

Transmitter Band Edge Conducted Emissions (5.47-5.725 GHz Band) (continued)**Results: BPSK / Sectorised Antenna / 45 MHz Channel**

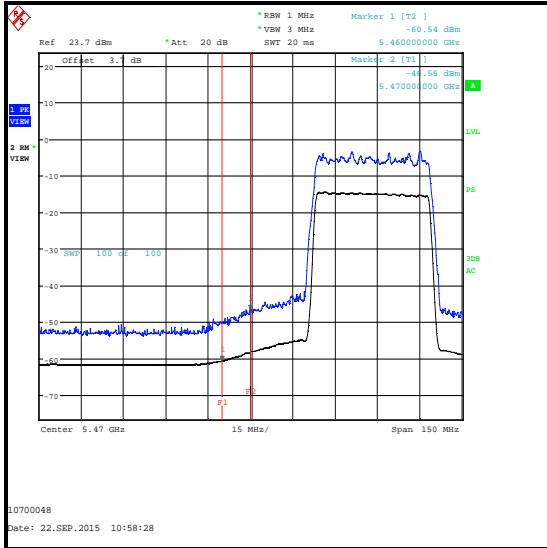
| Frequency (MHz) | Conducted Emission Level H Port (dBm/MHz) | Conducted Emission Level V Port (dBm/MHz) | Combined Conducted Emission Level (dBm/MHz) | Antenna Gain (dBi) | EIRP (dBm/MHz) |
|-----------------|---|---|---|--------------------|----------------|
| 5470 | -48.9* | -45.8* | -44.1 | 16.1 | -28.0 |
| 5725 | -48.4* | -46.2* | -44.2 | 16.1 | -28.1 |

| Frequency (MHz) | EIRP (dBm/MHz) | EIRP Limit (dBm/MHz) | Margin (dB) | Result |
|-----------------|----------------|----------------------|-------------|----------|
| 5470 | -28.0 | -27.0 | 1.0 | Complied |
| 5725 | -28.1 | -27.0 | 1.1 | Complied |

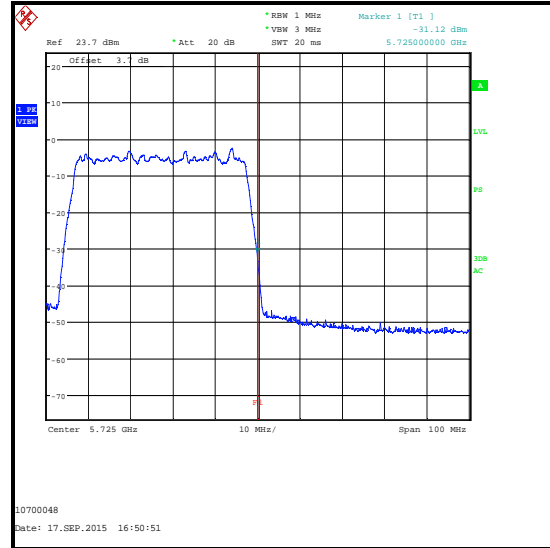
Transmitter Band Edge Conducted Emissions (5.47-5.725 GHz Band) (continued)

Results: BPSK / Sectorised Antenna / 45 MHz Channel

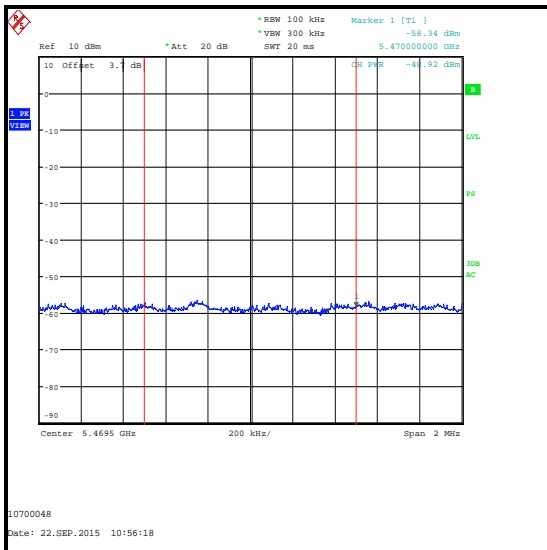
H Port



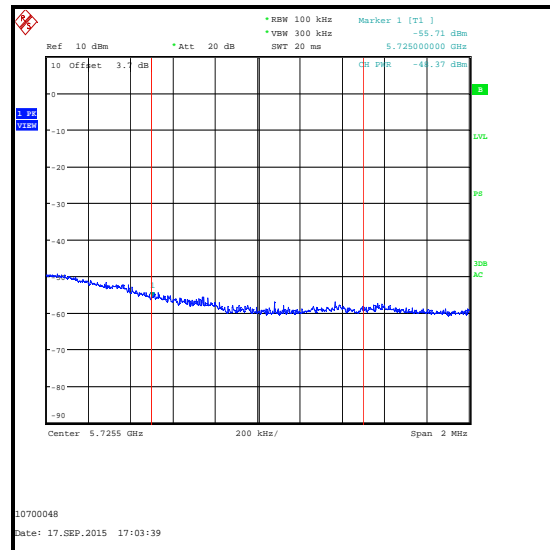
Lower Band Edge Measurement



Upper Band Edge Measurement



Lower Band Edge Measurement Integration method

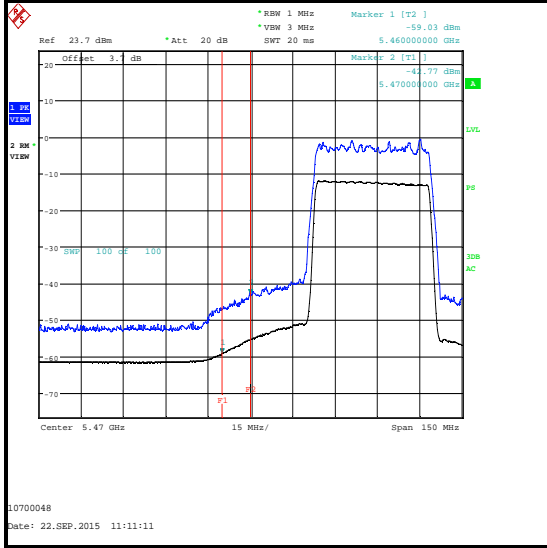


Upper Band Edge Measurement Integration method

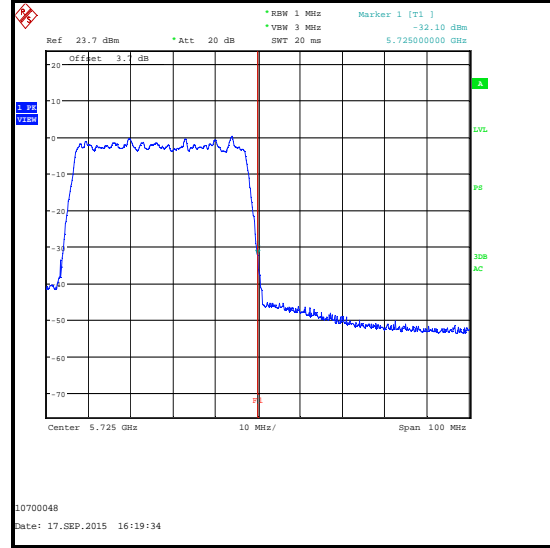
Transmitter Band Edge Conducted Emissions (5.47-5.725 GHz Band) (continued)

Results: BPSK / Sectorised Antenna / 45 MHz Channel

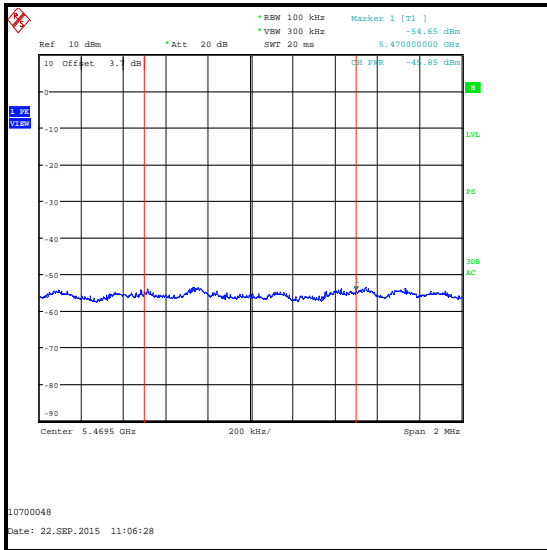
V Port



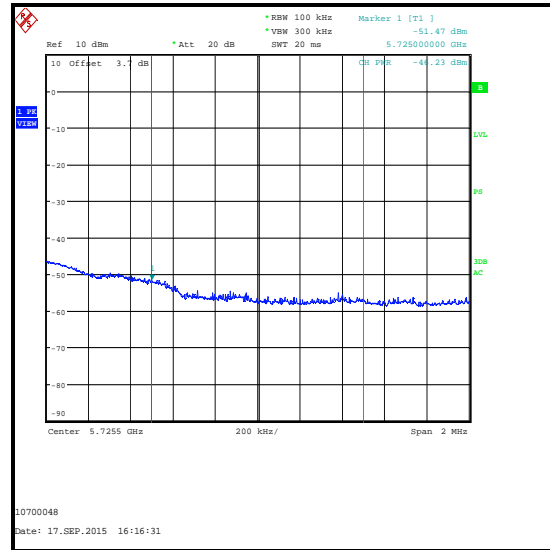
Lower Band Edge Measurement



Upper Band Edge Measurement



**Lower Band Edge Measurement
Integration method**



**Upper Band Edge Measurement
Integration method**

Transmitter Band Edge Conducted Emissions (5.47-5.725 GHz Band) (continued)**Results: BPSK / Omnidirectional Antenna / 5 MHz Channel**

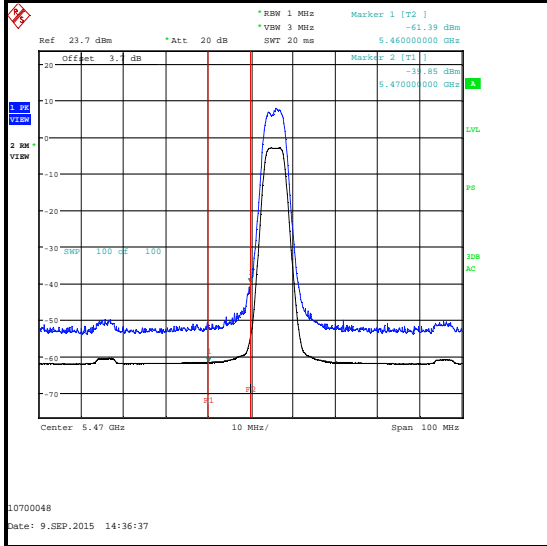
| Frequency (MHz) | Conducted Emission Level H Port (dBm/MHz) | Conducted Emission Level V Port (dBm/MHz) | Combined Conducted Emission Level (dBm/MHz) | Antenna Gain (dBi) | EIRP (dBm/MHz) |
|-----------------|---|---|---|--------------------|----------------|
| 5470 | -46.3* | -42.4* | -40.9 | 12.1 | -28.8 |
| 5725 | -45.2* | -41.7* | -40.1 | 12.1 | -28.0 |
| 5759.936 | -50.0 | -47.9 | -45.8 | 12.1 | -33.7 |

| Frequency (MHz) | EIRP (dBm/MHz) | EIRP Limit (dBm/MHz) | Margin (dB) | Result |
|-----------------|----------------|----------------------|-------------|----------|
| 5470 | -28.8 | -27.0 | 1.8 | Complied |
| 5725 | -28.0 | -27.0 | 1.0 | Complied |
| 5759.936 | -33.7 | -27.0 | 6.7 | Complied |

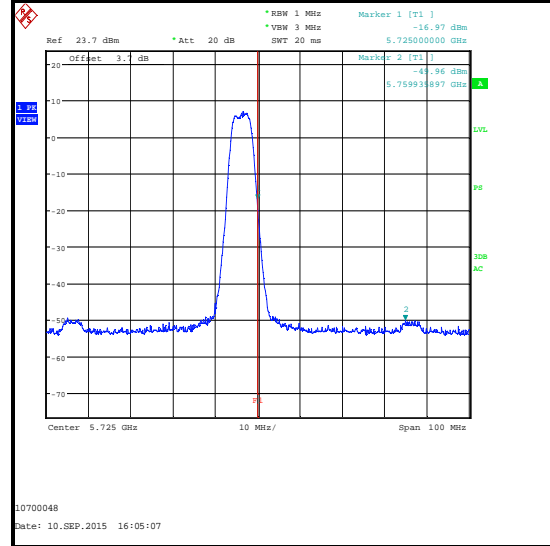
Transmitter Band Edge Conducted Emissions (5.47-5.725 GHz Band) (continued)

Results: BPSK / Omnidirectional Antenna / 5 MHz Channel

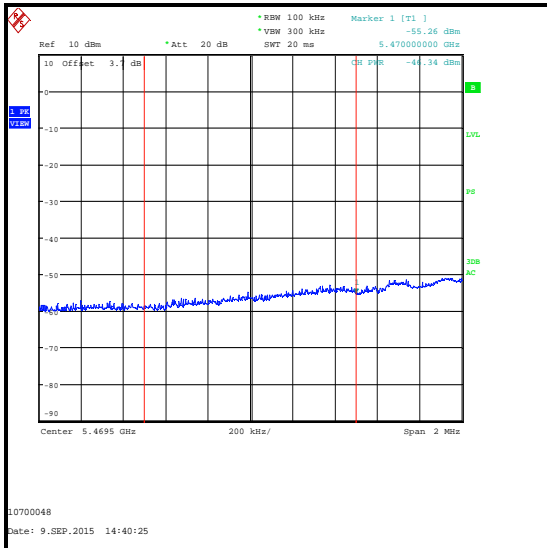
H Port



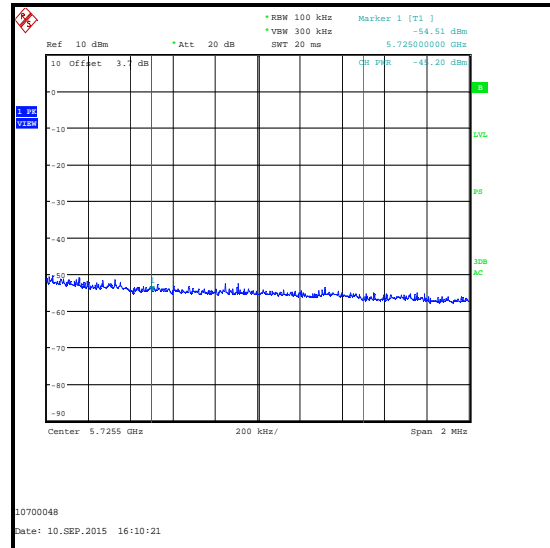
Lower Band Edge Measurement



Upper Band Edge Measurement



Lower Band Edge Measurement Integration method

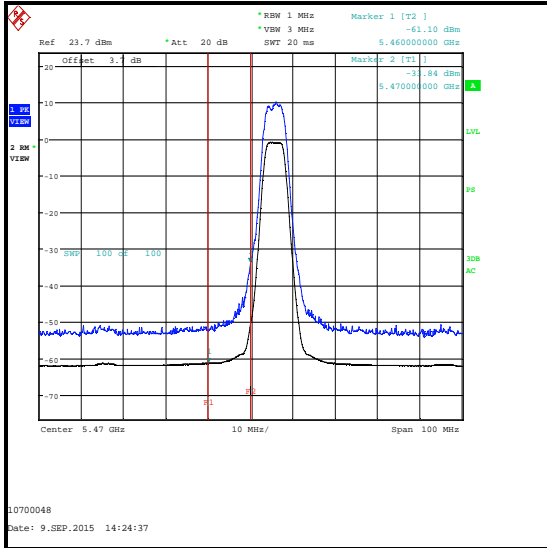


Upper Band Edge Measurement Integration method

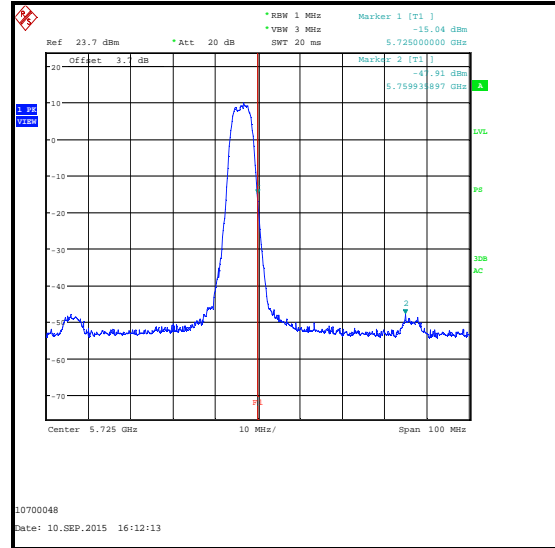
Transmitter Band Edge Conducted Emissions (5.47-5.725 GHz Band) (continued)

Results: BPSK / Omnidirectional Antenna / 5 MHz Channel

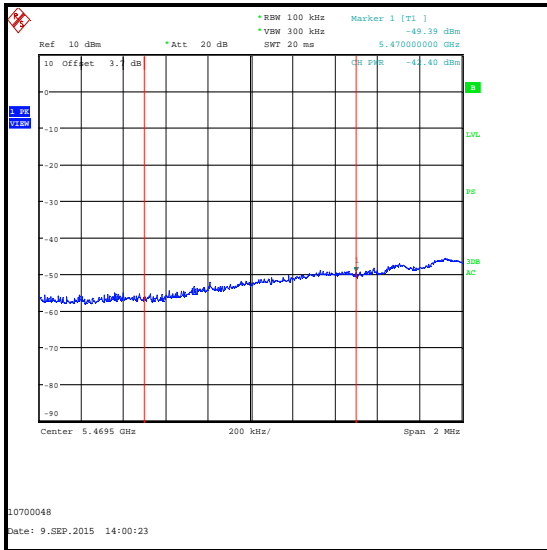
V Port



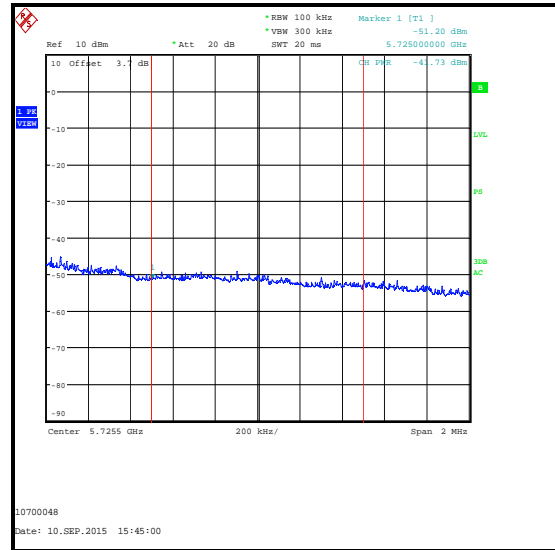
Lower Band Edge Measurement



Upper Band Edge Measurement



**Lower Band Edge Measurement
Integration method**



**Upper Band Edge Measurement
Integration method**

Transmitter Band Edge Conducted Emissions (5.47-5.725 GHz Band) (continued)**Results: BPSK / Omnidirectional Antenna / 10 MHz Channel**

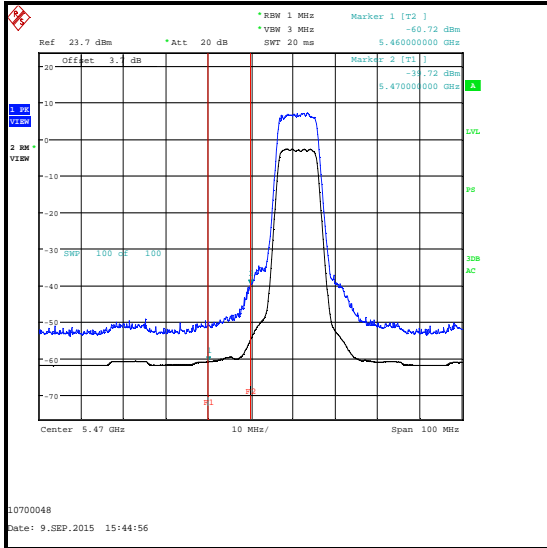
| Frequency (MHz) | Conducted Emission Level H Port (dBm/MHz) | Conducted Emission Level V Port (dBm/MHz) | Combined Conducted Emission Level (dBm/MHz) | Antenna Gain (dBi) | EIRP (dBm/MHz) |
|-----------------|---|---|---|--------------------|----------------|
| 5470 | -45.5* | -41.8* | -40.3 | 12.1 | -28.2 |
| 5725 | -44.5* | -42.8* | -40.6 | 12.1 | -28.5 |

| Frequency (MHz) | EIRP (dBm/MHz) | EIRP Limit (dBm/MHz) | Margin (dB) | Result |
|-----------------|----------------|----------------------|-------------|----------|
| 5470 | -28.2 | -27.0 | 1.2 | Complied |
| 5725 | -28.5 | -27.0 | 1.5 | Complied |

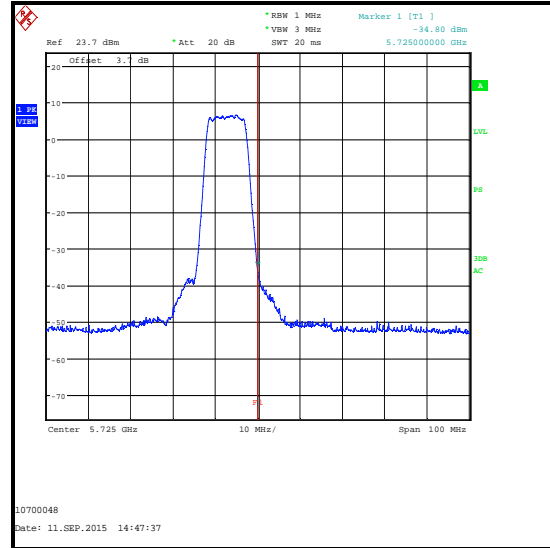
Transmitter Band Edge Conducted Emissions (5.47-5.725 GHz Band) (continued)

Results: BPSK / Omnidirectional Antenna / 10 MHz Channel

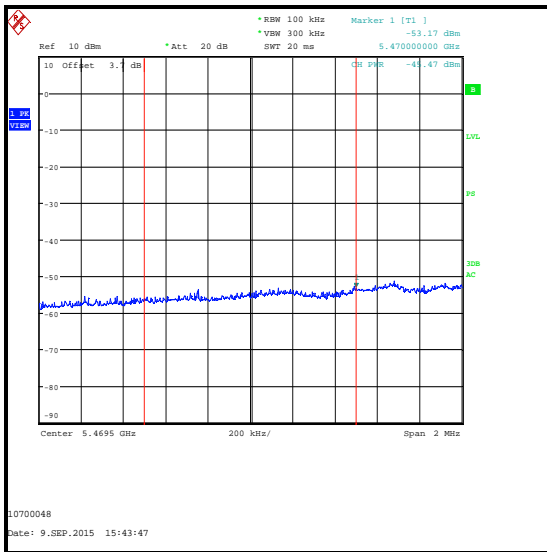
H Port



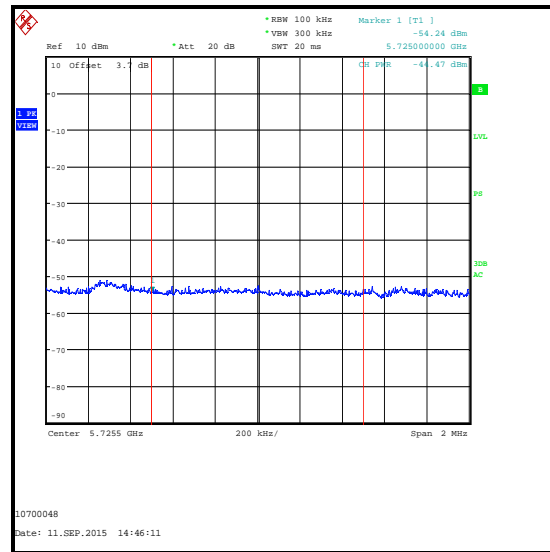
Lower Band Edge Measurement



Upper Band Edge Measurement



Lower Band Edge Measurement
Integration method

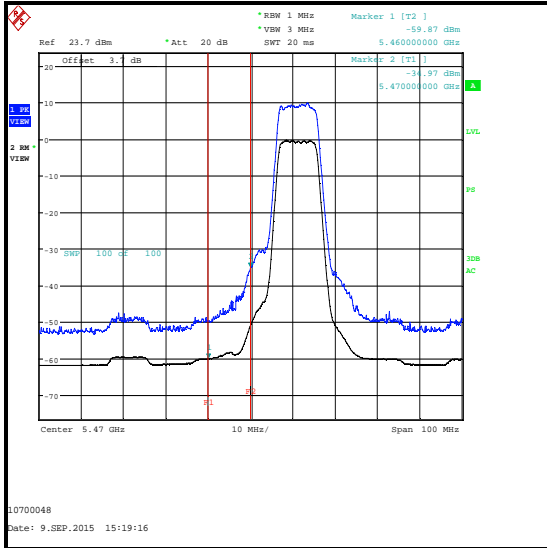


Upper Band Edge Measurement
Integration method

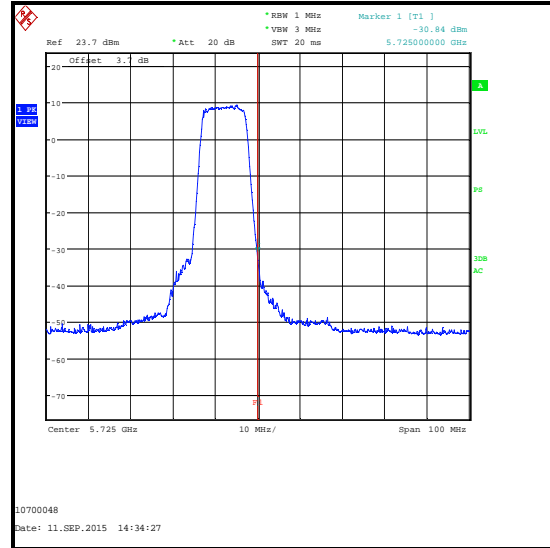
Transmitter Band Edge Conducted Emissions (5.47-5.725 GHz Band) (continued)

Results: BPSK / Omnidirectional Antenna / 10 MHz Channel

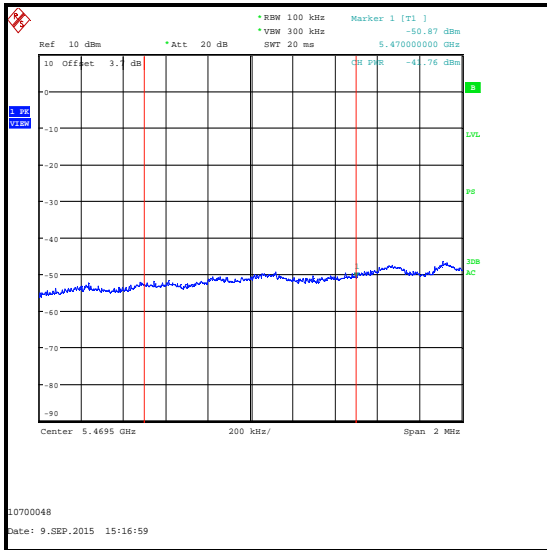
V Port



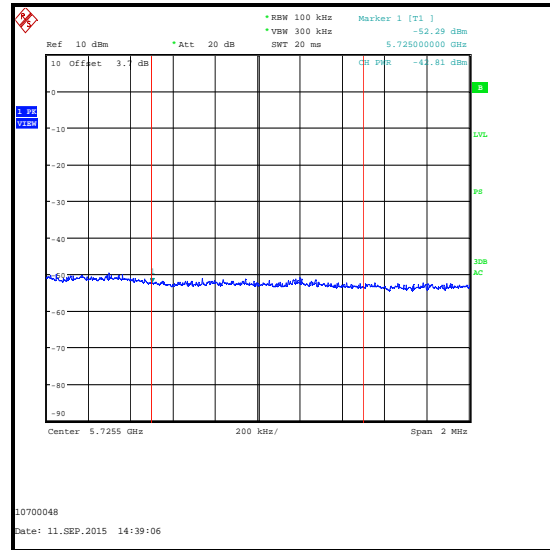
Lower Band Edge Measurement



Upper Band Edge Measurement



**Lower Band Edge Measurement
Integration method**



**Upper Band Edge Measurement
Integration method**

Transmitter Band Edge Conducted Emissions (5.47-5.725 GHz Band) (continued)**Results: BPSK / Omnidirectional Antenna / 15 MHz Channel**

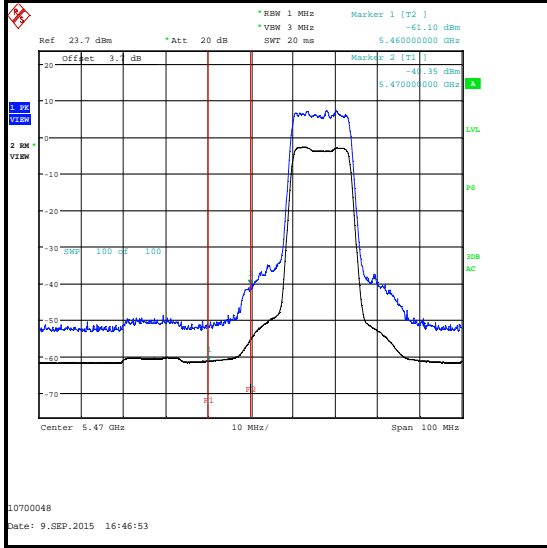
| Frequency (MHz) | Conducted Emission Level H Port (dBm/MHz) | Conducted Emission Level V Port (dBm/MHz) | Combined Conducted Emission Level (dBm/MHz) | Antenna Gain (dBi) | EIRP (dBm/MHz) |
|-----------------|---|---|---|--------------------|----------------|
| 5470 | -46.0* | -41.7* | -40.3 | 12.1 | -28.2 |
| 5725 | -43.7* | -42.1* | -39.8 | 12.1 | -27.7 |

| Frequency (MHz) | EIRP (dBm/MHz) | EIRP Limit (dBm/MHz) | Margin (dB) | Result |
|-----------------|----------------|----------------------|-------------|----------|
| 5470 | -28.2 | -27.0 | 1.2 | Complied |
| 5725 | -27.7 | -27.0 | 0.7 | Complied |

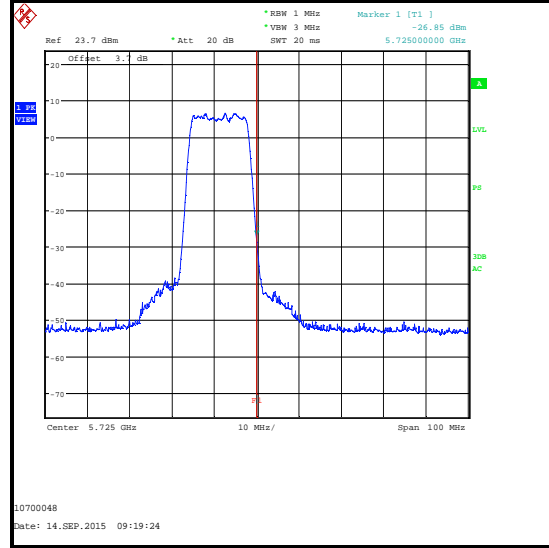
Transmitter Band Edge Conducted Emissions (5.47-5.725 GHz Band) (continued)

Results: BPSK / Omnidirectional Antenna / 15 MHz Channel

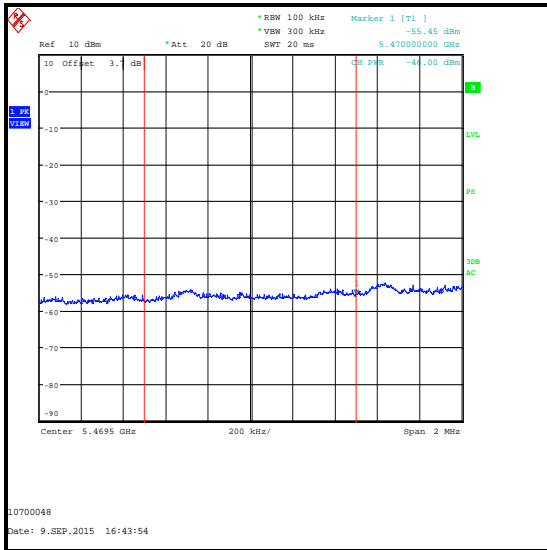
H Port



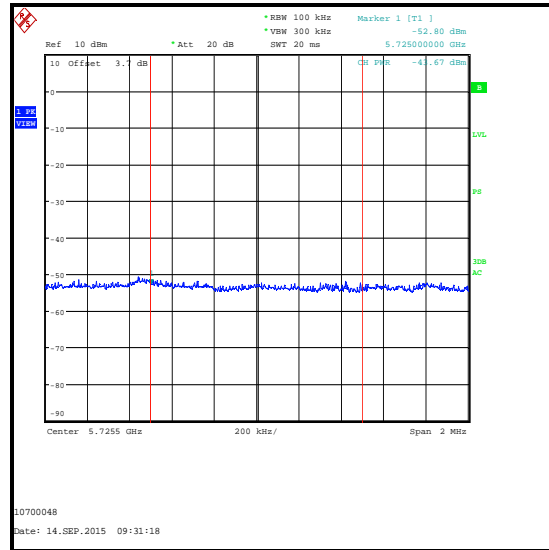
Lower Band Edge Measurement



Upper Band Edge Measurement



**Lower Band Edge Measurement
Integration method**

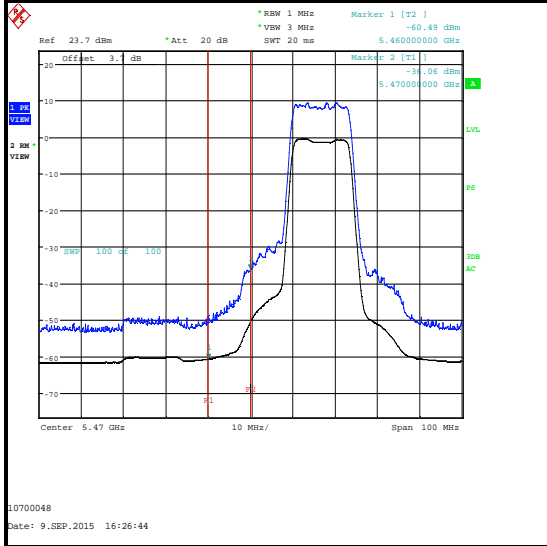


**Upper Band Edge Measurement
Integration method**

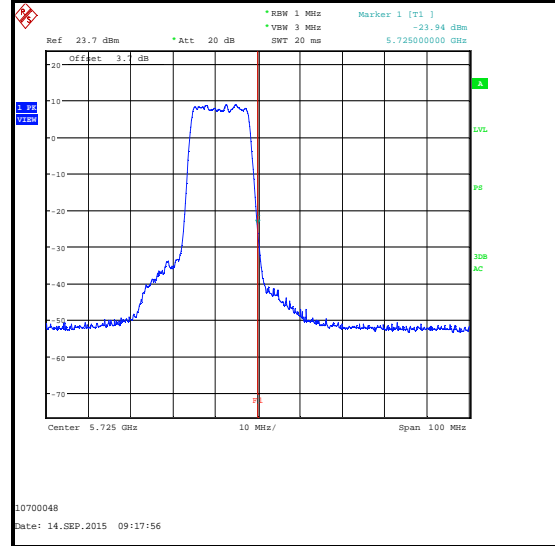
Transmitter Band Edge Conducted Emissions (5.47-5.725 GHz Band) (continued)

Results: BPSK / Omnidirectional Antenna / 15 MHz Channel

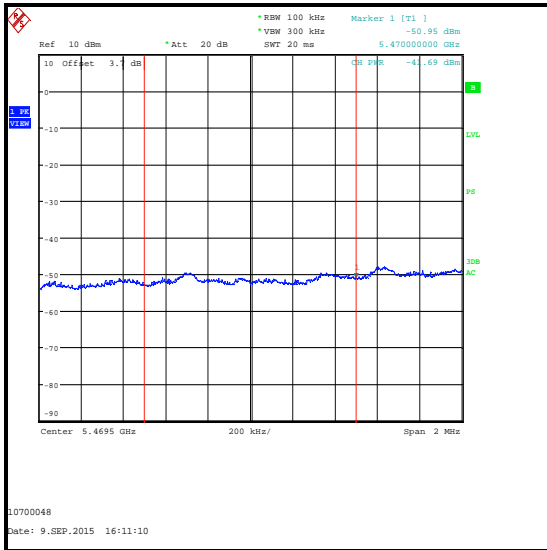
V Port



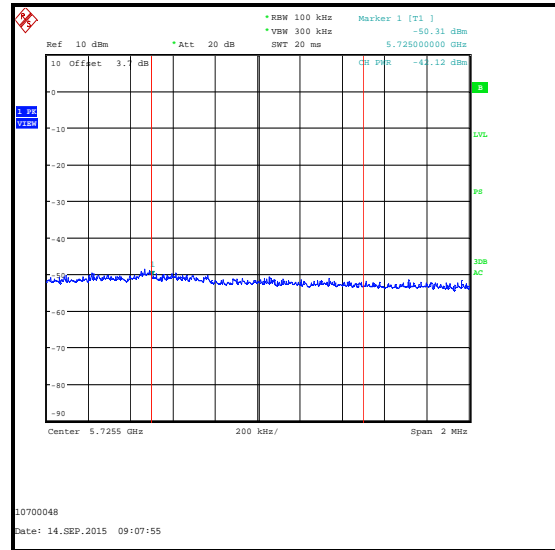
Lower Band Edge Measurement



Upper Band Edge Measurement



Lower Band Edge Measurement Integration method



Upper Band Edge Measurement Integration method

Transmitter Band Edge Conducted Emissions (5.47-5.725 GHz Band) (continued)**Results: BPSK / Omnidirectional Antenna / 20 MHz Channel**

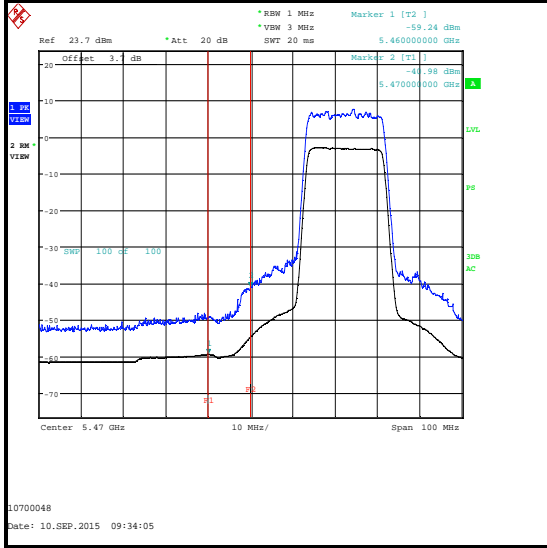
| Frequency (MHz) | Conducted Emission Level H Port (dBm/MHz) | Conducted Emission Level V Port (dBm/MHz) | Combined Conducted Emission Level (dBm/MHz) | Antenna Gain (dBi) | EIRP (dBm/MHz) |
|-----------------|---|---|---|--------------------|----------------|
| 5470 | -45.0* | -41.8* | -40.1 | 12.1 | -28.0 |
| 5725 | -43.5* | -43.0* | -40.2 | 12.1 | -28.1 |

| Frequency (MHz) | EIRP (dBm/MHz) | EIRP Limit (dBm/MHz) | Margin (dB) | Result |
|-----------------|----------------|----------------------|-------------|----------|
| 5470 | -28.0 | -27.0 | 1.0 | Complied |
| 5725 | -28.1 | -27.0 | 1.1 | Complied |

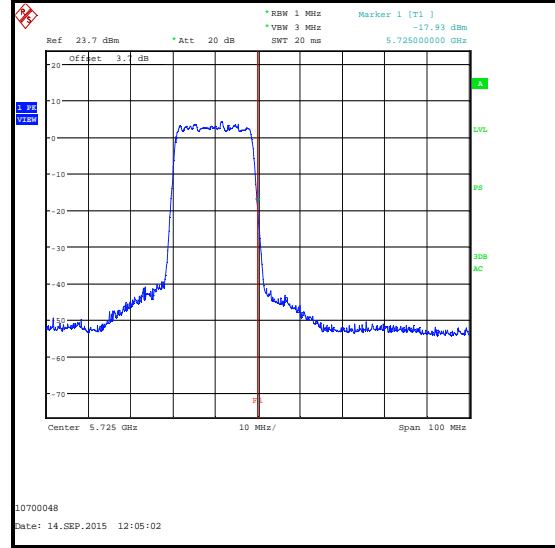
Transmitter Band Edge Conducted Emissions (5.47-5.725 GHz Band) (continued)

Results: BPSK / Omnidirectional Antenna / 20 MHz Channel

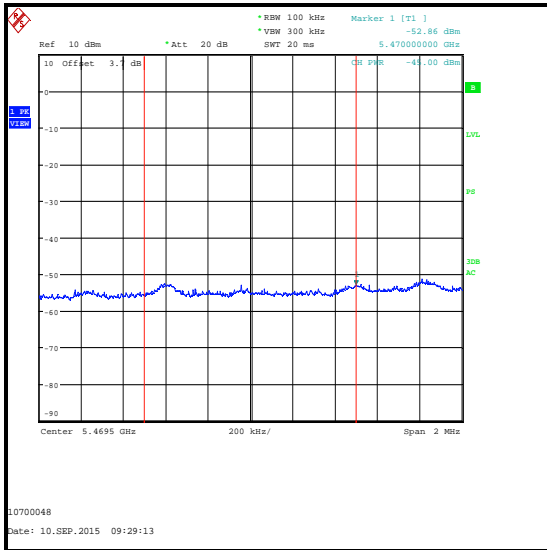
H Port



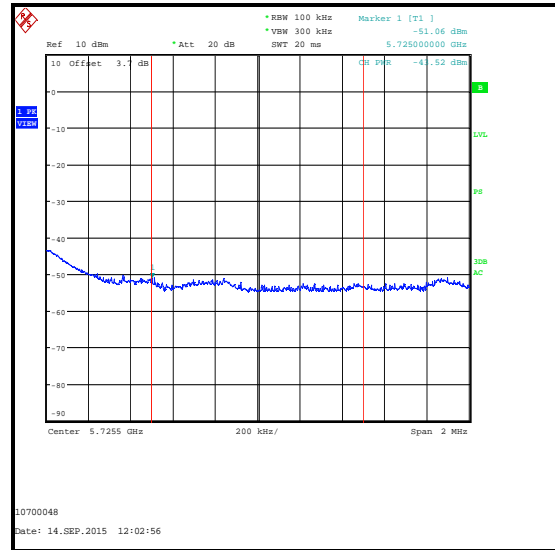
Lower Band Edge Measurement



Upper Band Edge Measurement



Lower Band Edge Measurement Integration method

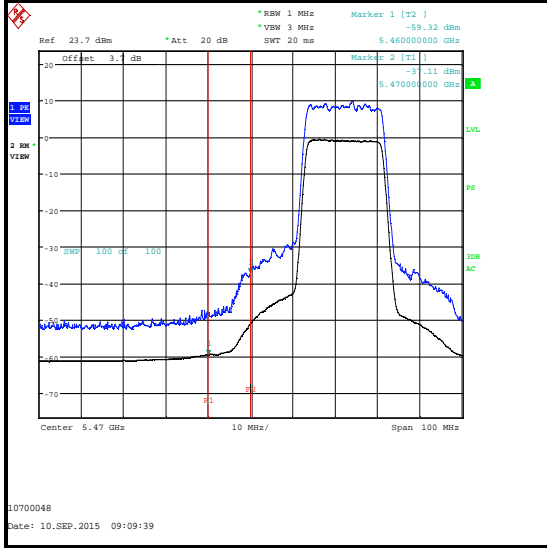


Upper Band Edge Measurement Integration method

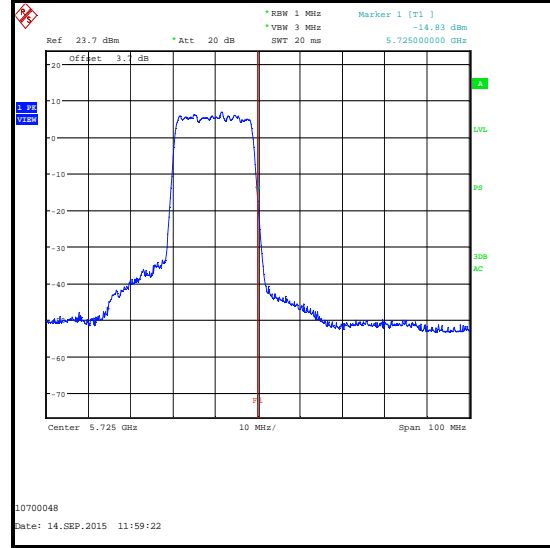
Transmitter Band Edge Conducted Emissions (5.47-5.725 GHz Band) (continued)

Results: BPSK / Omnidirectional Antenna / 20 MHz Channel

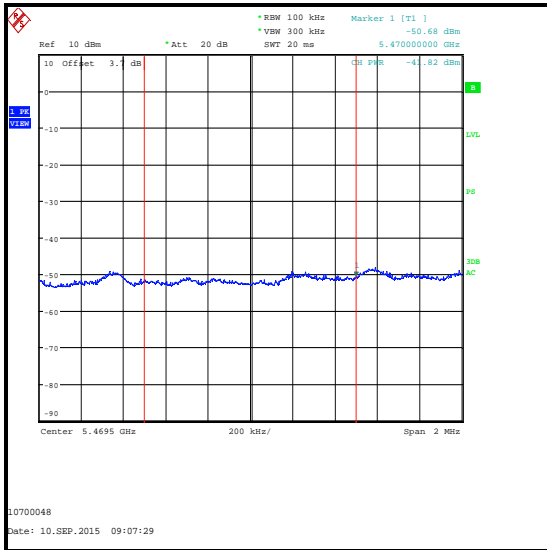
V Port



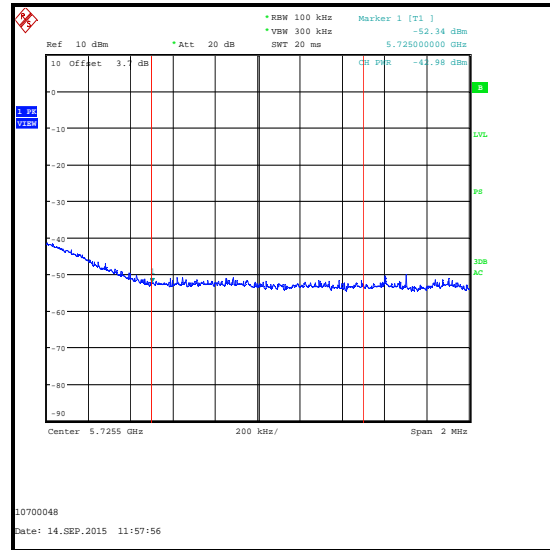
Lower Band Edge Measurement



Upper Band Edge Measurement



**Lower Band Edge Measurement
Integration method**



**Upper Band Edge Measurement
Integration method**

Transmitter Band Edge Conducted Emissions (5.47-5.725 GHz Band) (continued)**Results: BPSK / Omnidirectional Antenna / 30 MHz Channel**

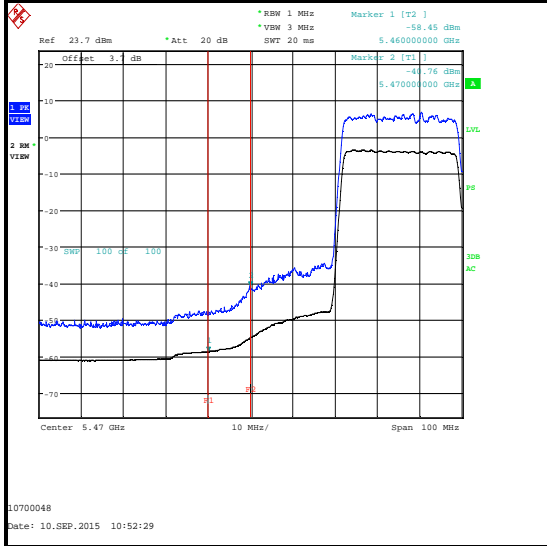
| Frequency (MHz) | Conducted Emission Level H Port (dBm/MHz) | Conducted Emission Level V Port (dBm/MHz) | Combined Conducted Emission Level (dBm/MHz) | Antenna Gain (dBi) | EIRP (dBm/MHz) |
|-----------------|---|---|---|--------------------|----------------|
| 5470 | -44.6* | -41.6* | -39.8 | 12.1 | -27.7 |
| 5725 | -43.8* | -42.8* | -40.3 | 12.1 | -28.2 |

| Frequency (MHz) | EIRP (dBm/MHz) | EIRP Limit (dBm/MHz) | Margin (dB) | Result |
|-----------------|----------------|----------------------|-------------|----------|
| 5470 | -27.7 | -27.0 | 0.7 | Complied |
| 5725 | -28.2 | -27.0 | 1.2 | Complied |

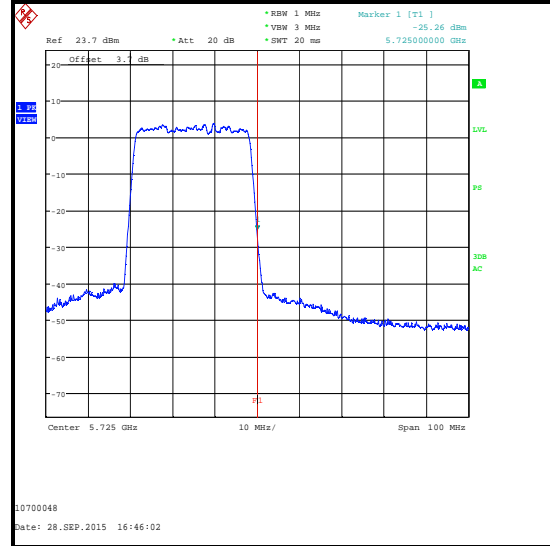
Transmitter Band Edge Conducted Emissions (5.47-5.725 GHz Band) (continued)

Results: BPSK / Omnidirectional Antenna / 30 MHz Channel

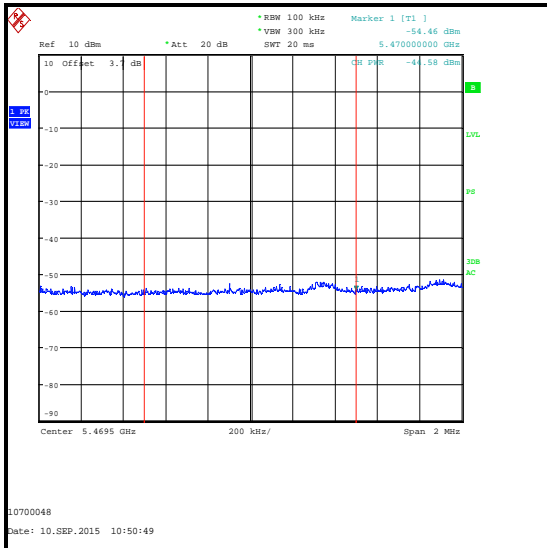
H Port



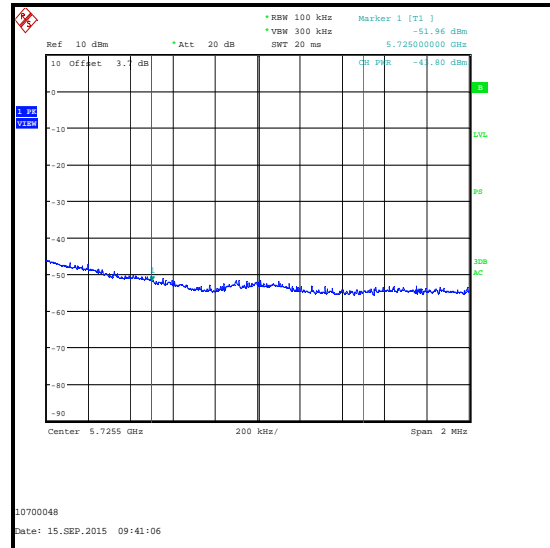
Lower Band Edge Measurement



Upper Band Edge Measurement



Lower Band Edge Measurement Integration method

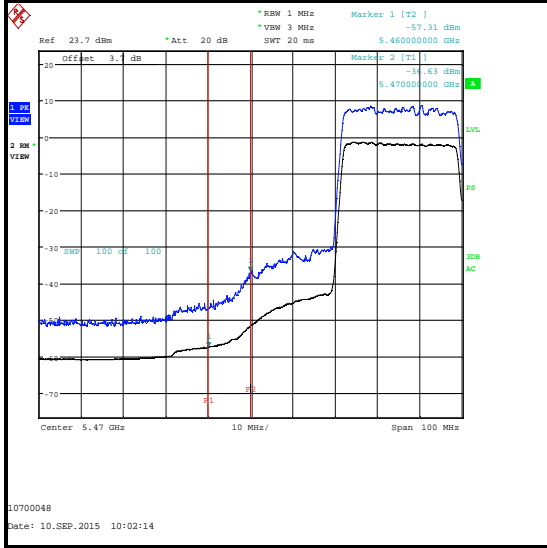


Upper Band Edge Measurement Integration method

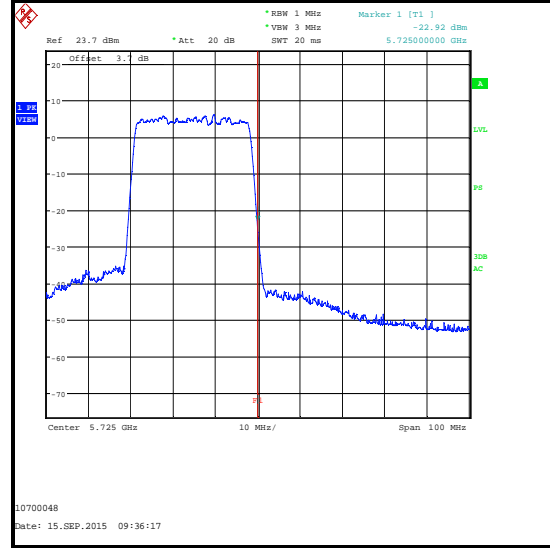
Transmitter Band Edge Conducted Emissions (5.47-5.725 GHz Band) (continued)

Results: BPSK / Omnidirectional Antenna / 30 MHz Channel

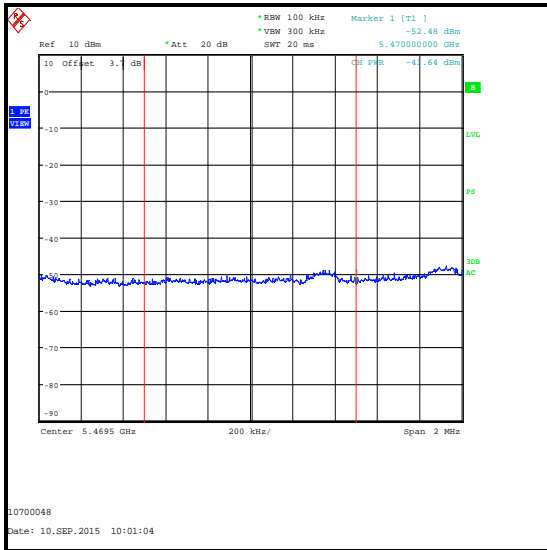
V Port



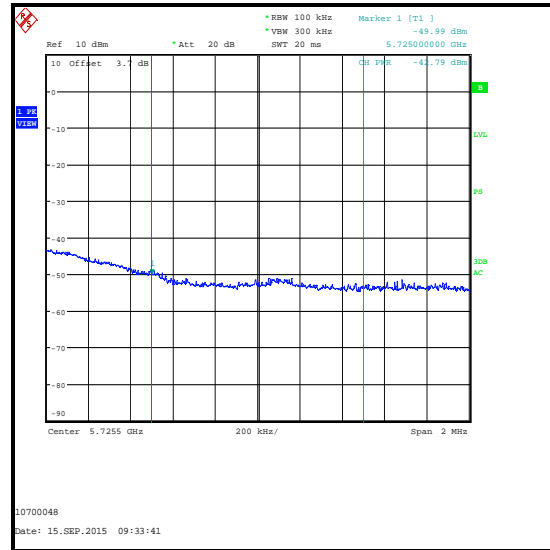
Lower Band Edge Measurement



Upper Band Edge Measurement



**Lower Band Edge Measurement
Integration method**



**Upper Band Edge Measurement
Integration method**

Transmitter Band Edge Conducted Emissions (5.47-5.725 GHz Band) (continued)**Results: BPSK / Omnidirectional Antenna / 40 MHz Channel**

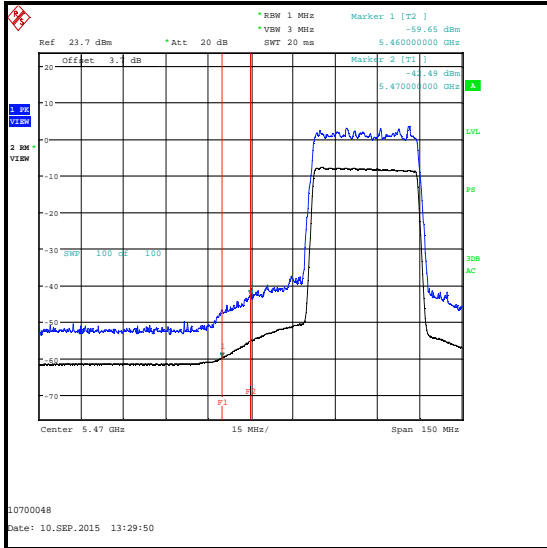
| Frequency (MHz) | Conducted Emission Level H Port (dBm/MHz) | Conducted Emission Level V Port (dBm/MHz) | Combined Conducted Emission Level (dBm/MHz) | Antenna Gain (dBi) | EIRP (dBm/MHz) |
|-----------------|---|---|---|--------------------|----------------|
| 5470 | -45.3* | -41.7* | -40.1 | 12.1 | -28.0 |
| 5725 | -43.9* | -41.9* | -39.8 | 12.1 | -27.7 |

| Frequency (MHz) | EIRP (dBm/MHz) | EIRP Limit (dBm/MHz) | Margin (dB) | Result |
|-----------------|----------------|----------------------|-------------|----------|
| 5470 | -28.0 | -27.0 | 1.0 | Complied |
| 5725 | -27.7 | -27.0 | 0.7 | Complied |

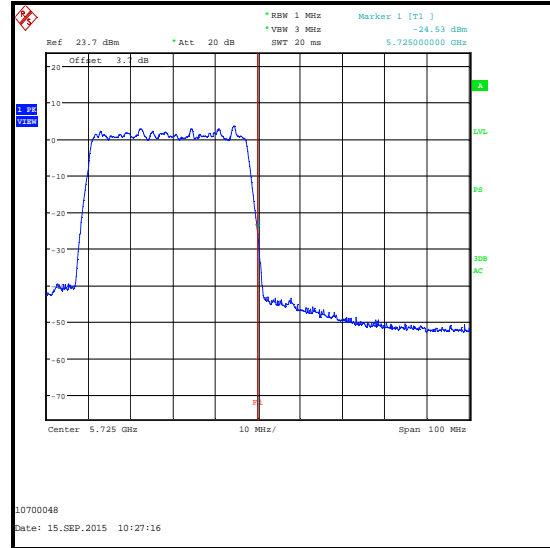
Transmitter Band Edge Conducted Emissions (5.47-5.725 GHz Band) (continued)

Results: BPSK / Omnidirectional Antenna / 40 MHz Channel

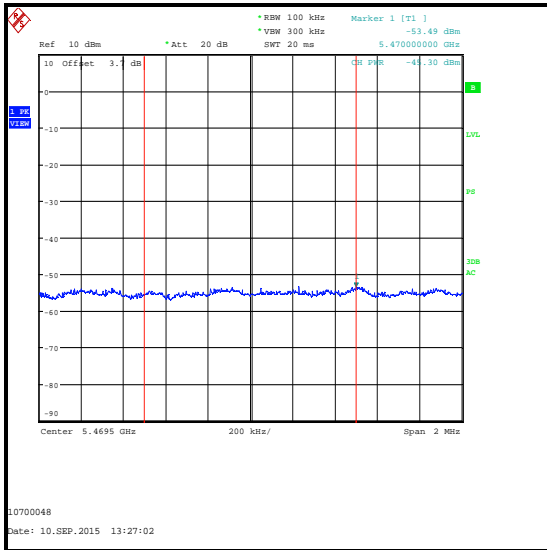
H Port



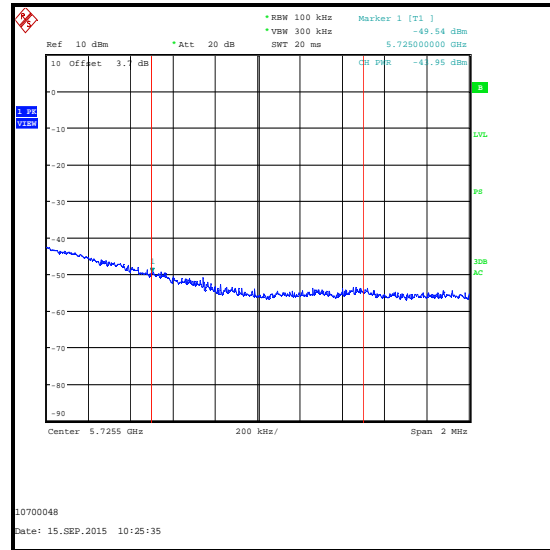
Lower Band Edge Measurement



Upper Band Edge Measurement



Lower Band Edge Measurement Integration method

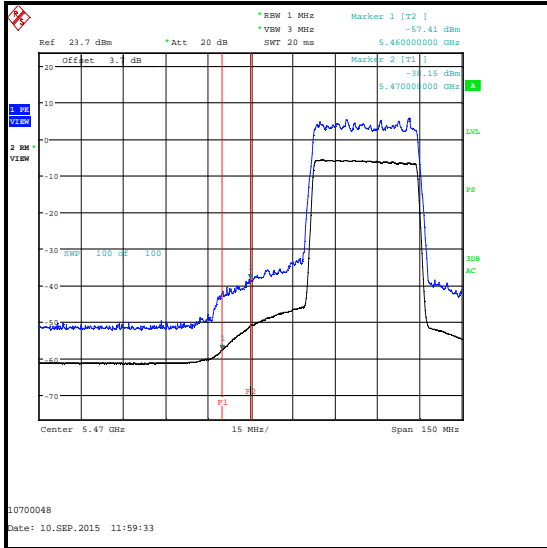


Upper Band Edge Measurement Integration method

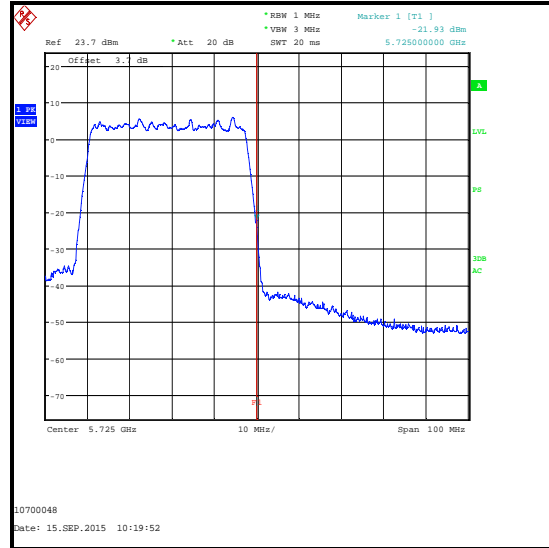
Transmitter Band Edge Conducted Emissions (5.47-5.725 GHz Band) (continued)

Results: BPSK / Omnidirectional Antenna / 40 MHz Channel

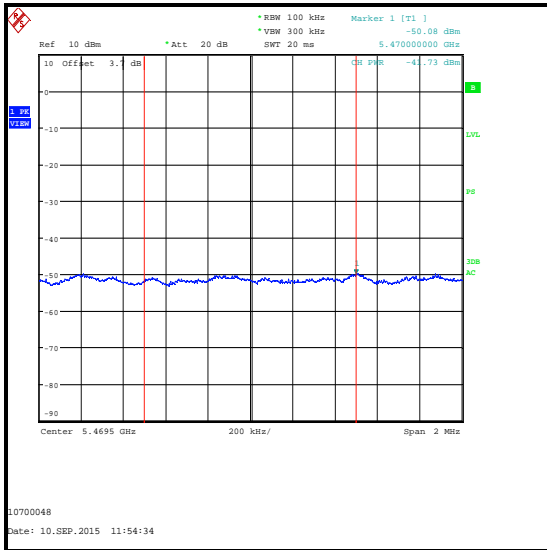
V Port



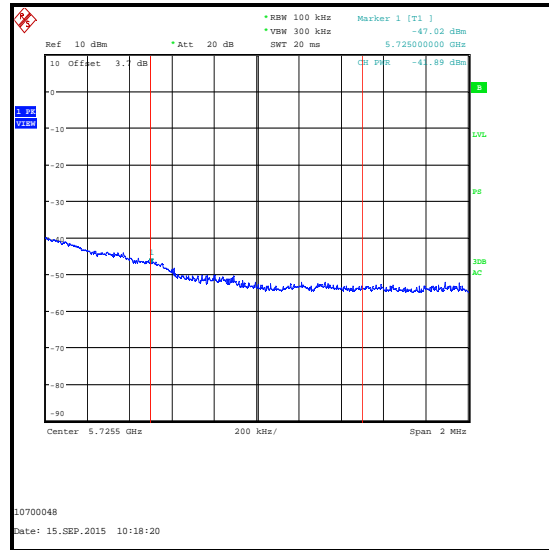
Lower Band Edge Measurement



Upper Band Edge Measurement



**Lower Band Edge Measurement
Integration method**



**Upper Band Edge Measurement
Integration method**

Transmitter Band Edge Conducted Emissions (5.47-5.725 GHz Band) (continued)**Results: BPSK / Omnidirectional Antenna / 45 MHz Channel**

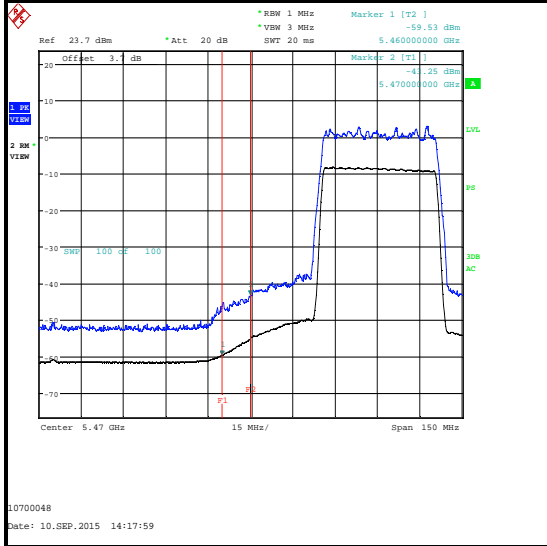
| Frequency (MHz) | Conducted Emission Level H Port (dBm/MHz) | Conducted Emission Level V Port (dBm/MHz) | Combined Conducted Emission Level (dBm/MHz) | Antenna Gain (dBi) | EIRP (dBm/MHz) |
|-----------------|---|---|---|--------------------|----------------|
| 5470 | -45.1* | -41.7* | -40.1 | 12.1 | -28.0 |
| 5725 | -43.8* | -42.5* | -40.1 | 12.1 | -28.0 |

| Frequency (MHz) | EIRP (dBm/MHz) | EIRP Limit (dBm/MHz) | Margin (dB) | Result |
|-----------------|----------------|----------------------|-------------|----------|
| 5470 | -28.0 | -27.0 | 1.0 | Complied |
| 5725 | -28.0 | -27.0 | 1.0 | Complied |

Transmitter Band Edge Conducted Emissions (5.47-5.725 GHz Band) (continued)

Results: BPSK / Omnidirectional Antenna / 45 MHz Channel

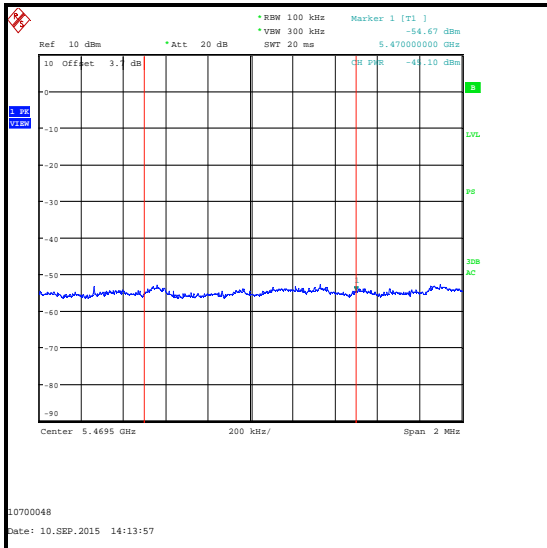
H Port



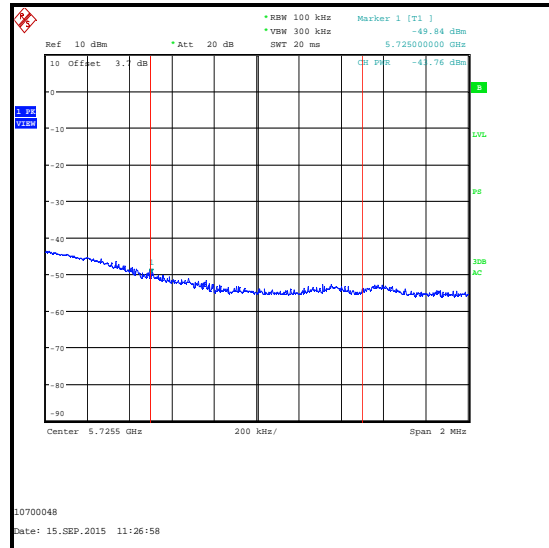
Lower Band Edge Measurement



Upper Band Edge Measurement



**Lower Band Edge Measurement
Integration method**

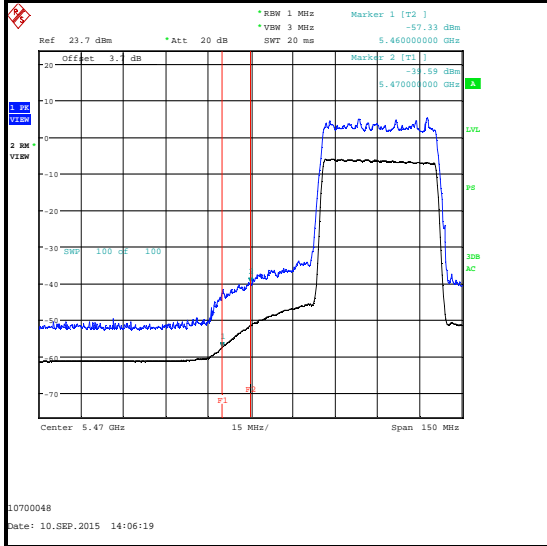


**Upper Band Edge Measurement
Integration method**

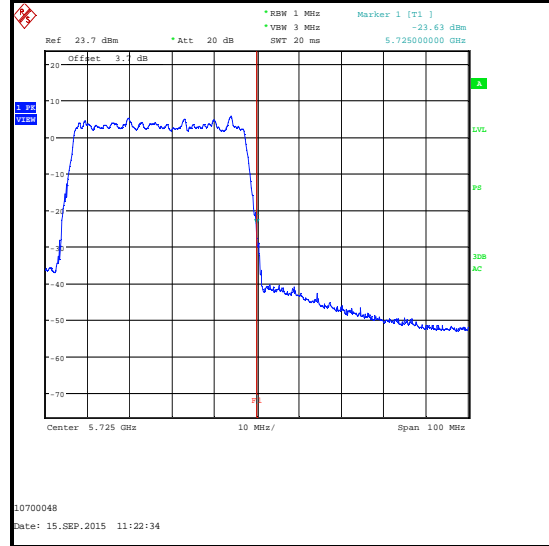
Transmitter Band Edge Conducted Emissions (5.47-5.725 GHz Band) (continued)

Results: BPSK / Omnidirectional Antenna / 45 MHz Channel

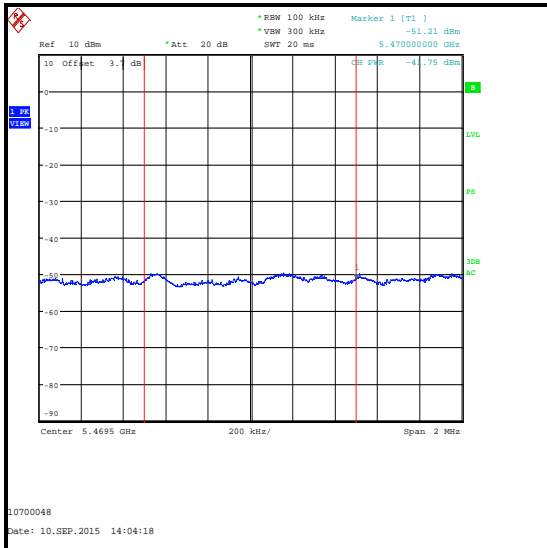
V Port



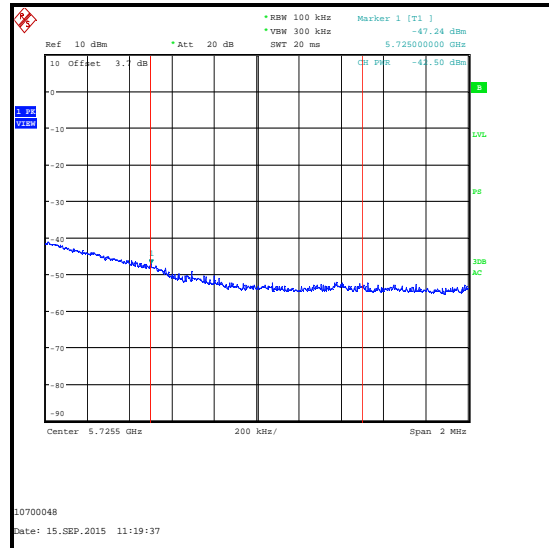
Lower Band Edge Measurement



Upper Band Edge Measurement



**Lower Band Edge Measurement
Integration method**



**Upper Band Edge Measurement
Integration method**

Transmitter Band Edge Conducted Emissions (continued)**Test Equipment Used:**

| Asset No. | Instrument | Manufacturer | Type No. | Serial No. | Date Calibration Due | Cal. Interval (Months) |
|-----------|------------------|-----------------|------------|-------------|-----------------------|------------------------|
| A1867 | Attenuator | Hewlett Packard | 8491A | 16823 | Calibrated Before Use | N/A |
| M1886 | Test Receiver | Rohde & Schwarz | ESU26 | 100554 | 21 May 2016 | 12 |
| G0608 | Signal Generator | Rohde & Schwarz | SMIQ 06B | 838341/033 | 01 Apr 2016 | 12 |
| M1785 | Thermohygrometer | JM Handelspunkt | 30.5015.13 | None stated | 23 Apr 2016 | 12 |

5.2.8. Transmitter Power Control**Test Summary:**

| | | | |
|-----------------------------------|-----------------|-------------------|-----------------|
| Test Engineer: | Georgios Vrezas | Test Date: | 21 October 2015 |
| Test Sample Serial Number: | 0004565800E2 | | |

| | |
|--------------------------|---|
| FCC Reference: | Part 15.407(h) |
| Test Method Used: | FCC KDB 789033 D02 Section II.E.3.a Method PM |

Environmental Conditions:

| | |
|-------------------------------|----|
| Temperature (°C): | 24 |
| Relative Humidity (%): | 41 |

Note(s):

1. Transmitter power control tests were performed as the maximum E.I.R.P. is greater than 500 mW.
2. Tests were performed with the EUT transmitting from the highest configurable RF power to the lowest configurable RF power. The EUT graphical user interface was used to configure the power in step increments of 1.
3. All conducted power measurements were made using an RF average power meter in accordance with FCC KDB 789033 Section II.E.3.a) Method PM. Power was measured on both RF ports. The power was combined. This test has no limit. The test was performed to prove control of the RF output power.

Transmitter Power Control (continued)**Results: 5 MHz Channel / BPSK / Middle Channel / 5597 MHz**

| Graphical Use Interface Power Setting | Measured Conducted Power H Port (dBm) | Measured Conducted Power V Port (dBm) | Combined Conducted Power (dBm) |
|---------------------------------------|---------------------------------------|---------------------------------------|--------------------------------|
| 17 | 12.7 | 14.1 | 16.5 |
| 16 | 11.8 | 13.3 | 15.6 |
| 15 | 10.7 | 12.3 | 14.6 |
| 14 | 9.6 | 11.2 | 13.5 |
| 13 | 8.7 | 10.3 | 12.6 |
| 12 | 7.7 | 9.3 | 11.6 |
| 11 | 6.7 | 8.3 | 10.6 |
| 10 | 5.7 | 7.2 | 9.5 |
| 9 | 4.6 | 6.4 | 8.6 |
| 8 | 3.6 | 5.3 | 7.5 |
| 7 | 2.6 | 4.3 | 6.5 |
| 6 | 1.7 | 3.5 | 5.7 |
| 5 | 0.7 | 2.6 | 4.8 |
| 4 | -0.2 | 1.6 | 3.8 |
| 3 | -1.3 | 0.6 | 2.8 |
| 2 | -2.2 | -0.4 | 1.8 |
| 1 | -3.2 | -1.3 | 0.9 |
| 0 | -4.1 | -2.3 | -0.1 |
| -1 | -5.3 | -2.6 | -0.7 |
| -2 | -6.4 | -3.6 | -1.8 |
| -3 | -7.3 | -4.6 | -2.7 |
| -4 | -8.3 | -5.6 | -3.7 |
| -5 | -9.2 | -6.4 | -4.6 |
| -6 | -10.3 | -7.4 | -5.6 |
| -7 | -11.3 | -8.3 | -6.5 |
| -8 | -12.4 | -9.3 | -7.6 |
| -9 | -13.5 | -10.3 | -8.6 |
| -10 | -14.6 | -11.3 | -9.6 |
| -11 | -15.8 | -12.3 | -10.7 |
| -12 | -17.1 | -13.4 | -11.9 |

Transmitter Power Control (continued)**Test Equipment Used:**

| Asset No. | Instrument | Manufacturer | Type No. | Serial No. | Date Calibration Due | Cal. Interval (Months) |
|-----------|------------------|-----------------|------------|-------------|-----------------------|------------------------|
| M1435 | Power Meter | Hewlett Packard | 437B | 3125U14631 | 24 Apr 2016 | 12 |
| M1009 | Power Meter | Hewlett Packard | 437B | 3125U13706 | 27 Jan 2016 | 12 |
| M1175 | Power Sensor | Hewlett Packard | 8485A | 2942A10299 | 11 Feb 2016 | 12 |
| M1592 | Power Sensor | Hewlett Packard | 8487A | 3318A02094 | 22 Sep 2016 | 12 |
| A2142 | Attenuator | AtlanTecRF | AN18-20 | 081120-23 | Calibrated Before Use | N/A |
| A2527 | Attenuator | AtlanTecRF | AN18W5-20 | 832828#2 | Calibrated Before Use | N/A |
| A2139 | Attenuator | AtlanTecRF | AN18-10 | 090918-04#1 | Calibrated Before Use | N/A |
| A2140 | Attenuator | AtlanTecRF | AN18-10 | 090918-14 | Calibrated Before Use | N/A |
| G0608 | Signal Generator | Rohde & Schwarz | SMIQ 06B | 838341/033 | 01 Apr 2016 | 12 |
| M1785 | Thermohygrometer | JM Handelspunkt | 30.5015.13 | None stated | 23 Apr 2016 | 12 |

6. Measurement Uncertainty

No measurement or test can ever be perfect and the imperfections give rise to error of measurement in the results. Consequently the result of a measurement is only an approximation to the value of the measurand (the specific quantity subject to measurement) and is only complete when accompanied by a statement of the uncertainty of the approximation.

The expression of uncertainty of a measurement result allows realistic comparison of results with reference values and limits given in specifications and standards.

The uncertainty of the result may need to be taken into account when interpreting the measurement results.

The reported expanded uncertainties below are based on a standard uncertainty multiplied by an appropriate coverage factor such that a confidence level of approximately 95% is maintained. For the purposes of this document “approximately” is interpreted as meaning “effectively” or “for most practical purposes”.

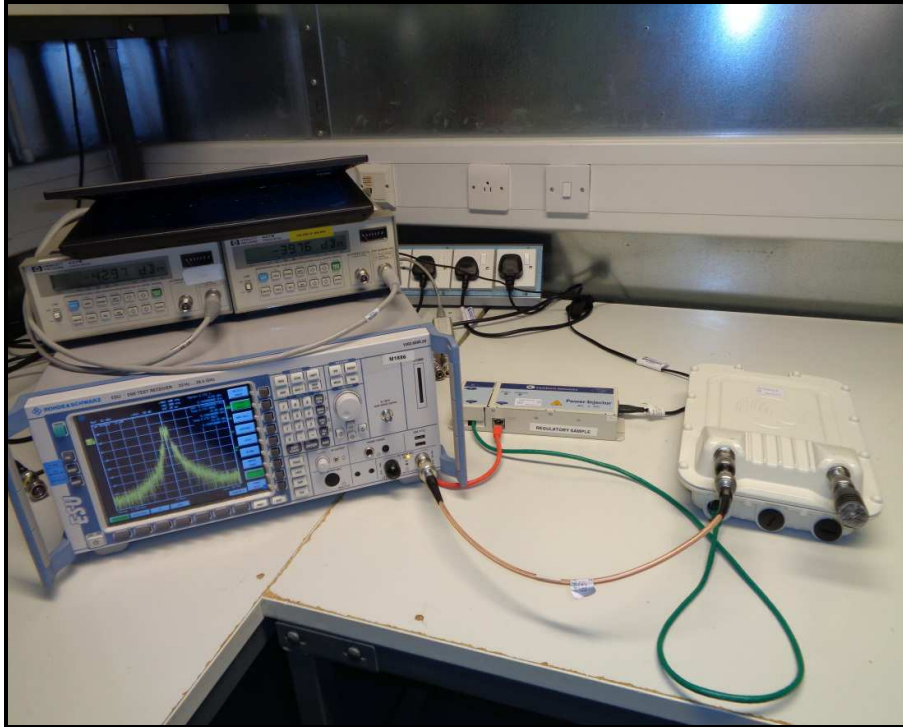
| Measurement Type | Range | Confidence Level (%) | Calculated Uncertainty |
|---------------------------------|------------------------|-----------------------------|-------------------------------|
| AC Conducted Spurious Emissions | 0.15 MHz to 30 MHz | 95% | ±4.69 dB |
| Conducted Output Power | 5.25 GHz to 5.725 GHz | 95% | ±0.76 dB |
| Power Spectral Density | 5.25 GHz to 5.725 GHz | 95% | ±1.13 dB |
| Occupied Bandwidth | 5.25 GHz to 5.725 GHz | 95% | ±3.92 % |
| Radiated Spurious Emissions | 30 MHz to 1 GHz | 95% | ±5.65 dB |
| Radiated Spurious Emissions | 1 GHz to 40 GHz | 95% | ±2.94 dB |
| Conducted Spurious Emissions | 5.395 GHz to 5.775 GHz | 95% | ±2.62 dB |

The methods used to calculate the above uncertainties are in line with those recommended within the various measurement specifications. Where measurement specifications do not include guidelines for the evaluation of measurement uncertainty the published guidance of the appropriate accreditation body is followed.

7. Report Revision History

| Version Number | Revision Details | | |
|----------------|--------------------------|--------|---|
| | Page No(s) | Clause | Details |
| 1.0 | - | - | Initial Version |
| 2.0 | 3 & 58 176 | - - | Corrected font style and Table of Contents Corrected FCC reference in Test Summary table |
| 3.0 | 183, 214 & 244 335 | - - | Removed FCC references in Test Summary tables Inserted test setup photograph |

Appendix 1. Conducted Test Setup Photograph



EUT configuration for conducted measurements

--- END OF REPORT---