

Report No.: SZEM180300254201 Page: 1 of 86

# Appendix B

E-UTRA Band 12



Report No.: SZEM180300254201 Page: 2 of 86

### CONTENT

Ρ	а	g	е

1	EFFECTIVE (ISOTROPIC) RADIATED POWER OUTPUT DATA	3
2	PEAK-TO-AVERAGE RATIO	11
	2.1 FOR LTE	11
	2.1.1 Test Band = LTE band12	11
3	MODULATION CHARACTERISTICS	17
	3.1 For LTE	17
	3.1.1 Test Band = LTE band12	17
4	BANDWIDTH	19
	4.1 For LTE	20
	4.1.1 Test Band = LTE band12	20
5	BAND EDGES COMPLIANCE	44
	5.1 FOR LTE	44
	5.1.1 Test Band = LTE band12	44
6	SPURIOUS EMISSION AT ANTENNA TERMINAL	76
	6.1 FOR LTE	76
	6.1.1 Test Band = LTE band12	76
7	FIELD STRENGTH OF SPURIOUS RADIATION	82
	7.1 For LTE	82
	7.1.1 Test Band = LTE band12	82
8	FREQUENCY STABILITY	84
	8.1 FREQUENCY ERROR VS. VOLTAGE	84
	8.2 FREQUENCY ERROR VS. TEMPERATURE	85



Report No.: SZEM180300254201 Page: 3 of 86

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

### Effective Radiated Power of Transmitter (ERP) for LTE BAND 12

Test Band(LTE)	Test Mode	Test Bandwidth	Test channel	Test RB	Measured (dBm)	ERP (dBm)	limit (dBm)	Verdict
				RB1#0	22.99	16.54	34.77	PASS
				RB1#2	23.1	16.65	34.77	PASS
				RB1#5	22.87	16.42	34.77	PASS
			LCH	RB3#0	22.93	16.48	34.77	PASS
				RB3#2	23.07	16.62	34.77	PASS
				RB3#3	22.97	16.52	34.77	PASS
				RB6#0	22.06	15.61	34.77	PASS
				RB1#0	22.83	16.38	34.77	PASS
		И1 1.4M		RB1#2	23	16.55	34.77	PASS
			МСН	RB1#5	22.86	16.41	34.77	PASS
BAND12	LTE/TM1			RB3#0	23.09	16.64	34.77	PASS
				RB3#2	23.03	16.58	34.77	PASS
				RB3#3	23.04	16.59	34.77	PASS
				RB6#0	22.11	15.66	34.77	PASS
				RB1#0	22.86	16.41	34.77	PASS
				RB1#2	23.01	16.56	34.77	PASS
				RB1#5	22.98	16.53	34.77	PASS
			НСН	RB3#0	22.92	16.47	34.77	PASS
				RB3#2	22.94	16.49	34.77	PASS
				RB3#3	22.96	16.51	34.77	PASS
				RB6#0	22.17	15.72	34.77	PASS



Report No.: SZEM180300254201 Page: 4 of 86

					Page:	4 of 86	)	
Test Band(LTE)	Test Mode	Test Bandwidth	Test channel	Test RB	Measured (dBm)	ERP (dBm)	limit (dBm)	Verdict
				RB1#0	22.07	15.62	34.77	PASS
				RB1#2	22.47	16.02	34.77	PASS
				RB1#5	22.06	15.61	34.77	PASS
			LCH	RB3#0	21.97	15.52	34.77	PASS
				RB3#2	22.1	15.65	34.77	PASS
				RB3#3	22.09	15.64	34.77	PASS
				RB6#0	21.07	14.62	34.77	PASS
				RB1#0	22.36	15.91	34.77	PASS
		1.4M		RB1#2	22.37	15.92	34.77	PASS
	LTE/TM2		MCH	RB1#5	22.45	16	34.77	PASS
BAND12				RB3#0	22.07	15.62	34.77	PASS
				RB3#2	22.11	15.66	34.77	PASS
				RB3#3	22.02	15.57	34.77	PASS
				RB6#0	21.23	14.78	34.77	PASS
				RB1#0	22.38	15.93	34.77	PASS
				RB1#2	21.94	15.49	34.77	PASS
				RB1#5	22.13	15.68	34.77	PASS
			НСН	RB3#0	22.02	15.57	34.77	PASS
				RB3#2	21.97	15.52	34.77	PASS
				RB3#3	22.09	15.64	34.77	PASS
				RB6#0	21.06	14.61	34.77	PASS



Report No.: SZEM180300254201 Page: 5 of 86

	Page: 5 01 86								
Test Band(LTE)	Test Mode	Test Bandwidth	Test channel	Test RB	Measured (dBm)	ERP (dBm)	limit (dBm)	Verdict	
				RB1#0	23.01	16.56	34.77	PASS	
				RB1#7	23.14	16.69	34.77	PASS	
				RB1#14	22.98	16.53	34.77	PASS	
			LCH	RB8#0	22.05	15.6	34.77	PASS	
				RB8#4	22.12	15.67	34.77	PASS	
				RB8#7	22.06	15.61	34.77	PASS	
				RB15#0	22.05	15.6	34.77	PASS	
				RB1#0	22.87	16.42	34.77	PASS	
	LTE/TM1	ЗМ		RB1#7	23.05	16.6	34.77	PASS	
			MCH	RB1#14	22.96	16.51	34.77	PASS	
BAND12				RB8#0	22.05	15.6	34.77	PASS	
				RB8#4	22.07	15.62	34.77	PASS	
				RB8#7	22.01	15.56	34.77	PASS	
				RB15#0	22.1	15.65	34.77	PASS	
				RB1#0	23.01	16.56	34.77	PASS	
				RB1#7	23.28	16.83	34.77	PASS	
				RB1#14	23.02	16.57	34.77	PASS	
			НСН	RB8#0	22.09	15.64	34.77	PASS	
				RB8#4	22.19	15.74	34.77	PASS	
				RB8#7	22.08	15.63	34.77	PASS	
				RB15#0	22.06	15.61	34.77	PASS	



Report No.: SZEM180300254201 Page: 6 of 86

	Page: 6 of 86							
Test Band(LTE)	Test Mode	Test Bandwidth	Test channel	Test RB	Measured (dBm)	ERP (dBm)	limit (dBm)	Verdict
				RB1#0	22.05	15.6	34.77	PASS
				RB1#7	22.34	15.89	34.77	PASS
				RB1#14	22.26	15.81	34.77	PASS
			LCH	RB8#0	21.04	14.59	34.77	PASS
				RB8#4	21.12	14.67	34.77	PASS
				RB8#7	21.11	14.66	34.77	PASS
				RB15#0	21.06	14.61	34.77	PASS
				RB1#0	22.51	16.06	34.77	PASS
		ЗМ		RB1#7	22.01	15.56	34.77	PASS
	LTE/TM2		MCH	RB1#14	22.43	15.98	34.77	PASS
BAND12				RB8#0	21.14	14.69	34.77	PASS
				RB8#4	21.16	14.71	34.77	PASS
				RB8#7	20.99	14.54	34.77	PASS
				RB15#0	21.12	14.67	34.77	PASS
				RB1#0	21.93	15.48	34.77	PASS
				RB1#7	22.25	15.8	34.77	PASS
				RB1#14	22.47	16.02	34.77	PASS
			НСН	RB8#0	20.97	14.52	34.77	PASS
				RB8#4	21.07	14.62	34.77	PASS
				RB8#7	21.03	14.58	34.77	PASS
				RB15#0	21.06	14.61	34.77	PASS



Report No.: SZEM180300254201 Page: 7 of 86

Page: / of 86								
Test Band(LTE)	Test Mode	Test Bandwidth	Test channel	Test RB	Measured (dBm)	ERP (dBm)	limit (dBm)	Verdict
				RB1#0	22.9	16.45	34.77	PASS
				RB1#13	23.1	16.65	34.77	PASS
				RB1#24	23.03	16.58	34.77	PASS
			LCH	RB12#0	22.14	15.69	34.77	PASS
				RB12#6	22.18	15.73	34.77	PASS
			RB12#13	22.09	15.64	34.77	PASS	
				RB25#0	22.08	15.63	34.77	PASS
				RB1#0	22.83	16.38	34.77	PASS
		5M		RB1#13	22.99	16.54	34.77	PASS
			МСН	RB1#24	22.86	16.41	34.77	PASS
BAND12	LTE/TM1			RB12#0	21.98	15.53	34.77	PASS
				RB12#6	22.09	15.64	34.77	PASS
				RB12#13	22.02	15.57	34.77	PASS
				RB25#0	22.16	15.71	34.77	PASS
				RB1#0	22.78	16.33	34.77	PASS
				RB1#13	22.97	16.52	34.77	PASS
				RB1#24	22.84	16.39	34.77	PASS
			НСН	RB12#0	22.11	15.66	34.77	PASS
				RB12#6	22.06	15.61	34.77	PASS
				RB12#13	22.05	15.6	34.77	PASS
				RB25#0	22.14	15.69	34.77	PASS



Report No.: SZEM180300254201 Page: 8 of 86

Page: 8 01 86								
Test Band(LTE)	Test Mode	Test Bandwidth	Test channel	Test RB	Measured (dBm)	ERP (dBm)	limit (dBm)	Verdict
				RB1#0	21.93	15.48	34.77	PASS
				RB1#13	22.11	15.66	34.77	PASS
				RB1#24	22.52	16.07	34.77	PASS
			LCH	RB12#0	21.05	14.6	34.77	PASS
				RB12#6	21.1	14.65	34.77	PASS
				RB12#13	21.01	14.56	34.77	PASS
				RB25#0	21.15	14.7	34.77	PASS
				RB1#0	22.41	15.96	34.77	PASS
		LTE/TM2 5M		RB1#13	22.49	16.04	34.77	PASS
			МСН	RB1#24	22.14	15.69	34.77	PASS
BAND12	LTE/TM2			RB12#0	20.99	14.54	34.77	PASS
				RB12#6	21.04	14.59	34.77	PASS
				RB12#13	21.07	14.62	34.77	PASS
				RB25#0	20.97	14.52	34.77	PASS
				RB1#0	22.31	15.86	34.77	PASS
				RB1#13	22.36	15.91	34.77	PASS
				RB1#24	21.76	15.31	34.77	PASS
			НСН	RB12#0	21.15	14.7	34.77	PASS
				RB12#6	20.94	14.49	34.77	PASS
				RB12#13	20.95	14.5	34.77	PASS
				RB25#0	20.94	14.49	34.77	PASS



Report No.: SZEM180300254201 Page: 9 of 86

	Page: 9 of 86								
Test Band(LTE)	Test Mode	Test Bandwidth	Test channel	Test RB	Measured (dBm)	ERP (dBm)	limit (dBm)	Verdict	
				RB1#0	22.94	16.49	34.77	PASS	
				RB1#25	23.17	16.72	34.77	PASS	
				RB1#49	22.98	16.53	34.77	PASS	
			LCH	RB25#0	22.19	15.74	34.77	PASS	
				RB25#13	22.25	15.8	34.77	PASS	
				RB25#25	22.4	15.95	34.77	PASS	
				RB50#0	22.3	15.85	34.77	PASS	
				RB1#0	22.85	16.4	34.77	PASS	
		10M		RB1#25	23.06	16.61	34.77	PASS	
	LTE/TM1		MCH	RB1#49	22.98	16.53	34.77	PASS	
BAND12				RB25#0	22.08	15.63	34.77	PASS	
				RB25#13	22.19	15.74	34.77	PASS	
				RB25#25	22.1	15.65	34.77	PASS	
				RB50#0	22.17	15.72	34.77	PASS	
				RB1#0	22.92	16.47	34.77	PASS	
				RB1#25	23.02	16.57	34.77	PASS	
				RB1#49	22.93	16.48	34.77	PASS	
			НСН	RB25#0	22.08	15.63	34.77	PASS	
				RB25#13	22.12	15.67	34.77	PASS	
				RB25#25	22.12	15.67	34.77	PASS	
				RB50#0	22.02	15.57	34.77	PASS	



Report No.: SZEM180300254201 Page: 10 of 86

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Test Band(LTE)	Test Mode	Test Bandwidth	Test channel	Test RB	Measured (dBm)	ERP (dBm)	limit (dBm)	Verdic t
				RB1#0	21.8	15.35	34.77	PASS
				RB1#25	22.59	16.14	34.77	PASS
				RB1#49	22.51	16.06	34.77	PASS
			LCH	RB25#0	21.18	14.73	34.77	PASS
			RB25#13	21.14	14.69	34.77	PASS	
				RB25#25	21.35	14.9	34.77	PASS
				RB50#0	21.26	14.81	34.77	PASS
				RB1#0	22.4	15.95	34.77	PASS
		10M		RB1#25	22.54	16.09	34.77	PASS
			MCH	RB1#49	22.17	15.72	34.77	PASS
BAND12	LTE/TM2			RB25#0	21.06	14.61	34.77	PASS
				RB25#13	21.15	14.7	34.77	PASS
				RB25#25	21.11	14.66	34.77	PASS
				RB50#0	21.06	14.61	34.77	PASS
				RB1#0	22.13	15.68	34.77	PASS
				RB1#25	22.55	16.1	34.77	PASS
				RB1#49	22.22	15.77	34.77	PASS
			НСН	RB25#0	21.03	14.58	34.77	PASS
				RB25#13	21.13	14.68	34.77	PASS
				RB25#25	21.08	14.63	34.77	PASS
				RB50#0	20.94	14.49	34.77	PASS

Note:

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

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



Report No.: SZEM180300254201 Page: 11 of 86

### 2 Peak-to-Average Ratio

### Part I - Test Results

Test Band	Test Mode	Test Channel	Measured[dB]	Limit [dB]	Verdict
		LCH	4.87	13	PASS
	TM1/10M	MCH	4.99	13	PASS
Band 12		НСН	4.93	13	PASS
Danu 12	TM2/10M	LCH	5.80	13	PASS
		MCH	5.97	13	PASS
		НСН	5.83	13	PASS

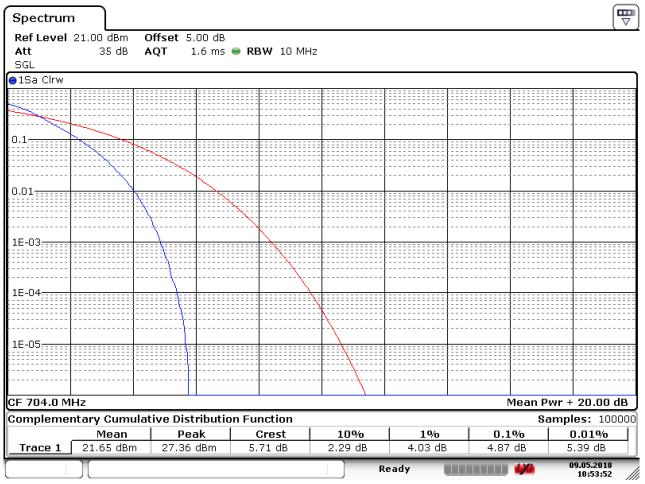
### Part II - Test Plots

### 2.1 For LTE

### 2.1.1 Test Band = LTE band12

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

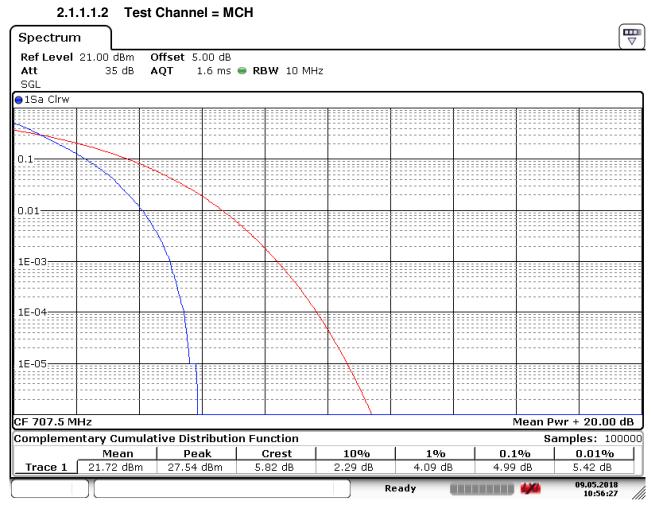
2.1.1.1.1 Test Channel = LCH



Date: 9.MAY.2018 10:53:52



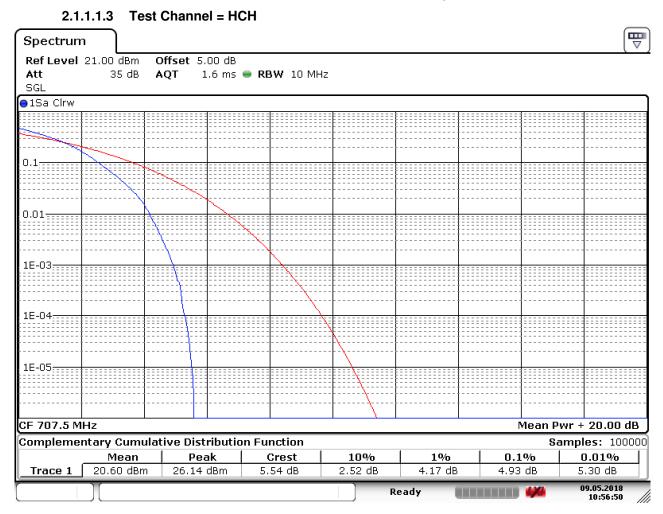
Report No.: SZEM180300254201 Page: 12 of 86



Date: 9.MAY.2018 10:56:27



Report No.: SZEM180300254201 Page: 13 of 86

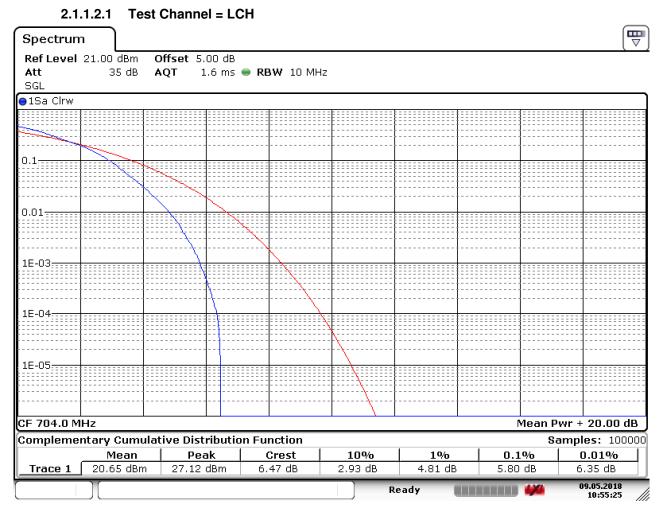


Date: 9.MAY.2018 10:56:51



Report No.: SZEM180300254201 Page: 14 of 86

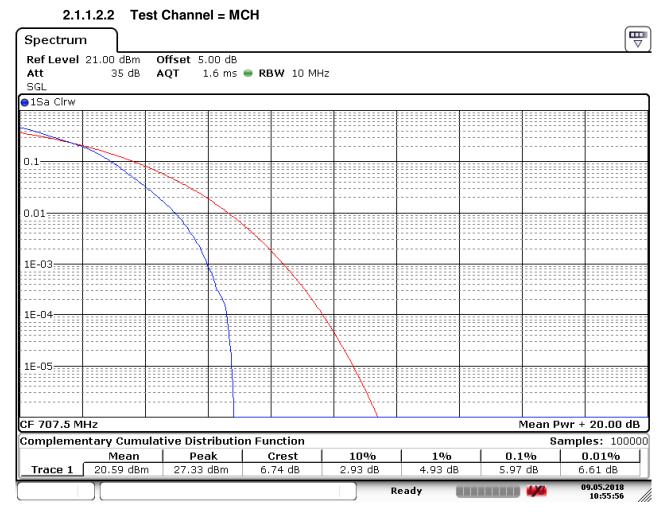
#### 2.1.1.2 Test Mode = LTE/TM2.Bandwidth=10MHz



Date: 9.MAY.2018 10:55:25



Report No.: SZEM180300254201 Page: 15 of 86

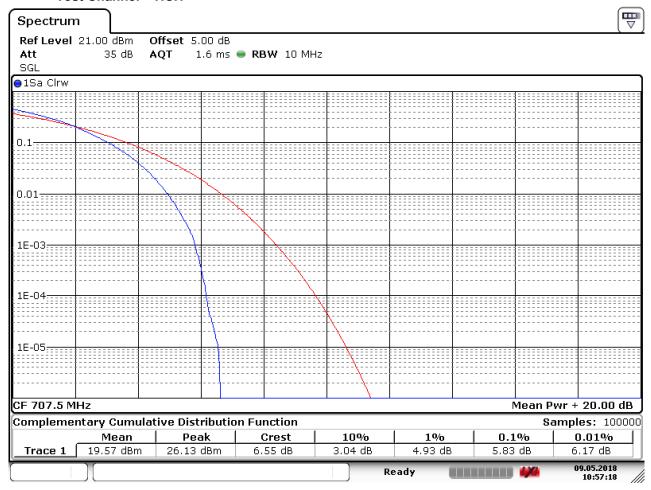


Date: 9.MAY.2018 10:55:56



Report No.: SZEM180300254201 Page: 16 of 86

Test Channel = HCH



Date: 9.MAY.2018 10:57:18



Report No.: SZEM180300254201 Page: 17 of 86

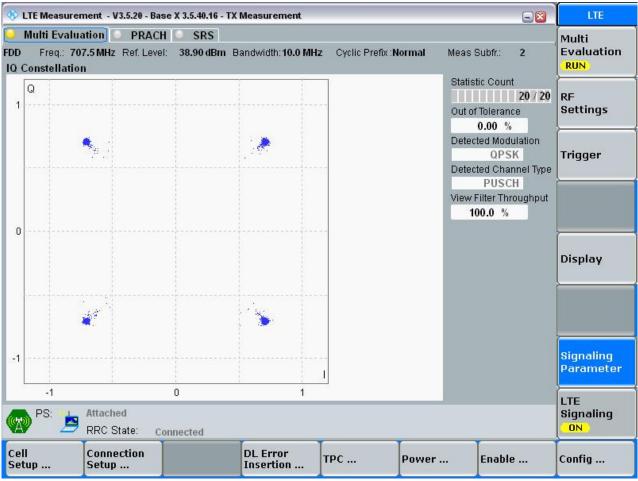
### **3 Modulation Characteristics**

### 3.1 For LTE

### 3.1.1 Test Band = LTE band12

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

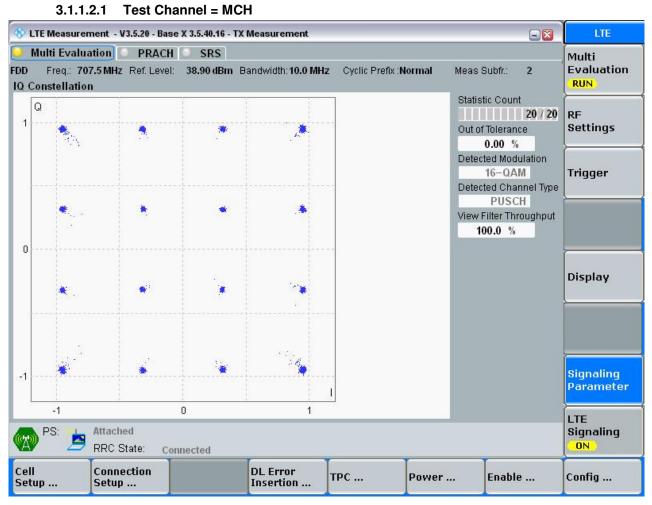
### 3.1.1.1.1 Test Channel = MCH





Report No.: SZEM180300254201 Page: 18 of 86

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





Report No.: SZEM180300254201 Page: 19 of 86

### 4 Bandwidth

#### Part I - Test Results

Test Band	Test Mode	Test Channel	Occupied Bandwidth [MHz]	Emission Bandwidth [MHz]	Verdict
		LCH	1.08	1.24	PASS
	TM1/1.4MHz	MCH	1.08	1.24	PASS
		HCH	1.09	1.26	PASS
		LCH	1.08	1.26	PASS
	TM2/1.4MHz	MCH	1.08	1.24	PASS
		HCH	1.08	1.26	PASS
		LCH	2.68	2.84	PASS
	TM1/ 3MHz	MCH	2.67	2.83	PASS
		HCH	2.68	2.83	PASS
		LCH	2.67	2.84	PASS
	TM2/3MHz	MCH	2.67	2.83	PASS
		HCH	2.67	2.84	PASS
Band 12	TM1/ 5MHz	LCH	4.47	4.89	PASS
		MCH	4.49	4.92	PASS
		HCH	4.48	4.91	PASS
		LCH	4.47	4.90	PASS
	TM2/ 5MHz	MCH	4.47	4.88	PASS
		HCH	4.48	4.89	PASS
		LCH	8.93	9.64	PASS
	TM1/10MHz	MCH	8.97	9.85	PASS
		HCH	8.91	9.59	PASS
		LCH	8.93	9.64	PASS
	TM2/ 10MHz	MCH	8.95	9.65	PASS
		HCH	8.93	9.54	PASS



Report No.: SZEM180300254201 Page: 20 of 86

### Part II – Test Plots

### 4.1 For LTE

### 4.1.1 Test Band = LTE band12

### 4.1.1.1 Test Mode = LTE/TM1 1.4MHz

#### 4.1.1.1.1 Test Channel = LCH

Spectrun	n								
	I 30.00 dBm		5.00 dB 👄						
Att 1Rm Max	40 aB	I SWT	15 📟	<b>VBW</b> 300 kł	HZ Mode	Auto Swee	p		—
20 dBm					0	1[1] cc Bw 1[1]		1.0849 -	-0.24 dB 24380 MHz 15085 MHz 16.59 dBm 08260 MHz
10 dBm	D1 8.720 dE	3m	There		a a a a a a a a a a a a a a a a a a a	h	+	099.	00200 MI 12
0 dBm			1			T T			
-10 dBm—		M	}				<b>Q</b> 1		
-20 dBm	D2 -17	.280 dBm /							
-30 dBm	Carlo and a start and a start a	- Andrew					minun	the starter the	m
-40 dBm—									
-50 dBm—									
-60 dBm—									
CF 699.7 M	MHz			1001	pts	I	I	Spa	n 3.0 MHz
					Mea	suring		<b>4/4</b> (	)9.05.2018 08:01:19

Date: 9.MAY.2018 08:01:19



Report No.: SZEM180300254201 Page: 21 of 86

Spectrum									
-	l 30.00 dBm	Offset SWT	5.00 dB 👄 1 s 👄	<b>RBW</b> 30 ki <b>VBW</b> 300 ki		Auto Swee	p		(*
●1Rm Max									•
						1[1]			0.06 dB 24380 MHz
20 dBm						cc Bw 1[1]		-	15085 MHz 16.99 dBm 87660 MHz
10 dBm	D1 8.740 dł	 3m	There are a second seco		Mark and a second			700.	57000 1112
0 dBm			1						
-10 dBm		Mt				- (			
-20 dBm	D2 -17	.260 dBm 🕇							
-30 dBm—	adout the advantage of the advantage	and a start of					hanne	mun	No. Al an
-40 dBm									m Manner our
-50 dBm									
-60 dBm									
CF 707.5 M	1Hz			1001	pts			Spa	n 3.0 MHz
						suring		-	9.05.2018 08:05:03

4.1.1.1.2 Test Channel = MCH

Date: 9.MAY.2018 08:05:03



Report No.: SZEM180300254201 Page: 22 of 86

4.1	.1.1.3 Ie	est Channe	H = HCH						_
Spectrun	n ]								
Ref Leve Att	30.00 dBm 40 dB	) Offset S 👄 SWT	5.00 dB 👄 1 s 👄	<b>RBW</b> 30 ki <b>VBW</b> 300 ki		Auto Swee	p		
⊖1Rm Max									
20 dBm					o	1[1] cc Bw 1[1]		1.0909	0.69 dB 26470 MHz 09091 MHz 18.02 dBm 65560 MHz
10 dBm	D1 8.560 dl	Bm			and the second s				
0 dBm			1						
-10 dBm—		M1/	/						
-20 dBm	D2 -17	.440 dBm							
-30 dBm	and anon	menter					hunn	man and an all	
marken									man
-40 dBm—									
-50 dBm—									
-60 dBm									
CF 715.3 M	MHz			1001	. pts			-	n 3.0 MHz
					Mea	suring		<b>4/4</b>	9.05.2018 08:06:24

#### 4.1.1.1.3 Test Channel = HCH

Date: 9.MAY.2018 08:06:25



Report No.: SZEM180300254201 Page: 23 of 86

4.1	.1.2.1 Te	est Channe	el = LCH						
Spectrun	n								
Ref Leve	I 30.00 dBm	n Offset	5.00 dB 👄	<b>RBW</b> 30 k	Ηz				
🗕 Att	40 dE	B 🔵 SWT	1 s 🔵	<b>VBW</b> 300 k	Hz Mode	Auto Swee	р		
⊖1Rm Max									
					D	1[1]			0.29 dB
									26170 MHz
20 dBm——						cc Bw			15085 MHz
					M	1[1]			18.20 dBm 06760 MHz
10 dBm								699.	
	D1 7.630 d	Bm	Termin	m	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	m may 2			
0 dBm			Y			ľ.			
o abiii									
-10 dBm—									
		M1					Q1		
-20 dBm—	D2 -18	3.370 dBm 🕇					1		
-30 dBm							herenne		
mar	and and and a second	and a start of the						man man and man	w marker warmen
AD JD									" Andrew
-40 dBm—									
-50 dBm—									
-60 dBm—									
CF 699.7 M	MHz			1001	pts			Spa	n 3.0 MHz
					Mea	suring		<b>440</b>	9.05.2018 08:02:32 //

### 4.1.1.2 Test Mode = LTE/TM2 1.4MHz

Date: 9.MAY.2018 08:02:32



Report No.: SZEM180300254201 Page: 24 of 86

Spectrum		Stonanne							
	I 30.00 dBm	Offset	5.00 dB 👄	<b>RBW</b> 30 kHz <b>VBW</b> 300 kHz			_		(*
• Att	40 uc	o 🖶 owi	15 💻	YDYY 300 KH2	moue /	Auto Swee	9		
• IRM Max					D1	[1]		1.	0.63 dB 24380 MHz
20 dBm						с Вw [1]		-	15085 MHz 18.78 dBm 87660 MHz
10 dBm	D1 7 600 d	 	<b>T</b> 4						
	D1 7.630 d	Bm	-			mul 2			
0 dBm——									
-10 dBm——									
-20 dBm	D2 -18	3.370 dBm	; 						
							$\sum$		
-30 dBm	and the state of the second	and warmand					- Com	errou mar	
-40 dBm									Muran
-50 dBm									
-60 dBm—									
CF 707.5 N	ИHz			1001 p	its			Spa	n 3.0 MHz
					Meas	uring		<b>4/4</b>	)9.05.2018 08:03:37

4.1.1.2.2 Test Channel = MCH

Date: 9.MAY.2018 08:03:37



Report No.: SZEM180300254201 Page: 25 of 86

4.1	.1.2.3 Ie	est Channe	H = HCH						
Spectrun	n ]								
Ref Leve	I 30.00 dBm	Offset	5.00 dB 😑	<b>RBW</b> 30 kł	Ηz				
🗕 Att	40 dB	S 🔵 SWT	1 s 😑	<b>VBW</b> 300 kł	Hz Mode	Auto Swee	р		
⊖1Rm Max									
					D	1[1]			0.86 dB
									25870 MHz
20 dBm——						cc Bw 1[1]			15085 MHz 18.37 dBm
					171	1[1]			66460 MHz
10 dBm	D1 7.640 dl	B.m							
	D1 7.040 ui		T1/m			12 miles			
0 dBm			+						
-10 dBm			ļ						
		MI	/				Å.		
-20 dBm	D2 -18	1.360 dBm 👎							
20 4011		1					1		
-30 dBm—							N.		
-30 UBIII	- and and the man and the	and the street of the state					and by	when have	
All and a start of the start of									- Understone war
-40 dBm——									
-50 dBm									
-60 dBm—									
05 745 0 4	<u> </u>							<u> </u>	
CF 715.3 N	MHZ			1001			_		n 3.0 MHz
					Mea	suring		<b>4/4</b>	9.05.2018 08:07:15

4.1.1.2.3 Test Channel = HCH

Date: 9.MAY.2018 08:07:16



Report No.: SZEM180300254201 Page: 26 of 86

4.1	.1.3.1 Te	est Channe	el = LCH						_
Spectrun	n								
Ref Leve	I 30.00 dBm	o Offset	5.00 dB 😑	<b>RBW</b> 30 ki	Ηz				
🗕 Att	40 dB	SWT 😑	1 s 👄	<b>VBW</b> 300 ki	Hz Mode	Auto Swee	р		
⊖1Rm Max									
					D	1[1]			-0.63 dB
									83670 MHz
20 dBm						CC BW			20679 MHz
					M	1[1]			20.52 dBm 08540 MHz
10 dBm							+	099.	
	D1 5.040 dl	Bm <u>T1</u>		and a mark	and a second second	m	T2		
0 dBm		~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	······································	- wa			17		
10 10							11		
-10 dBm—									
		ML							
-20 dBm—	D2 -20	).960 dBm —							
-30 dBm—							+		
	mon wearing	www					when	for a special stranger	mour
-40 dBm									~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
-50 dBm—									
-60 dBm—									
	<u> </u>								
CF 700.5 r	MHZ			1001	. pts			-	n 6.0 MHz
	Л				Mea	suring		<b>4/4</b> 0	9.05.2018 08:08:39

### 4.1.1.3 Test Mode = LTE/TM1 3MHz

Date: 9.MAY.2018 08:08:40



Report No.: SZEM180300254201 Page: 27 of 86

Spectrum		St Onanna						
Ref Level • Att	40 dB	o Offset	5.00 dB 👄 1 s 👄	<b>RBW</b> 30 kHz <b>VBW</b> 300 kHz		) Sweep		
●1Rm Max						· · · · ·		
20 dBm					D1[1]	м		0.71 dB 82920 MHz 26673 MHz
					M1[1]			-21.16 dBm 07940 MHz
10 dBm	D1 5.180 d	Bm <u></u>	mmm	man	mmmmm	T2		
0 dBm								
-10 dBm								
-20 dBm	D2 -20	).820 dBm=						
-30 dBm								
*-40 dBm	month and the starters of	woman					unanter	monunt al respective
-50 dBm								
-60 dBm								
CF 707.5 M	1Hz			1001 p	ots		Spa	n 6.0 MHz
	)[]				Measurir	ıg 🚺 🚺 🚺	. 444	09.05.2018 08:11:41

4.1.1.3.2 Test Channel = MCH

Date: 9.MAY.2018 08:11:41



Report No.: SZEM180300254201 Page: 28 of 86

4.1.	.1.3.3 Ie	st Channe	e = HCH						_
Spectrum	ı )								
Ref Level Att	I 30.00 dBm 40 dB	Offset	5.00 dB 👄 F 1 s 👄 🎙	<b>RBW</b> 30 kH <b>/BW</b> 300 kH		Auto Swee	n		
●1Rm Max						1.4.0 0.1.00	r		
20 dBm					0	L[1] CC BW 1[1]		2.6793	0.11 dB 82920 MHz 20679 MHz 20.81 dBm 07940 MHz
10 dBm								710.	079101112
0 dBm	D1 5.030 dł	3m T1	mm	in the second			T2 my		
-10 dBm									
-20 dBm	D2 -20	.970 dBm							
-30 dBm	Markanderhorter	4.100 The and					hung	-	
-40 dBm								a manufacture	m
-50 dBm									
-60 dBm									
CF 714.5 M	1Hz	·	I I	1001	pts	·	ı	Spa	n 6.0 MHz
	)[]				Mea	suring		· 🚧	)9.05.2018 08:12:48

4.1.1.3.3 Test Channel = HCH

Date: 9.MAY.2018 08:12:48



Report No.: SZEM180300254201 Page: 29 of 86

4.1	.1.4.1 Te	est Channe	el = LCH						_
Spectrum	ι								[₩
Ref Leve	I 30.00 dBm	0ffset	5.00 dB 🔵	RBW 30 kH	Ηz				
🖷 Att	40 dB	SWT 😑	1 s 👄	<b>VBW</b> 300 kH	Hz Mode	Auto Swe	ер		
⊖1Rm Max									
					D	1[1]			1.41 dB
						_			83670 MHz
20 dBm						CC BW			26673 MHz
					IVI	1[1]			22.24 dBm 07940 MHz
10 dBm							1	099.	07940 0112
	D1 4.230 dl	 Bm			when a notest	tone of the second	Т2		
0 dBm		₩ ₩	-						
-10 dBm									
-10 0800									
		м					41		
-20 dBm	D2 -21	770 dBm-							
-30 dBm							+		
	St. marine works	North Real Street					me	man	mm
~¥40 dBm—	where a second								China
-50 dBm									
00 00.									
co in									
-60 dBm									
CF 700.5 N	/IHz	1	1	1001	pts	I		Spa	n 6.0 MHz
					Mea	suring		<b>4</b>	9.05.2018 08:09:35

### 4.1.1.4 Test Mode = LTE/TM2 3MHz

Date: 9.MAY.2018 08:09:35



Report No.: SZEM180300254201 Page: 30 of 86

4.1	.1.4.2 Ie	est Channe							_
Spectrum	ı ]								
Ref Leve	I 30.00 dBm	offset	5.00 dB 🔵 R	<b>:BW</b> 30 kH	z				
Att	40 dE	s 🔵 SML	1 s 👄 V	<b>'BW</b> 300 kH	z Mode	Auto Swee	эр		
😑 1 Rm Max									
					D1	.[1]			0.73 dB
									82920 MHz
20 dBm						C BW			26673 MHz
					IMI 1	l[1]			22.48 dBm 07940 MHz
10 dBm							+	700.	
	D1 3.950 d	Т1					т2		
0 dBm	DI 9,930.0	<u>~</u>	when the work		vernerra	mm	www.		
o dem									
-10 dBm——									
-20 dBm—	n222	1					41		
							1		
-30 dBm							<u> </u>		
<u>~40°dBtff~^^</u>	an water with	malan					tun	monorman	ب الاستثنائية
-+0'ubiii									<sup>مەللەشەدىل</sup> ىيى <sup>ىل</sup> ىرىنى
-50 dBm—									
-60 dBm—									
CF 707.5 N	/IHz			1001	pts			-	n 6.0 MHz
	][]				Meas	suring		<b>4/4</b>	9.05.2018 08:11:01

4.1.1.4.2 Test Channel = MCH

Date: 9.MAY.2018 08:11:01



Report No.: SZEM180300254201 Page: 31 of 86

4.1	.1.4.3 Ie	est Channe	H = HCH						_
Spectrun	n ]								
Ref Leve	I 30.00 dBm	0ffset	5.00 dB 👄 R	. <b>BW</b> 30 kHz					
🔵 Att	40 dB	s 👄 SWT	1 s 👄 V	' <b>BW</b> 300 kHz	Mode	Auto Swee	р		
⊖1Rm Max									
					D1	L[1]			0.47 dB
									83520 MHz
20 dBm——						cc Bw			26673 MHz
					M	1[1]			22.96 dBm 07940 MHz
10 dBm							1	/13.	07940 MHZ
		Т1					T2		
0 dBm	D1 3.440 dI	Bm <del>yr</del>	-unapper and	www.www.www.www.www.www.www.www.www.ww		mun	www.		
-10 dBm——							1		
-20 dBm		MA					di		
	D2 -22	2.560 dBm-							
00 d0									
-30 dBm—									
∿≄0 dBm—	allow man well and well	and a start and a start and a start and a start					mahung	and and the second of a	Jun 11 11
'≏40 dBm—									· · · · · · · · · · · · · · · · · · ·
-50 dBm									
-60 dBm									
CF 714.5 N	⊥ ∕IHz	1		1001 p	l		1	Spa	n 6.0 MHz
	Υ				)	suring			9.05.2018
L						saring			08:13:32

4.1.1.4.3 Test Channel = HCH

Date: 9.MAY.2018 08:13:32



Report No.: SZEM180300254201 Page: 32 of 86

∀

#### 4.1.1.5.1 Test Channel = LCH Spectrum Ref Level 35.00 dBm Offset 5.00 dB 👄 RBW 50 kHz 40 dB 🔵 SWT 10 ms 👄 **VBW** 200 kHz Att Mode Auto Sweep ⊖1Pk View D1[1] -3.84 dB 30 dBm-4.88700 MHz Occ Bw 4.465534466 MHz -11.70 dBm M1[1] 20 dBm-699.07200 MHz D1 13.290 dBm-Γ1 <u>ما/مىمىۋە ھەرال</u> www. normound Murch 10 dBm-0 dBm· M -10 dBm--D2 -12.710 dBm<sup>.</sup> 4 ĵî, Λ And and the full for the second -20 dBm-Now water all the all the second W. du -30 dBm--40 dBm--50 dBm--60 dBm-CF 701.5 MHz 1001 pts Span 10.0 MHz 31.05.2018 Measuring... 09:00:52

4.1.1.5 Test Mode = LTE/TM1 5MHz

Date: 31.MAY.2018 09:00:52



Report No.: SZEM180300254201 Page: 33 of 86

4.1	.1.5.2 Te	est Chann	el = MCH						_
Spectrun	n								
Ref Leve	l 35.00 dBm	n Offset	5.00 dB 👄	<b>RBW</b> 50 k	Hz				
🗕 Att	40 dB	8 👄 SWT	10 ms 👄	<b>VBW</b> 200 k	Hz Mode	Auto Swe	ер		
⊖1Pk View									
00 JD					D	1[1]		-2.38 dB	
30 dBm					_	.92100 MHz			
									14486 MHz
20 dBm					IVI	1[1]	-12.38 dBm 705.05200 MHz		
	D1 10 000	 				1	Т2	1 /03	
10 dBm	D1 12.860)	asm Thu	Almouthtet	ulthan walnus	en her and	with received	theng		
0 dBm									
o abiii									
		M					h		
-10 dBm—	D213	3.140 dBm-					141		
	02 -13						1		
-20 dBm	pullingulut	ANN A P					Musen.	40.	
yuntruther	pallown	nn.d.s						m where but	and and the work of the
-30 dBm				_					
-40 dBm									
-40 00111									
-50 dBm—									
-60 dBm									
CF 707.5 M	MHZ			1001	L pts				10.0 MHz
					Mea	asuring		4/4	31.05.2018 09:03:46

Date: 31.MAY.2018 09:03:46



Report No.: SZEM180300254201 Page: 34 of 86

4.1	.1.5.3 Te	est Channe	el = HCH							
Spectrum										
Ref Level 35.00 dBm Offset 5.00 dB 🖷 RBW 50 kHz										
e Att	40 dB	B 👄 SWT	10 ms 😑	<b>VBW</b> 200 kł	Hz Mode	Auto Swee	ep			
●1Pk View	1	1								
30 dBm					D:	1[1]		4	-2.34 dB	
00 dbiii					0	cc Bw	4.90500 MHz 4.475524476 MHz			
20 dBm						1[1]	-11.74 dBm			
20 aBm							711.04200 MHz			
	D1 13.050	dBm <u>11</u>	Jacon Martin Martin	adat di ka	Anterburren		1 T2			
10 dBm		- year			anne ar ann	ويسولهم المعقب مقائدات	hair a			
							1.1			
0 dBm							+			
-10 dBm—		M1					<u> </u>			
	D2 -12	2.950 d <mark>B</mark> m								
-20 dBm	1 March	Mar Martin P					WW MARK	W. marce her no		
where the well	MANALANLES .							I S & T I S A A A A A A A A A A A A A A A A A A	hullinger	
-30 dBm										
-30 UBIII										
-40 dBm—										
-50 dBm										
-60 dBm										
CF 713.5 M	 			1001	nte				10.0 MUs	
[ CF 713.5 P	τιπz			1001					10.0 MHz	
					Mea	suring		4/4	09:05:00	

Date: 31.MAY.2018 09:05:00



Report No.: SZEM180300254201 Page: 35 of 86

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

4.1.	1.6.1 Te	st Channe	el = LCH						_	
Spectrum	ı )								[₩	
	35.00 dBm		5.00 dB 😑							
Att	40 dB	e swt	10 ms 👄	<b>VBW</b> 200 ki	Hz Mode	Auto Swee	р			
●1Pk View				1		(141			-2.15 dB	
30 dBm					U.	D1[1]			4.89700 MHz	
					Occ Bw			4.465534466 MHz		
20 dBm					M1[1]			-12.55 dBm		
					l	699.06200 MHz				
10 dBm	D1 11.600 (	dBm	abarret harrow	and the second second	والمدور الطاري موالية ومعروراته	يد البحي <u>ال</u> يد	the state of the s			
		γř.					Ň			
0 dBm										
-10 dBm		M								
							<u>C</u> 1			
-20 dBm										
-20 dBm   -20 dBm  -30 dBm	welle mout	water					Viringe	rationstration	March Lord	
HAND HED	AND MILES								. Հատորդու	
, 50 dbin										
-40 dBm										
-+0 0011										
-50 dBm										
-30 übili										
-60 dBm										
CF 701.5 M	IHz			1001	pts			Span	10.0 MHz	
					Mea	suring		3 🚧	1.05.2018 09:01:43	

Date: 31.MAY.2018 09:01:43



Report No.: SZEM180300254201 Page: 36 of 86

4.1	.1.6.2 Te	est Channe	eI = MCH						_	
Spectrun	n )									
Ref Leve	l 35.00 dBm	n Offset	5.00 dB 👄 F	<b>RBW</b> 50 kH	łz					
Att	40 dB	s 🔵 SML	10 ms 👄 🎙	<b>VBW</b> 200 kH	lz Mode	Auto Swei	ер			
●1Pk View										
30 dBm					D	1[1]			-2.99 dB	
30 UBIII						_		4.88100 MHz		
									34466 MHz 12.66 dBm	
20 dBm——					I¥I	1[1]			12.00 UBM 07200 MHz	
		ļ							07200 1112	
10 dBm	D1 11.860	dBm T1	Lahes-sawlands	Marchen to a	-		topology			
							15			
0 dBm										
0 4011		N								
		Mø					$  \rangle$			
-10 dBm—		<b></b>					-4-			
	02 -14	140 dBm					1			
-20 dBm——							4			
wowww.rdg	W. www. Hu way	Howthe					man	MA Marine Mar	www.Monaryo	
-30 dBm									o to to gotto Ala	
-40 dBm										
10 4011										
-50 dBm—										
-60 dBm										
CF 707.5 N	 MHz			1001	nts			 Snan	10.0 MHz	
	)(			1001					10.01112	
L I					Mea	suring			09:02:50	

4.1.1.6.2 Test Channel = MCH

Date: 31.MAY.2018 09:02:50



Report No.: SZEM180300254201 Page: 37 of 86

4.1	.1.6.3 Ie	est Channe	el = HCH					
Spectrun	ı ]							
	I 35.00 dBm		5.00 dB 👄					
Att	40 dE	B 🔵 SWT	10 ms 👄	<b>VBW</b> 200 kHz	Mode Auto Sw	еер		
⊖1Pk View		1	1	<u> </u>				
30 dBm					D1[1]			-0.77 dB
SO abiii					Occ Bw			88500 MHz 24476 MHz
					M1[1]			13.49 dBm
20 dBm——								05200 MHz
		ļ					1	
10 dBm	D1 11.800	dBm <del>T1</del>	anness and an	المتوجعة والمحاصية والمحاصية	he have and the former and	winny		
		(				19		
0 dBm								
o abiii						1		
-10 dBm——		<u> ₩</u> ₽				61		
		4.200 dBm—				1		
-20 dBm	d.d. hat	when				- Wiggenth	Muchuked, no	when we reduil
4. about Milliant	MARMAN AL						~ and Avert	any marchall
۱ <sup>۳۷</sup> ″″″″ -30 dBm——								
50 GBII								
-40 dBm								
-50 dBm—								
-60 dBm								
00 0011								
CF 713.5 N	/Hz	•		1001 p	ts		Span	10.0 MHz
					Measuring		•	31.05.2018 09:05:54
	~ ~							////

A 1 1 C 0 Toot Oh 

Date: 31.MAY.2018 09:05:55



Report No.: SZEM180300254201 Page: 38 of 86

#### 4.1.1.7 Test Mode = LTE/TM1 10MHz 4.1.1.7.1 Test Channel = LCH

Spectrum	ı )							
Ref Level	35.00 dBm	o Offset	5.00 dB 👄	<b>RBW</b> 100 kH:	z			
Att 🖉	40 dE	SWT 😑 SWT	10 ms 👄	<b>VBW</b> 300 kH:	z Mode Auto	) Sweep		
●1Pk View								
20 40					D1[1]			-1.26 dB
30 dBm								.6350 MHz
					Occ By	N		68931 MHz
20 dBm					M1[1]			11.95 dBm
		 			1	1	1 099	.2050 MHz
10 dBm	D1 13.320		Moutherstry	who have a strategy and the second	Welders Harry mark	HAR YOUHWA		
10 0.011		l f				···· ····		
0 dBm								
						4		
-10 dBm—		M1				101		
		2.680 d <mark>8</mark> m						
20 dBm						Mush also	adden and the for	
-20 000		and the second				1.0.0	a mar wall the	When And
-20 dBm പ്രാർൻBm	ANN HAVE A							an court
<sub>M</sub> a® den m								
-40 dBm								
-50 dBm—								
-60 dBm—				+				
05 704 0 0				1001			0	00.0 MU-
CF 704.0 M				1001				20.0 MHz
					Measurin	ig	3	09:07:45

Date: 31.MAY.2018 09:07:45



Report No.: SZEM180300254201 Page: 39 of 86

4.1	.1.7.2 Te	est Channe	el = MCH						
Spectrun	n								
Ref Leve	l 35.00 dBm	o Offset	5.00 dB 😑	<b>RBW</b> 100 k					```.
e Att	40 dE	SWT 😑 SWT	10 ms 👄	<b>VBW</b> 300 k	Hz Mode	Auto Sweep	2		
●1Pk View	1	1	1	1					
30 dBm					D	1[1]		-	-1.09 dB
					0	cc Bw			.8520 MHz 28971 MHz
						1[1]			12.28 dBm
20 dBm						-[-]			.5650 MHz
	D1 13.680	dBm <del>1</del>					T2		
10 dBm			nvindindituditudituditudi v	pagala hy na dala parta.	ւ <mark>կերում՝ - շշվ</mark> որթների	HANDRING MAN	u Ant		
0 dBm									
		l í							
-10 dBm		мţ					<u> </u>		
	D2 -12	2.320 dBm							
-20 dBm- whithin the		and a strategy of					M. Maria		wellettergeterented
-20 asm	flandline filler	MP. M.						Philips palls have readed	olaran
									~ annually with
-30 dBm—									
-40 dBm—									
-50 dBm									
-60 dBm									
-00 UBIII									
CF 707.5 M	MHz	·	ı	1001	pts	·	·	Span	20.0 MHz
					Mea	suring		<b>4/4</b> 3	1.05.2018 09:10:10
· · · · · ·									09:10:10

Date: 31.MAY.2018 09:10:11



Report No.: SZEM180300254201 Page: 40 of 86

Spectrum	- <u> </u>								
Ref Level	35.00 dBm	Offset	5.00 dB 😑	<b>RBW</b> 100 k	Ηz				
🖷 Att	40 dB	s 🔵 SWT	10 ms 😑	<b>VBW</b> 300 k	Hz Mode	Auto Swe	ер		
⊖1Pk View									
30 dBm					D	L[1]		g	-1.49 dB .5880 MHz
					0	cc Bw			88911 MHz
20 dBm					M	1[1]		-	10.24 dBm
								706	.2250 MHz
10 dBm	D1 14.250 (	dBm T1	-	aproxide the all	and and and and	lan Almaha ya da wa	MUT2		
0 dBm							+		
-10 dBm		M							
-10 4611	——D2 -11	750 dBm							
-20 dBm	<del>n na tuala</del> t	1. M. Level					- Under		
-20 dBm	wywar v w w w w w	Y 10 1					a . andr	themapping	when the for the former
-30 dBm									
-40 dBm									
-50 dBm									
-60 dBm									
CF 711.0 M	IHz			1001	pts			-	20.0 MHz
	Π				Mea	suring		<b>4//4</b> 3	1.05.2018 09:11:44

4.1.1.7.3 Test Channel = HCH

Date: 31.MAY.2018 09:11:45



Report No.: SZEM180300254201 Page: 41 of 86

∀

-1.43 dB

#### 4.1.1.8.1 Test Channel = LCH Spectrum Ref Level 35.00 dBm Offset 5.00 dB 👄 RBW 100 kHz 40 dB 🔵 SWT 10 ms 👄 **VBW** 300 kHz Att Mode Auto Sweep ⊖1Pk View D1[1] 30 dBm-9.6350 MHz Occ Bw 8.931068931 MHz -13.37 dBm M1[1] 20 dBm-699.2450 MHz 11.740 dBm all the state of the second states and the second states and the second states and the second states and the se 10 dBm-4P3 Haber MAR Manutan dh.le 0 dBm· -10 dBmh 1 -D2 -14.260 dBm wheel all when when when by the -20 dBm-39. asthler problem Justic and -40 dBm-

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

-50 dBm--60 dBm-CF 704.0 MHz 1001 pts Span 20.0 MHz 31.05.2018 Measuring... 09:08:37 

Date: 31.MAY.2018 09:08:37



Report No.: SZEM180300254201 Page: 42 of 86

4.1.	1.8.2 Te	est Channe	el = MCH						_
Spectrum	ı )								
Ref Level	35.00 dBm	n Offset	5.00 dB 😑	<b>RBW</b> 100 k	Ηz				
Att	40 dB	s 🔵 SWT	10 ms 👄	<b>VBW</b> 300 ki	Hz Mode	Auto Swee	ер		
⊖1Pk View		1	1	1					
30 dBm					D:	1[1]			-2.42 dB
00 42111					0	cc Bw			.6520 MHz 48951 MHz
00 dB						1[1]			12.38 dBm
20 dBm									.6850 MHz
	D1 12.110	dBm <u>T1</u>	and the later						
10 dBm		Kunto	᠖ᠳᡰᡊᢦᡆᢥᢂᢧᡗᢤᠷᢢᡍᠳ	and the second second	anthread-address	land and a start of the start	a <b>hili</b> é		
0 dBm							+		
-10 dBm—		M1							
	D2 -13	3.890 dBm							
-20 dBm—	ւ սեստես	ullut 1					- W		
-20 dBm Hurreburght	Lauran A. A.	վիլը ուղ					~ Walay Ma	AND ALLOW AND ALL	March 1.
-30 dBm								and when the property of the p	I WY WWHITH
-40 dBm									
-50 dBm									
-30 0011									
-60 dBm									
-ou ubiii									
CF 707.5 M	1Hz		·	1001	pts	•		Span	20.0 MHz
					Mea	suring		<b>444</b> 3	:1.05.2018 09:09:31

Date: 31.MAY.2018 09:09:31



Report No.: SZEM180300254201 Page: 43 of 86

4.1	.1.8.3 Te	est Channe	el = HCH						
Spectrun	n								
Ref Leve	I 35.00 dBm	n Offset	5.00 dB 👄	<b>RBW</b> 100 k	Ηz				
e Att	40 dE	S 👄 SWT	10 ms 👄	<b>VBW</b> 300 k	Hz Mode	Auto Swe	ер		
⊖1Pk View	1	1	1	1					
30 dBm					D	1[1]		_	-1.38 dB
SO GDIII					0	cc Bw			0.5480 MHz 68931 MHz
						1[1]			12.98 dBm
20 dBm						1[1]			.2450 MHz
	D1 12.510	 d8m							
10 dBm	01 12,510		thepatronitist	-	ally south a little walk	han and the second	*100-01-12		
0 dBm									
-10 dBm		Mb					1 1		
-10 uBiii—	D2 -13	3.490 dBm					01		
		<mark> </mark> "					1		
-20 dBm	. upresalled	Mar M					With		Mybula My
Another and	Offerio, chi rola co	UTHU Y						monthly	Mathilana
-30 dBm—									* WWVM
-40 dBm									
-50 dBm—									
-60 dBm—									
CF 711.0 M	 MHz			1001	pts			 Span	20.0 MHz
						suring			1.05.2018
Ĺ						suriny			09:12:40

Date: 31.MAY.2018 09:12:40



Report No.: SZEM180300254201 Page: 44 of 86

#### 5 Band Edges Compliance

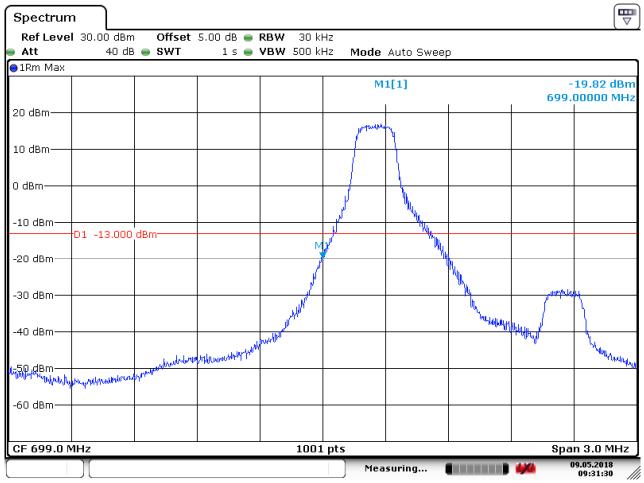
#### 5.1 For LTE

#### 5.1.1 Test Band = LTE band12

#### 5.1.1.1 Test Mode = LTE/TM1 1.4MHz

5.1.1.1.1 Test Channel = LCH

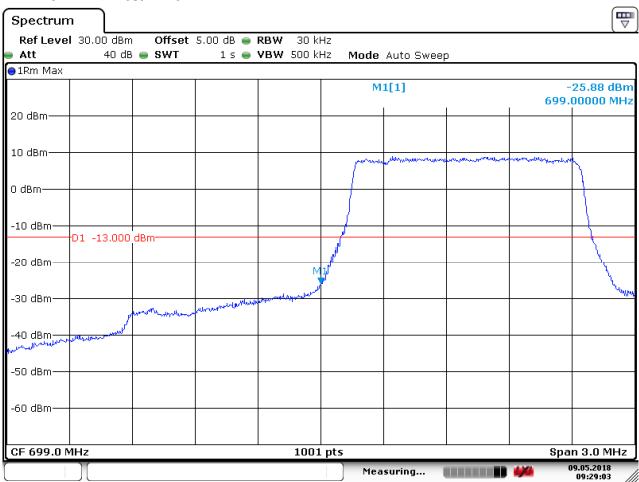
#### 5.1.1.1.1.1 Test RB=1RB



Date: 9.MAY.2018 09:31:30



Report No.: SZEM180300254201 Page: 45 of 86

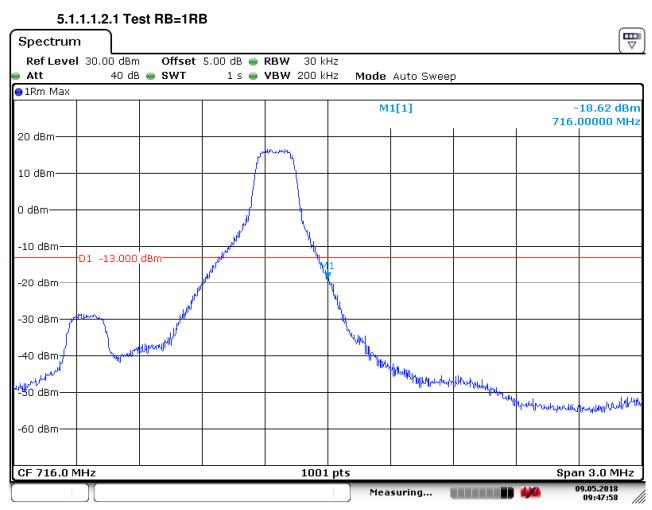


5.1.1.1.1.2 Test RB=6RB

Date: 9.MAY.2018 09:29:04



Report No.: SZEM180300254201 Page: 46 of 86

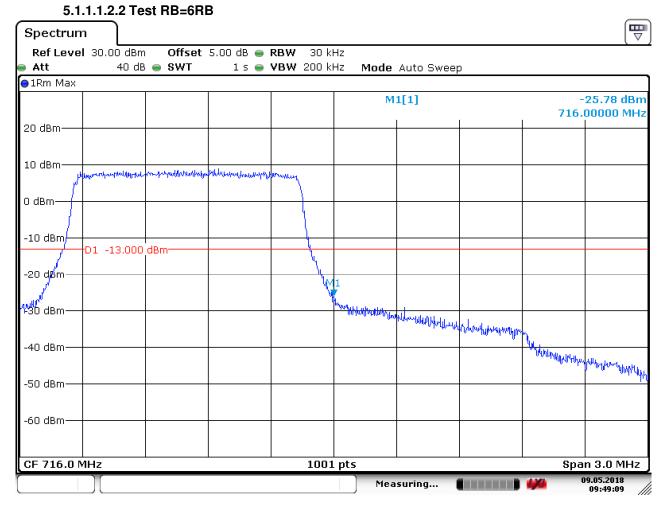


5.1.1.1.2 Test Channel = HCH

Date: 9.MAY.2018 09:47:59



Report No.: SZEM180300254201 Page: 47 of 86



Date: 9.MAY.2018 09:49:09



5.1.1.2 Test Mode = LTE/TM2 1.4MHz

#### SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch

Report No.: SZEM180300254201 Page: 48 of 86

#### 5.1.1.2.1 Test Channel = LCH 5.1.1.2.1.1 Test RB=1RB ₽ Spectrum Ref Level 30.00 dBm Offset 5.00 dB 👄 RBW 🛛 30 kHz 1 s 🔵 **VBW** 500 kHz Att 40 dB 💿 SWT Mode Auto Sweep ●1Rm Max M1[1] -19.45 dBm 699.00000 MHz 20 dBm-10 dBm-0 dBm--10 dBm-D1 -13.000 dBm-M -20 dBm -30 dBm--40 dBm--50,dBm--60 dBm-1001 pts CF 699.0 MHz Span 3.0 MHz 09.05.2018 Measuring... 09:31:08

Date: 9.MAY.2018 09:31:08



Report No.: SZEM180300254201 Page: 49 of 86

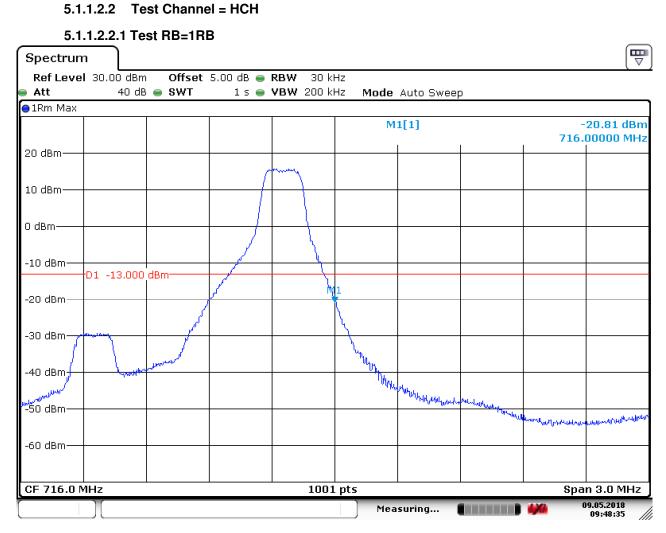
5.1	.1.2.1.2 10	SI NDEON	D						_
Spectrun	n )								
Ref Leve	l 30.00 dBm	) Offset	5.00 dB 😑	<b>RBW</b> 30 kł	Ηz				
🖷 Att	40 dE	😑 SWT	1 s 👄	<b>VBW</b> 500 kł	Hz Mode	Auto Swee	р		
😑 1 Rm Max									
					М	1[1]			27.71 dBm
								699.0	00000 MHz
20 dBm——									
10 dBm									
					Julion	-	anna an	4. Mary Hallansell remark	<b>L</b>
					1			Ť	N
0 dBm									
-10 dBm—									
	D1 -13.000	dBm			M				N.
-20 dBm					الر				- <sup>1</sup> N
				м	1 <sup>1</sup>				પ
					ľ				N. Mundaline
-30 aBm				and the shall be and be and					We have
		maryen warnet	helegen all and a state of the	home					
-40 dBm—		WHON .							
Multimation	NV AUPERIO COM								
-50 dBm									
-60 dBm—									
CF 699.0 M	I MHz			1001	nts			l Snar	n 3.0 MHz
					<u>.</u>	curina			9.05.2018
( I					mea	suring			09:29:34

5.1.1.2.1.2 Test RB=6RB

Date: 9.MAY.2018 09:29:35



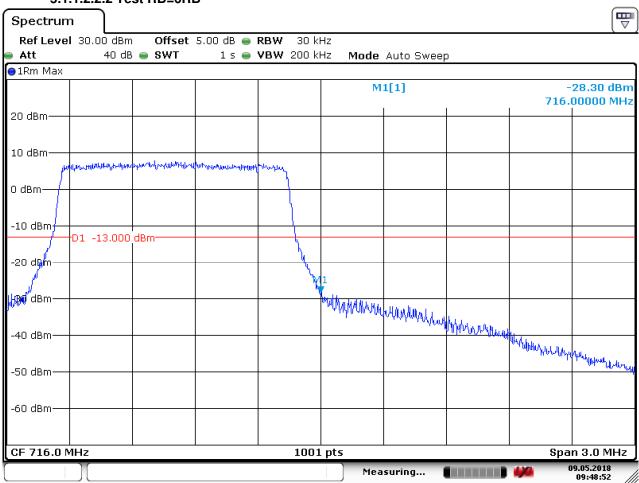
Report No.: SZEM180300254201 Page: 50 of 86



Date: 9.MAY.2018 09:48:35



Report No.: SZEM180300254201 Page: 51 of 86



5.1.1.2.2.2 Test RB=6RB

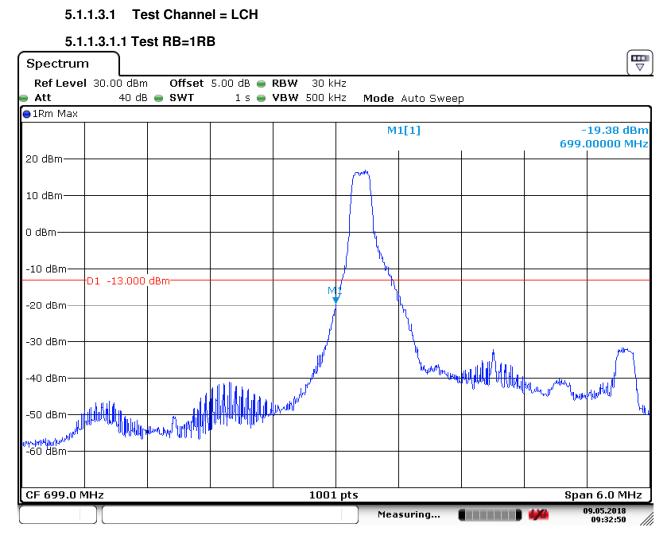
Date: 9.MAY.2018 09:48:52



5.1.1.3 Test Mode = LTE/TM1 3MHz

#### SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch

Report No.: SZEM180300254201 Page: 52 of 86



Date: 9.MAY.2018 09:32:50



Report No.: SZEM180300254201 Page: 53 of 86

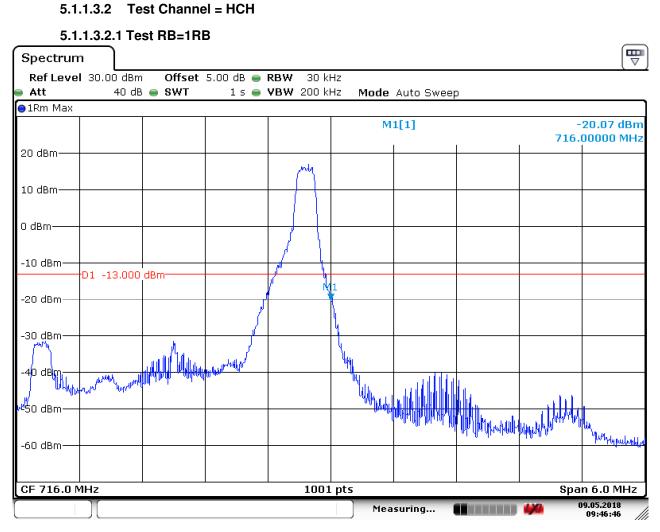
	1.3.1.2 10	31110-131								_
Spectrum	1 ]									
Ref Level Att	30.00 dBm 40 dB	Offset SWT	5.00 dB 👄 1 s 👄	<b>RBW</b> 30 kł <b>VBW</b> 500 kł		Mode	Auto Swee	p		
⊖1Rm Max										
						М	1[1]			32.08 dBm 00000 MHz
20 dBm										
10 dBm										
0 dBm					_	w when the particular	www.www.	holenalashaharbilish	oblemantheory	whitehous
-10 dBm										
	D1 -13.000	dBm			+					
-20 dBm					1					ų
-30 dBm				M Land Marker	ļ					
-40 dBm	and the company of the second s	apa party figure	happenerser	<b></b>						
المیسسی <i>د</i> ر -50 dBm										
-60 dBm										
CF 699.0 M	1Hz			1001	pt	5			Spa	n 6.0 MHz
	)[					) Mea	suring		· · ·	09.05.2018 09:32:31

5.1.1.3.1.2 Test RB=15RB

Date: 9.MAY.2018 09:32:31



Report No.: SZEM180300254201 Page: 54 of 86



Date: 9.MAY.2018 09:46:47



Report No.: SZEM180300254201 Page: 55 of 86

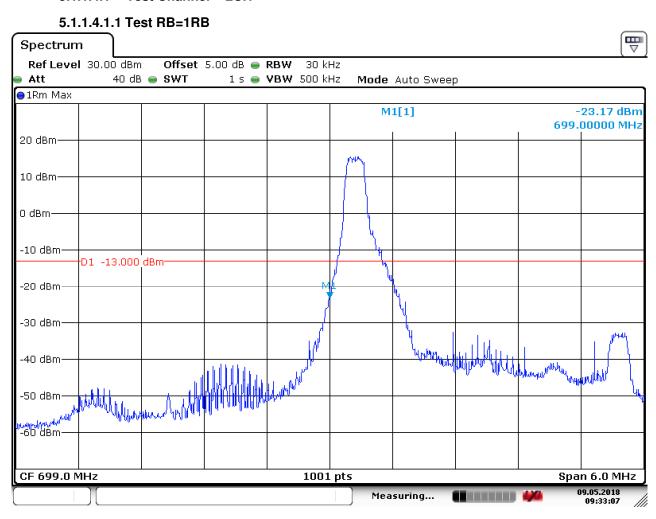
5.1.	1.3.2.2 Te	st RB=15	RB							
Spectrum	ı )									
Ref Level	30.00 dBm	Offset	: 5.00 dB 😑	<b>RBW</b> 30 k	Hz					
🗕 Att	40 dB	😑 SWT	1 s 👄	<b>VBW</b> 200 k	Hz	Mode	Auto Swee	р		
●1Rm Max			-							
						М	1[1]			32.06 dBm 00000 MHz
20 dBm										
10 dBm										
when where the	and and the states of the	. And the second s	un Adamated Waran	habelahy						
0 dBm				l						
-10 dBm										
	D1 -13.000	dBm								
-20 dBm										
-30 dBm				ĥ	1					
					Hund	Andrewing	Wohn with the start	Hubriddensetation		
-40 dBm								mo national daries	all you and that	um
-50 dBm										handread
00 00										
-60 dBm—										
CF 716.0 M	1Hz			1003	l pts				-	n 6.0 MHz
[	][					Mea	suring		<b>4/4</b> 0	)9.05.2018 09:47:01

Date: 9.MAY.2018 09:47:01



Report No.: SZEM180300254201 Page: 56 of 86

#### 5.1.1.4 Test Mode = LTE/TM2 3MHz 5.1.1.4.1 Test Channel = LCH



Date: 9.MAY.2018 09:33:08



Report No.: SZEM180300254201 Page: 57 of 86

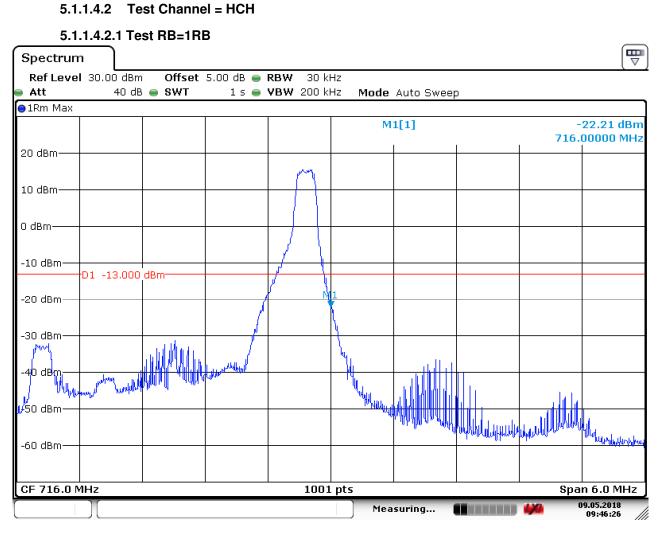
5.1	.1.4.1.2 Te		סר							6	
Spectrum	n ]									['	$\overline{\nabla}$
Ref Leve	l 30.00 dBm	Offset	5.00 dB 😑	<b>RBW</b> 30 kł	Ηz					`	
Att	40 dB	5 👄 SWT	1 s 👄	<b>VBW</b> 500 kł	Ηz	Mode	Auto Sweep	כ			
●1Rm Max											
						M	1[1]			32.71 df	
								I.	699.	00000 M	Hz
20 dBm											
10 dBm											
0 dBm						whypome	array have been a served of	phanetphangelikersetike	energy	mound	1
o ubili											١.
						(					1
-10 dBm	D1 -13.000	d0m-									+
	DI -13.000	ubili									U
-20 dBm					+						4
					1						ų.
-30 dBm				M	Ł						<u> </u>
					× .						1
		and the mend	ليلطبهم واللوالية فالرود فريسه	waterwater							
-40 dBm	moundalite	Capably and the second	the way fredelling the								
www.											
-50 dBm											
-60 dBm											
CF 699.0 N	IHz			1001	pt	ts			Spa	n 6.0 M⊦	lz
						Mea	suring		<b>4/4</b>	)9.05.2018 09:32:05	

5.1.1.4.1.2 Test RB=15RB

Date: 9.MAY.2018 09:32:06



Report No.: SZEM180300254201 Page: 58 of 86



Date: 9.MAY.2018 09:46:26



Report No.: SZEM180300254201 Page: 59 of 86

Spectrum									
Ref Level	30.00 dBm	Offset	5.00 dB 👄	<b>RBW</b> 30 k	Hz				
🖷 Att	40 dB	SWT		<b>VBW</b> 200 k	Hz Mode	Auto Sweej	o		
😑 1Rm Max									
					М	1[1]			33.59 dBm 00000 MHz
20 dBm									
10 dBm									
0 dBm	un provinsiplanta	rwanderstein	allanderan and	and the start of the					
-10 dBm	D1 -13.000	dn m							
-20 dBm	DI -13.000								
-30 dBm				- \v	1				
-40 dBm				,	human and the second	upretterly une of the			
-50 dBm							- mar Jacker where	Mr. Mature	an and the second second
-50 0611									
-60 dBm									
CF 716.0 M	Hz			1001	 . pts			 Spa	n 6.0 MHz
(	][					suring		· 🚧 👘	)9.05.2018 09:47:19

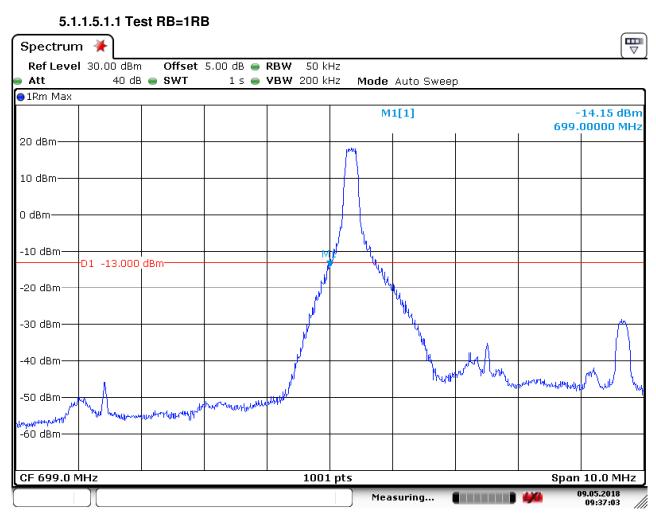
5.1.1.4.3 Test RB=15RB

Date: 9.MAY.2018 09:47:20



Report No.: SZEM180300254201 Page: 60 of 86

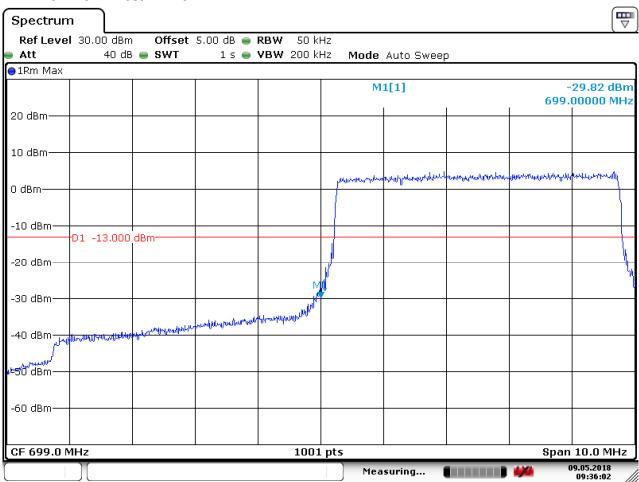
#### 5.1.1.5 Test Mode = LTE/TM1 5MHz 5.1.1.5.1 Test Channel = LCH



Date: 9.MAY.2018 09:37:04



Report No.: SZEM180300254201 Page: 61 of 86

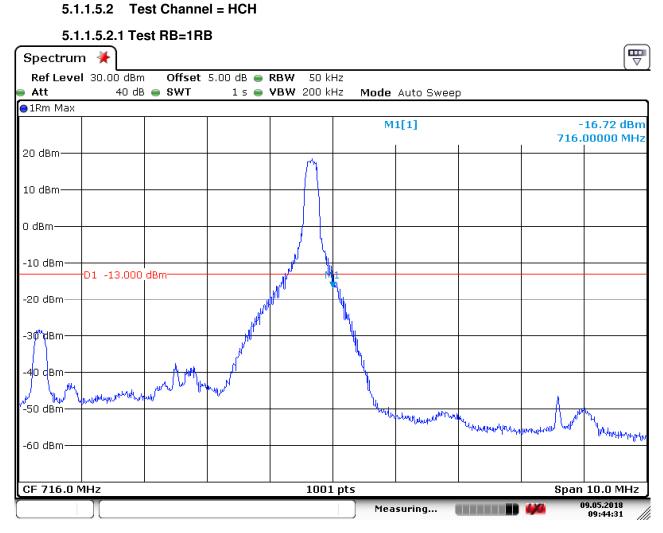


5.1.1.5.1.2 Test RB=25RB

Date: 9.MAY.2018 09:36:02



Report No.: SZEM180300254201 Page: 62 of 86



Date: 9.MAY.2018 09:44:31



Report No.: SZEM180300254201 Page: 63 of 86

Spectrum									
Ref Level			5.00 dB 👄						
Att 🗧	40 dB	🔵 SWT	1 s 👄	<b>VBW</b> 200 k	Hz Mode	Auto Swee	2		
😑 1Rm Max									
					м	1[1]			25.90 dBm 00000 MHz
20 dBm									
10 dBm									
0 dBm	phoppediates the states of	numenyleentu	unterlation which which	munuly					
-10 dBm	01 -13.000	di m							
-20 dBm	JI -13.000	ивш							
, <b>∕</b> -30 dBm——				V V	1 W				
					Marmona	warmung	Mariya wontorwanya		
-40 dBm							Contra Materia	4M Maunungah	when the
-50 dBm									Wyweller prosec
-60 dBm									
CF 716.0 M	Hz			1001	pts			Span	10.0 MHz
	Υ					suring			9.05.2018

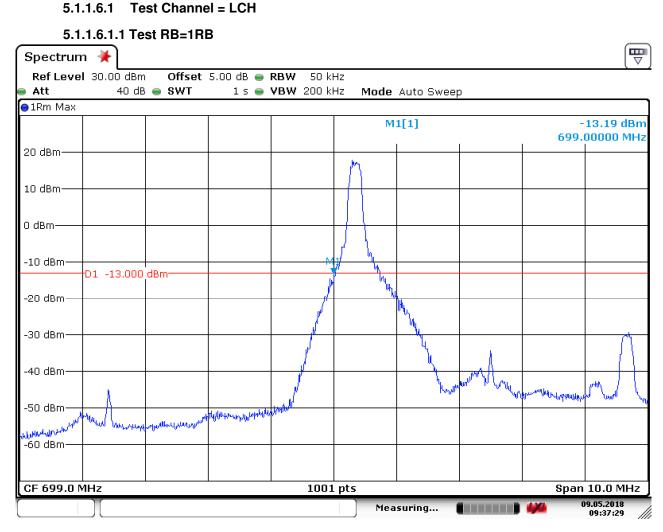
5.1.1.5.2.2 Test RB=25RB

Date: 9.MAY.2018 09:45:21



Report No.: SZEM180300254201 Page: 64 of 86

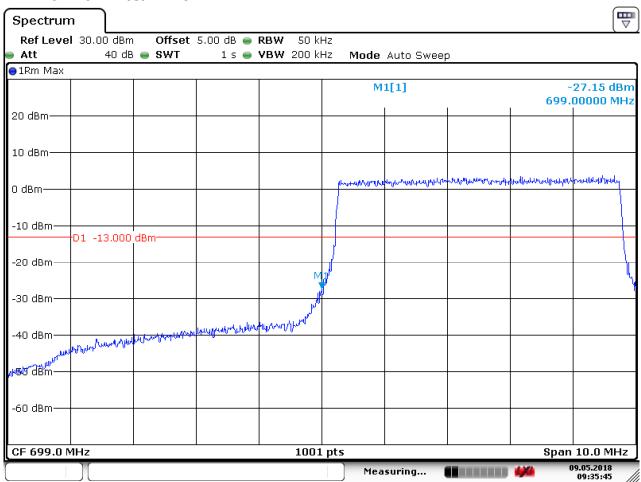
#### 5.1.1.6 Test Mode = LTE/TM2 5MHz



Date: 9.MAY.2018 09:37:29



Report No.: SZEM180300254201 Page: 65 of 86

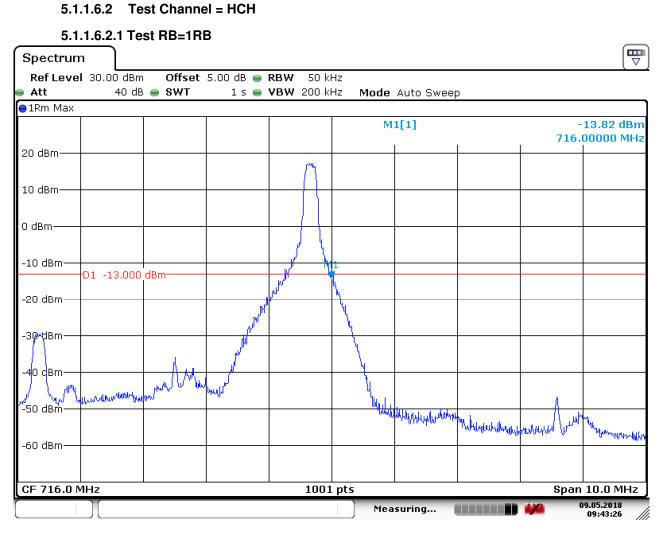


5.1.1.6.1.2 Test RB=25RB

Date: 9.MAY.2018 09:35:45



Report No.: SZEM180300254201 Page: 66 of 86



Date: 9.MAY.2018 09:43:26



Report No.: SZEM180300254201 Page: 67 of 86

Spectrum	<u> </u>								Ē
Ref Level	30.00 dBn	n Offset	5.00 dB 😑	<b>RBW</b> 50 ki	Hz				
🗕 Att	40 dB	B 👄 SWT	1 s 👄	<b>VBW</b> 200 ki	Hz Mode	Auto Swee	эр		
⊖1Rm Max									
				M1[1]			-28.41 dBm 716.00000 MHz		
20 dBm									
10 dBm									
0 gBm	unenweinen wieder	hanapeneogenee	hang alland and a souther	www.hup					
-10 dBm									
-20 dBm	D1 -13.000								
/ -30 dBm——				1	1				
					White we wanted and	Maraan			
-40 dBm						1. Contraction	ann a thrainn	-unphypelion follow	Indra.
-50 dBm									001 Middelwhilwaardfel
-60 dBm									
CF 716.0 M	IHz			1001	. pts			 Span	10.0 MHz
	)[				) Mea	suring		<b>W</b>	09.05.2018 09:45:36

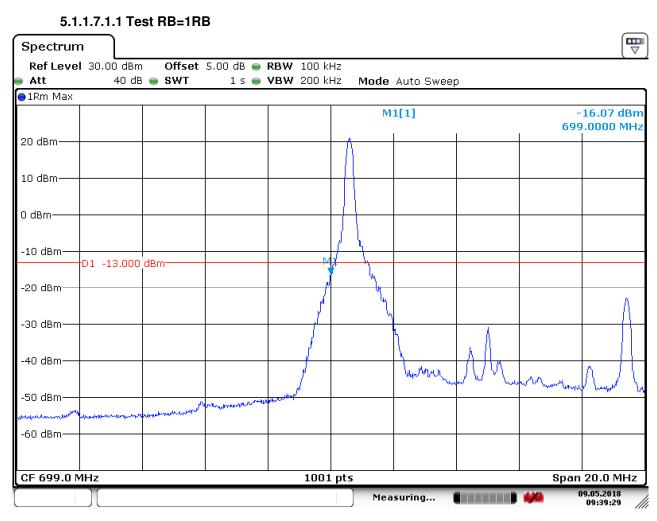
5.1.1.6.2.2 Test RB=25RB

Date: 9.MAY.2018 09:45:37



Report No.: SZEM180300254201 Page: 68 of 86

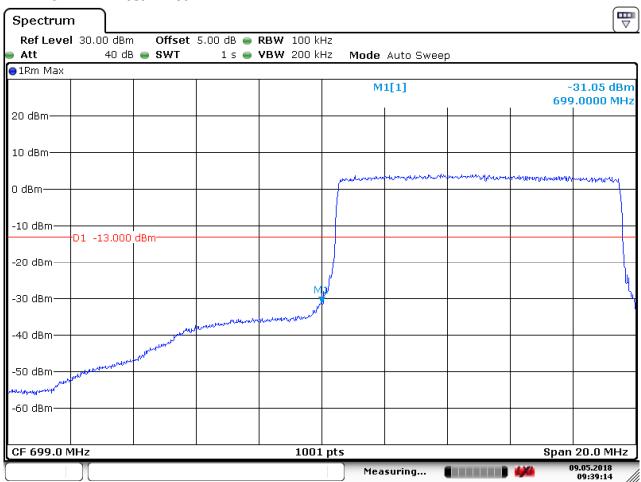
#### 5.1.1.7 Test Mode = LTE/TM1 10MHz 5.1.1.7.1 Test Channel = LCH



Date: 9.MAY.2018 09:39:30



Report No.: SZEM180300254201 Page: 69 of 86

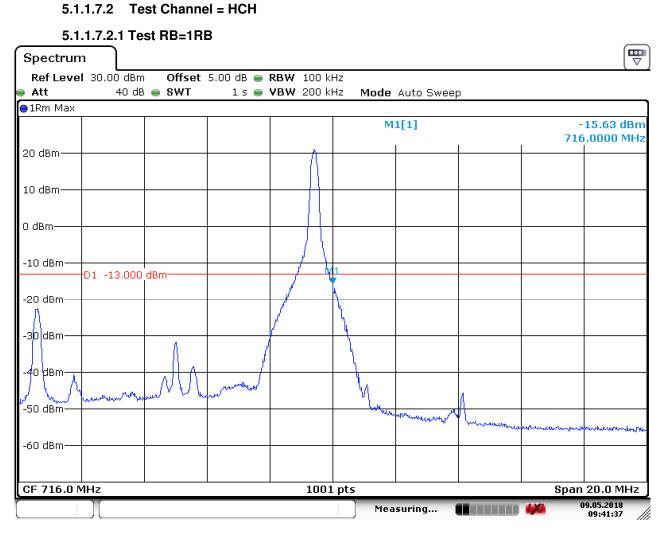


5.1.1.7.1.2 Test RB=50RB

Date: 9.MAY.2018 09:39:14



Report No.: SZEM180300254201 Page: 70 of 86



Date: 9.MAY.2018 09:41:38



Report No.: SZEM180300254201 Page: 71 of 86



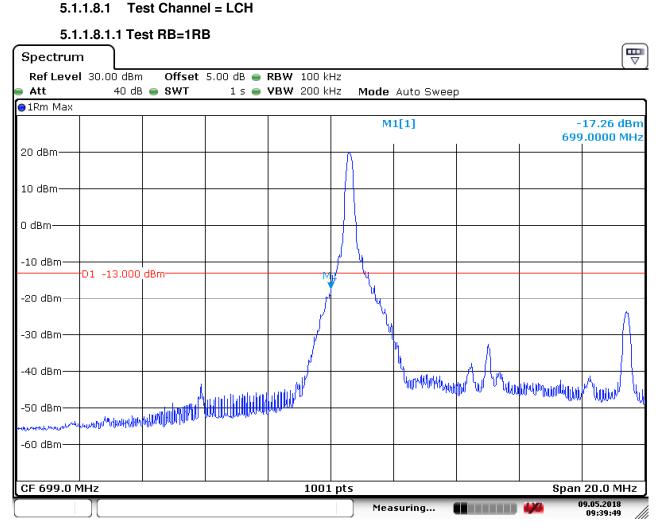
5.1.1.7.2.2 Test RB=50RB

Date: 9.MAY.2018 09:42:15



Report No.: SZEM180300254201 Page: 72 of 86

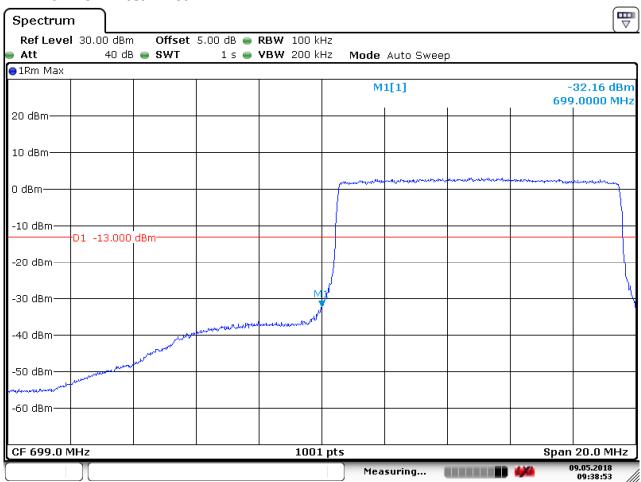
#### 5.1.1.8 Test Mode = LTE/TM2 10MHz



Date: 9.MAY.2018 09:39:49



Report No.: SZEM180300254201 Page: 73 of 86

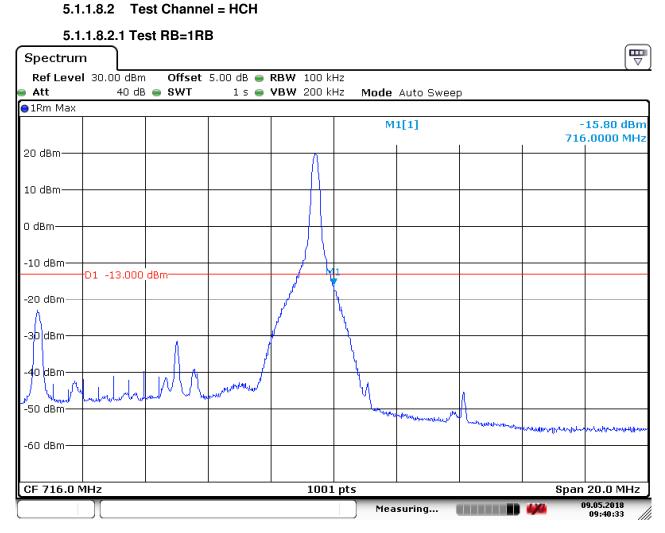


5.1.1.8.1.2 Test RB=50RB

Date: 9.MAY.2018 09:38:53



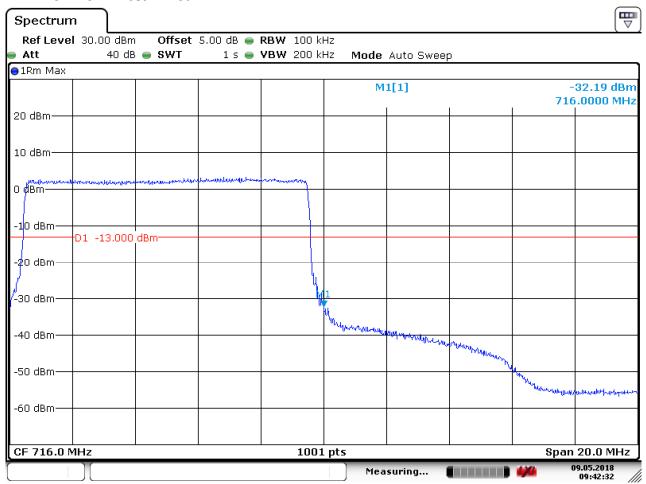
Report No.: SZEM180300254201 Page: 74 of 86



Date: 9.MAY.2018 09:40:33



Report No.: SZEM180300254201 Page: 75 of 86



5.1.1.8.2.2 Test RB=50RB

Date: 9.MAY.2018 09:42:32



Report No.: SZEM180300254201 Page: 76 of 86

### 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 band12

6.1.1.1	Test Mode = LTE / TM1	15MHz RB1#0

6.1.1.1.1 Test Channel = LCH

Spectrun	n ]								
Ref Level Att	28.00 dBn 40 dB	n Offset 3 e SWT	5.00 dB 👄 RI 1 s 👄 V	BW 50 kHz BW 100 kHz		Auto Sweep	)		
⊖1Rm Max						1			
20 dBm					М	1[1] M	1		21.20 dBm .6300 MHz
10 dBm									
0 dBm									
-10 dBm—	D1 -13.00	0 dBm							
-20 dBm—									
-30 dBm									
-40 dBm—									
-50 dBm	ushdaadkaa ka andha		the second se	the former of the state of the state of the	anized A LoopP	and the state of the	N <mark>al la contratione</mark>	d beledigt at her retricket	ath television (14th die 19
-60 dBm				na ha san dan sa sa si ku su sa sa	han filmhaith a baile	for the first first free free free free free free free fre			a an in state state the
-70 dBm	MU-7			20001	ntc				p 1.0 GHz
				20001		suring			9.05.2018
	Л				)				11:20:05 //

Date: 9.MAY.2018 11:20:06



Report No.: SZEM180300254201 Page: 77 of 86

Spectrur	n	ר								[₩
Ref Level	28.0			t 5.00 dB 👄 I						
Att		40 dB	SWT	1 s 👄 '	<b>VBW</b> 100 kH	lz Mode	Auto Sweep	)		
⊖1Rm Max						1				
						M	1[1]			49.29 dBm
20 dBm							1	1	5.9	23880 GHz
10 dBm										
0 dBm										
-10 dBm—										
	-D1 -	-13.000	dBm							
-20 dBm—										
-30 dBm—										
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Date: 9.MAY.2018 11:20:38



Report No.: SZEM180300254201 Page: 78 of 86

Spectrum	ı )								
	28.00 dBm		5.00 dB 👄 R		_				
Att	40 dB	SWT	1 s 🖷 🎙	' <b>BW</b> 100 kH	z Mode /	Auto Sweep			
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					М	1[1] M	1		20.35 dBm
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#### 6.1.1.1.2 Test Channel = MCH

Date: 9.MAY.2018 11:21:05



Report No.: SZEM180300254201 Page: 79 of 86

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Att		40 dB	e swt	1 s 👄	<b>VBW</b> 100	KHZ Mode	Auto Sweep			
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Date: 9.MAY.2018 11:21:27



Report No.: SZEM180300254201 Page: 80 of 86

Spectrun	n										Ē
Ref Level	28.00 dE	3m	Offset	5.00 dB 👄	RBW	50 kH	z				
Att	40	dB 😑	SWT	1 s 👄	VBW	100 kH	z Mode /	Auto Sweep	)		
😑 1 Rm Max											
							М	1[1]			18.45 dBm
20 dBm								N	41	706	5.5650 MHz
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-70 dBm	MUS					2000	1 ntc			0+-	
						2000					op 1.0 GHz
							Mea	suring			09.05.2018 11:22:00 //

### 6.1.1.1.3 Test Channel = HCH

Date: 9.MAY.2018 11:22:01



Report No.: SZEM180300254201 Page: 81 of 86

Spectrun	n	ר								(₩
Ref Level	28.0			5.00 dB 👄 F						
Att		40 dB	SWT	1 s 👄 🖌	<b>′BW</b> 100 k⊢	lz Mode	Auto Sweep			
⊖1Rm Max	-									
						M	1[1]			48.93 dBm
20 dBm							ł	1	1.4	13300 GHz
10 -10										
10 dBm										
0 dBm										
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-30 dBm—										
-40 dBm—	-									
M1										
-50 dBm										
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-70 dBm—										
Start 1.0 (	GHz				2000	1 pts			Stop	10.0 GHz
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Date: 9.MAY.2018 11:22:17



Report No.: SZEM180300254201 Page: 82 of 86

### 7 Field Strength of Spurious Radiation

### 7.1 For LTE

### 7.1.1 Test Band = LTE band12

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

7.1.1.1.1 T	est Channel = LCH			
Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Over Limit (dB)	Polarization
64.300000	-81.44	-13.00	68.44	Vertical
90.480000	-81.75	-13.00	68.75	Vertical
1399.000000	-66.89	-13.00	53.89	Vertical
2099.000000	-59.98	-13.00	46.98	Vertical
3497.575000	-66.19	-13.00	53.19	Vertical
7865.575000	-64.01	-13.00	51.01	Vertical
64.066667	-77.88	-13.00	64.88	Horizontal
469.525000	-73.41	-13.00	60.41	Horizontal
1399.000000	-65.69	-13.00	52.69	Horizontal
2099.000000	-58.95	-13.00	45.95	Horizontal
3497.575000	-63.63	-13.00	50.63	Horizontal
4897.025000	-65.47	-13.00	52.47	Horizontal

#### 7.1.1.1.2 Test Channel = MCH

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Over Limit (dB)	Polarization
62.760000	-77.15	-13.00	64.15	Vertical
109.986667	-82.96	-13.00	69.96	Vertical
181.993333	-83.74	-13.00	70.74	Vertical
2109.500000	-61.00	-13.00	48.00	Vertical
3515.125000	-67.16	-13.00	54.16	Vertical
5660.125000	-66.28	-13.00	53.28	Vertical
62.713333	-77.72	-13.00	64.72	Horizontal
183.253333	-82.07	-13.00	69.07	Horizontal
2109.500000	-60.51	-13.00	47.51	Horizontal
3515.125000	-65.38	-13.00	52.38	Horizontal
4218.425000	-65.97	-13.00	52.97	Horizontal
5899.975000	-65.29	-13.00	52.29	Horizontal



Report No.: SZEM180300254201 Page: 83 of 86

7.1.1.1.3 T	est Channel = HCH			
Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Over Limit (dB)	Polarization
56.506667	-81.74	-13.00	68.74	Vertical
195.013333	-83.02	-13.00	70.02	Vertical
2671.000000	-57.47	-13.00	44.47	Vertical
4117.025000	-67.53	-13.00	54.53	Vertical
6281.525000	-65.63	-13.00	52.63	Vertical
9267.950000	-63.94	-13.00	50.94	Vertical
55.946667	-77.91	-13.00	64.91	Horizontal
109.240000	-81.80	-13.00	68.80	Horizontal
176.393333	-82.08	-13.00	69.08	Horizontal
2120.000000	-61.41	-13.00	48.41	Horizontal
3532.675000	-68.19	-13.00	55.19	Horizontal
5927.925000	-65.19	-13.00	52.19	Horizontal

#### NOTE:

1) All modes are tested, but the data presented above is the worst case. 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.: SZEM180300254201 Page: 84 of 86

### 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	-0.08	-0.00011	PASS
		LCH	ΤN	VN	7.12	0.01011	PASS
				VH	-9.55	-0.01357	PASS
				VL	7.27	0.01028	PASS
	LTE/TM1 10MHz	MCH	ΤN	VN	5.75	0.00813	PASS
				VH	1.17	0.00166	PASS
				VL	-7.46	-0.01049	PASS
		HCH	TN	VN	1.84	0.00259	PASS
LTE band12				VH	0.85	0.00120	PASS
LIE Danuiz		LCH	TN	VL	1.34	0.00191	PASS
				VN	9.04	0.01283	PASS
				VH	-4.70	-0.00667	PASS
				VL	-9.31	-0.01316	PASS
	LTE/TM2 10MHz	MCH	ΤN	VN	-3.66	-0.00518	PASS
				VH	-5.16	-0.00730	PASS
				VL	0.25	0.00035	PASS
		НСН	TN	VN	-8.48	-0.01193	PASS
				VH	-4.91	-0.00691	PASS



Report No.: SZEM180300254201 Page: 85 of 86

### 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	-4.86	-0.00690	PASS
				-20	7.66	0.01088	PASS
				-10	-5.27	-0.00748	PASS
				0	3.22	0.00457	PASS
		LCH	VN	10	-4.73	-0.00672	PASS
				20	-0.49	-0.00069	PASS
				30	-2.87	-0.00407	PASS
				40	0.68	0.00097	PASS
				50	-0.09	-0.00013	PASS
				-30	5.01	0.00708	PASS
	LTE/TM1 10MHz			-20	-9.73	-0.01375	PASS
		МСН		-10	-1.82	-0.00257	PASS
				0	5.17	0.00731	PASS
LTE band12			VN	10	-5.71	-0.00807	PASS
				20	-4.87	-0.00688	PASS
				30	3.53	0.00498	PASS
				40	9.36	0.01322	PASS
				50	-6.76	-0.00955	PASS
				-30	6.34	0.00892	PASS
				-20	-9.35	-0.01314	PASS
				-10	-3.90	-0.00549	PASS
				0	-2.38	-0.00335	PASS
		HCH	VN	10	-1.63	-0.00229	PASS
				20	-4.11	-0.00578	PASS
				30	1.37	0.00192	PASS
				40	6.09	0.00856	PASS
				50	-2.80	-0.00394	PASS



Report No.: SZEM180300254201 Page: 86 of 86

				Page: 86 of 86			
Test Band	Test Mode	Test Channel	Test Volt.	Test Temp.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
LTE band12	LTE/TM2 10MHz	LCH	VN	-30	-6.53	-0.00927	PASS
				-20	8.95	0.01272	PASS
				-10	-0.77	-0.00110	PASS
				0	8.16	0.01159	PASS
				10	-9.31	-0.01322	PASS
				20	-6.62	-0.00940	PASS
				30	2.60	0.00369	PASS
				40	-1.16	-0.00164	PASS
				50	-1.20	-0.00171	PASS
		МСН	VN	-30	-3.73	-0.00527	PASS
				-20	-7.76	-0.01097	PASS
				-10	4.42	0.00624	PASS
				0	-9.44	-0.01335	PASS
				10	6.54	0.00924	PASS
				20	-4.64	-0.00656	PASS
				30	1.08	0.00153	PASS
				40	-8.91	-0.01260	PASS
				50	-0.46	-0.00065	PASS
		нсн	VN	-30	6.42	0.00903	PASS
				-20	8.68	0.01221	PASS
				-10	-3.52	-0.00496	PASS
				0	-7.44	-0.01046	PASS
				10	7.29	0.01025	PASS
				20	-2.02	-0.00284	PASS
				30	1.30	0.00183	PASS
				40	1.51	0.00212	PASS
				50	2.61	0.00367	PASS

The End