	0	4.718	PASS			

Channel Bandwidth: 10MHz								
Modulation	Channal	RB Confi	guration	OCAD Dondwidth (MIII-)	Mar Park			
	Channel	Size	Offset	26dB Bandwidth (MHz)	Verdict			
	LCH	50	0	9.297	PASS			
QPSK	MCH	50	0	9.367	PASS			
	HCH	50	0	9.381	PASS			
	LCH	50	0	9.331	PASS			
16QAM	MCH	50	0	9.291	PASS			
	HCH	50	0	9.336	PASS			

Page 90 of149

Channel Bandwidth: 15 MHz

Channel Bandwidth: 15MHz								
	Channal	RB Confi	guration	OCAD Dondwidth (MIII-)	Verdict			
Modulation	Channel	Size	Offset	26dB Bandwidth (MHz)				
	LCH	75	0	13.91	PASS			
QPSK	MCH	75	0	13.97	PASS			
	HCH	75	0	13.93	PASS			
	LCH	75	0	13.91	PASS			
16QAM	MCH	75	0	13.91	PASS			
	HCH	75	0	13.92	PASS			

Channel Bandwidth: 20MHz							
NA LLC	Channel	RB Configuration		26dP Pandwidth (MUz)	Mamaliat		
Modulation		Size	Offset	26dB Bandwidth (MHz)	Verdict		
	LCH	100	0	18.49	PASS		
QPSK	MCH	100	0	18.47	PASS		
	HCH	100	0	18.54	PASS		
	LCH	100	0	18.51	PASS		
16QAM	MCH	100	0	18.53	PASS		
	HCH	100	0	18.48	PASS		

Page 91 of149

LTEBand 40(1)

Channel Bandwidth: 5 MHz

Channel Bandwidth: 5MHz							
NA - ded ation	Channel	RB Configuration		OCAD Davidus (MILE)	\/a nali at		
Modulation		Size	Offset	26dB Bandwidth (MHz)	Verdict		
	LCH	25	0	4.879	PASS		
QPSK	MCH	25	0	4.841	PASS		
	HCH	25	0	4.990	PASS		
	LCH	25	0	4.876	PASS		
16QAM	MCH	25	0	4.900	PASS		
	HCH	25	0	4.972	PASS		

Channel Bandwidth: 10MHz							
Madulation	Channal	RB Configuration		OCAD Downdroidth (MILE)	\/a ndi at		
Modulation C	Channel	Size	Offset	26dB Bandwidth (MHz)	Verdict		
QPSK	MCH	50	0	9.547	PASS		
16QAM	MCH	50	0	9.566	PASS		

Page 92 of149

LTEBand 40(2)

Channel Bandwidth: 5 MHz

Channel Bandwidth: 5MHz							
NA a ded a time	Channel	RB Configuration		26dP Pandwidth (MUz)	V = ==!; = t		
Modulation		Size	Offset	26dB Bandwidth (MHz)	Verdict		
QPSK	LCH	25	0	4.890	PASS		
	MCH	25	0	4.842	PASS		
	HCH	25	0	4.940	PASS		
	LCH	25	0	4.892	PASS		
16QAM	MCH	25	0	4.904	PASS		
	HCH	25	0	4.927	PASS		

Channel Bandwidth: 10MHz							
Madulation Champal		RB Configuration		OCAD Doodyridth (MIII-)	\/ordiot		
Modulation	Channel	Size	Offset	26dB Bandwidth (MHz)	Verdict		
QPSK	MCH	50	0	9.542	PASS		
16QAM	MCH	50	0	9.571	PASS		

Page 93 of149

LTE Band 41
Channel Bandwidth: 5 MHz

Channel Bandwidth: 5MHz							
NA LLC	Channel	RB Configuration		OCAD Dondwidth (MIII-)	Manaliat		
Modulation		Size	Offset	26dB Bandwidth (MHz)	Verdict		
	LCH	25	0	4.784	PASS		
QPSK	MCH	25	0	4.700	PASS		
	HCH	25	0	4.707	PASS		
	LCH	25	0	4.704	PASS		
16QAM	MCH	25	0	4.728	PASS		
	HCH	25	0	4.755	PASS		

Channel Bandwidth: 10MHz							
	Channel	RB Configuration			Marie Park		
Modulation		Size	Offset	26dB Bandwidth (MHz)	Verdict		
	LCH	50	0	9.411	PASS		
QPSK	MCH	50	0	9.352	PASS		
	HCH	50	0	9.322	PASS		
	LCH	50	0	9.306	PASS		
16QAM	MCH	50	0	9.295	PASS		
	HCH	50	0	9.332	PASS		

Page 94 of149

Channel Bandwidth: 15 MHz

Channel Bandwidth: 15MHz							
NA - ded - di - c	Channel	RB Configuration		OCAD Davidus (MILE)	Manakat		
Modulation		Size	Offset	26dB Bandwidth (MHz)	Verdict		
QPSK	LCH	75	0	14.00	PASS		
	MCH	75	0	13.98	PASS		
	HCH	75	0	13.93	PASS		
	LCH	75	0	13.99	PASS		
16QAM	MCH	75	0	14.00	PASS		
	HCH	75	0	13.99	PASS		

Channel Bandwidth: 20 MHz

Channel Bandwidth: 20MHz							
Modulation	Channel	RB Configuration		26dP Pandwidth (MUz)	Manaliat		
		Size	Offset	26dB Bandwidth (MHz)	Verdict		
	LCH	100	0	18.52	PASS		
QPSK	MCH	100	0	18.51	PASS		
	HCH	100	0	18.53	PASS		
	LCH	100	0	18.53	PASS		
16QAM	MCH	100	0	18.52	PASS		
	HCH	100	0	18.53	PASS		

Note:Please refers to Appendix B for compliance test plots for emission bandwidth (-26dBc)

Page 95 of149

11. BAND EDGE

11.1 MEASUREMENT METHOD

The test set up and general procedure is similar to conducted peak output power test. Only different for setting the measurement configuration of the measuring instrument of Spectrum Analyzer.

11.2 PROVISIONS APPLICABLE

As Specified in FCC rules of §2.1051 §24.238(a) §27.53(g) §27.53(h)§27.53(m) KDB 971168 D01v03 – Section 6.0

11.3 MEASUREMENT RESULT

All out of band emissions are measured with a spectrum analyzer connected to the antenna terminal of the EUT while the EUT is operating at its maximum duty cycle, at maximum power, and at the appropriate frequency. All data rates were investigated to determine the worst case configuration. All modes of operation were investigated and the worst case configuration results are reported in this section. The minimum permissible attenuation level of any spurious emission is 43 + log10(P[Watts]), where P is the transmitter power in Watts.

For FCC rules§27.53(m)

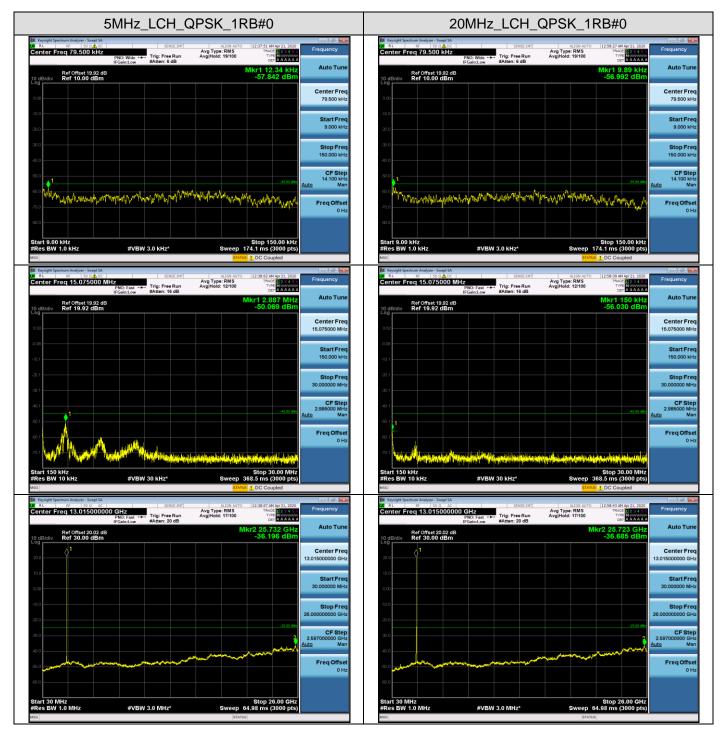
- (i) 40 + 10 log10 p from the channel edges to 5 MHz away
- (ii) 43 + 10 log10 p between 5 MHz and X MHz from the channel edges, and
- (iii) 55 + 10 log10 p at X MHz and beyond from the channel edges

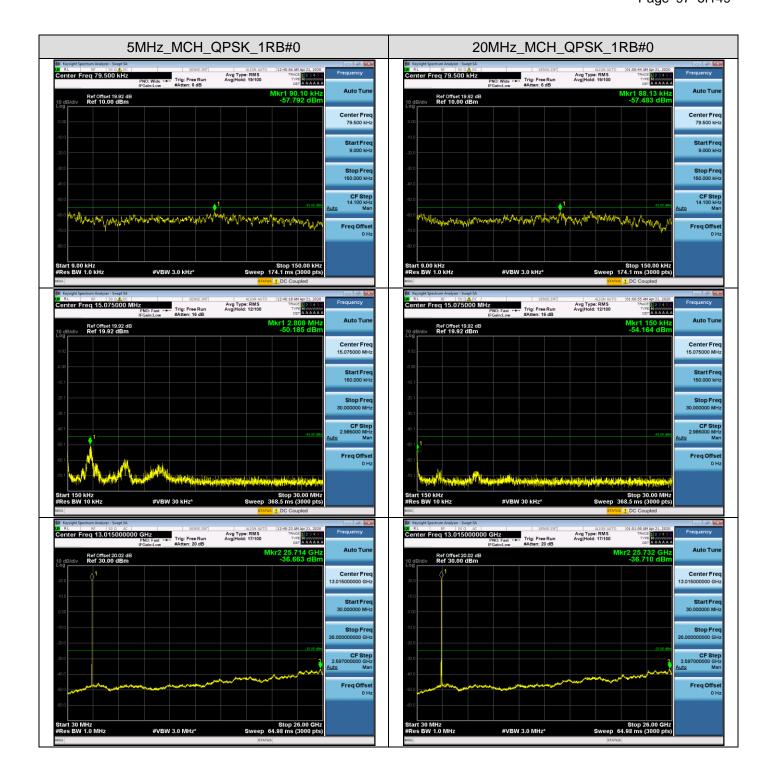
Please refers to Appendix C for compliance test plots for band edge

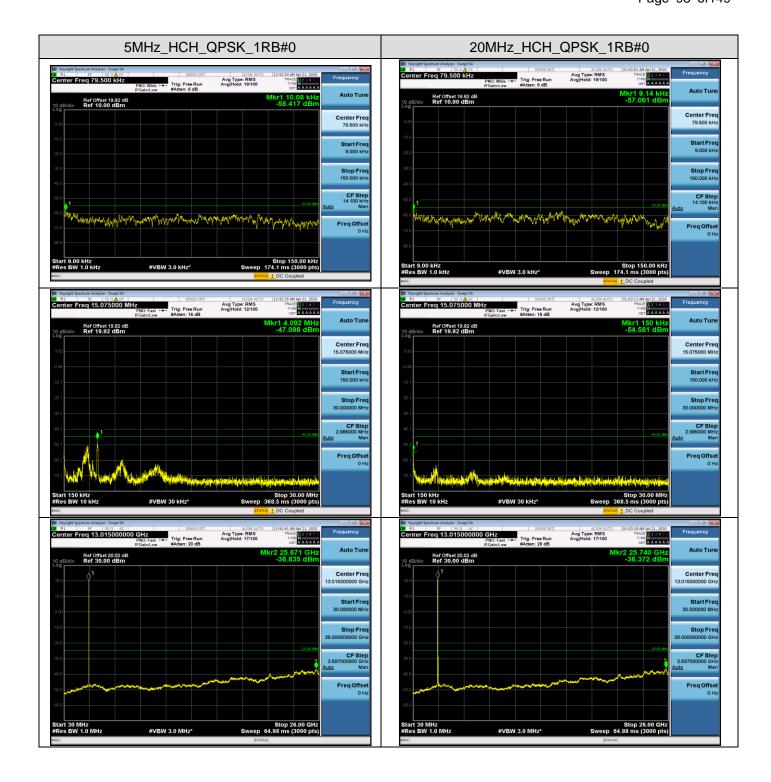
Report No.: AGC09966200404FE07 Page 96 of149

APPENDIX ATEST PLOTS FOR CONDUCTED SPURIOUS EMISSION

TEST PLOTS FOR CONDUCTED SPURIOUS EMISSION LTE BAND 7

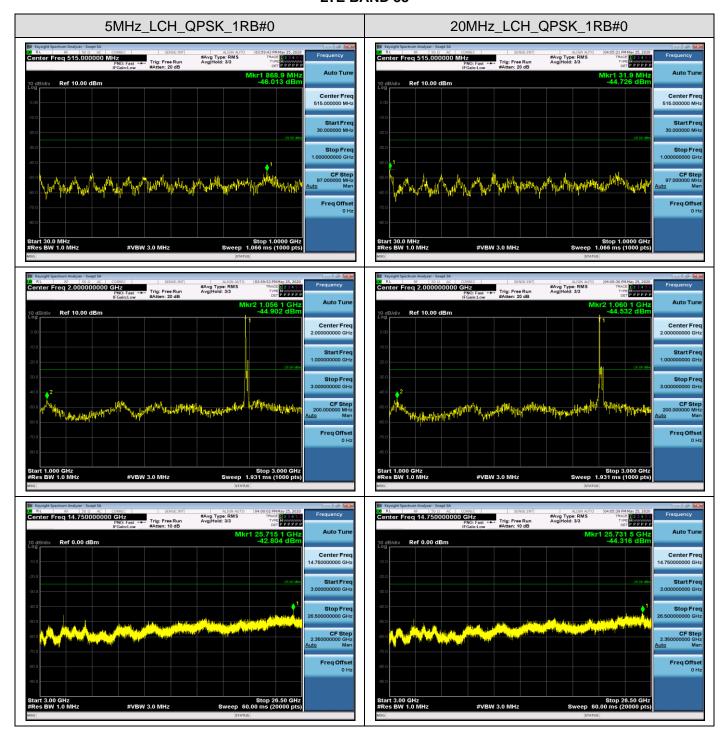




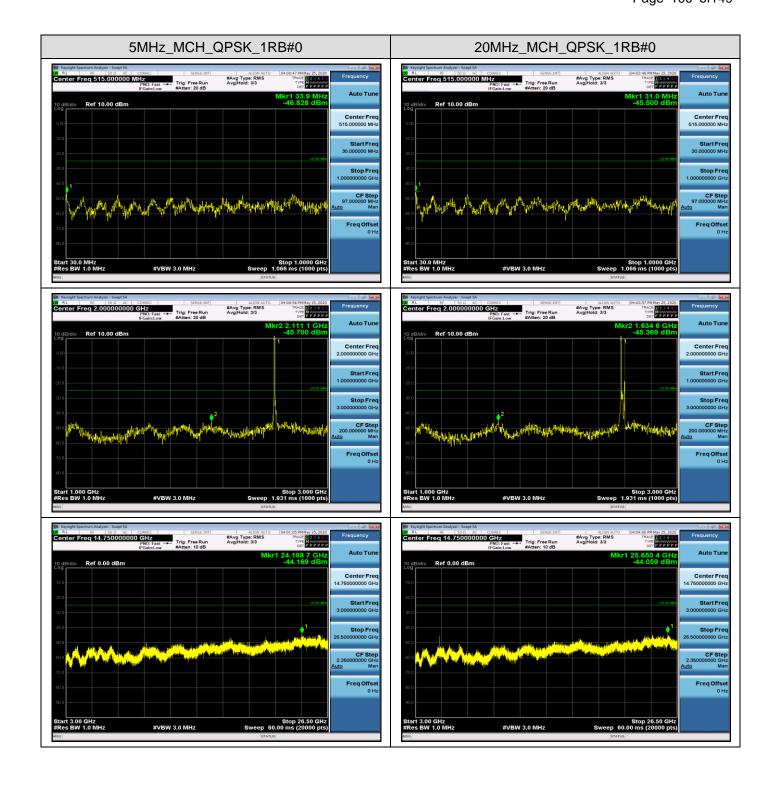


Page 99 of149

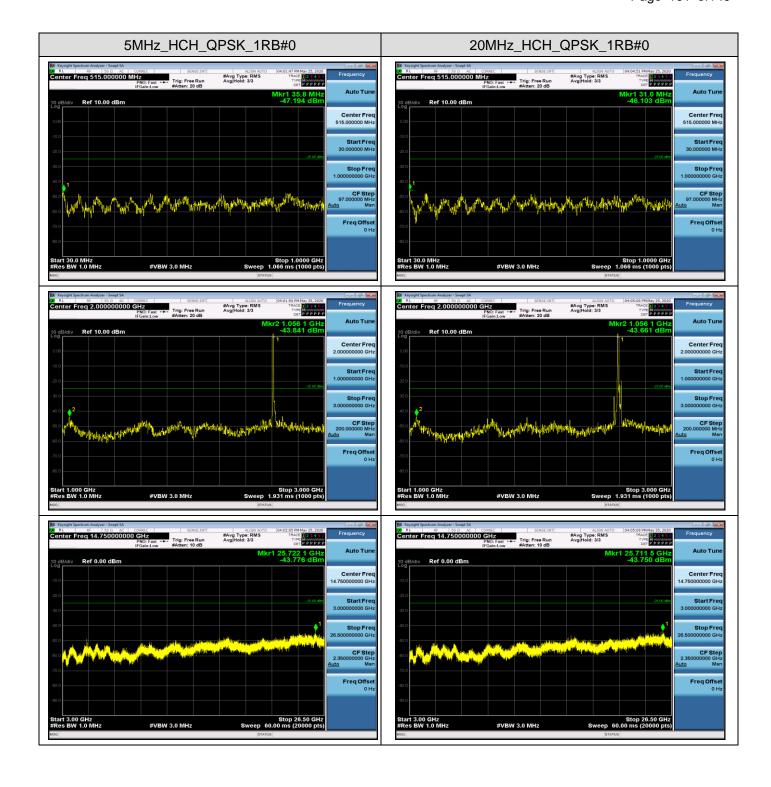
TEST PLOTS FOR CONDUCTED SPURIOUS EMISSION LTE BAND 38



Report No.: AGC09966200404FE07 Page 100 of149



Report No.: AGC09966200404FE07 Page 101 of149



Page 102 of149

EST PLOTS FOR CONDUCTED SPURIOUS EMISSION LTE BAND 40(1)

