

Report No.: SZEM180600492001 Page: 1 of 40

# Appendix B

E-UTRA Band 13



Report No.: SZEM180600492001 Page: 2 of 40

Page

### CONTENT

1	EFFECTIVE (ISOTROPIC) RADIATED POWER OUTPUT DATA	3
2	PEAK-TO-AVERAGE RATIO	6
	2.1 FOR LTE	6
	2.1.1 Test Band = LTE band13	6
3	MODULATION CHARACTERISTICS	8
	3.1 FOR LTE	
	3.1.1 Test Band = LTE band13	8
4	BANDWIDTH	
	4.1 For LTE	
	4.1.1 Test Band = LTE band13	
5	BAND EDGES COMPLIANCE	
	5.1 FOR LTE	
	5.1.1 Test Band = LTE band13	
6	SPURIOUS EMISSION AT ANTENNA TERMINAL	34
	6.1 For LTE	
	6.1.1 Test Band = LTE band13	
7	FIELD STRENGTH OF SPURIOUS RADIATION	
	7.1 For LTE	
	7.1.1 Test Band = LTE band13	
8	FREQUENCY STABILITY	
	8.1 FREQUENCY ERROR VS. VOLTAGE	
	8.2 FREQUENCY ERROR VS. TEMPERATURE	40



Report No.: SZEM180600492001 Page: 3 of 40

### 1 Effective (Isotropic) Radiated Power Output Data

#### Test Test ERP limit Test Test Measured Test RB Verdict Band(LTE) Mode **Bandwidth** channel (dBm) (dBm) (dBm) RB1#0 23.58 20.93 34.77 PASS RB1#13 23.39 20.74 34.77 PASS RB1#24 23.49 20.84 34.77 PASS LCH RB12#0 PASS 22.76 20.11 34.77 RB12#6 22.55 34.77 PASS 19.9 RB12#13 22.69 34.77 PASS 20.04 22.59 PASS RB25#0 19.94 34.77 RB1#0 23.32 34.77 PASS 20.67 RB1#13 23.56 34.77 PASS 20.91 RB1#24 23.36 20.71 34.77 PASS BAND13 LTE/TM1 5M MCH PASS RB12#0 22.74 20.09 34.77 PASS RB12#6 22.78 20.13 34.77 RB12#13 22.75 20.1 34.77 PASS RB25#0 22.73 20.08 34.77 PASS PASS RB1#0 23.58 20.93 34.77 RB1#13 23.72 21.07 34.77 PASS RB1#24 PASS 23.28 20.63 34.77 HCH RB12#0 22.67 34.77 PASS 20.02 RB12#6 PASS 22.86 20.21 34.77 RB12#13 22.79 20.14 34.77 PASS RB25#0 22.72 PASS 20.07 34.77

#### Effective Radiated Power of Transmitter (ERP) for LTE BAND 13



Report No.: SZEM180600492001 Page: 4 of 40

Test Band(LTE)	Test Mode	Test Bandwidth	Test channel	Test RB	Measured (dBm)	ERP (dBm)	limit (dBm)	Verdict	
				RB1#0	22.6	19.95	34.77	PASS	
				RB1#13	22.48	19.83	34.77	PASS	
				RB1#24	21.93	19.28	34.77	PASS	
			LCH	RB12#0	21.75	19.1	34.77	PASS	
				RB12#6	21.57	18.92	34.77	PASS	
				RB12#13	21.58	18.93	34.77	PASS	
				RB25#0	21.75	19.1	34.77	PASS	
			МСН	RB1#0	22.98	20.33	34.77	PASS	
				RB1#13	22.63	19.98	34.77	PASS	
	LTE/TM2				RB1#24	22.78	20.13	34.77	PASS
BAND13		5M		RB12#0	21.7	19.05	34.77	PASS	
				RB12#6	21.58	18.93	34.77	PASS	
				RB12#13	21.85	19.2	34.77	PASS	
				RB25#0	21.85	19.2	34.77	PASS	
				RB1#0	22.06	19.41	34.77	PASS	
				RB1#13	22.26	19.61	34.77	PASS	
				RB1#24	22.4	19.75	34.77	PASS	
			НСН	RB12#0	21.52	18.87	34.77	PASS	
				RB12#6	21.56	18.91	34.77	PASS	
				RB12#13	21.65	19	34.77	PASS	
				RB25#0	21.62	18.97	34.77	PASS	



Report No.: SZEM180600492001 Page: 5 of 40

Test Band(LTE)	Test Mode	Test Bandwidth	Test channel	Test RB	Measured (dBm)	ERP (dBm)	limit (dBm)	Verdict
				RB1#0	23.32	20.67	34.77	PASS
			МСН	RB1#25	23.8	21.15	34.77	PASS
		10M		RB1#49	23.62	20.97	34.77	PASS
	LTE/TM1			RB25#0	22.79	20.14	34.77	PASS
				RB25#13	22.87	20.22	34.77	PASS
				RB25#25	22.81	20.16	34.77	PASS
BAND13				RB50#0	22.74	20.09	34.77	PASS
BAND 13				RB1#0	23.17	20.52	34.77	PASS
				RB1#25	22.99	20.34	34.77	PASS
				RB1#49	22.36	19.71	34.77	PASS
	LTE/TM2	10M	MCH	RB25#0	21.8	19.15	34.77	PASS
				RB25#13	21.92	19.27	34.77	PASS
			-	RB25#25	21.75	19.1	34.77	PASS
				RB50#0	21.8	19.15	34.77	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



Report No.: SZEM180600492001 Page: 6 of 40

### 2 Peak-to-Average Ratio

#### Part I - Test Results

Test Band	Test Mode	Test Channel	Measured[dB]	Limit [dB]	Verdict
Dond 10	TM1/10M	HCH	4.96	13	PASS
Band 13	TM2/10M	HCH	5.80	13	PASS

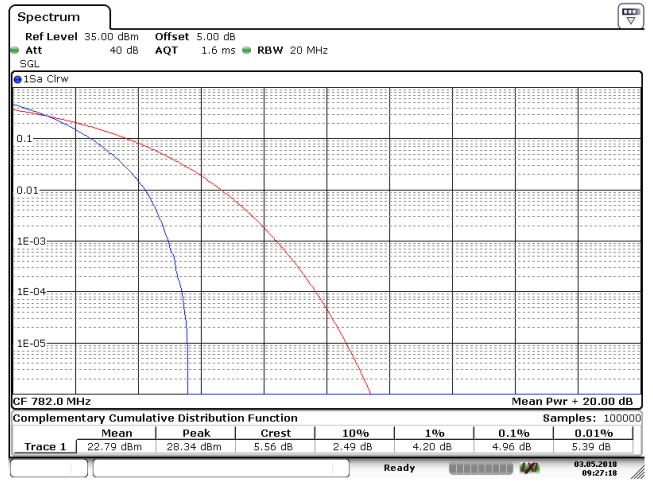
Part II - Test Plots

### 2.1 For LTE

#### 2.1.1 Test Band = LTE band13

#### 2.1.1.1 Test Mode = LTE/TM1.Bandwidth=10MHz





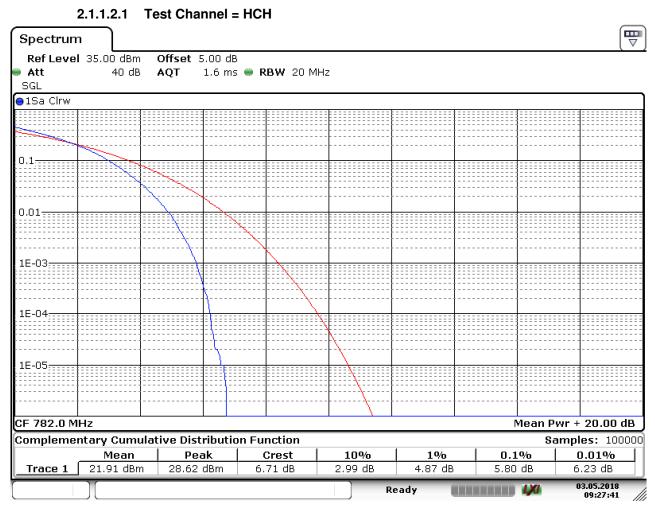
Date: 3.MAY.2018 09:27:19

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Report No.: SZEM180600492001 Page: 7 of 40

#### 2.1.1.2 Test Mode = LTE/TM2.Bandwidth=10MHz



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Report No.: SZEM180600492001 Page: 8 of 40

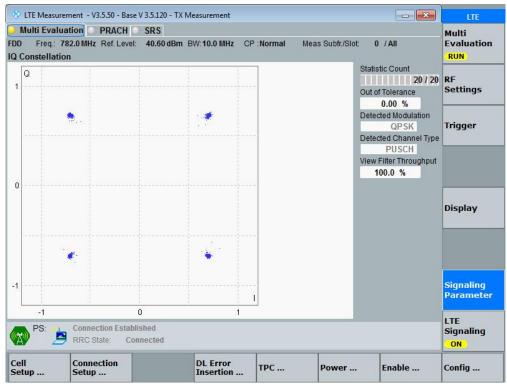
### **3 Modulation Characteristics**

Part I - Test Plots

### 3.1 For LTE

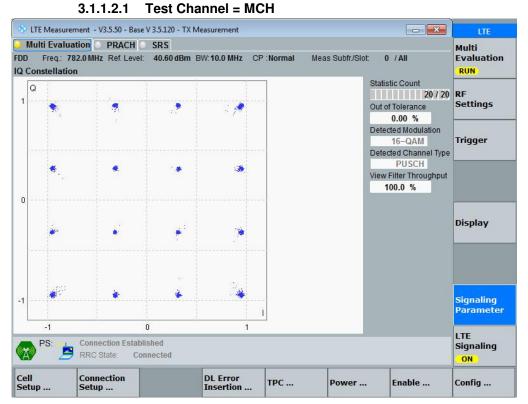
- 3.1.1 Test Band = LTE band13
- 3.1.1.1 Test Mode = LTE /TM1 10MHz

3.1.1.1.1 Test Channel = MCH





Report No.: SZEM180600492001 Page: 9 of 40



### 3.1.1.2 Test Mode = LTE /TM2 10MHz



Report No.: SZEM180600492001 Page: 10 of 40

### 4 Bandwidth

#### Part I - Test Results

Test Band	Test Mode	Test Channel	Occupied Bandwidth [MHz]	Emission Bandwidth [MHz]	Verdict
		LCH	4.47	4.79	PASS
	TM1/ 5MHz	MCH	4.49	4.79	PASS
		HCH	4.49	4.79	PASS
Band 13	TM2/ 5MHz	LCH	4.47	4.79	PASS
Dallu 13		MCH	4.49	4.83	PASS
		HCH	4.49	4.77	PASS
	TM1/10MHz	MCH	8.93	9.49	PASS
	TM2/10MHz	MCH	8.93	9.49	PASS

### 4.1 For LTE

#### 4.1.1 Test Band = LTE band13

#### 4.1.1.1 Test Mode = LTE/TM1 5MHz

#### 4.1.1.1.1 Test Channel = LCH



Date: 1.MAY.2018 04:47:39



Report No.: SZEM180600492001 Page: 11 of 40

Spectrun	n										
Ref Level Att SGL			Offset SWT	5.00 dB 1 s	RBW VBW	100 kHz 1 MHz	Mode	Auto Sweep			
●1Rm Max											
20 dBm								D1[1] Dcc Bw M1[1]		4.4855	-0.13 dB 79300 MHz 14486 MHz 17.76 dBm
10 dBm											59200 MHz
	D1 8.060	dBm	<u>т</u> 1 7	etrodul (free-to)re-	www.eucarta	<sup>war</sup> where J-b	aprelotion preserved	nggagydinianaeanaeana	wurky		00000
0 dBm											
-10 dBm——			M								
-20 dBm—			<u>40 dBm-</u>								
-30 dBm	nandertellerander	- Jaho and a state of the state	ndr-dl						- Annone	uluph war ward	analmal-landqaa
-40 dBm——											
-50 dBm											
-60 dBm											
CF 782.0 N	MHz					1001	pts			Span	10.0 MHz
								Ready		<b>1,70</b>	)1.05.2018 04:51:44

#### 4.1.1.1.2 Test Channel = MCH

Date: 1.MAY.2018 04:51:44



Report No.: SZEM180600492001 Page: 12 of 40

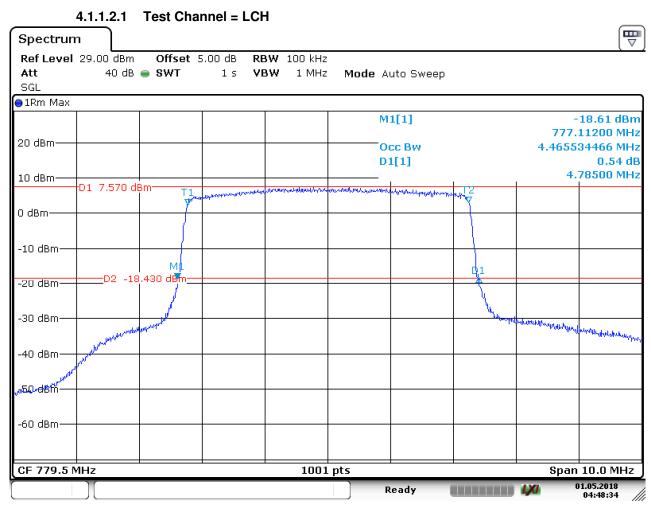
Spectrun	n								
Ref Level Att SGL	29.00 dBm 40 dB	Offset e SWT		RBW 100 kHz /BW 1 MHz	Mode A	uto Sweep			
😑 1 Rm Max									
20 dBm					o	1[1] cc Bw 1[1]		4.4855	-0.15 dB 79100 MHz 14486 MHz 18.53 dBm
					111	1[1]			10200 MHz
10 dBm	D1 8.200 c		nayabaliydorifedeniybedyr	art <mark>a</mark> ayayayaanaa ahaanaa	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	a hayd yn offar fan yn	wt2		
-10 dBm—	Do _ 1	7,800 dem-							
-20 dBm	02 -1	7.800 dBiii-							
-40 dBm	hand an	mund					Jour	and a second and a s	house have the second of the second
-50 dBm									
-60 dBm									
CF 784.5 N	HIT	i	_i	1001	pts	İ	i	Span	10.0 MHz
						Ready			01.05.2018 04:52:54

#### 4.1.1.1.3 Test Channel = HCH

Date: 1.MAY.2018 04:52:54



Report No.: SZEM180600492001 Page: 13 of 40



#### 4.1.1.2 Test Mode = LTE/TM2 5MHz

Date: 1.MAY.2018 04:48:34



Report No.: SZEM180600492001 Page: 14 of 40

Spectrum	ı											₽
Ref Level Att SGL		dBm 0 dB			5.00 dB 1 s		100 kHz 1 MHz	Mode A	uto Sweep			
⊖1Rm Max												
								D	1[1]		4.	-0.38 dB 83300 MHz
20 dBm								0	CC BW		4.4855	14486 MHz
								M	11[1]		-	19.60 dBm
10 dBm									1	1	779.	57200 MHz
	Ð1 7.:	190 de	3m	Ť	-test and a second s	ntohogine for	whether when	nella stran Jana yan da ka	nununun	ounty		
0 dBm——												
-10 dBm					_					$\left  \right\rangle$		
-20 dBm	D	2 -18	.810	 D_d <mark>∮</mark> m=						<u> </u>		
				al and						<u>)</u>		
-30 dBm	portunt	Laborates	an sun	pl <sup>e</sup>						- Color	and provident	down the second second
-40 dBm												
-50 dBm												
-60 dBm												
CF 782.0 N	1Hz						1001	pts	+	<u> </u>		10.0 MHz
									Ready		1,70	01.05.2018 04:50:49

#### 4.1.1.2.2 Test Channel = MCH

Date: 1.MAY.2018 04:50:50



Report No.: SZEM180600492001 Page: 15 of 40

Spectrum	1 )										
Ref Level Att SGL			Offset SWT	5.00 dB 1 s	RBW VBW	100 kHz 1 MHz	Mode	Auto Sweep			
●1Rm Max											
								D1[1]		4.	1.10 dB 77100 MHz
20 dBm——								Occ Bw M1[1]			14486 MHz 18.63 dBm
10 dBm	D1 7.180		T1					1.	L T2		12200 MHz
0 dBm	01 7.180		- J	njorth transformer	nutra utiler telefo	where have	hartrefan skalan syn sen steren sen steren sen sen sen sen sen sen sen sen sen s	the for the	-		
-10 dBm									+		
-20 dBm	D2 -	18.82	20 dBm=								
-30 dBm—									l l	and the state of the	
-40 dBm	where the famous of the second s										underson and and
-50 dBm—											
-60 dBm——											
CF 784.5 M	/Hz					1001	pts			Span	10.0 MHz
	)[							Ready		1,70	)1.05.2018 04:53:44 //

#### 4.1.1.2.3 Test Channel = HCH

Date: 1.MAY.2018 04:53:45



Report No.: SZEM180600492001 Page: 16 of 40

	4.1.1.3.1	Test Cha	nnel = MCI	4					
Spectru	n								E □
Ref Leve	l 29.00 dBm	Offset	5.00 dB RB	<b>W</b> 200 kHz					
Att SGL	40 dE	s 🕳 SML	15 <b>VB</b>	W 2 MHz	Mode A	uto Sweep			
😑 1Rm Max									
					D	1[1]			-1.34 dB
20 dBm					0	cc Bw			.4880 MHz 68931 MHz
						1[1]			17.48 dBm
10 dBm									.2650 MHz
	D1 8.230	dBm────────────────────────────────────	N-ARRI-RUN-RANNAR CARLAN	nan haard and a stand a		ىدىنىۋاتىدىلايىتىلىرىنى سىرىۋاتىدىلايىتىلىرىنى	why Z		
0 dBm		+							
-10 dBm—									
	D2 1	.7,.770 dBm-					D1		
-20 dBm—	02 -1						1		
-30 dBm—							Manager		
-30 0011		and a second						mon and a second a property	Waren - Other Brang
-40 dBm—		ø							
-50 dBm	and the second								
When an an a fair and a second s									
-60 dBm—									
	<u> </u>								
CF 782.0	MHZ			1001					20.0 MHz
l					F	eady (		LX0	1.05.2018 04:55:46

#### 4.1.1.3 Test Mode = LTE/TM1 10MHz

Date: 1.MAY.2018 04:55:46



Report No.: SZEM180600492001 Page: 17 of 40

	4.1.1.4.1	Test Ch	annel = MCH	l					
Spectru	m								l III III III III III III III III III I
Ref Leve	l 29.00 dBi	m Offset	5.00 dB <b>RB</b>	<b>W</b> 200 kHz					
Att SGL	40 d	IB 👄 SWT	1s <b>VB</b>	W 2 MHz	Mode A	uto Sweep			
⊖1Rm Max	{								
					D	1[1]			0.98 dB
20 dBm—						CC BW			9.4880 MHz 68931 MHz
						11[1]			19.61 dBm
10 dBm—			_						7.2650 MHz
	-D1 7.150	dBm T1	in the second and the second second	and the second second	- William and a group of a start of the	and the second			
0 dBm		, Y							
-10 dBm—									
		MI							
-20 dBm—	D2 -	18.850 dBm=							
							<b>\</b>		
-30 dBm—									
		Harver					- Arway	wheel Hymnesel and man	munanguating
-40 dBm—		<u> </u>							
	1	/							
-50 dBm	population and								
a filment a start and a start and a start a sta									
-60 dBm—	_								
CF 782.0	MHz			1001					20.0 MHz
						Ready		<b>1,70</b>	01.05.2018 04:54:46

#### 4.1.1.4 Test Mode = LTE/TM2 10MHz

Date: 1.MAY.2018 04:54:46



Report No.: SZEM180600492001 Page: 18 of 40

### 5 Band Edges Compliance

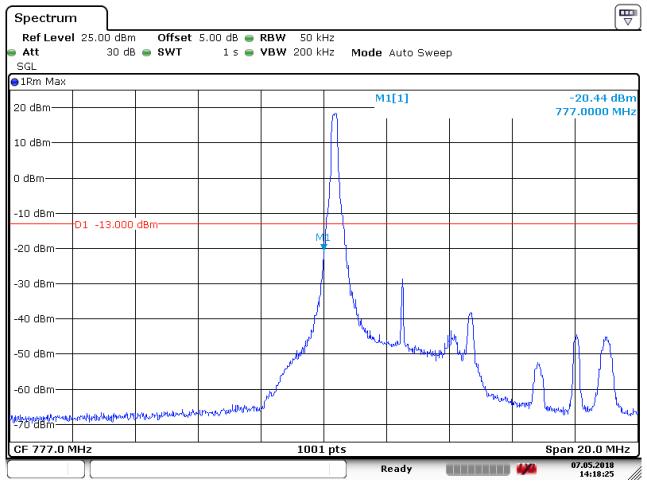
Part I –

### 5.1 For LTE

- 5.1.1 Test Band = LTE band13
- 5.1.1.1 Test Mode = LTE/TM1 5MHz

5.1.1.1.1 Test Channel = LCH

5.1.1.1.1.1 Test RB=1RB



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Report No.: SZEM180600492001 Page: 19 of 40

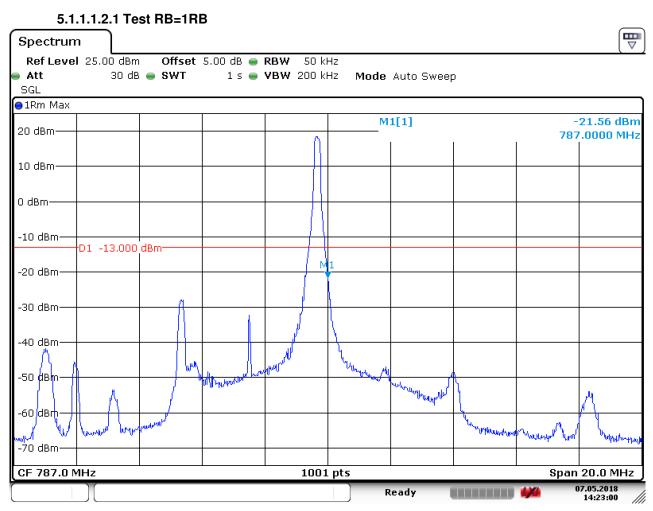
Spectrun	n								
Ref Leve Att SGL	l 25.00 dBn 30 dB	n Offset 3 e SWT	5.00 dB 👄 1 s 👄	RBW 50 ki VBW 200 ki		Auto Swee	р		
😑 1 Rm Max									
20 dBm					M	1[1]	1		28.98 dBm .0000 MHz
10 dBm									
0 dBm					phrandellander	derbrahenhynder	universe		
-10 dBm—	D1 -13.000								
-20 dBm	01 -13,000								
-30 dBm				M			h h		
-40 dBm				and the second				flithearter and the section of the s	Muydenerghave
-50 dBm				/					Why
-60 dBm			and a start and a start a start						
-60 aBm	Warnhy Marked Milling	Marin Marine Marine Marine	R.M. Mark						
CF 777.0 N	 MHz			1001	pts		<u> </u>	 Span	20.0 MHz
	)[]					teady			17.05.2018 14:21:15

5.1.1.1.1.2 Test RB=25RB

Date: 7.MAY.2018 14:21:15



Report No.: SZEM180600492001 Page: 20 of 40



5.1.1.1.2 Test Channel = HCH

Date: 7.MAY.2018 14:23:00



Report No.: SZEM180600492001 Page: 21 of 40

Spectrum	ı									
Ref Level Att SGL	l 25.00 dBm 30 dE	n Off 8 🖷 SW		5.00 dB 👄 1 s 👄	RBW 50 k VBW 200 k		Auto Swee	p		`
⊖1Rm Max										
20 dBm						M	1[1]	1		28.86 dBm 7.0000 MHz
10 dBm										
0 dBm			purroma	www.hubble.	allowandermany					
-10 dBm	D1 -13.000	dem								
-20 dBm—	DI -13.000									
-30 dBm					Γ					
-40 dBm	the tradition of the	mun				huber and a straight	Hunne m	ututi		
ылыри -50 dBm-								how have	prominenter	
									problems	have been and
-60 dBm——										
-70 dBm	/Hz				100	1 pts			Span	20.0 MHz
	)[]				_00		Ready			14:23:24

5.1.1.1.2.2 Test RB=25RB

Date: 7.MAY.2018 14:23:25



5.1.1.2 Test Mode = LTE/TM2 5MHz

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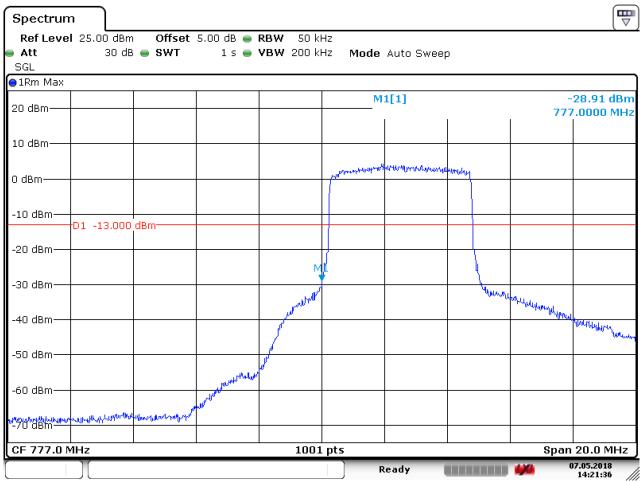
Report No.: SZEM180600492001 Page: 22 of 40

#### 5.1.1.2.1 Test Channel = LCH 5.1.1.2.1.1 Test RB=1RB ₽ Spectrum Ref Level 25.00 dBm Offset 5.00 dB 👄 RBW 50 kHz Att 30 dB 💿 SWT 1 s 👄 **VBW** 200 kHz Mode Auto Sweep SGL ●1Rm Max M1[1] -22.43 dBm 20 dBm-777.0000 MHz 10 dBm-0 dBm--10 dBm-D1 -13.000 dBm--20 dBm--30 dBm--40 dBm--50 dBm--60 dBmtiou waltherestation our put to the destruction of the second s -70 dBm 1001 pts CF 777.0 MHz Span 20.0 MHz 07.05.2018 14:22:11 Ready

Date: 7.MAY.2018 14:22:11



Report No.: SZEM180600492001 Page: 23 of 40

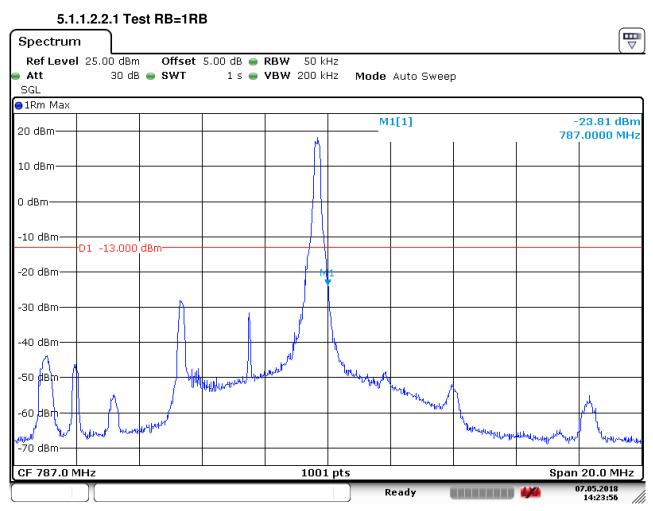


#### 5.1.1.2.1.2 Test RB=25RB

Date: 7.MAY.2018 14:21:36



Report No.: SZEM180600492001 Page: 24 of 40

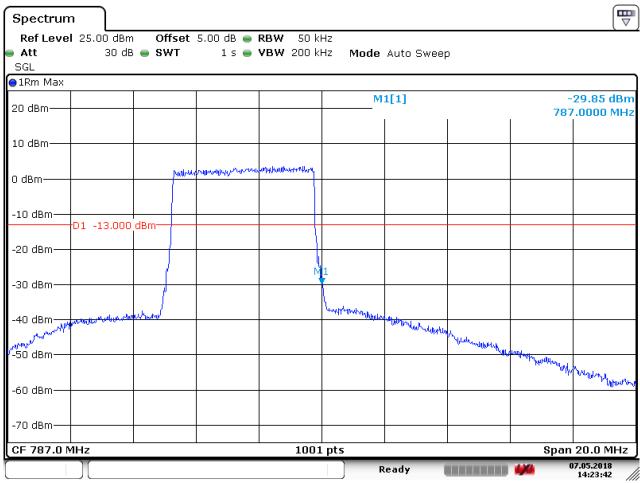


5.1.1.2.2 Test Channel = HCH

Date: 7.MAY.2018 14:23:57



Report No.: SZEM180600492001 Page: 25 of 40



#### 5.1.1.2.2.2 Test RB=25RB

Date: 7.MAY.2018 14:23:42



5.1.1.3 Test Mode = LTE/TM1 10MHz

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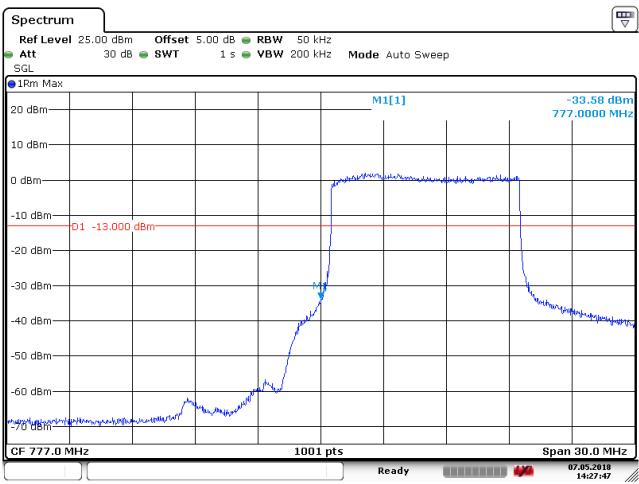
Report No.: SZEM180600492001 Page: 26 of 40

#### 5.1.1.3.1 Test Channel = LCH 5.1.1.3.1.1 Test RB=1RB ₩ Spectrum Ref Level 25.00 dBm Offset 5.00 dB 👄 RBW 50 kHz Att 30 dB 👄 SWT 1 s 👄 **VBW** 200 kHz Mode Auto Sweep SGL ●1Rm Max M1[1] -35.68 dBm 20 dBm-777.0000 MHz 10 dBm-0 dBm--10 dBm-D1 -13.000 dBm -20 dBm--30 dBm-M -40 dBm-Wylaha -50 dBm--60 dBm· WANNH henry performance R. W. W. Walker to Sheels Willing Mr. My 490raBm to a text to a text to CF 777.0 MHz 1001 pts Span 30.0 MHz 07.05.2018 Ready 14:27:27

Date: 7.MAY.2018 14:27:27



Report No.: SZEM180600492001 Page: 27 of 40

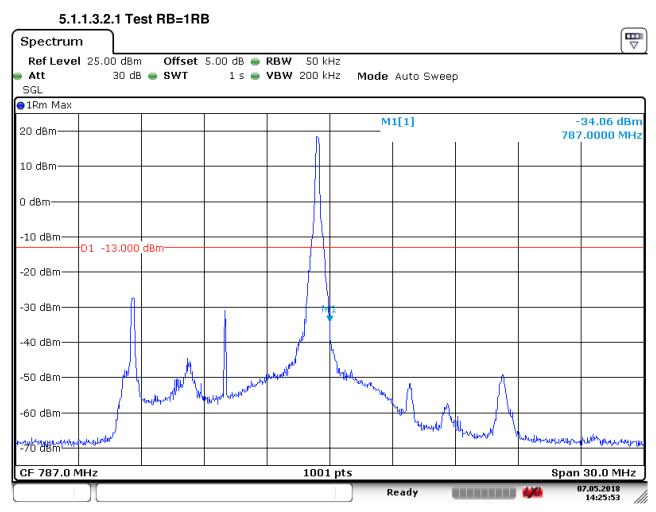


5.1.1.3.1.2 Test RB=50RB

Date: 7.MAY.2018 14:27:48



Report No.: SZEM180600492001 Page: 28 of 40

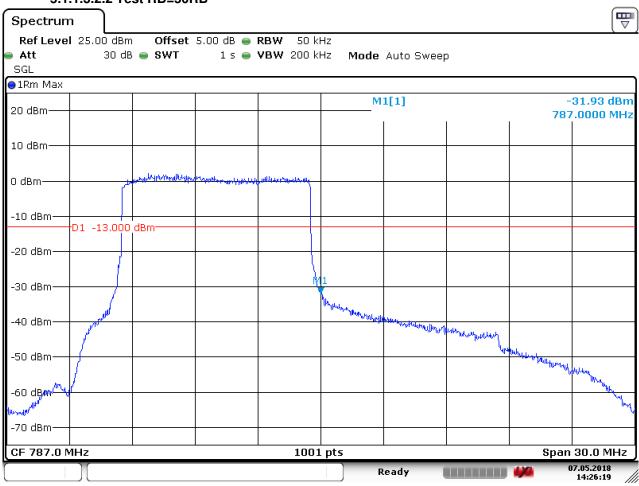


5.1.1.3.2 Test Channel = HCH

Date: 7.MAY.2018 14:25:53



Report No.: SZEM180600492001 Page: 29 of 40



5.1.1.3.2.2 Test RB=50RB

Date: 7.MAY.2018 14:26:19



5.1.1.4 Test Mode = LTE/TM2 10MHz

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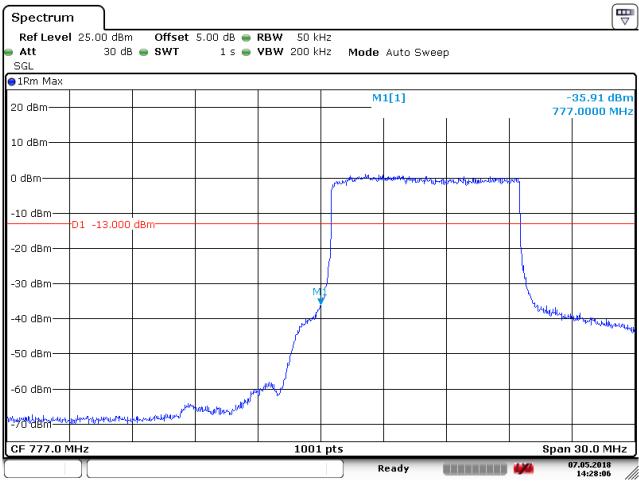
Report No.: SZEM180600492001 Page: 30 of 40

#### 5.1.1.4.1 Test Channel = LCH 5.1.1.4.1.1 Test RB=1RB ₽ Spectrum Ref Level 25.00 dBm Offset 5.00 dB 👄 RBW 50 kHz Att 30 dB 💿 SWT 1 s 🔵 **VBW** 200 kHz Mode Auto Sweep SGL ●1Rm Max M1[1] -36.65 dBm 20 dBm-777.0000 MHz 10 dBm-0 dBm--10 dBm-D1 -13.000 dBm--20 dBm--30 dBm-M -40 dBm-WWW HA -50 dBm-- The grad -60 dBmun and a start when an war when the When you when the work b.r. 1001 pts CF 777.0 MHz Span 30.0 MHz 07.05.2018 14:28:22 Ready

Date: 7.MAY.2018 14:28:22



Report No.: SZEM180600492001 Page: 31 of 40

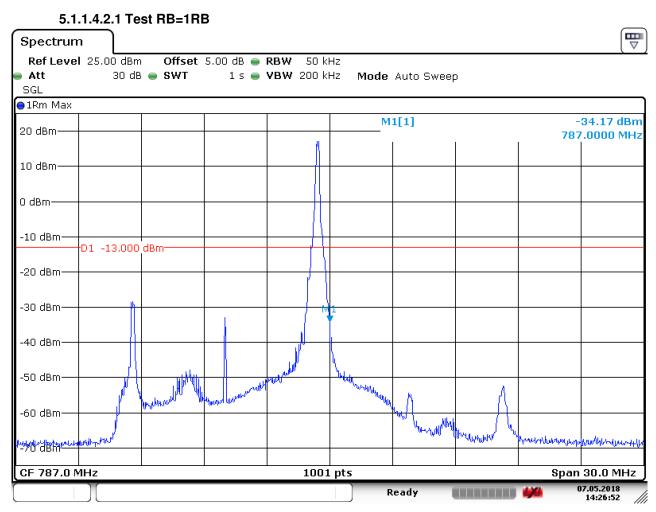


5.1.1.4.1.2 Test RB=50RB

Date: 7.MAY.2018 14:28:07



Report No.: SZEM180600492001 Page: 32 of 40

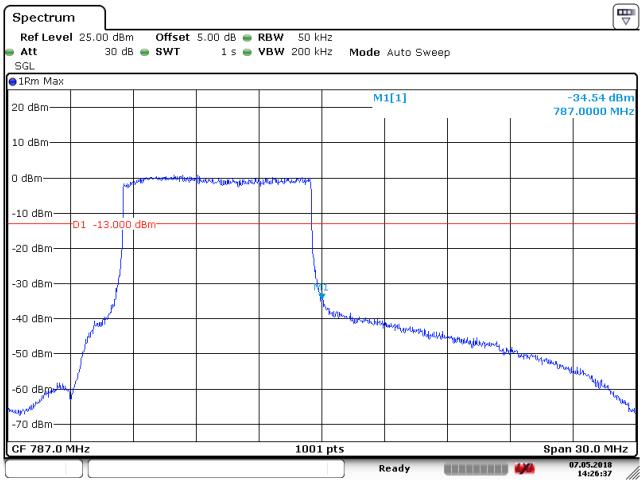


5.1.1.4.2 Test Channel = HCH

Date: 7.MAY.2018 14:26:53



Report No.: SZEM180600492001 Page: 33 of 40



5.1.1.4.2.2 Test RB=50RB

Date: 7.MAY.2018 14:26:38



Report No.: SZEM180600492001 Page: 34 of 40

### 6 Spurious Emission at Antenna Terminal

NOTE: 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. Part I - Test Plots

### 6.1 For LTE

#### 6.1.1 Test Band = LTE band13

6.1.1.1 Test Mode = LTE / TM1 10MHz RB1#0

6.1.1.1.1 Test Channel = MCH

Spectrum	ן ר									
Ref Level Att	1 30.00 dBm	Offset	5.00 dB 👄	<b>RBW</b> 50 ki <b>VBW</b> 200 ki		Auto Swee	_			
● 1Rm Max	55 45		13 🚽	• D W 200 Ki	12 Ifioue	Auto Swee	J			,
					М	1[1]	M	1		22.02 dBm .6140 MHz
20 dBm——										
10 dBm										
0 dBm										
-10 dBm—	D1 -13.000	dBm								
-20 dBm										
-30 dBm										
-40 dBm——								1		
-50 dBm										
ահիստենովութ				والماعير والمورقي الربين						
and a barrier of the failure of the second	n ponto e la construcción de la con	ann <mark>a bhailte san a</mark>	haladi den filikalingen:	a de la contra de la Contra de la contra d	and the fighter of the	an na statu na statu	and the literation of	1	ne serba, peta profilo debla de la com	يوليه يستشامانها ودرا
Start 30.0	MHz	<u> </u>	<u> </u>	2000	1 pts	<u> </u>	I		Sto	p 1.0 GHz
	Υ				Mea	suring			<b>1)/0</b>	1.05.2018

Date: 1.MAY.2018 14:14:32

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Report No.: SZEM180600492001 Page: 35 of 40

Spectrun	n	)								
Ref Leve	l 15.0			et 5.00 dB 👄						`
Att		30 dB	🔵 SWT	1 s 👄	VBW 3 MHz	Mode A	uto Sweep			
●1Rm Max					1		4541			41.00 Jp
10 dBm						N	1[1]	1		-41.33 dBm 551850 GHz
0 dBm										
-10 dBm—	-D1 -1	.3.000	dBm							
-20 dBm—		.5.000								
-30 dBm—										
-40 dBm										M
-50 dBm										
	1,000			(diget, plant light of other and li			an later in stated in			
-60 dBm——										
-70 dBm—										
-80 dBm										
Start 1.0 C	i GHz				20001	pts	1	1	Stop	1.559 GHz
	)[						suring		-	07.05.2018 14:32:26 //

Date: 7.MAY.2018 14:32:27



Report No.: SZEM180600492001 Page: 36 of 40

Spectrum	1	)										
Ref Level	15.0			set 5.00								
Att		30 dB	e sw	Т	1 s 👄	VBW	3 MHz	Mode A	Auto Sweej	p		
⊖1Rm Max												
10 dBm						_		M	1[1]			·54.35 dBm 174840 GHz
									1			
0 dBm												
0 0.0												
-10 dBm—												
10 0.0111												
-20 dBm												
20 0.0111												
-30 dBm												
00 dbiii												
-40 dBm	∙D1 -4	   0.000	dBm									
			abiii									
<mark>ו⊽</mark> ק0 dBm—												
VII-			يعارجون ورجو		- Indone has no settle			ten diamana amin'ny fi	a particular da a			
-60 dBm—												hap and the false of
-70 dBm												
-80 dBm												
Start 1.559	9 GHz						20001	pts			-	) 1.61 GHz
[	Л							Mea	asuring		4/4	07.05.2018 14:31:17 //

Date: 7.MAY.2018 14:31:17



Report No.: SZEM180600492001 Page: 37 of 40

Spectrun	n								ſ	∀
Ref Leve					RBW 1 MHz					
Att		30 dB	SWT	1 s 😑	VBW 3 MHz	Mode A	uto Sweep	p		
●1Rm Max	1				<u>т т</u>		1111		-48.88 dE	
10 dBm							1[1] I	1 1	-48.88 uE 6.933400 G	
0 dBm										
-10 dBm—	D1 -1:	2 000	d8 m							
-20 dBm—		5.000								
-30 dBm—										
-40 dBm—										
-50 dBm							M1			
-60 dBm										
-70 dBm—										
-80 dBm										
Start 1.61	GHz			1	20001	pts			 Stop 10.0 GH	١z
						Mea	suring	••••••	07.05.2018 14:32:01	

Date: 7.MAY.2018 14:32:01



Report No.: SZEM180600492001 Page: 38 of 40

### 7 Field Strength of Spurious Radiation

### 7.1 For LTE

### 7.1.1 Test Band = LTE band13

### 7.1.1.1 Test Mode =LTE/TM1 10MHz RB1#0

7.1.1.1.1	Test Channel = M	СН		
Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Over Limit (dB)	Polarization
71.953333	-73.54	-13.00	60.54	Vertical
144.006667	-70.53	-13.00	57.53	Vertical
1605.000000	-60.28	-40.00	20.28	Vertical
2332.500000	-54.12	-13.00	41.12	Vertical
3109.850000	-68.04	-13.00	55.04	Vertical
4011.725000	-67.08	-13.00	54.08	Vertical
62.713333	-78.04	-13.00	65.04	Horizontal
144.006667	-75.51	-13.00	62.51	Horizontal
1605.000000	-62.38	-40.00	20.38	Horizontal
2332.500000	-57.11	-13.00	44.11	Horizontal
3110.175000	-68.01	-13.00	55.01	Horizontal
6056.625000	-65.26	-13.00	52.26	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



Report No.: SZEM180600492001 Page: 39 of 40

### 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
				VL	8.41	0.01075	PASS
		LCH	TN	VN	-2.33	-0.00297	PASS
				VH	0.16	0.00021	PASS
				VL	-6.82	-0.00872	PASS
	LTE/TM1 10MHz	MCH	ΤN	VN	2.30	0.00294	PASS
				VH	7.89	0.01009	PASS
		НСН	TN	VL	-3.42	-0.00437	PASS
				VN	-4.79	-0.00612	PASS
LTEband13				VH	2.82	0.00361	PASS
LIEDanuis		LCH	TN	VL	-6.49	-0.00830	PASS
				VN	8.37	0.01070	PASS
				VH	-6.40	-0.00818	PASS
				VL	-2.56	-0.00327	PASS
	LTE/TM2 10MHz	MCH	TN	VN	-1.07	-0.00137	PASS
				VH	0.54	0.00069	PASS
				VL	4.50	0.00575	PASS
		HCH	ΤN	VN	-7.63	-0.00976	PASS
				VH	6.68	0.00854	PASS



Report No.: SZEM180600492001 Page: 40 of 40

### 8.2 Frequency Error VS. Temperature

Test Band	Test Mode	Test Channel	Test Volt.	Test Temp.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
				-30	-4.90	-0.00627	PASS
			VN	-20	-6.14	-0.00785	PASS
				-10	5.47	0.00699	PASS
				0	-3.63	-0.00464	PASS
	LTE/TM1 10MHz	MCH		10	7.43	0.00950	PASS
				20	6.03	0.00771	PASS
				30	0.99	0.00126	PASS
				40	-4.50	-0.00575	PASS
LTEband13				50	-4.42	-0.00565	PASS
LIEDanuis				-30	-2.09	-0.00268	PASS
				-20	-6.03	-0.00771	PASS
				-10	0.60	0.00076	PASS
				0	2.34	0.00299	PASS
	LTE/TM2 10MHz	MCH	VN	10	4.16	0.00532	PASS
				20	0.39	0.00050	PASS
				30	9.98	0.01276	PASS
				40	1.61	0.00205	PASS
				50	-4.09	-0.00522	PASS

The End