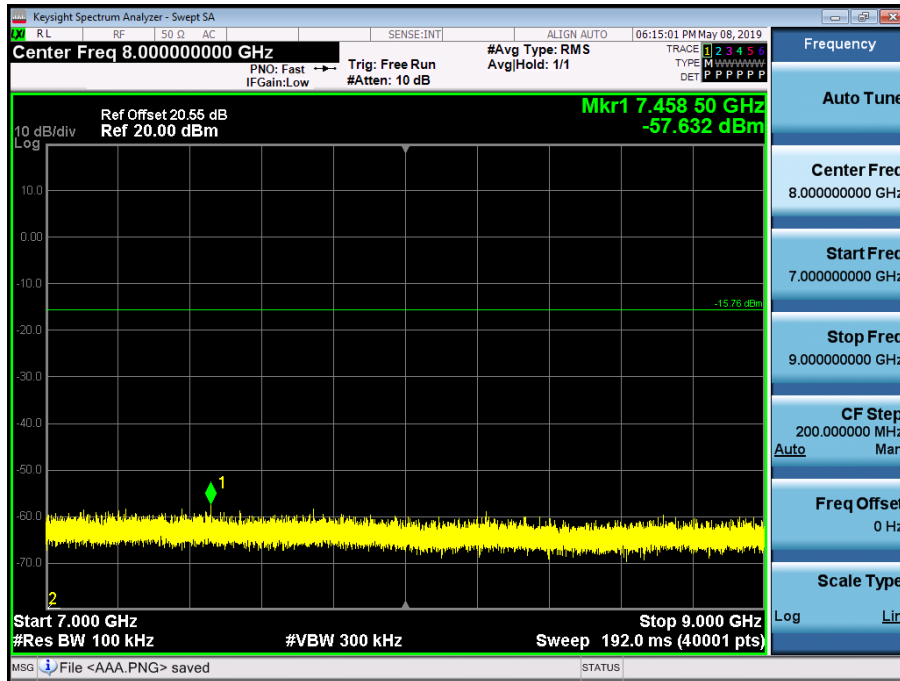


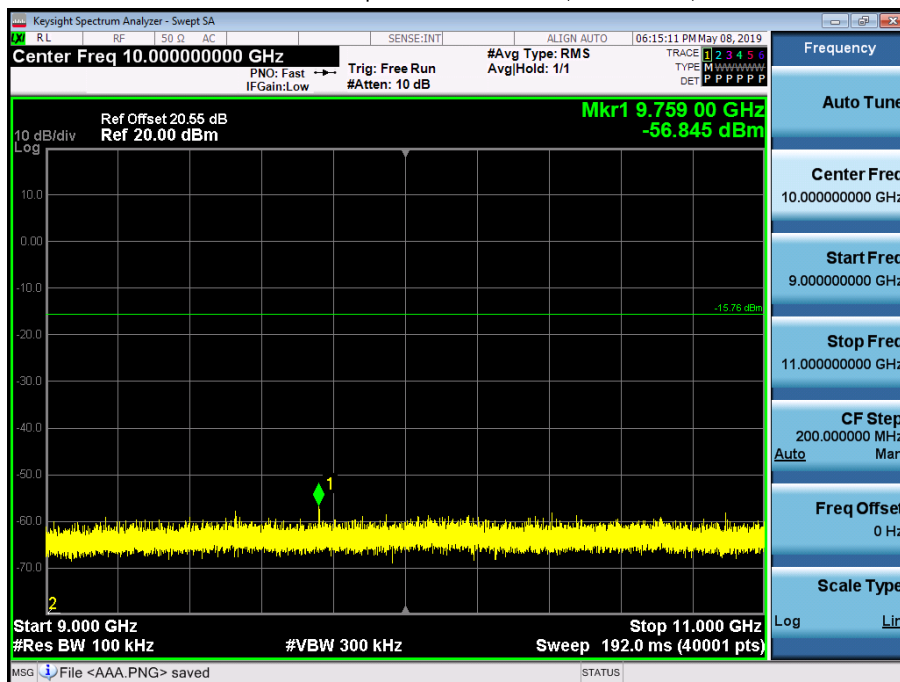
7 GHz ~ 9 GHz

Conducted Spurious Emission (Low-CH 19)



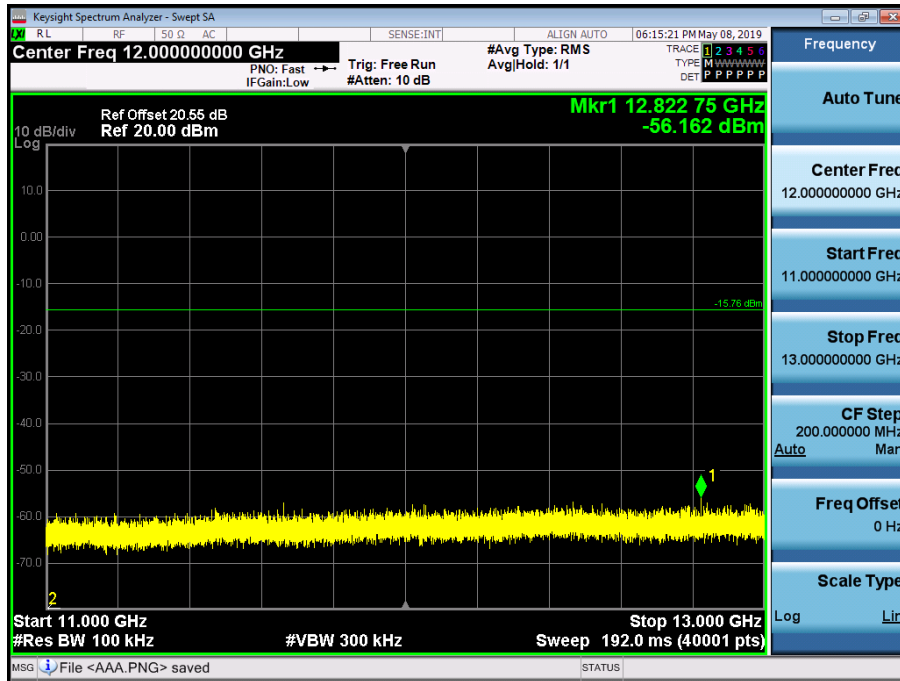
9 GHz ~ 11 GHz

Conducted Spurious Emission (Low-CH 19)



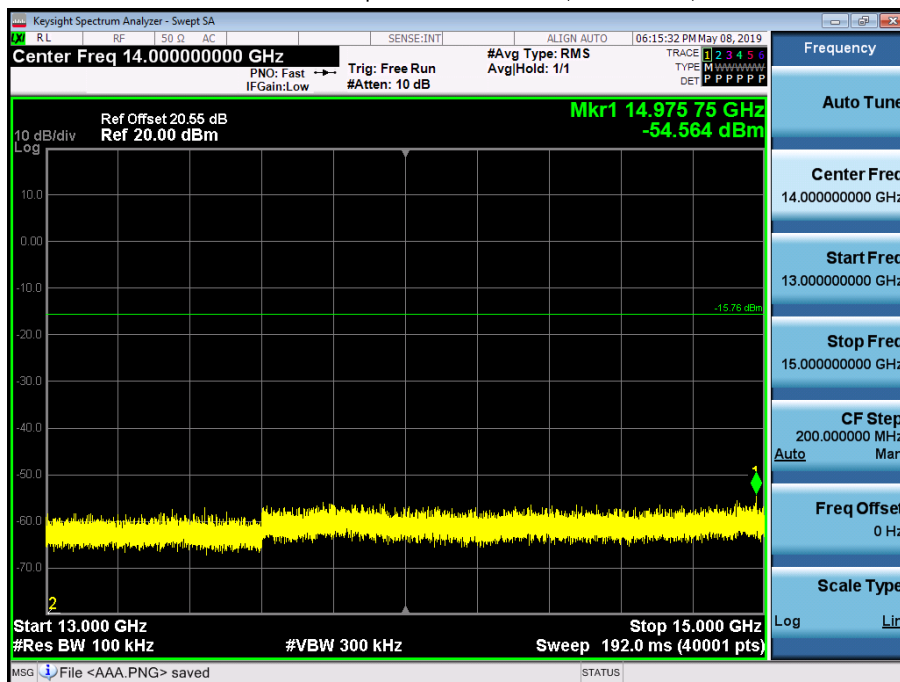
11 GHz ~ 13 GHz

Conducted Spurious Emission (Low-CH 19)



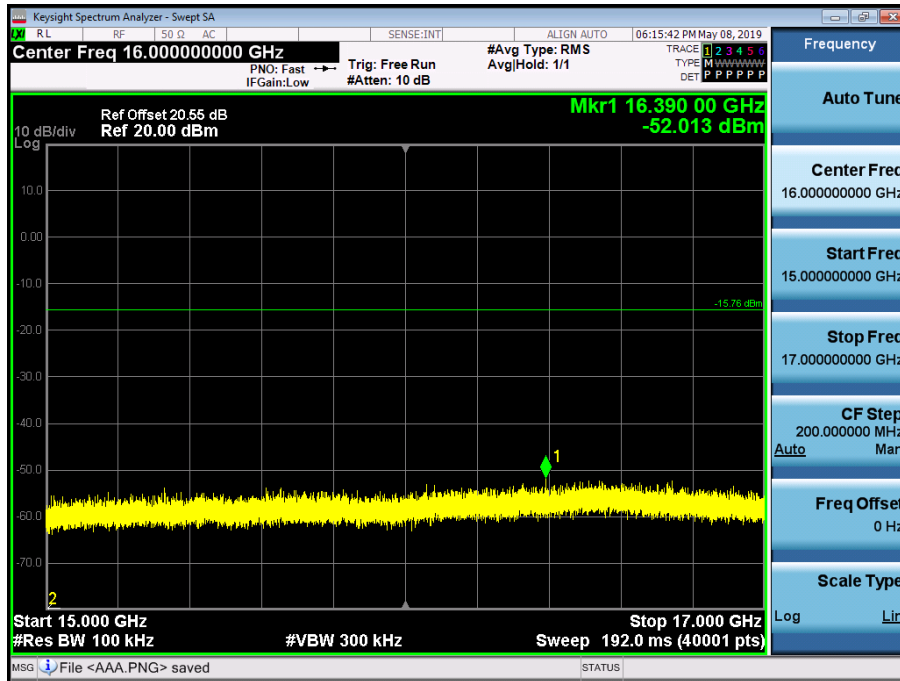
13 GHz ~ 15 GHz

Conducted Spurious Emission (Low-CH 19)



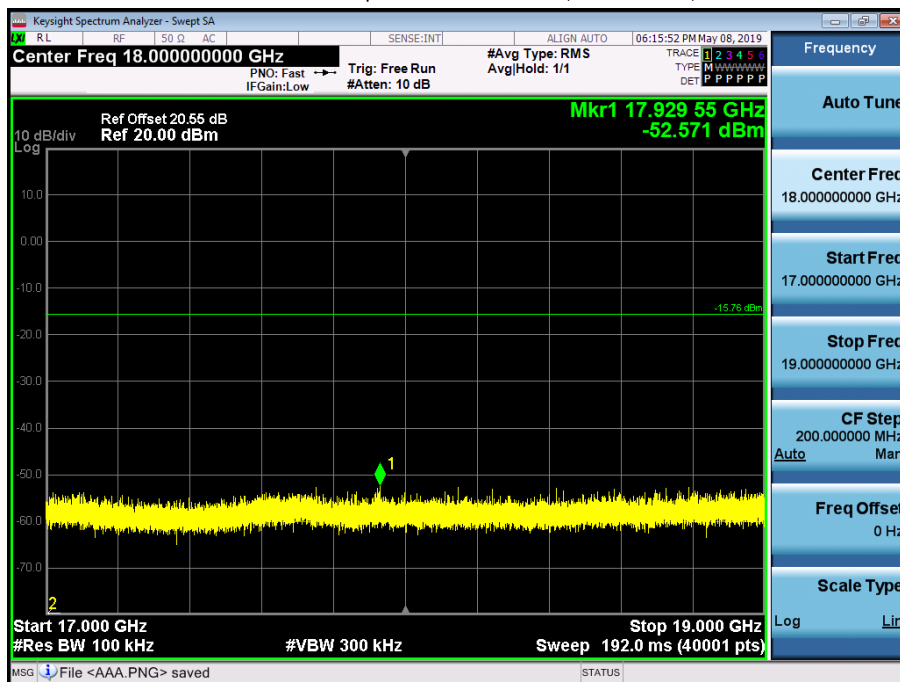
15 GHz ~ 17 GHz

Conducted Spurious Emission (Low-CH 19)



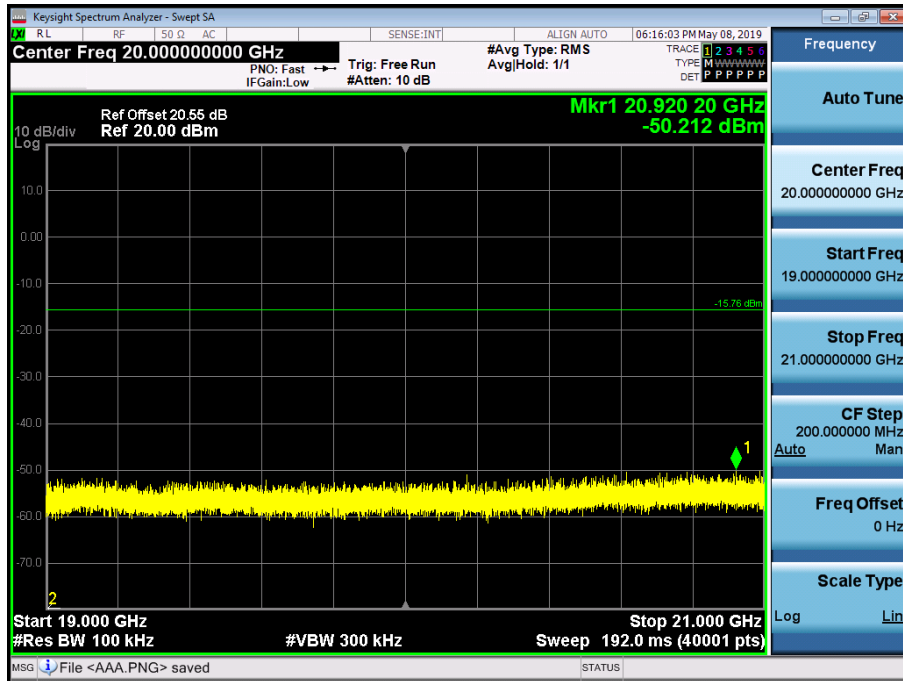
17 GHz ~ 19 GHz

Conducted Spurious Emission (Low-CH 19)



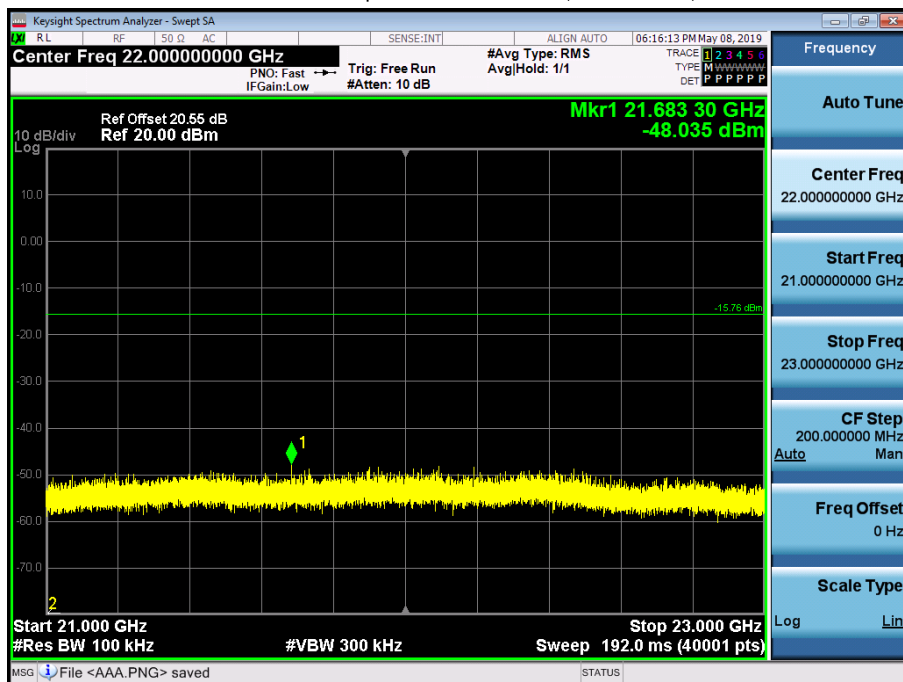
19 GHz ~ 21 GHz

Conducted Spurious Emission (Low-CH 19)



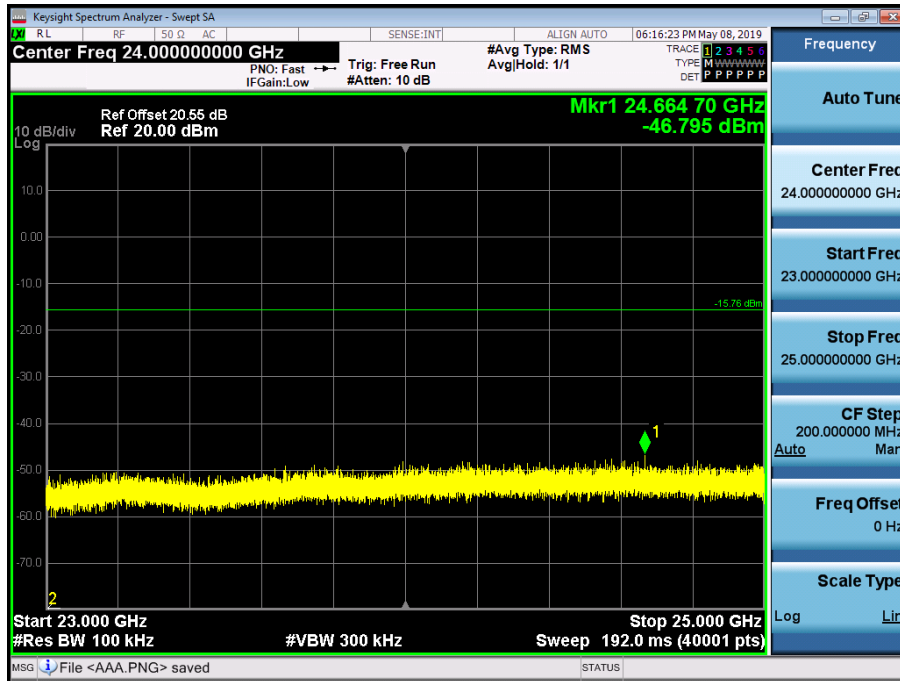
21 GHz ~ 23 GHz

Conducted Spurious Emission (Low-CH 19)



23 GHz ~ 25 GHz

Conducted Spurious Emission (Low-CH 19)

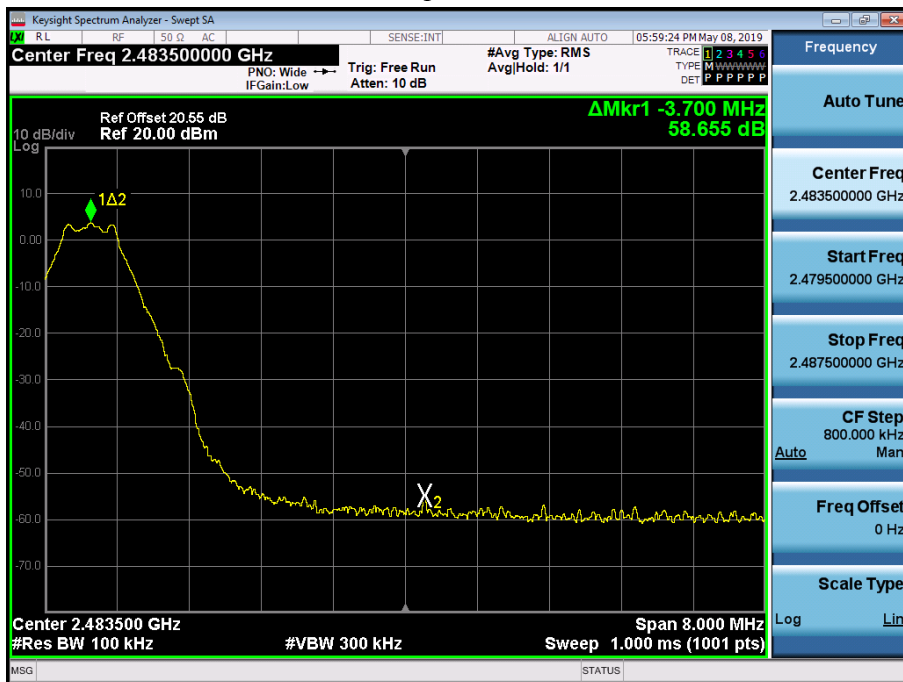


255 byte Test Plots (BandEdge)

Low-CH 0



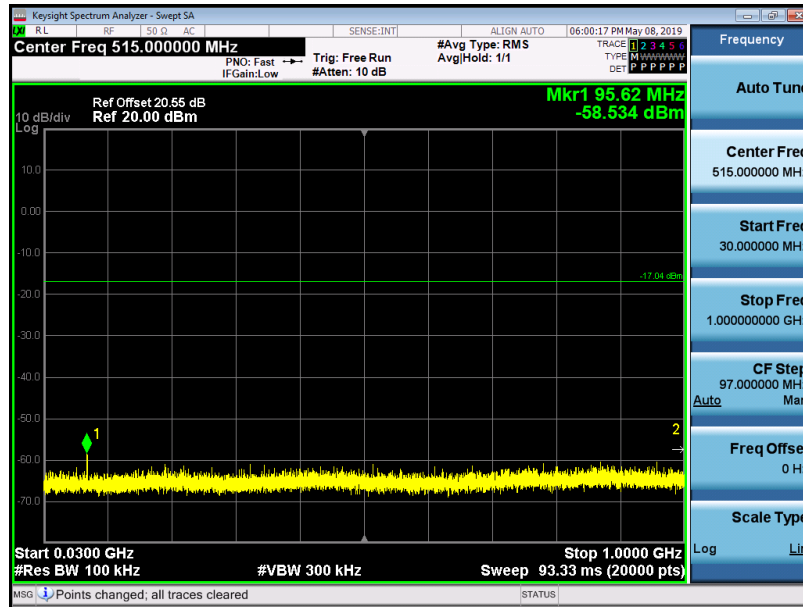
High-CH 39



▣ Test Plots (Conducted Spurious Emission)

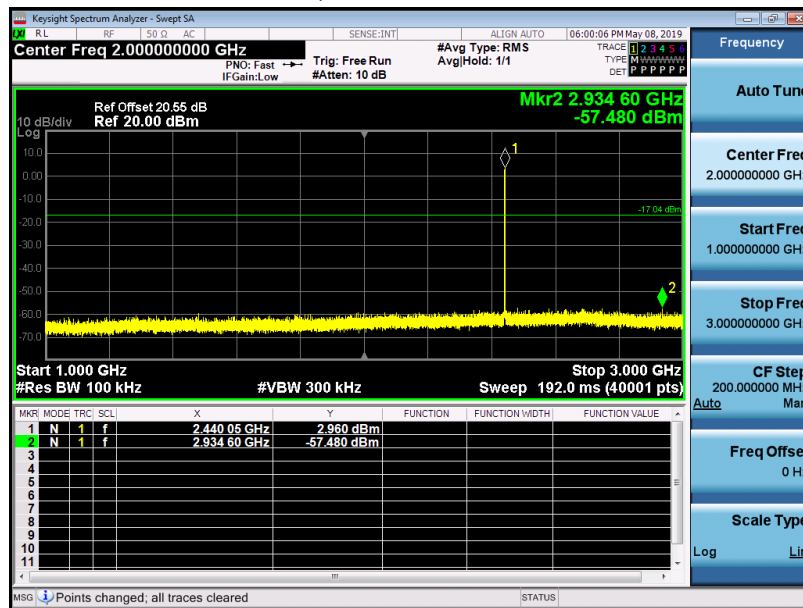
30 MHz ~ 1 GHz

Conducted Spurious Emission (Low-CH 19)



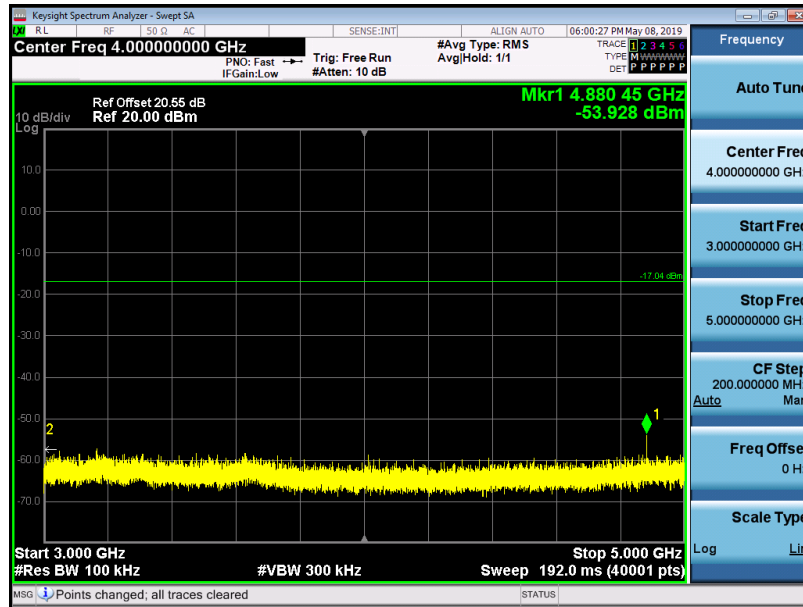
1 GHz ~ 3 GHz

Conducted Spurious Emission (Low-CH 19)



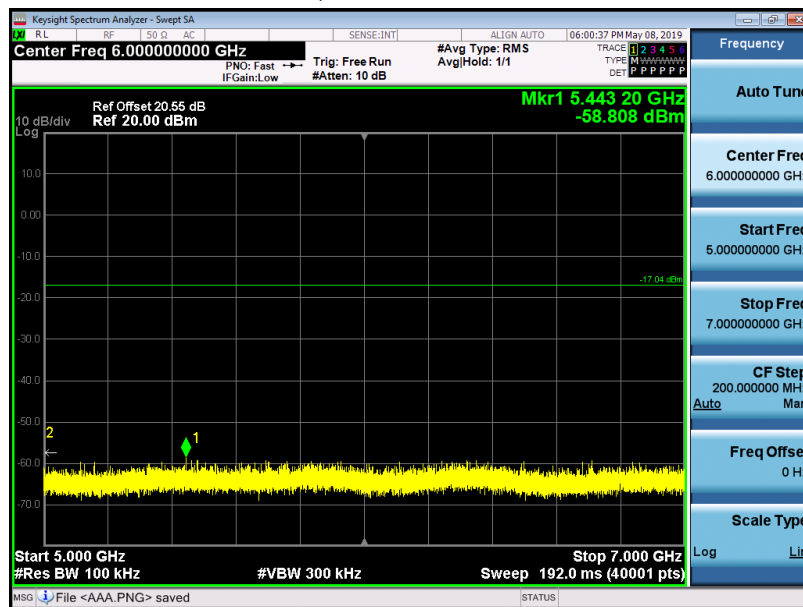
3 GHz ~ 5 GHz

Conducted Spurious Emission (Low-CH 19)



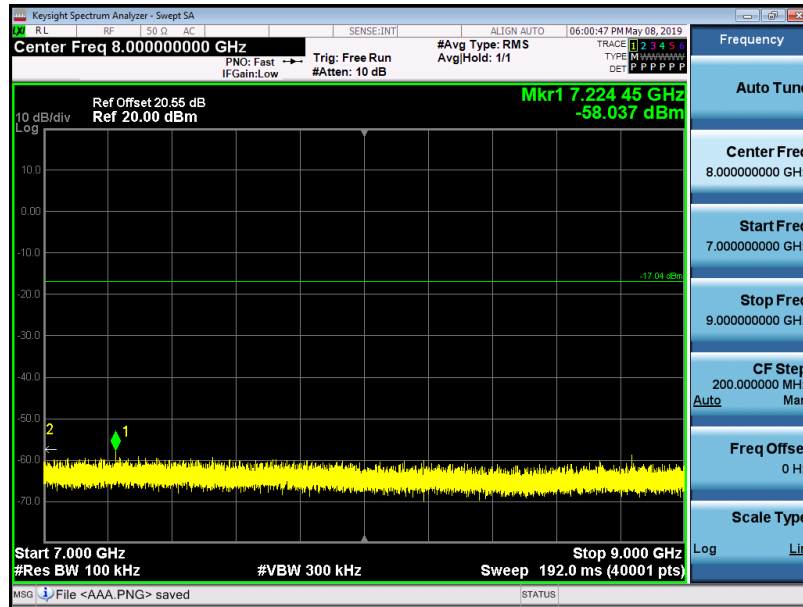
5 GHz ~ 7 GHz

Conducted Spurious Emission (Low-CH 19)



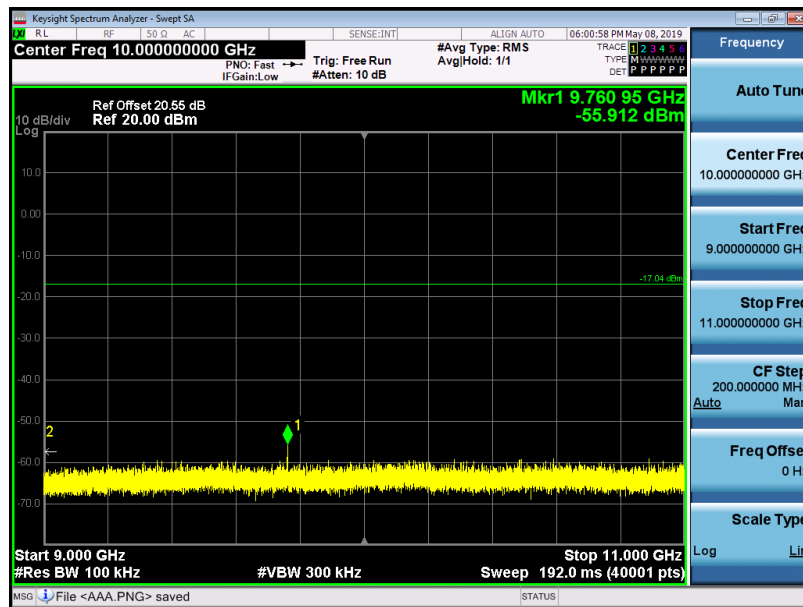
7 GHz ~ 9 GHz

Conducted Spurious Emission (Low-CH 19)



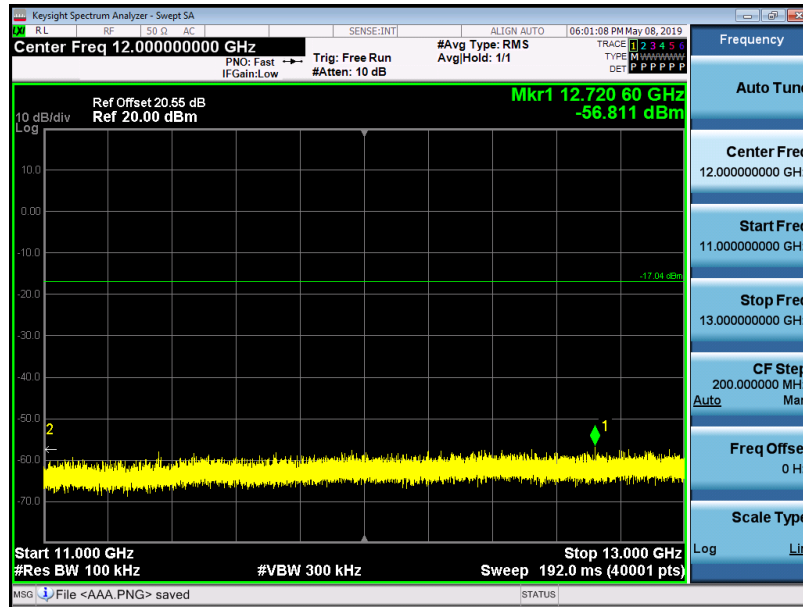
9 GHz ~ 11 GHz

Conducted Spurious Emission (Low-CH 19)



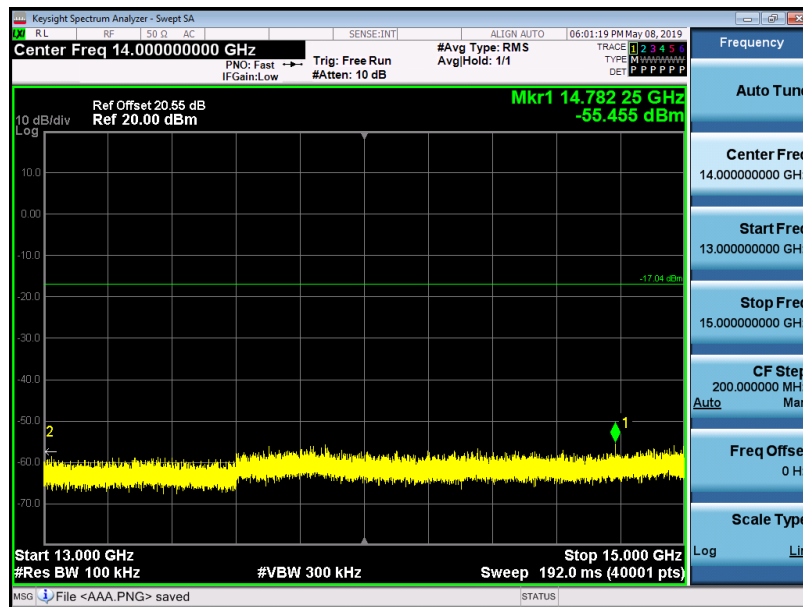
11 GHz ~ 13 GHz

Conducted Spurious Emission (Low-CH 19)



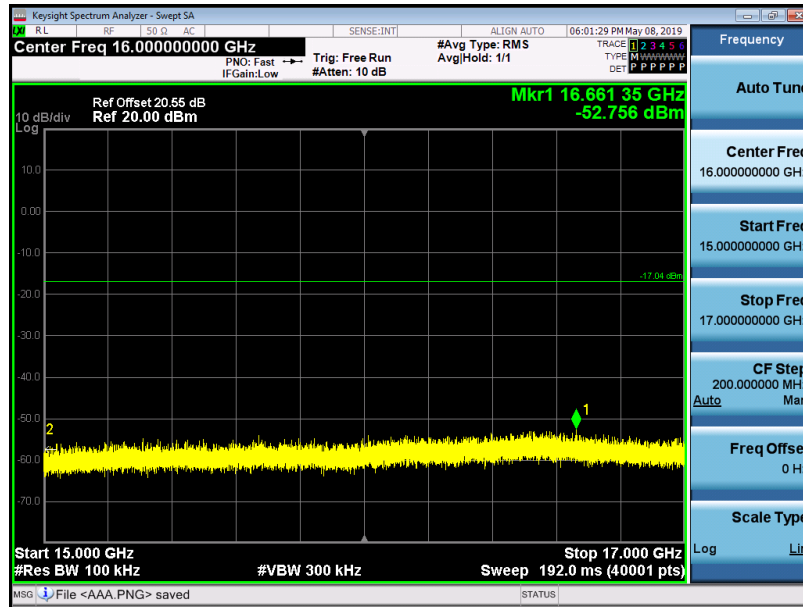
13 GHz ~ 15 GHz

Conducted Spurious Emission (Low-CH 19)



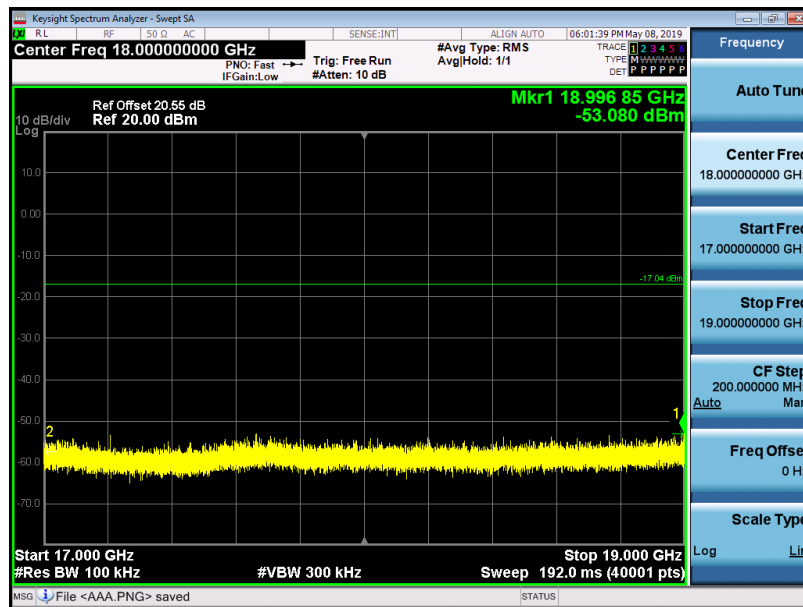
15 GHz ~ 17 GHz

Conducted Spurious Emission (Low-CH 19)



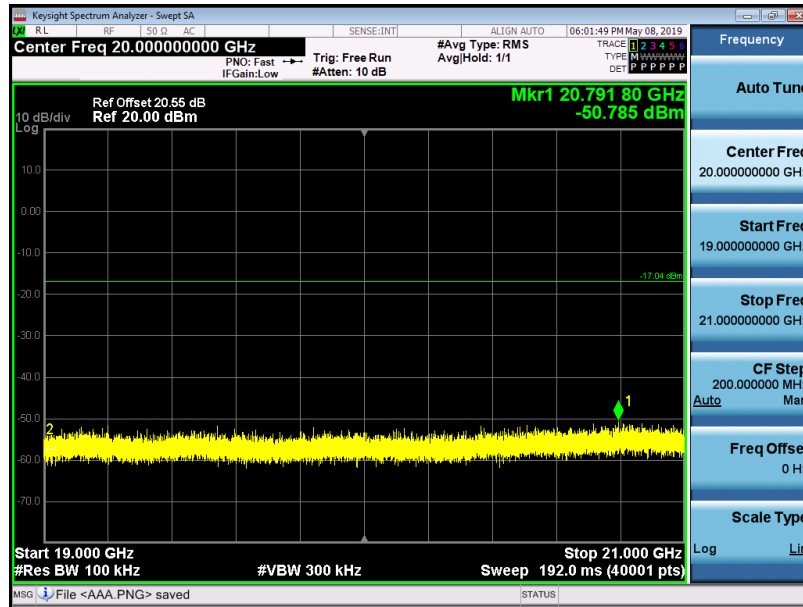
17 GHz ~ 19 GHz

Conducted Spurious Emission (Low-CH 19)



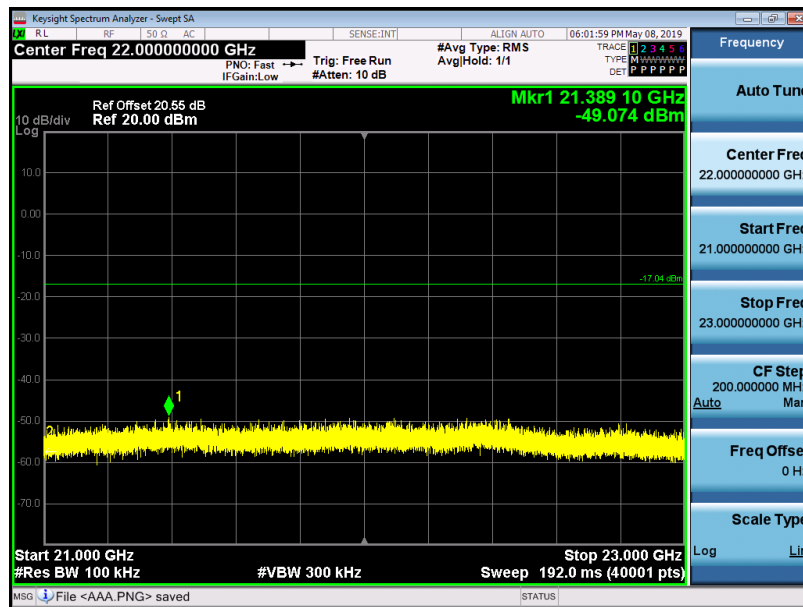
19 GHz ~ 21 GHz

Conducted Spurious Emission (Low-CH 19)



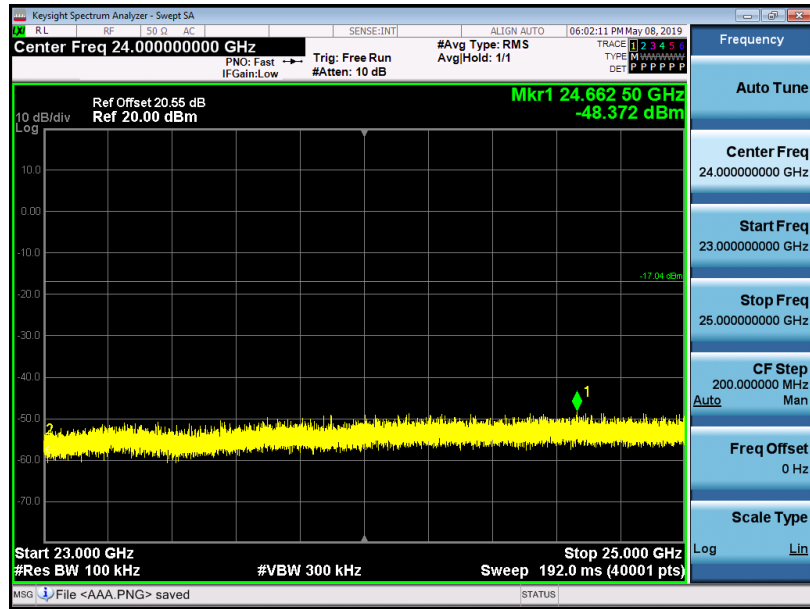
21 GHz ~ 23 GHz

Conducted Spurious Emission (Low-CH 19)



23 GHz ~ 25 GHz

Conducted Spurious Emission (Low-CH 19)



9.6 RADIATED SPURIOUS EMISSIONS

Frequency Range : 9 kHz – 30MHz

Frequency	Reading	Ant. factor	Cable loss	Ant. POL	Total	Limit	Margin
MHz	dBuV/m	dBm/m	dBm	(H/V)	dBuV/m	dBuV/m	dB
No Critical peaks found							

Note:

1. The reading of emissions are attenuated more than 20 dB below the permissible limits or the field strength is too small to be measured.
2. Distance extrapolation factor = $40 \cdot \log(\text{specific distance} / \text{test distance})$ (dB)
3. Limit line = specific Limits (dBuV) + Distance extrapolation factor
4. Radiated test is performed with hopping off.
5. The test results for below 30 MHz is correlated to an open site.
The result on OFS is about 2 dB higher than semi-anechoic chamber(10 m chamber)

Frequency Range : Below 1 GHz

Frequency	Reading	Ant. factor	Cable loss	Ant. POL	Total	Limit	Margin
MHz	dBuV/m	dBm/m	dBm	(H/V)	dBuV/m	dBuV/m	dB
No Critical peaks found							

Note:

1. Radiated emissions measured in frequency range from 30 MHz to 1000 MHz were made with an instrument using Quasi peak detector mode.

Frequency Range : Above 1 GHz

37 byte

Operation Mode: CH Low

Frequency [MHz]	Reading [dBuV]	Duty Cycle Factor [dB]	ANCLAMP [dB]	POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
4804	51.52	0.00	2.17	V	53.69	73.98	20.29	PK
4804	44.88	1.84	2.17	V	48.89	53.98	5.09	AV
7206	43.23	0.00	8.97	V	52.2	73.98	21.78	PK
7206	31.97	1.84	8.97	V	42.78	53.98	11.20	AV
4804	50.91	0.00	2.17	H	53.08	73.98	20.90	PK
4804	43.24	1.84	2.17	H	47.25	53.98	6.73	AV
7206	42.12	0.00	8.97	H	51.09	73.98	22.89	PK
7206	30.85	1.84	8.97	H	41.66	53.98	12.32	AV

Operation Mode: CH Mid

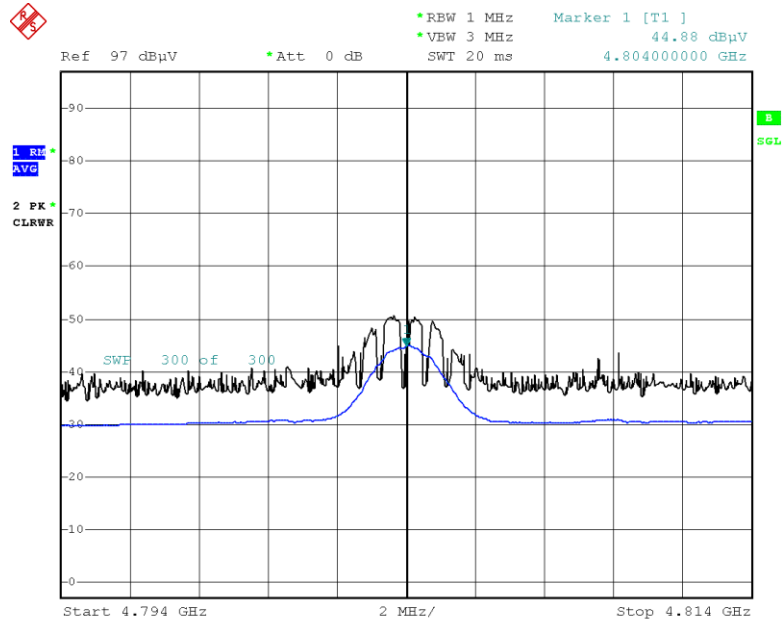
Frequency [MHz]	Reading [dBuV]	Duty Cycle Factor [dB]	ANCLAMP [dB]	POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
4880	49.67	0.00	2.66	V	52.33	73.98	21.65	PK
4880	43.44	1.84	2.66	V	47.94	53.98	6.04	AV
7320	43.30	0.00	9.04	V	52.34	73.98	21.64	PK
7320	32.07	1.84	9.04	V	42.95	53.98	11.03	AV
4880	48.21	0.00	2.66	H	50.87	73.98	23.11	PK
4880	42.08	1.84	2.66	H	46.58	53.98	7.40	AV
7320	42.18	0.00	9.04	H	51.22	73.98	22.76	PK
7320	31.33	1.84	9.04	H	42.21	53.98	11.77	AV

Operation Mode: CH High

Frequency [MHz]	Reading [dBuV]	Duty Cycle Factor [dB]	ANCLAMP [dB]	POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
4960	49.90	0.00	1.54	V	51.44	73.98	22.54	PK
4960	43.29	1.84	1.54	V	46.67	53.98	7.31	AV
7440	43.27	0.00	9.82	V	53.09	73.98	20.89	PK
7440	32.34	1.84	9.82	V	44	53.98	9.98	AV
4960	48.42	0.00	1.54	H	49.96	73.98	24.02	PK
4960	42.42	1.84	1.54	H	45.8	53.98	8.18	AV
7440	42.17	0.00	9.82	H	51.99	73.98	21.99	PK
7440	31.29	1.84	9.82	H	42.95	53.98	11.03	AV

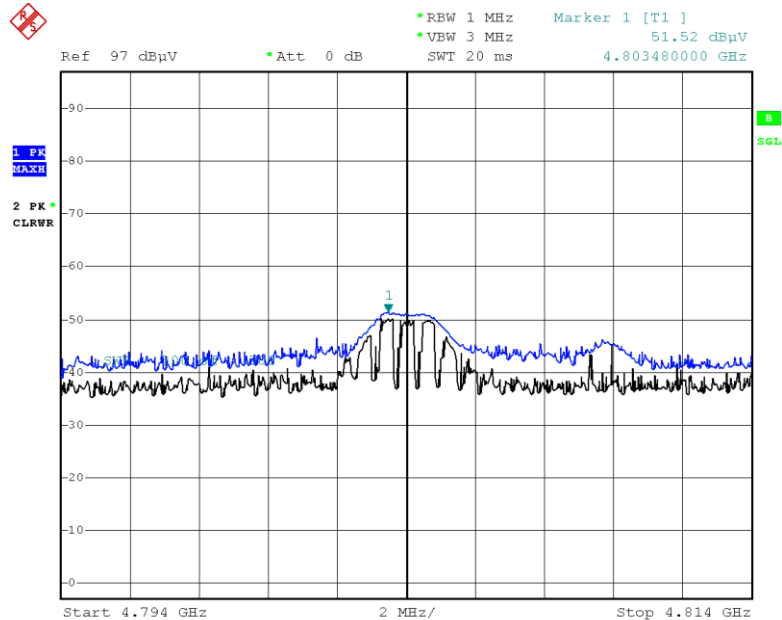
37 byteTest Plots (Worst-case: X-V)

Radiated Spurious Emissions plot – Average Reading (Ch.0 2nd Harmonic)



Date: 9.MAY.2019 08:43:50

Radiated Spurious Emissions plot – Peak Reading (Ch.0 2nd Harmonic)



Date: 9.MAY.2019 08:44:10

Note:

Plot of worst case are only reported.

9.7 RADIATED RESTRICTED BAND EDGES

37 byte

Operating Frequency 2402 MHz
 Channel No. 0

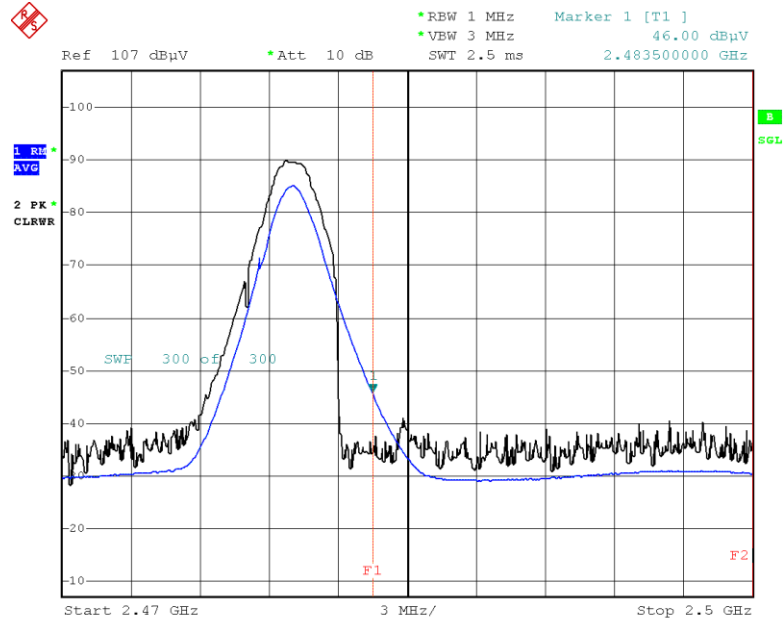
Frequency [MHz]	Reading [dBuV/m]	Duty Cycle Factor [dB]	A.F.+CL [dB]	Ant. Pol. [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
2390.0	42.49	0.00	0.22	H	42.71	73.98	31.27	PK
2390.0	31.25	1.84	0.22	H	33.31	53.98	20.67	AV
2390.0	41.23	0.00	0.22	V	41.45	73.98	32.53	PK
2390.0	30.71	1.84	0.22	V	32.77	53.98	21.21	AV

Operating Frequency 2480 MHz
 Channel No. 39

Frequency [MHz]	Reading [dBuV/m]	Duty Cycle Factor [dB]	A.F.+CL [dB]	Ant. Pol. [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
2483.5	52.35	0.00	0.65	H	53.00	73.98	20.98	PK
2483.5	46.00	1.84	0.65	H	48.49	53.98	5.49	AV
2483.5	50.74	0.00	0.65	V	51.39	73.98	22.59	PK
2483.5	45.04	1.84	0.65	V	47.53	53.98	6.45	AV

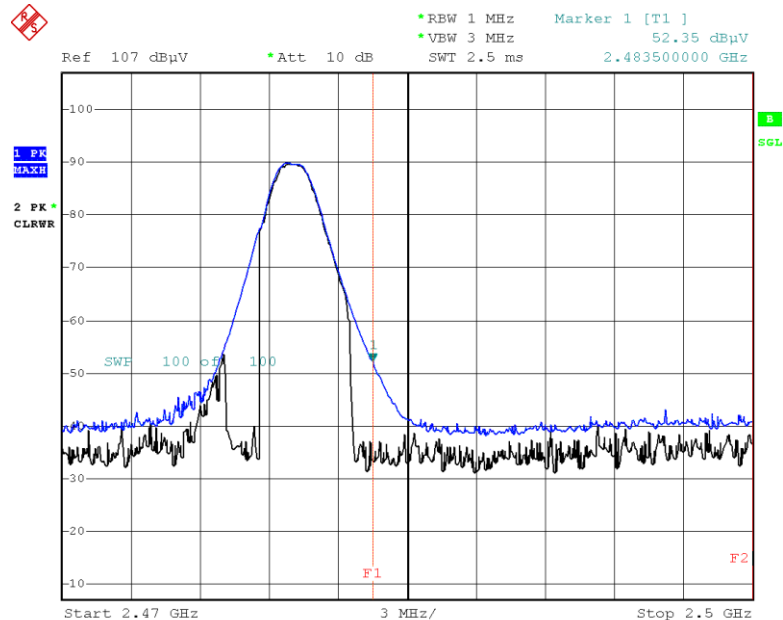
37 byte Test Plots (Worst-case : X-V)

Radiated Restricted Band Edges plot – Average Reading (Ch.39)



Date: 9.MAY.2019 07:53:15

Radiated Restricted Band Edges plot – Peak Reading (Ch.39)



Date: 9.MAY.2019 07:53:32

Note:

Plot of worst case are only reported.

9.8 RECEIVER SPURIOUS EMISSIONS

Frequency Range : Below 1 GHz

Frequency	Reading	Ant. factor	Cable loss	Ant. POL	Total	Limit	Margin
MHz	dBuV/m	dBm/m	dBm	(H/V)	dBuV/m	dBuV/m	dB
No Critical peaks found							

Note:

1. Radiated emissions measured in frequency range from 30 MHz to 1000 MHz were made with an instrument using Quasi peak detector mode.

Frequency Range : Above 1 GHz

Frequency	Reading	Ant. factor	Cable loss	Ant. POL	Total	Limit	Margin
MHz	dBuV/m	dBm/m	dBm	(H/V)	dBuV/m	dBuV/m	dB
No Critical peaks found							

9.9 POWERLINE CONDUCTED EMISSIONS

Note: We don't perform powerline conductde emission test. Because this EUT uses DC power.

10. LIST OF TEST EQUIPMENT

Conducted Test

Manufacturer	Model / Equipment	Calibration Date	Calibration Interval	Serial No.
Rohde & Schwarz	ENV216 / LISN	12/12/2018	Annual	102245
Rohde & Schwarz	ESCI / Test Receiver	06/27/2018	Annual	100033
ESPAC	SU-642 / Temperature Chamber	03/12/2019	Annual	0093008124
Agilent	N9020A / Signal Analyzer	06/08/2018	Annual	MY51110085
Agilent	N9020A / Signal Analyzer	06/08/2018	Annual	MY52090906
Agilent	N9030A / Signal Analyzer	01/10/2019	Annual	MY49431210
Rohde & Schwarz	OSP 120 / Power Measurement Set	07/26/2018	Annual	101231
Agilent	N1911A / Power Meter	04/10/2019	Annual	MY45100523
Agilent	N1921A / Power Sensor	04/10/2019	Annual	MY52260025
Agilent	87300B / Directional Coupler	11/20/2018	Annual	3116A03621
Hewlett Packard	11667B / Power Splitter	06/07/2018	Annual	05001
Hewlett Packard	E3632A / DC Power Supply	06/26/2018	Annual	KR75303960
Agilent	8493C / Attenuator(10 dB)	07/10/2018	Annual	07560
Rohde & Schwarz	EMC32 / Software	N/A	N/A	N/A
HCT CO., LTD.	FCC WLAN&BT&BLE Conducted Test Software v3.0	N/A	N/A	N/A

Note:

1. Equipment listed above that calibrated during the testing period was set for test after the calibration.
2. Equipment listed above that has a calibration due date during the testing period, the testing is completed before equipment expiration date.

Radiated Test

Manufacturer	Model / Equipment	Calibration Date	Calibration Interval	Serial No.
Innco system	CO3000 / Controller(Antenna mast)	N/A	N/A	CO3000-4p
Innco system	MA4640/800-XP-EP / Antenna Position Tower	N/A	N/A	N/A
Audix	EM1000 / Controller	N/A	N/A	060520
Audix	Turn Table	N/A	N/A	N/A
Rohde & Schwarz	Loop Antenna	08/23/2018	Biennial	1513-175
Schwarzbeck	VULB 9168 / Hybrid Antenna	03/22/2019	Biennial	760
Schwarzbeck	VULB 9168 / Hybrid Antenna	08/09/2018	Annual	3368
Schwarzbeck	BBHA 9120D / Horn Antenna	06/30/2017	Biennial	1300
Schwarzbeck	BBHA9170 / Horn Antenna(15 GHz ~ 40 GHz)	12/04/2017	Biennial	BBHA9170541
Rohde & Schwarz	FSP(9 kHz ~ 40 GHz) / Spectrum Analyzer	07/24/2018	Annual	100843
Wainwright Instruments	WHK3.0/18G-10EF / High Pass Filter	01/03/2019	Annual	F6
Wainwright Instruments	WHFX7.0/18G-8SS / High Pass Filter	05/03/2019	Annual	29
Wainwright Instruments	WRCJV2400/2483.5-2370/2520-60/12SS / Band Reject Filter	06/29/2018	Annual	2
Wainwright Instruments	WRCJV5100/5850-40/50-8EEK / Band Reject Filter	01/03/2019	Annual	2
Weinschel	2-3 / Attenuator (3 dB)	10/10/2018	Annual	BR0617
H+S	5910-N-50-010 / Attenuator(10 dB)	11/08/2018	Annual	NONE
CERNEX	CBLU1183540B-01 / Power Amplifier	12/21/2018	Annual	25540
CERNEX	CBL06185030 / Power Amplifier	03/26/2019	Annual	28550
CERNEX	CBL18265035 / Power Amplifier	01/03/2019	Annual	22966
CERNEX	CBL26405040 / Power Amplifier	06/29/2018	Annual	25956
TESCOM	TC-3000C / Bluetooth Tester	03/26/2019	Annual	3000C000276

Note:

1. Equipment listed above that calibrated during the testing period was set for test after the calibration.
2. Equipment listed above that has a calibration due date during the testing period, the testing is completed before equipment expiration date.

11. ANNEX A_ TEST SETUP PHOTO

Please refer to test setup photo file no. as follows;

No.	Description
1	HCT-RF-1905-FI001-P