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Appendix B

LTE-M1 BAND 4



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1 Effective (Isotropic) Radiated Power Output Data

Ellect	ive isotropic	Radiated Pow				DAND 4		
Test Band(LTE)	Test Mode	Test Bandwidth	Test channel	Test RB	Measured (dBm)	EIRP (dBm)	limit (dBm)	Verdict
				RB1#0	22.84	24.44	30	PASS
			LCH	RB1#5	22.89	24.49	30	PASS
				RB6#0	21.99	23.59	30	PASS
				RB1#0	22.97	24.57	30	PASS
BAND4	LTE- M1/TM1	1.4M	MCH	RB1#5	23.02	24.62	30	PASS
				RB6#0	22.02	23.62	30	PASS
			RB1#0	22.98	24.58	30	PASS	
			HCH	RB1#5	23	24.6	30	PASS
				RB6#0	21.89	23.49	30	PASS

Effective Isotropic Radiated Power of Transmitter (EIRP) for LTE-M1 BAND 4

Test Band(LTE)	Test Mode	Test Bandwidth	Test channel	Test RB	Measured (dBm)	EIRP (dBm)	limit (dBm)	Verdict
				RB1#0	22.24	23.84	30	PASS
			LCH	RB1#5	22.31	23.91	30	PASS
				RB6#0	21.23	22.83	30	PASS
				RB1#0	22.26	23.86	30	PASS
BAND4	LTE- M1/TM2	1.4M	MCH	RB1#5	22.11	23.71	30	PASS
				RB6#0	21.21	22.81	30	PASS
				RB1#0	22.25	23.85	30	PASS
			HCH	RB1#5	22.31	23.91	30	PASS
				RB6#0	21.23	22.83	30	PASS

Test Band(LTE)	Test Mode	Test Bandwidth	Test channel	Test RB	Measured (dBm)	EIRP (dBm)	limit (dBm)	Verdict
				RB1#0	22.82	24.42	30	PASS
			LCH	RB1#5	22.77	24.37	30	PASS
				RB6#0	21.88	23.48	30	PASS
BAND4				RB1#0	22.83	24.43	30	PASS
	LTE- M1/TM1	3M	MCH	RB1#5	22.87	24.47	30	PASS
				RB6#0	21.85	23.45	30	PASS
				RB1#0	22.81	24.41	30	PASS
			HCH	RB1#5	22.72	24.32	30	PASS
				RB6#0	21.83	23.43	30	PASS

Test Band(LTE)	Test Mode	Test Bandwidth	Test channel	Test RB	Measured (dBm)	EIRP (dBm)	limit (dBm)	Verdict
				RB1#0	21.84	23.44	30	PASS
BAND4			LCH	RB1#5	21.92	23.52	30	PASS
	LTE-	214		RB6#0	20.74	22.34	30	PASS
	M1/TM2	ЗМ		RB1#0	21.95	23.55	30	PASS
			MCH	RB1#5	22.01	23.61	30	PASS
				RB6#0	20.75	22.35	30	PASS



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		RB1#0	21.97	23.57	30	PASS
	HCH	RB1#5	22.11	23.71	30	PASS
		RB6#0	20.72	22.32	30	PASS

Test Band(LTE)	Test Mode	Test Bandwidth	Test channel	Test RB	Measured (dBm)	EIRP (dBm)	limit (dBm)	Verdict
				RB1#0	22.81	24.41	30	PASS
			LCH	RB1#5	22.74	24.34	30	PASS
				RB6#0	21.92	23.52	30	PASS
BAND4				RB1#0	22.75	24.35	30	PASS
	LTE- M1/TM1	5M	MCH	RB1#5	22.78	24.38	30	PASS
				RB6#0	21.88	23.48	30	PASS
				RB1#0	22.81	24.41	30	PASS
			HCH	RB1#5	22.87	24.47	30	PASS
				RB6#0	21.93	23.53	30	PASS

Test Band(LTE)	Test Mode	Test Bandwidth	Test channel	Test RB	Measured (dBm)	EIRP (dBm)	limit (dBm)	Verdict
				RB1#0	22.22	23.82	30	PASS
			LCH	RB1#5	22.28	23.88	30	PASS
				RB6#0	20.92	22.52	30	PASS
				RB1#0	22.26	23.86	30	PASS
BAND4	LTE- M1/TM2	5M	MCH	RB1#5	22.28	23.88	30	PASS
				RB6#0	20.88	22.48	30	PASS
				RB1#0	22.15	23.75	30	PASS
			HCH	RB1#5	22.25	23.85	30	PASS
				RB6#0	20.95	22.55	30	PASS

Test Band(LTE)	Test Mode	Test Bandwidth	Test channel	Test RB	Measured (dBm)	EIRP (dBm)	limit (dBm)	Verdict
				RB1#0	22.74	24.34	30	PASS
			LCH	RB1#5	22.63	24.23	30	PASS
				RB6#0	21.87	23.47	30	PASS
				RB1#0	22.85	24.45	30	PASS
BAND4	LTE- M1/TM1	10M	MCH	RB1#5	22.66	24.26	30	PASS
				RB6#0	21.81	23.41	30	PASS
				RB1#0	22.75	24.35	30	PASS
			HCH	RB1#5	22.77	24.37	30	PASS
				RB6#0	21.82	23.42	30	PASS

Test Band(LTE)	Test Mode	Test Bandwidth	Test channel	Test RB	Measured (dBm)	EIRP (dBm)	limit (dBm)	Verdict
				RB1#0	22.14	23.74	30	PASS
BAND4			LCH	RB1#5	22.06	23.66	30	PASS
	LTE-	1014		RB6#0	20.78	22.38	30	PASS
	M1/TM2	10M		RB1#0	22.22	23.82	30	PASS
			MCH	RB1#5	22.26	23.86	30	PASS
				RB6#0	20.8	22.4	30	PASS



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		RB1#0	22.14	23.74	30	PASS
	HCH	RB1#5	22.16	23.76	30	PASS
		RB6#0	20.91	22.51	30	PASS

Test Band(LTE)	Test Mode	Test Bandwidth	Test channel	Test RB	Measured (dBm)	EIRP (dBm)	limit (dBm)	Verdict
				RB1#0	22.72	24.32	30	PASS
			LCH	RB1#5	22.57	24.17	30	PASS
BAND4				RB6#0	22.63	24.23	30	PASS
				RB1#0	22.76	24.36	30	PASS
	LTE- M1/TM1	15M	MCH	RB1#5	22.73	24.33	30	PASS
				RB6#0	22.79	24.39	30	PASS
				RB1#0	22.67	24.27	30	PASS
			HCH	RB1#5	22.55	24.15	30	PASS
				RB6#0	22.67	24.27	30	PASS

Test Band(LTE)	Test Mode	Test Bandwidth	Test channel	Test RB	Measured (dBm)	EIRP (dBm)	limit (dBm)	Verdict
				RB1#0	22.12	23.72	30	PASS
			LCH	RB1#5	22.11	23.71	30	PASS
				RB6#0	22.81	24.41	30	PASS
	BAND4 LTE- M1/TM2			RB1#0	22.29	23.89	30	PASS
BAND4		15M	MCH	RB1#5	22.27	23.87	30	PASS
			RB6#0	22.76	24.36	30	PASS	
				RB1#0	22.4	24	30	PASS
			HCH	RB1#5	22.38	23.98	30	PASS PASS PASS PASS PASS PASS
				RB6#0	22.67	24.27	30	PASS

Test Band(LTE)	Test Mode	Test Bandwidth	Test channel	Test RB	Measured (dBm)	EIRP (dBm)	limit (dBm)	Verdict
				RB1#0	22.78	24.38	30	PASS
			LCH	RB1#5	22.74	24.34	30	PASS
				RB6#0	22.83	24.43	30	PASS
				RB1#0	22.89	24.49	30	PASS
BAND4 LTE- M1/TM1	20M	MCH	RB1#5	22.82	24.42	30	PASS	
			RB6#0	22.93	24.53	30	PASS	
				RB1#0	22.94	24.54	30	PASS
			HCH	RB1#5	22.83	24.43	30	PASS PASS PASS PASS
				RB6#0	22.92	24.52	30	PASS

Test Band(LTE)	Test Mode	Test Bandwidth	Test channel	Test RB	Measured (dBm)	EIRP (dBm)	limit (dBm)	Verdict
				RB1#0	22.27	23.87	30	PASS
			LCH	RB1#5	22.14	23.74	30	PASS
BAND4 LTE-	2014		RB6#0	22.08	23.68	30	PASS	
DAND4	BAND4 M1/TM2	20M		RB1#0	22.61	24.21	30	PASS
		MCH	RB1#5	22.67	24.27	30	PASS	
				RB6#0	23.02	24.62	30	PASS



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		RB1#0	22.52	24.12	30	PASS
	HCH	RB1#5	22.58	24.18	30	PASS
		RB6#0	23.02	24.62	30	PASS

Note:

a: For getting the EIRP (Efficient Isotropic Radiated Power) in substitution method, the following formula should be taken to calculate it,

EIRP [dBm] = SGP [dBm] – Cable Loss [dB] + Gain [dBi] b: SGP=Signal Generator Level



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2 **Peak-to-Average Ratio**

Test Band	Test Mode	Test Channel	Measured[dB]	Limit [dB]	Verdict
		LCH	4.26	13	PASS
	TM1/5M Full RB	MCH	4.29	13	PASS
		HCH	5.65	13	PASS
	TM1/5M	LCH	4.38	13	PASS
	1 RB	MCH	4.32	13	PASS
Band 4		HCH	4.03	13	PASS
Dallu 4	TM2/5M Full RB	LCH	5.77	13	PASS
		MCH	4.26	13	PASS
		HCH	5.88	13	PASS
		LCH	5.01	13	PASS
	TM2/5M 1 RB	MCH	5.04	13	PASS
	IND	HCH	4.17	13	PASS

Part II - Test Plots

2.1 For LTE-M1

2.1.1 Test Band = LTE-M1 BAND4

2.1.1.1 Test Mode = LTE-M1/TM1.Bandwidth=5MHz Full RB

2.1.1.1.1 Test Channel = LCH Spectrum Ref Level 35.00 dBm Att 40 dB Offset 5.00 dB AQT 1.6 ms 1.6 ms . RBW 10 MHz SGL 91Sa Clrv 0.1 0.01-1E-03; 1E-04 1E-05; CF 1.7125 GHz Mean Pwr + 20.00 dB Complementary Cumulative Distribution Function Samples: 100000 Mean Trace 1 21.67 dBm Peak 10% 2.52 dB 1% 3.45 dB 0.1% 0.01% Crest 1 1 26.12 dBm 4.45 dB 4.26 dB 4.43 dB 02.07.2018 Date: 2.JUL.2018 05:45:27

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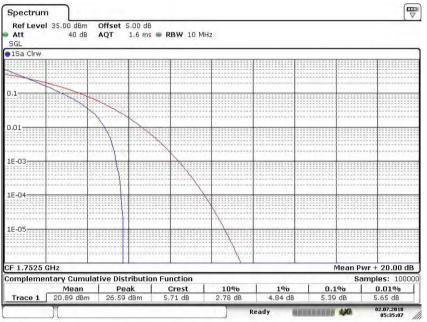
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2.1.1.1.2 Test Channel = MCH



Date: 2.JUL.2018 05:36:09

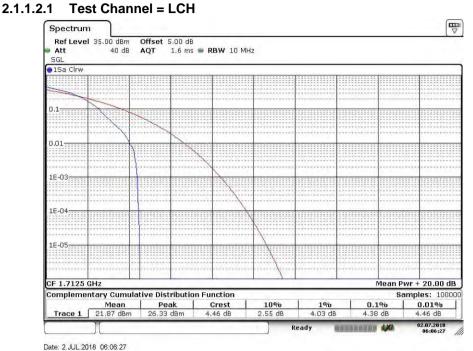
2.1.1.1.3 Test Channel = HCH



Date: 2.JUL.2018 05:35:08



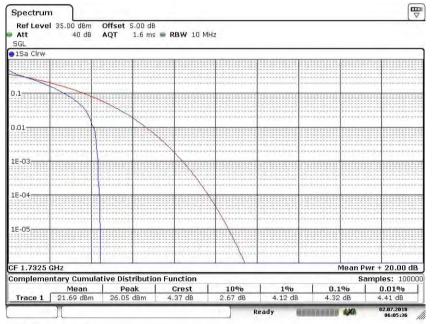
Report No.: SZEM180400321702 Page: 9 of 35



2.1.1.2 Test Mode = LTE-M1/TM1.Bandwidth=5MHz 1 RB

Bute. 2.002.2010 00.00.27

2.1.1.2.2 Test Channel = MCH



Date: 2.JUL.2018 06:05:37



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2.1.1.2.3 Test Channel = HCH E Spectrum Ref Level 35.00 dBm Offset 5.00 dB 1.6 ms 🖷 RBW 10 MHz Att 40 dB AQT SGL 1Sa Clrw 0.1 0.01-1E-03-1E-04: 16-05 CF 1.7525 GHz Mean Pwr + 20.00 dB Complementary Cumulative Distribution Function Samples: 100000 Mean Trace 1 21.90 dBm Peak 25.97 dBm Crest 4.06 dB 10% .43 dB 1% 3.80 dB 0.1% 4.03 dB 0.01% 4.09 dB 02.07.2018 Ready A 100 A 100 Date: 2.JUL.2018 06:04:06

2.1.1.3 Test Mode = LTE-M1/TM2.Bandwidth=5MHz Full RB

2.1.1.3.1 Test Channel = LCH

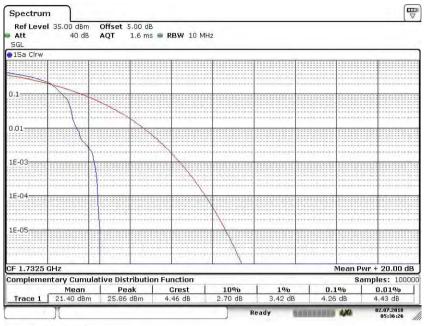


Date: 2.JUL.2018 05:45:09



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2.1.1.3.2 Test Channel = MCH



Date: 2.JUL.2018 05:36:26

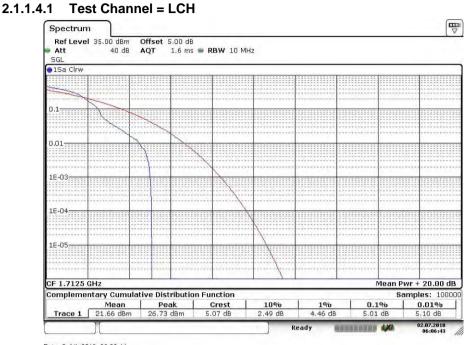
2.1.1.3.3 Test Channel = HCH



Date: 2.JUL.2018 05:33:38



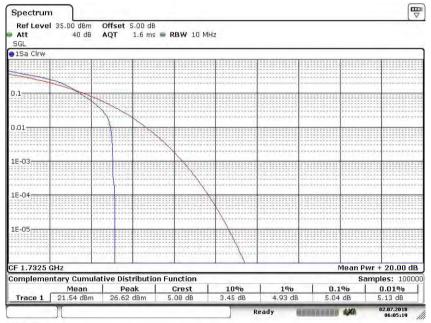
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2.1.1.4 Test Mode = LTE-M1/TM2.Bandwidth=5MHz 1 RB

Date: 2.JUL.2018 06:06:44

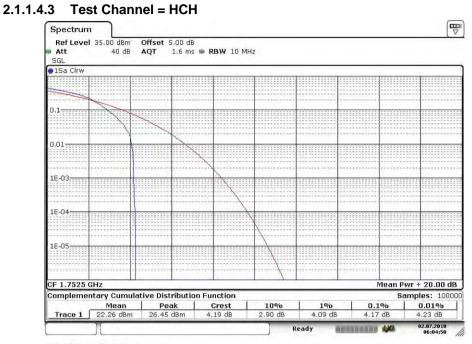
2.1.1.4.2 Test Channel = MCH



Date: 2.JUL.2018 06:05:19



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Date: 2.JUL.2018 06:04:50



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3 Modulation Characteristics

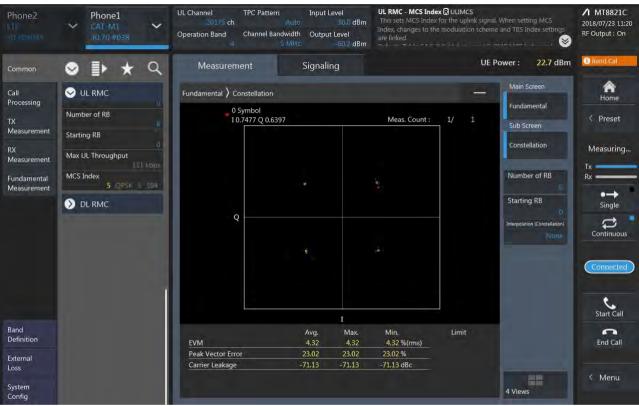
Part I - Test Plots

3.1 For LTE-M1

3.1.1 Test Band = LTE-M1 BAND4

3.1.1.1 Test Mode = LTE-M1 /TM1 5MHz

3.1.1.1.1 Test Channel = MCH





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UL Channel TPC Pattern 20175 ch UL Channel 🖪 ULCHAN **∕**1 MT8821C Phone1 This sets the uplink channel. When changing the set value of the uplink channel, the dow channel and uplink frequency are changed automatically. Operation Band Channel Bandwidth Output Level RF Output : On 8 0.2 dBm . UE Power: 21.9 dBm Q Signaling S ⇒ ★ A Home UL RMC Fundamental > Constellation Call Processing Fundamental 0 Symbol I -0.3548 Q 0.3730 Number of RB Meas. Count : < Preset Sub Screen Measurement Starting RB Constellation Measuring... Max UL Throughput Measurement Tx = MCS Index 11 16QAM 10 1032 Number of RB Fundamental Measurement •-+ Starting RB > DL RMC Q Continuous olation (Conste Start Call End Call Max. Min. Limit Definition EVM 4.64 4.64 Peak Vector Error 23.41 23.41 23.41% -76.14 -76.14 dBc Carrier Leakage Loss 4 Views Config

3.1.1.2 Test Mode = LTE-M1 /TM2 5MHz 3.1.1.2.1 Test Channel = MCH



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4 Bandwidth

Part I - Test Results

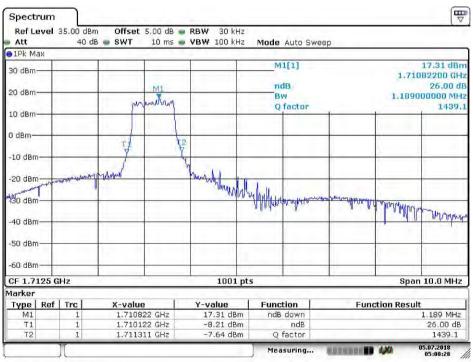
Test Band	Test Mode	Test Channel	Occupied Bandwidth [MHz]	Emission Bandwidth [MHz]	Verdict
		LCH	0.92	1.18	PASS
	TM1/ 5MHz	MCH	1.11	1.18	PASS
BAND4		HCH	1.10	1.16	PASS
		LCH	0.95	1.23	PASS
	TM2/ 5MHz	MCH	1.12	1.22	PASS
		HCH	1.12	1.23	PASS

4.1 For LTE

4.1.1 Test Band = LTE-M1 BAND4

4.1.1.1 Test Mode = LTE-M1/TM1 5MHz

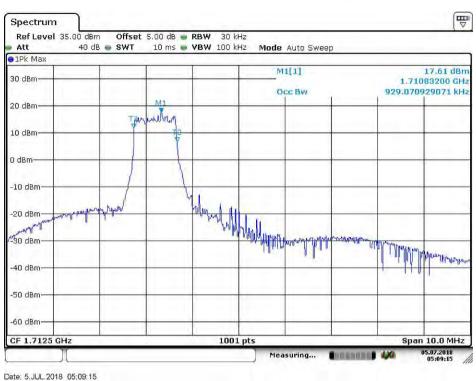
4.1.1.1.1 Test Channel = LCH



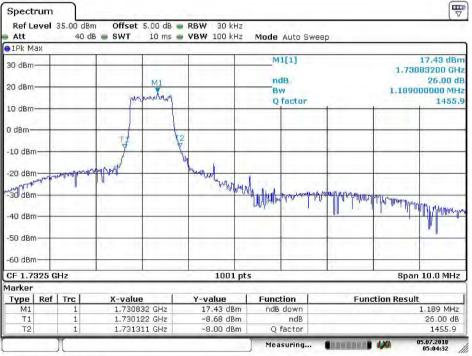
Date: 5.JUL.2018 05:08:28



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4.1.1.1.2 Test Channel = MCH



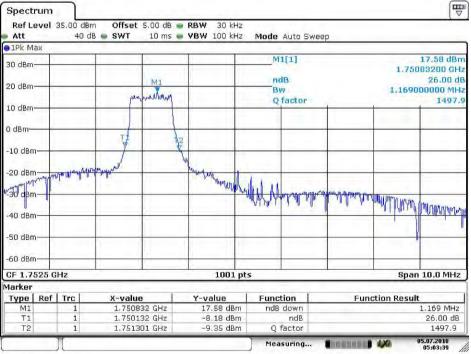
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4.1.1.1.3 Test Channel = HCH



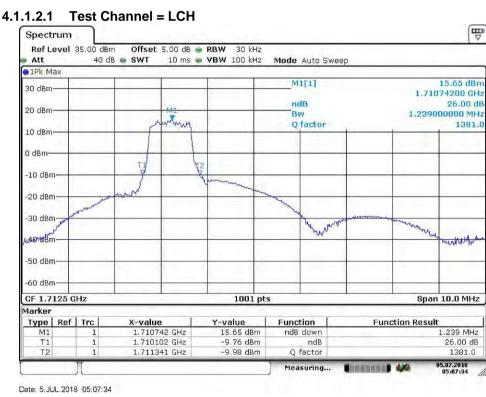
Date: 5.JUL.2018 05:03:39



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4.1.1.2 Test Mode = LTE-M1/TM2 5MHz





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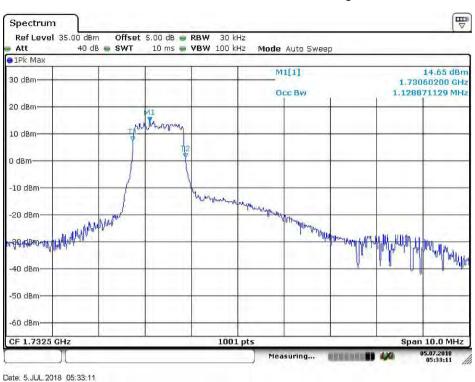
4.1.1.2.2 Test Channel = MCH



Date: 5.JUL.2018 05:05:25



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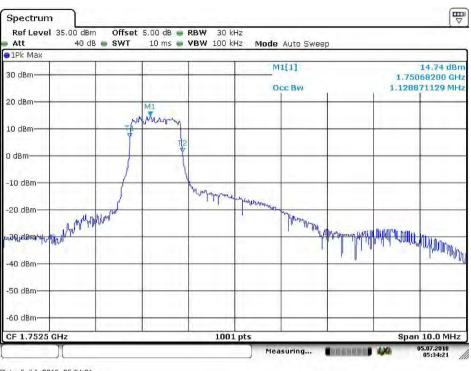
4.1.1.2.3 Test Channel = HCH



Date: 5.JUL.2018 05:03:03



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Date: 5.JUL.2018 05:34:21



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5 Band Edges Compliance

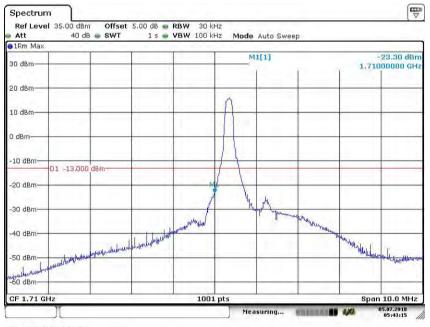
5.1 For LTE-M1

5.1.1 Test Band = LTE-M1 BAND4

5.1.1.1 Test Mode = LTE-M1/TM1 5MHz

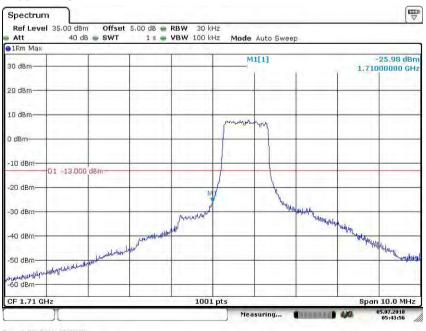
5.1.1.1.1 Test Channel = LCH

5.1.1.1.1.1 Test RB=1RB



Date: 5.JUL.2018 05:43:16

5.1.1.1.1.2 Test RB=6RB

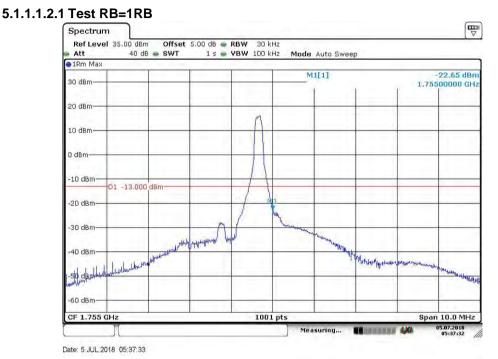


Date: 5.JUL.2018 05:43:57

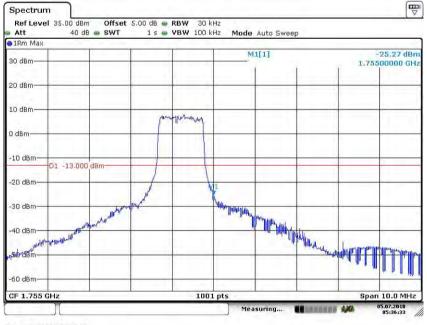


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5.1.1.1.2 Test Channel = HCH



5.1.1.1.2.2 Test RB=6RB



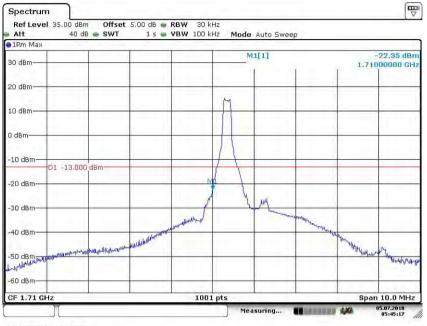
Date: 5.JUL.2018 05:36:34



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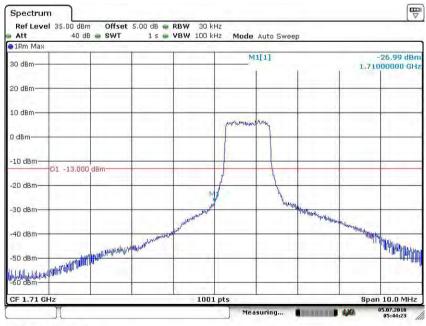
5.1.1.2 Test Mode = LTE-M1/TM2 5MHz 5.1.1.2.1 Test Channel = LCH

5.1.1.2.1.1 Test RB=1RB



Date: 5.JUL.2018 05:45:17

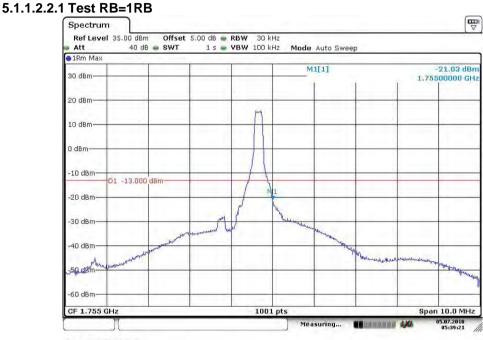
5.1.1.2.1.2 Test RB=6RB



Date: 5.JUL.2018 05:44:23



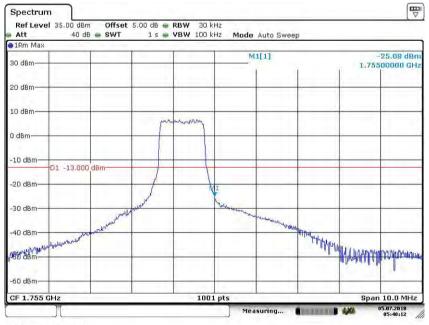
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5.1.1.2.2 Test Channel = HCH

Date: 5.JUL.2018 05:39:21

5.1.1.2.2.2 Test RB=6RB



Date: 5.JUL.2018 05:40:13



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6 Spurious Emission at Antenna Terminal

NOTE1: For the averaged unwanted emissions measurements, the measurement points in each sweep is greater than twice the Span/RBW in order to ensure bin-to-bin spacing of < RBW/2 so that narrowband signals are not lost between frequency bins. As to the present test item, the "Measurement Points = k * (Span / RBW)" with k between 4 and 5, which results in an acceptable level error of less than 0.5 dB.

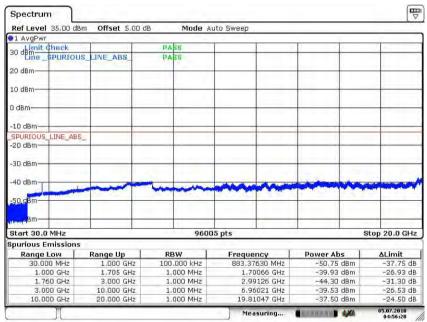
NOTE2: only the worst case data displayed in this report.

Part I - Test Plots

6.1 For LTE-M1

6.1.1 Test Band = LTE-M1 BAND4

6.1.1.1 Test Mode = LTE-M1 / TM1 5MHz RB1#0



6.1.1.1.1 Test Channel = LCH

Date: 5.JUL.2018 04:56:28



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6.1.1.1.2 Test Channel = MCH

Ref Level 35.00 d	Bm Offset 5.00 c	B Mode Au	ito Sweep		
1 AvgPwr					
30 dBm Line_\$PURIO		PASS			
Line_SPURIO	US_LINE_ABS_	PASS			
20 dBm					-
10 dBm		-			
) dBm		-			_
-10 dBm	_				
SPURIOUS_LINE_AL	35				
-20 dBm					
-30 dBm					
-40 dBm		-	- And and and a second		-
50 d <mark>Bm</mark>					
Bm				_	-
Start 30.0 MHz	V	9600	5 pts	5	top 20.0 GHz
purious Emission	15				
Range Low	Range Up	RBW	Frequency	Power Abs	ALimit
30.000 MHz	1.000 GHz	100.000 kHz	855.76248 MHz	-50.86 dBm	-37.86 dB
1.000 GHz	1.705 GHz	1.000 MHz	1.67684 GHz	-45.15 dBm	-32.15 dB
1.760 GHz	3.000 GHz	1.000 MHz	2.99560 GHz	-44.36 dBm	-31.36 dB
3,000 GHz	10.000 GHz	1.000 MHz	6.95438 GHz	-39.67 dBm	-26.67 dB
10,000 GHz	20.000 GHz	1.000 MHz	19.81172 GHz	-37.80 dBm	-24.80 dB
T			Measuring		05.07.2018 04:59:22

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6.1.1.1.3 Test Channel = HCH

Ref Level 35.00	dBm Offset 5.00 c	B Mode A	uto Sweep		1
1 AvgPwr					
		PASS			.7
30 dBm Line_\$PURI	OUS_LINE_ABS_	PASS			
20 dBm					-
10 dBm					-
0 dBm				+ +	-
-10 dBm-					
SPURIOUS_LINE_	ABS_				
-30 dBm		_			-
-40 dBm	-	- man	- Andrew Marken		
-50 d <mark>Bm</mark>			10143 P (5		
-oordBm					-
Start 30.0 MHz		9600	15 pts	5	stop 20.0 GHz
purious Emissio Range Low	Range Up	RBW	Frequency	Power Abs	∆Limit
30,000 MHz		100.000 kHz	872,73695 MHz	-50.67 dBm	-37.67 dB
1,000 GHz		1.000 MHz	1.69651 GHz	-45.42 dBm	-32,42 dB
1.760 GHz		1.000 MHz	2.99870 GHz	-44.30 dBm	-31.30 dB
	10.000 GHz	1.000 MHz	6.92930 GHz	-39.70 dBm	-26.70 dB
3,000 GHz 10,000 GHz		1.000 MHz	19.83610 GHz	-37.85 dBm	-24.85 dB

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6.1.1.2 Test Mode = LTE-M1 / TM2 5MHz RB1#0

6.1.1.2.1 Test Channel = LCH Spectrum Ref Level 35.00 dBm Offset 5.00 dB Mode Auto Sweep 91 AvgPwr 30 dBm Line_\$PURIOUS_ LINE ABS PA 20 dBm 10 dBm-0 dBm--10 dBm-SPURIOUS_LINE_ABS -20 dBm--30 dBm 40 dBm -50 dB Start 30.0 MHz 96005 pts Stop 20.0 GHz Spurious Emissions Range Low 30.000 MHz 1.000 GHz Range Up 1.000 GHz 1.705 GHz RBW 100.000 kHz 1.000 MHz Frequency 931.63229 MHz 1.70179 GHz Power Abs -49.84 dBm -41.93 dBm ∆Limit -36.84 dB -28.93 dB 3.000 GHz 10.000 GHz 1.000 MHz 1.000 MHz -31.48 dB -26.70 dB 760 GHz 2.97340 GHz -44.48 dBm 3.000 GHz -39.70 dBm 6.93396 GHz 19.82204 GHz 10.000 GHz 20.000 GHz 1.000 MHz -37.28 dBm -24.28 dB 05.07.2018 Measuring...

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6.1.1.2.2 Test Channel = MCH

1 AvgPwr					to Sweep				
	heck		PASS				1	1	
30 demit (SPURIOUS	LINE ABS	PASS						-
20 dBm				-			-	-	-
10 dBm					-		-		-
0 dBm							-		
-10 dBm-					-		-		
SPURIOUS	LINE_ABS_								
-20 dBm						-			
-30 dBm			-	-			-		-
-40 dBm—		mart	Turk	-				with the	-
-50 dBm					0000				
Bm	_			-	-		-		-
Start 30.0	MHz	é =	100.00	9600	5 pts			SI	top 20.0 GHz
Spurious E									
Range		Range Up	RBW		Freque		Power A		ALimit
	0 MHz	1.000 GHz	100.000			838 MHz	-50.38		-37.38 dB
	00 GHz	1.705 GHz	1.000			7261 GHz	-45,38		-32.38 dB
	60 GHz	3.000 GHz	1.000			4514 GHz	-44.55		-31.55 di
	0 GHz	10.000 GHz	1.000			7246 GHz	-39.68		-26.68 di
10.00	O GHz	20.000 GHz	1.000	MHz	19.82	2047 GHz	-37.56	dBm	-24.56 dB

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6.1.1.2.3 Test Channel = HCH

E_ABS_	PASS			
ABS				
E_ABS_	PASS			
~	1			
~	-			
-				
-		~~~~		-
	-			
	han	m		
	9600	5 pts	S	Stop 20.0 GHz
qe Up	RBW	Frequency	Power Abs	ALimit
.000 GHz	100.000 kHz	973.58348 MHz	-49.67 dBm	-36.67 dB
.705 GHz	1.000 MHz	1.66781 GHz	-45.26 dBm	-32.26 dB
.000 GHz	1.000 MHz	2.97427 GHz	-44.44 dBm	-31.44 dB
.000 GHz	1.000 MHz	6.88730 GHz	-39.68 dBm	-26.68 dB
.000 GHz	1.000 MHz	19.81485 GHz	-37.84 dBm	-24.84 dB
	000 GHz 705 GHz 000 GHz 000 GHz	000 GHz 100.000 kHz 705 GHz 1,000 MHz 000 GHz 1,000 MHz 000 GHz 1,000 MHz	000 GHz 100.000 kHz 973.58348 MHz 705 GHz 1.000 MHz 1.66781 GHz 000 GHz 1.000 MHz 2.97427 GHz 000 GHz 1.000 MHz 6.88730 GHz	000 GHz 100.000 kHz 973.58348 MHz -49.67 dBm 705 GHz 1.000 MHz 1.66781 GHz -45.26 dBm 000 GHz 1.000 MHz 2.97427 GHz -44.44 dBm 000 GHz 1.000 MHz 6.88730 GHz -39.68 dBm 000 GHz 1.000 MHz -39.68 dBm -37.84 dBm

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7 Field Strength of Spurious Radiation

7.1 For LTE-M1

7.1.1 Test Band = LTE-M1 BAND4

7.1.1.1 Test Mode =LTE-M1/TM1 5MHz RB1#0

7.1.1.1.1	Test Channel = LC	H		
Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Over Limit (dB)	Polarization
65.050000	-82.47	-13.00	-69.47	Vertical
124.950000	-87.58	-13.00	-74.58	Vertical
791.595833	-80.51	-13.00	-67.51	Vertical
3420.225000	-53.64	-13.00	-40.64	Vertical
5131.350000	-62.79	-13.00	-49.79	Vertical
6841.500000	-53.17	-13.00	-40.17	Vertical
62.650000	-77.74	-13.00	-64.74	Horizontal
110.750000	-93.38	-13.00	-80.38	Horizontal
268.750000	-87.06	-13.00	-74.06	Horizontal
3420.550000	-45.80	-13.00	-32.80	Horizontal
5131.025000	-61.05	-13.00	-48.05	Horizontal
6842.150000	-59.38	-13.00	-46.38	Horizontal

7.1.1.1.2 Test Channel = MCH

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Over Limit (dB)	Polarization			
65.450000	-82.12	-13.00	-69.12	Vertical			
125.000000	-87.29	-13.00	-74.29	Vertical			
307.900000	-87.02	-13.00	-74.02	Vertical			
3460.525000	-50.50	-13.00	-37.50	Vertical			
5190.825000	-61.64	-13.00	-48.64	Vertical			
6921.775000	-54.89	-13.00	-41.89	Vertical			
62.450000	-77.68	-13.00	-64.68	Horizontal			
111.050000	-93.43	-13.00	-80.43	Horizontal			
265.000000	-87.14	-13.00	-74.14	Horizontal			
3460.200000	-45.08	-13.00	-32.08	Horizontal			
5190.500000	-64.21	-13.00	-51.21	Horizontal			
6921.775000	-56.73	-13.00	-43.73	Horizontal			



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7.1.1.1.3 Test Channel = HCH							
Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Over Limit (dB)	Polarization			
65.150000	-82.19	-13.00	-69.19	Vertical			
125.000000	-87.64	-13.00	-74.64	Vertical			
1103.000000	-61.93	-13.00	-48.93	Vertical			
3501.150000	-52.13	-13.00	-39.13	Vertical			
5250.950000	-65.26	-13.00	-52.26	Vertical			
7001.400000	-54.74	-13.00	-41.74	Vertical			
62.100000	-78.43	-13.00	-65.43	Horizontal			
300.300000	-87.33	-13.00	-74.33	Horizontal			
1046.000000	-61.12	-13.00	-48.12	Horizontal			
3501.150000	-55.85	-13.00	-42.85	Horizontal			
5250.300000	-65.82	-13.00	-52.82	Horizontal			
7002.050000	-61.34	-13.00	-48.34	Horizontal			

NOTE:

1) The disturbance above 13GHz and below 30MHz was very low, and the above harmonics were the highest point could be found when testing, so only the above harmonics had been displayed.

2) We have tested all modulation and all bandwidth, but only the worst case data presented in this report.



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8 Frequency Stability

8.1 Frequency Error VS. Voltage

Test Band	Test Mode	Test Channel	Test Temp.	Test Volt.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
LTE-M1	LTE-M1/TM1 5MHz	LCH	TN	VL	-5.13	-0.002991	PASS
				VN	-8.66	-0.005047	PASS
				VH	-9.96	-0.005809	PASS
		МСН	TN	VL	6.69	0.003859	PASS
				VN	-6.87	-0.003967	PASS
				VH	5.30	0.003058	PASS
		нсн	TN	VL	9.17	0.005238	PASS
				VN	-0.30	-0.000174	PASS
				VH	-0.76	-0.000434	PASS
BAND4	LTE-M1/TM2 5MHz	LCH	TN	VL	4.49	0.002616	PASS
				VN	-2.37	-0.001382	PASS
				VH	8.11	0.004727	PASS
		МСН	TN	VL	-6.02	-0.003476	PASS
				VN	3.88	0.002239	PASS
				VH	7.45	0.004301	PASS
		НСН	TN	VL	8.26	0.004720	PASS
				VN	3.05	0.001744	PASS
				VH	2.02	0.001154	PASS



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8.2 Frequency Error VS. Temperature

Test Band	Test Mode	Test Channel	Test Volt.	Test Temp.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
			VN	-30	-3.59	-0.002094	PASS
	LTE-M1/TM1 5MHz	LCH		-20	2.09	0.001218	PASS
				-10	2.54	0.001484	PASS
				0	-9.41	-0.005488	PASS
				10	-8.64	-0.005038	PASS
				20	-9.60	-0.005599	PASS
				30	-8.42	-0.004909	PASS
				40	7.08	0.004128	PASS
				50	-9.72	-0.005669	PASS
			VN	-30	8.01	0.004623	PASS
				-20	-8.20	-0.004734	PASS
		МСН		-10	2.04	0.001179	PASS
				0	6.94	0.004006	PASS
LTE-M1 BAND4				10	2.40	0.001386	PASS
				20	-7.48	-0.004320	PASS
				30	-2.12	-0.001222	PASS
				40	8.58	0.004952	PASS
				50	3.21	0.001853	PASS
		НСН	VN	-30	3.43	0.001961	PASS
				-20	8.51	0.004864	PASS
				-10	9.61	0.005493	PASS
				0	-1.67	-0.000954	PASS
				10	6.52	0.003728	PASS
				20	2.55	0.001458	PASS
				30	9.93	0.005672	PASS
				40	0.29	0.000166	PASS
				50	6.28	0.003590	PASS



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Test Band	Test Mode	Test Channel	Test Volt.	Test Temp.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
	LTE-M1/TM2 5MHz		VN	-30	2.73	0.001591	PASS
		LCH		-20	4.57	0.002663	PASS
				-10	9.05	0.005277	PASS
				0	-5.05	-0.002943	PASS
				10	-1.95	-0.001137	PASS
				20	1.14	0.000665	PASS
				30	-3.56	-0.002079	PASS
				40	-6.61	-0.003854	PASS
LTE-M1 BAND4				50	-9.44	-0.005503	PASS
		МСН	VN	-30	3.67	0.002120	PASS
				-20	0.90	0.000522	PASS
				-10	8.16	0.004711	PASS
				0	-6.83	-0.003944	PASS
				10	2.53	0.001461	PASS
				20	-0.48	-0.000277	PASS
				30	7.86	0.004539	PASS
				40	9.37	0.005407	PASS
				50	-6.72	-0.003879	PASS
		нсн	VN	-30	-2.33	-0.001333	PASS
				-20	6.10	0.003484	PASS
				-10	9.47	0.005413	PASS
				0	-8.26	-0.004718	PASS
				10	-7.86	-0.004493	PASS
				20	2.69	0.001536	PASS
				30	0.87	0.000495	PASS
				40	1.62	0.000924	PASS
				50	-5.29	-0.003022	PASS

The End