

Report No.: SZEM1701001122301 Page: 1 of 77

Appendix B

E-UTRA Band 5



Report No.: SZEM1701001122301 Page: 2 of 77

CONTENT

1	EFFECTIVE (ISOTROPIC) RADIATED POWER OUTPUT DATA	3
2	PEAK-TO-AVERAGE RATIO	15
	2.1 FOR LTE	
	2.1.1 Test Band = LTE band5	
3	MODULATION CHARACTERISTICS	21
	3.1 For LTE	
	3.1.1 Test Band = LTE band5	
4	BANDWIDTH	23
	4.1 For LTE	
	4.1.1 Test Band = LTE band5	
5	BAND EDGES COMPLIANCE	43
	5.1 FOR LTE	43
	5.1.1 Test Band = LTE band5	43
6	SPURIOUS EMISSION AT ANTENNA TERMINAL	68
	6.1 FOR LTE	68
7	FIELD STRENGTH OF SPURIOUS RADIATION	72
	7.1 FOR LTE	72
	7.1.1 Test Band = LTE band5	
8	FREQUENCY STABILITY	74
	8.1 FREQUENCY ERROR VS. VOLTAGE	74
	8.2 FREQUENCY ERROR VS. TEMPERATURE	75



Report No.: SZEM1701001122301 Page: 3 of 77

1 Effective (Isotropic) Radiated Power Output Data

Effective Radiated Power of Transmitter (ERP) for LTE BAND 5

Test Band(LTE)	Test Mode	Test Bandwidth	Test channel	Test RB	Measured (dBm)	ERP (dBm)	limit (dBm)	Verdict
				RB1#0	23.73	21.33	38.45	PASS
				RB1#2	23.42	21.02	38.45	PASS
				RB1#5	23.72	21.32	38.45	PASS
			LCH	RB3#0	23.50	21.10	38.45	PASS
				RB3#2	23.56	21.16	38.45	PASS
				RB3#3	23.43	21.03	38.45	PASS
				RB6#0	22.14	19.74	38.45	PASS
				RB1#0	23.69	21.29	38.45	PASS
				RB1#2	23.32	20.92	38.45	PASS
				RB1#5	23.71	21.31	38.45	PASS
BAND5	LTE/TM1	1.4M	MCH	RB3#0	23.54	21.14	38.45	PASS
				RB3#2	23.59	21.19	38.45	PASS
				RB3#3	23.46	21.06	38.45	PASS
				RB6#0	22.12	19.72	38.45	PASS
				RB1#0	23.73	21.33	38.45	PASS
				RB1#2	23.25	20.85	38.45	PASS
				RB1#5	23.84	21.44	38.45	PASS
			НСН	RB3#0	23.59	21.19	38.45	PASS
				RB3#2	23.50	21.1	38.45	PASS
				RB3#3	23.5	21.1	38.45	PASS
				RB6#0	22.12	19.72	38.45	PASS



Report No.: SZEM1701001122301 Page: 4 of 77

		[1		Page:	4 of 77		
Test Band(LTE)	Test Mode	Test Bandwidth	Test channel	Test RB	Measured (dBm)	ERP (dBm)	limit (dBm)	Verdict
				RB1#0	22.48	20.08	38.45	PASS
				RB1#2	22.34	19.94	38.45	PASS
				RB1#5	22.49	20.09	38.45	PASS
			LCH	RB3#0	22.13	19.73	38.45	PASS
				RB3#2	22.06	19.66	38.45	PASS
				RB3#3	22.20	19.8	38.45	PASS
				RB6#0	21.10	18.7	38.45	PASS
				RB1#0	22.47	20.07	38.45	PASS
BAND5				RB1#2	22.26	19.86	38.45	PASS
				RB1#5	22.47	20.07	38.45	PASS
	LTE/TM2	1.4M	MCH	RB3#0	22.04	19.64	38.45	PASS
				RB3#2	22.15	19.75	38.45	PASS
				RB3#3	22.18	19.78	38.45	PASS
				RB6#0	21.15	18.75	38.45	PASS
				RB1#0	22.48	20.08	38.45	PASS
				RB1#2	22.22	19.82	38.45	PASS
				RB1#5	22.51	20.11	38.45	PASS
			НСН	RB3#0	22.12	19.72	38.45	PASS
				RB3#2	22.14	19.74	38.45	PASS
				RB3#3	22.27	19.87	38.45	PASS
				RB6#0	21.17	18.77	38.45	PASS



Report No.: SZEM1701001122301 Page: 5 of 77

					Page:	5 of 77		·
Test Band(LTE)	Test Mode	Test Bandwidth	Test channel	Test RB	Measured (dBm)	ERP (dBm)	limit (dBm)	Verdict
				RB1#0	22.24	19.84	38.45	PASS
				RB1#2	21.77	19.37	38.45	PASS
				RB1#5	22.19	19.79	38.45	PASS
			LCH	RB3#0	22.07	19.67	38.45	PASS
				RB3#2	21.98	19.58	38.45	PASS
				RB3#3	22.16	19.76	38.45	PASS
				RB6#0	21.07	18.67	38.45	PASS
				RB1#0	22.20	19.8	38.45	PASS
BAND5				RB1#2	21.83	19.43	38.45	PASS
				RB1#5	22.11	19.71	38.45	PASS
	LTE/TM3	1.4M	MCH	RB3#0	22.08	19.68	38.45	PASS
				RB3#2	21.99	19.59	38.45	PASS
				RB3#3	22.08	19.68	38.45	PASS
				RB6#0	21.04	18.64	38.45	PASS
				RB1#0	22.26	19.86	38.45	PASS
				RB1#2	21.73	19.33	38.45	PASS
				RB1#5	22.29	19.89	38.45	PASS
			НСН	RB3#0	22.09	19.69	38.45	PASS
				RB3#2	22.03	19.63	38.45	PASS
				RB3#3	22.29	19.89	38.45	PASS
				RB6#0	21.15	18.75	38.45	PASS



Report No.: SZEM1701001122301 Page: 6 of 77

					Page:	6 of 77		1
Test Band(LTE)	Test Mode	Test Bandwidth	Test channel	Test RB	Measured (dBm)	ERP (dBm)	limit (dBm)	Verdict
				RB1#0	23.70	21.30	38.45	PASS
				RB1#7	23.34	20.94	38.45	PASS
				RB1#14	23.73	21.33	38.45	PASS
			LCH	RB8#0	22.16	19.76	38.45	PASS
				RB8#4	22.07	19.67	38.45	PASS
				RB8#7	22.16	19.76	38.45	PASS
				RB15#0	22.16	19.76	38.45	PASS
				RB1#0	23.66	21.26	38.45	PASS
BAND5				RB1#7	23.33	20.93	38.45	PASS
				RB1#14	23.68	21.28	38.45	PASS
	LTE/TM1	ЗМ	MCH	RB8#0	22.12	19.72	38.45	PASS
				RB8#4	22.18	19.78	38.45	PASS
				RB8#7	22.11	19.71	38.45	PASS
				RB15#0	22.16	19.76	38.45	PASS
				RB1#0	23.62	21.22	38.45	PASS
				RB1#7	22.97	20.57	38.45	PASS
				RB1#14	23.75	21.35	38.45	PASS
			НСН	RB8#0	22.04	19.64	38.45	PASS
				RB8#4	22.08	19.68	38.45	PASS
				RB8#7	22.15	19.75	38.45	PASS
				RB15#0	22.17	19.77	38.45	PASS



Report No.: SZEM1701001122301 Page: 7 of 77

					Page:	/ of / /		1
Test Band(LTE)	Test Mode	Test Bandwidth	Test channel	Test RB	Measured (dBm)	ERP (dBm)	limit (dBm)	Verdict
				RB1#0	22.36	19.96	38.45	PASS
				RB1#7	21.95	19.55	38.45	PASS
				RB1#14	22.46	20.06	38.45	PASS
			LCH	RB8#0	21.15	18.75	38.45	PASS
				RB8#4	21.08	18.68	38.45	PASS
				RB8#7	21.04	18.64	38.45	PASS
				RB15#0	21.11	18.71	38.45	PASS
				RB1#0	22.44	20.04	38.45	PASS
BAND5				RB1#7	21.83	19.43	38.45	PASS
				RB1#14	22.44	20.04	38.45	PASS
	LTE/TM2	3M	MCH	RB8#0	21.08	18.68	38.45	PASS
				RB8#4	21.08	18.68	38.45	PASS
				RB8#7	21.13	18.73	38.45	PASS
				RB15#0	21.11	18.71	38.45	PASS
				RB1#0	22.46	20.06	38.45	PASS
				RB1#7	22.05	19.65	38.45	PASS
				RB1#14	22.41	20.01	38.45	PASS
			НСН	RB8#0	21.17	18.77	38.45	PASS
				RB8#4	21.13	18.73	38.45	PASS
				RB8#7	21.15	18.75	38.45	PASS
				RB15#0	21.08	18.68	38.45	PASS



Report No.: SZEM1701001122301 Page: 8 of 77

			1		Page:	8 of 77		
Test Band(LTE)	Test Mode	Test Bandwidth	Test channel	Test RB	Measured (dBm)	ERP (dBm)	limit (dBm)	Verdict
				RB1#0	22.30	19.90	38.45	PASS
				RB1#7	22.04	19.64	38.45	PASS
				RB1#14	22.24	19.84	38.45	PASS
			LCH	RB8#0	21.10	18.70	38.45	PASS
				RB8#4	21.07	18.67	38.45	PASS
				RB8#7	21.11	18.71	38.45	PASS
				RB15#0	21.09	18.69	38.45	PASS
				RB1#0	22.30	19.90	38.45	PASS
BAND5				RB1#7	22.10	19.70	38.45	PASS
				RB1#14	22.29	19.89	38.45	PASS
	LTE/TM3	ЗM	MCH	RB8#0	21.09	18.69	38.45	PASS
				RB8#4	21.14	18.74	38.45	PASS
				RB8#7	21.16	18.76	38.45	PASS
				RB15#0	21.10	18.70	38.45	PASS
				RB1#0	22.30	19.90	38.45	PASS
				RB1#7	22.04	19.64	38.45	PASS
				RB1#14	22.32	19.92	38.45	PASS
			НСН	RB8#0	21.16	18.76	38.45	PASS
				RB8#4	21.16	18.76	38.45	PASS
				RB8#7	21.22	18.82	38.45	PASS
				RB15#0	21.12	18.72	38.45	PASS



Report No.: SZEM1701001122301 Page: 9 of 77

		I	I		Page:	9 of 77		
Test Band(LTE)	Test Mode	Test Bandwidth	Test channel	Test RB	Measured (dBm)	ERP (dBm)	limit (dBm)	Verdict
				RB1#0	23.70	21.30	38.45	PASS
				RB1#13	23.69	21.29	38.45	PASS
				RB1#24	23.72	21.32	38.45	PASS
			LCH	RB12#0	22.21	19.81	38.45	PASS
				RB12#6	22.17	19.77	38.45	PASS
				RB12#13	22.24	19.84	38.45	PASS
				RB25#0	22.16	19.76	38.45	PASS
				RB1#0	23.67	21.27	38.45	PASS
				RB1#13	23.73	21.33	38.45	PASS
BAND5				RB1#24	23.69	21.29	38.45	PASS
	LTE/TM1	5M	MCH	RB12#0	22.22	19.82	38.45	PASS
				RB12#6	22.15	19.75	38.45	PASS
				RB12#13	22.24	19.84	38.45	PASS
				RB25#0	22.17	19.77	38.45	PASS
				RB1#0	23.76	21.36	38.45	PASS
				RB1#13	23.76	21.36	38.45	PASS
				RB1#24	23.82	21.42	38.45	PASS
			НСН	RB12#0	22.23	19.83	38.45	PASS
				RB12#6	22.15	19.75	38.45	PASS
				RB12#13	22.21	19.81	38.45	PASS
				RB25#0	22.21	19.81	38.45	PASS



Report No.: SZEM1701001122301 Page: 10 of 77

		1			Page:	10 Of <i>i</i>	1	I
Test Band(LTE)	Test Mode	Test Bandwidth	Test channel	Test RB	Measured (dBm)	ERP (dBm)	limit (dBm)	Verdict
				RB1#0	22.41	20.01	38.45	PASS
				RB1#13	22.43	20.03	38.45	PASS
				RB1#24	22.44	20.04	38.45	PASS
			LCH	RB12#0	21.20	18.80	38.45	PASS
				RB12#6	21.08	18.68	38.45	PASS
				RB12#13	21.20	18.80	38.45	PASS
				RB25#0	21.14	18.74	38.45	PASS
				RB1#0	22.38	19.98	38.45	PASS
BAND5				RB1#13	22.45	20.05	38.45	PASS
				RB1#24	22.39	19.99	38.45	PASS
	LTE/TM2	5M	МСН	RB12#0	21.16	18.76	38.45	PASS
				RB12#6	21.06	18.66	38.45	PASS
				RB12#13	21.18	18.78	38.45	PASS
				RB25#0	21.11	18.71	38.45	PASS
				RB1#0	22.43	20.03	38.45	PASS
				RB1#13	22.43	20.03	38.45	PASS
				RB1#24	22.48	20.08	38.45	PASS
			НСН	RB12#0	21.18	18.78	38.45	PASS
				RB12#6	21.12	18.72	38.45	PASS
				RB12#13	21.15	18.75	38.45	PASS
				RB25#0	21.10	18.70	38.45	PASS



Report No.: SZEM1701001122301 Page: 11 of 77

	-	-			Page:	11 of 7	<u> </u>	
Test Band(LTE)	Test Mode	Test Bandwidth	Test channel	Test RB	Measured (dBm)	ERP (dBm)	limit (dBm)	Verdict
				RB1#0	22.27	19.87	38.45	PASS
				RB1#13	22.20	19.8	38.45	PASS
				RB1#24	22.28	19.88	38.45	PASS
			LCH	RB12#0	21.19	18.79	38.45	PASS
				RB12#6	21.15	18.75	38.45	PASS
				RB12#13	21.17	18.77	38.45	PASS
				RB25#0	21.11	18.71	38.45	PASS
				RB1#0	22.18	19.78	38.45	PASS
BAND5				RB1#13	22.25	19.85	38.45	PASS
				RB1#24	22.19	19.79	38.45	PASS
	LTE/TM3	5M	МСН	RB12#0	21.18	18.78	38.45	PASS
				RB12#6	21.10	18.7	38.45	PASS
				RB12#13	21.19	18.79	38.45	PASS
				RB25#0	21.12	18.72	38.45	PASS
				RB1#0	22.24	19.84	38.45	PASS
				RB1#13	22.22	19.82	38.45	PASS
				RB1#24	22.29	19.89	38.45	PASS
			НСН	RB12#0	21.20	18.8	38.45	PASS
				RB12#6	21.15	18.75	38.45	PASS
				RB12#13	21.20	18.8	38.45	PASS
				RB25#0	21.11	18.71	38.45	PASS



Report No.: SZEM1701001122301 Page: 12 of 77

			I		Page:	12 of <i>i</i>	7	· · · · · · · · · · · · · · · · · · ·
Test Band(LTE)	Test Mode	Test Bandwidth	Test channel	Test RB	Measured (dBm)	ERP (dBm)	limit (dBm)	Verdict
				RB1#0	23.78	21.38	38.45	PASS
				RB1#25	23.52	21.12	38.45	PASS
				RB1#49	23.73	21.33	38.45	PASS
			LCH	RB25#0	22.22	19.82	38.45	PASS
				RB25#13	22.20	19.80	38.45	PASS
				RB25#25	22.21	19.81	38.45	PASS
				RB50#0	22.20	19.80	38.45	PASS
				RB1#0	23.75	21.35	38.45	PASS
BAND5				RB1#25	23.42	21.02	38.45	PASS
				RB1#49	23.72	21.32	38.45	PASS
	LTE/TM1	10M	MCH	RB25#0	22.20	19.80	38.45	PASS
				RB25#13	22.19	19.79	38.45	PASS
				RB25#25	22.17	19.77	38.45	PASS
				RB50#0	22.20	19.80	38.45	PASS
				RB1#0	23.63	21.23	38.45	PASS
				RB1#25	23.52	21.12	38.45	PASS
				RB1#49	23.73	21.33	38.45	PASS
			НСН	RB25#0	22.22	19.82	38.45	PASS
				RB25#13	22.19	19.79	38.45	PASS
				RB25#25	22.21	19.81	38.45	PASS
				RB50#0	22.21	19.81	38.45	PASS



Report No.: SZEM1701001122301 Page: 13 of 77

			I		Page:	13 Of /		
Test Band(LTE)	Test Mode	Test Bandwidth	Test channel	Test RB	Measured (dBm)	ERP (dBm)	limit (dBm)	Verdic t
				RB1#0	22.28	19.88	38.45	PASS
				RB1#25	22.34	19.94	38.45	PASS
				RB1#49	22.38	19.98	38.45	PASS
			LCH	RB25#0	21.15	18.75	38.45	PASS
				RB25#13	21.17	18.77	38.45	PASS
				RB25#25	21.19	18.79	38.45	PASS
				RB50#0	21.14	18.74	38.45	PASS
				RB1#0	22.39	19.99	38.45	PASS
				RB1#25	22.39	19.99	38.45	PASS
				RB1#49	22.40	20.00	38.45	PASS
BAND5	LTE/TM2	10M	МСН	RB25#0	21.12	18.72	38.45	PASS
				RB25#13	21.13	18.73	38.45	PASS
				RB25#25	21.11	18.71	38.45	PASS
				RB50#0	21.12	18.72	38.45	PASS
				RB1#0	22.32	19.92	38.45	PASS
				RB1#25	22.17	19.77	38.45	PASS
				RB1#49	22.29	19.89	38.45	PASS
			НСН	RB25#0	21.16	18.76	38.45	PASS
				RB25#13	21.14	18.74	38.45	PASS
				RB25#25	21.14	18.74	38.45	PASS
				RB50#0	21.12	18.72	38.45	PASS



Report No.: SZEM1701001122301 Page: 14 of 77

		_			Page:	14 of 7		
Test Band(LTE)	Test Mode	Test Bandwidth	Test channel	Test RB	Measured (dBm)	ERP (dBm)	limit (dBm)	Verdic t
				RB1#0	22.13	19.73	38.45	PASS
				RB1#25	21.95	19.55	38.45	PASS
				RB1#49	22.22	19.82	38.45	PASS
			LCH	RB25#0	21.08	18.68	38.45	PASS
				RB25#13	21.10	18.7	38.45	PASS
				RB25#25	21.10	18.7	38.45	PASS
				RB50#0	21.05	18.65	38.45	PASS
				RB1#0	22.12	19.72	38.45	PASS
				RB1#25	22.05	19.65	38.45	PASS
				RB1#49 22.14	19.74	38.45	PASS	
BAND5	LTE/TM3	10M	МСН	RB25#0	21.06	18.66	38.45	PASS
				RB25#13	21.06	18.66	38.45	PASS
				RB25#25	21.05	18.65	38.45	PASS
				RB50#0 21.03	21.03	18.63	38.45	PASS
				RB1#0	22.10	19.7	38.45	PASS
				RB1#25 2	22.09	19.69	38.45	PASS
				RB1#49	22.15	19.75	38.45	PASS
			НСН	RB25#0	21.13	18.73	38.45	PASS
				RB25#13	21.06	18.66	38.45	PASS
	l			RB25#25	21.10	18.7	38.45	PASS
				RB50#0	21.14	18.74	38.45	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

c: RBW > emission bandwidth, VBW > 3 x RBW.

Detector: RMS



Report No.: SZEM1701001122301 Page: 15 of 77

2 Peak-to-Average Ratio

Part I - Test Results

Test Band	Test Mode	Test Channel	Measured[dB]	Limit [dB]	Verdict
		LCH	5.42	13	PASS
	TM1/10M	MCH	5.16	13	PASS
		HCH	5.28	13	PASS
		LCH	6.09	13	PASS
Band 5	TM2/10M	MCH	6.12	13	PASS
		НСН	6.06	13	PASS
		LCH	6.23	13	PASS
	TM3/10M	MCH	6.06	13	PASS
		НСН	6.23	13	PASS



Report No.: SZEM1701001122301 Page: 16 of 77

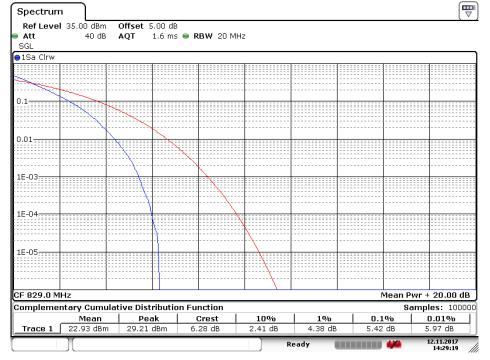
Part II - Test Plots

2.1 For LTE

2.1.1 Test Band = LTE band5

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

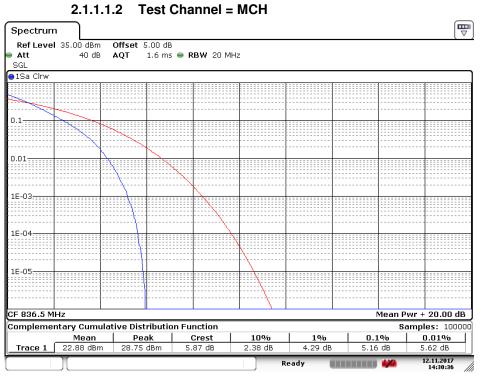




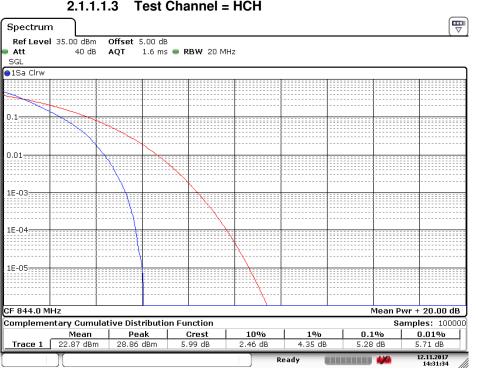
Date: 12.NOV.2017 14:29:19



Report No.: SZEM1701001122301 Page: 17 of 77



Date: 12.NOV.2017 14:30:37



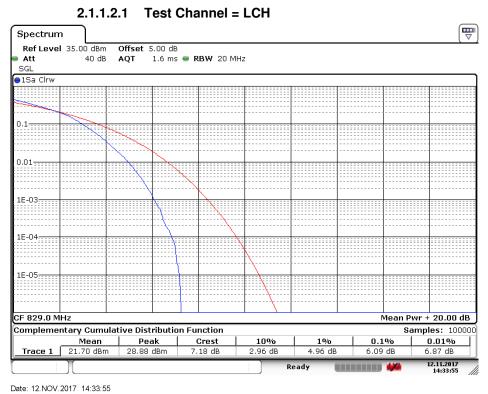
2.1.1.1.3 Test Channel = HCH

Date: 12 NOV 2017 14:31:34



Report No.: SZEM1701001122301 Page: 18 of 77

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



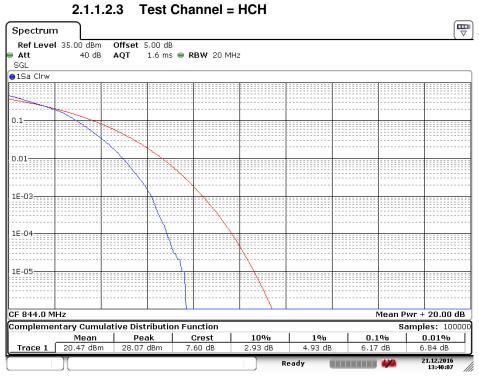




Date: 12.NOV.2017 14:33:03

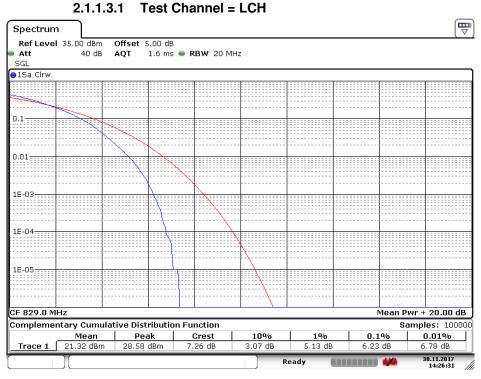


Report No.: SZEM1701001122301 Page: 19 of 77



Date: 21.DEC.2016 13:40:08

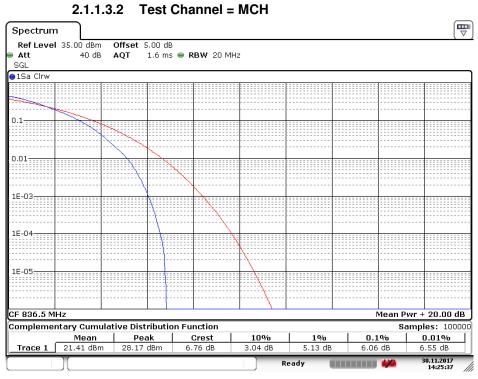
2.1.1.3 Test Mode = LTE/TM3.Bandwidth=10MHz



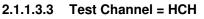
Date: 30.NOV.2017 14:26:32



Report No.: SZEM1701001122301 Page: 20 of 77



Date: 30.NOV.2017 14:25:38





Date: 30.NOV.2017 14:24:50



Multi

Evaluation RUN

Settings

Trigger

Display

Signaling

Parameter

Signaling

LTE

ON

Config ...

Enable ...

Report No.: SZEM1701001122301 Page: 21 of 77

Modulation Characteristics 3

3.1 For LTE

-1

(西)

Cell Setup ..

-1

PS:

Attached

RRC State:

Connection

Setup ...

3.1.1 Test Band = LTE band5

Test Mode = LTE /TM1 10MHz 3.1.1.1

0

Connected

3.1.1.1.1 Test Channel = MCH CMW 500 V 3.7.10 - LTE Measurement - X3.7.20.69 - TX Measurement - X Multi Evaluation PRACH SRS FDD Freq.: 836.5 MHz Ref. Level: 38.30 dBm BW:10.0 MHz CP :Normal Meas Subfr./Slot: 0 / All IQ Constellation Statistic Count Q 20/20 RF 1 Out of Tolerance 0.00 % Detected Modulation QPSK Detected Channel Type PUSCH View Filter Throughput 100.0 % 0

in

DL Error Insertion

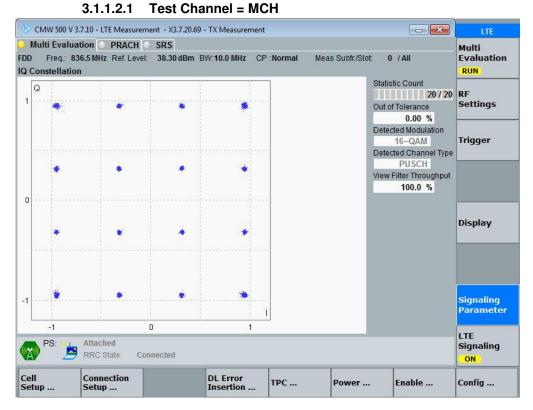
1

TPC

Power ..

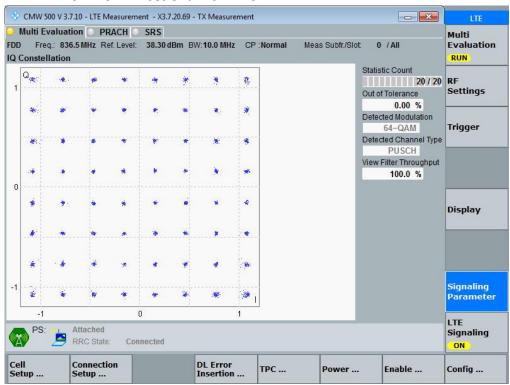


Report No.: SZEM1701001122301 Page: 22 of 77



3.1.1.2 Test Mode = LTE /TM2 10MHz

3.1.1.3 Test Mode = LTE /TM3 10MHz 3.1.1.3.1 Test Channel = MCH





Report No.: SZEM1701001122301 Page: 23 of 77

4 Bandwidth

Part I - Test Results

Test Band	Test Mode	Test Channel	Occupied Bandwidth [MHz]	Emission Bandwidth [MHz]	Verdict
		LCH	1.10	1.24	PASS
	TM1/1.4MHz	MCH	1.10	1.25	PASS
		HCH	1.10	1.24	PASS
		LCH	1.10	1.26	PASS
	TM2/1.4MHz	MCH	1.11	1.25	PASS
		HCH	1.10	1.24	PASS
		LCH	1.10	1.25	PASS
	TM3/1.4MHz	MCH	1.10	1.24	PASS
		HCH	1.10	1.24	PASS
		LCH	2.70	2.94	PASS
	TM1/ 3MHz	MCH	2.69	2.93	PASS
		HCH	2.69	2.93	PASS
		LCH	2.69	2.94	PASS
	TM2/3MHz	MCH	2.69	2.93	PASS
		HCH	2.69	2.91	PASS
	TM3/3MHz	LCH	2.69	2.93	PASS
Band 5		MCH	2.69	2.93	PASS
		HCH	2.69	2.92	PASS
		LCH	4.48	4.90	PASS
	TM1/ 5MHz	MCH	4.47	4.91	PASS
		HCH	4.49	4.89	PASS
		LCH	4.49	4.89	PASS
	TM2/ 5MHz	MCH	4.49	4.91	PASS
		HCH	4.49	4.88	PASS
		LCH	4.48	4.88	PASS
	TM3/ 5MHz	MCH	4.48	4.87	PASS
		HCH	4.50	4.91	PASS
		LCH	8.97	9.79	PASS
	TM1/10MHz	MCH	8.93	9.75	PASS
		HCH	8.97	9.75	PASS
		LCH	8.97	9.77	PASS
	TM2/ 10MHz	MCH	8.97	9.79	PASS
		HCH	8.97	9.79	PASS



Report No.: SZEM1701001122301 Page: 24 of 77

				.gee	
Test Band	Test Mode	Test Channel	Occupied Bandwidth [MHz]	Emission Bandwidth [MHz]	Verdict
	TM3/ 10MHz	LCH	8.97	9.71	PASS
Band5		MCH	8.93	9.63	PASS
		HCH	8.97	9.69	PASS

Part II –Test Plots

4.1 For LTE

4.1.1 Test Band = LTE band5

4.1.1.1 Test Mode = LTE/TM1 1.4MHz

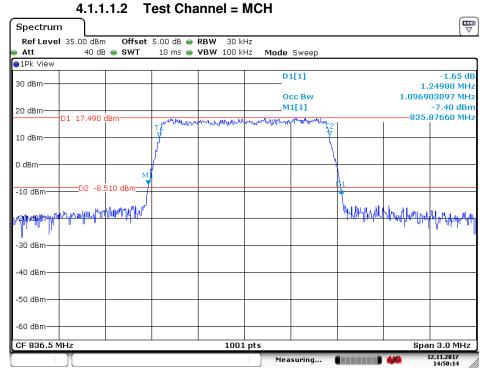
4.1.1.1.1 Test Channel = LCH

Att	l 35.00 dBm 40 dB	SWT	5.00 dB 👄 10 ms 👄	RBW 30 k VBW 100 k		Sweep			
∋1Pk View		-							
30 dBm					Di	1[1]		1.	-1.38 d 24380 MH
						cc Bw		1.0969	03097 MH
20 dBm	D1 18.440 (18m				1[1]		0.24	-6.88 dBi 07960 MH
			Frank	enturyun	whatmendown the	When Mint 2		824.	07900 MF
10 dBm			1						
0 dBm——		M	/						
-10 dBm	D2 -7.5	560 dBm	-				1		
		Mart					 (6		
-20 dBm	Martin	W H WARD					"WPMAN	hallphy	atruthly
-30 dBm									
-40 dBm									
-50 dBm									
-60 dBm									
CF 824.7 (1001				0	n 3.0 MH;

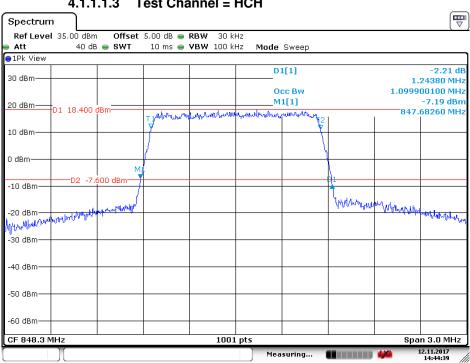
Date: 12.NOV.2017 14:39:38



Report No.: SZEM1701001122301 Page: 25 of 77



Date: 12.NOV.2017 14:50:14

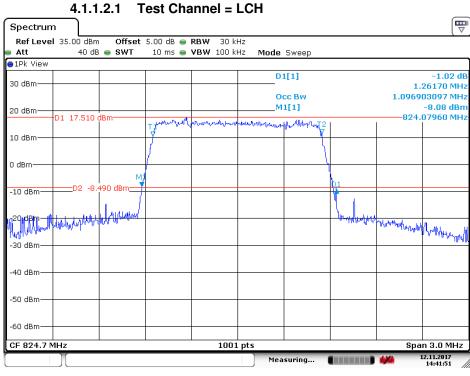


4.1.1.1.3 Test Channel = HCH

Date: 12.NOV.2017 14:44:40



Report No.: SZEM1701001122301 Page: 26 of 77



4.1.1.2 Test Mode = LTE/TM2 1.4MHz

Date: 12.NOV.2017 14:41:51

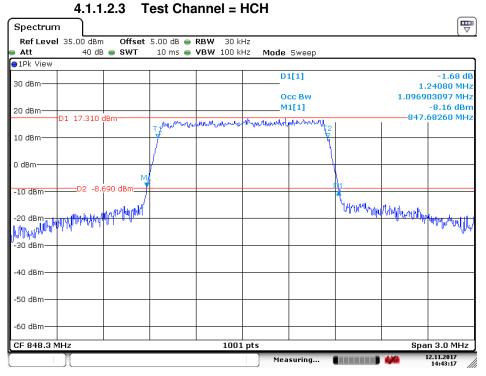


Spectrun	n								
Ref Leve Att	l 35.00 dBm 40 dB) Offset 3 e SWT	5.00 dB 👄 10 ms 👄	RBW 30 k VBW 100 k		Sweep			
⊖1Pk View									
30 dBm						1[1]			-0.50 d 24980 MH
20 dBm					M	cc Bw 1[1]			94106 MH -8.75 dBr 87660 MH
10 dBm	D1 16.900	dBm	Thursday	Mmunder	ething have	hundrend 5	!		
0 dBm			/			1			
		100 dBm	ſ				d1		
-10 dBm							1		
-20 dBm	winthin	WWWW					- apply and a	Matharran	hannan public
-30 dBm									
-40 dBm—									
-50 dBm									
-60 dBm									
CF 836.5 M	MHz	·		1001	pts	·			n 3.0 MHz
					Mea	suring		4/0	2.11.2017 14:51:17

Date: 12.NOV.2017 14:51:18

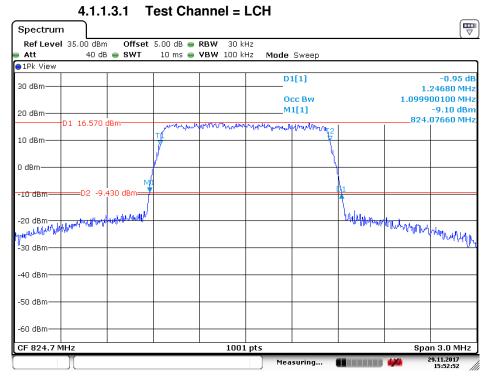


Report No.: SZEM1701001122301 Page: 27 of 77



Date: 12.NOV.2017 14:43:17

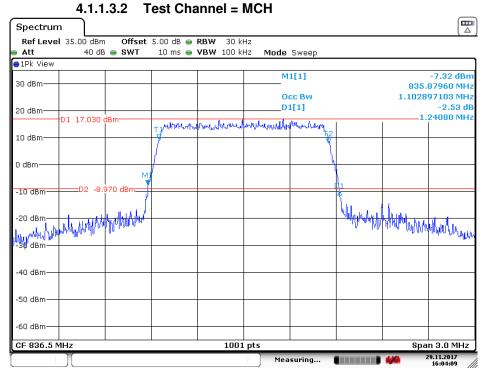
4.1.1.3 Test Mode = LTE/TM3 1.4MHz



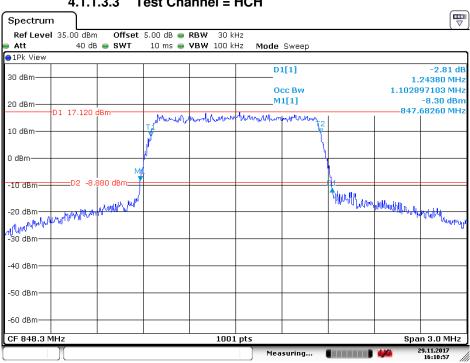
Date: 29.NOV.2017 15:52:53



Report No.: SZEM1701001122301 Page: 28 of 77



Date: 29.NOV.2017 16:04:09

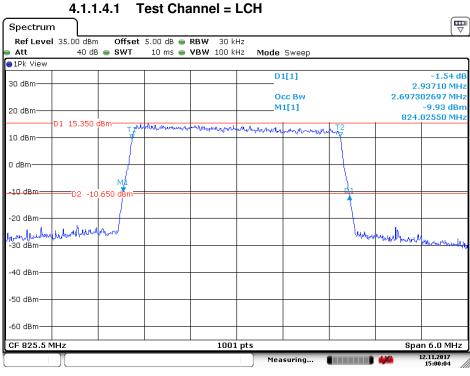


4.1.1.3.3 Test Channel = HCH

Date: 29.NOV.2017 16:10:57

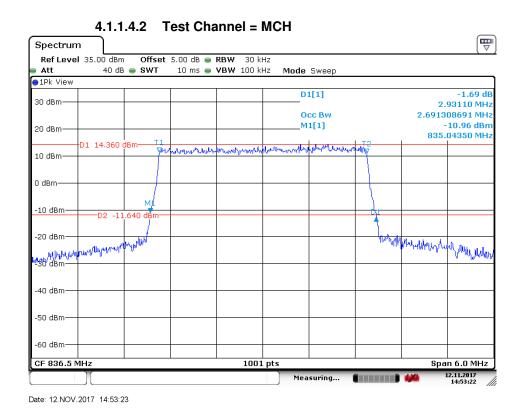


Report No.: SZEM1701001122301 Page: 29 of 77



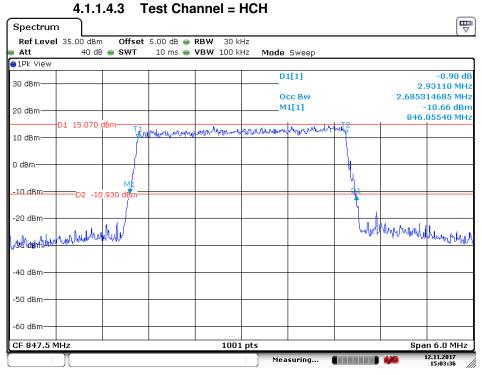
4.1.1.4 Test Mode = LTE/TM1 3MHz

Date: 12.NOV.2017 15:00:04



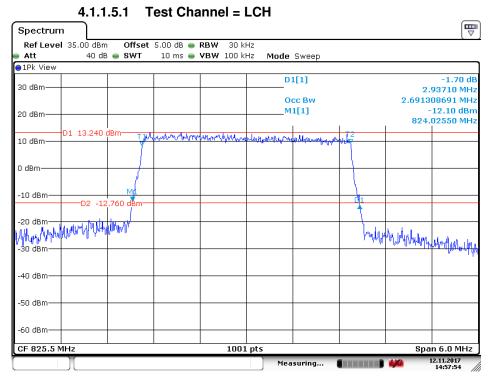


Report No.: SZEM1701001122301 Page: 30 of 77



Date: 12.NOV.2017 15:03:36

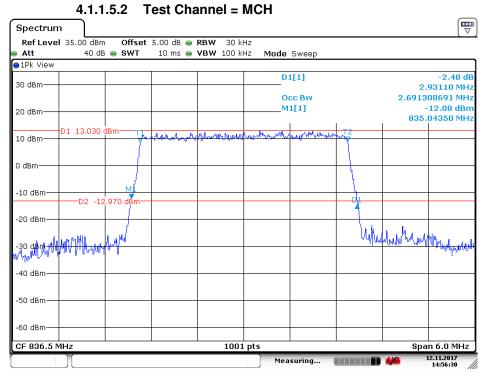
4.1.1.5 Test Mode = LTE/TM2 3MHz



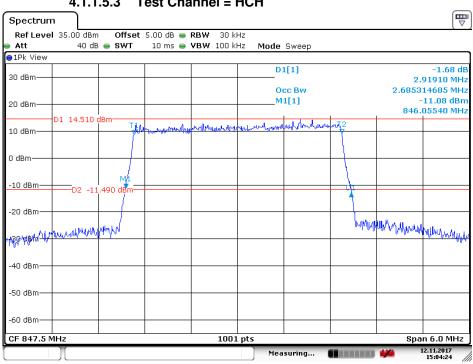
Date: 12.NOV.2017 14:57:54



Report No.: SZEM1701001122301 Page: 31 of 77



Date: 12.NOV.2017 14:56:30

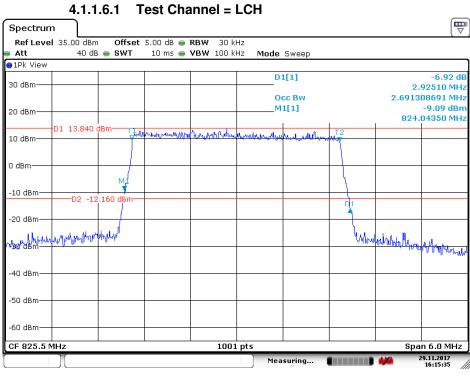


4.1.1.5.3 Test Channel = HCH

Date: 12.NOV.2017 15:04:24



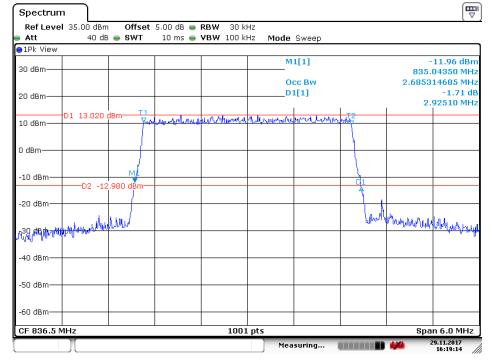
Report No.: SZEM1701001122301 Page: 32 of 77



4.1.1.6 Test Mode = LTE/TM3 3MHz

Date: 29.NOV.2017 16:15:35

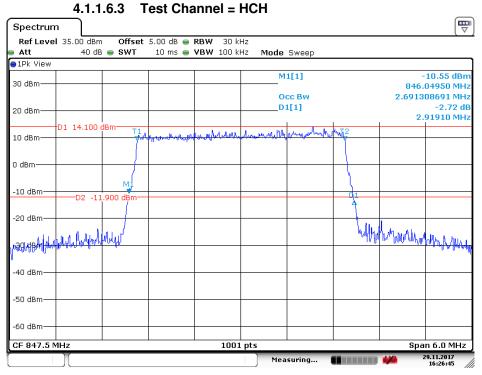




Date: 29.NOV.2017 16:19:15

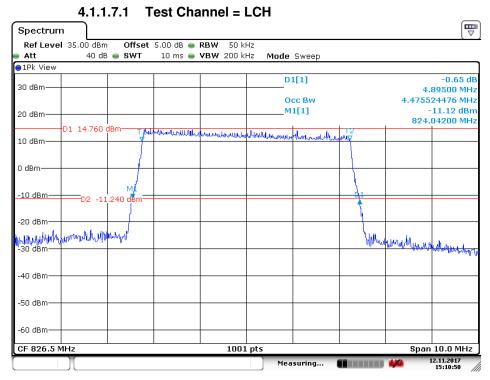


Report No.: SZEM1701001122301 Page: 33 of 77



Date: 29.NOV.2017 16:26:45

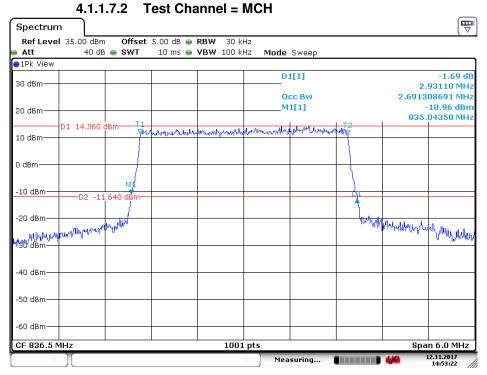
4.1.1.7 Test Mode = LTE/TM1 5MHz



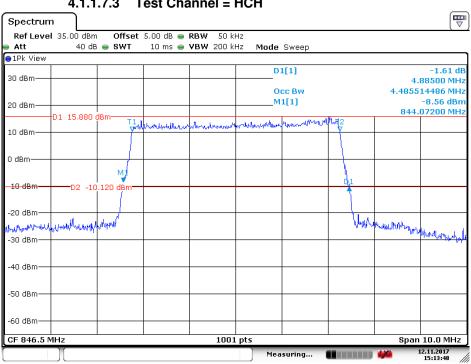
Date: 12.NOV.2017 15:10:50



Report No.: SZEM1701001122301 Page: 34 of 77



Date: 12.NOV.2017 14:53:23

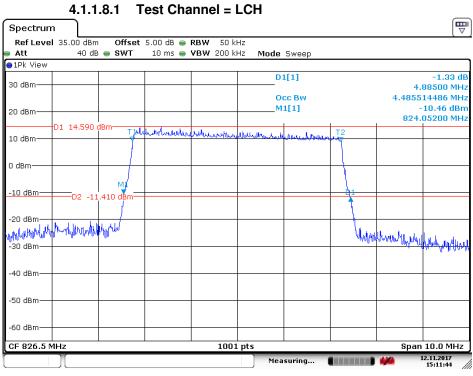


4.1.1.7.3 Test Channel = HCH

Date: 12.NOV.2017 15:13:49



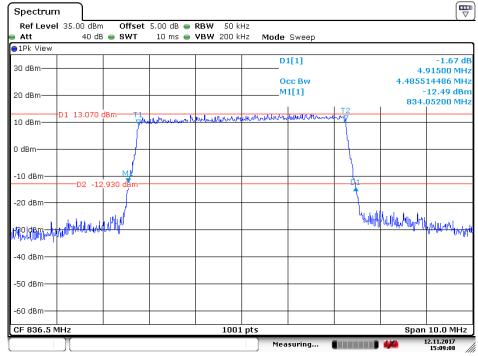
Report No.: SZEM1701001122301 Page: 35 of 77



4.1.1.8 Test Mode = LTE/TM2 5MHz

Date: 12.NOV.2017 15:11:44

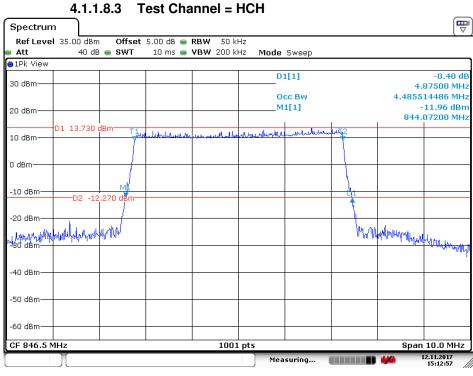




Date: 12.NOV.2017 15:09:08

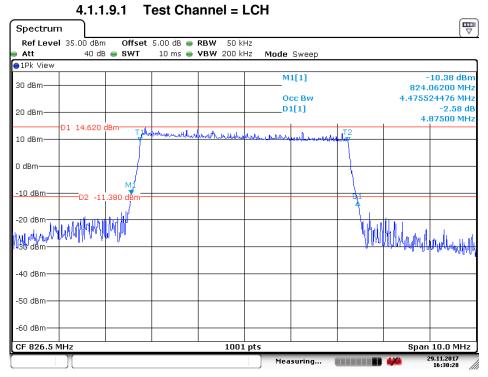


Report No.: SZEM1701001122301 Page: 36 of 77



Date: 12.NOV.2017 15:12:58

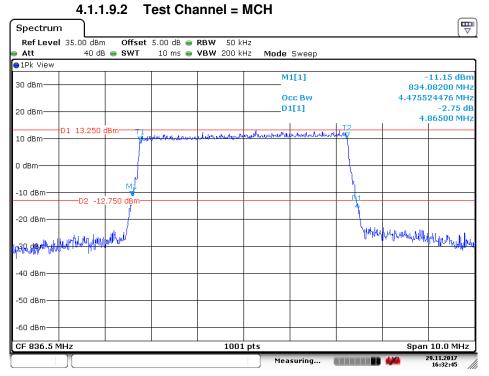
4.1.1.9 Test Mode = LTE/TM3 5MHz



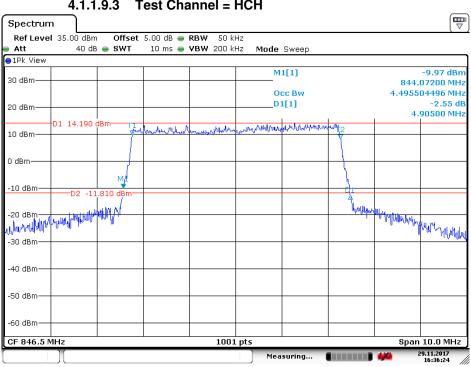
Date: 29.NOV.2017 16:30:29



Report No.: SZEM1701001122301 Page: 37 of 77



Date: 29.NOV.2017 16:32:46

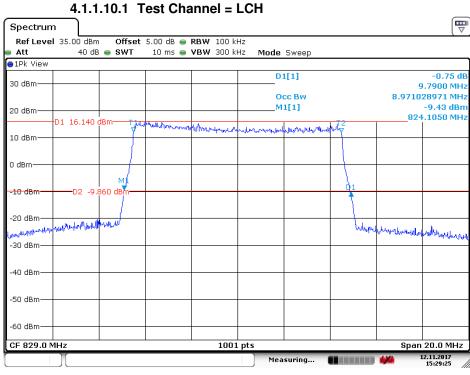


4.1.1.9.3 Test Channel = HCH

Date: 29.NOV.2017 16:36:25

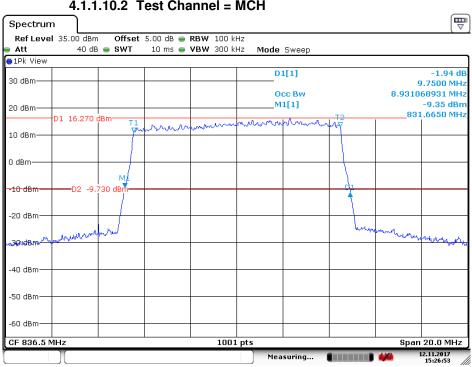


Report No.: SZEM1701001122301 Page: 38 of 77



4.1.1.10 Test Mode = LTE/TM1 10MHz

Date: 12.NOV.2017 15:29:26

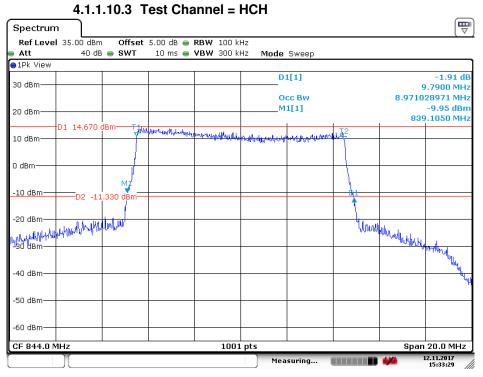


4.1.1.10.2 Test Channel = MCH

Date: 12.NOV.2017 15:26:54

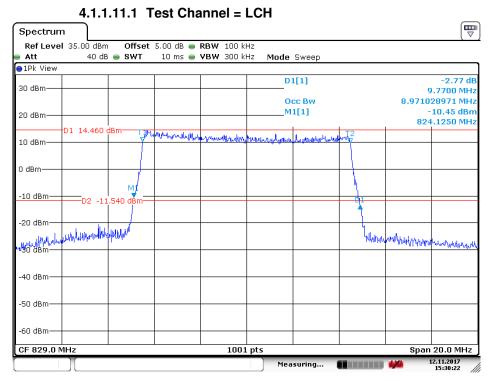


Report No.: SZEM1701001122301 Page: 39 of 77



Date: 12.NOV.2017 15:33:30

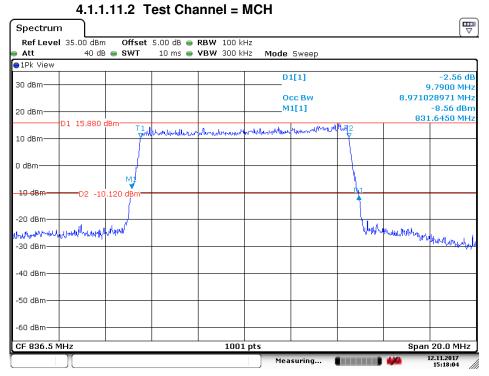
4.1.1.11 Test Mode = LTE/TM2 10MHz



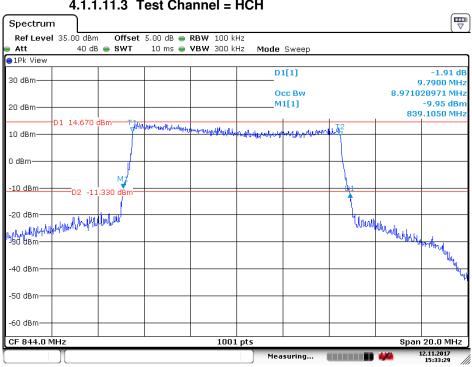
Date: 12.NOV.2017 15:30:22



Report No.: SZEM1701001122301 Page: 40 of 77



Date: 12.NOV.2017 15:18:04

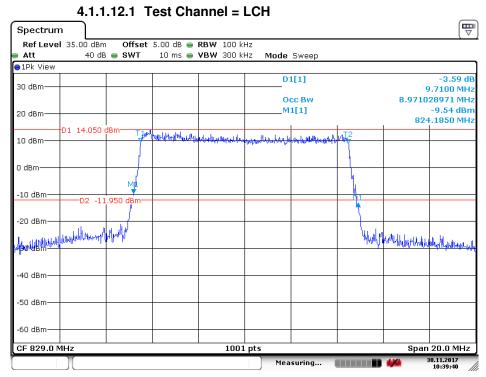


4.1.1.11.3 Test Channel = HCH

Date: 12.NOV.2017 15:33:30

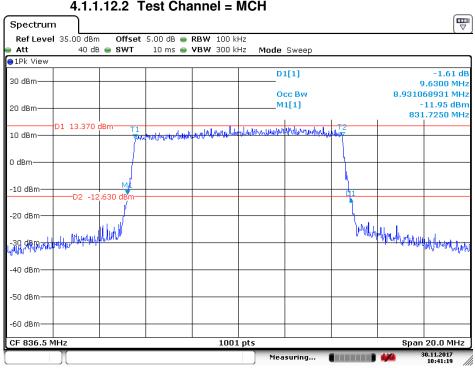


Report No.: SZEM1701001122301 Page: 41 of 77



4.1.1.12 Test Mode = LTE/TM3 10MHz

Date: 30.NOV.2017 10:39:41

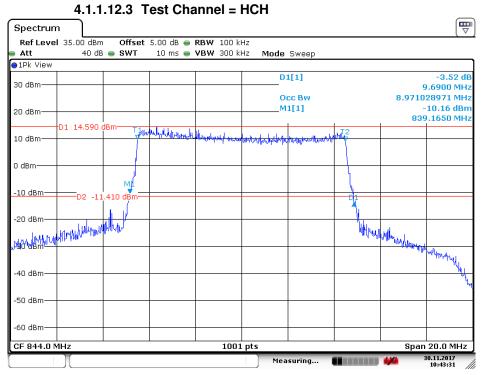


4.1.1.12.2 Test Channel = MCH

Date: 30.NOV.2017 10:41:19



Report No.: SZEM1701001122301 Page: 42 of 77



Date: 30.NOV.2017 10:43:32



Report No.: SZEM1701001122301 Page: 43 of 77

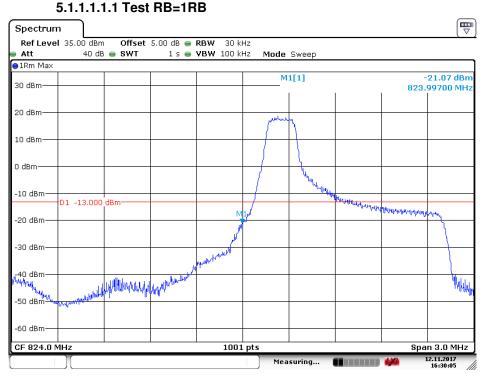
5 Band Edges Compliance

5.1 For LTE

5.1.1 Test Band = LTE band5

5.1.1.1 Test Mode = LTE/TM1 1.4MHz

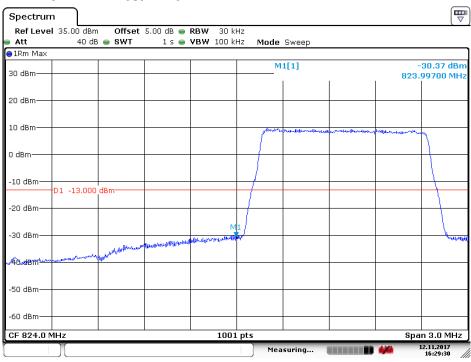
5.1.1.1.1 Test Channel = LCH



Date: 12.NOV.2017 16:30:05

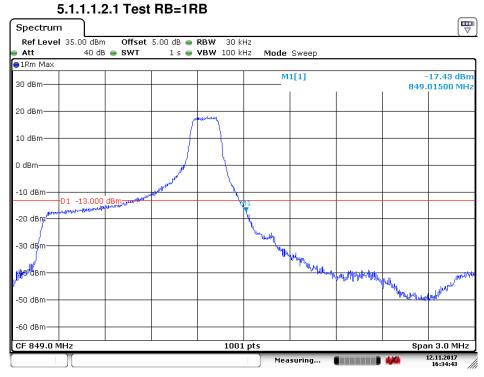


Report No.: SZEM1701001122301 Page: 44 of 77



Date: 12.NOV.2017 16:29:30

5.1.1.1.2 Test Channel = HCH



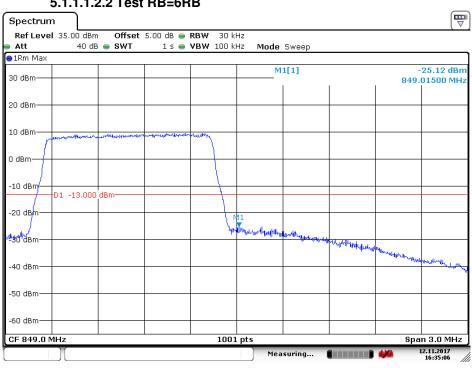
Date: 12.NOV.2017 16:34:43

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at http://www.sgs.com/en/Terms-and-Conditions.aspx and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at http://www.sgs.com/en/Terms-and-Conditions.Terms-e-Document.aspx. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction document. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

5.1.1.1.1.2 Test RB=6RB

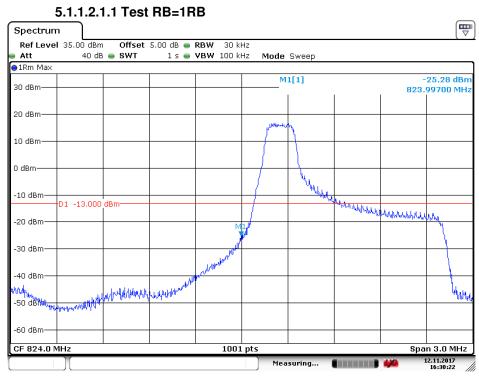


Report No.: SZEM1701001122301 45 of 77 Page:



Date: 12.NOV.2017 16:35:07

5.1.1.2 Test Mode = LTE/TM2 1.4MHz 5.1.1.2.1 Test Channel = LCH



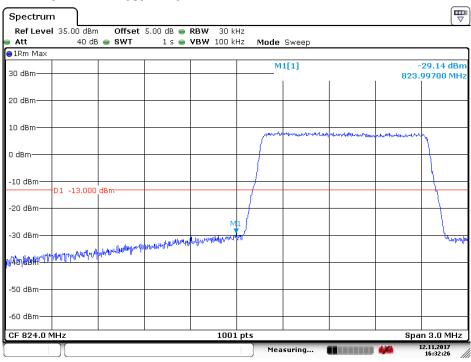
Date: 12.NOV.2017 16:30:22

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at http://www.sgs.com/en/Terms-and-Conditions.aspx and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at http://www.sgs.com/en/Terms-and-Conditions.Terms-e-Document.aspx. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction document. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

5.1.1.1.2.2 Test RB=6RB

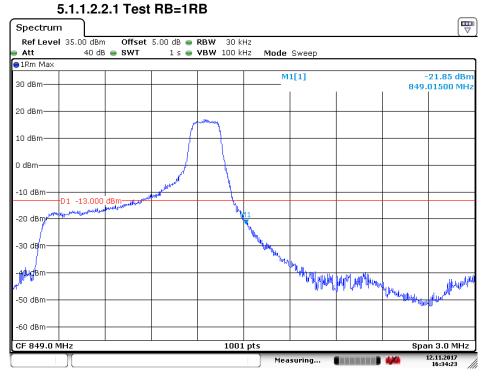


Report No.: SZEM1701001122301 Page: 46 of 77



Date: 12.NOV.2017 16:32:27

5.1.1.2.2 Test Channel = HCH



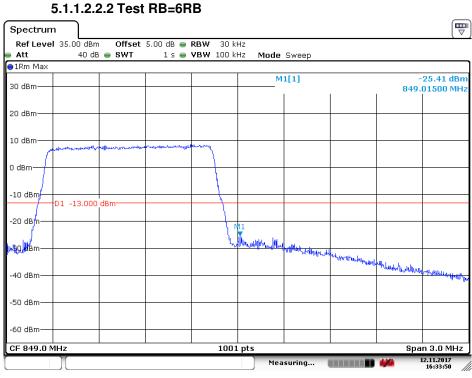
Date: 12.NOV.2017 16:34:23

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at http://www.sgs.com/en/Terms-and-Conditions.aspx and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at http://www.sgs.com/en/Terms-and-Conditions.Terms-e-Document.aspx. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction document. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

5.1.1.2.1.2 Test RB=6RB



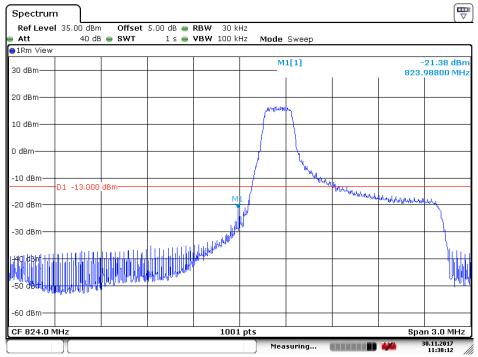
Report No.: SZEM1701001122301 Page: 47 of 77



Date: 12.NOV.2017 16:33:51

5.1.1.3 Test Mode = LTE/TM3 1.4MHz 5.1.1.3.1 Test Channel = LCH

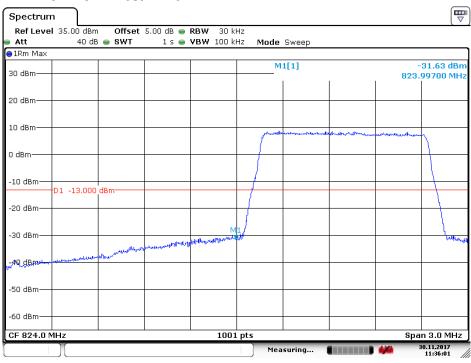
5.1.1.3.1.1 Test RB=1RB



Date: 30.NOV.2017 11:38:12



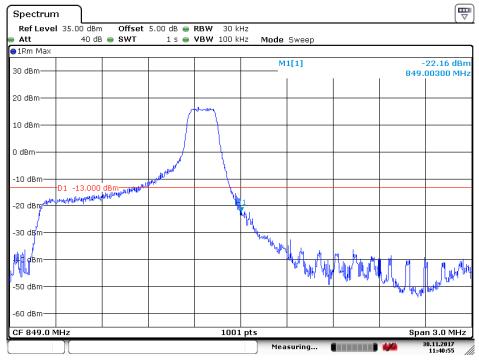
Report No.: SZEM1701001122301 Page: 48 of 77



Date: 30.NOV.2017 11:36:01

5.1.1.3.1 Test Channel = HCH

5.1.1.3.1.1 Test RB=1RB



Date: 30.NOV.2017 11:40:55

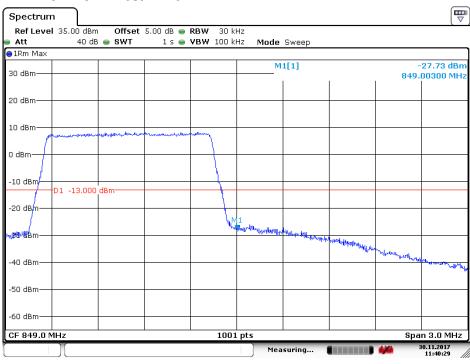
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at http://www.sgs.com/en/Terms-and-Conditions.aspx and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at http://www.sgs.com/en/Terms-and-Conditions.Terms-e-Document.aspx. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction document. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

5.1.1.3.1.2 Test RB=6RB



P

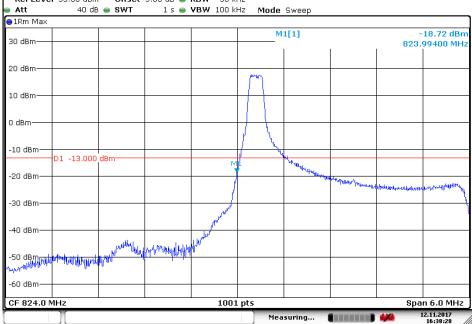
Report No.: SZEM1701001122301 Page: 49 of 77



Date: 30.NOV.2017 11:40:29

5.1.1.4 Test Mode = LTE/TM1 3MHz 5.1.1.4.1 Test Channel = LCH

5.1.1.4.1.1 Test RB=1RB Spectrum Offset 5.00 dB • RBW 30 kHz Ref Level 35.00 dB • 00 kHz 40 dB • 00 kHz 1 s • 00 kHz 100 kHz Att 40 dB • 00 kHz 1 s • 00 kHz 100 kHz 100 kHz



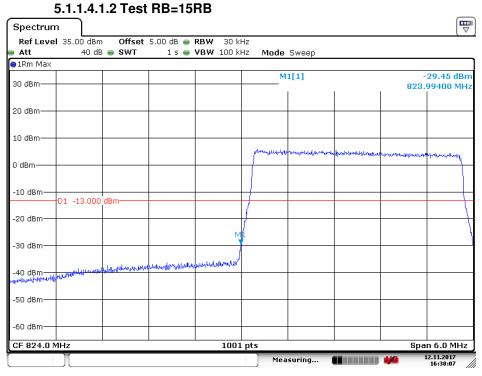
Date: 12.NOV.2017 16:38:28

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at http://www.sgs.com/en/Terms-and-Conditions.aspx and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at http://www.sgs.com/en/Terms-and-Conditions.Terms-e-Document.aspx. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction document. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

5.1.1.3.1.2 Test RB=6RB



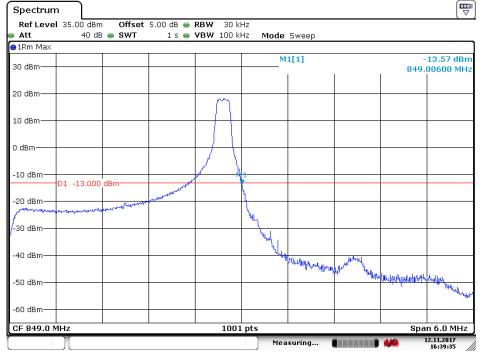
Report No.: SZEM1701001122301 Page: 50 of 77



Date: 12.NOV.2017 16:38:08

5.1.1.4.2 Test Channel = HCH

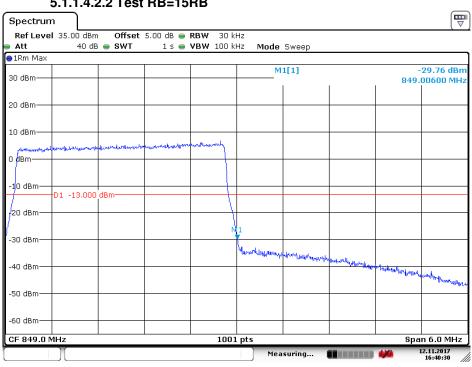
5.1.1.4.2.1 Test RB=1RB



Date: 12.NOV.2017 16:39:36

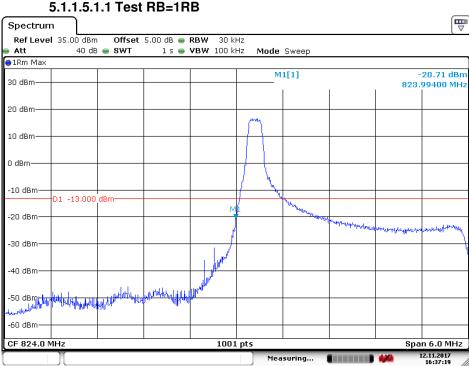


Report No.: SZEM1701001122301 51 of 77 Page:



Date: 12.NOV.2017 16:40:31

5.1.1.5 Test Mode = LTE/TM2 3MHz 5.1.1.5.1 Test Channel = LCH



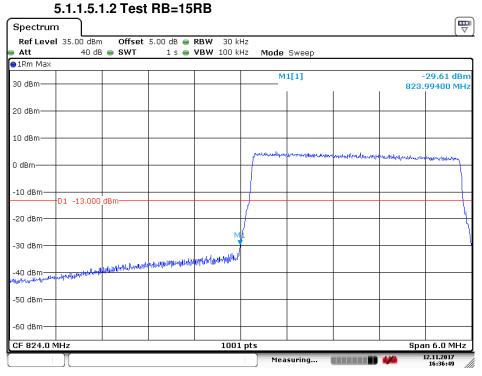
Date: 12.NOV.2017 16:37:20

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at http://www.sgs.com/en/Terms-and-Conditions.aspx and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at http://www.sgs.com/en/Terms-and-Conditions.Terms-e-Document.aspx. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction document. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

5.1.1.4.2.2 Test RB=15RB



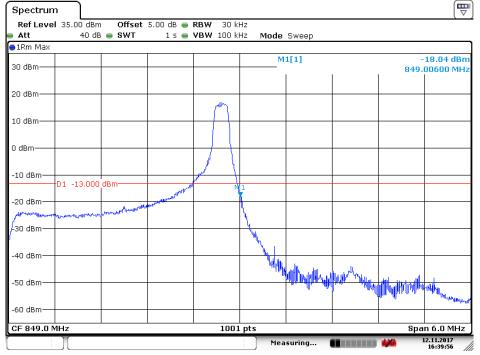
Report No.: SZEM1701001122301 Page: 52 of 77



Date: 12.NOV.2017 16:36:49

5.1.1.5.2 Test Channel = HCH

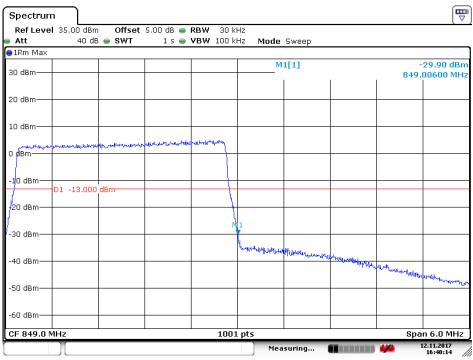
5.1.1.5.2.1 Test RB=1RB



Date: 12.NOV.2017 16:39:57



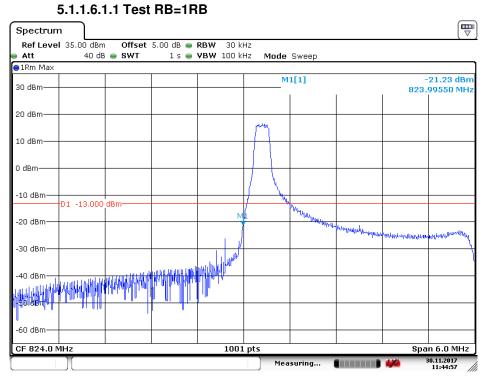
Report No.: SZEM1701001122301 Page: 53 of 77



5.1.1.5.3 Test RB=15RB

Date: 12.NOV.2017 16:40:14

5.1.1.6 Test Mode = LTE/TM3 3MHz 5.1.1.6.1 Test Channel = LCH



Date: 30.NOV.2017 11:44:57



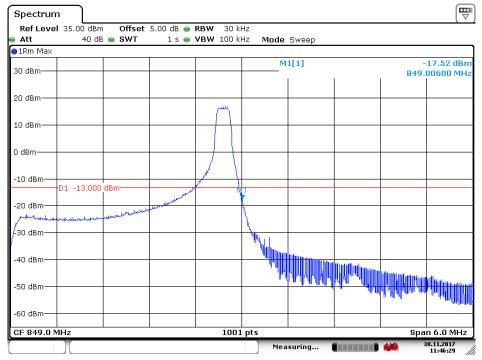
Report No.: SZEM1701001122301 Page: 54 of 77

₩ Spectrum Ref Level 35.00 dBm Offset 5.00 dB 👄 RBW 30 kHz Att 40 dB 🔵 SWT 1 s 👄 **VBW** 100 kHz Mode Sweep ⊖1Rm Max M1[1] -29.56 dBn 30 dBm-823.99550 MH 20 dBm· 10 dBm 0 dBm -10 dBm-D1 -13.000 dBm -20 dBm· -30 dBm Mary James enterther about -40 dBm -50 dBm--60 dBm-CF 824.0 MHz 1001 pts Span 6.0 MHz 30.11.2017 11:44:13 Measuring...

Date: 30.NOV.2017 11:44:13

5.1.1.6.1 Test Channel = HCH

5.1.1.6.1.1 Test RB=1RB



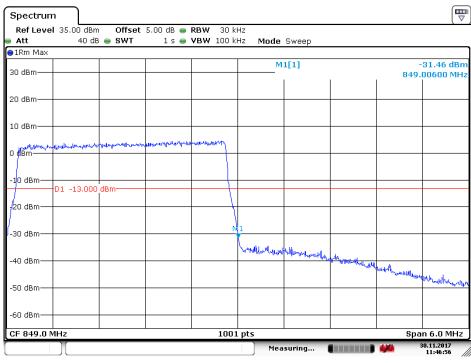
Date: 30.NOV.2017 11:46:29

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at http://www.sgs.com/en/Terms-and-Conditions.aspx and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at http://www.sgs.com/en/Terms-and-Conditions.Terms-e-Document.aspx. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction document. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

5.1.1.6.1.2 Test RB=15RB



Report No.: SZEM1701001122301 Page: 55 of 77



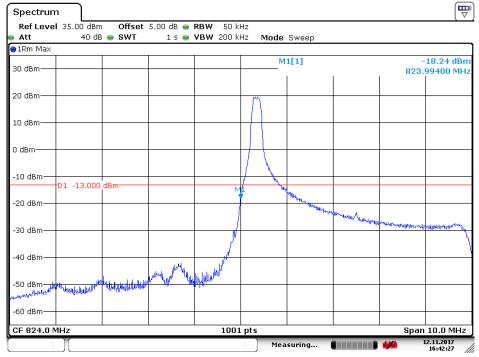
5.1.1.6.1 Test RB=15RB

Date: 30.NOV.2017 11:46:56

5.1.1.7 Test Mode = LTE/TM1 5MHz

5.1.1.7.1 Test Channel = LCH

5.1.1.7.1.1 Test RB=1RB



Date: 12.NOV.2017 16:42:27

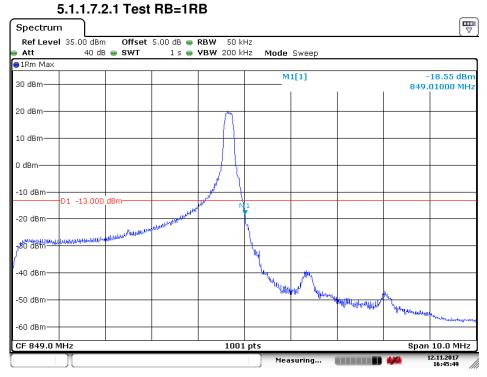


Report No.: SZEM1701001122301 Page: 56 of 77

₩ Spectrum Ref Level 35.00 dBm Offset 5.00 dB 👄 RBW 50 kHz Att 40 dB 🔵 SWT 1 s 👄 **VBW** 200 kHz Mode Sweep ⊖1Rm Max M1[1] -29.67 dBn 30 dBm-823.99400 MH 20 dBm· 10 dBm 0 dBm -10 dBm-D1 -13.000 dBm -20 dBm· -30 dBm -40 dBm--50 dBm--60 dBm-CF 824.0 MHz 1001 pts Span 10.0 MHz 12.11.2017 16:41:47 Measuring...

Date: 12.NOV.2017 16:41:47

5.1.1.7.2 Test Channel = HCH



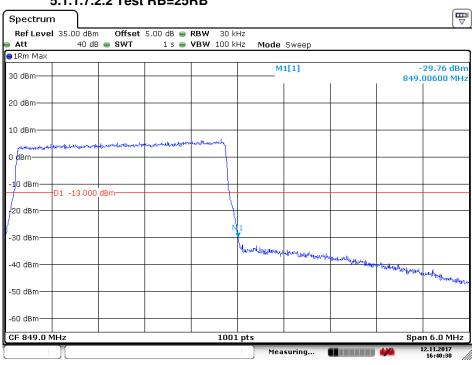
Date: 12.NOV.2017 16:45:50

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at http://www.sgs.com/en/Terms-and-Conditions.aspx and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at http://www.sgs.com/en/Terms-and-Conditions.Terms-e-Document.aspx. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction document. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

5.1.1.7.1.2 Test RB=25RB

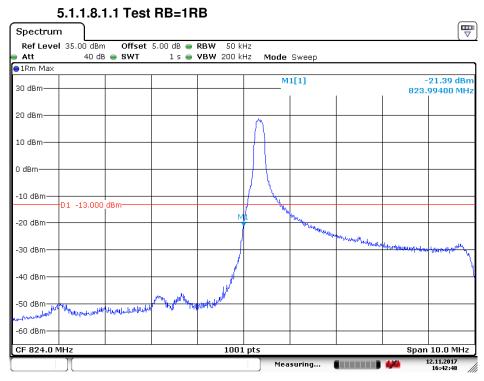


Report No.: SZEM1701001122301 Page: 57 of 77



Date: 12.NOV.2017 16:40:31

5.1.1.8 Test Mode = LTE/TM2 5MHz 5.1.1.8.1 Test Channel = LCH



Date: 12.NOV.2017 16:42:48

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at http://www.sgs.com/en/Terms-and-Conditions.aspx and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at http://www.sgs.com/en/Terms-and-Conditions.Terms-e-Document.aspx. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction document. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

5.1.1.7.2.2 Test RB=25RB

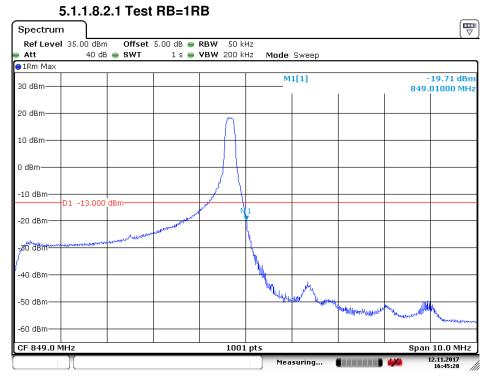


Report No.: SZEM1701001122301 Page: 58 of 77

P Spectrum Ref Level 35.00 dBm Offset 5.00 dB 🖷 RBW 50 kHz Att 40 dB 🔵 SWT 1 s 👄 **VBW** 200 kHz Mode Sweep ⊖1Rm Ma× M1[1] -29.94 dBn 30 dBm 823.99400 MH 20 dBm 10 dBm 0 dBm -10 dBm D1 -13.000 dBm--20 dBm -30 dBm mound all have been all and a start -40 dBm -50 dBm -60 dBm-CF 824.0 MHz 1001 pts Span 10.0 MHz 12.11.2017 16:43:08 Measuring...

Date: 12.NOV.2017 16:43:09

5.1.1.8.2 Test Channel = HCH



Date: 12.NOV.2017 16:45:29

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at http://www.sgs.com/en/Terms-and-Conditions.aspx and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at http://www.sgs.com/en/Terms-and-Conditions.Terms-e-Document.aspx. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction document. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

5.1.1.8.1.2 Test RB=25RB



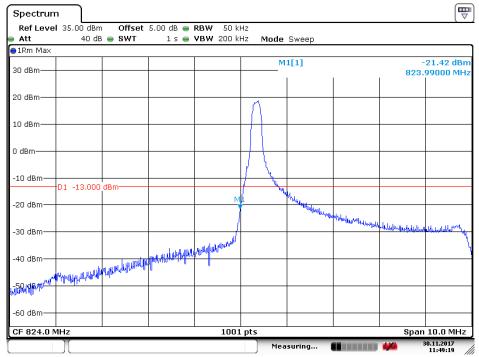
Report No.: SZEM1701001122301 Page: 59 of 77

P Spectrum Ref Level 35.00 dBm Offset 5.00 dB 👄 RBW 50 kHz Att 40 dB 🔵 SWT 1 s 👄 **VBW** 200 kHz Mode Sweep ⊖1Rm Max M1[1] -31.33 dBn 30 dBm-849.01000 MH 20 dBm 10 dBm 0 dBm -10 dBm D1 -13.000 dBm 20 dBm -30 dBm -40 dBm -50 dBm -60 dBm-CF 849.0 MHz 1001 pts Span 10.0 MHz 12.11.2017 16:44:49 Measuring...

Date: 12.NOV.2017 16:44:49

5.1.1.9 Test Mode = LTE/TM3 5MHz 5.1.1.9.1 Test Channel = LCH

5.1.1.9.1.1 Test RB=1RB



Date: 30.NOV.2017 11:49:20

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at http://www.sgs.com/en/Terms-and-Conditions.aspx and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at http://www.sgs.com/en/Terms-and-Conditions.Terms-e-Document.aspx. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction document. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

5.1.1.8.2.2 Test RB=25RB



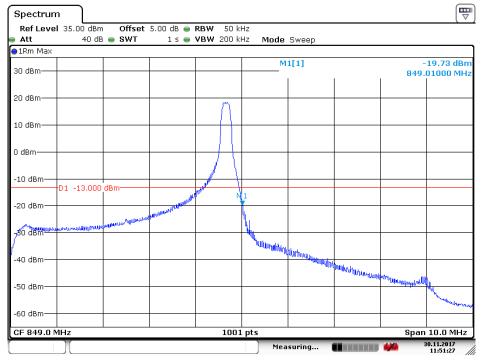
Report No.: SZEM1701001122301 Page: 60 of 77

₩ Spectrum Ref Level 35.00 dBm Offset 5.00 dB 👄 RBW 50 kHz Att 40 dB 🔵 SWT 1 s 👄 **VBW** 200 kHz Mode Sweep ⊖1Rm Max M1[1] -29.22 dBn 30 dBm-823.99000 MH 20 dBm 10 dBm 0 dBm -10 dBm-D1 -13.000 dBm -20 dBm· -30 dBm dh. -40 dBm--50 dBm -60 dBm-CF 824.0 MHz 1001 pts Span 10.0 MHz 30.11.2017 11:48:37 Measuring...

Date: 30.NOV.2017 11:48:37

5.1.1.9.1 Test Channel = HCH

5.1.1.9.1.1 Test RB=1RB



Date: 30.NOV.2017 11:51:27

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at http://www.sgs.com/en/Terms-and-Conditions.aspx and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at http://www.sgs.com/en/Terms-and-Conditions.Terms-e-Document.aspx. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction document. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

5.1.1.9.1.2 Test RB=25RB



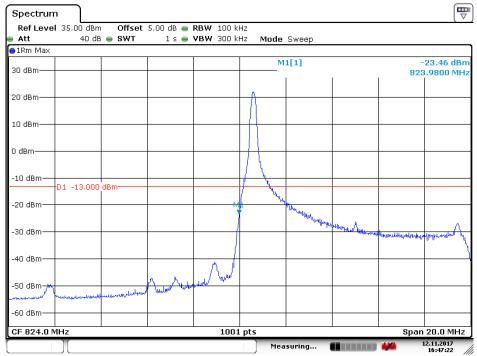
Report No.: SZEM1701001122301 Page: 61 of 77

P Spectrum Ref Level 35.00 dBm Offset 5.00 dB 🖷 RBW 50 kHz Att 40 dB 👄 SWT 1 s 👄 **VBW** 200 kHz Mode Sweep ⊖1Rm Max M1[1] -30.08 dBn 30 dBm-849.01000 MH 20 dBm 10 dBm 0 dBm -10 dBm D1 -13.000 dBm 20 dBm -30 dBm hunder way Hunde -40 dBm -50 dBm -60 dBm-1001 pts CF 849.0 MHz Span 10.0 MHz 30.11.2017 11:50:40 Measuring...

Date: 30.NOV.2017 11:50:41

5.1.1.10 Test Mode = LTE/TM1 10MHz 5.1.1.10.1 Test Channel = LCH

5.1.1.10.1.1 Test RB=1RB



Date: 12.NOV.2017 16:47:22

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at http://www.sgs.com/en/Terms-and-Conditions.aspx and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at http://www.sgs.com/en/Terms-and-Conditions.Terms-e-Document.aspx. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction document. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

5.1.1.9.1.2 Test RB=25RB



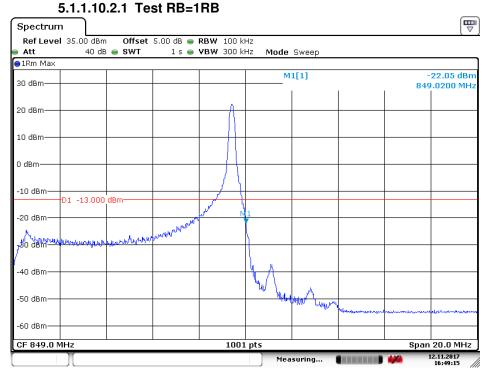
Report No.: SZEM1701001122301 Page: 62 of 77



5.1.1.10.1.2 Test RB=50RB

Date: 12.NOV.2017 16:46:57

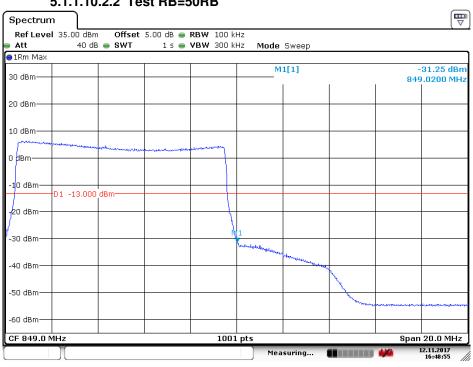
5.1.1.10.2 Test Channel = HCH



Date: 12.NOV.2017 16:49:16



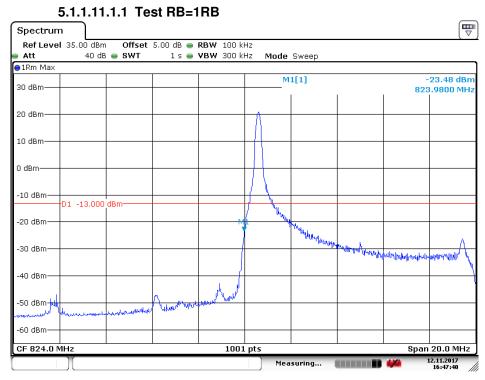
Report No.: SZEM1701001122301 Page: 63 of 77



Date: 12.NOV.2017 16:48:55

5.1.1.11 Test Mode = LTE/TM2 10MHz

5.1.1.11.1 Test Channel = LCH



Date: 12.NOV.2017 16:47:40

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at http://www.sgs.com/en/Terms-and-Conditions.aspx and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at http://www.sgs.com/en/Terms-and-Conditions.Terms-e-Document.aspx. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction document. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

5.1.1.10.2.2 Test RB=50RB



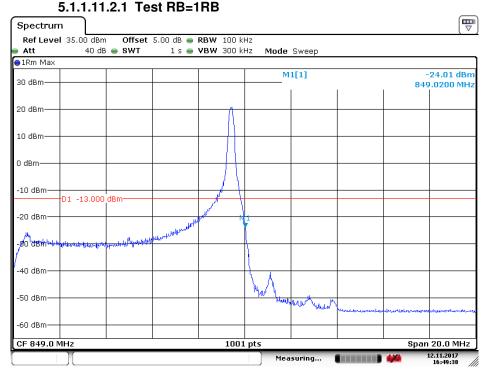
Report No.: SZEM1701001122301 Page: 64 of 77



5.1.1.11.1.2 Test RB=50RB

Date: 12.NOV.2017 16:47:57

5.1.1.11.2 Test Channel = HCH



Date: 12.NOV.2017 16:49:38



Report No.: SZEM1701001122301 Page: 65 of 77



5.1.1.11.2.2 Test RB=50RB

Date: 12.NOV.2017 16:49:57

5.1.1.12 Test Mode = LTE/TM3 10MHz 5.1.1.12.1 Test Channel = LCH

P Spectrum Ref Level 35.00 dBm Offset 5.00 dB 👄 RBW 100 kHz Att 40 dB 👄 SWT 1 s 👄 **VBW** 300 kHz Mode Sweep ●1Rm Ma: M1[1] -21.39 dBm 30 dBm-824.0000 MH 20 dBm· 10 dBm 0 dBm--10 dBm--D1 -13.000 dBm--20 dBm -30 dBm Malergrouth www.www. -40 dBm and maked -50 dBm 🕁 -60 dBm· Span 20.0 MHz CF 824.0 MHz 1001 pts 0.11.2017 11:54:22 Measuring...

5.1.1.12.1.1 Test RB=1RB

Date: 30.NOV.2017 11:54:23



Report No.: SZEM1701001122301 Page: 66 of 77

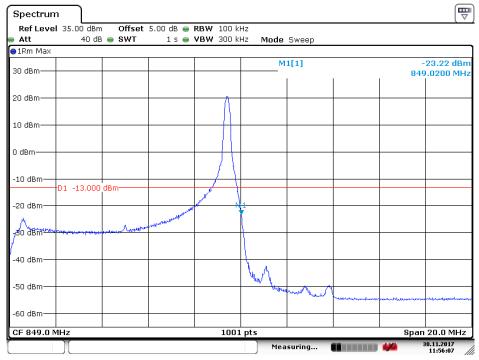


5.1.1.12.1.2 Test RB=50RB

Date: 30.NOV.2017 11:53:18

5.1.1.12.1 Test Channel = HCH

5.1.1.12.1.1 Test RB=1RB



Date: 30.NOV.2017 11:56:07



Report No.: SZEM1701001122301 Page: 67 of 77



5.1.1.12.1.2 Test RB=50RB

Date: 30.NOV.2017 11:55:22

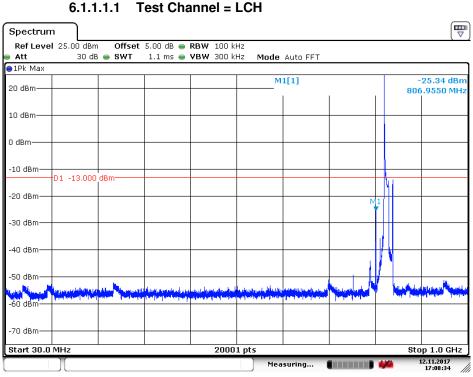


Report No.: SZEM1701001122301 Page: 68 of 77

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



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

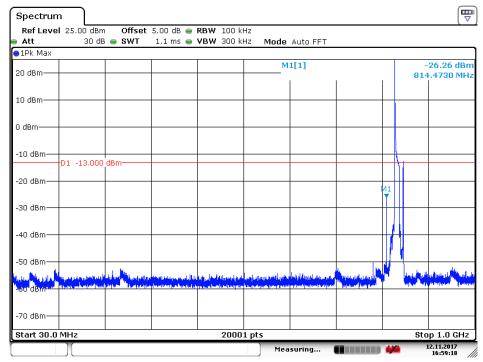
Date: 12.NOV.2017 17:08:34



								R	eport No	.: SZEM1701001122301
								P	age:	69 of 77
	l 25.00 dBm		5.00 dB 🖷							
Att 1Pk Max	30 dE	B 👄 SWT	30 ms 👄	VBW З МН:	2 Mode A	uto Sweep.				
20 dBm					M	1[1]			33.16 dBm 49540 GHz	
10 dBm										
0 dBm										
-10 dBm—	D1 -13.000	dBm								
-20 dBm—										
-30 dBM 1										
-40 dBm		Las carella cares tar	ر ان الاحاد مسلمان ان ارتبان	a a participante de la calencia de l		ing the second	Alteres alterations	مى مەلىرىيە مەلىرىيە	and the second second	
No. Jon (1997) Procession (1997)	a statistica de la construcción de la construcción la segui de la construcción de la construcción la segui de la construcción de la construcción de la construcción	The state of the state of		A State of the Sta	par ^{an} in in		ور الله ور الله المراجع الله الله الله الله الله الله الله الل	Party and the state of the stat	All Definition of physical sectors	
-60 dBm										
-70 dBm										
Start 1.0 G	GHz			2000	1 pts			Stop	10.0 GHz	
						suring			12.11.2017 16:54:38	

Date: 12.NOV.2017 16:54:38





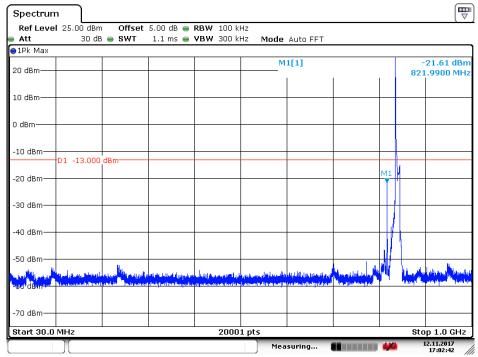
Date: 12.NOV.2017 16:59:18



								R	eport No	.: SZEM1701001122301
								P	age:	70 of 77
	l 25.00 dBm		5.00 dB 🖷							
Att 1Pk Max	30 dE	3 👄 SWT	30 ms 👄	VBW 3 MH:	2 Mode A	uto Sweep				
20 dBm					M	1[1]	1		31.65 dBm 64390 GHz	
10 dBm										
0 dBm										
-10 dBm	D1 -13.000	dBm								
-20 dBm—										
-30 dBm										
-40 dBm —		الاستقلافه وإعريني		un an	and a state of the		and a state of the	المراجع المراجع مناطقة المراجع ا	a di stata da para para di separa se	
Research an Anna an Anna an Anna an Anna Anna A	nal an	n de Hylking Historia.								
-60 dBm										
-70 dBm										
Start 1.0 C	GHz			2000					10.0 GHz	
					Mea	suring		444	12.11.2017 16:59:56	

Date: 12.NOV.2017 16:59:56





Date: 12.NOV.2017 17:02:43



Spectrum Ref Level 2	25.00 dBm	Offset	5.00 dB 🖷 I	RBW 1 MHz					eport No age:	o.: SZEM1701001122301 71 of 77
🗕 Att	30 dB	SWT	30 ms 😑 '	VBW 3 MHz	Mode A	uto Sweep				
●1Pk Max										
20 dBm					M	1[1]	1		33.96 dBm 79690 GHz	
10 dBm										
0 dBm										
-10 dBm	1 -13.000	dBm								
-20 dBm										
-30 dBm r1										
-40 dBm		an an an Aulas ta	and the line of the line of the	المقادر والحرول	an a t ^{a sa} ta da ^j aria da	n je ti ovrju i Pri ok u se stateljska ¹ v 191	and all advances a laterate	ر. مناقبهما الروري المقاهدين	foldback of the design of the	
الدارية (الاطلالية) والمكرة العربية والمالة. المراجع (الاطلالية)	والاروران التي الاستروالي محمد الدينية بينية من الاستروالي	And a second	and the second second	the state of the s	- Ale	Nope	allina (Chimi) and a D	والأريطفين وطائرهم	with defends a strends property	
Key Johnston (1997)										
-60 dBm										
-70 dBm										
Start 1.0 GH	l			2000	1 pts		<u> </u>	Stop	10.0 GHz	
						suring			12.11.2017 17:01:16	

Date: 12.NOV.2017 17:01:16



Report No.: SZEM1701001122301 Page: 72 of 77

7 Field Strength of Spurious Radiation

7.1 For LTE

7.1.1 Test Band = LTE band5

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

Diversity antenna

7.1.1.1.1	Test Channel = LC	H		
Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Over Limit (dB)	Polarization
1210.000	-66.31	-13.00	-53.31	Vertical
2664.000	-57.65	-13.00	-44.65	Vertical
4950.000	-66.76	-13.00	-53.76	Vertical
1221.000	-67.24	-13.00	-54.24	Horizontal
2360.000	-59.24	-13.00	-46.24	Horizontal
6217.500	-65.65	-13.00	-52.65	Horizontal

7.1.1.1.2	Test Channel = MC	ЭН		
Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Over Limit (dB)	Polarization
1144.000	-67.08	-13.00	-54.08	Vertical
2672.000	-57.50	-13.00	-44.50	Vertical
6120.000	-65.46	-13.00	-52.46	Vertical
1100.000	-66.78	-13.00	-53.78	Horizontal
2776.000	-57.37	-13.00	-44.37	Horizontal
4852.500	-66.82	-13.00	-53.82	Horizontal

7.1.1.1.3 Test Channel = HCH

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Over Limit (dB)	Polarization
1276.000	-66.38	-13.00	-53.38	Vertical
2600.000	-58.24	-13.00	-45.24	Vertical
4657.500	-67.45	-13.00	-54.45	Vertical
1210.000	-67.17	-13.00	-54.17	Horizontal
2608.000	-58.66	-13.00	-45.66	Horizontal
4950.000	-66.75	-13.00	-53.75	Horizontal

Main antenna

7.1.1.1.4	Test Channel = LC	H		
Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Over Limit (dB)	Polarization
2336.000	-59.62	-30.00	-29.62	Vertical
4267.500	-67.31	-30.00	-37.31	Vertical
5827.500	-66.60	-30.00	-36.60	Vertical
2232.000	-59.60	-13.00	-46.60	Horizontal
4170.000	-67.69	-13.00	-54.69	Horizontal
6607.500	-65.79	-13.00	-52.79	Horizontal



Report No.: SZEM1701001122301 Page: 73 of 77

7.1.1.1.5	Test Channel = MC	СН		
Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Over Limit (dB)	Polarization
2712.000	-57.68	-13.00	-44.68	Vertical
4170.000	-67.57	-13.00	-54.57	Vertical
6705.000	-65.60	-13.00	-52.60	Vertical
2200.000	-59.48	-13.00	-46.48	Horizontal
4657.500	-67.42	-13.00	-54.42	Horizontal
6217.500	-65.60	-13.00	-52.60	Horizontal

7.1.1.1.6 Test Channel = HCH

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Over Limit (dB)	Polarization
1177.000	-67.11	-13.00	-54.11	Vertical
2600.000	-58.26	-13.00	-45.26	Vertical
4950.000	-66.78	-13.00	-53.78	Vertical
1177.000	-67.71	-13.00	-54.71	Horizontal
2400.000	-59.05	-13.00	-46.05	Horizontal
5242.500	-67.26	-13.00	-54.26	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.



Report No.: SZEM1701001122301 Page: 74 of 77

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	-2.26	-0.00273	PASS
		LCH	TN	VN	1.41	0.00170	PASS
				VH	-2.23	-0.00269	PASS
				VL	-1.59	-0.00190	PASS
	LTE/TM1 10MHz	MCH	TN	VN	-2.83	-0.00338	PASS
				VH	1.22	0.00146	PASS
				VL	-5.39	-0.00639	PASS
		НСН	TN	VN	-4.95	-0.00586	PASS
				VH	-1.83	-0.00217	PASS
		LCH		VL	-4.40	-0.00531	PASS
	LTE/TM2 10MHz		TN	VN	-3.32	-0.00400	PASS
				VH	-3.13	-0.00378	PASS
		MCH	TN	VL	1.28	0.00153	PASS
LTE band5				VN	-3.29	-0.00393	PASS
				VH	1.73	0.00207	PASS
		НСН	TN	VL	-2.31	-0.00274	PASS
				VN	-6.18	-0.00732	PASS
				VH	5.12	0.00607	PASS
				VL	-1.54	-0.00186	PASS
		LCH	TN	VN	2.76	0.00333	PASS
				VH	4.93	0.00595	PASS
				VL	-3.43	-0.00410	PASS
	LTE/TM3 10MHz	MCH	TN	VN	2.65	0.00317	PASS
				VH	-0.23	-0.00027	PASS
				VL	1.87	0.00222	PASS
		HCH	TN	VN	4.86	0.00576	PASS
				VH	-3.34	-0.00396	PASS



Report No.: SZEM1701001122301 Page: 75 of 77

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	-4.38	-0.00528	PASS
				-20	-2.32	-0.00280	PASS
				-10	-2.47	-0.00298	PASS
				0	1.27	0.00153	PASS
		LCH	VN	10	1.20	0.00145	PASS
				20	0.55	0.00066	PASS
				30	2.68	0.00323	PASS
				40	-2.10	-0.00253	PASS
			-	50	-4.02	-0.00485	PASS
	LTE/TM1 10MHz	МСН		-30	-5.04	-0.00603	PASS
			VN	-20	-5.10	-0.00610	PASS
				-10	-3.30	-0.00395	PASS
				0	-1.25	-0.00149	PASS
LTE band5				10	-2.07	-0.00247	PASS
				20	-1.89	-0.00226	PASS
				30	-3.99	-0.00477	PASS
				40	-4.83	-0.00577	PASS
				50	-5.92	-0.00708	PASS
				-30	-6.06	-0.00718	PASS
				-20	-5.24	-0.00621	PASS
				-10	3.69	0.00437	PASS
				0	-2.43	-0.00288	PASS
		HCH	VN	10	2.24	0.00265	PASS
				20	-1.39	-0.00165	PASS
				30	-2.42	-0.00287	PASS
				40	-4.39	-0.00520	PASS
				50	-3.84	-0.00455	PASS



Report No.: SZEM1701001122301 Page: 76 of 77

raye. 700177							
Test Band	Test Mode	Test Channel	Test Volt.	Test Temp.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
				-30	-3.57	-0.00431	PASS
				-20	-2.43	-0.00293	PASS
				-10	1.22	0.00147	PASS
				0	2.41	0.00291	PASS
		LCH	VN	10	1.76	0.00212	PASS
				20	-0.43	-0.00052	PASS
				30	-3.03	-0.00366	PASS
				40	2.27	0.00274	PASS
			-	50	-4.85	-0.00585	PASS
		МСН		-30	-3.32	-0.00397	PASS
			VN	-20	-2.66	-0.00318	PASS
				-10	-2.14	-0.00256	PASS
	LTE/TM2 10MHz			0	-1.83	-0.00219	PASS
LTE band5				10	-0.72	-0.00086	PASS
				20	1.33	0.00159	PASS
				30	-2.24	-0.00268	PASS
				40	-6.58	-0.00787	PASS
				50	-5.49	-0.00656	PASS
				-30	-3.04	-0.00360	PASS
				-20	-4.69	-0.00556	PASS
				-10	2.49	0.00295	PASS
				0	-3.46	-0.00410	PASS
		HCH	VN	10	2.46	0.00291	PASS
				20	-1.93	-0.00229	PASS
				30	-3.32	-0.00393	PASS
				40	-5.70	-0.00675	PASS
				50	-4.32	-0.00512	PASS



Report No.: SZEM1701001122301 Page: 77 of 77

		Page: // of //					
Test Band	Test Mode	Test Channel	Test Volt.	Test Temp.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
LTE band5	LTE/TM3 10MHz	LCH	VN	-30	-5.38	-0.00649	PASS
				-20	-4.32	-0.00521	PASS
				-10	-2.47	-0.00298	PASS
				0	1.27	0.00153	PASS
				10	3.11	0.00375	PASS
				20	1.89	0.00228	PASS
				30	2.67	0.00322	PASS
				40	-2.10	-0.00253	PASS
				50	-4.02	-0.00485	PASS
		МСН	VN	-30	-5.04	-0.00603	PASS
				-20	-3.99	-0.00477	PASS
				-10	-3.30	-0.00395	PASS
				0	-1.25	-0.00149	PASS
				10	-2.81	-0.00336	PASS
				20	-2.82	-0.00337	PASS
				30	-3.99	-0.00477	PASS
				40	-4.55	-0.00544	PASS
				50	-5.92	-0.00708	PASS
		НСН	VN	-30	-1.90	-0.00225	PASS
				-20	-5.24	-0.00621	PASS
				-10	3.69	0.00437	PASS
				0	-2.43	-0.00288	PASS
				10	6.43	0.00762	PASS
				20	-4.39	-0.00520	PASS
				30	-2.46	-0.00291	PASS
				40	-4.46	-0.00528	PASS
				50	-2.87	-0.00340	PASS

The End