

Test Laboratory: Sporton International Inc.

#1 Antenna module 0\_BW 100MHz\_Back\_5mm\_32RB\_0Offset\_QPSK

Device under Test Properties

| Manufacturer | Dimensions [mm]     | IMEI | DUT Type  |
|--------------|---------------------|------|-----------|
|              | 160.0 x 75.0 x 15.0 |      | Phone+Mod |

Exposure Conditions

| Phantom Section | Position, Test Distance [mm] | Band | Frequency [MHz], Channel Number | Conversion Factor |
|-----------------|------------------------------|------|---------------------------------|-------------------|
| 5G              | BACK<br>5.00 mm              | n260 | 38500.0                         | 1.0               |

Hardware Setup

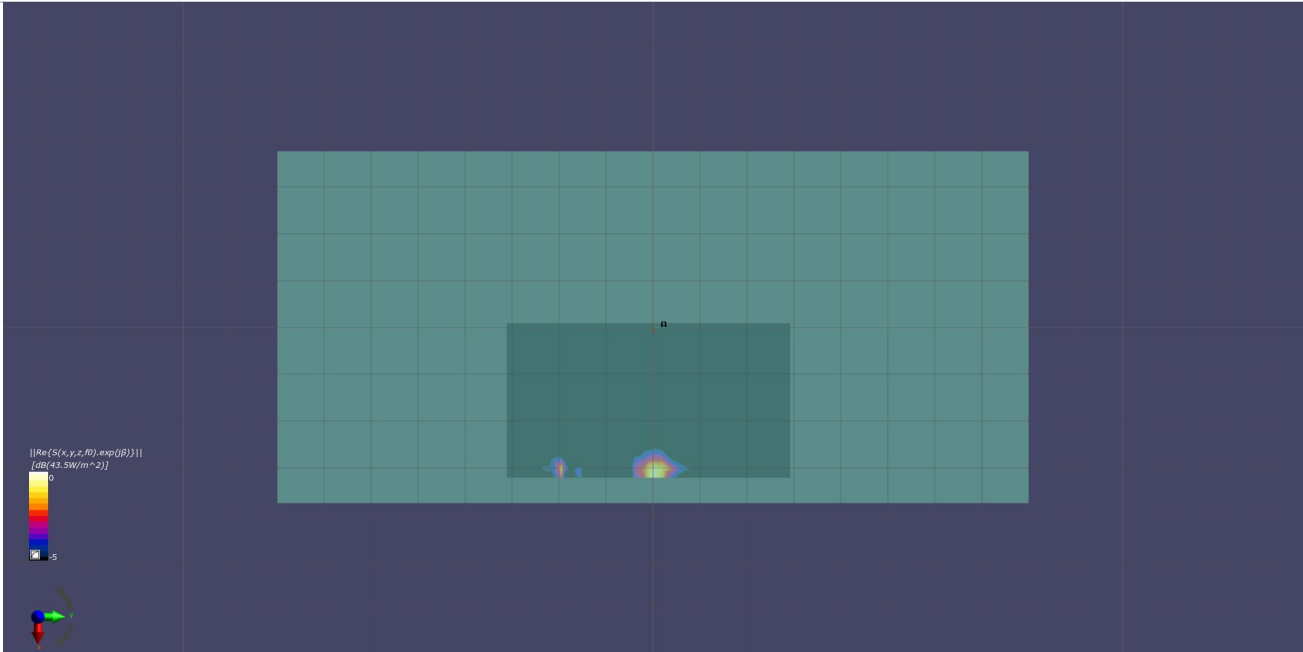
| Phantom  | Medium | Probe, Calibration Date      | DAE, Calibration Date  |
|----------|--------|------------------------------|------------------------|
| 5G Cover | Air    | EUmmWV3 - SN9390, 2018-06-28 | DAE4 Sn778, 2018-05-25 |

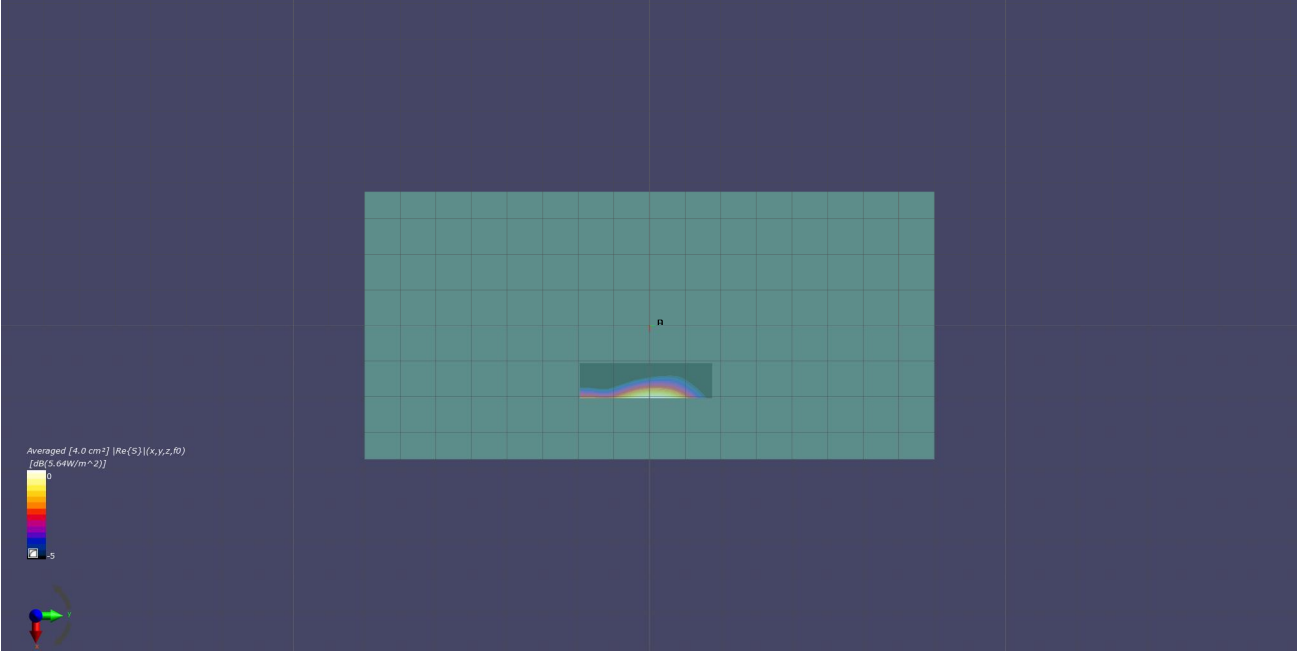
Scan Setup

|                     | 5G Scan     |
|---------------------|-------------|
| Grid Extents [mm]   | 30.0 x 60.0 |
| Grid Steps [lambda] | 0.25 x 0.25 |
| Sensor Surface [mm] | 5.0         |

Measurement Results

|                  | 5G Scan           |
|------------------|-------------------|
| Date             | 2019-01-20, 21:43 |
| Avg. Area [cm²]  | 4.00              |
| Savg tot [W/m²]  | 5.64              |
| Savg inc [W/m²]  | 4.73              |
| Speak [W/m²]     | 43.5              |
| Epeak [V/m]      | 138               |
| Hpeak [A/m]      | 0.337             |
| Power Drift [dB] | 0.02              |





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#2 Antenna module 1\_BW 100MHz\_Back \_5mm\_66RB\_0Offset\_QPSK

Device under Test Properties

| Name, Manufacturer | Dimensions [mm]     | IMEI | DUT Type  |
|--------------------|---------------------|------|-----------|
|                    | 160.0 x 75.0 x 15.0 |      | Phone+Mod |

Exposure Conditions

| Phantom Section | Position, Test Distance [mm] | Band | Frequency [MHz], Channel Number | Conversion Factor |
|-----------------|------------------------------|------|---------------------------------|-------------------|
| 5G              | BACK, 5.00 mm                | n260 | 38500.0                         | 1.0               |

Hardware Setup

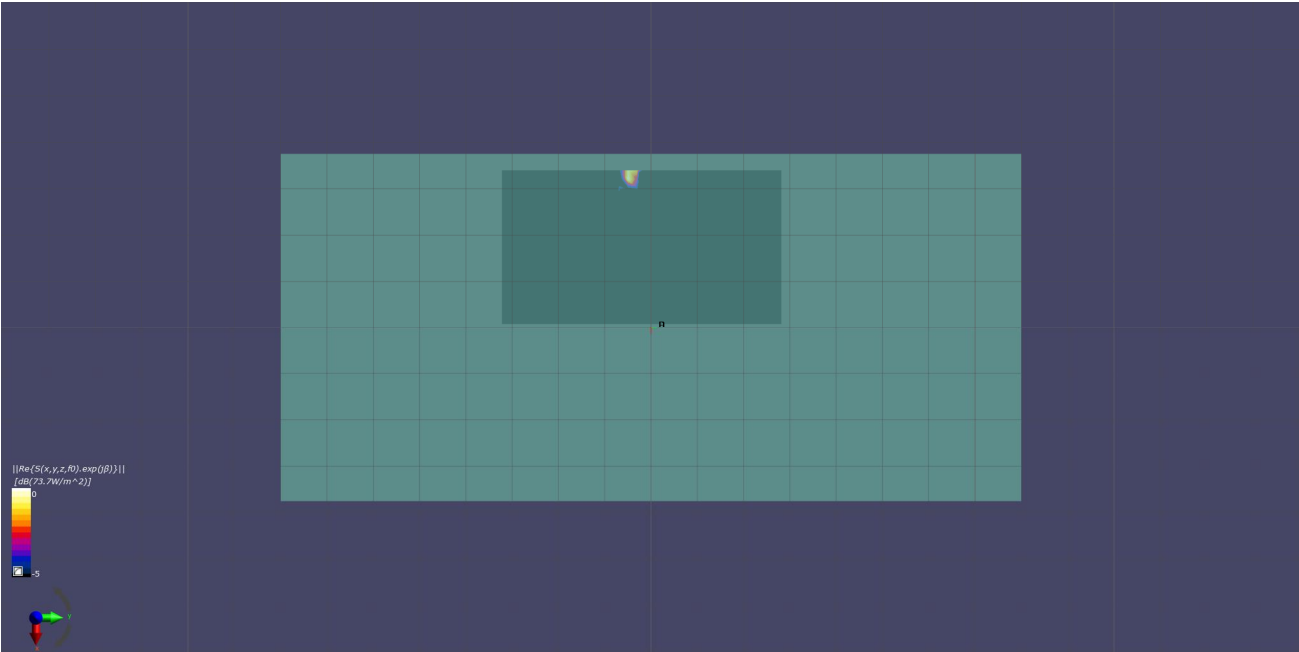
| Phantom  | Medium | Probe, Calibration Date      | DAE, Calibration Date  |
|----------|--------|------------------------------|------------------------|
| 5G Cover | Air    | EUmmWV3 - SN9390, 2018-06-28 | DAE4 Sn778, 2018-05-25 |

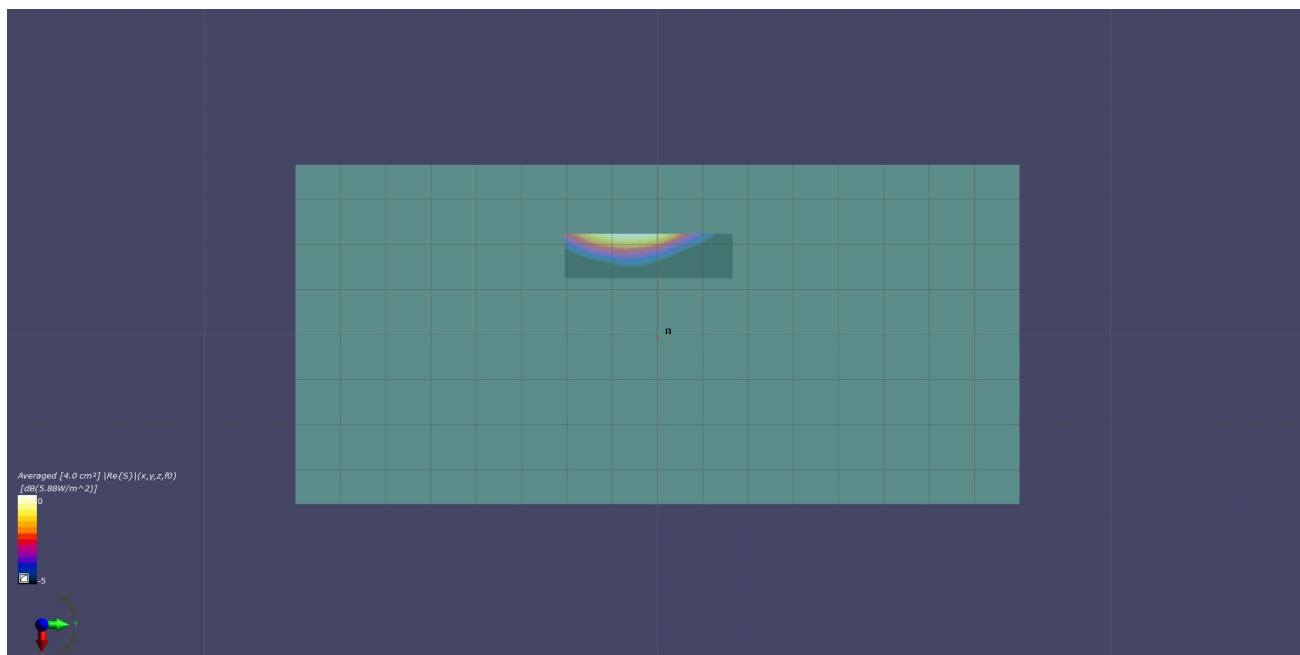
Scan Setup

|                     | 5G Scan     |
|---------------------|-------------|
| Grid Extents [mm]   | 30.0 x 70.0 |
| Grid Steps [lambda] | 0.25 x 0.25 |
| Sensor Surface [mm] | 5.0         |

Measurement Results

|                  | 5G Scan           |
|------------------|-------------------|
| Date             | 2019-01-23, 11:30 |
| Avg. Area [cm²]  | 4.00              |
| Savg tot [W/m²]  | 5.88              |
| Savg inc [W/m²]  | 4.39              |
| Speak [W/m²]     | 73.7              |
| Epeak [V/m]      | 171               |
| Hpeak [A/m]      | 0.448             |
| Power Drift [dB] | 0.10              |





Test Laboratory: Sporton International Inc.

#3 Antenna module 2\_BW 100MHz\_Top Side\_5mm\_32RB\_0Offset\_QPSK

Device under Test Properties

| Manufacturer | Dimensions [mm]     | IMEI | DUT Type  |
|--------------|---------------------|------|-----------|
|              | 160.0 x 75.0 x 15.0 |      | Phone+Mod |

Exposure Conditions

| Phantom Section | Position, Test Distance [mm] | Band | Frequency [MHz], Channel Number | Conversion Factor |
|-----------------|------------------------------|------|---------------------------------|-------------------|
| 5G              | EDGE TOP<br>5.00 mm          | n260 | 38500.0                         | 1.0               |

Hardware Setup

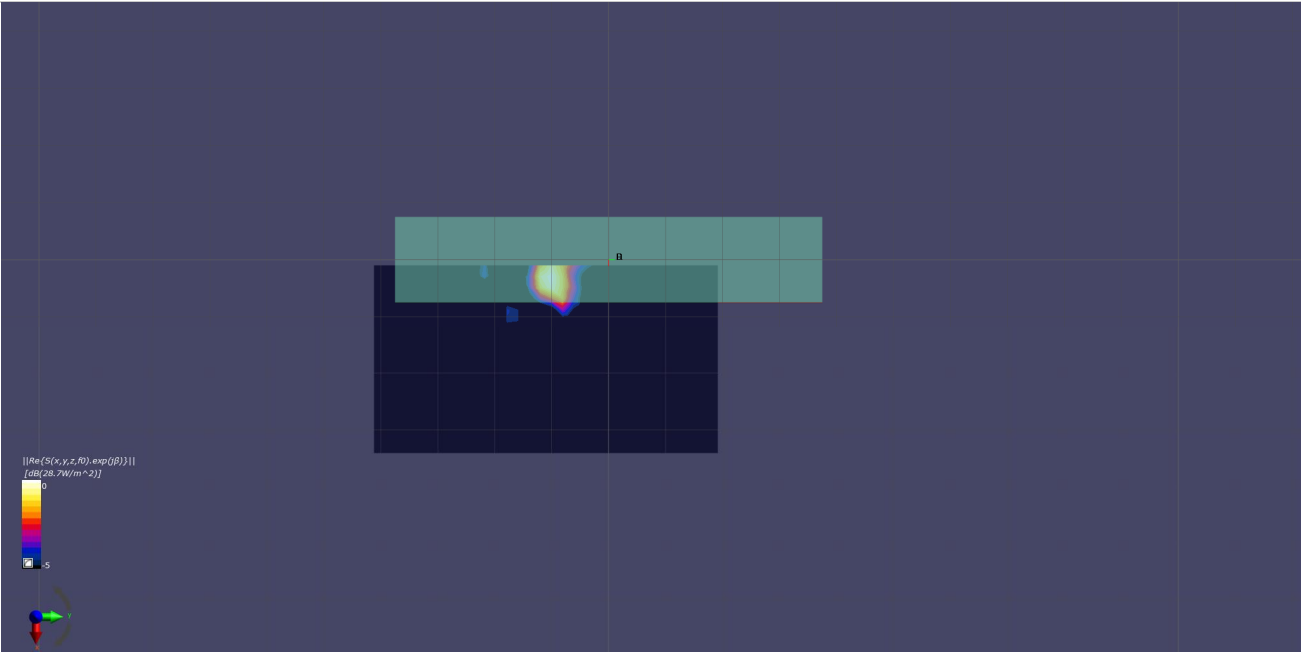
| Phantom  | Medium | Probe, Calibration Date      | DAE, Calibration Date  |
|----------|--------|------------------------------|------------------------|
| 5G Cover | Air    | EUmmWV3 - SN9390, 2018-06-28 | DAE4 Sn778, 2018-05-25 |

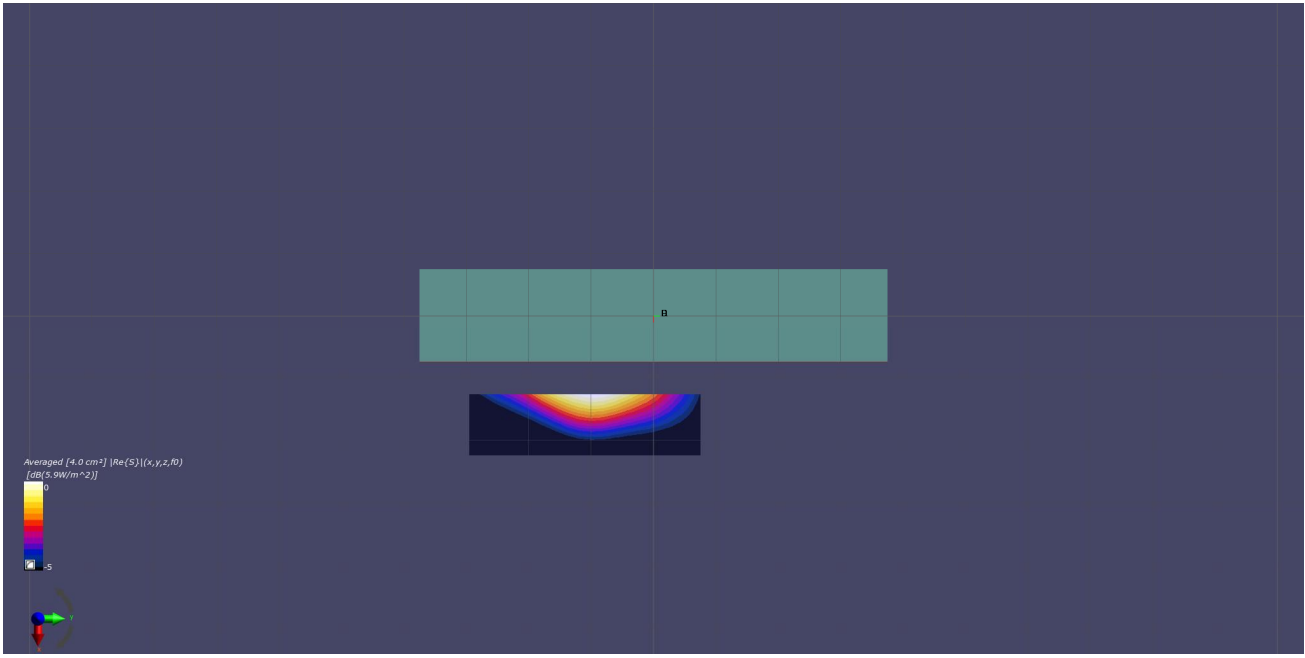
Scan Setup

|                     | 5G Scan     |
|---------------------|-------------|
| Grid Extents [mm]   | 30.0 x 60.0 |
| Grid Steps [lambda] | 0.25 x 0.25 |
| Sensor Surface [mm] | 5.0         |

Measurement Results

|                  | 5G Scan           |
|------------------|-------------------|
| Date             | 2019-01-21, 13:38 |
| Avg. Area [cm²]  | 4.00              |
| Savg tot [W/m²]  | 5.90              |
| Savg inc [W/m²]  | 4.80              |
| Speak [W/m²]     | 28.7              |
| Epeak [V/m]      | 109               |
| Hpeak [A/m]      | 0.266             |
| Power Drift [dB] | -0.06             |





Test Laboratory: Sporton International Inc.

#4 Antenna module 3\_BW 100MHz\_Top Side\_5mm\_1RB\_0Offset\_QPSK

Device under Test Properties

| Manufacturer | Dimensions [mm]     | IMEI | DUT Type  |
|--------------|---------------------|------|-----------|
|              | 160.0 x 75.0 x 15.0 |      | Phone+Mod |

Exposure Conditions

| Phantom Section | Position, Test Distance [mm] | Band | Frequency [MHz], Channel Number | Conversion Factor |
|-----------------|------------------------------|------|---------------------------------|-------------------|
| 5G              | EDGE TOP<br>5.00 mm          | n260 | 37050.0                         | 1.0               |

Hardware Setup

| Phantom  | Medium | Probe, Calibration Date      | DAE, Calibration Date  |
|----------|--------|------------------------------|------------------------|
| 5G Cover | Air    | EUmmWV3 - SN9390, 2018-06-28 | DAE4 Sn778, 2018-05-25 |

Scan Setup

|                     | 5G Scan     |
|---------------------|-------------|
| Grid Extents [mm]   | 40.0 x 60.0 |
| Grid Steps [lambda] | 0.25 x 0.25 |
| Sensor Surface [mm] | 5.0         |

Measurement Results

|                  | 5G Scan           |
|------------------|-------------------|
| Date             | 2019-01-23, 01:23 |
| Avg. Area [cm²]  | 4.00              |
| Savg tot [W/m²]  | 3.12              |
| Savg inc [W/m²]  | 2.90              |
| Speak [W/m²]     | 9.91              |
| Epeak [V/m]      | 63.5              |
| Hpeak [A/m]      | 0.159             |
| Power Drift [dB] | 0.11              |

