

EX3DV4- SN:7307

May 29, 2020

## DASY/EASY - Parameters of Probe: EX3DV4 - SN:7307

### Sensor Model Parameters

|   | C1<br>fF | C2<br>fF | $\alpha$<br>V <sup>-1</sup> | T1<br>ms.V <sup>-2</sup> | T2<br>ms.V <sup>-1</sup> | T3<br>ms | T4<br>V <sup>-2</sup> | T5<br>V <sup>-1</sup> | T6   |
|---|----------|----------|-----------------------------|--------------------------|--------------------------|----------|-----------------------|-----------------------|------|
| X | 35.6     | 260.75   | 34.45                       | 5.76                     | 0.00                     | 4.90     | 1.28                  | 0.00                  | 1.00 |
| Y | 41.0     | 304.44   | 35.07                       | 7.30                     | 0.00                     | 5.01     | 1.33                  | 0.09                  | 1.01 |
| Z | 40.7     | 299.93   | 34.68                       | 9.21                     | 0.00                     | 4.91     | 0.98                  | 0.11                  | 1.00 |

### Other Probe Parameters

|   |            |
|---|------------|
| Sensor Arrangement                            | Triangular |
| Connector Angle (°)                           | 23.6       |
| Mechanical Surface Detection Mode             | enabled    |
| Optical Surface Detection Mode                | disabled   |
| Probe Overall Length                          | 337 mm     |
| Probe Body Diameter                           | 10 mm      |
| Tip Length                                    | 9 mm       |
| Tip Diameter                                  | 2.5 mm     |
| Probe Tip to Sensor X Calibration Point       | 1 mm       |
| Probe Tip to Sensor Y Calibration Point       | 1 mm       |
| Probe Tip to Sensor Z Calibration Point       | 1 mm       |
| Recommended Measurement Distance from Surface | 1.4 mm     |

## DASY/EASY - Parameters of Probe: EX3DV4 - SN:7307

### Calibration Parameter Determined in Head Tissue Simulating Media

| f (MHz) <sup>C</sup> | Relative Permittivity <sup>F</sup> | Conductivity (S/m) <sup>F</sup> | ConvF X | ConvF Y | ConvF Z | Alpha <sup>G</sup> | Depth <sup>G</sup> (mm) | Unc (k=2) |
|----------------------|------------------------------------|---------------------------------|---------|---------|---------|--------------------|-------------------------|-----------|
| 64                   | 54.2                               | 0.75                            | 14.38   | 14.38   | 14.38   | 0.00               | 1.00                    | ± 13.3 %  |
| 150                  | 52.3                               | 0.76                            | 13.49   | 13.49   | 13.49   | 0.00               | 1.00                    | ± 13.3 %  |
| 300                  | 45.3                               | 0.87                            | 11.83   | 11.83   | 11.83   | 0.10               | 1.20                    | ± 13.3 %  |
| 450                  | 43.5                               | 0.87                            | 11.16   | 11.16   | 11.16   | 0.12               | 1.30                    | ± 13.3 %  |
| 750                  | 41.9                               | 0.89                            | 10.41   | 10.41   | 10.41   | 0.55               | 0.80                    | ± 12.0 %  |
| 835                  | 41.5                               | 0.90                            | 10.20   | 10.20   | 10.20   | 0.47               | 0.80                    | ± 12.0 %  |
| 900                  | 41.5                               | 0.97                            | 9.95    | 9.95    | 9.95    | 0.44               | 0.87                    | ± 12.0 %  |
| 1450                 | 40.5                               | 1.20                            | 8.85    | 8.85    | 8.85    | 0.40               | 0.80                    | ± 12.0 %  |
| 1640                 | 40.2                               | 1.31                            | 8.74    | 8.74    | 8.74    | 0.39               | 0.86                    | ± 12.0 %  |
| 1750                 | 40.1                               | 1.37                            | 8.64    | 8.64    | 8.64    | 0.39               | 0.86                    | ± 12.0 %  |
| 1810                 | 40.0                               | 1.40                            | 8.39    | 8.39    | 8.39    | 0.38               | 0.86                    | ± 12.0 %  |
| 1900                 | 40.0                               | 1.40                            | 8.33    | 8.33    | 8.33    | 0.35               | 0.86                    | ± 12.0 %  |
| 2000                 | 40.0                               | 1.40                            | 8.31    | 8.31    | 8.31    | 0.35               | 0.88                    | ± 12.0 %  |
| 2100                 | 39.8                               | 1.49                            | 8.29    | 8.29    | 8.29    | 0.30               | 0.88                    | ± 12.0 %  |
| 2300                 | 39.5                               | 1.67                            | 8.15    | 8.15    | 8.15    | 0.33               | 0.90                    | ± 12.0 %  |
| 2450                 | 39.2                               | 1.80                            | 7.77    | 7.77    | 7.77    | 0.34               | 0.90                    | ± 12.0 %  |
| 2600                 | 39.0                               | 1.96                            | 7.61    | 7.61    | 7.61    | 0.35               | 0.90                    | ± 12.0 %  |
| 3300                 | 38.2                               | 2.71                            | 7.09    | 7.09    | 7.09    | 0.35               | 1.30                    | ± 13.1 %  |
| 3500                 | 37.9                               | 2.91                            | 6.72    | 6.72    | 6.72    | 0.35               | 1.30                    | ± 13.1 %  |
| 3700                 | 37.7                               | 3.12                            | 6.50    | 6.50    | 6.50    | 0.35               | 1.30                    | ± 13.1 %  |
| 3900                 | 37.5                               | 3.32                            | 6.60    | 6.60    | 6.60    | 0.40               | 1.60                    | ± 13.1 %  |
| 4100                 | 37.2                               | 3.53                            | 6.50    | 6.50    | 6.50    | 0.40               | 1.60                    | ± 13.1 %  |
| 4200                 | 37.1                               | 3.63                            | 6.40    | 6.40    | 6.40    | 0.40               | 1.70                    | ± 13.1 %  |
| 4400                 | 36.9                               | 3.84                            | 6.30    | 6.30    | 6.30    | 0.40               | 1.70                    | ± 13.1 %  |
| 4600                 | 36.7                               | 4.04                            | 6.22    | 6.22    | 6.22    | 0.40               | 1.70                    | ± 13.1 %  |
| 4800                 | 36.4                               | 4.25                            | 6.18    | 6.18    | 6.18    | 0.40               | 1.80                    | ± 13.1 %  |
| 4950                 | 36.3                               | 4.40                            | 5.90    | 5.90    | 5.90    | 0.40               | 1.80                    | ± 13.1 %  |
| 5200                 | 36.0                               | 4.66                            | 5.72    | 5.72    | 5.72    | 0.40               | 1.80                    | ± 13.1 %  |
| 5250                 | 35.9                               | 4.71                            | 5.61    | 5.61    | 5.61    | 0.40               | 1.80                    | ± 13.1 %  |
| 5300                 | 35.9                               | 4.76                            | 5.51    | 5.51    | 5.51    | 0.40               | 1.80                    | ± 13.1 %  |
| 5500                 | 35.6                               | 4.96                            | 5.20    | 5.20    | 5.20    | 0.40               | 1.80                    | ± 13.1 %  |
| 5600                 | 35.5                               | 5.07                            | 5.10    | 5.10    | 5.10    | 0.40               | 1.80                    | ± 13.1 %  |
| 5750                 | 35.4                               | 5.22                            | 5.05    | 5.05    | 5.05    | 0.40               | 1.80                    | ± 13.1 %  |
| 5800                 | 35.3                               | 5.27                            | 4.95    | 4.95    | 4.95    | 0.40               | 1.80                    | ± 13.1 %  |

<sup>C</sup> Frequency validity above 300 MHz of ± 100 MHz only applies for DASY v4.4 and higher (see Page 2), else it is restricted to ± 50 MHz. The uncertainty is the RSS of the ConvF uncertainty at calibration frequency and the uncertainty for the indicated frequency band. Frequency validity below 300 MHz is ± 10, 25, 40, 50 and 70 MHz for ConvF assessments at 30, 64, 128, 150 and 220 MHz respectively. Validity of ConvF assessed at 6 MHz is 4-9 MHz, and ConvF assessed at 13 MHz is 9-19 MHz. Above 5 GHz frequency validity can be extended to ± 110 MHz.

<sup>F</sup> At frequencies below 3 GHz, the validity of tissue parameters ( $\epsilon$  and  $\sigma$ ) can be relaxed to ± 10% if liquid compensation formula is applied to measured SAR values. At frequencies above 3 GHz, the validity of tissue parameters ( $\epsilon$  and  $\sigma$ ) is restricted to ± 5%. The uncertainty is the RSS of the ConvF uncertainty for indicated target tissue parameters.

<sup>G</sup> Alpha/Depth are determined during calibration. SPEAG warrants that the remaining deviation due to the boundary effect after compensation is always less than ± 1% for frequencies below 3 GHz and below ± 2% for frequencies between 3-6 GHz at any distance larger than half the probe tip diameter from the boundary.

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## DASY/EASY - Parameters of Probe: EX3DV4 - SN:7307

### Calibration Parameter Determined in Body Tissue Simulating Media

| f (MHz) <sup>C</sup> | Relative Permittivity <sup>F</sup> | Conductivity (S/m) <sup>F</sup> | ConvF X | ConvF Y | ConvF Z | Alpha <sup>G</sup> | Depth <sup>G</sup> (mm) | Unc (k=2) |
|----------------------|------------------------------------|---------------------------------|---------|---------|---------|--------------------|-------------------------|-----------|
| 150                  | 61.9                               | 0.80                            | 13.01   | 13.01   | 13.01   | 0.00               | 1.00                    | ± 13.3 %  |
| 300                  | 58.2                               | 0.92                            | 11.81   | 11.81   | 11.81   | 0.06               | 1.20                    | ± 13.3 %  |
| 450                  | 56.7                               | 0.94                            | 11.33   | 11.33   | 11.33   | 0.07               | 1.30                    | ± 13.3 %  |
| 750                  | 55.5                               | 0.96                            | 10.47   | 10.47   | 10.47   | 0.34               | 0.95                    | ± 12.0 %  |
| 835                  | 55.2                               | 0.97                            | 10.12   | 10.12   | 10.12   | 0.51               | 0.80                    | ± 12.0 %  |
| 900                  | 55.0                               | 1.05                            | 9.88    | 9.88    | 9.88    | 0.43               | 0.88                    | ± 12.0 %  |
| 1450                 | 54.0                               | 1.30                            | 8.90    | 8.90    | 8.90    | 0.34               | 0.80                    | ± 12.0 %  |
| 1640                 | 53.7                               | 1.42                            | 8.70    | 8.70    | 8.70    | 0.39               | 0.86                    | ± 12.0 %  |
| 1750                 | 53.4                               | 1.49                            | 8.41    | 8.41    | 8.41    | 0.45               | 0.86                    | ± 12.0 %  |
| 1810                 | 53.3                               | 1.52                            | 8.34    | 8.34    | 8.34    | 0.45               | 0.86                    | ± 12.0 %  |
| 1900                 | 53.3                               | 1.52                            | 8.30    | 8.30    | 8.30    | 0.32               | 0.88                    | ± 12.0 %  |
| 2000                 | 53.3                               | 1.52                            | 8.27    | 8.27    | 8.27    | 0.32               | 0.88                    | ± 12.0 %  |
| 2100                 | 53.2                               | 1.62                            | 8.24    | 8.24    | 8.24    | 0.42               | 0.88                    | ± 12.0 %  |
| 2300                 | 52.9                               | 1.81                            | 7.91    | 7.91    | 7.91    | 0.40               | 0.90                    | ± 12.0 %  |
| 2450                 | 52.7                               | 1.95                            | 7.79    | 7.79    | 7.79    | 0.34               | 0.90                    | ± 12.0 %  |
| 2600                 | 52.5                               | 2.16                            | 7.63    | 7.63    | 7.63    | 0.27               | 0.90                    | ± 12.0 %  |
| 3300                 | 51.6                               | 3.08                            | 6.66    | 6.66    | 6.66    | 0.40               | 1.30                    | ± 13.1 %  |
| 3500                 | 51.3                               | 3.31                            | 6.36    | 6.36    | 6.36    | 0.40               | 1.40                    | ± 13.1 %  |
| 3700                 | 51.0                               | 3.55                            | 6.27    | 6.27    | 6.27    | 0.40               | 1.40                    | ± 13.1 %  |
| 3900                 | 51.2                               | 3.78                            | 6.24    | 6.24    | 6.24    | 0.40               | 1.60                    | ± 13.1 %  |
| 4100                 | 50.5                               | 4.01                            | 6.20    | 6.20    | 6.20    | 0.40               | 1.60                    | ± 13.1 %  |
| 4200                 | 50.4                               | 4.13                            | 6.10    | 6.10    | 6.10    | 0.40               | 1.60                    | ± 13.1 %  |
| 4400                 | 50.1                               | 4.37                            | 6.02    | 6.02    | 6.02    | 0.40               | 1.70                    | ± 13.1 %  |
| 4600                 | 49.8                               | 4.60                            | 5.81    | 5.81    | 5.81    | 0.40               | 1.70                    | ± 13.1 %  |
| 4800                 | 49.6                               | 4.83                            | 5.50    | 5.50    | 5.50    | 0.50               | 1.90                    | ± 13.1 %  |
| 4950                 | 49.4                               | 5.01                            | 5.30    | 5.30    | 5.30    | 0.50               | 1.90                    | ± 13.1 %  |
| 5200                 | 49.0                               | 5.30                            | 4.85    | 4.85    | 4.85    | 0.50               | 1.90                    | ± 13.1 %  |
| 5250                 | 48.9                               | 5.36                            | 4.81    | 4.81    | 4.81    | 0.50               | 1.90                    | ± 13.1 %  |
| 5300                 | 48.9                               | 5.42                            | 4.80    | 4.80    | 4.80    | 0.50               | 1.90                    | ± 13.1 %  |
| 5500                 | 48.6                               | 5.65                            | 4.47    | 4.47    | 4.47    | 0.50               | 1.90                    | ± 13.1 %  |
| 5600                 | 48.5                               | 5.77                            | 4.37    | 4.37    | 4.37    | 0.50               | 1.90                    | ± 13.1 %  |
| 5750                 | 48.3                               | 5.94                            | 4.45    | 4.45    | 4.45    | 0.50               | 1.90                    | ± 13.1 %  |
| 5800                 | 48.2                               | 6.00                            | 4.31    | 4.31    | 4.31    | 0.50               | 1.90                    | ± 13.1 %  |

<sup>C</sup> Frequency validity above 300 MHz of ± 100 MHz only applies for DASY v4.4 and higher (see Page 2), else it is restricted to ± 50 MHz. The uncertainty is the RSS of the ConvF uncertainty at calibration frequency and the uncertainty for the indicated frequency band. Frequency validity below 300 MHz is ± 10, 25, 40, 50 and 70 MHz for ConvF assessments at 30, 64, 128, 150 and 220 MHz respectively. Validity of ConvF assessed at 6 MHz is 4-9 MHz, and ConvF assessed at 13 MHz is 9-19 MHz. Above 5 GHz frequency validity can be extended to ± 110 MHz.

<sup>F</sup> At frequencies below 3 GHz, the validity of tissue parameters ( $\epsilon$  and  $\sigma$ ) can be relaxed to ± 10% if liquid compensation formula is applied to measured SAR values. At frequencies above 3 GHz, the validity of tissue parameters ( $\epsilon$  and  $\sigma$ ) is restricted to ± 5%. The uncertainty is the RSS of the ConvF uncertainty for indicated target tissue parameters.

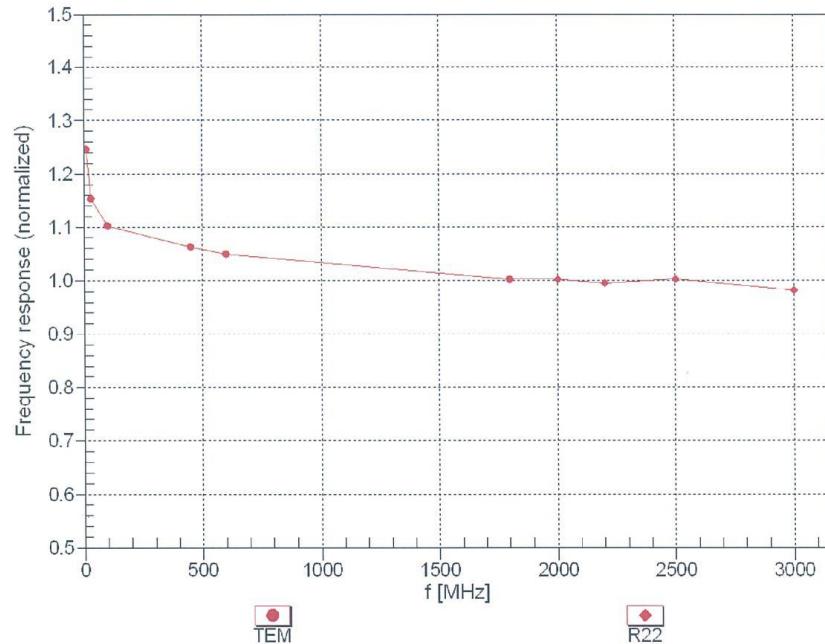
<sup>G</sup> Alpha/Depth are determined during calibration. SPEAG warrants that the remaining deviation due to the boundary effect after compensation is always less than ± 1% for frequencies below 3 GHz and below ± 2% for frequencies between 3-6 GHz at any distance larger than half the probe tip diameter from the boundary.

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## Frequency Response of E-Field

(TEM-Cell:ifi110 EXX, Waveguide: R22)



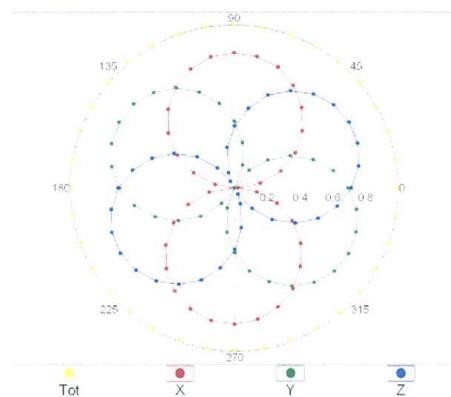
Uncertainty of Frequency Response of E-field:  $\pm 6.3\%$  ( $k=2$ )

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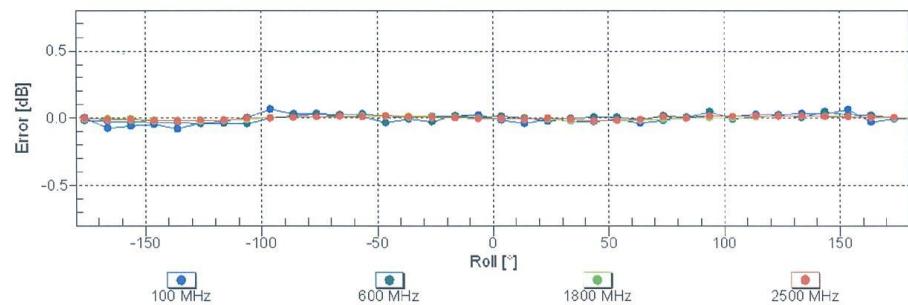
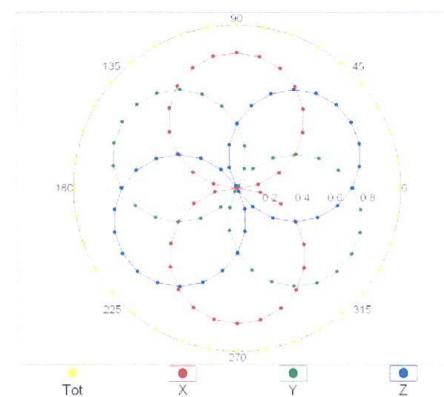
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### Receiving Pattern ( $\phi$ ), $\theta = 0^\circ$

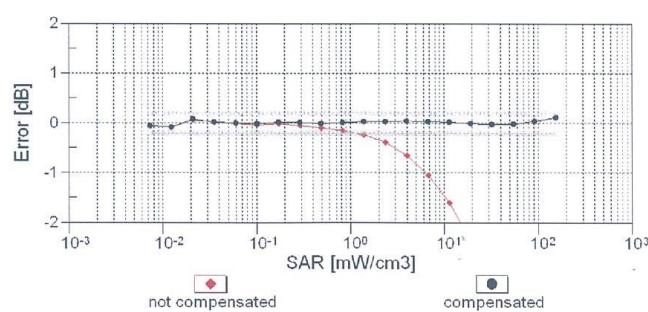
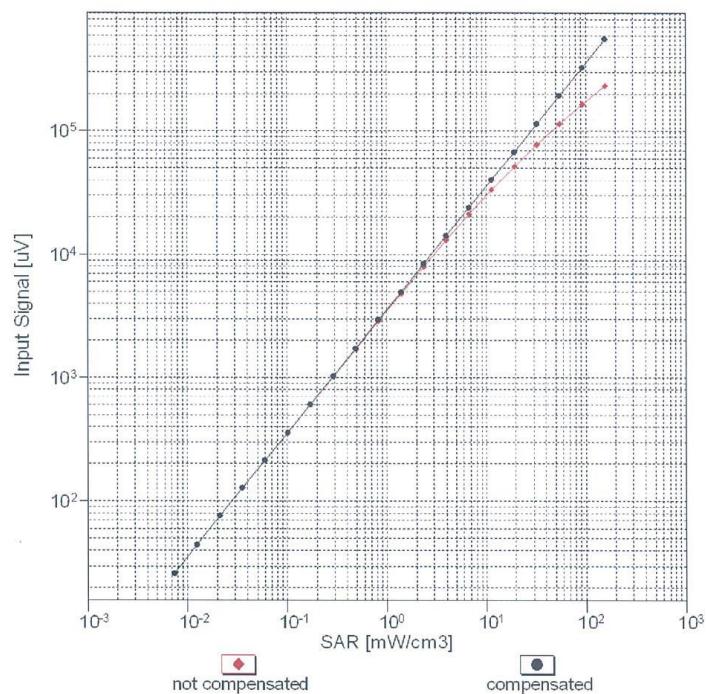
f=600 MHz,TEM



f=1800 MHz,R22


 Uncertainty of Axial Isotropy Assessment:  $\pm 0.5\%$  (k=2)

**Dynamic Range  $f(\text{SAR}_{\text{head}})$**   
 (TEM cell,  $f_{\text{eval}} = 1900$  MHz)

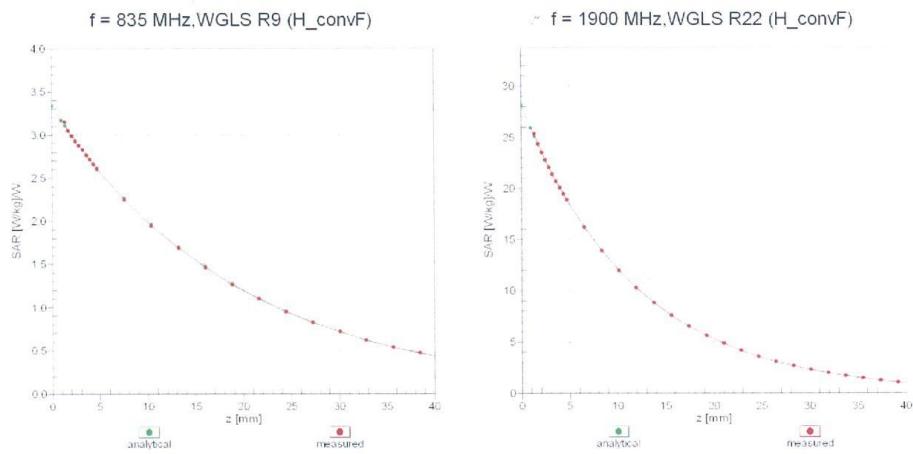


Uncertainty of Linearity Assessment:  $\pm 0.6\%$  ( $k=2$ )

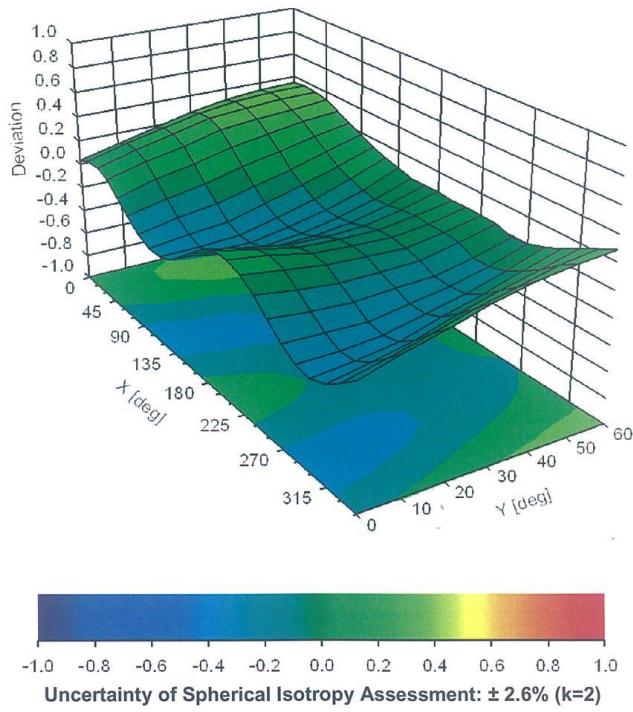
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## Conversion Factor Assessment



## Deviation from Isotropy in Liquid Error ( $\phi, \theta$ ), $f = 900$ MHz



**Appendix: Modulation Calibration Parameters**

| UID   | Rev | Communication System Name                           | Group     | PAR (dB) | Unc <sup>E</sup> (k=2) |
|-------|-----|---|-----------|----------|------------------------|
| 0     |     | CW  | CW        | 0.00     | ± 4.7 %                |
| 10010 | CAA | SAR Validation (Square, 100ms, 10ms)                | Test      | 10.00    | ± 9.6 %                |
| 10011 | CAB | UMTS-FDD (WCDMA)                                    | WCDMA     | 2.91     | ± 9.6 %                |
| 10012 | CAB | IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps)            | WLAN      | 1.87     | ± 9.6 %                |
| 10013 | CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps)       | WLAN      | 9.46     | ± 9.6 %                |
| 10021 | DAC | GSM-FDD (TDMA, GMSK)                                | GSM       | 9.39     | ± 9.6 %                |
| 10023 | DAC | GPRS-FDD (TDMA, GMSK, TN 0)                         | GSM       | 9.57     | ± 9.6 %                |
| 10024 | DAC | GPRS-FDD (TDMA, GMSK, TN 0-1)                       | GSM       | 6.56     | ± 9.6 %                |
| 10025 | DAC | EDGE-FDD (TDMA, 8PSK, TN 0)                         | GSM       | 12.62    | ± 9.6 %                |
| 10026 | DAC | EDGE-FDD (TDMA, 8PSK, TN 0-1)                       | GSM       | 9.55     | ± 9.6 %                |
| 10027 | DAC | GPRS-FDD (TDMA, GMSK, TN 0-1-2)                     | GSM       | 4.80     | ± 9.6 %                |
| 10028 | DAC | GPRS-FDD (TDMA, GMSK, TN 0-1-2-3)                   | GSM       | 3.55     | ± 9.6 %                |
| 10029 | DAC | EDGE-FDD (TDMA, 8PSK, TN 0-1-2)                     | GSM       | 7.78     | ± 9.6 %                |
| 10030 | CAA | IEEE 802.15.1 Bluetooth (GFSK, DH1)                 | Bluetooth | 5.30     | ± 9.6 %                |
| 10031 | CAA | IEEE 802.15.1 Bluetooth (GFSK, DH3)                 | Bluetooth | 1.87     | ± 9.6 %                |
| 10032 | CAA | IEEE 802.15.1 Bluetooth (GFSK, DH5)                 | Bluetooth | 1.16     | ± 9.6 %                |
| 10033 | CAA | IEEE 802.15.1 Bluetooth (PI/4-DQPSK, DH1)           | Bluetooth | 7.74     | ± 9.6 %                |
| 10034 | CAA | IEEE 802.15.1 Bluetooth (PI/4-DQPSK, DH3)           | Bluetooth | 4.53     | ± 9.6 %                |
| 10035 | CAA | IEEE 802.15.1 Bluetooth (PI/4-DQPSK, DH5)           | Bluetooth | 3.83     | ± 9.6 %                |
| 10036 | CAA | IEEE 802.15.1 Bluetooth (8-DPSK, DH1)               | Bluetooth | 8.01     | ± 9.6 %                |
| 10037 | CAA | IEEE 802.15.1 Bluetooth (8-DPSK, DH3)               | Bluetooth | 4.77     | ± 9.6 %                |
| 10038 | CAA | IEEE 802.15.1 Bluetooth (8-DPSK, DH5)               | Bluetooth | 4.10     | ± 9.6 %                |
| 10039 | CAB | CDMA2000 (1xRTT, RC1)                               | CDMA2000  | 4.57     | ± 9.6 %                |
| 10042 | CAB | IS-54 / IS-136 FDD (TDMA/FDM, PI/4-DQPSK, Halfrate) | AMPS      | 7.78     | ± 9.6 %                |
| 10044 | CAA | IS-91/EIA/TIA-553 FDD (FDMA, FM)                    | AMPS      | 0.00     | ± 9.6 %                |
| 10048 | CAA | DECT (TDD, TDMA/FDM, GFSK, Full Slot, 24)           | DECT      | 13.80    | ± 9.6 %                |
| 10049 | CAA | DECT (TDD, TDMA/FDM, GFSK, Double Slot, 12)         | DECT      | 10.79    | ± 9.6 %                |
| 10056 | CAA | UMTS-TDD (TD-SCDMA, 1.28 Mcps)                      | TD-SCDMA  | 11.01    | ± 9.6 %                |
| 10058 | DAC | EDGE-FDD (TDMA, 8PSK, TN 0-1-2-3)                   | GSM       | 6.52     | ± 9.6 %                |
| 10059 | CAB | IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps)            | WLAN      | 2.12     | ± 9.6 %                |
| 10060 | CAB | IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps)          | WLAN      | 2.83     | ± 9.6 %                |
| 10061 | CAB | IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps)           | WLAN      | 3.60     | ± 9.6 %                |
| 10062 | CAC | IEEE 802.11a/h WiFi 5 GHz (OFDM, 6 Mbps)            | WLAN      | 8.68     | ± 9.6 %                |
| 10063 | CAC | IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps)            | WLAN      | 8.63     | ± 9.6 %                |
| 10064 | CAC | IEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps)           | WLAN      | 9.09     | ± 9.6 %                |
| 10065 | CAC | IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps)           | WLAN      | 9.00     | ± 9.6 %                |
| 10066 | CAC | IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps)           | WLAN      | 9.38     | ± 9.6 %                |
| 10067 | CAC | IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps)           | WLAN      | 10.12    | ± 9.6 %                |
| 10068 | CAC | IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps)           | WLAN      | 10.24    | ± 9.6 %                |
| 10069 | CAC | IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps)           | WLAN      | 10.56    | ± 9.6 %                |
| 10071 | CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 9 Mbps)       | WLAN      | 9.83     | ± 9.6 %                |
| 10072 | CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 12 Mbps)      | WLAN      | 9.62     | ± 9.6 %                |
| 10073 | CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 18 Mbps)      | WLAN      | 9.94     | ± 9.6 %                |
| 10074 | CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 24 Mbps)      | WLAN      | 10.30    | ± 9.6 %                |
| 10075 | CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 36 Mbps)      | WLAN      | 10.77    | ± 9.6 %                |
| 10076 | CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 48 Mbps)      | WLAN      | 10.94    | ± 9.6 %                |
| 10077 | CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 54 Mbps)      | WLAN      | 11.00    | ± 9.6 %                |
| 10081 | CAB | CDMA2000 (1xRTT, RC3)                               | CDMA2000  | 3.97     | ± 9.6 %                |
| 10082 | CAB | IS-54 / IS-136 FDD (TDMA/FDM, PI/4-DQPSK, Fullrate) | AMPS      | 4.77     | ± 9.6 %                |
| 10090 | DAC | GPRS-FDD (TDMA, GMSK, TN 0-4)                       | GSM       | 6.56     | ± 9.6 %                |
| 10097 | CAB | UMTS-FDD (HSDPA)                                    | WCDMA     | 3.98     | ± 9.6 %                |
| 10098 | CAB | UMTS-FDD (HSUPA, Subtest 2)                         | WCDMA     | 3.98     | ± 9.6 %                |
| 10099 | DAC | EDGE-FDD (TDMA, 8PSK, TN 0-4)                       | GSM       | 9.55     | ± 9.6 %                |
| 10100 | CAE | LTE-FDD (SC-FDMA, 100% RB, 20 MHz, QPSK)            | LTE-FDD   | 5.67     | ± 9.6 %                |
| 10101 | CAE | LTE-FDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM)          | LTE-FDD   | 6.42     | ± 9.6 %                |
| 10102 | CAE | LTE-FDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM)          | LTE-FDD   | 6.60     | ± 9.6 %                |
| 10103 | CAG | LTE-TDD (SC-FDMA, 100% RB, 20 MHz, QPSK)            | LTE-TDD   | 9.29     | ± 9.6 %                |
| 10104 | CAG | LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM)          | LTE-TDD   | 9.97     | ± 9.6 %                |
| 10105 | CAG | LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM)          | LTE-TDD   | 10.01    | ± 9.6 %                |
| 10108 | CAG | LTE-FDD (SC-FDMA, 100% RB, 10 MHz, QPSK)            | LTE-FDD   | 5.80     | ± 9.6 %                |

|       |     |  |         |       |              |
|-------|-----|--|---------|-------|--------------|
| 10109 | CAG | LTE-FDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM)     | LTE-FDD | 6.43  | $\pm 9.6 \%$ |
| 10110 | CAG | LTE-FDD (SC-FDMA, 100% RB, 5 MHz, QPSK)        | LTE-FDD | 5.75  | $\pm 9.6 \%$ |
| 10111 | CAG | LTE-FDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM)      | LTE-FDD | 6.44  | $\pm 9.6 \%$ |
| 10112 | CAG | LTE-FDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM)     | LTE-FDD | 6.59  | $\pm 9.6 \%$ |
| 10113 | CAG | LTE-FDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM)      | LTE-FDD | 6.62  | $\pm 9.6 \%$ |
| 10114 | CAC | IEEE 802.11n (HT Greenfield, 13.5 Mbps, BPSK)  | WLAN    | 8.10  | $\pm 9.6 \%$ |
| 10115 | CAC | IEEE 802.11n (HT Greenfield, 81 Mbps, 16-QAM)  | WLAN    | 8.46  | $\pm 9.6 \%$ |
| 10116 | CAC | IEEE 802.11n (HT Greenfield, 135 Mbps, 64-QAM) | WLAN    | 8.15  | $\pm 9.6 \%$ |
| 10117 | CAC | IEEE 802.11n (HT Mixed, 13.5 Mbps, BPSK)       | WLAN    | 8.07  | $\pm 9.6 \%$ |
| 10118 | CAC | IEEE 802.11n (HT Mixed, 81 Mbps, 16-QAM)       | WLAN    | 8.59  | $\pm 9.6 \%$ |
| 10119 | CAC | IEEE 802.11n (HT Mixed, 135 Mbps, 64-QAM)      | WLAN    | 8.13  | $\pm 9.6 \%$ |
| 10140 | CAE | LTE-FDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM)     | LTE-FDD | 6.49  | $\pm 9.6 \%$ |
| 10141 | CAF | LTE-FDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM)     | LTE-FDD | 6.53  | $\pm 9.6 \%$ |
| 10142 | CAF | LTE-FDD (SC-FDMA, 100% RB, 3 MHz, QPSK)        | LTE-FDD | 5.73  | $\pm 9.6 \%$ |
| 10143 | CAF | LTE-FDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM)      | LTE-FDD | 6.35  | $\pm 9.6 \%$ |
| 10144 | CAF | LTE-FDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM)      | LTE-FDD | 6.65  | $\pm 9.6 \%$ |
| 10145 | CAF | LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK)      | LTE-FDD | 5.76  | $\pm 9.6 \%$ |
| 10146 | CAF | LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM)    | LTE-FDD | 6.41  | $\pm 9.6 \%$ |
| 10147 | CAF | LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM)    | LTE-FDD | 6.72  | $\pm 9.6 \%$ |
| 10149 | CAF | LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM)      | LTE-FDD | 6.42  | $\pm 9.6 \%$ |
| 10150 | CAF | LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM)      | LTE-FDD | 6.60  | $\pm 9.6 \%$ |
| 10151 | CAG | LTE-TDD (SC-FDMA, 50% RB, 20 MHz, QPSK)        | LTE-TDD | 9.28  | $\pm 9.6 \%$ |
| 10152 | CAG | LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM)      | LTE-TDD | 9.92  | $\pm 9.6 \%$ |
| 10153 | CAG | LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM)      | LTE-TDD | 10.05 | $\pm 9.6 \%$ |
| 10154 | CAG | LTE-FDD (SC-FDMA, 50% RB, 10 MHz, QPSK)        | LTE-FDD | 5.75  | $\pm 9.6 \%$ |
| 10155 | CAG | LTE-FDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM)      | LTE-FDD | 6.43  | $\pm 9.6 \%$ |
| 10156 | CAG | LTE-FDD (SC-FDMA, 50% RB, 5 MHz, QPSK)         | LTE-FDD | 5.79  | $\pm 9.6 \%$ |
| 10157 | CAG | LTE-FDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM)       | LTE-FDD | 6.49  | $\pm 9.6 \%$ |
| 10158 | CAG | LTE-FDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM)      | LTE-FDD | 6.62  | $\pm 9.6 \%$ |
| 10159 | CAG | LTE-FDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM)       | LTE-FDD | 6.56  | $\pm 9.6 \%$ |
| 10160 | CAE | LTE-FDD (SC-FDMA, 50% RB, 15 MHz, QPSK)        | LTE-FDD | 5.82  | $\pm 9.6 \%$ |
| 10161 | CAE | LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM)      | LTE-FDD | 6.43  | $\pm 9.6 \%$ |
| 10162 | CAE | LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM)      | LTE-FDD | 6.58  | $\pm 9.6 \%$ |
| 10166 | CAF | LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK)       | LTE-FDD | 5.46  | $\pm 9.6 \%$ |
| 10167 | CAF | LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM)     | LTE-FDD | 6.21  | $\pm 9.6 \%$ |
| 10168 | CAF | LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM)     | LTE-FDD | 6.79  | $\pm 9.6 \%$ |
| 10169 | CAE | LTE-FDD (SC-FDMA, 1 RB, 20 MHz, QPSK)          | LTE-FDD | 5.73  | $\pm 9.6 \%$ |
| 10170 | CAE | LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM)        | LTE-FDD | 6.52  | $\pm 9.6 \%$ |
| 10171 | AAE | LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM)        | LTE-FDD | 6.49  | $\pm 9.6 \%$ |
| 10172 | CAG | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK)          | LTE-TDD | 9.21  | $\pm 9.6 \%$ |
| 10173 | CAG | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM)        | LTE-TDD | 9.48  | $\pm 9.6 \%$ |
| 10174 | CAG | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM)        | LTE-TDD | 10.25 | $\pm 9.6 \%$ |
| 10175 | CAG | LTE-FDD (SC-FDMA, 1 RB, 10 MHz, QPSK)          | LTE-FDD | 5.72  | $\pm 9.6 \%$ |
| 10176 | CAG | LTE-FDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM)        | LTE-FDD | 6.52  | $\pm 9.6 \%$ |
| 10177 | CAI | LTE-FDD (SC-FDMA, 1 RB, 5 MHz, QPSK)           | LTE-FDD | 5.73  | $\pm 9.6 \%$ |
| 10178 | CAG | LTE-FDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM)         | LTE-FDD | 6.52  | $\pm 9.6 \%$ |
| 10179 | CAG | LTE-FDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM)        | LTE-FDD | 6.50  | $\pm 9.6 \%$ |
| 10180 | CAG | LTE-FDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM)         | LTE-FDD | 6.50  | $\pm 9.6 \%$ |
| 10181 | CAE | LTE-FDD (SC-FDMA, 1 RB, 15 MHz, QPSK)          | LTE-FDD | 5.72  | $\pm 9.6 \%$ |
| 10182 | CAE | LTE-FDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM)        | LTE-FDD | 6.52  | $\pm 9.6 \%$ |
| 10183 | AAD | LTE-FDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM)        | LTE-FDD | 6.50  | $\pm 9.6 \%$ |
| 10184 | CAE | LTE-FDD (SC-FDMA, 1 RB, 3 MHz, QPSK)           | LTE-FDD | 5.73  | $\pm 9.6 \%$ |
| 10185 | CAE | LTE-FDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM)         | LTE-FDD | 6.51  | $\pm 9.6 \%$ |
| 10186 | AAE | LTE-FDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM)         | LTE-FDD | 6.50  | $\pm 9.6 \%$ |
| 10187 | CAF | LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK)         | LTE-FDD | 5.73  | $\pm 9.6 \%$ |
| 10188 | CAF | LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM)       | LTE-FDD | 6.52  | $\pm 9.6 \%$ |
| 10189 | AAF | LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM)       | LTE-FDD | 6.50  | $\pm 9.6 \%$ |
| 10193 | CAC | IEEE 802.11n (HT Greenfield, 6.5 Mbps, BPSK)   | WLAN    | 8.09  | $\pm 9.6 \%$ |
| 10194 | CAC | IEEE 802.11n (HT Greenfield, 39 Mbps, 16-QAM)  | WLAN    | 8.12  | $\pm 9.6 \%$ |
| 10195 | CAC | IEEE 802.11n (HT Greenfield, 65 Mbps, 64-QAM)  | WLAN    | 8.21  | $\pm 9.6 \%$ |
| 10196 | CAC | IEEE 802.11n (HT Mixed, 6.5 Mbps, BPSK)        | WLAN    | 8.10  | $\pm 9.6 \%$ |
| 10197 | CAC | IEEE 802.11n (HT Mixed, 39 Mbps, 16-QAM)       | WLAN    | 8.13  | $\pm 9.6 \%$ |
| 10198 | CAC | IEEE 802.11n (HT Mixed, 65 Mbps, 64-QAM)       | WLAN    | 8.27  | $\pm 9.6 \%$ |
| 10219 | CAC | IEEE 802.11n (HT Mixed, 7.2 Mbps, BPSK)        | WLAN    | 8.03  | $\pm 9.6 \%$ |

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| 10220 | CAC | IEEE 802.11n (HT Mixed, 43.3 Mbps, 16-QAM)  | WLAN     | 8.13  | ± 9.6 % |
| 10221 | CAC | IEEE 802.11n (HT Mixed, 72.2 Mbps, 64-QAM)  | WLAN     | 8.27  | ± 9.6 % |
| 10222 | CAC | IEEE 802.11n (HT Mixed, 15 Mbps, BPSK)      | WLAN     | 8.06  | ± 9.6 % |
| 10223 | CAC | IEEE 802.11n (HT Mixed, 90 Mbps, 16-QAM)    | WLAN     | 8.48  | ± 9.6 % |
| 10224 | CAC | IEEE 802.11n (HT Mixed, 150 Mbps, 64-QAM)   | WLAN     | 8.08  | ± 9.6 % |
| 10225 | CAB | UMTS-FDD (HSPA+)                            | WCDMA    | 5.97  | ± 9.6 % |
| 10226 | CAB | LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM)    | LTE-TDD  | 9.49  | ± 9.6 % |
| 10227 | CAB | LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM)    | LTE-TDD  | 10.26 | ± 9.6 % |
| 10228 | CAB | LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK)      | LTE-TDD  | 9.22  | ± 9.6 % |
| 10229 | CAD | LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM)      | LTE-TDD  | 9.48  | ± 9.6 % |
| 10230 | CAD | LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM)      | LTE-TDD  | 10.25 | ± 9.6 % |
| 10231 | CAD | LTE-TDD (SC-FDMA, 1 RB, 3 MHz, QPSK)        | LTE-TDD  | 9.19  | ± 9.6 % |
| 10232 | CAG | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM)      | LTE-TDD  | 9.48  | ± 9.6 % |
| 10233 | CAG | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM)      | LTE-TDD  | 10.25 | ± 9.6 % |
| 10234 | CAG | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK)        | LTE-TDD  | 9.21  | ± 9.6 % |
| 10235 | CAG | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM)     | LTE-TDD  | 9.48  | ± 9.6 % |
| 10236 | CAG | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM)     | LTE-TDD  | 10.25 | ± 9.6 % |
| 10237 | CAG | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK)       | LTE-TDD  | 9.21  | ± 9.6 % |
| 10238 | CAF | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM)     | LTE-TDD  | 9.48  | ± 9.6 % |
| 10239 | CAF | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM)     | LTE-TDD  | 10.25 | ± 9.6 % |
| 10240 | CAF | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, QPSK)       | LTE-TDD  | 9.21  | ± 9.6 % |
| 10241 | CAB | LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM)  | LTE-TDD  | 9.82  | ± 9.6 % |
| 10242 | CAB | LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM)  | LTE-TDD  | 9.86  | ± 9.6 % |
| 10243 | CAB | LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK)    | LTE-TDD  | 9.46  | ± 9.6 % |
| 10244 | CAD | LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM)    | LTE-TDD  | 10.06 | ± 9.6 % |
| 10245 | CAD | LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM)    | LTE-TDD  | 10.06 | ± 9.6 % |
| 10246 | CAD | LTE-TDD (SC-FDMA, 50% RB, 3 MHz, QPSK)      | LTE-TDD  | 9.30  | ± 9.6 % |
| 10247 | CAG | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM)    | LTE-TDD  | 9.91  | ± 9.6 % |
| 10248 | CAG | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM)    | LTE-TDD  | 10.09 | ± 9.6 % |
| 10249 | CAG | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, QPSK)      | LTE-TDD  | 9.29  | ± 9.6 % |
| 10250 | CAG | LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM)   | LTE-TDD  | 9.81  | ± 9.6 % |
| 10251 | CAG | LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM)   | LTE-TDD  | 10.17 | ± 9.6 % |
| 10252 | CAG | LTE-TDD (SC-FDMA, 50% RB, 10 MHz, QPSK)     | LTE-TDD  | 9.24  | ± 9.6 % |
| 10253 | CAF | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM)   | LTE-TDD  | 9.90  | ± 9.6 % |
| 10254 | CAF | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM)   | LTE-TDD  | 10.14 | ± 9.6 % |
| 10255 | CAF | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, QPSK)     | LTE-TDD  | 9.20  | ± 9.6 % |
| 10256 | CAB | LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM) | LTE-TDD  | 9.96  | ± 9.6 % |
| 10257 | CAB | LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM) | LTE-TDD  | 10.08 | ± 9.6 % |
| 10258 | CAB | LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK)   | LTE-TDD  | 9.34  | ± 9.6 % |
| 10259 | CAD | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM)   | LTE-TDD  | 9.98  | ± 9.6 % |
| 10260 | CAD | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM)   | LTE-TDD  | 9.97  | ± 9.6 % |
| 10261 | CAD | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, QPSK)     | LTE-TDD  | 9.24  | ± 9.6 % |
| 10262 | CAG | LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM)   | LTE-TDD  | 9.83  | ± 9.6 % |
| 10263 | CAG | LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM)   | LTE-TDD  | 10.16 | ± 9.6 % |
| 10264 | CAG | LTE-TDD (SC-FDMA, 100% RB, 5 MHz, QPSK)     | LTE-TDD  | 9.23  | ± 9.6 % |
| 10265 | CAG | LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM)  | LTE-TDD  | 9.92  | ± 9.6 % |
| 10266 | CAG | LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM)  | LTE-TDD  | 10.07 | ± 9.6 % |
| 10267 | CAG | LTE-TDD (SC-FDMA, 100% RB, 10 MHz, QPSK)    | LTE-TDD  | 9.30  | ± 9.6 % |
| 10268 | CAF | LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM)  | LTE-TDD  | 10.06 | ± 9.6 % |
| 10269 | CAF | LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM)  | LTE-TDD  | 10.13 | ± 9.6 % |
| 10270 | CAF | LTE-TDD (SC-FDMA, 100% RB, 15 MHz, QPSK)    | LTE-TDD  | 9.58  | ± 9.6 % |
| 10274 | CAB | UMTS-FDD (HSUPA, Subtest 5, 3GPP Rel8.10)   | WCDMA    | 4.87  | ± 9.6 % |
| 10275 | CAB | UMTS-FDD (HSUPA, Subtest 5, 3GPP Rel8.4)    | WCDMA    | 3.96  | ± 9.6 % |
| 10277 | CAA | PHS (QPSK)                                  | PHS      | 11.81 | ± 9.6 % |
| 10278 | CAA | PHS (QPSK, BW 884MHz, Rolloff 0.5)          | PHS      | 11.81 | ± 9.6 % |
| 10279 | CAA | PHS (QPSK, BW 884MHz, Rolloff 0.38)         | PHS      | 12.18 | ± 9.6 % |
| 10290 | AAB | CDMA2000, RC1, SO55, Full Rate              | CDMA2000 | 3.91  | ± 9.6 % |
| 10291 | AAB | CDMA2000, RC3, SO55, Full Rate              | CDMA2000 | 3.46  | ± 9.6 % |
| 10292 | AAB | CDMA2000, RC3, SO32, Full Rate              | CDMA2000 | 3.39  | ± 9.6 % |
| 10293 | AAB | CDMA2000, RC3, SO3, Full Rate               | CDMA2000 | 3.50  | ± 9.6 % |
| 10295 | AAB | CDMA2000, RC1, SO3, 1/8th Rate 25 fr.       | CDMA2000 | 12.49 | ± 9.6 % |
| 10297 | AAD | LTE-FDD (SC-FDMA, 50% RB, 20 MHz, QPSK)     | LTE-FDD  | 5.81  | ± 9.6 % |
| 10298 | AAD | LTE-FDD (SC-FDMA, 50% RB, 3 MHz, QPSK)      | LTE-FDD  | 5.72  | ± 9.6 % |
| 10299 | AAD | LTE-FDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM)    | LTE-FDD  | 6.39  | ± 9.6 % |

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| 10300 | AAD | LTE-FDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM)                   | LTE-FDD  | 6.60  | $\pm 9.6 \%$ |
| 10301 | AAA | IEEE 802.16e WiMAX (29:18, 5ms, 10MHz, QPSK, PUSC)         | WiMAX    | 12.03 | $\pm 9.6 \%$ |
| 10302 | AAA | IEEE 802.16e WiMAX (29:18, 5ms, 10MHz, QPSK, PUSC, 3CTRL)  | WiMAX    | 12.57 | $\pm 9.6 \%$ |
| 10303 | AAA | IEEE 802.16e WiMAX (31:15, 5ms, 10MHz, 64QAM, PUSC)        | WiMAX    | 12.52 | $\pm 9.6 \%$ |
| 10304 | AAA | IEEE 802.16e WiMAX (29:18, 5ms, 10MHz, 64QAM, PUSC)        | WiMAX    | 11.86 | $\pm 9.6 \%$ |
| 10305 | AAA | IEEE 802.16e WiMAX (31:15, 10ms, 10MHz, 64QAM, PUSC)       | WiMAX    | 15.24 | $\pm 9.6 \%$ |
| 10306 | AAA | IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, 64QAM, PUSC)       | WiMAX    | 14.67 | $\pm 9.6 \%$ |
| 10307 | AAA | IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, QPSK, PUSC)        | WiMAX    | 14.49 | $\pm 9.6 \%$ |
| 10308 | AAA | IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, 16QAM, PUSC)       | WiMAX    | 14.46 | $\pm 9.6 \%$ |
| 10309 | AAA | IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, 16QAM, AMC 2x3)    | WiMAX    | 14.58 | $\pm 9.6 \%$ |
| 10310 | AAA | IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, QPSK, AMC 2x3)     | WiMAX    | 14.57 | $\pm 9.6 \%$ |
| 10311 | AAD | LTE-FDD (SC-FDMA, 100% RB, 15 MHz, QPSK)                   | LTE-FDD  | 6.06  | $\pm 9.6 \%$ |
| 10313 | AAA | iDEN 1:3   | iDEN     | 10.51 | $\pm 9.6 \%$ |
| 10314 | AAA | iDEN 1:6   | iDEN     | 13.48 | $\pm 9.6 \%$ |
| 10315 | AAB | IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 96pc dc)          | WLAN     | 1.71  | $\pm 9.6 \%$ |
| 10316 | AAB | IEEE 802.11g WiFi 2.4 GHz (ERP-OFDM, 6 Mbps, 96pc dc)      | WLAN     | 8.36  | $\pm 9.6 \%$ |
| 10317 | AAC | IEEE 802.11a WiFi 5 GHz (OFDM, 6 Mbps, 96pc dc)            | WLAN     | 8.36  | $\pm 9.6 \%$ |
| 10352 | AAA | Pulse Waveform (200Hz, 10%)                                | Generic  | 10.00 | $\pm 9.6 \%$ |
| 10353 | AAA | Pulse Waveform (200Hz, 20%)                                | Generic  | 6.99  | $\pm 9.6 \%$ |
| 10354 | AAA | Pulse Waveform (200Hz, 40%)                                | Generic  | 3.98  | $\pm 9.6 \%$ |
| 10355 | AAA | Pulse Waveform (200Hz, 60%)                                | Generic  | 2.22  | $\pm 9.6 \%$ |
| 10356 | AAA | Pulse Waveform (200Hz, 80%)                                | Generic  | 0.97  | $\pm 9.6 \%$ |
| 10387 | AAA | QPSK Waveform, 1 MHz                                       | Generic  | 5.10  | $\pm 9.6 \%$ |
| 10388 | AAA | QPSK Waveform, 10 MHz                                      | Generic  | 5.22  | $\pm 9.6 \%$ |
| 10396 | AAA | 64-QAM Waveform, 100 kHz                                   | Generic  | 6.27  | $\pm 9.6 \%$ |
| 10399 | AAA | 64-QAM Waveform, 40 MHz                                    | Generic  | 6.27  | $\pm 9.6 \%$ |
| 10400 | AAD | IEEE 802.11ac WiFi (20MHz, 64-QAM, 99pc dc)                | WLAN     | 8.37  | $\pm 9.6 \%$ |
| 10401 | AAD | IEEE 802.11ac WiFi (40MHz, 64-QAM, 99pc dc)                | WLAN     | 8.60  | $\pm 9.6 \%$ |
| 10402 | AAD | IEEE 802.11ac WiFi (80MHz, 64-QAM, 99pc dc)                | WLAN     | 8.53  | $\pm 9.6 \%$ |
| 10403 | AAB | CDMA2000 (1xEV-DO, Rev. 0)                                 | CDMA2000 | 3.76  | $\pm 9.6 \%$ |
| 10404 | AAB | CDMA2000 (1xEV-DO, Rev. A)                                 | CDMA2000 | 3.77  | $\pm 9.6 \%$ |
| 10406 | AAB | CDMA2000, RC3, SO32, SCH0, Full Rate                       | CDMA2000 | 5.22  | $\pm 9.6 \%$ |
| 10410 | AAG | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK, UL Sub=2,3,4,7,8,9)  | LTE-TDD  | 7.82  | $\pm 9.6 \%$ |
| 10414 | AAA | WLAN CCDF, 64-QAM, 40MHz                                   | Generic  | 8.54  | $\pm 9.6 \%$ |
| 10415 | AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 99pc dc)          | WLAN     | 1.54  | $\pm 9.6 \%$ |
| 10416 | AAA | IEEE 802.11g WiFi 2.4 GHz (ERP-OFDM, 6 Mbps, 99pc dc)      | WLAN     | 8.23  | $\pm 9.6 \%$ |
| 10417 | AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 6 Mbps, 99pc dc)          | WLAN     | 8.23  | $\pm 9.6 \%$ |
| 10418 | AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 99pc, Long)  | WLAN     | 8.14  | $\pm 9.6 \%$ |
| 10419 | AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 99pc, Short) | WLAN     | 8.19  | $\pm 9.6 \%$ |
| 10422 | AAB | IEEE 802.11n (HT Greenfield, 7.2 Mbps, BPSK)               | WLAN     | 8.32  | $\pm 9.6 \%$ |
| 10423 | AAB | IEEE 802.11n (HT Greenfield, 43.3 Mbps, 16-QAM)            | WLAN     | 8.47  | $\pm 9.6 \%$ |
| 10424 | AAB | IEEE 802.11n (HT Greenfield, 72.2 Mbps, 64-QAM)            | WLAN     | 8.40  | $\pm 9.6 \%$ |
| 10425 | AAB | IEEE 802.11n (HT Greenfield, 15 Mbps, BPSK)                | WLAN     | 8.41  | $\pm 9.6 \%$ |
| 10426 | AAB | IEEE 802.11n (HT Greenfield, 90 Mbps, 16-QAM)              | WLAN     | 8.45  | $\pm 9.6 \%$ |
| 10427 | AAB | IEEE 802.11n (HT Greenfield, 150 Mbps, 64-QAM)             | WLAN     | 8.41  | $\pm 9.6 \%$ |
| 10430 | AAD | LTE-FDD (OFDMA, 5 MHz, E-TM 3.1)                           | LTE-FDD  | 8.28  | $\pm 9.6 \%$ |
| 10431 | AAD | LTE-FDD (OFDMA, 10 MHz, E-TM 3.1)                          | LTE-FDD  | 8.38  | $\pm 9.6 \%$ |
| 10432 | AAC | LTE-FDD (OFDMA, 15 MHz, E-TM 3.1)                          | LTE-FDD  | 8.34  | $\pm 9.6 \%$ |
| 10433 | AAC | LTE-FDD (OFDMA, 20 MHz, E-TM 3.1)                          | LTE-FDD  | 8.34  | $\pm 9.6 \%$ |
| 10434 | AAA | W-CDMA (BS Test Model 1, 64 DPCH)                          | WCDMA    | 8.60  | $\pm 9.6 \%$ |
| 10435 | AAF | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK, UL Sub)              | LTE-TDD  | 7.82  | $\pm 9.6 \%$ |
| 10447 | AAD | LTE-FDD (OFDMA, 5 MHz, E-TM 3.1, Clipping 44%)             | LTE-FDD  | 7.56  | $\pm 9.6 \%$ |
| 10448 | AAD | LTE-FDD (OFDMA, 10 MHz, E-TM 3.1, Clipping 44%)            | LTE-FDD  | 7.53  | $\pm 9.6 \%$ |
| 10449 | AAC | LTE-FDD (OFDMA, 15 MHz, E-TM 3.1, Clipping 44%)            | LTE-FDD  | 7.51  | $\pm 9.6 \%$ |
| 10450 | AAC | LTE-FDD (OFDMA, 20 MHz, E-TM 3.1, Clipping 44%)            | LTE-FDD  | 7.48  | $\pm 9.6 \%$ |
| 10451 | AAA | W-CDMA (BS Test Model 1, 64 DPCH, Clipping 44%)            | WCDMA    | 7.59  | $\pm 9.6 \%$ |
| 10453 | AAD | Validation (Square, 10ms, 1ms)                             | Test     | 10.00 | $\pm 9.6 \%$ |
| 10456 | AAB | IEEE 802.11ac WiFi (160MHz, 64-QAM, 99pc dc)               | WLAN     | 8.63  | $\pm 9.6 \%$ |
| 10457 | AAA | UMTS-FDD (DC-HSDPA)  | WCDMA    | 6.62  | $\pm 9.6 \%$ |
| 10458 | AAA | CDMA2000 (1xEV-DO, Rev. B, 2 carriers)                     | CDMA2000 | 6.55  | $\pm 9.6 \%$ |
| 10459 | AAA | CDMA2000 (1xEV-DO, Rev. B, 3 carriers)                     | CDMA2000 | 8.25  | $\pm 9.6 \%$ |
| 10460 | AAA | UMTS-FDD (WCDMA, AMR)                                      | WCDMA    | 2.39  | $\pm 9.6 \%$ |
| 10461 | AAB | LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK, UL Sub)             | LTE-TDD  | 7.82  | $\pm 9.6 \%$ |
| 10462 | AAB | LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM, UL Sub)           | LTE-TDD  | 8.30  | $\pm 9.6 \%$ |

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|       |     |   |         |      |             |
|-------|-----|---|---------|------|-------------|
| 10463 | AAB | LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM, UL Sub)    | LTE-TDD | 8.56 | $\pm 9.6\%$ |
| 10464 | AAC | LTE-TDD (SC-FDMA, 1 RB, 3 MHz, QPSK, UL Sub)        | LTE-TDD | 7.82 | $\pm 9.6\%$ |
| 10465 | AAC | LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM, UL Sub)      | LTE-TDD | 8.32 | $\pm 9.6\%$ |
| 10466 | AAC | LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM, UL Sub)      | LTE-TDD | 8.57 | $\pm 9.6\%$ |
| 10467 | AAF | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK, UL Sub)        | LTE-TDD | 7.82 | $\pm 9.6\%$ |
| 10468 | AAF | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM, UL Sub)      | LTE-TDD | 8.32 | $\pm 9.6\%$ |
| 10469 | AAF | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM, UL Sub)      | LTE-TDD | 8.56 | $\pm 9.6\%$ |
| 10470 | AAF | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK, UL Sub)       | LTE-TDD | 7.82 | $\pm 9.6\%$ |
| 10471 | AAF | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM, UL Sub)     | LTE-TDD | 8.32 | $\pm 9.6\%$ |
| 10472 | AAF | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM, UL Sub)     | LTE-TDD | 8.57 | $\pm 9.6\%$ |
| 10473 | AAE | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, QPSK, UL Sub)       | LTE-TDD | 7.82 | $\pm 9.6\%$ |
| 10474 | AAE | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM, UL Sub)     | LTE-TDD | 8.32 | $\pm 9.6\%$ |
| 10475 | AAE | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM, UL Sub)     | LTE-TDD | 8.57 | $\pm 9.6\%$ |
| 10477 | AAF | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM, UL Sub)     | LTE-TDD | 8.32 | $\pm 9.6\%$ |
| 10478 | AAF | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM, UL Sub)     | LTE-TDD | 8.57 | $\pm 9.6\%$ |
| 10479 | AAB | LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK, UL Sub)    | LTE-TDD | 7.74 | $\pm 9.6\%$ |
| 10480 | AAB | LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM, UL Sub)  | LTE-TDD | 8.18 | $\pm 9.6\%$ |
| 10481 | AAB | LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM, UL Sub)  | LTE-TDD | 8.45 | $\pm 9.6\%$ |
| 10482 | AAC | LTE-TDD (SC-FDMA, 50% RB, 3 MHz, QPSK, UL Sub)      | LTE-TDD | 7.71 | $\pm 9.6\%$ |
| 10483 | AAC | LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM, UL Sub)    | LTE-TDD | 8.39 | $\pm 9.6\%$ |
| 10484 | AAC | LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM, UL Sub)    | LTE-TDD | 8.47 | $\pm 9.6\%$ |
| 10485 | AAF | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, QPSK, UL Sub)      | LTE-TDD | 7.59 | $\pm 9.6\%$ |
| 10486 | AAF | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM, UL Sub)    | LTE-TDD | 8.38 | $\pm 9.6\%$ |
| 10487 | AAF | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM, UL Sub)    | LTE-TDD | 8.60 | $\pm 9.6\%$ |
| 10488 | AAF | LTE-TDD (SC-FDMA, 50% RB, 10 MHz, QPSK, UL Sub)     | LTE-TDD | 7.70 | $\pm 9.6\%$ |
| 10489 | AAF | LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM, UL Sub)   | LTE-TDD | 8.31 | $\pm 9.6\%$ |
| 10490 | AAF | LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM, UL Sub)   | LTE-TDD | 8.54 | $\pm 9.6\%$ |
| 10491 | AAE | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, QPSK, UL Sub)     | LTE-TDD | 7.74 | $\pm 9.6\%$ |
| 10492 | AAE | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM, UL Sub)   | LTE-TDD | 8.41 | $\pm 9.6\%$ |
| 10493 | AAE | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM, UL Sub)   | LTE-TDD | 8.55 | $\pm 9.6\%$ |
| 10494 | AAF | LTE-TDD (SC-FDMA, 50% RB, 20 MHz, QPSK, UL Sub)     | LTE-TDD | 7.74 | $\pm 9.6\%$ |
| 10495 | AAF | LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM, UL Sub)   | LTE-TDD | 8.37 | $\pm 9.6\%$ |
| 10496 | AAF | LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM, UL Sub)   | LTE-TDD | 8.54 | $\pm 9.6\%$ |
| 10497 | AAB | LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK, UL Sub)   | LTE-TDD | 7.67 | $\pm 9.6\%$ |
| 10498 | AAB | LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM, UL Sub) | LTE-TDD | 8.40 | $\pm 9.6\%$ |
| 10499 | AAB | LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM, UL Sub) | LTE-TDD | 8.68 | $\pm 9.6\%$ |
| 10500 | AAC | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, QPSK, UL Sub)     | LTE-TDD | 7.67 | $\pm 9.6\%$ |
| 10501 | AAC | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM, UL Sub)   | LTE-TDD | 8.44 | $\pm 9.6\%$ |
| 10502 | AAC | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM, UL Sub)   | LTE-TDD | 8.52 | $\pm 9.6\%$ |
| 10503 | AAF | LTE-TDD (SC-FDMA, 100% RB, 5 MHz, QPSK, UL Sub)     | LTE-TDD | 7.72 | $\pm 9.6\%$ |
| 10504 | AAF | LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM, UL Sub)   | LTE-TDD | 8.31 | $\pm 9.6\%$ |
| 10505 | AAF | LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM, UL Sub)   | LTE-TDD | 8.54 | $\pm 9.6\%$ |
| 10506 | AAF | LTE-TDD (SC-FDMA, 100% RB, 10 MHz, QPSK, UL Sub)    | LTE-TDD | 7.74 | $\pm 9.6\%$ |
| 10507 | AAF | LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM, UL Sub)  | LTE-TDD | 8.36 | $\pm 9.6\%$ |
| 10508 | AAF | LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM, UL Sub)  | LTE-TDD | 8.55 | $\pm 9.6\%$ |
| 10509 | AAE | LTE-TDD (SC-FDMA, 100% RB, 15 MHz, QPSK, UL Sub)    | LTE-TDD | 7.99 | $\pm 9.6\%$ |
| 10510 | AAE | LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM, UL Sub)  | LTE-TDD | 8.49 | $\pm 9.6\%$ |
| 10511 | AAE | LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM, UL Sub)  | LTE-TDD | 8.51 | $\pm 9.6\%$ |
| 10512 | AAF | LTE-TDD (SC-FDMA, 100% RB, 20 MHz, QPSK, UL Sub)    | LTE-TDD | 7.74 | $\pm 9.6\%$ |
| 10513 | AAF | LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM, UL Sub)  | LTE-TDD | 8.42 | $\pm 9.6\%$ |
| 10514 | AAF | LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM, UL Sub)  | LTE-TDD | 8.45 | $\pm 9.6\%$ |
| 10515 | AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps, 99pc dc)   | WLAN    | 1.58 | $\pm 9.6\%$ |
| 10516 | AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps, 99pc dc) | WLAN    | 1.57 | $\pm 9.6\%$ |
| 10517 | AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps, 99pc dc)  | WLAN    | 1.58 | $\pm 9.6\%$ |
| 10518 | AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps, 99pc dc)   | WLAN    | 8.23 | $\pm 9.6\%$ |
| 10519 | AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps, 99pc dc)  | WLAN    | 8.39 | $\pm 9.6\%$ |
| 10520 | AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps, 99pc dc)  | WLAN    | 8.12 | $\pm 9.6\%$ |
| 10521 | AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps, 99pc dc)  | WLAN    | 7.97 | $\pm 9.6\%$ |
| 10522 | AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps, 99pc dc)  | WLAN    | 8.45 | $\pm 9.6\%$ |
| 10523 | AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps, 99pc dc)  | WLAN    | 8.08 | $\pm 9.6\%$ |
| 10524 | AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps, 99pc dc)  | WLAN    | 8.27 | $\pm 9.6\%$ |
| 10525 | AAB | IEEE 802.11ac WiFi (20MHz, MCS0, 99pc dc)           | WLAN    | 8.36 | $\pm 9.6\%$ |
| 10526 | AAB | IEEE 802.11ac WiFi (20MHz, MCS1, 99pc dc)           | WLAN    | 8.42 | $\pm 9.6\%$ |
| 10527 | AAB | IEEE 802.11ac WiFi (20MHz, MCS2, 99pc dc)           | WLAN    | 8.21 | $\pm 9.6\%$ |