



## EMC Test Data

|                 |                     |                  |             |
|-----------------|---------------------|------------------|-------------|
| Client:         | OQO                 | Job Number:      | J62637      |
| Model:          | Model 02            | Test-Log Number: | T65242      |
|                 |                     | Project Manager: | Susan Pelzl |
| Contact:        | Bob Hymes           |                  |             |
| Emissions Spec: | EN 300 328, 301 893 | Class:           | Radio       |
| Immunity Spec:  | EN 301 489-17       | Environment:     | Radio       |

## EMC Test Data

For The

**OQO**

Model

**Model 02**

Date of Last Test: 11/9/2006



## EMC Test Data

|                 |                     |                  |             |
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| Client:         | OQO                 | Job Number:      | J62637      |
| Model:          | Model 02            | Test-Log Number: | T65242      |
|                 |                     | Project Manager: | Susan Pelzl |
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| Emissions Spec: | EN 300 328, 301 893 | Class:           | Radio       |
| Immunity Spec:  | EN 301 489-17       | Environment:     | Radio       |

### EUT INFORMATION

*The following information was collected during the test sessions(s).*

#### General Description

The EUT is a Handheld PC. Since the EUT would be placed on a table top during operation, the EUT was treated as table-top equipment during testing to simulate the end-user environment. The electrical rating of the EUT is -5Vdc Volts, 3.5 Amps. It can be powered from an external AC/DC adapter rated for operation from 100-240V, 50/60Hz.

#### Equipment Under Test

| Manufacturer | Model    | Description | Serial Number | FCC ID |
|--------------|----------|-------------|---------------|--------|
| OQO          | Model 02 | Handheld PC | 47 (silver)   |        |

#### Other EUT Details

The following EUT details should be noted: N/A

#### EUT Antenna (Intentional Radiators Only)

The EUT antenna is an internal flex .

The antenna is integral to the device.

#### EUT Enclosure

The EUT enclosure is primarily constructed of Metal and Plastic. It measures approximately 15 cm Long by 5 cm Wide by 2 cm high.

#### Modification History

| Mod. # | Test | Date | Modification |
|--------|------|------|--------------|
| 1      |      |      |              |
| 2      |      |      |              |
| 3      |      |      |              |

Modifications applied are assumed to be used on subsequent tests unless otherwise stated as a further modification.



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| Model:                 | Model 02            | T-Log Number:   | T65242      |
|                        |                     | Account Manger: | Susan Pelzl |
| Contact:               | Bob Hymes           |                 |             |
| Emissions Standard(s): | EN 300 328, 301 893 | Class:          | Radio       |
| Immunity Standard(s):  | EN 301 489-17       | Environment:    | Radio       |

### Test Configuration #1

#### Local Support Equipment

| Manufacturer | Model | Description | Serial Number | FCC ID |
|--------------|-------|-------------|---------------|--------|
| None         | -     | -           | -             | -      |

#### Remote Support Equipment

| Manufacturer | Model | Description | Serial Number | FCC ID |
|--------------|-------|-------------|---------------|--------|
| None         | -     | -           | -             | -      |

#### Cabling and Ports

| Port         | Connected To  | Cable(s)    |                        |           |
|--------------|---------------|-------------|------------------------|-----------|
|              |               | Description | Shielded or Unshielded | Length(m) |
| EUT AC Power | AC/DC Adapter | 2 wire      | Unshielded             | 1.5       |

#### EUT Operation During Emissions Tests

EUT was running ACHES\_with\_files\_defined software.

#### EUT Operation During Immunity Tests

TBD

#### Performance Criteria for Immunity Tests

Criterion A:

Criterion B:

Criterion C:



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| Contact:  | Bob Hymes           | Account Manager: | Susan Pelzl |
| Standard: | EN 300 328, 301 893 | Class:           | N/A         |

### Radiated Spurious Emissions, EN 301 893 V1.2.3

#### Test Specific Details

Objective: The objective of this test session is to perform engineering evaluation testing of the EUT with respect to the specification listed above.

Date of Test: 9/5/2006 9:13  
Test Engineer: Juan Martinez  
Test Location: Chamber #2

Config. Used: 1  
Config Change: None  
EUT Voltage: 230V/50Hz

#### General Test Configuration

The EUT and all local support equipment were located on the turntable for radiated spurious emissions testing.

The measurement antenna was located 3 meters from the EUT.

#### Summary of Results

| Run # | Test Performed                                                 | Limit      | Pass / Fail | Result / Margin |
|-------|----------------------------------------------------------------|------------|-------------|-----------------|
| 1     | Spurious Emissions<br>Transmit Mode<br>30 - 26,500 MHz         | EN 301 893 | Eval        | Refer to run    |
| 2     | Spurious Emissions<br>Receive/Stand-By Mode<br>30 - 26,500 MHz | EN 301 893 | Eval        | Refer to run    |

#### Modifications Made During Testing:

No modifications were made to the EUT during testing

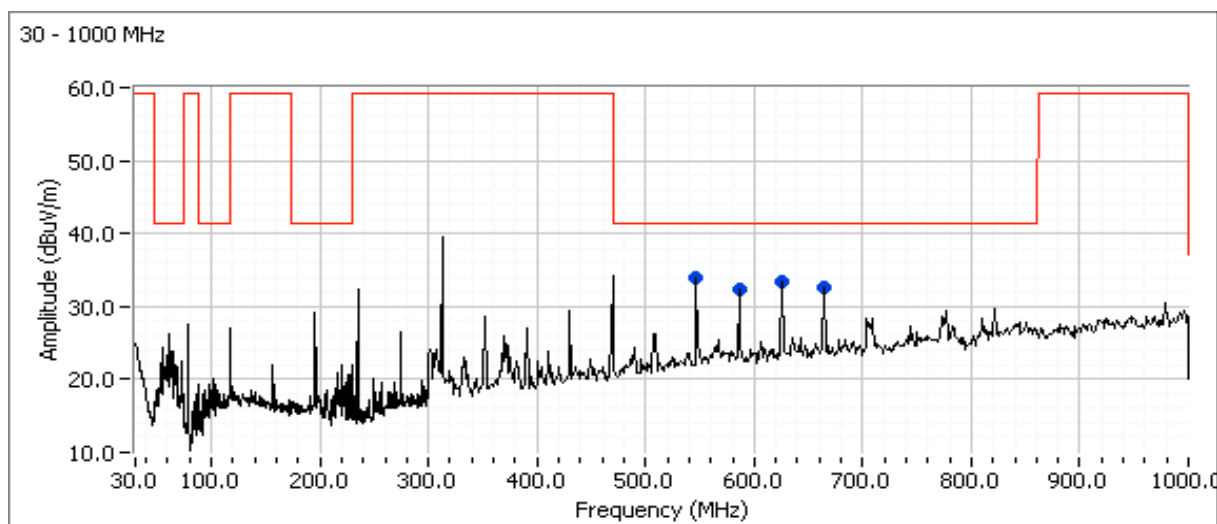
#### Deviations From The Standard

No deviations were made from the requirements of the standard.

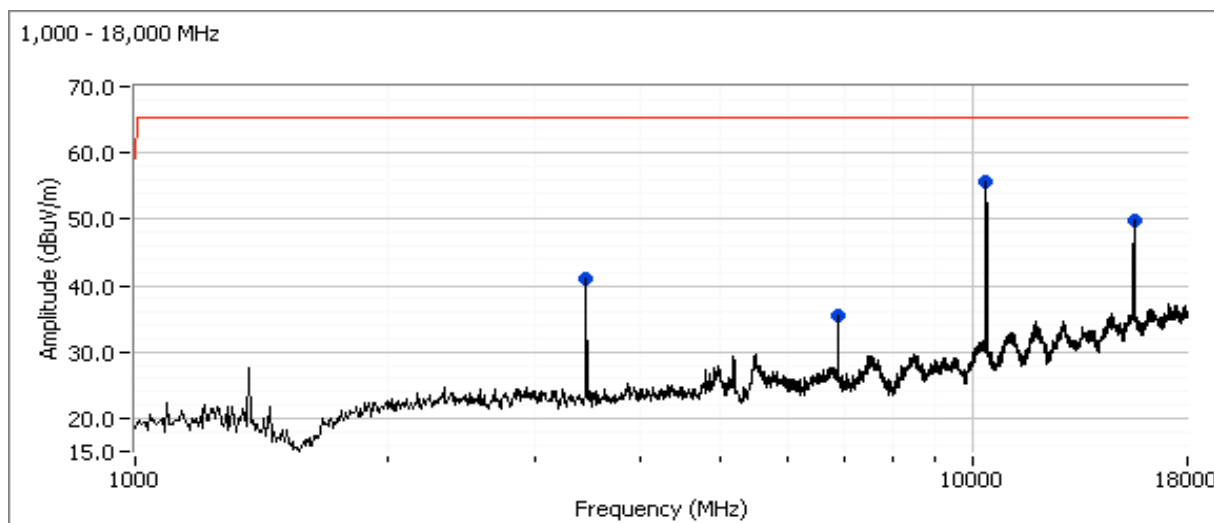
|                               |                              |
|-------------------------------|------------------------------|
| Client: OQO                   | Job Number: J62637           |
| Model: Model 02               | T-Log Number: T65242         |
| Contact: Bob Hymes            | Account Manager: Susan Pelzl |
| Standard: EN 300 328, 301 893 | Class: N/A                   |

**Run #1: Radiated Spurious Emissions, Transmit Mode, 30 - 26,500 MHz**  
**Measurements made at 3m**

**Run #1a: EUT @ 5180 MHz**



|                               |                              |
|-------------------------------|------------------------------|
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| Model: Model 02               | T-Log Number: T65242         |
| Contact: Bob Hymes            | Account Manager: Susan Pelzl |
| Standard: EN 300 328, 301 893 | Class: N/A                   |

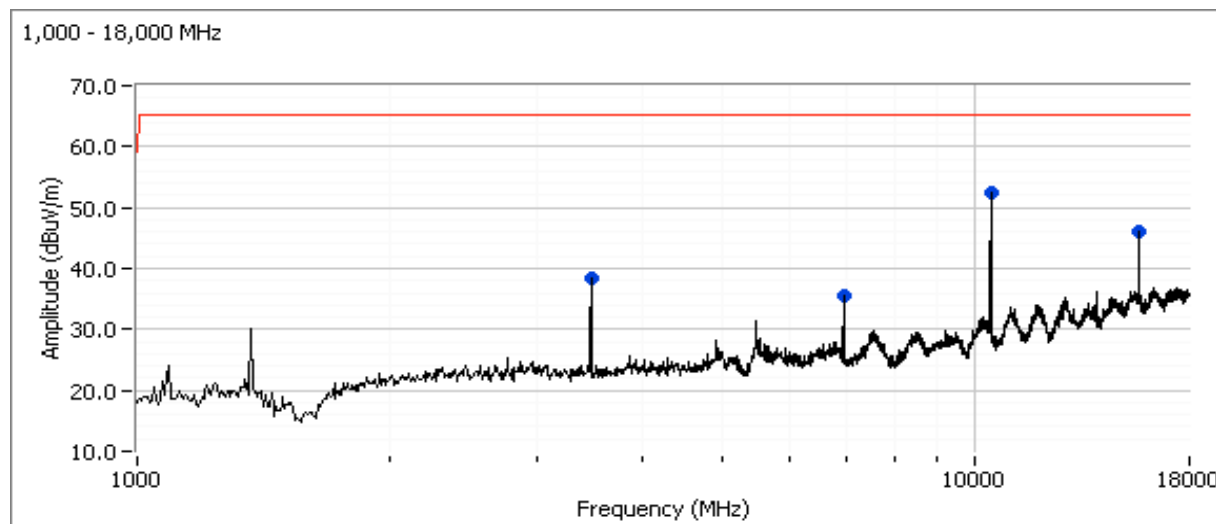


| Frequency | Level  | Pol | EN 301 893 <small>Note 1</small> |        | Detector  | Azimuth | Height | Comments |
|-----------|--------|-----|----------------------------------|--------|-----------|---------|--------|----------|
| MHz       | dBuV/m | V/H | Limit                            | Margin | Pk/QP/Avg | degrees | meters |          |
| 546.894   | 33.9   | H   | 41.3                             | -7.4   | Peak      | 312     | 1.0    |          |
| 586.172   | 32.4   | H   | 41.3                             | -8.9   | Peak      | 309     | 1.0    |          |
| 625.451   | 33.5   | H   | 41.3                             | -7.8   | Peak      | 287     | 1.0    |          |
| 664.729   | 32.7   | H   | 41.3                             | -8.6   | Peak      | 342     | 1.0    |          |
| 469.739   | 34.2   | H   | 59.3                             | -25.1  | Peak      | 324     | 1.0    |          |
| 10361.350 | 55.6   | H   | 65.3                             | -9.7   | Peak      | 248     | 1.7    |          |
| 15550.000 | 49.7   | V   | 65.3                             | -15.6  | Peak      | 272     | 1.7    |          |
| 469.167   | 38.8   | H   | 59.3                             | -20.5  | Peak      | 324     | 1.7    |          |
| 3453.400  | 40.9   | V   | 65.3                             | -24.4  | Peak      | 267     | 1.7    |          |
| 6906.680  | 35.4   | H   | 65.3                             | -29.9  | Peak      | 224     | 1.7    |          |

**Note 1:** The field strength limit in the tables above was calculated from the erp/eirp limit detailed in the standard using the free space propagation equation:  $E = \sqrt{(30PG)/d}$ . This limit is conservative - it does not consider the presence of the ground plane and, for erp limits, the dipole gain (2.2dBi) has not been included. The erp or eirp for all signals with less than 10dB of margin relative to this field strength limit is determined using substitution measurements.

|                               |                              |
|-------------------------------|------------------------------|
| Client: OQO                   | Job Number: J62637           |
| Model: Model 02               | T-Log Number: T65242         |
| Contact: Bob Hymes            | Account Manager: Susan Pelzl |
| Standard: EN 300 328, 301 893 | Class: N/A                   |

## Run #1b: EUT @ 5220 MHz

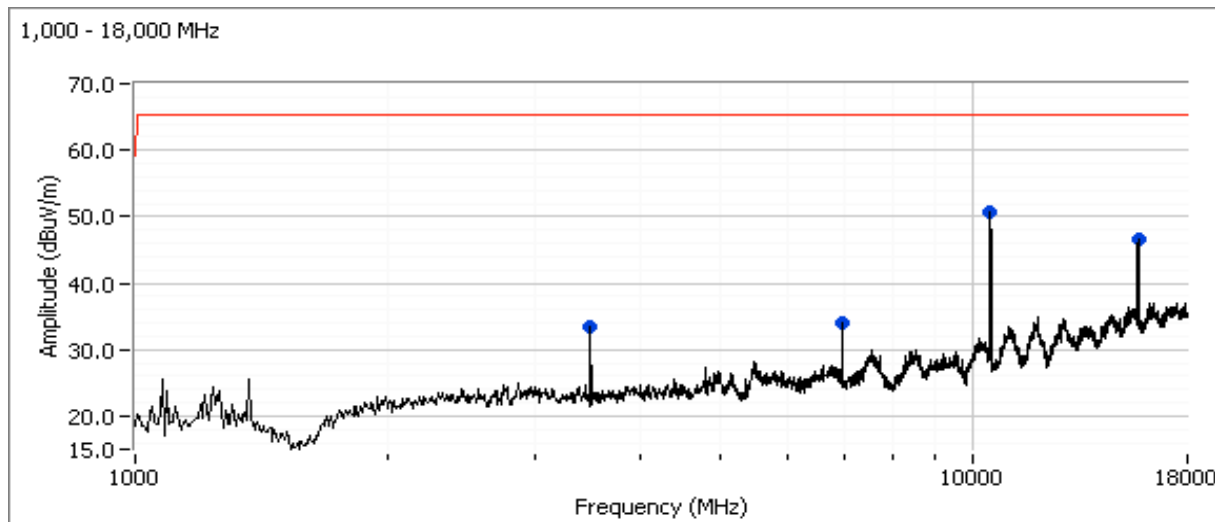


| Frequency | Level  | Pol | EN 301 893 <sup>Note 1</sup> |        | Detector  | Azimuth | Height | Comments |
|-----------|--------|-----|------------------------------|--------|-----------|---------|--------|----------|
| MHz       | dBuV/m | V/H | Limit                        | Margin | Pk/QP/Avg | degrees | meters |          |
| 10439.700 | 52.5   | H   | 65.3                         | -12.8  | Peak      | 273     | 1.7    |          |
| 15661.350 | 46.2   | V   | 65.3                         | -19.1  | Peak      | 272     | 1.7    |          |
| 3480.070  | 38.5   | V   | 65.3                         | -26.8  | Peak      | 258     | 1.7    |          |
| 6960.060  | 35.4   | V   | 65.3                         | -29.9  | Peak      | 310     | 1.7    |          |

**Note 1:** The field strength limit in the tables above was calculated from the erp/eirp limit detailed in the standard using the free space propagation equation:  $E = \sqrt{(30PG)/d}$ . This limit is conservative - it does not consider the presence of the ground plane and, for erp limits, the dipole gain (2.2dBi) has not been included. The erp or eirp for all signals with less than 10dB of margin relative to this field strength limit is determined using substitution measurements.

|                               |                              |
|-------------------------------|------------------------------|
| Client: OQO                   | Job Number: J62637           |
| Model: Model 02               | T-Log Number: T65242         |
| Contact: Bob Hymes            | Account Manager: Susan Pelzl |
| Standard: EN 300 328, 301 893 | Class: N/A                   |

## Run #1c: EUT @ 5240 MHz



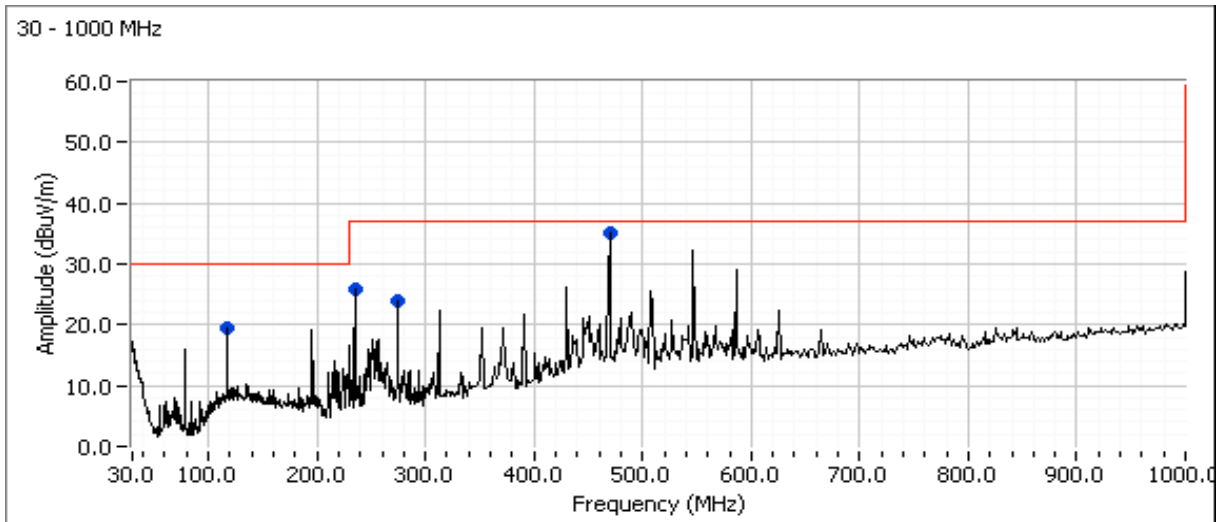
| Frequency | Level  | Pol | EN 301 893 <sup>Note 1</sup> |        | Detector  | Azimuth | Height | Comments |
|-----------|--------|-----|------------------------------|--------|-----------|---------|--------|----------|
| MHz       | dBuV/m | V/H | Limit                        | Margin | Pk/QP/Avg | degrees | meters |          |
| 6986.670  | 34.1   | V   | 65.3                         | -31.2  | Peak      | 295     | 1.7    |          |
| 3493.400  | 33.3   | H   | 65.3                         | -32.0  | Peak      | 219     | 1.7    |          |
| 10480.670 | 50.8   | H   | 65.3                         | -14.5  | Peak      | 284     | 1.7    |          |
| 15717.510 | 46.7   | V   | 65.3                         | -18.6  | Peak      | 285     | 1.7    |          |

**Note 1:** The field strength limit in the tables above was calculated from the erp/eirp limit detailed in the standard using the free space propagation equation:  $E = \sqrt{(30PG)/d}$ . This limit is conservative - it does not consider the presence of the ground plane and, for erp limits, the dipole gain (2.2dBi) has not been included. The erp or eirp for all signals with less than 10dB of margin relative to this field strength limit is determined using substitution measurements.

|                               |                              |
|-------------------------------|------------------------------|
| Client: OQO                   | Job Number: J62637           |
| Model: Model 02               | T-Log Number: T65242         |
| Contact: Bob Hymes            | Account Manager: Susan Pelzl |
| Standard: EN 300 328, 301 893 | Class: N/A                   |

**Run #3: Radiated Spurious Emissions, Receive Mode, 30 - 26,500 MHz**  
**Measurements made at 3m**

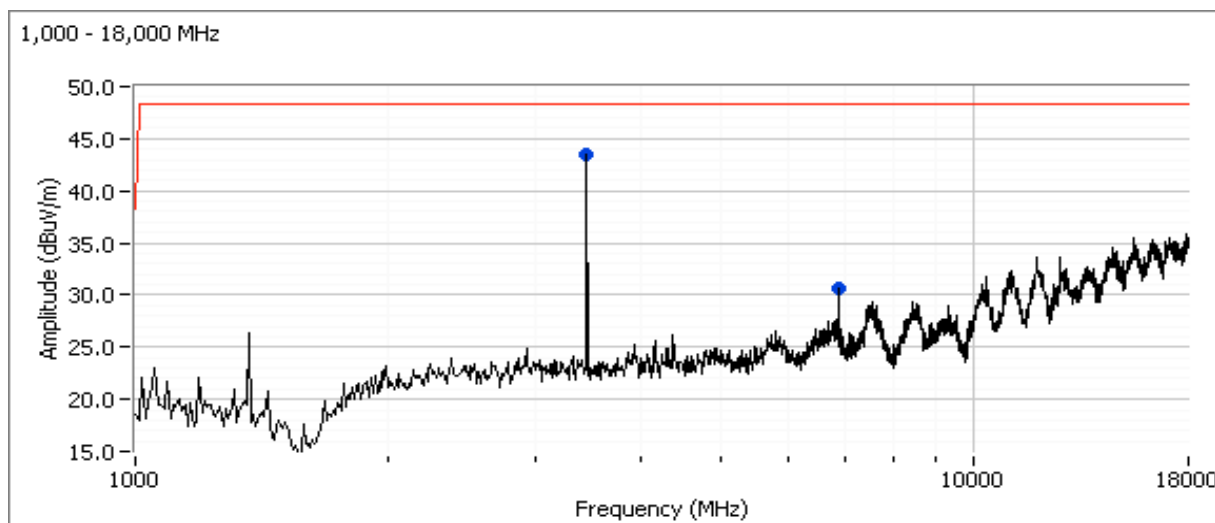
**Run #3a: EUT @ 5180 MHz**





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| Model:    | Model 02            | T-Log Number:    | T65242      |
| Contact:  | Bob Hymes           | Account Manager: | Susan Pelzl |
| Standard: | EN 300 328, 301 893 | Class:           | N/A         |

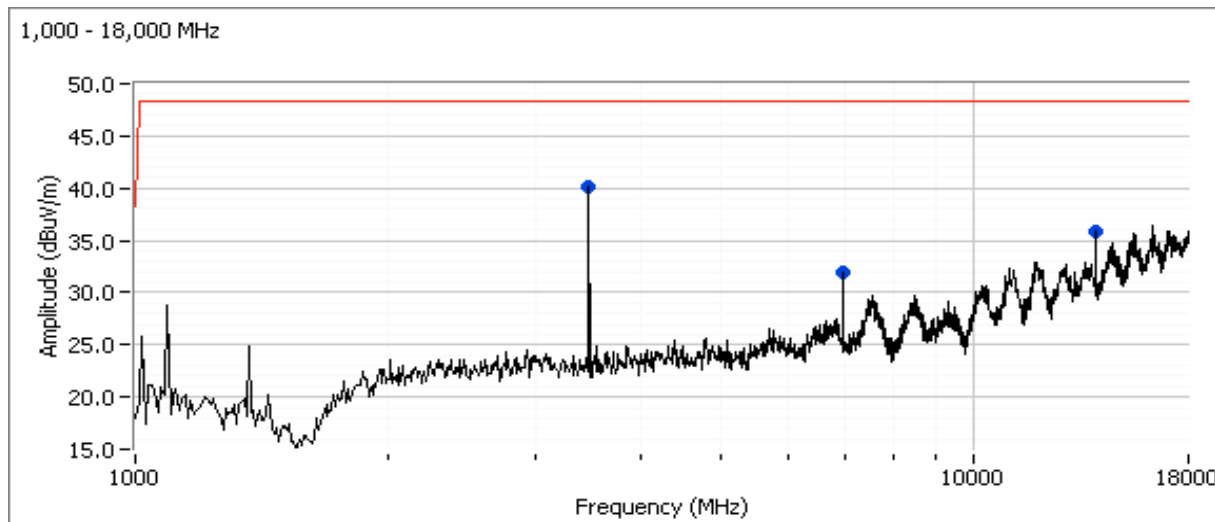


| Frequency | Level  | Pol | EN 301 893 <sup>Note 1</sup> |        | Detector  | Azimuth | Height | Comments  |
|-----------|--------|-----|------------------------------|--------|-----------|---------|--------|-----------|
| MHz       | dBuV/m | V/H | Limit                        | Margin | Pk/QP/Avg | degrees | meters |           |
| 469.739   | 35.1   | H   | 37.0                         | -1.9   | Peak      | 1       | 1.0    |           |
| 235.070   | 25.9   | H   | 37.0                         | -11.1  | Peak      | 263     | 1.0    |           |
| 274.028   | 23.9   | H   | 37.0                         | -13.1  | Peak      | 69      | 1.0    |           |
| 117.114   | 19.4   | H   | 30.0                         | -10.6  | Peak      | 101     | 1.0    |           |
| 3453.390  | 43.4   | V   | 48.3                         | -4.9   | Peak      | 271     | 1.7    |           |
| 469.167   | 30.5   | V   | 37.0                         | -6.5   | Peak      | 68      | 1.7    | Radio Off |
| 6906.680  | 30.7   | V   | 48.3                         | -17.6  | Peak      | 235     | 1.7    |           |

**Note 1:** The field strength limit in the tables above was calculated from the erp/eirp limit detailed in the standard using the free space propagation equation:  $E = \sqrt{(30PG)/d}$ . This limit is conservative - it does not consider the presence of the ground plane and, for erp limits, the dipole gain (2.2dBi) has not been included. The erp or eirp for all signals with less than 10dB of margin relative to this field strength limit is determined using substitution measurements.

|                               |                              |
|-------------------------------|------------------------------|
| Client: OQO                   | Job Number: J62637           |
| Model: Model 02               | T-Log Number: T65242         |
| Contact: Bob Hymes            | Account Manager: Susan Pelzl |
| Standard: EN 300 328, 301 893 | Class: N/A                   |

## Run #3b: EUT @ 5220 MHz

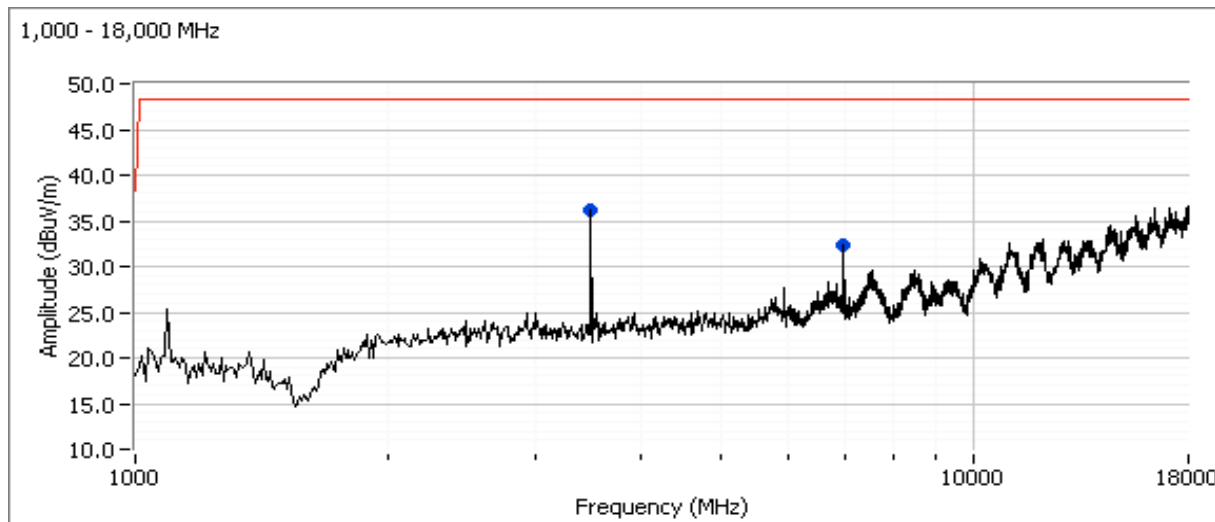


| Frequency | Level  | Pol | EN 301 893 <sup>Note 1</sup> |        | Detector  | Azimuth | Height | Comments |
|-----------|--------|-----|------------------------------|--------|-----------|---------|--------|----------|
| MHz       | dBuV/m | V/H | Limit                        | Margin | Pk/QP/Avg | degrees | meters |          |
| 3480.090  | 40.1   | V   | 48.3                         | -8.2   | Peak      | 263     | 1.7    |          |
| 13920.020 | 35.8   | V   | 48.3                         | -12.5  | Peak      | 285     | 1.7    |          |
| 6960.010  | 32.0   | V   | 48.3                         | -16.3  | Peak      | 302     | 1.7    |          |

**Note 1:** The field strength limit in the tables above was calculated from the erp/eirp limit detailed in the standard using the free space propagation equation:  $E = \sqrt{(30PG)/d}$ . This limit is conservative - it does not consider the presence of the ground plane and, for erp limits, the dipole gain (2.2dBi) has not been included. The erp or eirp for all signals with less than 10dB of margin relative to this field strength limit is determined using substitution measurements.

|           |                     |                  |             |
|-----------|---------------------|------------------|-------------|
| Client:   | OQO                 | Job Number:      | J62637      |
| Model:    | Model 02            | T-Log Number:    | T65242      |
| Contact:  | Bob Hymes           | Account Manager: | Susan Pelzl |
| Standard: | EN 300 328, 301 893 | Class:           | N/A         |

## Run #3c: EUT @ 5240 MHz



| Frequency | Level  | Pol | EN 301 893 <sup>Note 1</sup> |        | Detector  | Azimuth | Height | Comments |
|-----------|--------|-----|------------------------------|--------|-----------|---------|--------|----------|
| MHz       | dBuV/m | V/H | Limit                        | Margin | Pk/QP/Avg | degrees | meters |          |
| 3493.430  | 36.1   | V   | 48.3                         | -12.2  | Peak      | 268     | 1.7    |          |
| 6986.680  | 32.3   | V   | 48.3                         | -16.0  | Peak      | 288     | 1.7    |          |

**Note 1:** The field strength limit in the tables above was calculated from the erp/eirp limit detailed in the standard using the free space propagation equation:  $E = \sqrt{(30PG)/d}$ . This limit is conservative - it does not consider the presence of the ground plane and, for erp limits, the dipole gain (2.2dBi) has not been included. The erp or eirp for all signals with less than 10dB of margin relative to this field strength limit is determined using substitution measurements.