

## Appendix F. FCC 3G SAR Measurement Procedures

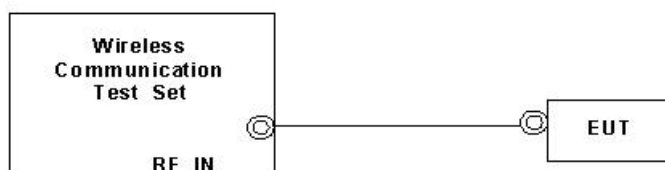
### Conducted Output Power:

The EUT was tested according to the requirements of the FCC 3G procedures and the TS 34.121. The EUT's WCDMA and HSPA function is Release 6 version supporting HSDPA Category 8. A detailed analysis of the output power for all WCDMA, HSDPA modes is provided in the tables below. According to the FCC 3G procedures, handsets with HSDPA should be tested according to Release 6 HSPA test procedures, and the EUT does not support VOIP function over the HSPA function. Device was tested according to procedure KDB941225 - section Release 6 HSPA Data Devices as documented/evaluated in the following table. Power values for HSPA are less than ¼ dB higher than the basic 12.2 kbps RMC configurations in WCDMA or maximum SAR value (0.871 W/kg) in WCDMA mode is less than 75% of SAR limit.

| WCDMA SAR Test mode - Conducted Power |                 |                 |             |             |
|---------------------------------------|-----------------|-----------------|-------------|-------------|
| Mode                                  | Setup           | Cell band (850) |             |             |
|                                       |                 | CH4132          | CH4182      | CH4233      |
|                                       |                 | 826.4 (MHz)     | 836.4 (MHz) | 846.6 (MHz) |
| WCDMA                                 | AMR             | 22.03           | 22.02       | 22.10       |
|                                       | RMC 12.2K       | 22.05           | 22.09       | 22.12       |
|                                       | HSDPA Subtest-1 | 20.76           | 20.92       | 20.83       |
|                                       | HSDPA Subtest-2 | 20.78           | 20.93       | 20.88       |
|                                       | HSDPA Subtest-3 | 20.68           | 20.86       | 20.80       |
|                                       | HSDPA Subtest-4 | 20.69           | 20.83       | 20.83       |

**WCDMA Setup Configuration:**

- a. The EUT was connected to Base Station referred to the drawing of Setup Configuration.
- b. The RF path losses were compensated into the measurements.
- c. A call was established between EUT and Base Station with following setting
  - i. Data rates: Varied from RMC 12.2Kbps
  - ii. RMC Test Loop = Loop Mode 1
  - iii. Power Ctrl Mode = All Up bits
- d. The transmitted maximum output power was recorded.

**Setup Configuration**

**HSDPA Setup Configuration:**

- a. The EUT was connected to Base Station referred to the drawing of Setup Configuration.
- b. The RF path losses were compensated into the measurements.
- c. A call was established between EUT and Base Station with following setting:
  - i. Set Gain Factors ( $\beta_c$  and  $\beta_d$ ) and parameters were set according to each
  - ii. Specific sub-test in the following table, C10.1.4, quoted from the TS 34.121
  - iii. Set RMC12.2Kbps + HSDPA mode.
  - iv. Set Cell Power = -86 dBm
  - v. Set HS-DSCH Configuration Type to FRC (H-set 1, QPSK)
  - vi. Select HSDPA Uplink Parameters
  - vii. Set DeltaACK, DeltaNACK and DeltaCQI = 8
  - viii. Set Ack-Nack Repetition Factor to 3
  - ix. Set CQI Feedback Cycle (k) to 4 ms
  - x. Set CQI Repetition Factor to 2
  - xi. Power Ctrl Mode = All Up bits
- d. The transmitted maximum output power was recorded.

**Table C.10.1.4:  $\beta$  values for transmitter characteristics tests with HS-DPCCH**

| Sub-test | $\beta_c$         | $\beta_d$         | $\beta_d$<br>(SF) | $\beta_c/\beta_d$ | $\beta_{hs}$<br>(Note 1,<br>Note 2) | CM (dB)<br>(Note 3) | MPR (dB)<br>(Note 3) |
|----------|-------------------|-------------------|-------------------|-------------------|-------------------------------------|---------------------|----------------------|
| 1        | 2/15              | 15/15             | 64                | 2/15              | 4/15                                | 0.0                 | 0.0                  |
| 2        | 12/15<br>(Note 4) | 15/15<br>(Note 4) | 64                | 12/15<br>(Note 4) | 24/15                               | 1.0                 | 0.0                  |
| 3        | 15/15             | 8/15              | 64                | 15/8              | 30/15                               | 1.5                 | 0.5                  |
| 4        | 15/15             | 4/15              | 64                | 15/4              | 30/15                               | 1.5                 | 0.5                  |

Note 1:  $\Delta_{ACK}$ ,  $\Delta_{NACK}$  and  $\Delta_{CQI} = 30/15$  with  $\beta_{hs} = 30/15 * \beta_c$ .  
 Note 2: For the HS-DPCCH power mask requirement test in clause 5.2C, 5.7A, and the Error Vector Magnitude (EVM) with HS-DPCCH test in clause 5.13.1A, and HSDPA EVM with phase discontinuity in clause 5.13.1AA,  $\Delta_{ACK}$  and  $\Delta_{NACK} = 30/15$  with  $\beta_{hs} = 30/15 * \beta_c$ , and  $\Delta_{CQI} = 24/15$  with  $\beta_{hs} = 24/15 * \beta_c$ .  
 Note 3: CM = 1 for  $\beta_c/\beta_d = 12/15$ ,  $\beta_{hs}/\beta_c = 24/15$ . For all other combinations of DPDCCH, DPCCH and HS-DPCCH the MPR is based on the relative CM difference. This is applicable for only UEs that support HSDPA in release 6 and later releases.  
 Note 4: For subtest 2 the  $\beta_c/\beta_d$  ratio of 12/15 for the TFC during the measurement period (TF1, TF0) is achieved by setting the signalled gain factors for the reference TFC (TF1, TF1) to  $\beta_c = 11/15$  and  $\beta_d = 15/15$ .

**Setup Configuration**

**HSPA (HSUPA & HSPDA) Setup Configuration:**

- a. The EUT was connected to Base Station referred to the drawing of Setup Configuration.
- b. The RF path losses were compensated into the measurements.
- c. A call was established between EUT and Base Station with following setting \* :
  - i. Call Configs = 5.2B, 5.9B, 5.10B, and 5.13.2B with QPSK
  - ii. Set the Gain Factors ( $\beta_c$  and  $\beta_d$ ) and parameters (AG Index) were set according to each specific sub-test in the following table, C11.1.3, quoted from the TS 34.121
  - iii. Set Cell Power = -86 dBm
  - iv. Set Channel Type = 12.2k + HSPA
  - v. Set UE Target Power
  - vi. Power Ctrl Mode= Alternating bits
  - vii. Set and observe the E-TFCI
  - viii. Confirm that E-TFCI is equal to the target E-TFCI of 75 for sub-test 1, and other subtest's E-TFCI
- d. The transmitted maximum output power was recorded.

**Table C.11.1.3:  $\beta$  values for transmitter characteristics tests with HS-DPCCH and E-DCH**

| Sub-test | $\beta_c$      | $\beta_d$      | $\beta_d$ (SF) | $\beta_c/\beta_d$ | $\beta_{HS}$ (Note 1) | $\beta_{EC}$ | $\beta_{ED}$ (Note 5) (Note 6)                 | $\beta_{ED}$ (SF) | $\beta_{ED}$ (Codes) | CM (dB) (Note 2) | MPR (dB) (Note 2) | AG Index (Note 6) | E-TFCI |
|----------|----------------|----------------|----------------|-------------------|-----------------------|--------------|--|-------------------|----------------------|------------------|-------------------|-------------------|--------|
| 1        | 11/15 (Note 3) | 15/15 (Note 3) | 64             | 11/15 (Note 3)    | 22/15                 | 209/25       | 1309/225                                       | 4                 | 1                    | 1.0              | 0.0               | 20                | 75     |
| 2        | 6/15           | 15/15          | 64             | 6/15              | 12/15                 | 12/15        | 94/75  | 4                 | 1                    | 3.0              | 2.0               | 12                | 67     |
| 3        | 15/15          | 9/15           | 64             | 15/9              | 30/15                 | 30/15        | $\beta_{ED1}$ : 47/15<br>$\beta_{ED2}$ : 47/15 | 4                 | 2                    | 2.0              | 1.0               | 15                | 92     |
| 4        | 2/15           | 15/15          | 64             | 2/15              | 4/15                  | 2/15         | 56/75  | 4                 | 1                    | 3.0              | 2.0               | 17                | 71     |
| 5        | 15/15 (Note 4) | 15/15 (Note 4) | 64             | 15/15 (Note 4)    | 30/15                 | 24/15        | 134/15   | 4                 | 1                    | 1.0              | 0.0               | 21                | 81     |

Note 1:  $\Delta_{ACK}$ ,  $\Delta_{NACK}$  and  $\Delta_{CQI} = 30/15$  with  $\beta_{HS} = 30/15 * \beta_c$ .

Note 2: CM = 1 for  $\beta_c/\beta_d=12/15$ ,  $\beta_{HS}/\beta_c=24/15$ . For all other combinations of DPDCH, DPCCH, HS-DPCCH, E-DPDCH and E-DPCCH the MPR is based on the relative CM difference.

Note 3: For subtest 1 the  $\beta_c/\beta_d$  ratio of 11/15 for the TFC during the measurement period (TF1, TF0) is achieved by setting the signalled gain factors for the reference TFC (TF1, TF1) to  $\beta_c = 10/15$  and  $\beta_d = 15/15$ .

Note 4: For subtest 5 the  $\beta_c/\beta_d$  ratio of 15/15 for the TFC during the measurement period (TF1, TF0) is achieved by setting the signalled gain factors for the reference TFC (TF1, TF1) to  $\beta_c = 14/15$  and  $\beta_d = 15/15$ .

Note 5: In case of testing by UE using E-DPDCH Physical Layer category 1, Sub-test 3 is omitted according to TS25.306 Table 5.1g.

Note 6:  $\beta_{ED}$  can not be set directly, it is set by Absolute Grant Value.

**Setup Configuration**

**Note:** For details settings in the Agilent 8960 test equipment, please refer to the user guide "HSUPA Measurement Guide with 8960 V7.5.0 Release 7 (2007-06) Ver.: v.02.18"

| Call Setup Screen     |  |   |  |  |  |  |  |                            |  |
|-----------------------|--|---|--|--|--|--|--|----------------------------|--|
| Call Control          |  | Active Cell Operating Mode  |  |  |  |  |  | Call Parms                 |  |
| Channel (UARFCN) Info |  | <div>UE Information</div> <div>           INSI:<br/>           INEI:<br/>           Power Class:         </div>   |  |  |  |  |  | Cell Power                 |  |
|                       |  |   |  |  |  |  |  | -86.00                     |  |
| Cell Parameters       |  | <div>UE Expected Open Loop Transmit Power</div> <div>           Initial PRACH TX Power: -11.70 dBm<br/>           Initial DPCCH TX Power: -0.56 dBm         </div>  |  |  |  |  |  | dBm/3.84 MHz               |  |
|                       |  |   |  |  |  |  |  | Channel Type               |  |
| Generator Info        |  | <div>Uplink Parameters</div> <div>           PRACH Preambles: 64<br/>           PRACH Ramping Cycles(MAX): 2<br/>           Available Subchannels (Bit Mask): 000000000001<br/>           Uplink DPCCH Scrambling Code: 0<br/>           Uplink DPCCH Bc/Bd Control: Manual<br/>           Manual Uplink DPCCH Bc: 11<br/>           Manual Uplink DPCCH Bd: 15<br/>           Maximum Uplink Transmit Power Level: 21 dBm         </div> |  |  |  |  |  | 12.2k + HSPA               |  |
|                       |  |   |  |  |  |  |  | Paging Service             |  |
| Uplink Parameters     |  | <div>Value</div> <div>           PRACH Preambles: 64<br/>           PRACH Ramping Cycles(MAX): 2<br/>           Available Subchannels (Bit Mask): 000000000001<br/>           Uplink DPCCH Scrambling Code: 0<br/>           Uplink DPCCH Bc/Bd Control: Manual<br/>           Manual Uplink DPCCH Bc: 11<br/>           Manual Uplink DPCCH Bd: 15<br/>           Maximum Uplink Transmit Power Level: 21 dBm         </div>             |  |  |  |  |  | RB Test Mode               |  |
|                       |  |   |  |  |  |  |  | HSPA Parameters            |  |
| UE Rep Meas           |  | <div>Manual Uplink DPCCH Bc</div> <div>           Manual Uplink DPCCH Bd: 15<br/>           Maximum Uplink Transmit Power Level: 21 dBm         </div>  |  |  |  |  |  | 34.121 Preset Call Configs |  |
|                       |  |   |  |  |  |  |  | Channel (UARFCN) Parms     |  |
| Close Menu            |  | <div>Active Cell</div> <div>           Idle<br/>           Sys Type: UTRA FDD         </div>  |  |  |  |  |  | 1 of 3                     |  |
|                       |  |   |  |  |  |  |  | 2 of 4                     |  |
|                       |  |   |  |  |  |  |  |                            |  |

Example for HSPA Subtest 1, and other subtests following table, C11.1.3  
(Gain Factors ( $\beta_c = 11$  and  $\beta_d = 15$ ))

| Call Setup Screen  |  |  |  |  |  |  |  |                                 |  |
|--------------------|--|--|--|--|--|--|--|---------------------------------|--|
| Call Control       |  | Active Cell Operating Mode   |  |  |  |  |  | Serving Grant                   |  |
| Additional Screens |  | <div>UE Information</div> <div>           INSI:<br/>           INEI:<br/>           Power Class:         </div>  |  |  |  |  |  | AG Mode                         |  |
|                    |  |  |  |  |  |  |  | Single Shot                     |  |
| Cell Parameters    |  | <div>UE Expected Open Loop Transmit Power</div> <div>           Initial PRACH TX Power: -11.70 dBm<br/>           Initial DPCCH TX Power: -0.56 dBm         </div>   |  |  |  |  |  | Single Shot AG                  |  |
|                    |  |  |  |  |  |  |  | 20: (119/15)^2                  |  |
| Generator Info     |  | <div>Call Processing Status</div> <div>           Current Service Type: None<br/>           MM Status: Abs Single Shot AG<br/>           GMM State: Index 15: (67/15)^2<br/>           Current DPCCH: Index 16: (75/15)^2<br/>           HSUPA In: Index 17: (84/15)^2<br/>           UE Rep E-DCH: Index 18: (95/15)^2<br/>           Last Received: Index 19: (106/15)^2<br/>           Throughput: Index 20: (119/15)^2<br/>           ACKs Transmitted:         </div> |  |  |  |  |  | Send Single Shot Absolute Grant |  |
|                    |  |  |  |  |  |  |  | Send Relative Grant Up          |  |
| Uplink Parameters  |  | <div>Information</div> <div>           DPCCH Cat: ----<br/>           Ratio: ---- %<br/>           kbps<br/>           Transmitted: ----         </div>  |  |  |  |  |  | Send Relative Grant Down        |  |
|                    |  |  |  |  |  |  |  | Return                          |  |
| UE Rep Meas        |  | <div>Active Cell</div> <div>           Idle<br/>           Sys Type: UTRA FDD         </div>   |  |  |  |  |  | 1 of 2                          |  |
|                    |  |  |  |  |  |  |  | 2 of 4                          |  |
| Trig Output Setup  |  |  |  |  |  |  |  |                                 |  |
| Sys Frame Clock    |  |  |  |  |  |  |  |                                 |  |

Example: AG – Index = 20 for HSPA subtest 1

| Call Setup Screen  |   |     |      |     |      |     |      |               |      |     |     |      |      |      |      |      |      |    |    |     |    |     |      |     |      |     |      |    |    |     |    |     |      |     |      |     |      |    |    |     |    |     |      |     |      |     |      |    |    |     |    |     |      |     |      |     |      |    |    |     |      |     |      |     |      |     |      |    |    |     |      |     |      |     |      |     |      |    |    |     |      |     |      |     |      |     |      |    |    |     |      |     |      |     |      |     |      |     |    |     |      |     |      |     |      |     |      |                  |
|--|---|-----|------|-----|------|-----|------|---------------|------|-----|-----|------|------|------|------|------|------|----|----|-----|----|-----|------|-----|------|-----|------|----|----|-----|----|-----|------|-----|------|-----|------|----|----|-----|----|-----|------|-----|------|-----|------|----|----|-----|----|-----|------|-----|------|-----|------|----|----|-----|------|-----|------|-----|------|-----|------|----|----|-----|------|-----|------|-----|------|-----|------|----|----|-----|------|-----|------|-----|------|-----|------|----|----|-----|------|-----|------|-----|------|-----|------|-----|----|-----|------|-----|------|-----|------|-----|------|------------------|
| Screen Ctrl  | Recorded E-TFCI Information   |     |      |     |      |     |      | E-TFCI Record |      |     |     |      |      |      |      |      |      |    |    |     |    |     |      |     |      |     |      |    |    |     |    |     |      |     |      |     |      |    |    |     |    |     |      |     |      |     |      |    |    |     |    |     |      |     |      |     |      |    |    |     |      |     |      |     |      |     |      |    |    |     |      |     |      |     |      |     |      |    |    |     |      |     |      |     |      |     |      |    |    |     |      |     |      |     |      |     |      |     |    |     |      |     |      |     |      |     |      |                  |
| Channel (UARFCN) Info  | <div style="border: 1px solid black; padding: 5px;"> <div style="background-color: #e0e0e0; text-align: center; margin-bottom: 5px;">E-TFCI Recording State</div> <div style="text-align: center; margin-bottom: 5px;">Idle</div> <div style="background-color: #e0e0e0; text-align: center; margin-bottom: 5px;">Recorded E-TFCI Values</div> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>1:</td><td>75</td><td>11:</td><td>75</td><td>21:</td><td>----</td><td>31:</td><td>----</td><td>41:</td><td>----</td></tr> <tr><td>2:</td><td>75</td><td>12:</td><td>75</td><td>22:</td><td>----</td><td>32:</td><td>----</td><td>42:</td><td>----</td></tr> <tr><td>3:</td><td>75</td><td>13:</td><td>75</td><td>23:</td><td>----</td><td>33:</td><td>----</td><td>43:</td><td>----</td></tr> <tr><td>4:</td><td>75</td><td>14:</td><td>75</td><td>24:</td><td>----</td><td>34:</td><td>----</td><td>44:</td><td>----</td></tr> <tr><td>5:</td><td>75</td><td>15:</td><td>75</td><td>25:</td><td>----</td><td>35:</td><td>----</td><td>45:</td><td>----</td></tr> <tr><td>6:</td><td>75</td><td>16:</td><td>----</td><td>26:</td><td>----</td><td>36:</td><td>----</td><td>46:</td><td>----</td></tr> <tr><td>7:</td><td>75</td><td>17:</td><td>----</td><td>27:</td><td>----</td><td>37:</td><td>----</td><td>47:</td><td>----</td></tr> <tr><td>8:</td><td>75</td><td>18:</td><td>----</td><td>28:</td><td>----</td><td>38:</td><td>----</td><td>48:</td><td>----</td></tr> <tr><td>9:</td><td>75</td><td>19:</td><td>----</td><td>29:</td><td>----</td><td>39:</td><td>----</td><td>49:</td><td>----</td></tr> <tr><td>10:</td><td>75</td><td>20:</td><td>----</td><td>30:</td><td>----</td><td>40:</td><td>----</td><td>50:</td><td>----</td></tr> </table> <div style="text-align: center; font-size: 1.2em; margin-top: 10px;">15/15</div> </div> |     |      |     |      |     |      | 1:            | 75   | 11: | 75  | 21:  | ---- | 31:  | ---- | 41:  | ---- | 2: | 75 | 12: | 75 | 22: | ---- | 32: | ---- | 42: | ---- | 3: | 75 | 13: | 75 | 23: | ---- | 33: | ---- | 43: | ---- | 4: | 75 | 14: | 75 | 24: | ---- | 34: | ---- | 44: | ---- | 5: | 75 | 15: | 75 | 25: | ---- | 35: | ---- | 45: | ---- | 6: | 75 | 16: | ---- | 26: | ---- | 36: | ---- | 46: | ---- | 7: | 75 | 17: | ---- | 27: | ---- | 37: | ---- | 47: | ---- | 8: | 75 | 18: | ---- | 28: | ---- | 38: | ---- | 48: | ---- | 9: | 75 | 19: | ---- | 29: | ---- | 39: | ---- | 49: | ---- | 10: | 75 | 20: | ---- | 30: | ---- | 40: | ---- | 50: | ---- | E-TFCI Rec Count |
| 1:   |   |     |      |     |      |     |      | 75            | 11:  | 75  | 21: | ---- | 31:  | ---- | 41:  | ---- |      |    |    |     |    |     |      |     |      |     |      |    |    |     |    |     |      |     |      |     |      |    |    |     |    |     |      |     |      |     |      |    |    |     |    |     |      |     |      |     |      |    |    |     |      |     |      |     |      |     |      |    |    |     |      |     |      |     |      |     |      |    |    |     |      |     |      |     |      |     |      |    |    |     |      |     |      |     |      |     |      |     |    |     |      |     |      |     |      |     |      |                  |
| 2:   |   |     |      |     |      |     |      | 75            | 12:  | 75  | 22: | ---- | 32:  | ---- | 42:  | ---- |      |    |    |     |    |     |      |     |      |     |      |    |    |     |    |     |      |     |      |     |      |    |    |     |    |     |      |     |      |     |      |    |    |     |    |     |      |     |      |     |      |    |    |     |      |     |      |     |      |     |      |    |    |     |      |     |      |     |      |     |      |    |    |     |      |     |      |     |      |     |      |    |    |     |      |     |      |     |      |     |      |     |    |     |      |     |      |     |      |     |      |                  |
| 3:   |   |     |      |     |      |     |      | 75            | 13:  | 75  | 23: | ---- | 33:  | ---- | 43:  | ---- |      |    |    |     |    |     |      |     |      |     |      |    |    |     |    |     |      |     |      |     |      |    |    |     |    |     |      |     |      |     |      |    |    |     |    |     |      |     |      |     |      |    |    |     |      |     |      |     |      |     |      |    |    |     |      |     |      |     |      |     |      |    |    |     |      |     |      |     |      |     |      |    |    |     |      |     |      |     |      |     |      |     |    |     |      |     |      |     |      |     |      |                  |
| 4:   | 75  | 14: | 75   | 24: | ---- | 34: | ---- | 44:           | ---- |     |     |      |      |      |      |      |      |    |    |     |    |     |      |     |      |     |      |    |    |     |    |     |      |     |      |     |      |    |    |     |    |     |      |     |      |     |      |    |    |     |    |     |      |     |      |     |      |    |    |     |      |     |      |     |      |     |      |    |    |     |      |     |      |     |      |     |      |    |    |     |      |     |      |     |      |     |      |    |    |     |      |     |      |     |      |     |      |     |    |     |      |     |      |     |      |     |      |                  |
| 5:   | 75  | 15: | 75   | 25: | ---- | 35: | ---- | 45:           | ---- |     |     |      |      |      |      |      |      |    |    |     |    |     |      |     |      |     |      |    |    |     |    |     |      |     |      |     |      |    |    |     |    |     |      |     |      |     |      |    |    |     |    |     |      |     |      |     |      |    |    |     |      |     |      |     |      |     |      |    |    |     |      |     |      |     |      |     |      |    |    |     |      |     |      |     |      |     |      |    |    |     |      |     |      |     |      |     |      |     |    |     |      |     |      |     |      |     |      |                  |
| 6:   | 75  | 16: | ---- | 26: | ---- | 36: | ---- | 46:           | ---- |     |     |      |      |      |      |      |      |    |    |     |    |     |      |     |      |     |      |    |    |     |    |     |      |     |      |     |      |    |    |     |    |     |      |     |      |     |      |    |    |     |    |     |      |     |      |     |      |    |    |     |      |     |      |     |      |     |      |    |    |     |      |     |      |     |      |     |      |    |    |     |      |     |      |     |      |     |      |    |    |     |      |     |      |     |      |     |      |     |    |     |      |     |      |     |      |     |      |                  |
| 7:   | 75  | 17: | ---- | 27: | ---- | 37: | ---- | 47:           | ---- |     |     |      |      |      |      |      |      |    |    |     |    |     |      |     |      |     |      |    |    |     |    |     |      |     |      |     |      |    |    |     |    |     |      |     |      |     |      |    |    |     |    |     |      |     |      |     |      |    |    |     |      |     |      |     |      |     |      |    |    |     |      |     |      |     |      |     |      |    |    |     |      |     |      |     |      |     |      |    |    |     |      |     |      |     |      |     |      |     |    |     |      |     |      |     |      |     |      |                  |
| 8:   | 75  | 18: | ---- | 28: | ---- | 38: | ---- | 48:           | ---- |     |     |      |      |      |      |      |      |    |    |     |    |     |      |     |      |     |      |    |    |     |    |     |      |     |      |     |      |    |    |     |    |     |      |     |      |     |      |    |    |     |    |     |      |     |      |     |      |    |    |     |      |     |      |     |      |     |      |    |    |     |      |     |      |     |      |     |      |    |    |     |      |     |      |     |      |     |      |    |    |     |      |     |      |     |      |     |      |     |    |     |      |     |      |     |      |     |      |                  |
| 9:   | 75  | 19: | ---- | 29: | ---- | 39: | ---- | 49:           | ---- |     |     |      |      |      |      |      |      |    |    |     |    |     |      |     |      |     |      |    |    |     |    |     |      |     |      |     |      |    |    |     |    |     |      |     |      |     |      |    |    |     |    |     |      |     |      |     |      |    |    |     |      |     |      |     |      |     |      |    |    |     |      |     |      |     |      |     |      |    |    |     |      |     |      |     |      |     |      |    |    |     |      |     |      |     |      |     |      |     |    |     |      |     |      |     |      |     |      |                  |
| 10:  | 75  | 20: | ---- | 30: | ---- | 40: | ---- | 50:           | ---- |     |     |      |      |      |      |      |      |    |    |     |    |     |      |     |      |     |      |    |    |     |    |     |      |     |      |     |      |    |    |     |    |     |      |     |      |     |      |    |    |     |    |     |      |     |      |     |      |    |    |     |      |     |      |     |      |     |      |    |    |     |      |     |      |     |      |     |      |    |    |     |      |     |      |     |      |     |      |    |    |     |      |     |      |     |      |     |      |     |    |     |      |     |      |     |      |     |      |                  |
|  | 15  |     |      |     |      |     |      |               |      |     |     |      |      |      |      |      |      |    |    |     |    |     |      |     |      |     |      |    |    |     |    |     |      |     |      |     |      |    |    |     |    |     |      |     |      |     |      |    |    |     |    |     |      |     |      |     |      |    |    |     |      |     |      |     |      |     |      |    |    |     |      |     |      |     |      |     |      |    |    |     |      |     |      |     |      |     |      |    |    |     |      |     |      |     |      |     |      |     |    |     |      |     |      |     |      |     |      |                  |
| HSPA Information   | Start Recording E-TFCI Values   |     |      |     |      |     |      |               |      |     |     |      |      |      |      |      |      |    |    |     |    |     |      |     |      |     |      |    |    |     |    |     |      |     |      |     |      |    |    |     |    |     |      |     |      |     |      |    |    |     |    |     |      |     |      |     |      |    |    |     |      |     |      |     |      |     |      |    |    |     |      |     |      |     |      |     |      |    |    |     |      |     |      |     |      |     |      |    |    |     |      |     |      |     |      |     |      |     |    |     |      |     |      |     |      |     |      |                  |
| E-TFCI Recording Information   |   |     |      |     |      |     |      |               |      |     |     |      |      |      |      |      |      |    |    |     |    |     |      |     |      |     |      |    |    |     |    |     |      |     |      |     |      |    |    |     |    |     |      |     |      |     |      |    |    |     |    |     |      |     |      |     |      |    |    |     |      |     |      |     |      |     |      |    |    |     |      |     |      |     |      |     |      |    |    |     |      |     |      |     |      |     |      |    |    |     |      |     |      |     |      |     |      |     |    |     |      |     |      |     |      |     |      |                  |
| Clear UE Info  | Send Step Up TPC Bit Pattern  |     |      |     |      |     |      |               |      |     |     |      |      |      |      |      |      |    |    |     |    |     |      |     |      |     |      |    |    |     |    |     |      |     |      |     |      |    |    |     |    |     |      |     |      |     |      |    |    |     |    |     |      |     |      |     |      |    |    |     |      |     |      |     |      |     |      |    |    |     |      |     |      |     |      |     |      |    |    |     |      |     |      |     |      |     |      |    |    |     |      |     |      |     |      |     |      |     |    |     |      |     |      |     |      |     |      |                  |
| Return   | Send Step Down TPC Bit Pattern  |     |      |     |      |     |      |               |      |     |     |      |      |      |      |      |      |    |    |     |    |     |      |     |      |     |      |    |    |     |    |     |      |     |      |     |      |    |    |     |    |     |      |     |      |     |      |    |    |     |    |     |      |     |      |     |      |    |    |     |      |     |      |     |      |     |      |    |    |     |      |     |      |     |      |     |      |    |    |     |      |     |      |     |      |     |      |    |    |     |      |     |      |     |      |     |      |     |    |     |      |     |      |     |      |     |      |                  |
|  | Return  |     |      |     |      |     |      |               |      |     |     |      |      |      |      |      |      |    |    |     |    |     |      |     |      |     |      |    |    |     |    |     |      |     |      |     |      |    |    |     |    |     |      |     |      |     |      |    |    |     |    |     |      |     |      |     |      |    |    |     |      |     |      |     |      |     |      |    |    |     |      |     |      |     |      |     |      |    |    |     |      |     |      |     |      |     |      |    |    |     |      |     |      |     |      |     |      |     |    |     |      |     |      |     |      |     |      |                  |
| <div style="display: flex; justify-content: space-between;"> <div> <input type="checkbox"/> Background         </div> <div>           Active Cell<br/> <b>Connected</b> </div> <div>           Sys Type: UTRA FDD         </div> </div> <div style="display: flex; justify-content: space-between; margin-top: 5px;"> <div>IntRef</div> <div>Offset</div> </div> |   |     |      |     |      |     |      |               |      |     |     |      |      |      |      |      |      |    |    |     |    |     |      |     |      |     |      |    |    |     |    |     |      |     |      |     |      |    |    |     |    |     |      |     |      |     |      |    |    |     |    |     |      |     |      |     |      |    |    |     |      |     |      |     |      |     |      |    |    |     |      |     |      |     |      |     |      |    |    |     |      |     |      |     |      |     |      |    |    |     |      |     |      |     |      |     |      |     |    |     |      |     |      |     |      |     |      |                  |

**Example: Confirm that E-TFCI is equal to the target E-TFCI of 75 for sub-test 1**



**Reference:**

- [1] 941225 D01 SAR test for 3G devices v02, SAR Measurement Procedures for 3G Devices CDMA 2000/Ev-Do/WCDMA/HSDPA/HSPA Oct. 2007 Laboratory Division Office of Engineering and Technology Federal Communications Commission
- [2.] TS 34.121 Universal Mobile Telecommunications System (UMTS); Terminal Conformance Specification, Radio Transmission and Reception (FDD)
- [3.] HSUPA Measurement Guide with 8960 V7.5.0 Release 7 (2007-06) Ver.: v.02.18