

Report No.: SZEM180400250601

Page: 1 of 44

Appendix B

WCDMA Band 2&4&5



Report No.: SZEM180400250601

Page: 2 of 44

CONTENT

| | | | Page |
|-----|-------|--|------|
| 1 | EFFE | CTIVE (ISOTROPIC) RADIATED POWER OUTPUT DATA | 4 |
| 2 | PEAK. | -TO-AVERAGE RATIO | 5 |
| | | | |
| | 2.1 F | FOR WCDMA | |
| | 2.1.1 | Test Band = WCDMA 1700 | |
| | 2.1.2 | Test Band = WCDMA 850 | |
| _ | | | |
| 3 | MODU | JLATION CHARACTERISTICS | 11 |
| | 3.1 F | FOR WCDMA | 11 |
| | 3.1.1 | Test Band = WCDMA 1900 | |
| | 3.1.2 | Test Band = WCDMA 1700 | |
| | 3.1.3 | Test Band = WCDMA 850 | |
| 4 | BAND | WIDTH | 13 |
| | 4.1 F | FOR WCDMA | 14 |
| | 4.1.1 | Test Band = WCDMA 1900 | |
| | 4.1.2 | Test Band = WCDMA 1700 | |
| | 4.1.3 | Test Band = WCDMA 850 | 17 |
| 5 | BAND | EDGES COMPLIANCE | 19 |
| | 5.1 F | FOR WCDMA | 19 |
| | 5.1.1 | Test Band = WCDMA 1900 | |
| | 5.1.2 | Test Band = WCDMA 1700 | |
| | 5.1.3 | Test Band = WCDMA 850 | |
| 6 | SPUR | IOUS EMISSION AT ANTENNA TERMINAL | 23 |
| | | For WCDMA | |
| | 6.1.1 | Test Band = WCDMA 1900 | |
| | 6.1.2 | Test Band = WCDMA 1700 | |
| | 6.1.3 | Test Band = WCDMA 850 | |
| _ | | | |
| 7 | FIELD | STRENGTH OF SPURIOUS RADIATION | 36 |
| | 7.1 F | FOR WCDMA | 36 |
| | 7.1.1 | Test Band = WCDMA 1900 | 36 |
| | 7.1.2 | Test Band = WCDMAband 1700 | 37 |
| Th: | 7.1.3 | Test Band = WCDMAband 850 | |

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Report No.: SZEM180400250601

Page: 3 of 44

| 8 | FRE | QUENCY STABILITY | .41 |
|---|-----|---------------------------------|-----|
| | 8.1 | FREQUENCY ERROR VS. VOLTAGE | 41 |
| | 8.2 | Frequency Error VS. Temperature | 42 |



Report No.: SZEM180400250601

Page: 4 of 44

1 Effective (Isotropic) Radiated Power Output Data

Part I - Test Results

| Test Band | Test Mode | Test Channel | Measured[dBm] | EIRP[dBm] | Limit[dBm] | Verdict |
|-----------|-----------------|-----------------|---------------|-----------|------------|---------|
| | | LCH | 22.01 | 21.11 | 33 | PASS |
| WCDMA1900 | UMTS/TM1 | MCH | 22.03 | 21.13 | 33 | PASS |
| | | HCH | 22.04 | 21.14 | 33 | PASS |
| | IA1700 UMTS/TM1 | LCH | 22.19 | 21.09 | 30 | PASS |
| WCDMA1700 | | MCH | 22.22 | 21.12 | 30 | PASS |
| | | HCH | 22.26 | 21.16 | 30 | PASS |

Note:

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

EIRP [dBm] = SGP [dBm] - Cable Loss [dB] + Gain [dBi]

b: SGP=Signal Generator Level

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

Detector: RMS

| Test Band | Test Mode | Test Channel | Measured[dBm] | ERP[dBm] | Limit[dBm] | Verdict |
|-----------|-----------|-----------------|---------------|----------|------------|---------|
| | UMTS/TM1 | LCH | 22.61 | 20.81 | 38.45 | PASS |
| WCDMA850 | | MCH | 22.67 | 20.87 | 38.45 | PASS |
| | | HCH | 22.52 | 20.72 | 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.: SZEM180400250601

Page: 5 of 44

2 Peak-to-Average Ratio

Part I - Test Results

| Test Band | Test Mode | Test Channel | Measured[dB] | Limit [dB] | Verdict |
|-----------|-----------|--------------|--------------|------------|---------|
| | | LCH | 2.99 | 13 | PASS |
| WCDMA1900 | UMTS/TM1 | MCH | 3.04 | 13 | PASS |
| | | HCH | 2.96 | 13 | PASS |
| | UMTS/TM1 | LCH | 2.46 | 13 | PASS |
| WCDMA1700 | | MCH | 3.04 | 13 | PASS |
| | | HCH | 2.72 | 13 | PASS |
| | | LCH | 2.75 | 13 | PASS |
| WCDMA850 | UMTS/TM1 | MCH | 2.96 | 13 | PASS |
| | | HCH | 2.72 | 13 | PASS |



Report No.: SZEM180400250601

Page: 6 of 44

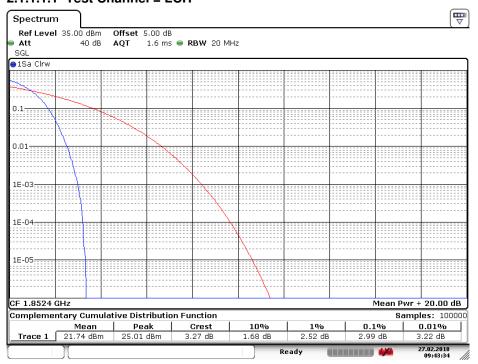
Part II - Test Plots

2.1 For WCDMA

2.1.1 Test Band = WCDMA 1900

2.1.1.1 Test Mode = UMTS/TM1

2.1.1.1.1 Test Channel = LCH



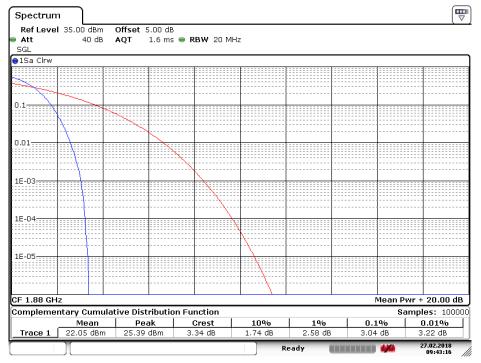
Date: 27.FEB.2018 09:43:35



Report No.: SZEM180400250601

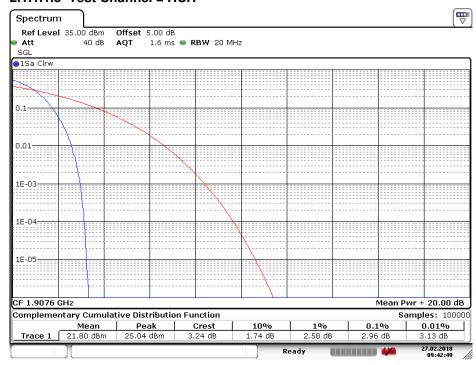
Page: 7 of 44

2.1.1.1.2 Test Channel = MCH



Date: 27.FEB.2018 09:43:16

2.1.1.1.3 Test Channel = HCH



Date: 27.FEB.2018 09:42:50



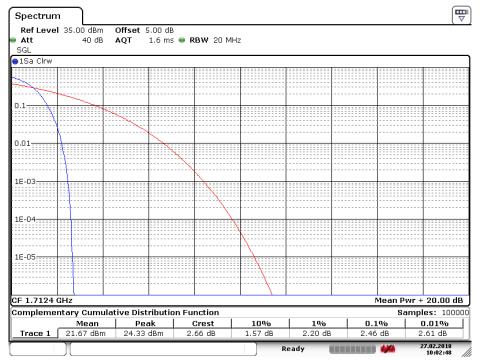
Report No.: SZEM180400250601

Page: 8 of 44

2.1.2 Test Band = WCDMA 1700

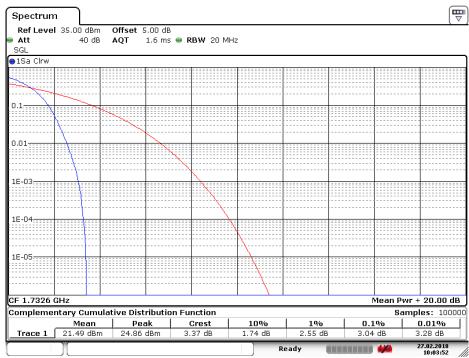
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2.1.2.1.1 Test Channel = LCH



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2.1.2.1.2 Test Channel = MCH



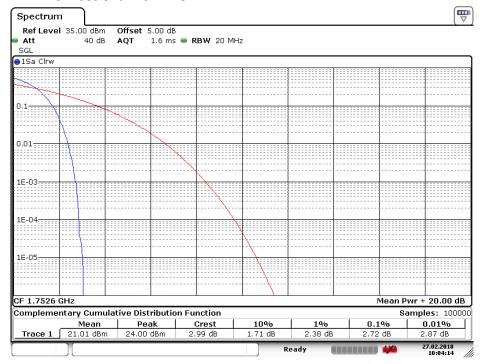
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Report No.: SZEM180400250601

Page: 9 of 44

2.1.2.1.3 Test Channel = HCH

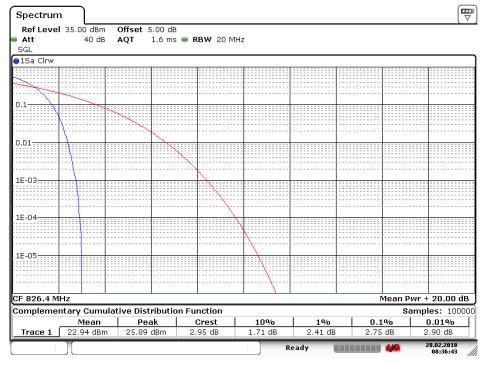


Date: 27.FEB.2018 10:04:14

2.1.3 Test Band = WCDMA 850

2.1.3.1 Test Mode = UMTS/TM1

2.1.3.1.1 Test Channel = LCH



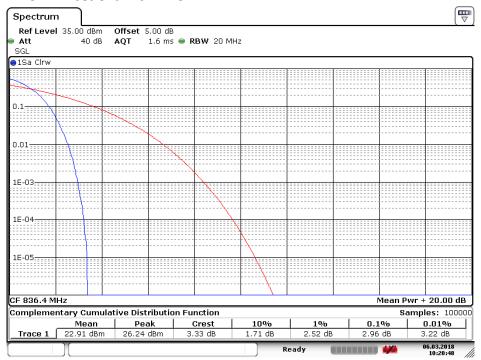
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Report No.: SZEM180400250601

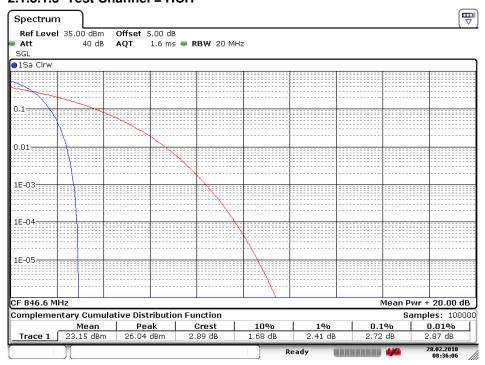
Page: 10 of 44

2.1.3.1.2 Test Channel = MCH



Date: 6.MAR.2018 10:20:49

2.1.3.1.3 Test Channel = HCH



Date: 28.FEB.2018 08:36:06



Report No.: SZEM180400250601

Page: 11 of 44

3 Modulation Characteristics

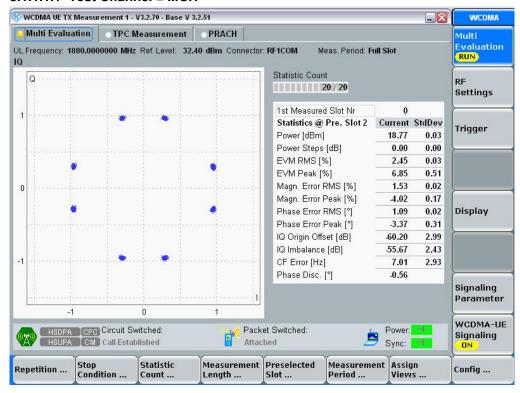
Part I - Test Plots

3.1 For WCDMA

3.1.1 Test Band = WCDMA 1900

3.1.1.1 Test Mode = UMTS/TM1

3.1.1.1.1 Test Channel = MCH





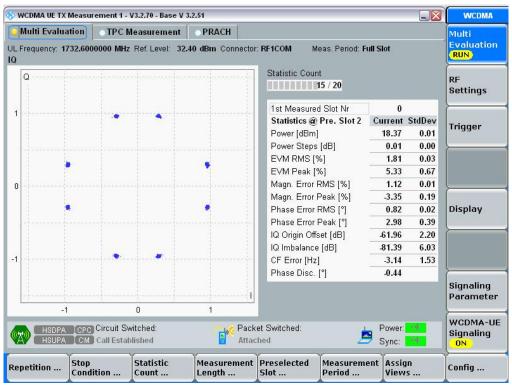
Report No.: SZEM180400250601

Page: 12 of 44

3.1.2 Test Band = WCDMA 1700

3.1.2.1 Test Mode = UMTS /TM1

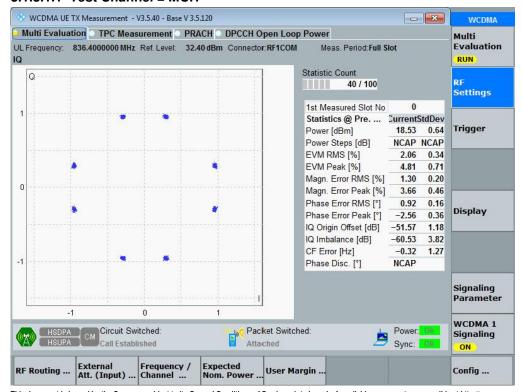
3.1.2.1.1 Test Channel = MCH



3.1.3 Test Band = WCDMA 850

3.1.3.1 Test Mode = UMTS /TM1

3.1.3.1.1 Test Channel = MCH



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Report No.: SZEM180400250601

Page: 13 of 44

4 Bandwidth

Part I - Test Results

| Test Band | Test Mode | Test Channel | Occupied Bandwidth [MHz] | Emission Bandwidth [MHz] | Verdict |
|-----------|-----------|-----------------|--------------------------|-----------------------------|---------|
| | | LCH | 4.15 | 4.69 | PASS |
| WCDMA1900 | UMTS/TM1 | MCH | 4.16 | 4.68 | PASS |
| | | HCH | 4.16 | 4.69 | PASS |
| | UMTS/TM1 | LCH | 4.16 | 4.71 | PASS |
| WCDMA1700 | | MCH | 4.15 | 4.69 | PASS |
| | | HCH | 4.16 | 4.70 | PASS |
| | UMTS/TM1 | LCH | 4.17 | 4.67 | PASS |
| WCDMA850 | | MCH | 4.16 | 4.68 | PASS |
| | | HCH | 4.17 | 4.71 | PASS |



Report No.: SZEM180400250601

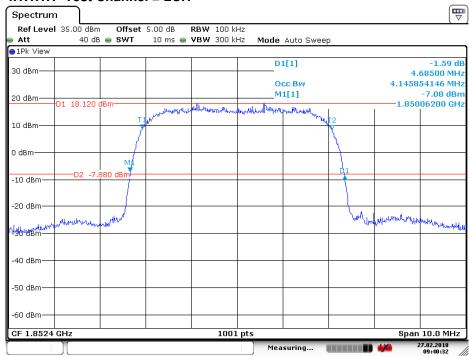
Page: 14 of 44

4.1 For WCDMA

4.1.1 Test Band = WCDMA 1900

4.1.1.1 Test Mode = UMTS/TM1

4.1.1.1.1 Test Channel = LCH



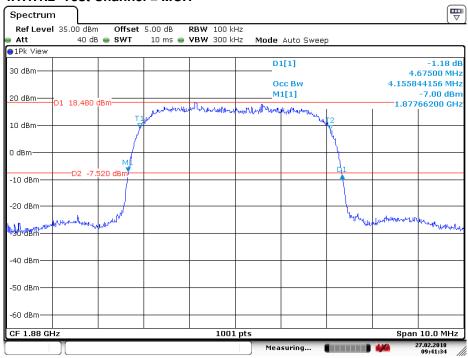
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Report No.: SZEM180400250601

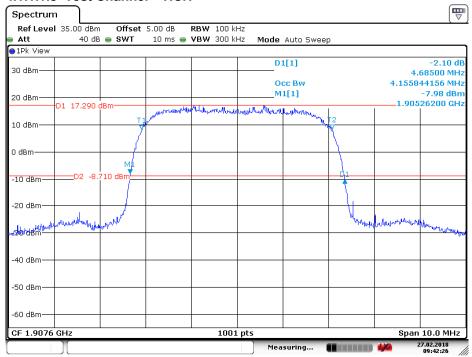
Page: 15 of 44

4.1.1.1.2 Test Channel = MCH



Date: 27.FEB.2018 09:41:34

4.1.1.1.3 Test Channel = HCH



Date: 27.FEB.2018 09:42:26



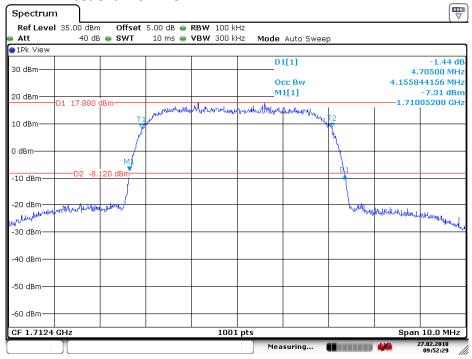
Report No.: SZEM180400250601

Page: 16 of 44

4.1.2 Test Band = WCDMA 1700

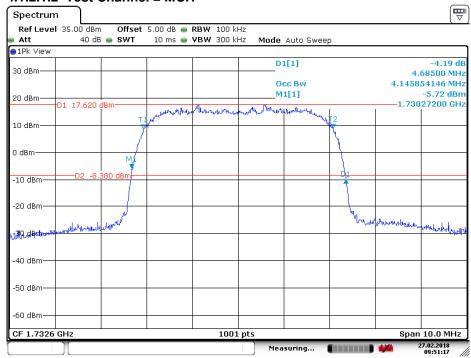
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4.1.2.1.1 Test Channel = LCH



Date: 27.FEB.2018 09:52:30

4.1.2.1.2 Test Channel = MCH



Date: 27.FEB.2018 09:51:17

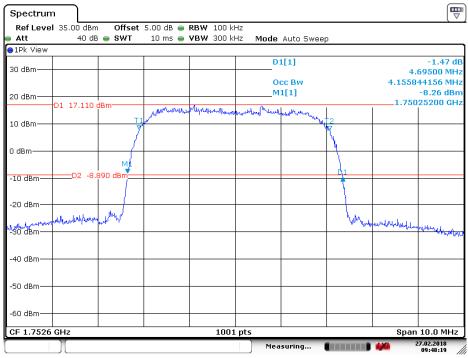
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Report No.: SZEM180400250601

Page: 17 of 44

4.1.2.1.3 Test Channel = HCH

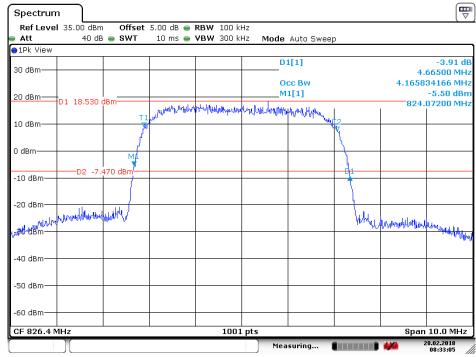


Date: 27.FEB.2018 09:48:19

4.1.3 Test Band = WCDMA 850

4.1.3.1 Test Mode = UMTS/TM1

4.1.3.1.1 Test Channel = LCH



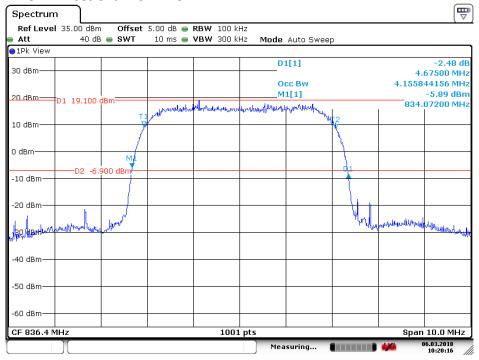
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Report No.: SZEM180400250601

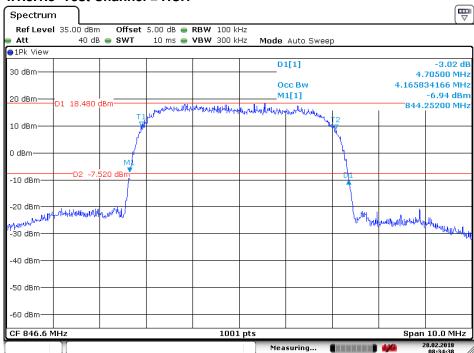
Page: 18 of 44

4.1.3.1.2 Test Channel = MCH



Date: 6.MAR.2018 10:20:16

4.1.3.1.3 Test Channel = HCH



Date: 28.FEB.2018 08:34:38



Report No.: SZEM180400250601

Page: 19 of 44

5 Band Edges Compliance

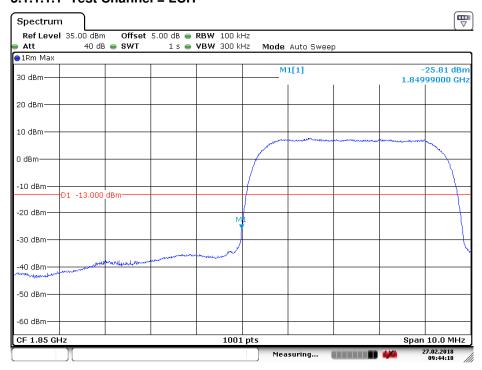
Part I - Test Plots

5.1 For WCDMA

5.1.1 Test Band = WCDMA 1900

5.1.1.1 Test Mode = UMTS/TM1

5.1.1.1.1 Test Channel = LCH



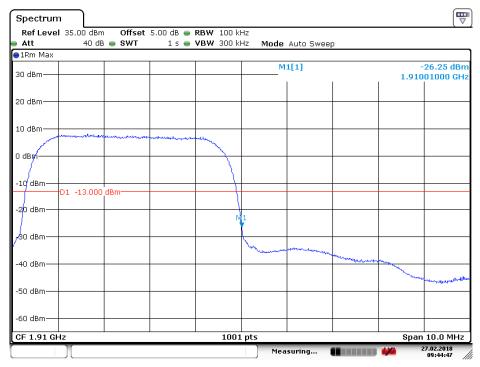
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Report No.: SZEM180400250601

Page: 20 of 44

5.1.1.1.2 Test Channel = HCH

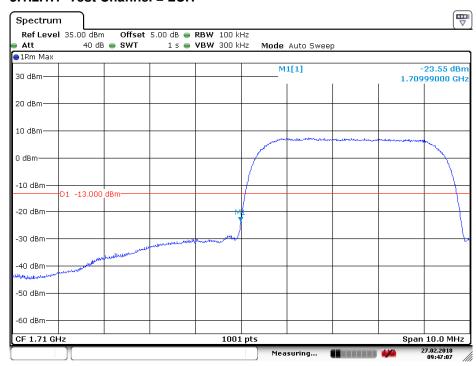


Date: 27.FEB.2018 09:44:47

5.1.2 Test Band = WCDMA 1700

5.1.2.1 Test Mode = UMTS/TM1

5.1.2.1.1 Test Channel = LCH



Date: 27.FEB.2018 09:47:08

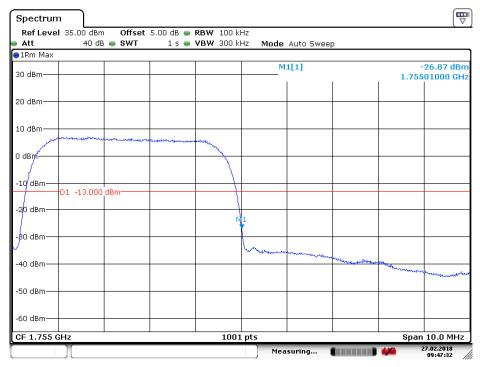
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Report No.: SZEM180400250601

Page: 21 of 44

5.1.2.1.2 Test Channel = HCH



Date: 27.FEB.2018 09:47:32

5.1.3 Test Band = WCDMA 850

5.1.3.1 Test Mode = UMTS/TM1

5.1.3.1.1 Test Channel = LCH



Date: 28.FEB.2018 08:39:38

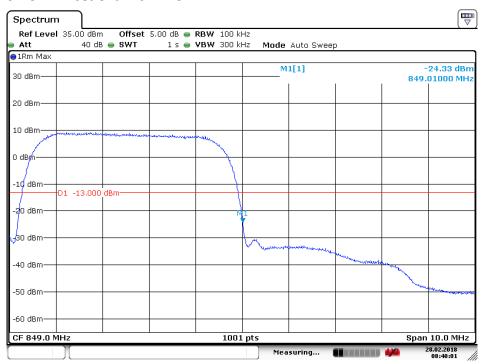
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Report No.: SZEM180400250601

Page: 22 of 44

5.1.3.1.2 Test Channel = HCH



Date: 28.FEB.2018 08:40:02



Report No.: SZEM180400250601

Page: 23 of 44

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.

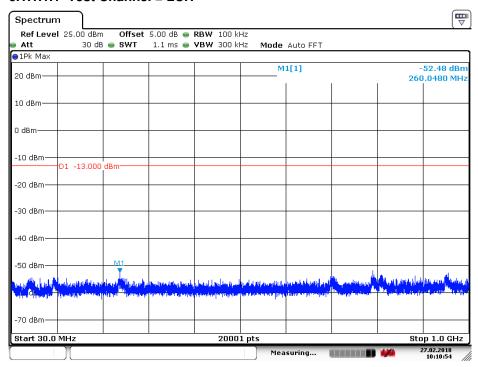
Part I - Test Plots

6.1 For WCDMA

6.1.1 Test Band = WCDMA 1900

6.1.1.1 Test Mode = UMTS/TM1

6.1.1.1.1 Test Channel = LCH

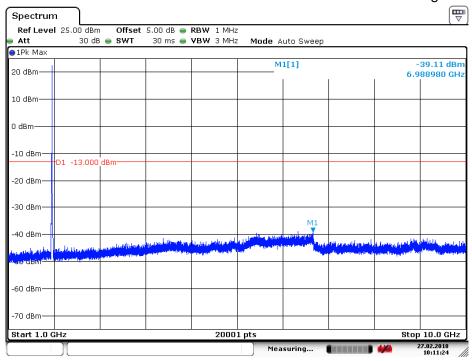


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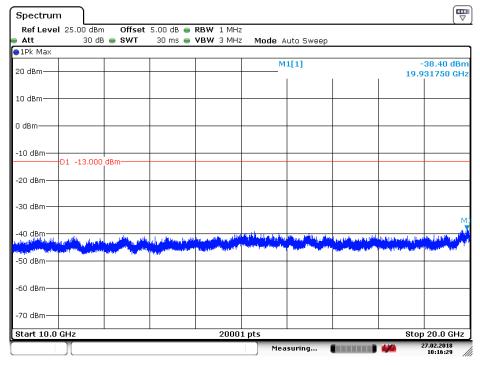


Report No.: SZEM180400250601

Page: 24 of 44



Date: 27.FEB.2018 10:11:25



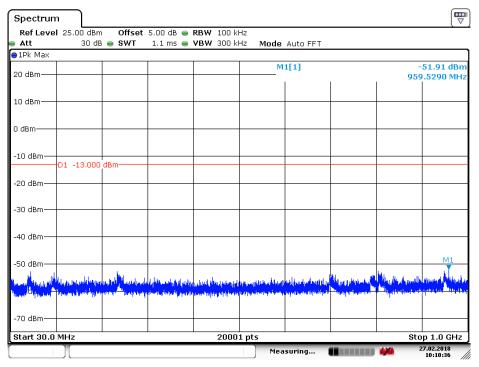
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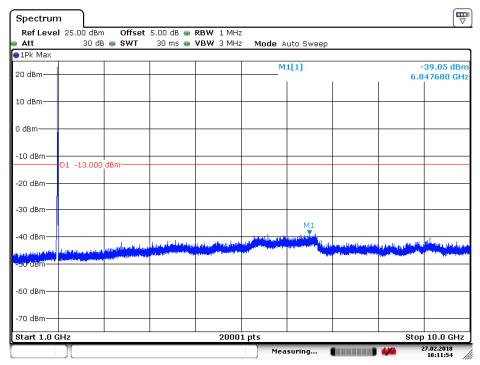
Report No.: SZEM180400250601

Page: 25 of 44

6.1.1.1.2 Test Channel = MCH



Date: 27.FEB.2018 10:10:36

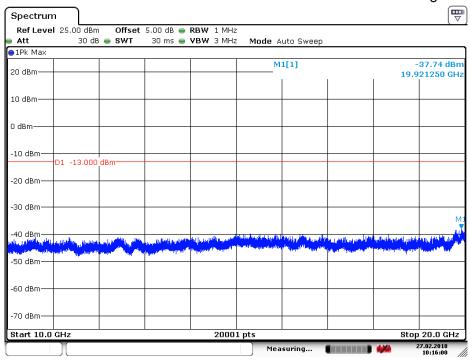


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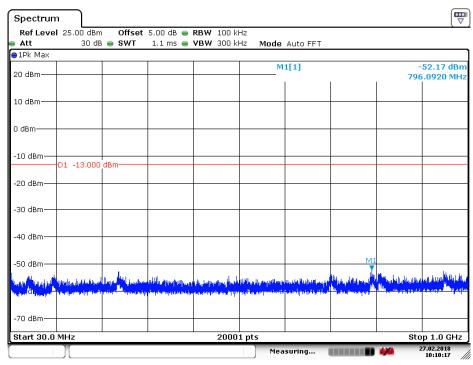
Report No.: SZEM180400250601

Page: 26 of 44



Date: 27.FEB.2018 10:16:00

6.1.1.1.3 Test Channel = HCH

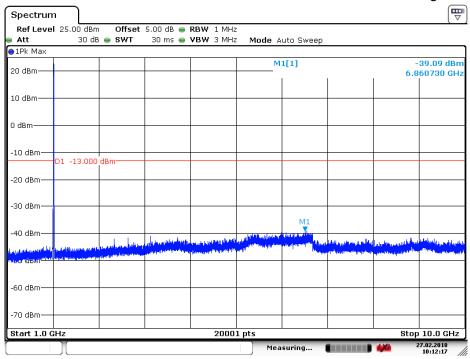


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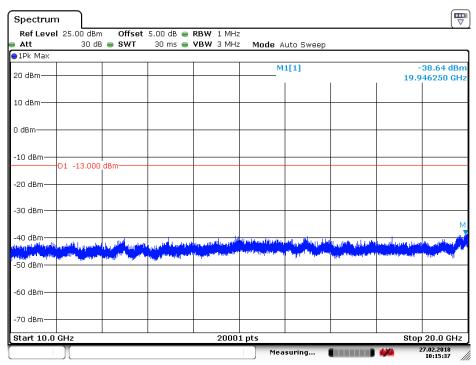


Report No.: SZEM180400250601

Page: 27 of 44



Date: 27.FEB.2018 10:12:17



Date: 27.FEB.2018 10:15:38



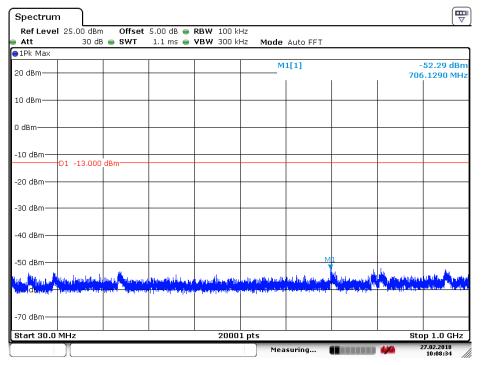
Report No.: SZEM180400250601

Page: 28 of 44

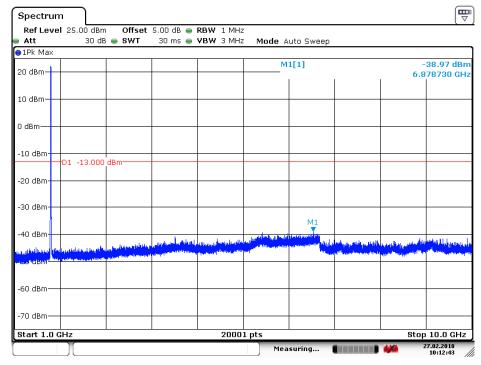
6.1.2 Test Band = WCDMA 1700

6.1.2.1 Test Mode = UMTS/TM1

6.1.2.1.1 Test Channel = LCH



Date: 27.FEB.2018 10:08:34

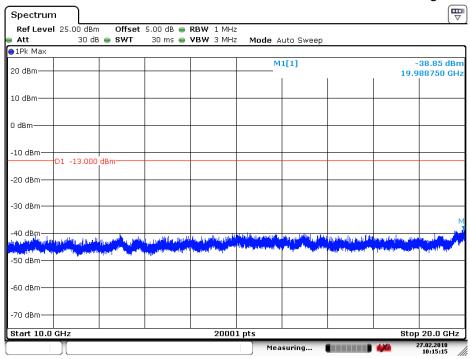


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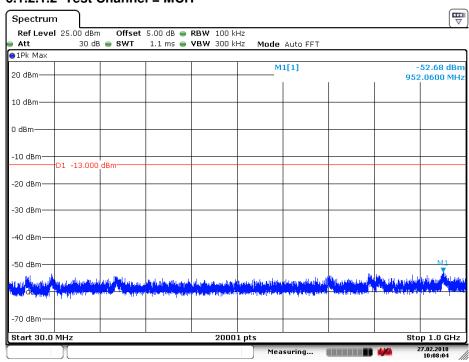
Report No.: SZEM180400250601

Page: 29 of 44



Date: 27.FEB.2018 10:15:15

6.1.2.1.2 Test Channel = MCH

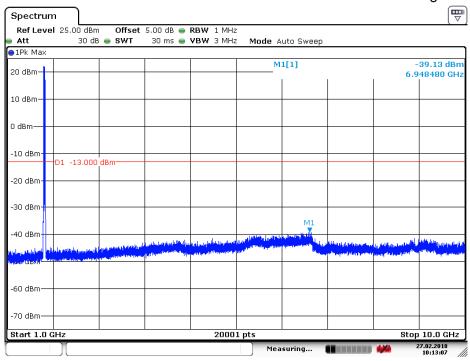


Date: 27.FEB.2018 10:08:05

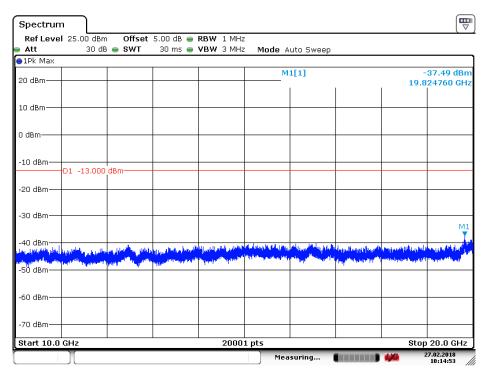


Report No.: SZEM180400250601

Page: 30 of 44



Date: 27.FEB.2018 10:13:08



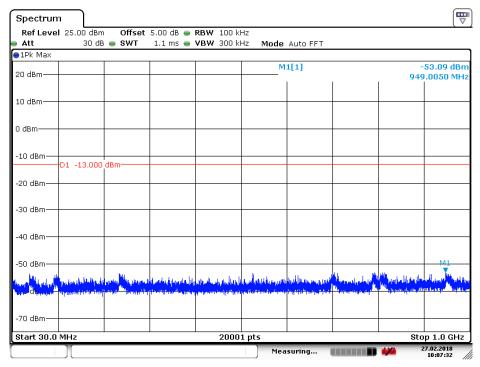
Date: 27.FEB.2018 10:14:53



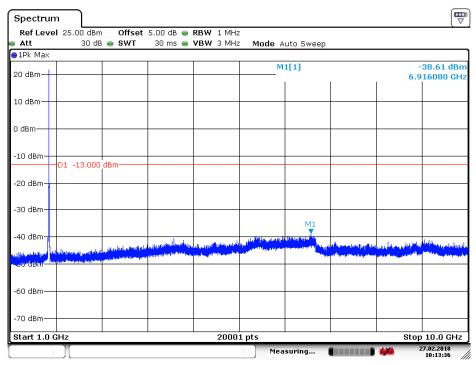
Report No.: SZEM180400250601

Page: 31 of 44

6.1.2.1.3 Test Channel = HCH



Date: 27.FEB.2018 10:07:32

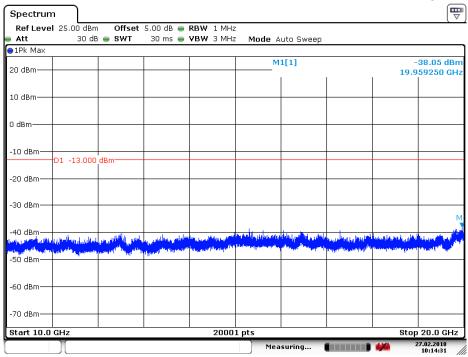


Date: 27.FEB.2018 10:13:36



Report No.: SZEM180400250601

Page: 32 of 44

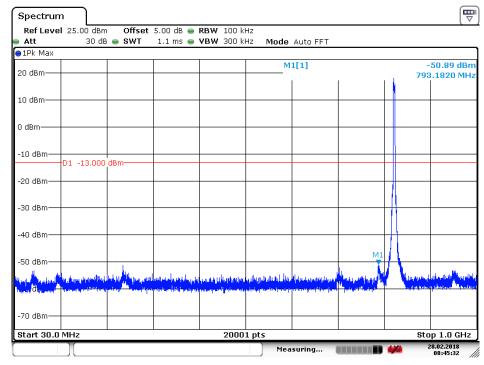


Date: 27.FEB.2018 10:14:32

6.1.3 Test Band = WCDMA 850

6.1.3.1 Test Mode = UMTS/TM1

6.1.3.1.1 Test Channel = LCH

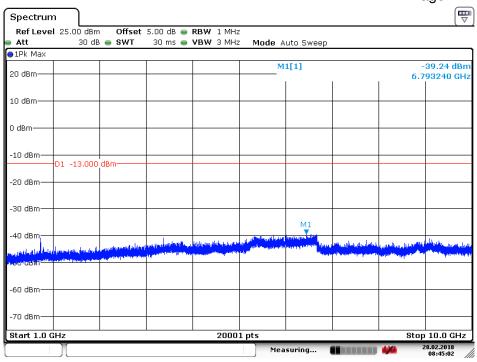


Date: 28.FEB.2018 08:45:31



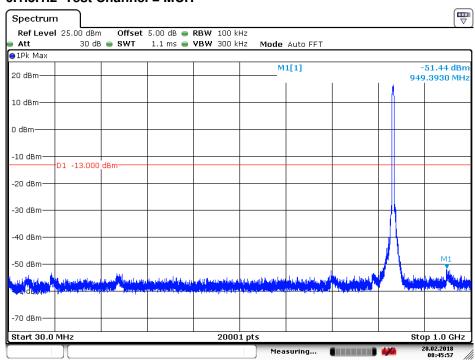
Report No.: SZEM180400250601

Page: 33 of 44



Date: 28.FEB.2018 08:45:03

6.1.3.1.2 Test Channel = MCH

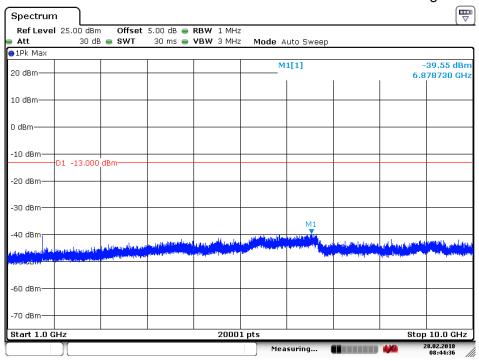


Date: 28.FEB.2018 08:45:57



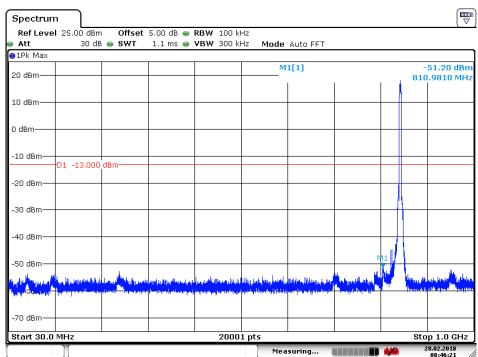
Report No.: SZEM180400250601

Page: 34 of 44



Date: 28.FEB.2018 08:44:36

6.1.3.1.3 Test Channel = HCH

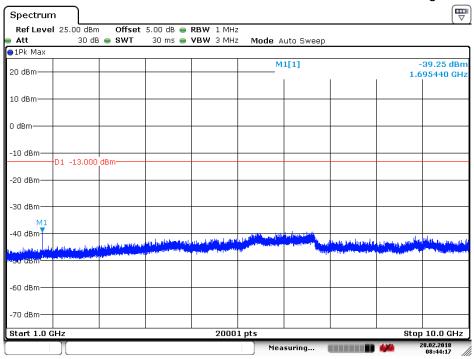


Date: 28.FEB.2018 08:46:22



Report No.: SZEM180400250601

Page: 35 of 44



Date: 28.FEB.2018 08:44:17



Report No.: SZEM180400250601

Page: 36 of 44

7 Field Strength of Spurious Radiation

Part I - Test Plots

7.1 For WCDMA Main Supply

7.1.1 Test Band = WCDMA 1900

7.1.1.1 Test Mode = UMTS/TM1

7.1.1.1.1 Test Channel = LCH

| Frequency (MHz) | Level (dBm) | Limit Line (dBm) | Over Limit (dB) | Polarization |
|-----------------|-------------|------------------|-----------------|--------------|
| 450.320833 | -76.22 | -13.00 | 63.22 | Vertical |
| 855.395833 | -70.12 | -13.00 | 57.12 | Vertical |
| 1718.500000 | -47.00 | -13.00 | 34.00 | Vertical |
| 3714.187500 | -56.43 | -13.00 | 43.43 | Vertical |
| 5637.375000 | -47.46 | -13.00 | 34.46 | Vertical |
| 9242.925000 | -51.02 | -13.00 | 38.02 | Vertical |
| 351.700000 | -78.69 | -13.00 | 65.69 | Horizontal |
| 659.916667 | -73.79 | -13.00 | 60.79 | Horizontal |
| 1635.000000 | -47.89 | -13.00 | 34.89 | Horizontal |
| 3761.962500 | -47.95 | -13.00 | 34.95 | Horizontal |
| 5643.712500 | -43.29 | -13.00 | 30.29 | Horizontal |
| 10627.912500 | -51.43 | -13.00 | 38.43 | Horizontal |

7.1.1.1.2 Test Channel = MCH

| Frequency (MHz) | Level (dBm) | Limit Line (dBm) | Over Limit (dB) | Polarization |
|-----------------|-------------|------------------|-----------------|--------------|
| 260.300000 | -79.16 | -13.00 | 66.16 | Vertical |
| 778.075000 | -70.41 | -13.00 | 57.41 | Vertical |
| 1613.000000 | -48.21 | -13.00 | 35.21 | Vertical |
| 3757.575000 | -53.46 | -13.00 | 40.46 | Vertical |
| 5635.912500 | -45.90 | -13.00 | 32.90 | Vertical |
| 7516.687500 | -50.86 | -13.00 | 37.86 | Vertical |
| 312.700000 | -76.92 | -13.00 | 63.92 | Horizontal |
| 633.104167 | -75.17 | -13.00 | 62.17 | Horizontal |
| 1682.500000 | -47.50 | -13.00 | 34.50 | Horizontal |
| 3757.087500 | -47.19 | -13.00 | 34.19 | Horizontal |
| 5635.912500 | -41.87 | -13.00 | 28.87 | Horizontal |
| 9708.975000 | -51.59 | -13.00 | 38.59 | Horizontal |



Report No.: SZEM180400250601

Page: 37 of 44

7.1.1.1.3 Test Channel = HCH

| Frequency (MHz) | Level (dBm) | Limit Line (dBm) | Over Limit (dB) | Polarization |
|-----------------|-------------|------------------|-----------------|--------------|
| 162.950000 | -84.75 | -13.00 | 71.75 | Vertical |
| 506.008333 | -76.15 | -13.00 | 63.15 | Vertical |
| 1596.500000 | -48.05 | -13.00 | 35.05 | Vertical |
| 3816.075000 | -52.84 | -13.00 | 39.84 | Vertical |
| 5719.275000 | -42.06 | -13.00 | 29.06 | Vertical |
| 9736.275000 | -51.87 | -13.00 | 38.87 | Vertical |
| 315.650000 | -78.59 | -13.00 | 65.59 | Horizontal |
| 640.575000 | -72.87 | -13.00 | 59.87 | Horizontal |
| 1537.000000 | -48.57 | -13.00 | 35.57 | Horizontal |
| 3812.175000 | -48.93 | -13.00 | 35.93 | Horizontal |
| 5718.787500 | -45.44 | -13.00 | 32.44 | Horizontal |
| 9199.050000 | -51.51 | -13.00 | 38.51 | Horizontal |

7.1.2 Test Band = WCDMAband 1700

7.1.2.1 Test Mode = UMTS/TM1

7.1.2.1.1 Test Channel = LCH

| Frequency (MHz) | Level (dBm) | Limit Line (dBm) | Over Limit (dB) | Polarization |
|-----------------|-------------|------------------|-----------------|--------------|
| 439.500000 | -76.92 | -13.00 | 63.92 | Vertical |
| 887.387500 | -69.15 | -13.00 | 56.15 | Vertical |
| 2410.500000 | -44.26 | -13.00 | 31.26 | Vertical |
| 3423.150000 | -52.73 | -13.00 | 39.73 | Vertical |
| 5134.762500 | -48.37 | -13.00 | 35.37 | Vertical |
| 7097.925000 | -52.69 | -13.00 | 39.69 | Vertical |
| 179.700000 | -82.58 | -13.00 | 69.58 | Horizontal |
| 499.637500 | -76.71 | -13.00 | 63.71 | Horizontal |
| 2411.500000 | -44.24 | -13.00 | 31.24 | Horizontal |
| 3422.662500 | -54.20 | -13.00 | 41.20 | Horizontal |
| 5133.300000 | -47.57 | -13.00 | 34.57 | Horizontal |
| 9189.300000 | -51.55 | -13.00 | 38.55 | Horizontal |

7.1.2.1.2 Test Channel = MCH

| Frequency (MHz) | Level (dBm) | Limit Line (dBm) | Over Limit (dB) | Polarization | | | |
|-----------------|-------------|------------------|-----------------|--------------|--|--|--|
| 329.700000 | -76.87 | -13.00 | 63.87 | Vertical | | | |
| 792.375000 | -70.16 | -13.00 | 57.16 | Vertical | | | |
| 2082.000000 | -40.94 | -13.00 | 27.94 | Vertical | | | |
| 3467.025000 | -51.87 | -13.00 | 38.87 | Vertical | | | |
| 5194.237500 | -44.70 | -13.00 | 31.70 | Vertical | | | |



Report No.: SZEM180400250601

Page: 38 of 44

| 8658.412500 | -47.72 | -13.00 | 34.72 | Vertical |
|-------------|--------|--------|-------|------------|
| 241.150000 | -79.82 | -13.00 | 66.82 | Horizontal |
| 670.687500 | -73.41 | -13.00 | 60.41 | Horizontal |
| 2080.500000 | -39.60 | -13.00 | 26.60 | Horizontal |
| 3462.637500 | -48.64 | -13.00 | 35.64 | Horizontal |
| 5193.750000 | -48.88 | -13.00 | 35.88 | Horizontal |
| 8663.287500 | -47.10 | -13.00 | 34.10 | Horizontal |

7.1.2.1.3 Test Channel = HCH

| Frequency (MHz) | Level (dBm) | Limit Line (dBm) | Over Limit (dB) | Polarization |
|-----------------|-------------|------------------|-----------------|--------------|
| 292.350000 | -77.62 | -13.00 | 64.62 | Vertical |
| 686.820833 | -73.96 | -13.00 | 60.96 | Vertical |
| 2100.500000 | -39.45 | -13.00 | 26.45 | Vertical |
| 3503.100000 | -49.91 | -13.00 | 36.91 | Vertical |
| 6087.825000 | -53.02 | -13.00 | 40.02 | Vertical |
| 10650.337500 | -50.89 | -13.00 | 37.89 | Vertical |
| 337.100000 | -77.72 | -13.00 | 64.72 | Horizontal |
| 769.733333 | -71.34 | -13.00 | 58.34 | Horizontal |
| 1470.000000 | -49.53 | -13.00 | 36.53 | Horizontal |
| 3502.612500 | -49.40 | -13.00 | 36.40 | Horizontal |
| 5253.712500 | -51.01 | -13.00 | 38.01 | Horizontal |
| 8769.075000 | -48.60 | -13.00 | 35.60 | Horizontal |

7.1.3 Test Band = WCDMAband 850

7.1.3.1 Test Mode = UMTS/TM1

| Frequency (MHz) | Level (dBm) | Limit Line (dBm) | Over Limit (dB) | Polarization |
|-----------------|-------------|------------------|-----------------|--------------|
| 257.600000 | -89.89 | -13.00 | 76.89 | Vertical |
| 726.741667 | -78.37 | -13.00 | 65.37 | Vertical |
| 1654.000000 | -62.84 | -13.00 | 49.84 | Vertical |
| 2413.000000 | -52.41 | -13.00 | 39.41 | Vertical |
| 4307.475000 | -66.22 | -13.00 | 53.22 | Vertical |
| 9727.012500 | -63.59 | -13.00 | 50.59 | Vertical |
| 294.350000 | -87.87 | -13.00 | 74.87 | Horizontal |
| 727.016667 | -78.88 | -13.00 | 65.88 | Horizontal |
| 1654.500000 | -62.70 | -13.00 | 49.70 | Horizontal |
| 2413.000000 | -54.61 | -13.00 | 41.61 | Horizontal |
| 4127.100000 | -64.88 | -13.00 | 51.88 | Horizontal |
| 6469.537500 | -64.51 | -13.00 | 51.51 | Horizontal |



Report No.: SZEM180400250601

Page: 39 of 44

7.1.3.1.1 Test Channel = MCH

| Frequency (MHz) | Level (dBm) | Limit Line (dBm) | Over Limit (dB) | Polarization |
|-----------------|-------------|------------------|-----------------|--------------|
| 275.000000 | -88.19 | -13.00 | 75.19 | Vertical |
| 535.891667 | -81.82 | -13.00 | 68.82 | Vertical |
| 1198.500000 | -65.81 | -13.00 | 52.81 | Vertical |
| 2413.000000 | -52.36 | -13.00 | 39.36 | Vertical |
| 4471.762500 | -66.71 | -13.00 | 53.71 | Vertical |
| 7241.250000 | -64.00 | -13.00 | 51.00 | Vertical |
| 231.500000 | -89.36 | -13.00 | 76.36 | Horizontal |
| 670.504167 | -79.53 | -13.00 | 66.53 | Horizontal |
| 1476.000000 | -65.52 | -13.00 | 52.52 | Horizontal |
| 2410.000000 | -53.56 | -13.00 | 40.56 | Horizontal |
| 4419.600000 | -66.63 | -13.00 | 53.63 | Horizontal |
| 9248.775000 | -62.68 | -13.00 | 49.68 | Horizontal |

7.1.3.1.2 Test Channel = HCH

| Frequency (MHz) | Level (dBm) | Limit Line (dBm) | Over Limit (dB) | Polarization |
|-----------------|-------------|------------------|-----------------|--------------|
| 292.700000 | -87.40 | -13.00 | 74.40 | Vertical |
| 728.758333 | -78.10 | -13.00 | 65.10 | Vertical |
| 1694.500000 | -62.16 | -13.00 | 49.16 | Vertical |
| 2409.500000 | -55.32 | -13.00 | 42.32 | Vertical |
| 4419.600000 | -66.71 | -13.00 | 53.71 | Vertical |
| 7689.262500 | -64.29 | -13.00 | 51.29 | Vertical |
| 231.250000 | -89.33 | -13.00 | 76.33 | Horizontal |
| 633.104167 | -79.07 | -13.00 | 66.07 | Horizontal |
| 1694.500000 | -61.51 | -13.00 | 48.51 | Horizontal |
| 2410.500000 | -52.97 | -13.00 | 39.97 | Horizontal |
| 4647.750000 | -66.37 | -13.00 | 53.37 | Horizontal |
| 10253.512500 | -63.41 | -13.00 | 50.41 | Horizontal |



Report No.: SZEM180400250601

Page: 40 of 44

7.2 For WCDMA _ Secondary Supply

7.2.1 Test Band = WCDMA 1900

7.2.1.1 Test Mode = UMTS/TM1

7.2.1.1.1 Test Channel = HCH

| Frequency (MHz) | Level (dBm) | Limit Line (dBm) | Over Limit (dB) | Polarization |
|-----------------|-------------|------------------|-----------------|--------------|
| 56.450000 | -69.10 | -13.00 | 56.10 | Horizontal |
| 61.900000 | -69.91 | -13.00 | 56.91 | Horizontal |
| 789.579167 | -70.89 | -13.00 | 57.89 | Horizontal |
| 1558.000000 | -47.18 | -13.00 | 34.18 | Horizontal |
| 3813.637500 | -54.60 | -13.00 | 41.60 | Horizontal |
| 6326.212500 | -53.21 | -13.00 | 40.21 | Horizontal |

7.2.2 Test Band = WCDMAband 1700

7.2.2.1 Test Mode = UMTS/TM1

7.2.2.1.1 Test Channel = MCH

| Frequency (MHz) | Level (dBm) | Limit Line (dBm) | Over Limit (dB) | Polarization |
|-----------------|-------------|------------------|-----------------|--------------|
| 72.550000 | -72.49 | -13.00 | 59.49 | Vertical |
| 104.300000 | -66.49 | -13.00 | 53.49 | Vertical |
| 1252.000000 | -49.32 | -13.00 | 36.32 | Vertical |
| 3462.150000 | -53.07 | -13.00 | 40.07 | Vertical |
| 6022.987500 | -53.23 | -13.00 | 40.23 | Vertical |
| 8658.900000 | -50.69 | -13.00 | 37.69 | Vertical |

7.2.3 Test Band = WCDMAband 850

7.2.3.1 Test Mode = UMTS/TM1

7.2.3.1.1 Test Channel = HCH

| Frequency (MHz) | Level (dBm) | Limit Line (dBm) | Over Limit (dB) | Polarization |
|-----------------|-------------|------------------|-----------------|--------------|
| 64.400000 | -82.04 | -13.00 | 69.04 | Vertical |
| 178.500000 | -79.82 | -13.00 | 66.82 | Vertical |
| 1695.000000 | -63.84 | -13.00 | 50.84 | Vertical |
| 3682.987500 | -63.50 | -13.00 | 50.50 | Vertical |
| 6476.850000 | -64.91 | -13.00 | 51.91 | Vertical |
| 8615.512500 | -64.01 | -13.00 | 51.01 | Vertical |

NOTE:

- 1) The disturbance above 13GHz and below 30MHz was very low, and the above harmonics were the highest point could be found when testing, so only the above harmonics had been displayed.
- 2) Only the worstest case RSE test data of Secondary supply showed .



Report No.: SZEM180400250601

Page: 41 of 44

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 | 3.28 | 0.00177 | PASS |
| | | LCH | TN | VN | -0.36 | -0.00019 | PASS |
| | | | | VH | 4.02 | 0.00217 | PASS |
| WCDMA | | JMTS/TM1 MCH TN HCH TN | MCH TN | VL | 3.84 | 0.00204 | PASS |
| 1900 | UMTS/TM1 | | | VN | 0.75 | 0.00040 | PASS |
| 1900 | | | | VH | -2.37 | -0.00126 | PASS |
| | | | | VL | 1.60 | 0.00084 | PASS |
| | | | TN | VN | -2.64 | -0.00138 | PASS |
| | | | | VH | -4.35 | -0.00228 | PASS |

| Test Band | Test Mode | Test Channel | Test Temp. | Test Volt. | Freq. Error [Hz] | Freq. vs. rated [ppm] | Verdict |
|--------------|-----------|-----------------|---------------|---------------|---------------------|--------------------------|---------|
| | | | | VL | -3.30 | -0.00193 | PASS |
| | | LCH | TN | VN | -1.48 | -0.00086 | PASS |
| | | | | VH | 2.32 | 0.00135 | PASS |
| WCDMA | | | MCH TN | VL | -3.84 | -0.00222 | PASS |
| 1700 | UMTS/TM1 | MCH | | VN | 1.32 | 0.00076 | PASS |
| 1700 | | | | VH | -2.45 | -0.00141 | PASS |
| | | | HCH TN | VL | 1.75 | 0.00100 | PASS |
| | | HCH | | VN | -3.61 | -0.00206 | PASS |
| | | | | VH | 2.80 | 0.00160 | PASS |

| Test Band | Test Mode | Test Channel | Test Temp. | Test Volt. | Freq. Error [Hz] | Freq. vs. rated [ppm] | Verdict |
|--------------|-----------|-----------------|---------------|---------------|---------------------|-----------------------|---------|
| | | | | VL | -3.36 | -0.00407 | PASS |
| | | LCH | TN | VN | -1.48 | -0.00179 | PASS |
| | | | | VH | 2.32 | 0.00281 | PASS |
| WCDMA | | | 1CH TN | VL | -3.84 | -0.00459 | PASS |
| 850 | UMTS/TM1 | MCH | | VN | 0.34 | 0.00041 | PASS |
| 030 | | | | VH | -2.45 | -0.00293 | PASS |
| | | | | VL | 1.75 | 0.00207 | PASS |
| | | HCH TN | TN | VN | -4.33 | -0.00511 | PASS |
| | | | | VH | 2.90 | 0.00343 | PASS |



Report No.: SZEM180400250601

Page: 42 of 44

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 | -2.49 | -0.00134 | PASS | | | |
| | | | | -20 | 1.96 | 0.00106 | PASS | | | |
| | | | | -10 | -5.97 | -0.00322 | PASS | | | |
| | | | | 0 | 0.50 | 0.00027 | PASS | | | |
| | | LCH | VN | 10 | -5.65 | -0.00305 | PASS | | | |
| | | | | 20 | -4.11 | -0.00222 | PASS | | | |
| | | | | 30 | -3.96 | -0.00214 | PASS | | | |
| | | | | 40 | -5.71 | -0.00308 | PASS | | | |
| | | | | 50 | -2.74 | -0.00148 | PASS | | | |
| | | | | -30 | -1.94 | -0.00103 | PASS | | | |
| | | | | -20 | 3.29 | 0.00175 | PASS | | | |
| | | | | | | | | -10 | -4.34 | -0.00231 |
| WCDMA | | | | 0 | 1.76 | 0.00094 | PASS | | | |
| 1900 | UMTS/TM1 | MCH | VN | 10 | -5.10 | -0.00271 | PASS | | | |
| 1900 | | | | 20 | -3.43 | -0.00182 | PASS | | | |
| | | | | 30 | -2.13 | -0.00113 | PASS | | | |
| | | | | 40 | -3.00 | -0.00160 | PASS | | | |
| | | | | 50 | -0.50 | -0.00027 | PASS | | | |
| | | | | -30 | -3.25 | -0.00170 | PASS | | | |
| | | | | -20 | -6.34 | -0.00332 | PASS | | | |
| | | | | -10 | -2.73 | -0.00143 | PASS | | | |
| | | | | 0 | -5.34 | -0.00280 | PASS | | | |
| | | HCH | VN | 10 | 1.07 | 0.00056 | PASS | | | |
| | | | | 20 | -4.03 | -0.00211 | PASS | | | |
| | | | | 30 | -3.22 | -0.00169 | PASS | | | |
| | | | | 40 | -2.84 | -0.00149 | PASS | | | |
| | | | | 50 | -5.07 | -0.00266 | PASS | | | |



Report No.: SZEM180400250601

Page: 43 of 44

| Test Band | Test Mode | Test Channel | Test Volt. | Test Temp. | Freq. Error [Hz] | Freq. vs. rated [ppm] | Verdict | | | |
|--------------|-----------|-----------------|---------------|---------------|---------------------|-----------------------|----------|-------|----------|----------|
| | | | | -30 | -3.13 | -0.00183 | PASS | | | |
| | | | | -20 | -4.23 | -0.00247 | PASS | | | |
| | | | | -10 | 1.38 | 0.00081 | PASS | | | |
| | | | | 0 | -2.47 | -0.00144 | PASS | | | |
| | | LCH | VN | 10 | -2.75 | -0.00161 | PASS | | | |
| | | | | 20 | -4.08 | -0.00238 | PASS | | | |
| | | | | 30 | 1.04 | 0.00061 | PASS | | | |
| | | | | 40 | -3.21 | -0.00187 | PASS | | | |
| | | | | 50 | -6.31 | -0.00368 | PASS | | | |
| | | | | -30 | -5.42 | -0.00313 | PASS | | | |
| | | TM1 MCH | МСН | | -20 | -2.30 | -0.00133 | PASS | | |
| | | | | | | | -10 | -4.42 | -0.00255 | PASS |
| WCDMA | | | | | 0 | 1.89 | 0.00109 | PASS | | |
| 1700 | UMTS/TM1 | | | MCH | MCH | MCH | MCH VN | 10 | -5.35 | -0.00309 |
| 1700 | | | | 20 | -2.15 | -0.00124 | PASS | | | |
| | | | | 30 | -3.07 | -0.00177 | PASS | | | |
| | | | | 40 | 0.13 | 0.00008 | PASS | | | |
| | | | | 50 | -6.14 | -0.00354 | PASS | | | |
| | | | | -30 | -3.45 | -0.00197 | PASS | | | |
| | | | | -20 | 2.42 | 0.00138 | PASS | | | |
| | | | | -10 | 1.45 | 0.00083 | PASS | | | |
| | | | | 0 | -5.30 | -0.00302 | PASS | | | |
| | | HCH | VN | 10 | -6.51 | -0.00371 | PASS | | | |
| | | | | 20 | -4.33 | -0.00247 | PASS | | | |
| | | | | 30 | -2.37 | -0.00135 | PASS | | | |
| | | | | 40 | -2.42 | -0.00138 | PASS | | | |
| | | | | 50 | -6.06 | -0.00346 | PASS | | | |



Report No.: SZEM180400250601

Page: 44 of 44

| | | | _ | | | | |
|--------------|-----------|-----------------|---------------|---------------|---------------------|-----------------------|---------|
| Test Band | Test Mode | Test Channel | Test Volt. | Test Temp. | Freq. Error [Hz] | Freq. vs. rated [ppm] | Verdict |
| WCDMA 850 | UMTS/TM1 | LCH | VN | -30 | 3.04 | 0.00368 | PASS |
| | | | | -20 | 1.97 | 0.00238 | PASS |
| | | | | -10 | -2.64 | -0.00319 | PASS |
| | | | | 0 | 5.32 | 0.00644 | PASS |
| | | | | 10 | 3.00 | 0.00363 | PASS |
| | | | | 20 | -0.45 | -0.00054 | PASS |
| | | | | 30 | 1.44 | 0.00174 | PASS |
| | | | | 40 | 4.33 | 0.00524 | PASS |
| | | | | 50 | -2.08 | -0.00252 | PASS |
| | | МСН | VN | -30 | 1.54 | 0.00184 | PASS |
| | | | | -20 | 3.65 | 0.00436 | PASS |
| | | | | -10 | 0.43 | 0.00051 | PASS |
| | | | | 0 | -5.43 | -0.00649 | PASS |
| | | | | 10 | 4.23 | 0.00506 | PASS |
| | | | | 20 | 3.44 | 0.00411 | PASS |
| | | | | 30 | -4.32 | -0.00516 | PASS |
| | | | | 40 | 1.87 | 0.00224 | PASS |
| | | | | 50 | 2.04 | 0.00244 | PASS |
| | | нсн | VN | -30 | 3.56 | 0.00421 | PASS |
| | | | | -20 | 6.43 | 0.00760 | PASS |
| | | | | -10 | -1.54 | -0.00182 | PASS |
| | | | | 0 | 4.82 | 0.00569 | PASS |
| | | | | 10 | -0.53 | -0.00063 | PASS |
| | | | | 20 | 3.66 | 0.00432 | PASS |
| | | | | 30 | 2.35 | 0.00278 | PASS |
| | | | | 40 | -1.54 | -0.00182 | PASS |
| | | | | 50 | 5.52 | 0.00652 | PASS |

The End