HERMON LABORATORIES

Test specification:	**FCC section 15.407(b), Conducted out of band emissions**		
Test procedure:	KDB 662911; KDB 789033, ANSI C63.10, section 12.7.6 & 12.7.7		
Test mode:	Compliance	**Verdict:**	**PASS**
Date(s):	11-Feb-19		
Temperature: 26 ºC	Relative Humidity: 45 %	Air Pressure: 1020 hPa	Power: 48 VDC
Remarks:			

Plot 7.7.2 Conducted spurious emission measurements in the range 4.5 – 5.46 GHz

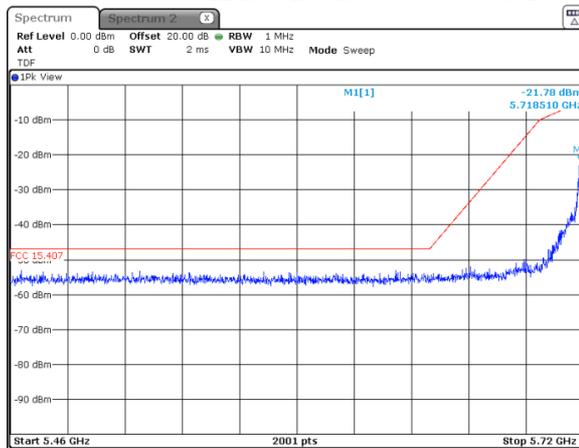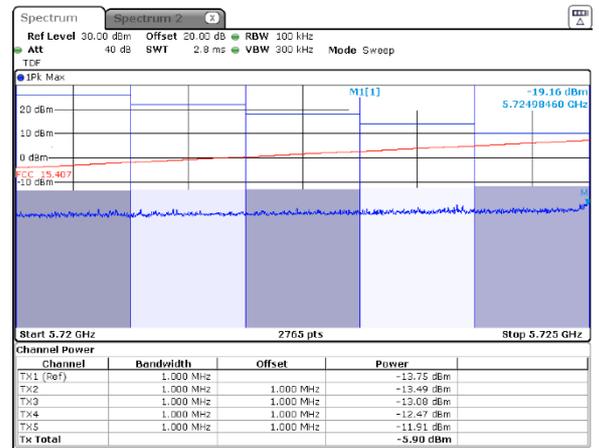| CARRIER FREQUENCY	5730 MHz
CHANNEL BANDWIDTH	10 MHz
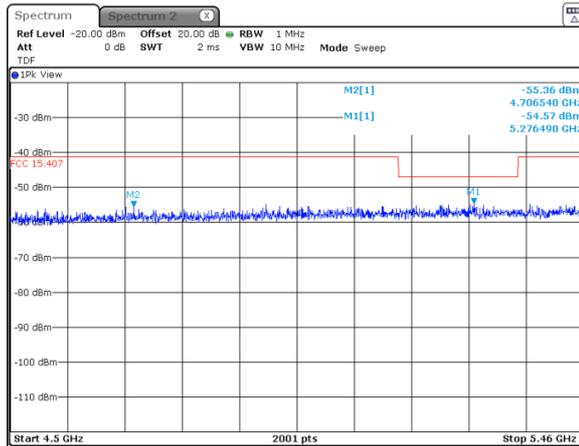
Date: 12.FEB.2019 16:42:29
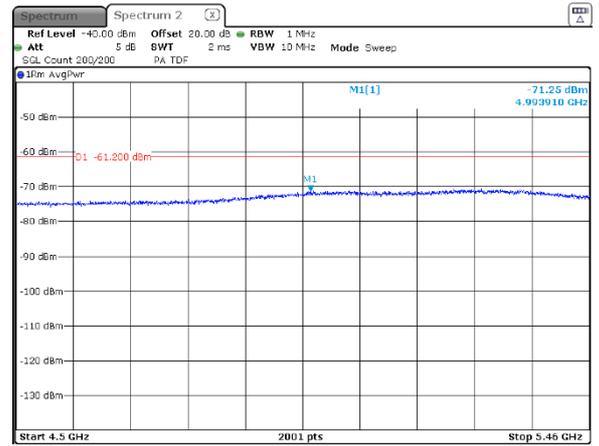
*Applied Limit = Specification limit – Antenna Gain – Antenna Array gain

Plot 7.7.3 Conducted spurious emission measurements in the range 5.46 – 5.725 GHz

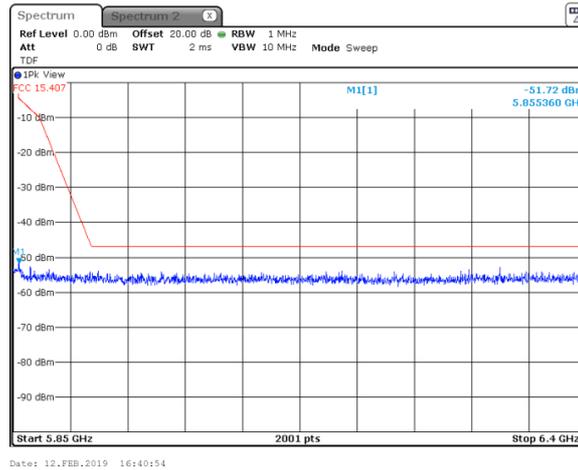| CARRIER FREQUENCY	5730 MHz
CHANNEL BANDWIDTH	10 MHz

Date: 12.FEB.2019 16:43:37

Channel	Bandwidth	Offset	Power
TX1 (Ref)	1.000 MHz		-13.75 dBm
TX2	1.000 MHz	1.000 MHz	-13.49 dBm
TX3	1.000 MHz	1.000 MHz	-13.09 dBm
TX4	1.000 MHz	1.000 MHz	-12.47 dBm
TX5	1.000 MHz	1.000 MHz	-11.91 dBm
Tx Total			-5.90 dBm

Date: 12.FEB.2019 16:45:27

Test specification:	**FCC section 15.407(b), Conducted out of band emissions**		
Test procedure:	KDB 662911; KDB 789033, ANSI C63.10, section 12.7.6 & 12.7.7		
Test mode:	Compliance	**Verdict:**	**PASS**
Date(s):	11-Feb-19		
Temperature: 26 ºC	**Relative Humidity:** 45 %	**Air Pressure:** 1020 hPa	**Power:** 48 VDC
Remarks:			

Plot 7.7.4 Conducted spurious emission measurements in the range 5.85 – 6.4 GHz

CARRIER FREQUENCY 5730 MHz
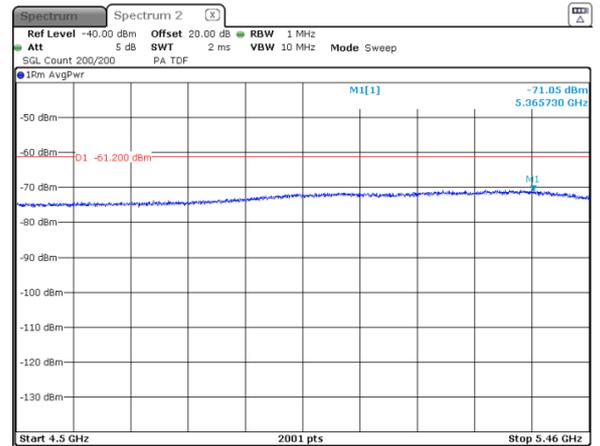CHANNEL BANDWIDTH 10 MHz
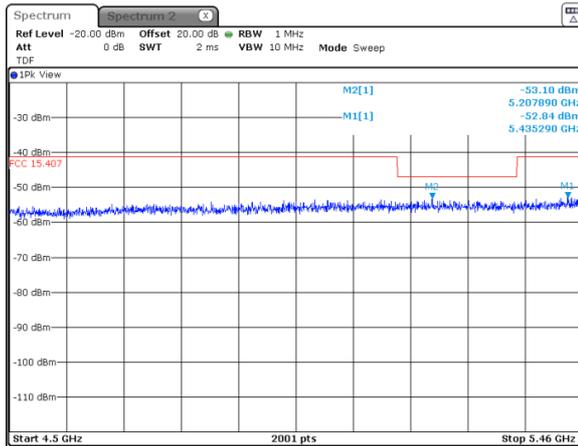

Date: 12.FEB.2019 16:40:54

HL
HERMON LABORATORIES

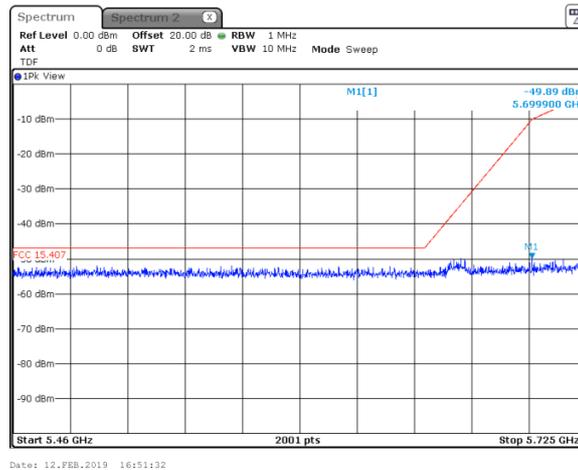| Test specification:	**FCC section 15.407(b), Conducted out of band emissions**		
Test procedure:	KDB 662911; KDB 789033, ANSI C63.10, section 12.7.6 & 12.7.7		
Test mode:	Compliance	**Verdict:**	**PASS**
Date(s):	11-Feb-19		
Temperature: 26 ºC	Relative Humidity: 45 %	Air Pressure: 1020 hPa	Power: 48 VDC
Remarks:			

Plot 7.7.5 Conducted spurious emission measurements in the range 4.5 – 5.46 GHz

CARRIER FREQUENCY 5788 MHz
CHANNEL BANDWIDTH 10 MHz

Plot 7.7.6 Conducted spurious emission measurements in the range 5.46 – 5.725 GHz

CARRIER FREQUENCY 5788 MHz
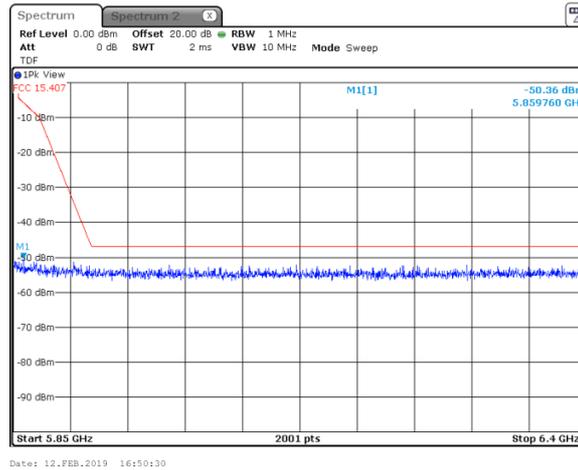CHANNEL BANDWIDTH 10 MHz

Test specification:	**FCC section 15.407(b), Conducted out of band emissions**		
Test procedure:	KDB 662911; KDB 789033, ANSI C63.10, section 12.7.6 & 12.7.7		
Test mode:	Compliance	**Verdict:**	**PASS**
Date(s):	11-Feb-19		
Temperature: 26 ºC	**Relative Humidity:** 45 %	**Air Pressure:** 1020 hPa	**Power:** 48 VDC
Remarks:			

Plot 7.7.7 Conducted spurious emission measurements in the range 5.85 – 6.4 GHz

CARRIER FREQUENCY   5788 MHz
CHANNEL BANDWIDTH   10 MHz

HERMON LABORATORIES

Test specification:	**FCC section 15.407(b), Conducted out of band emissions**		
Test procedure:	KDB 662911; KDB 789033, ANSI C63.10, section 12.7.6 & 12.7.7		
Test mode:	Compliance	**Verdict:**	**PASS**
Date(s):	11-Feb-19		
Temperature: 26 ºC	Relative Humidity: 45 %	Air Pressure: 1020 hPa	Power: 48 VDC
Remarks:			

Plot 7.7.8 Conducted spurious emission measurements in the range 4.5 – 5.46 GHz

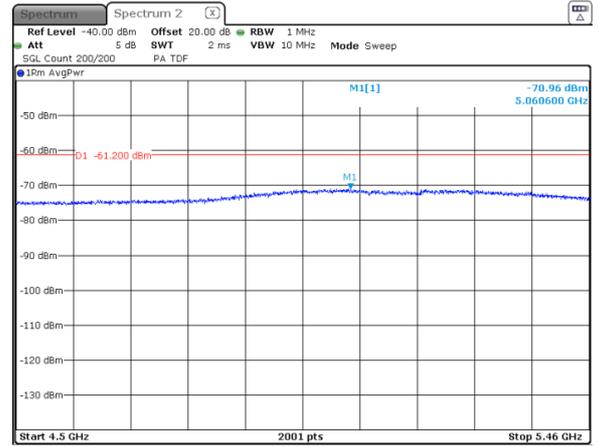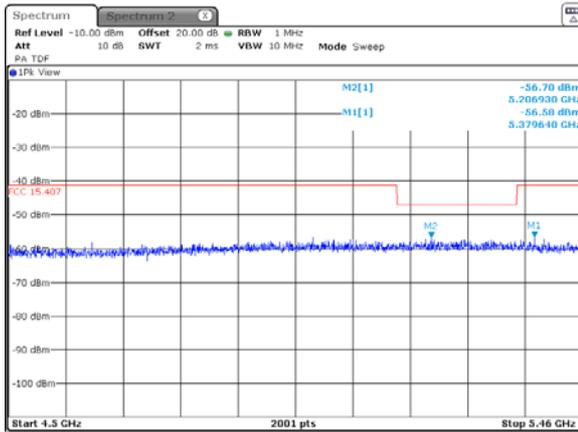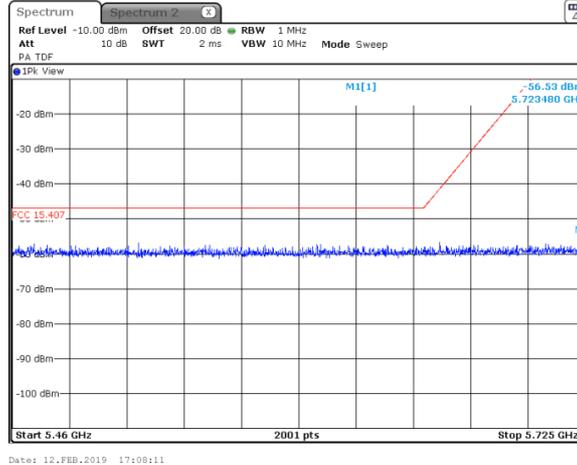CARRIER FREQUENCY   5845 MHz
CHANNEL BANDWIDTH   10 MHz

Plot 7.7.9 Conducted spurious emission measurements in the range 5.46 – 5.725 GHz

CARRIER FREQUENCY   5845 MHz
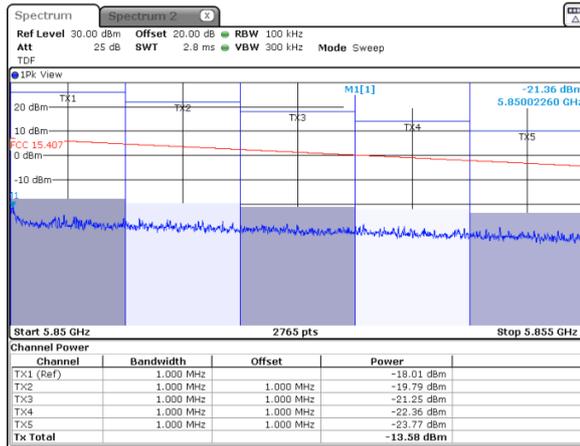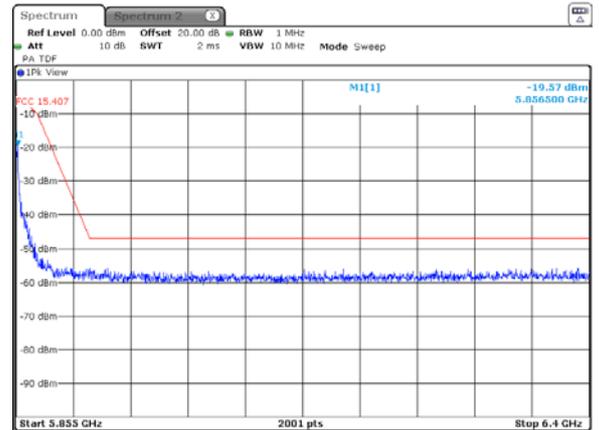CHANNEL BANDWIDTH   10 MHz

HERMON LABORATORIES

Test specification:	**FCC section 15.407(b), Conducted out of band emissions**			
Test procedure:	KDB 662911; KDB 789033, ANSI C63.10, section 12.7.6 & 12.7.7			
Test mode:	Compliance	**Verdict:**		**PASS**
Date(s):	11-Feb-19			
Temperature: 26 ºC	**Relative Humidity:** 45 %	**Air Pressure:** 1020 hPa		**Power:** 48 VDC
Remarks:				

Plot 7.7.10 Conducted spurious emission measurements in the range 5.85 – 6.4 GHz

CARRIER FREQUENCY   5845 MHz
CHANNEL BANDWIDTH   10 MHz

HL
HERMON LABORATORIES

Test specification:	**FCC section 15.407(b), Conducted out of band emissions**		
Test procedure:	KDB 662911; KDB 789033, ANSI C63.10, section 12.7.6 & 12.7.7		
Test mode:	Compliance	**Verdict:**	**PASS**
Date(s):	11-Feb-19		
Temperature: 26 ºC	**Relative Humidity:** 45 %	**Air Pressure:** 1020 hPa	**Power:** 48 VDC
Remarks:			

Plot 7.7.11 Conducted spurious emission measurements in the range 4.5 – 5.46 GHz

CARRIER FREQUENCY   5732.5 MHz
CHANNEL BANDWIDTH   15 MHz
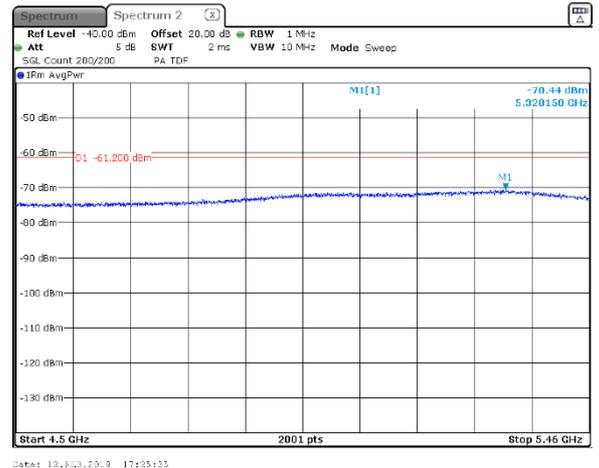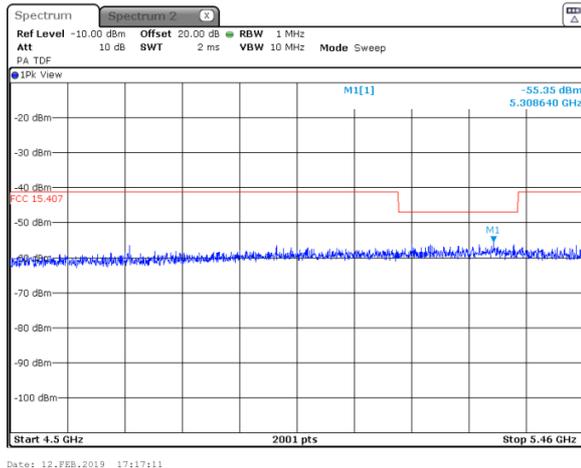
Plot 7.7.12 Conducted spurious emission measurements in the range 5.46 – 5.725 GHz

CARRIER FREQUENCY   5732.5 MHz
CHANNEL BANDWIDTH   15 MHz

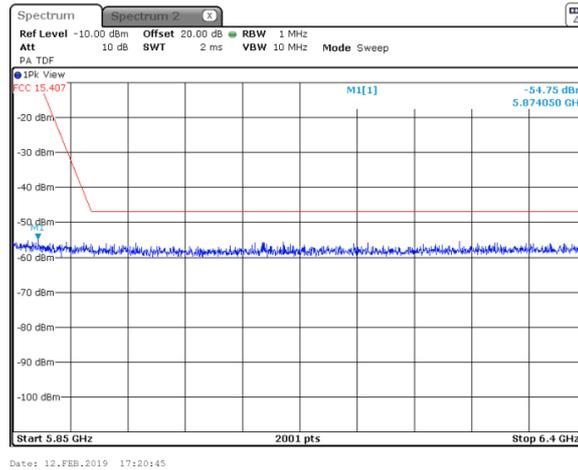| Test specification:	**FCC section 15.407(b), Conducted out of band emissions**			
Test procedure:	KDB 662911; KDB 789033, ANSI C63.10, section 12.7.6 & 12.7.7			
Test mode:	Compliance	**Verdict:**		**PASS**
Date(s):	11-Feb-19			
Temperature: 26 ºC	**Relative Humidity:** 45 %	**Air Pressure:** 1020 hPa		**Power:** 48 VDC
Remarks:				

Plot 7.7.13 Conducted spurious emission measurements in the range 5.85 – 6.4 GHz

CARRIER FREQUENCY   5732.5 MHz
CHANNEL BANDWIDTH   15 MHz

Test specification:	**FCC section 15.407(b), Conducted out of band emissions**		
Test procedure:	KDB 662911; KDB 789033, ANSI C63.10, section 12.7.6 & 12.7.7		
Test mode:	Compliance	**Verdict:**	**PASS**
Date(s):	11-Feb-19		
Temperature: 26 ºC	Relative Humidity: 45 %	Air Pressure: 1020 hPa	Power: 48 VDC
Remarks:			

Plot 7.7.14 Conducted spurious emission measurements in the range 4.5 – 5.46 GHz

CARRIER FREQUENCY   5788 MHz
CHANNEL BANDWIDTH   15 MHz

Plot 7.7.15 Conducted spurious emission measurements in the range 5.46 – 5.725 GHz

CARRIER FREQUENCY   5788 MHz
CHANNEL BANDWIDTH   15 MHz

HERMON LABORATORIES

Test specification:	**FCC section 15.407(b), Conducted out of band emissions**			
Test procedure:	KDB 662911; KDB 789033, ANSI C63.10, section 12.7.6 & 12.7.7			
Test mode:	Compliance	**Verdict:**	**PASS**	
Date(s):	11-Feb-19			
Temperature: 26 ºC	**Relative Humidity:** 45 %	**Air Pressure:** 1020 hPa		**Power:** 48 VDC
Remarks:				

Plot 7.7.16 Conducted spurious emission measurements in the range 5.85 – 6.4 GHz

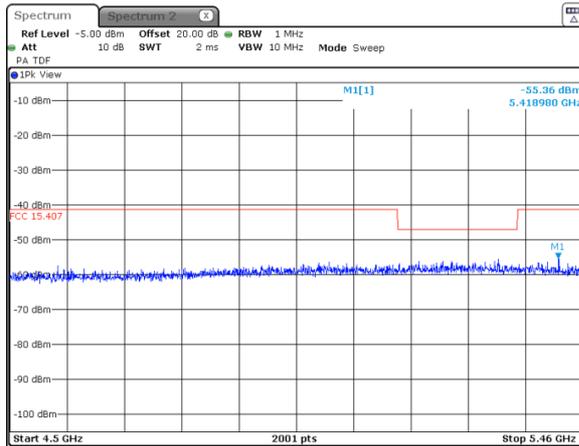CARRIER FREQUENCY   5788 MHz
CHANNEL BANDWIDTH   15 MHz

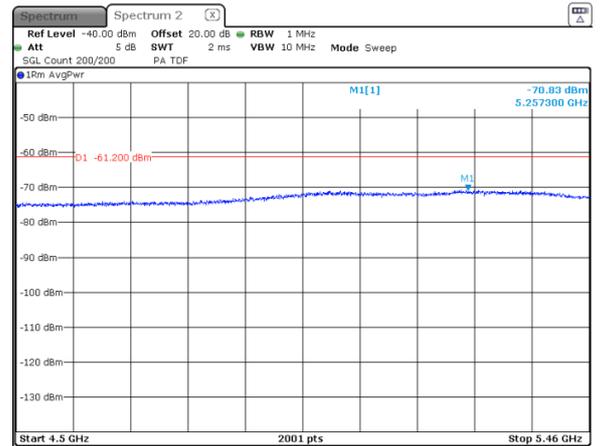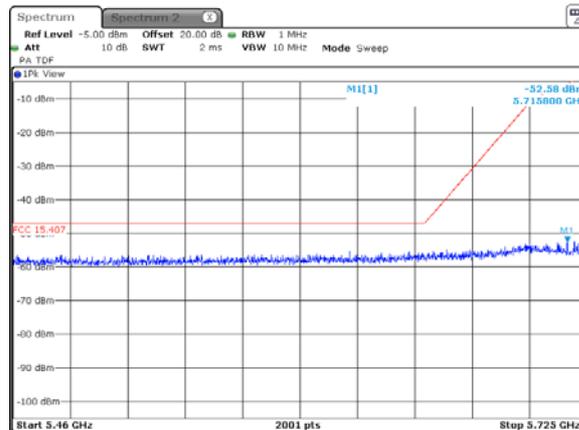Date: 12.FEB.2019 17:32:28

Test specification:	**FCC section 15.407(b), Conducted out of band emissions**		
Test procedure:	KDB 662911; KDB 789033, ANSI C63.10, section 12.7.6 & 12.7.7		
Test mode:	Compliance	**Verdict:**	**PASS**
Date(s):	11-Feb-19		
Temperature: 26 ºC	**Relative Humidity:** 45 %	**Air Pressure:** 1020 hPa	**Power:** 48 VDC
Remarks:			

Plot 7.7.17 Conducted spurious emission measurements in the range 4.5 – 5.46 GHz

CARRIER FREQUENCY   5842.5 MHz
CHANNEL BANDWIDTH   15 MHz

Plot 7.7.18 Conducted spurious emission measurements in the range 5.46 – 5.725 GHz

CARRIER FREQUENCY   5842.5 MHz
CHANNEL BANDWIDTH   15 MHz
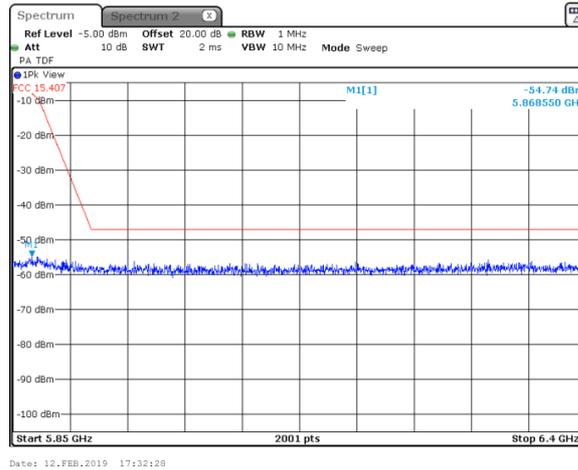
Test specification:	**FCC section 15.407(b), Conducted out of band emissions**		
Test procedure:	KDB 662911; KDB 789033, ANSI C63.10, section 12.7.6 & 12.7.7		
Test mode:	Compliance	**Verdict:**	**PASS**
Date(s):	11-Feb-19		
Temperature: 26 ºC	**Relative Humidity:** 45 %	**Air Pressure:** 1020 hPa	**Power:** 48 VDC
Remarks:			

Plot 7.7.19 Conducted spurious emission measurements in the range 5.85 – 6.4 GHz

CARRIER FREQUENCY   5842.5 MHz
CHANNEL BANDWIDTH   15 MHz
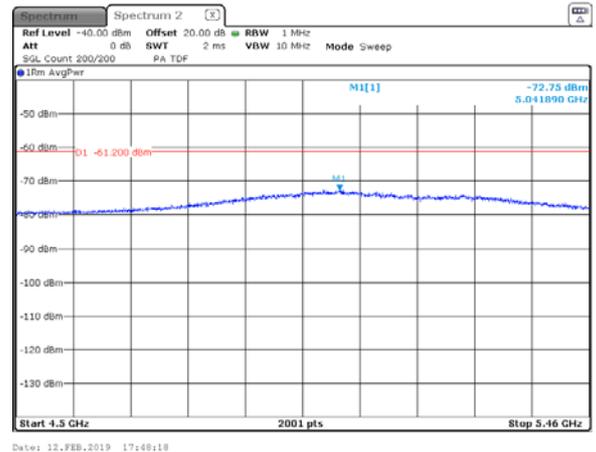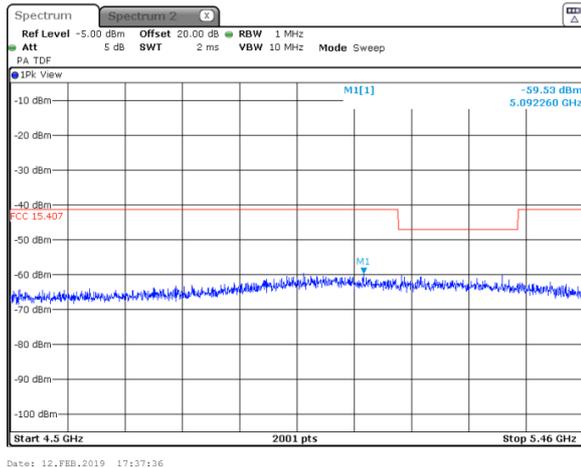

Date: 12.FEB.2019 17:45:36

Date: 12.FEB.2019 17:44:02

HL
HERMON LABORATORIES

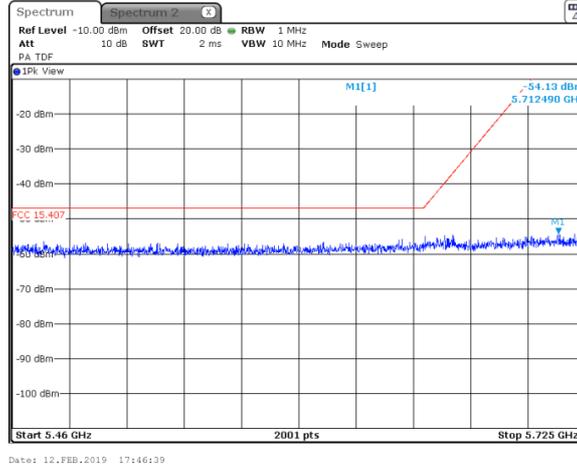| Test specification:	FCC section 15.407(b), Conducted out of band emissions		
Test procedure:	KDB 662911; KDB 789033, ANSI C63.10, section 12.7.6 & 12.7.7		
Test mode:	Compliance	**Verdict:**	**PASS**
Date(s):	11-Feb-19		
Temperature: 26 ºC	**Relative Humidity:** 45 %	**Air Pressure:** 1020 hPa	**Power:** 48 VDC
Remarks:			

Plot 7.7.20 Conducted spurious emission measurements in the range 4.5 – 5.46 GHz

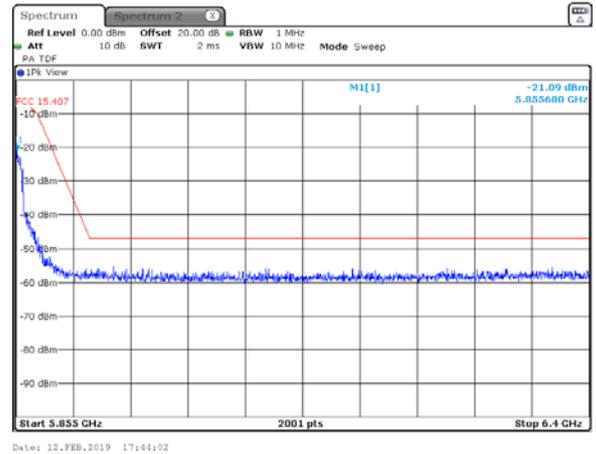CARRIER FREQUENCY   5735 MHz
CHANNEL BANDWIDTH   20 MHz

Date: 12.FEB.2019 18:10:41

Date: 12.FEB.2019 18:12:40

Plot 7.7.21 Conducted spurious emission measurements in the range 5.46 – 5.725 GHz

CARRIER FREQUENCY   5735 MHz
CHANNEL BANDWIDTH   20 MHz
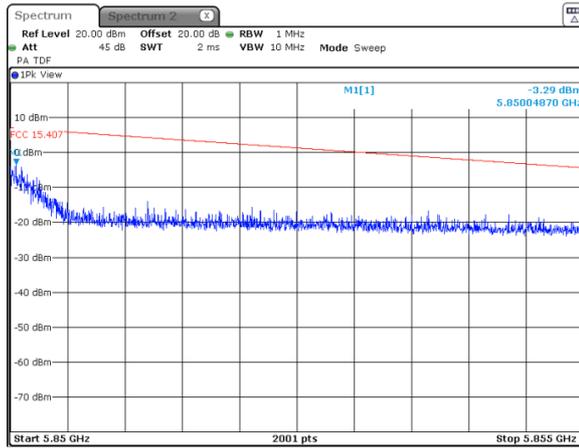

Date: 12.FEB.2019 18:09:37

Date: 12.FEB.2019 18:08:17

Test specification:	**FCC section 15.407(b), Conducted out of band emissions**		
Test procedure:	KDB 662911; KDB 789033, ANSI C63.10, section 12.7.6 & 12.7.7		
Test mode:	Compliance	**Verdict:**	**PASS**
Date(s):	11-Feb-19		
Temperature: 26 ºC	**Relative Humidity:** 45 %	**Air Pressure:** 1020 hPa	**Power:** 48 VDC
Remarks:			

Plot 7.7.22 Conducted spurious emission measurements in the range 5.85 – 6.4 GHz

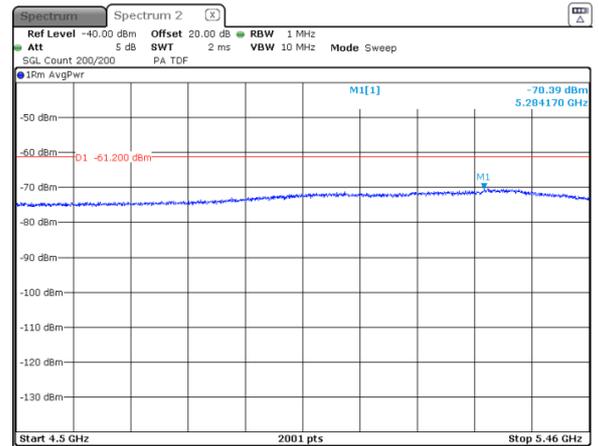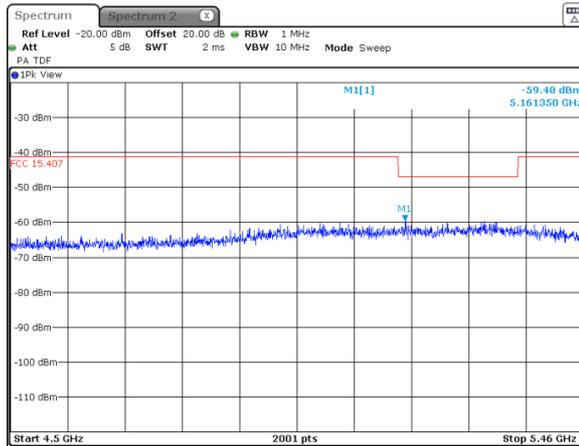CARRIER FREQUENCY   5735 MHz

CHANNEL BANDWIDTH   20 MHz

HERMON LABORATORIES

Test specification:	**FCC section 15.407(b), Conducted out of band emissions**		
Test procedure:	KDB 662911; KDB 789033, ANSI C63.10, section 12.7.6 & 12.7.7		
Test mode:	Compliance	**Verdict:**	**PASS**
Date(s):	11-Feb-19		
Temperature: 26 ºC	**Relative Humidity:** 45 %	**Air Pressure:** 1020 hPa	**Power:** 48 VDC
Remarks:			

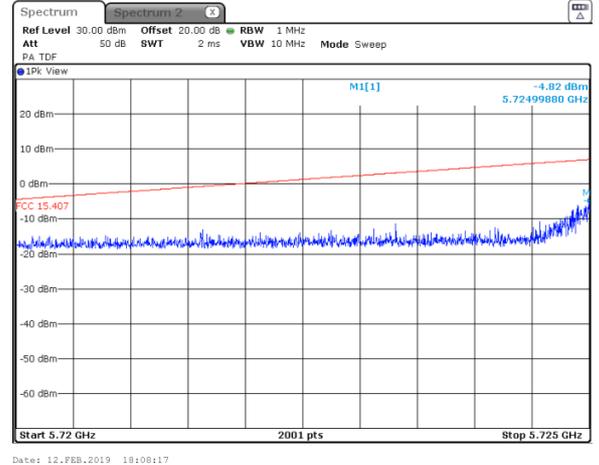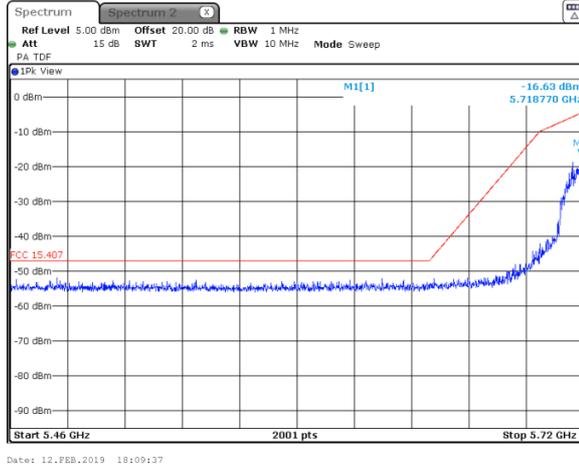**Plot 7.7.23 Conducted spurious emission measurements in the range 4.5 – 5.46 GHz**

CARRIER FREQUENCY   5788 MHz
CHANNEL BANDWIDTH   20 MHz

Date: 12.FEB.2019 18:15:21

Date: 12.FEB.2019 18:14:09

Plot 7.7.24 Conducted spurious emission measurements in the range 5.46 – 5.725 GHz

CARRIER FREQUENCY   5788 MHz
CHANNEL BANDWIDTH   20 MHz

Date: 12.FEB.2019 18:16:21

Test specification:	**FCC section 15.407(b), Conducted out of band emissions**		
Test procedure:	KDB 662911; KDB 789033, ANSI C63.10, section 12.7.6 & 12.7.7		
Test mode:	Compliance	**Verdict:**	**PASS**
Date(s):	11-Feb-19		
Temperature: 26 ºC	**Relative Humidity:** 45 %	**Air Pressure:** 1020 hPa	**Power:** 48 VDC
Remarks:			

Plot 7.7.25 Conducted spurious emission measurements in the range 5.85 – 6.4 GHz

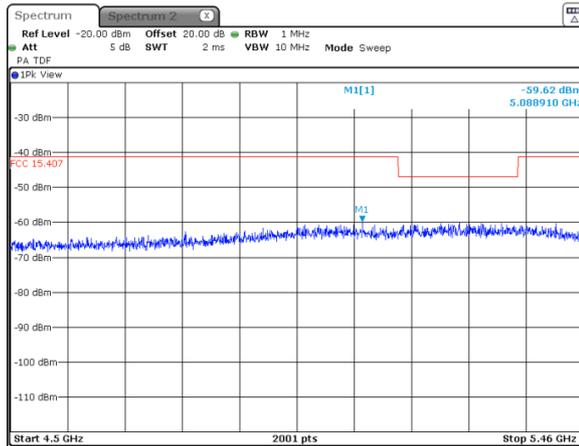CARRIER FREQUENCY   5788 MHz

CHANNEL BANDWIDTH   20 MHz
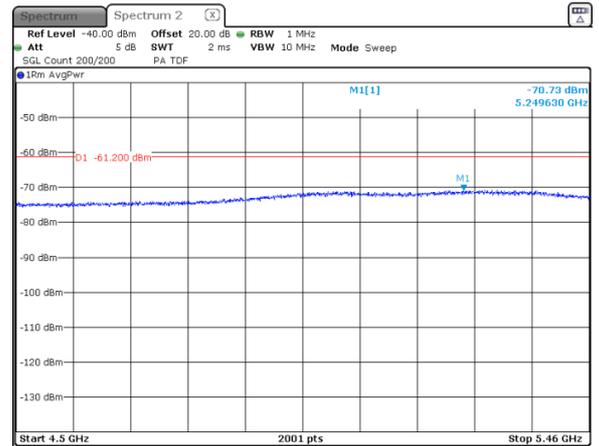
HL
HERMON LABORATORIES

Test specification:	**FCC section 15.407(b), Conducted out of band emissions**		
Test procedure:	KDB 662911; KDB 789033, ANSI C63.10, section 12.7.6 & 12.7.7		
Test mode:	Compliance	**Verdict:**	**PASS**
Date(s):	11-Feb-19		
Temperature: 26 ºC	**Relative Humidity:** 45 %	**Air Pressure:** 1020 hPa	**Power:** 48 VDC
Remarks:			

Plot 7.7.26 Conducted spurious emission measurements in the range 4.5 – 5.46 GHz

CARRIER FREQUENCY   5840 MHz
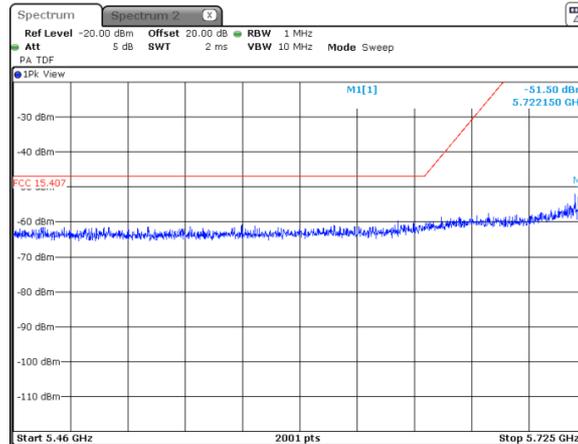CHANNEL BANDWIDTH   20 MHz

Date: 12.FEB.2019 18:24:14

Date: 12.FEB.2019 18:26:45

Plot 7.7.27 Conducted spurious emission measurements in the range 5.46 – 5.725 GHz

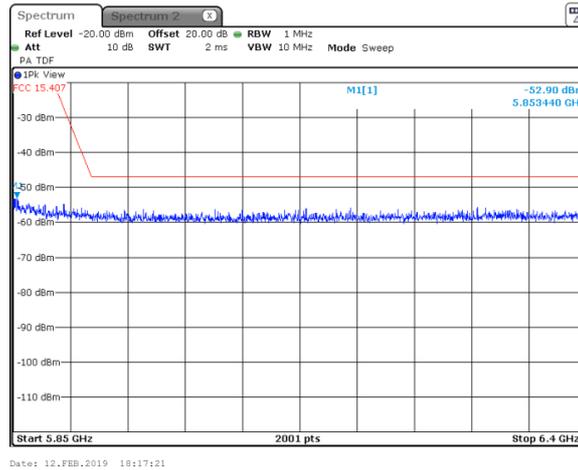CARRIER FREQUENCY   5840 MHz
CHANNEL BANDWIDTH   20 MHz

Date: 12.FEB.2019 18:28:28

Test specification:	**FCC section 15.407(b), Conducted out of band emissions**			
Test procedure:	KDB 662911; KDB 789033, ANSI C63.10, section 12.7.6 & 12.7.7			
Test mode:	Compliance	**Verdict:**		**PASS**
Date(s):	11-Feb-19			
Temperature: 26 ºC	**Relative Humidity:** 45 %	**Air Pressure:** 1020 hPa		**Power:** 48 VDC
Remarks:				

Plot 7.7.28 Conducted spurious emission measurements in the range 5.85 – 6.4 GHz

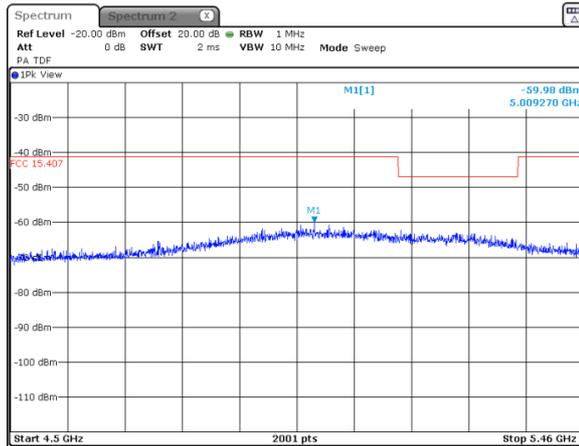CARRIER FREQUENCY   5840 MHz
CHANNEL BANDWIDTH   20 MHz
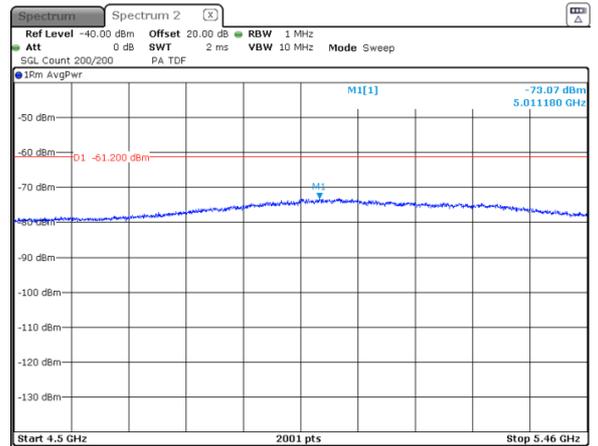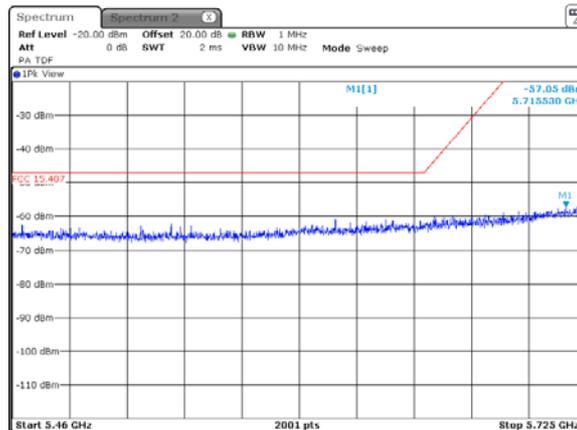
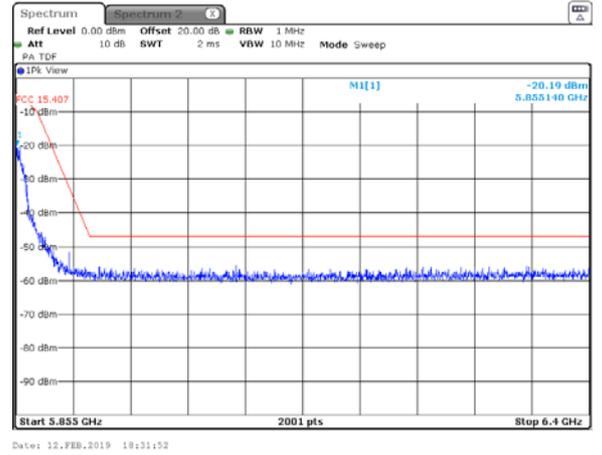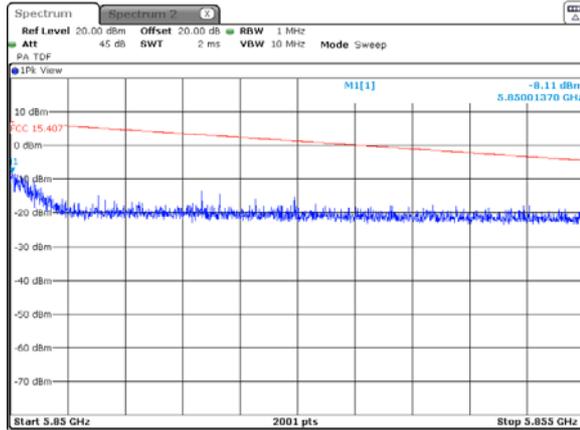| Test specification:	**FCC section 15.407(b), Conducted out of band emissions**		
Test procedure:	KDB 662911; KDB 789033, ANSI C63.10, section 12.7.6 & 12.7.7		
Test mode:	Compliance	**Verdict:**	**PASS**
Date(s):	11-Feb-19		
Temperature: 26 ºC	**Relative Humidity:** 45 %	**Air Pressure:** 1020 hPa	**Power:** 48 VDC
Remarks:			

7.8 Conducted out of band emissions at 5725 – 5850 MHz range

7.8.1 General

This test was performed to measure spurious emissions from the EUT near the band edges and within the pass band of the antenna. Specification test limits are given in Table 7.8.1 & EIRP of undesirable emission limits are given in Table 7.8.2

Table 7.8.1 Unwanted emissions limit within restricted bands above 1 GHz

Frequency, MHz	Field strength at 3 m, dB(μV/m)*		Equivalent EIRP*, dBm	
	Peak	Average	Peak	Average
1000 – 40000	74.0	54.0	-21.2	-41.2

* Equivalent EIRP was calculated as follow: Field strength – 95.2

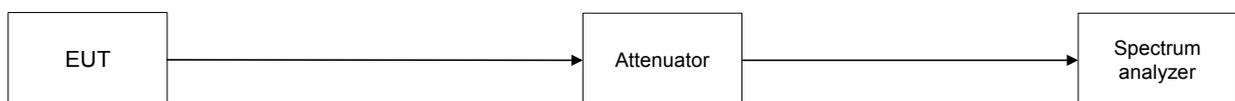**Table 7.8.2 EIRP of undesirable emission limits outside restricted bands above 1 GHz**

Frequency, MHz	EIRP of spurious, dBm/MHz
Outside 5725-5850 band	**-27 (below 5.650 GHz and above 5.925 GHz)** **-27 increasing linearly to 10 (in 5.650 - 5.700 GHz and 5.925 - 5.875 GHz)** **10 increasing linearly to 15.6 (in 5.700 - 5.720 GHz and 5.875 - 5.855 GHz)** **15.6 increasing linearly to 27 (in 5.720 - 5.725 GHz and 5.855 - 5.850 GHz)**

7.8.2 Test procedure

7.8.2.1 The EUT was set up as shown in Figure 7.8.1, energized and the performance check was conducted.

7.8.2.2 The EUT was adjusted to produce maximum available to end user RF output power at the lowest carrier frequency.

7.8.2.3 The spectrum analyzer span was set to capture the carrier frequency and associated modulation products. The resolution bandwidth was set to 1 MHz.

7.8.2.4 The spectrum analyzer was set in max hold mode and allowed trace to stabilize. The highest emission level within the authorized band was measured.

7.8.2.5 The maximum band edge emission and modulation product outside of the band were measured as provided in the associated tables and plots.

7.8.2.6 The above procedure was repeated with the EUT adjusted to produce maximum RF output power at the mid and highest carrier frequencies.

7.8.2.7 Test results are shown in the Table 7.8.3, Table 7.8.4, Table 7.8.5 and the associated plots.

Figure 7.8.1 Setup for conducted spurious emissions

Test specification:	**FCC section 15.407(b), Conducted out of band emissions**		
Test procedure:	KDB 662911; KDB 789033, ANSI C63.10, section 12.7.6 & 12.7.7		
Test mode:	Compliance	**Verdict:**	**PASS**
Date(s):	11-Feb-19		
Temperature: 26 ºC	**Relative Humidity:** 45 %	**Air Pressure:** 1020 hPa	**Power:** 48 VDC
Remarks:			

Table 7.8.3 Conducted spurious emission within restricted band test results

ASSIGNED FREQUENCY: 5.725 – 5.850 GHz
INVESTIGATED FREQUENCY RANGE: 4500 - 6400 MHz
MODULATION: QPSK
DETECTOR USED: Peak/Average
RESOLUTION BANDWIDTH: 1000 kHz
EUT CONFIGURATION: 1 carrier, 1 sector (4 ports to 2 dual slant antennas), coherent signal
CHANNEL BANWIDTH: 10 MHz

Frequency, MHz	Antenna gain, dBi	Antenna gain array*, dB	Peak				Average				Verdict
			SA reading, dBm	EIRP**, dBm/MHz	Limit, dBm	Margin***, dB	SA reading, dBm	EIRP**, dBm/MHz	Limit, dBm	Margin***, dB	
Low carrier frequency											
4993.910	17.0	6.0	-60.09	-37.09	-21.2	-15.89	-71.25	-45.76	-41.2	-4.56	Pass
Mid carrier frequency											
5365.730	17.0	6.0	-56.42	-33.42	-21.2	-12.22	-71.05	-45.56	-41.2	-4.36	Pass
High carrier frequency											
5060.600	17.0	6.0	-57.10	-34.10	-21.2	-12.90	-70.96	-45.47	-41.2	-4.27	Pass

CHANNEL BANWIDTH: 15 MHz

Frequency, MHz	Antenna gain, dBi	Antenna gain array*, dB	Peak				Average				Verdict
			SA reading, dBm	EIRP**, dBm/MHz	Limit, dBm	Margin***, dB	SA reading, dBm	EIRP**, dBm/MHz	Limit, dBm	Margin***, dB	
Low carrier frequency											
5320.150	17.0	6.0	-58.79	-35.79	-21.2	-14.59	-70.44	-44.95	-41.2	-3.75	Pass
Mid carrier frequency											
5257.300	17.0	6.0	-58.76	-35.76	-21.2	-14.56	-70.83	-45.34	-41.2	-4.14	Pass
High carrier frequency											
5041.890	17.0	6.0	-58.56	-35.56	-21.2	-14.36	-72.75	-47.26	-41.2	-6.06	Pass

CHANNEL BANWIDTH: 20 MHz

Frequency, MHz	Antenna gain, dBi	Antenna gain array*, dB	Peak				Average				Verdict
			SA reading, dBm	Peak EIRP**, dBm/MHz	Limit, dBm	Margin***, dB	SA reading, dBm	Average EIRP****, dBm/MHz	Limit, dBm	Margin***, dB	
Low carrier frequency											
5284.170	17.0	6.0	-59.50	-36.50	-21.2	-15.30	-70.39	-44.90	-41.2	-3.70	Pass
Mid carrier frequency											
5249.630	17.0	6.0	-59.66	-36.66	-21.2	-15.46	-70.73	-45.24	-41.2	-4.04	Pass
High carrier frequency											
5011.180	17.0	6.0	-60.08	-37.08	-21.2	-15.88	-73.07	-47.58	-41.2	-6.38	Pass

* - Antenna gain array = 10log(N_{ant}), where N_{ant} = 4 *(two cross-polarized antennas with coherent signals)*
** - Peak EIRP = SA reading + Antenna gain + Antenna gain array
*** - Margin = EIRP – specified limit.
**** - Average EIRP = SA reading + Antenna gain + Antenna gain array + Duty cycle factor

Table 7.8.4 Duty cycle factor calculation

Burst dration, ms	Burst period, ms	Duty cycle*	Duty cycle factor**, dB
2.82	5.00	0.564	2.49

*- Duty cycle = *Burst duration / Burst period*
** - Duty cycle factor = *10log(1/Duty cycle)*

Test specification:	**FCC section 15.407(b), Conducted out of band emissions**			
Test procedure:	KDB 662911; KDB 789033, ANSI C63.10, section 12.7.6 & 12.7.7			
Test mode:	Compliance	**Verdict:**	**PASS**	
Date(s):	11-Feb-19			
Temperature: 26 ºC	**Relative Humidity:** 45 %	**Air Pressure:** 1020 hPa	**Power:** 48 VDC	
Remarks:				

Table 7.8.5 Conducted spurious emission outside restricted band test results

ASSIGNED FREQUENCY RANGE: 5.725 – 5.850 GHz
INVESTIGATED FREQUENCY RANGE: 4500 - 6400 MHz
MODULATION: QPSK
DETECTOR USED: Peak
RESOLUTION BANDWIDTH 1000 kHz
EUT CONFIGURATION: 1 carrier, 1 sector (4 ports to 2 dual slant antennas), coherent signal
CHANNEL BANWIDTH: 10 MHz

Frequency, MHz	SA reading, dBm	Antenna gain, dBi	Antenna gain array*, dB	EIRP**, dBm/MHz	Limit, dBm/MHz	Margin***, dB	Verdict
Low carrier frequency							
5298.080	-58.84	17.0	6.0	-35.84	-27.0	-8.84	Pass
5719.810	-19.71	17.0	6.0	3.29	15.5	-12.26	Pass
5724.500	-11.91	17.0	6.0	11.09	25.9	-14.77	Pass
Mid carrier frequency							
5226.600	-56.12	17.0	6.0	-33.12	-27.0	-6.12	Pass
High carrier frequency							
5337.420	-56.20	17.0	6.0	-33.20	-27.0	-6.20	Pass
5850.500	-18.01	17.0	6.0	4.99	25.9	-20.87	Pass
5856.500	-19.57	17.0	6.0	3.43	15.2	-11.75	Pass

CHANNEL BANWIDTH: 15 MHz

Frequency, MHz	SA reading, dBm	Antenna gain, dBi	Antenna gain array*, dB	EIRP**, dBm/MHz	Limit, dBm/MHz	Margin***, dB	Verdict
Low carrier frequency							
5220.360	-59.79	17.0	6.0	-36.79	-27.0	-9.79	Pass
5719.550	-16.96	17.0	6.0	6.04	15.5	-9.43	Pass
5724.996	-1.99	17.0	6.0	21.01	27.0	-5.98	Pass
Mid carrier frequency							
5384.940	-58.75	17.0	6.0	-35.75	-27.0	-8.75	Pass
High carrier frequency							
5850.049	-2.89	17.0	6.0	20.11	26.9	-6.78	Pass
5855.680	-21.09	17.0	6.0	1.91	15.4	-13.50	Pass

Test specification:	**FCC section 15.407(b), Conducted out of band emissions**			
Test procedure:	KDB 662911; KDB 789033, ANSI C63.10, section 12.7.6 & 12.7.7			
Test mode:	Compliance	**Verdict:**		**PASS**
Date(s):	11-Feb-19			
Temperature: 26 ºC	**Relative Humidity:** 45 %	**Air Pressure:** 1020 hPa		**Power:** 48 VDC
Remarks:				

Table 7.8.5 Conducted spurious emission outside restricted band test results

ASSIGNED FREQUENCY RANGE: 5.725 – 5.850 GHz
INVESTIGATED FREQUENCY RANGE: 4500 - 6400 MHz
MODULATION: QPSK
DETECTOR USED: Peak
RESOLUTION BANDWIDTH 1000 kHz
EUT CONFIGURATION: 1 carrier, 1 sector (4 ports to 2 dual slant antennas),
coherent signal
CHANNEL BANWIDTH: 20 MHz

Frequency, MHz	SA reading, dBm	Antenna gain, dBi	Antenna gain array*, dB	EIRP**, dBm/MHz	Limit, dBm/MHz	Margin***, dB	Verdict
Low carrier frequency							
5276.010	-59.50	17.0	6.0	-36.50	-27.0	-9.50	Pass
5718.640	-16.56	17.0	6.0	6.44	15.2	-8.78	Pass
5724.986	-4.89	17.0	6.0	18.11	27.0	-8.86	Pass
Mid carrier frequency							
5248.670	-59.66	17.0	6.0	-36.66	-27.0	-9.66	Pass
High carrier frequency							
5850.031	-8.03	17.0	6.0	14.97	26.9	-11.96	Pass
5855.140	-20.19	17.0	6.0	2.81	15.6	-12.75	Pass

* - Antenna gain array = 10log(N_{ant}), where N_{ant} = 2 *(two cross-polarized antennas)*

** - EIRP = SA reading + Antenna gain + Antenna gain array

*** - Margin = EIRP – specified limit.

Reference numbers of test equipment used

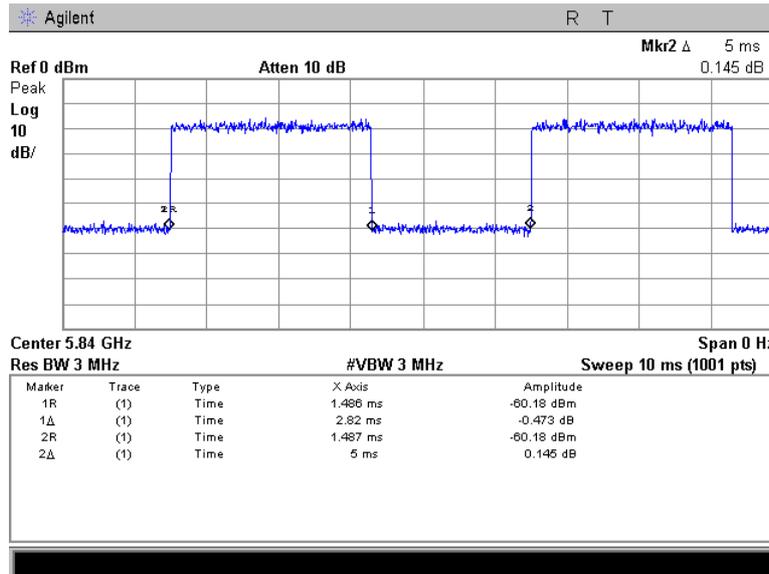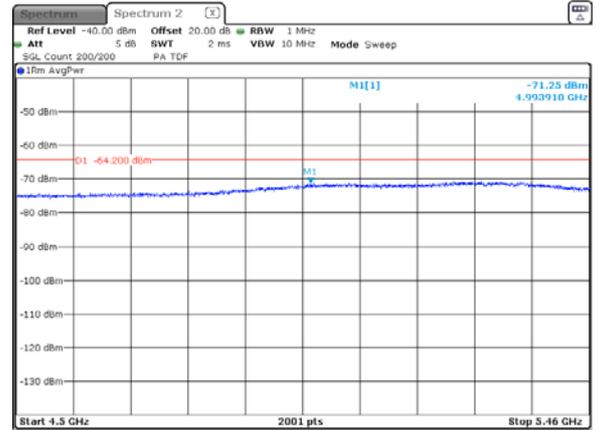| HL 3901	HL 4355						

Full description is given in Appendix A.

HERMON LABORATORIES

Test specification:	**FCC section 15.407(b), Conducted out of band emissions**		
Test procedure:	KDB 662911; KDB 789033, ANSI C63.10, section 12.7.6 & 12.7.7		
Test mode:	Compliance	**Verdict:**	**PASS**
Date(s):	11-Feb-19		
Temperature: 26 ºC	**Relative Humidity:** 45 %	**Air Pressure:** 1020 hPa	**Power:** 48 VDC
Remarks:			

Plot 7.8.1 Duty cycle

HL HERMON LABORATORIES

Test specification:	**FCC section 15.407(b), Conducted out of band emissions**		
Test procedure:	KDB 662911; KDB 789033, ANSI C63.10, section 12.7.6 & 12.7.7		
Test mode:	Compliance	**Verdict:**	**PASS**
Date(s):	11-Feb-19		
Temperature: 26 ºC	Relative Humidity: 45 %	Air Pressure: 1020 hPa	Power: 48 VDC
Remarks:			

Plot 7.8.2 Conducted spurious emission measurements in the range 4.5 – 5.46 GHz

CARRIER FREQUENCY	5730 MHz
CHANNEL BANDWIDTH	10 MHz
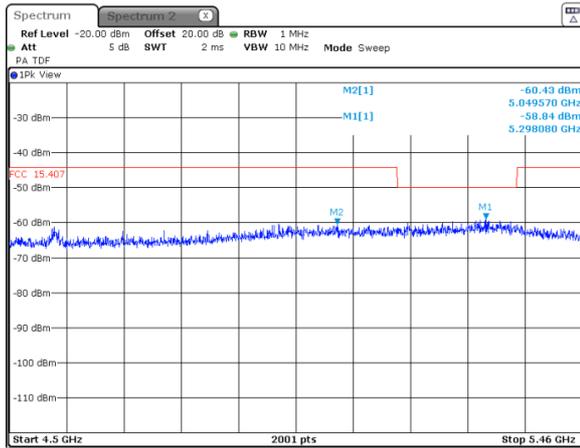
*Applied Limit = Specification limit – Antenna Gain – Antenna Array gain

Plot 7.8.3 Conducted spurious emission measurements in the range 5.46 – 5.725 GHz

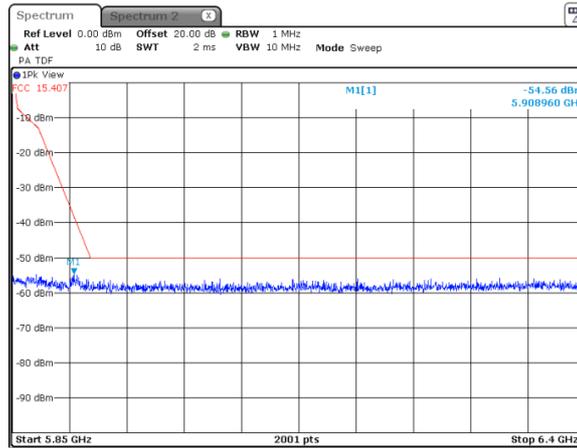| CARRIER FREQUENCY	5730 MHz
CHANNEL BANDWIDTH	10 MHz

Test specification:	**FCC section 15.407(b), Conducted out of band emissions**		
Test procedure:	KDB 662911; KDB 789033, ANSI C63.10, section 12.7.6 & 12.7.7		
Test mode:	Compliance	**Verdict:**	**PASS**
Date(s):	11-Feb-19		
Temperature: 26 ºC	**Relative Humidity:** 45 %	**Air Pressure:** 1020 hPa	**Power:** 48 VDC
Remarks:			

Plot 7.8.4 Conducted spurious emission measurements in the range 5.85 – 6.4 GHz

CARRIER FREQUENCY   5730 MHz
CHANNEL BANDWIDTH   10 MHz
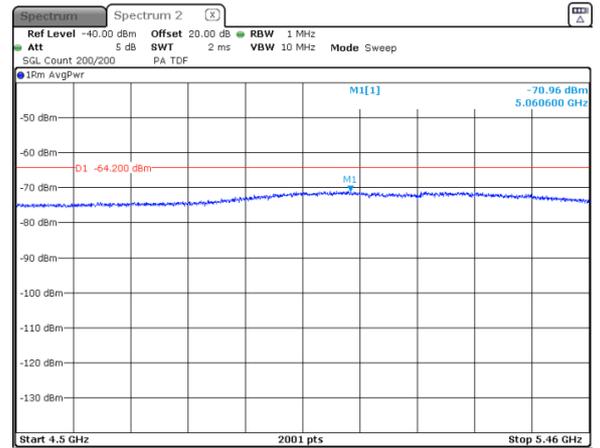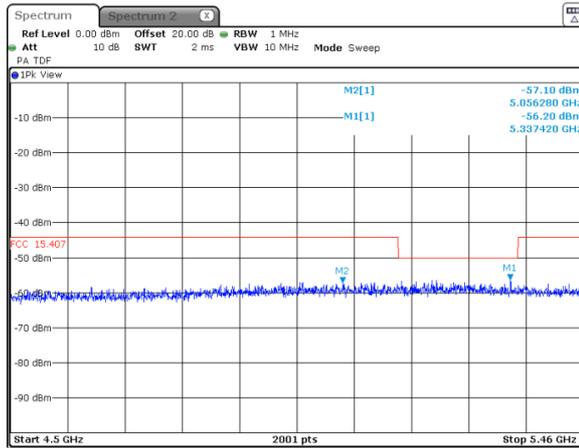
HERMON LABORATORIES

Test specification:	**FCC section 15.407(b), Conducted out of band emissions**			
Test procedure:	KDB 662911; KDB 789033, ANSI C63.10, section 12.7.6 & 12.7.7			
Test mode:	Compliance	**Verdict:**		**PASS**
Date(s):	11-Feb-19			
Temperature: 26 ºC	Relative Humidity: 45 %	Air Pressure: 1020 hPa	Power: 48 VDC	
Remarks:				

Plot 7.8.5 Conducted spurious emission measurements in the range 4.5 – 5.46 GHz

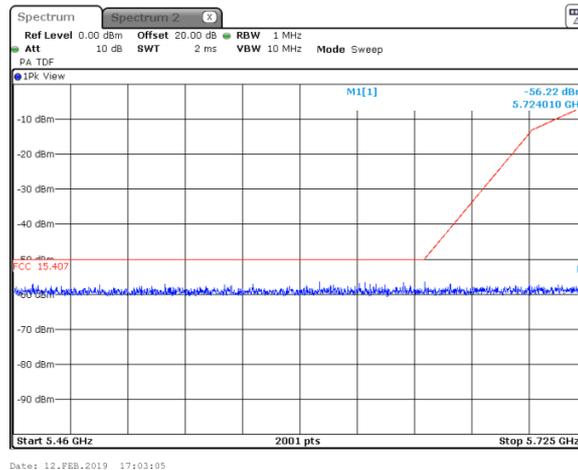CARRIER FREQUENCY   5788 MHz
CHANNEL BANDWIDTH   10 MHz
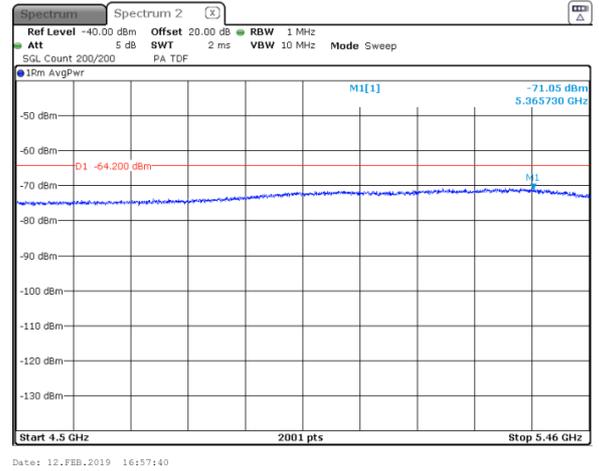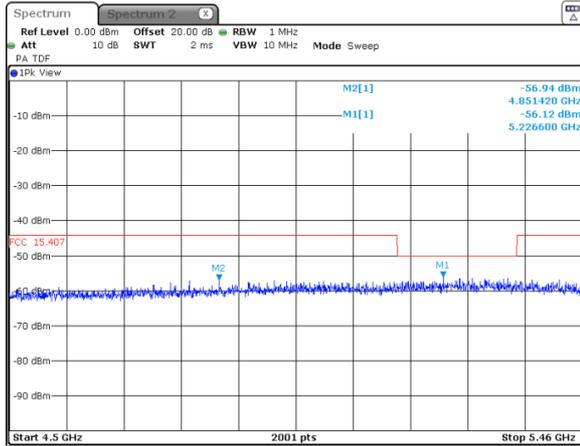
Plot 7.8.6 Conducted spurious emission measurements in the range 5.46 – 5.725 GHz

CARRIER FREQUENCY   5788 MHz
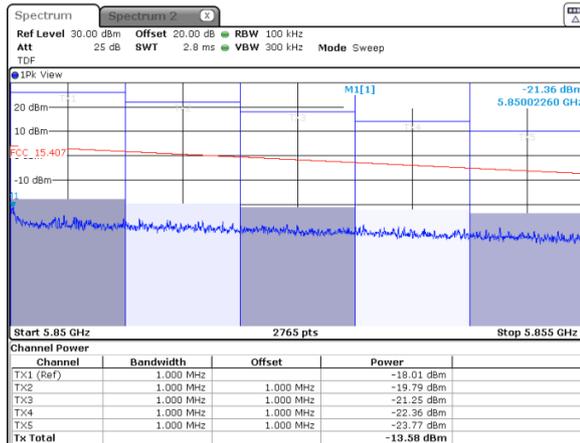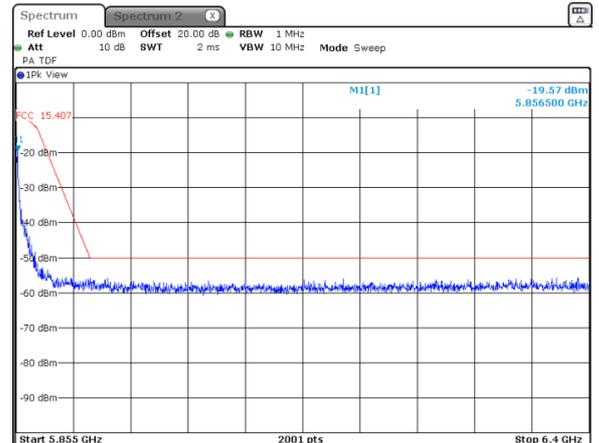CHANNEL BANDWIDTH   10 MHz

Test specification:	**FCC section 15.407(b), Conducted out of band emissions**		
Test procedure:	KDB 662911; KDB 789033, ANSI C63.10, section 12.7.6 & 12.7.7		
Test mode:	Compliance	**Verdict:**	**PASS**
Date(s):	11-Feb-19		
Temperature: 26 ºC	**Relative Humidity:** 45 %	**Air Pressure:** 1020 hPa	**Power:** 48 VDC
Remarks:			

Plot 7.8.7 Conducted spurious emission measurements in the range 5.85 – 6.4 GHz

CARRIER FREQUENCY   5788 MHz
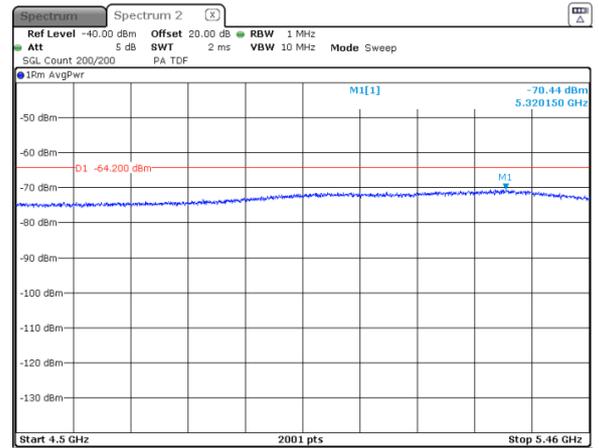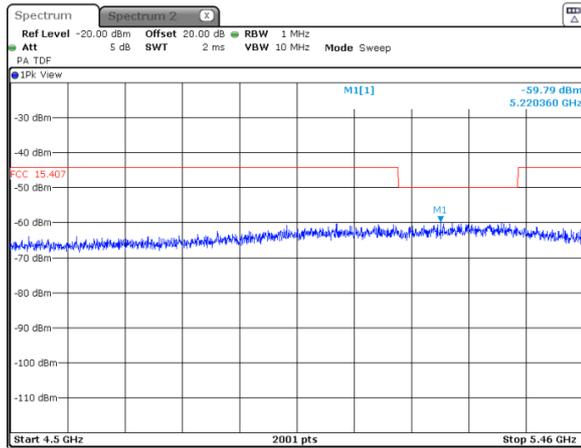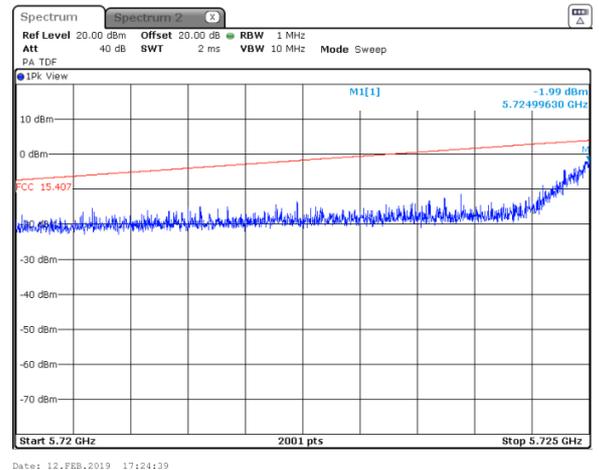CHANNEL BANDWIDTH   10 MHz

Date: 12.FEB.2019 16:54:21

HERMON LABORATORIES

Test specification:	**FCC section 15.407(b), Conducted out of band emissions**		
Test procedure:	KDB 662911; KDB 789033, ANSI C63.10, section 12.7.6 & 12.7.7		
Test mode:	Compliance	**Verdict:**	**PASS**
Date(s):	11-Feb-19		
Temperature: 26 ºC	**Relative Humidity:** 45 %	**Air Pressure:** 1020 hPa	**Power:** 48 VDC
Remarks:			

Plot 7.8.8 Conducted spurious emission measurements in the range 4.5 – 5.46 GHz

CARRIER FREQUENCY   5845 MHz
CHANNEL BANDWIDTH   10 MHz

Plot 7.8.9 Conducted spurious emission measurements in the range 5.46 – 5.725 GHz

CARRIER FREQUENCY   5845 MHz
CHANNEL BANDWIDTH   10 MHz

Test specification:	**FCC section 15.407(b), Conducted out of band emissions**		
Test procedure:	KDB 662911; KDB 789033, ANSI C63.10, section 12.7.6 & 12.7.7		
Test mode:	Compliance	**Verdict:**	**PASS**
Date(s):	11-Feb-19		
Temperature: 26 ºC	**Relative Humidity:** 45 %	**Air Pressure:** 1020 hPa	**Power:** 48 VDC
Remarks:			

Plot 7.8.10 Conducted spurious emission measurements in the range 5.85 – 6.4 GHz

CARRIER FREQUENCY   5845 MHz
CHANNEL BANDWIDTH   10 MHz

HERMON LABORATORIES

Test specification:	**FCC section 15.407(b), Conducted out of band emissions**		
Test procedure:	KDB 662911; KDB 789033, ANSI C63.10, section 12.7.6 & 12.7.7		
Test mode:	Compliance	**Verdict:**	**PASS**
Date(s):	11-Feb-19		
Temperature: 26 ºC	**Relative Humidity:** 45 %	**Air Pressure:** 1020 hPa	**Power:** 48 VDC
Remarks:			

Plot 7.8.11 Conducted spurious emission measurements in the range 4.5 – 5.46 GHz

CARRIER FREQUENCY   5732.5 MHz
CHANNEL BANDWIDTH   15 MHz

Date: 12.FEB.2019 17:22:18

Date: 12.FEB.2019 17:26:10

Plot 7.8.12 Conducted spurious emission measurements in the range 5.46 – 5.725 GHz

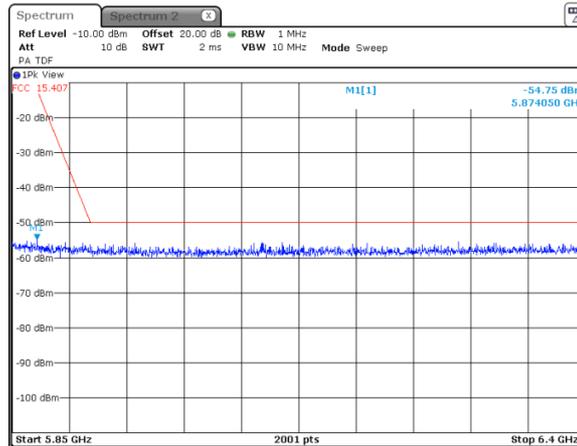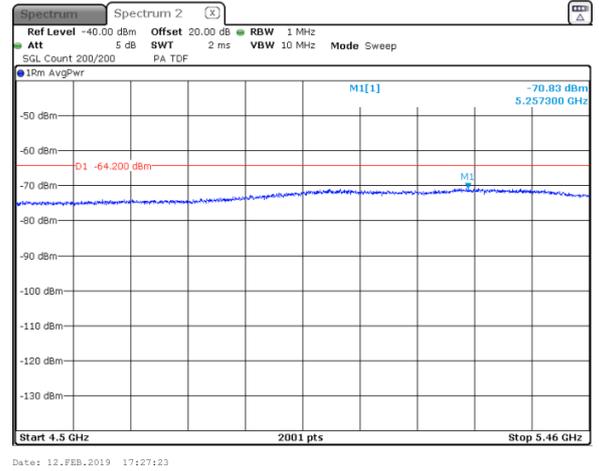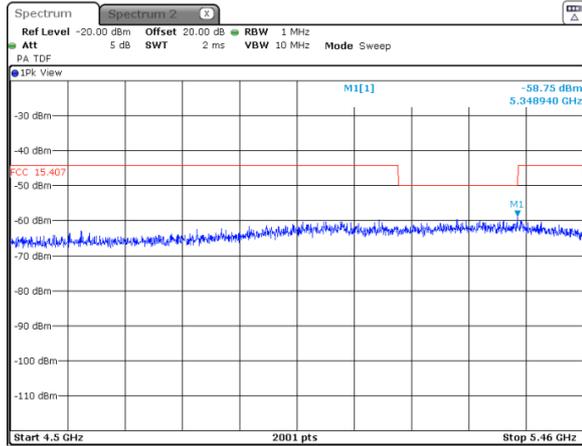CARRIER FREQUENCY   5732.5 MHz
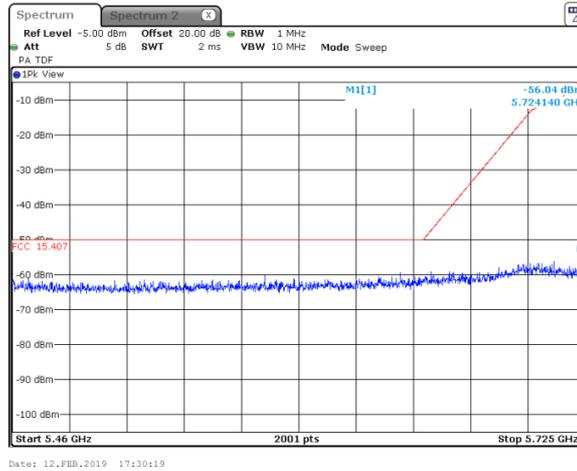CHANNEL BANDWIDTH   15 MHz

Date: 12.FEB.2019 17:23:33

Date: 12.FEB.2019 17:24:39

Test specification:	**FCC section 15.407(b), Conducted out of band emissions**		
Test procedure:	KDB 662911; KDB 789033, ANSI C63.10, section 12.7.6 & 12.7.7		
Test mode:	Compliance	**Verdict:**	**PASS**
Date(s):	11-Feb-19		
Temperature: 26 ºC	**Relative Humidity:** 45 %	**Air Pressure:** 1020 hPa	**Power:** 48 VDC
Remarks:			

Plot 7.8.13 Conducted spurious emission measurements in the range 5.85 – 6.4 GHz

CARRIER FREQUENCY   5732.5 MHz
CHANNEL BANDWIDTH   15 MHz

Date: 12.FEB.2019 17:21:20

HL
HERMON LABORATORIES

Test specification:	**FCC section 15.407(b), Conducted out of band emissions**		
Test procedure:	KDB 662911; KDB 789033, ANSI C63.10, section 12.7.6 & 12.7.7		
Test mode:	Compliance	**Verdict:**	**PASS**
Date(s):	11-Feb-19		
Temperature: 26 ºC	**Relative Humidity:** 45 %	**Air Pressure:** 1020 hPa	**Power:** 48 VDC
Remarks:			

Plot 7.8.14 Conducted spurious emission measurements in the range 4.5 – 5.46 GHz

    CARRIER FREQUENCY   5788 MHz
    CHANNEL BANDWIDTH   15 MHz

Plot 7.8.15 Conducted spurious emission measurements in the range 5.46 – 5.725 GHz

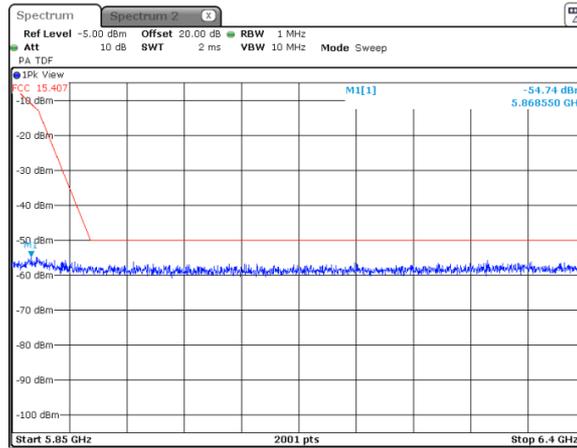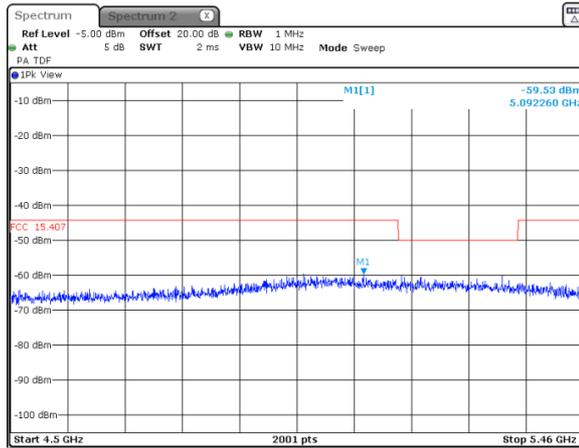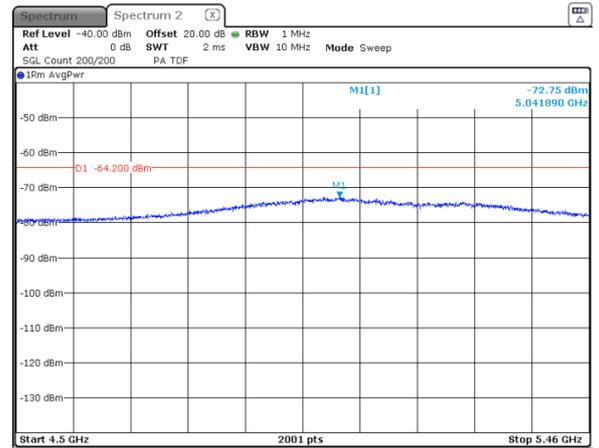   CARRIER FREQUENCY   5788 MHz
    CHANNEL BANDWIDTH   15 MHz

Test specification:	**FCC section 15.407(b), Conducted out of band emissions**		
Test procedure:	KDB 662911; KDB 789033, ANSI C63.10, section 12.7.6 & 12.7.7		
Test mode:	Compliance	**Verdict:**	**PASS**
Date(s):	11-Feb-19		
Temperature: 26 ºC	**Relative Humidity:** 45 %	**Air Pressure:** 1020 hPa	**Power:** 48 VDC
Remarks:			

Plot 7.8.16 Conducted spurious emission measurements in the range 5.85 – 6.4 GHz

CARRIER FREQUENCY   5788 MHz
CHANNEL BANDWIDTH   15 MHz

Test specification:	**FCC section 15.407(b), Conducted out of band emissions**		
Test procedure:	KDB 662911; KDB 789033, ANSI C63.10, section 12.7.6 & 12.7.7		
Test mode:	Compliance	**Verdict:**	**PASS**
Date(s):	11-Feb-19		
Temperature: 26 ºC	Relative Humidity: 45 %	Air Pressure: 1020 hPa	Power: 48 VDC
Remarks:			

Plot 7.8.17 Conducted spurious emission measurements in the range 4.5 – 5.46 GHz

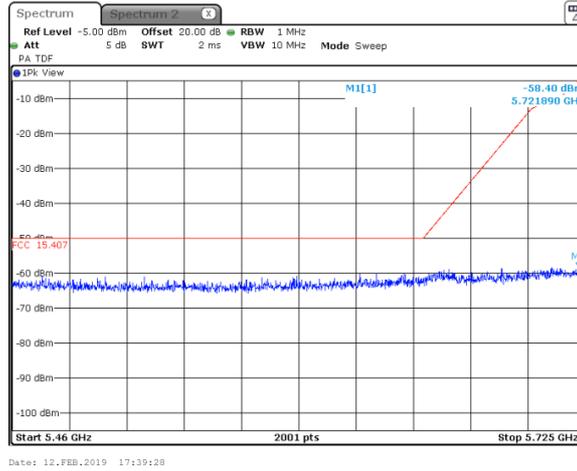CARRIER FREQUENCY   5842.5 MHz
CHANNEL BANDWIDTH   15 MHz

Test specification:	**FCC section 15.407(b), Conducted out of band emissions**		
Test procedure:	KDB 662911; KDB 789033, ANSI C63.10, section 12.7.6 & 12.7.7		
Test mode:	Compliance	**Verdict:**	**PASS**
Date(s):	11-Feb-19		
Temperature: 26 ºC	**Relative Humidity:** 45 %	**Air Pressure:** 1020 hPa	**Power:** 48 VDC
Remarks:			

Plot 7.8.18 Conducted spurious emission measurements in the range 5.46 – 5.725 GHz

CARRIER FREQUENCY   5842.5 MHz
CHANNEL BANDWIDTH   15 MHz

Plot 7.8.19 Conducted spurious emission measurements in the range 5.85 – 6.4 GHz

CARRIER FREQUENCY   5842.5 MHz
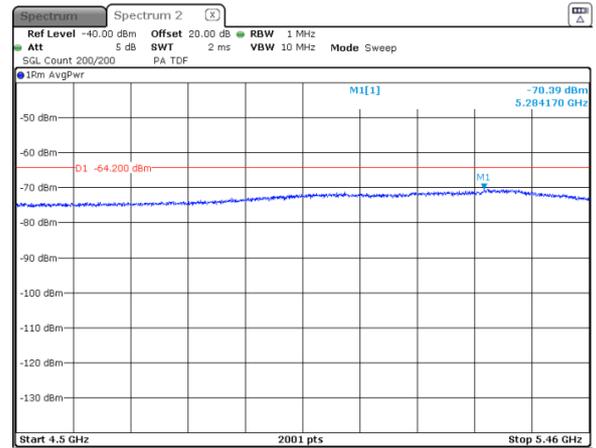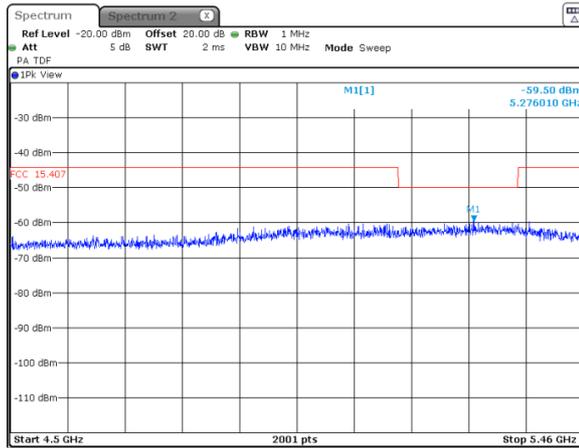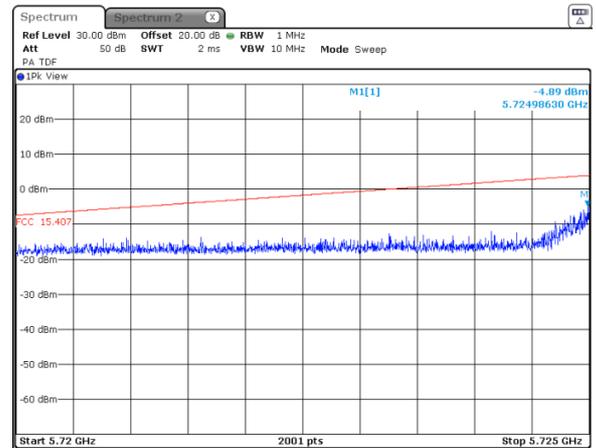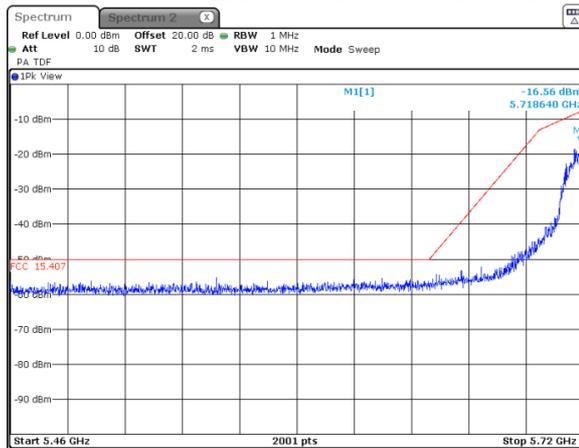CHANNEL BANDWIDTH   15 MHz

Test specification:	**FCC section 15.407(b), Conducted out of band emissions**		
Test procedure:	KDB 662911; KDB 789033, ANSI C63.10, section 12.7.6 & 12.7.7		
Test mode:	Compliance	**Verdict:**	**PASS**
Date(s):	11-Feb-19		
Temperature: 26 ºC	**Relative Humidity:** 45 %	**Air Pressure:** 1020 hPa	**Power:** 48 VDC
Remarks:			

Plot 7.8.20 Conducted spurious emission measurements in the range 4.5 – 5.46 GHz

CARRIER FREQUENCY   5735 MHz
CHANNEL BANDWIDTH   20 MHz

Plot 7.8.21 Conducted spurious emission measurements in the range 5.46 – 5.725 GHz

CARRIER FREQUENCY   5735 MHz
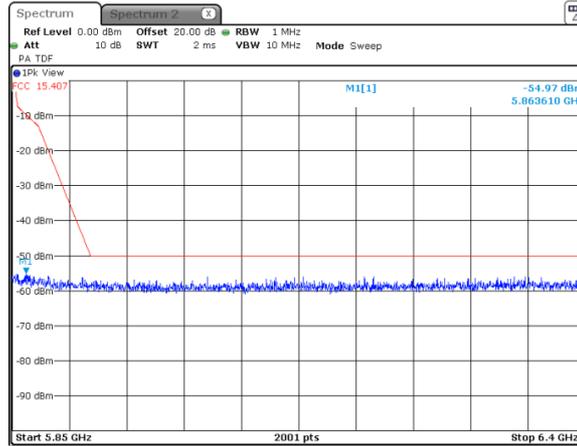CHANNEL BANDWIDTH   20 MHz

Test specification:	**FCC section 15.407(b), Conducted out of band emissions**		
Test procedure:	KDB 662911; KDB 789033, ANSI C63.10, section 12.7.6 & 12.7.7		
Test mode:	Compliance	**Verdict:**	**PASS**
Date(s):	11-Feb-19		
Temperature: 26 ºC	**Relative Humidity:** 45 %	**Air Pressure:** 1020 hPa	**Power:** 48 VDC
Remarks:			

Plot 7.8.22 Conducted spurious emission measurements in the range 5.85 – 6.4 GHz

CARRIER FREQUENCY   5735 MHz
CHANNEL BANDWIDTH   20 MHz