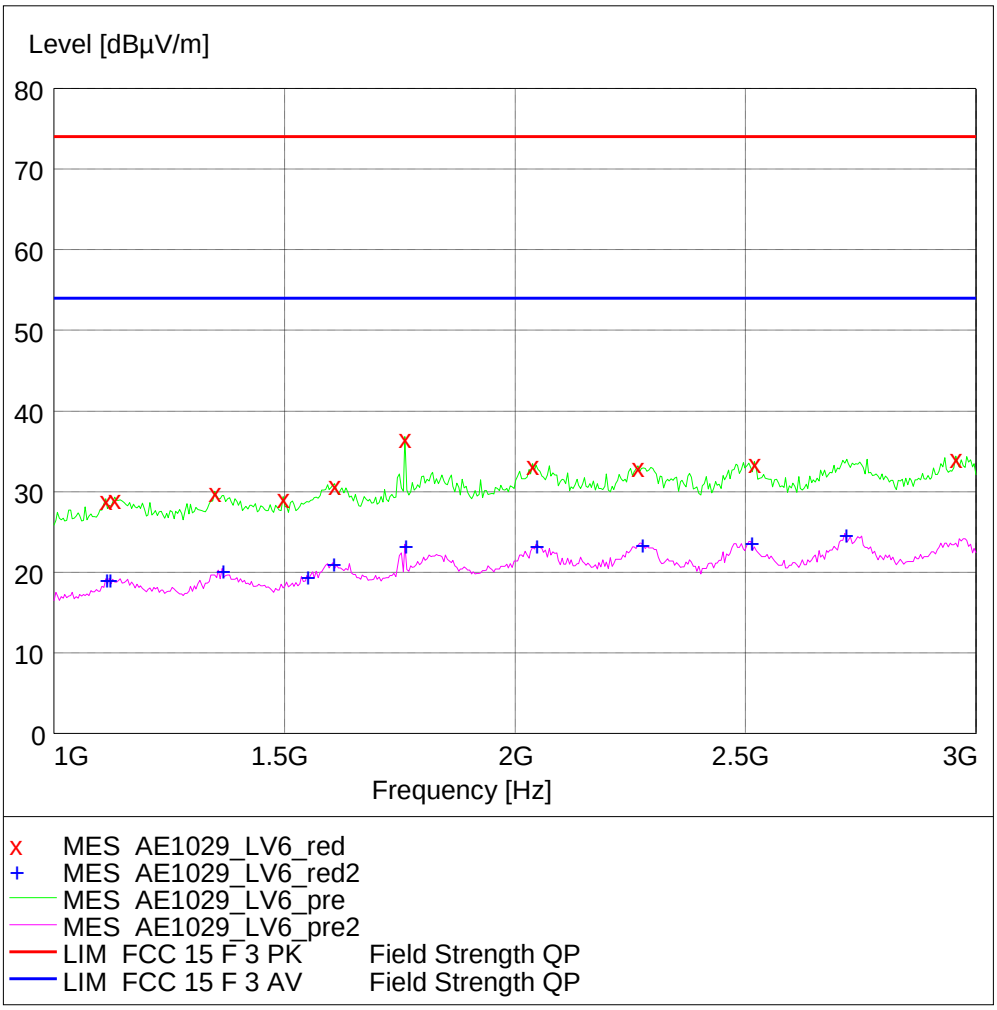
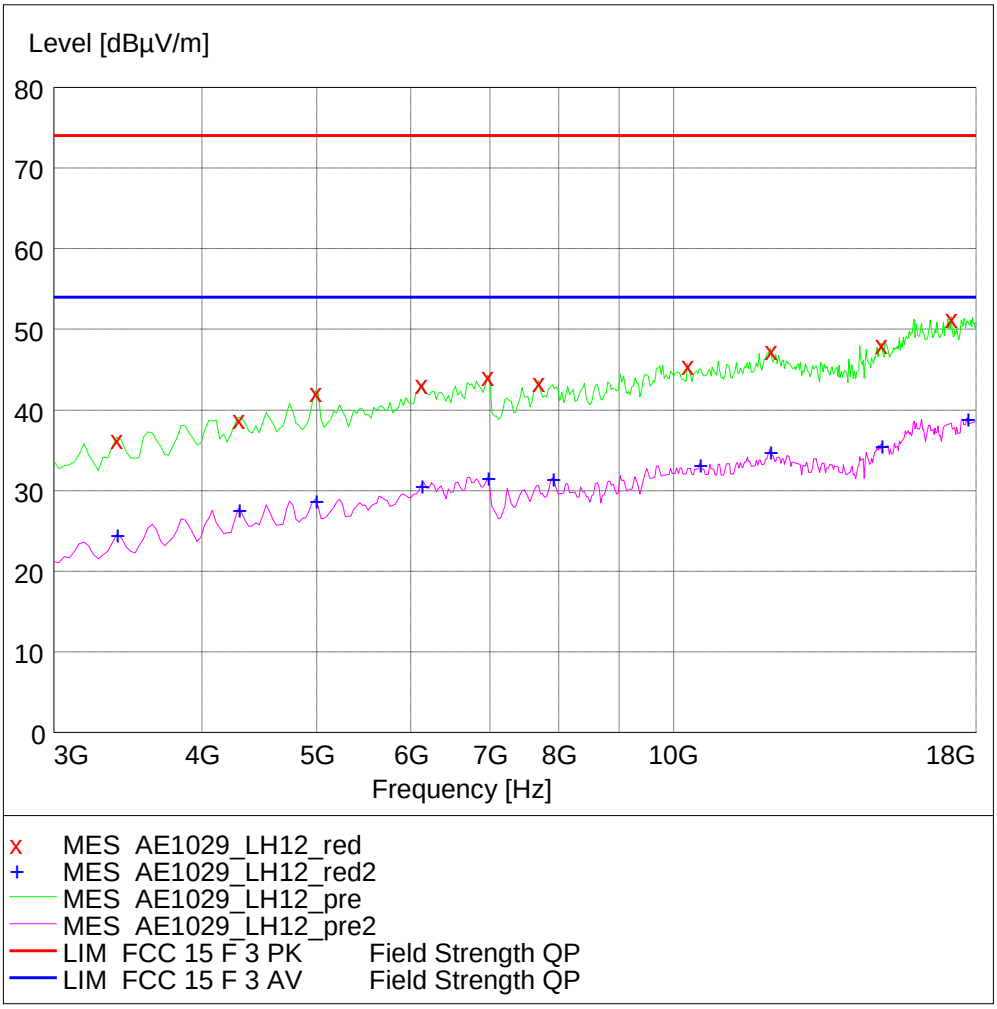
Vertical

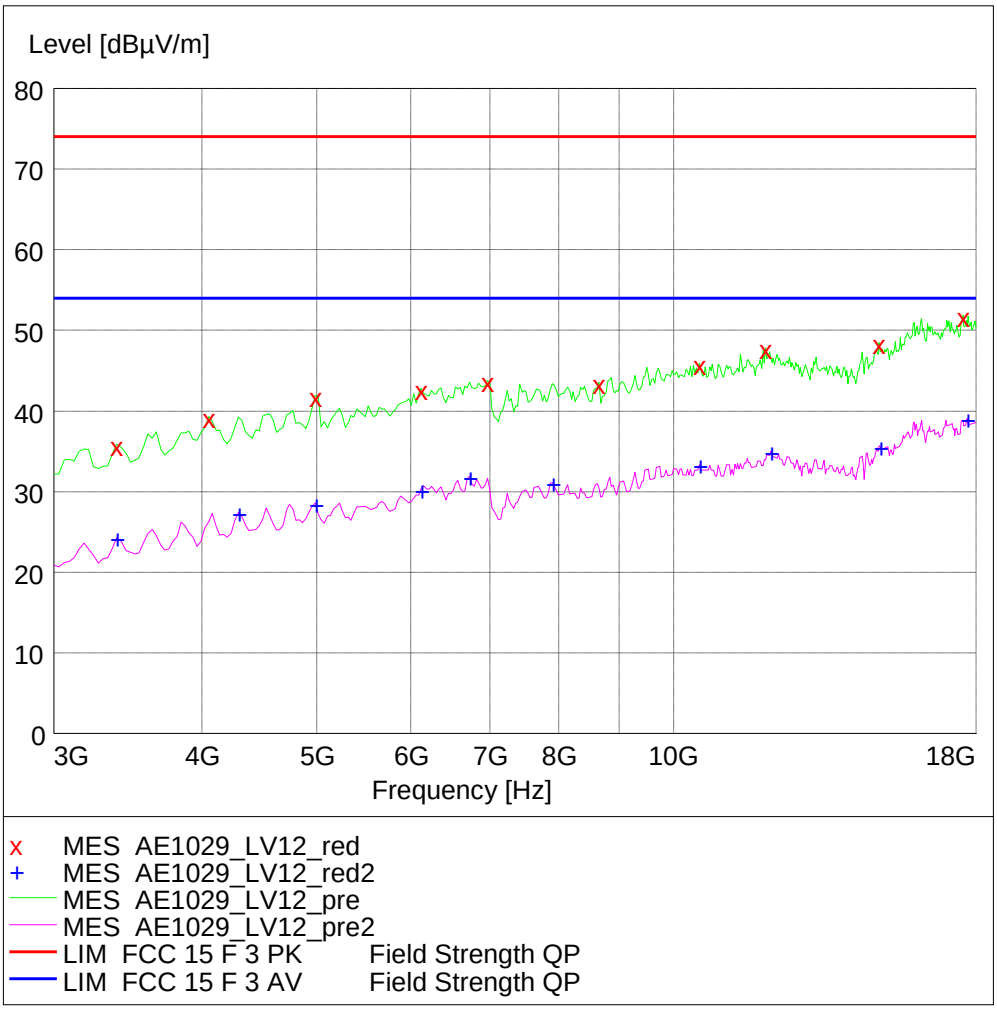

Level [dBµV/m]
80
70
60
50
40
30
20
10
0
1G
1.5G
2G
2.5G
3G
Frequency [Hz]
MES AE1029_LV6_red
MES AE1029_LV6_red2
MES AE1029_LV6_pre
MES AE1029_LV6_pre2
LIM FCC 15 F 3 PK Field Strength QP
LIM FCC 15 F 3 AV Field Strength QP

3-18GHz

Horizontal

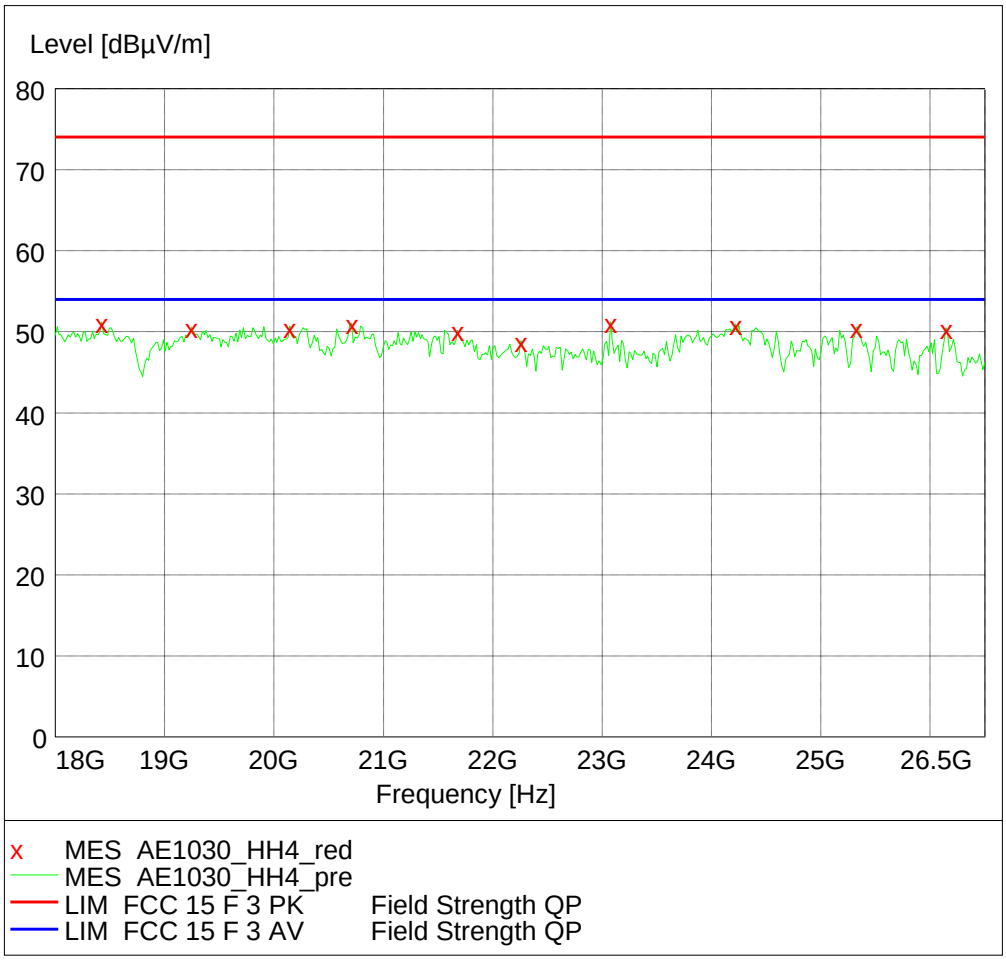


Vertical

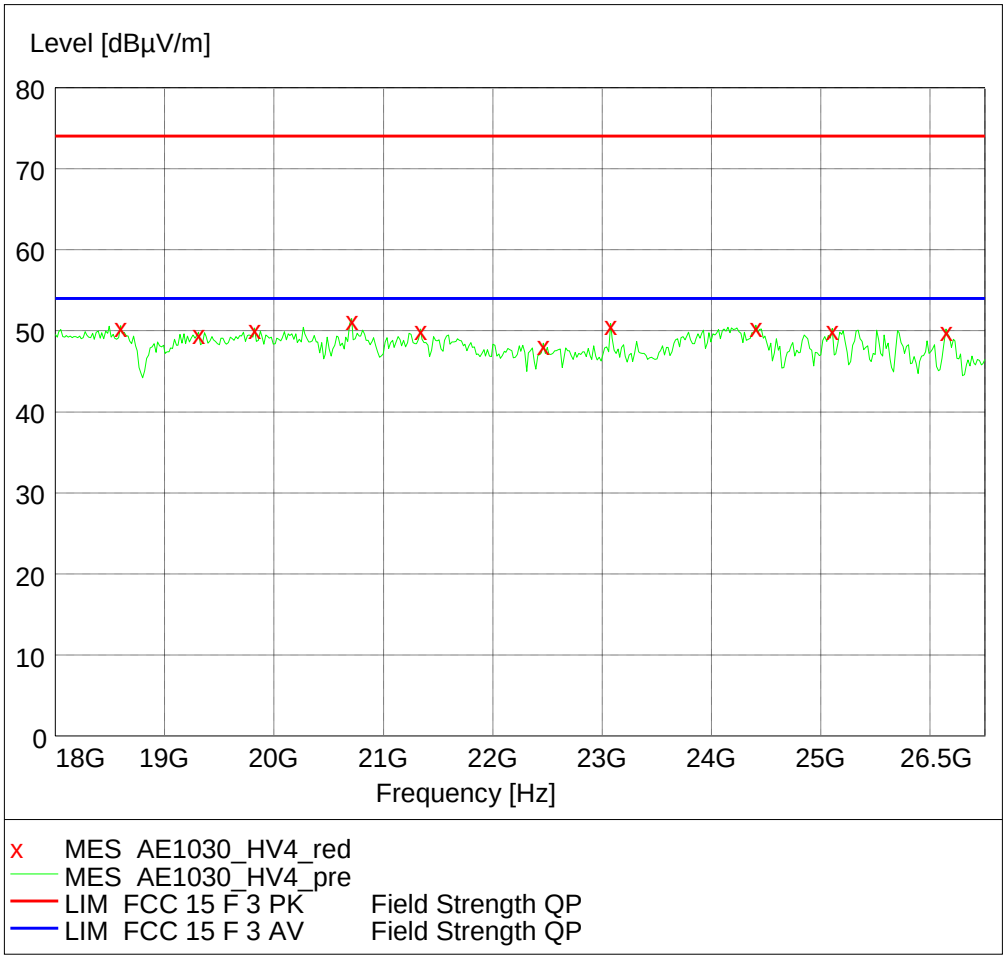

Level [dBµV/m]
80
70
60
50
40
30
20
10
0
3G
4G
5G
6G
7G
8G
10G
18G
Frequency [Hz]
x MES AE1029_LV12_red
+ MES AE1029_LV12_red2
MES AE1029_LV12_pre
MES AE1029_LV12_pre2
LIM FCC 15 F 3 PK Field Strength QP
LIM FCC 15 F 3 AV Field Strength QP

18-26.5GHz

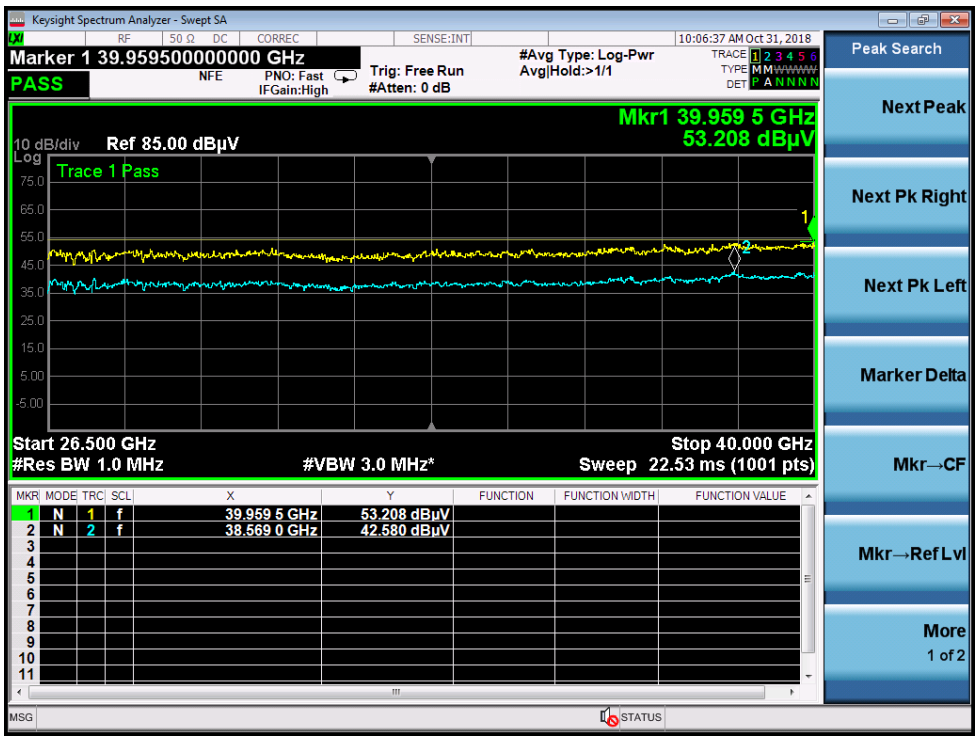
Horizontal



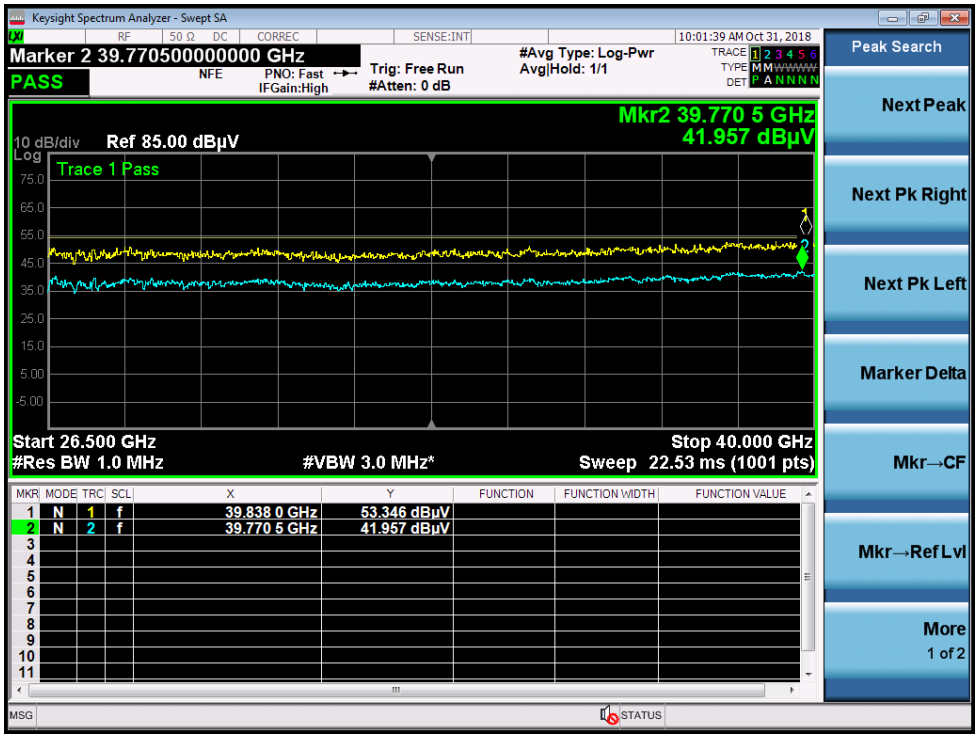
Vertical


Level [dBµV/m]
80
70
60
50
40
30
20
10
0
18G
19G
20G
21G
22G
23G
24G
25G
26.5G
Frequency [Hz]
MES AE1030_HV4_red
MES AE1030_HV4_pre
LIM FCC 15 F 3 PK Field Strength QP
LIM FCC 15 F 3 AV Field Strength QP

26.5-40GHz
Horizontal



Vertical



Channel Position M – QPSK

No emissions were detected within 20dB of the limit.

Channel Position T – QPSK

No emissions were detected within 20dB of the limit.

L-MIMO-MC 1 (2C)

Maximum Output Power 12dBm per port:

Channel Position	Channel Frequency
B_{RFBW}	5500MHz + 5520MHz

Channel Position B_{RFBW} – QPSK

No emissions were detected within 20dB of the limit.

L-MIMO-MC 2 (3C)

Maximum Output Power 12dBm per port:

Channel Position	Channel Frequency
B_{RFBW}	5500MHz + 5520MHz + 5540MHz

Channel Position B_{RFBW} – QPSK

No emissions were detected within 20dB of the limit.

Configuration B1

L-MIMO-SC

Maximum Output Power 12dBm per port:

Channel Position	Bandwidth (MHz)	Channel Frequency
B	20.0 MHz	5260MHz
M	20.0 MHz	5300MHz
T	20.0 MHz	5320MHz

Channel Position B – QPSK

No emissions were detected within 20dB of the limit.

Channel Position T – QPSK

No emissions were detected within 20dB of the limit.

Channel Position M – QPSK

Configuration B2

L-MIMO-SC

Maximum Output Power 12dBm per port:

Channel Position	Bandwidth (MHz)	Channel Frequency
B	20.0 MHz	5500MHz
M (for IC)	20.0 MHz	5580MHz
M (for FCC)	20.0 MHz	5600MHz
T	20.0 MHz	5700MHz

Channel Position B – QPSK

No emissions were detected within 20dB of the limit.

Channel Position M – QPSK

No emissions were detected within 20dB of the limit.

Channel Position T – QPSK

9 Conducted Emission

Test result: **Pass**

9.1 Limit

Frequency of Emission (MHz)	Conducted Limit (dBuV)	
	QP	AV
0.15-0.5	66 to 56*	56 to 46 *
0.5-5	56	46
5-30	60	50
* Decreases with the logarithm of the frequency.		

9.2 Test Method

Measured levels of ac power-line conducted emission shall be the emission voltages from the voltage probe, where permitted, or across the 50 Ω LISN port (to which the EUT is connected), where permitted, terminated into a 50 Ω measuring instrument. All emission voltage and current measurements shall be made on each current-carrying conductor at the plug end of the EUT power cord by the use of mating plugs and receptacles on the LISN, if used. Equipment shall be tested with power cords that are normally supplied or recommended by the manufacturer and that have electrical and shielding characteristics that are the same as those cords normally supplied or recommended by the manufacturer. For those measurements using a LISN, the 50 Ω measuring port is terminated by a measuring instrument having 50 Ω input impedance. All other ports are terminated in 50 Ω loads.

Tabletop devices shall be placed on a platform of nominal size 1 m by 1.5 m, raised 80 cm above the reference ground plane. The vertical conducting plane or wall of an RF-shielded (screened) room shall be located 40 cm to the rear of the EUT. Floor-standing devices shall be placed either directly on the reference ground-plane or on insulating material. All other surfaces of tabletop or floor-standing EUTs shall be at least 80 cm from any other grounded conducting surface, including the case or cases of one or more LISNs.

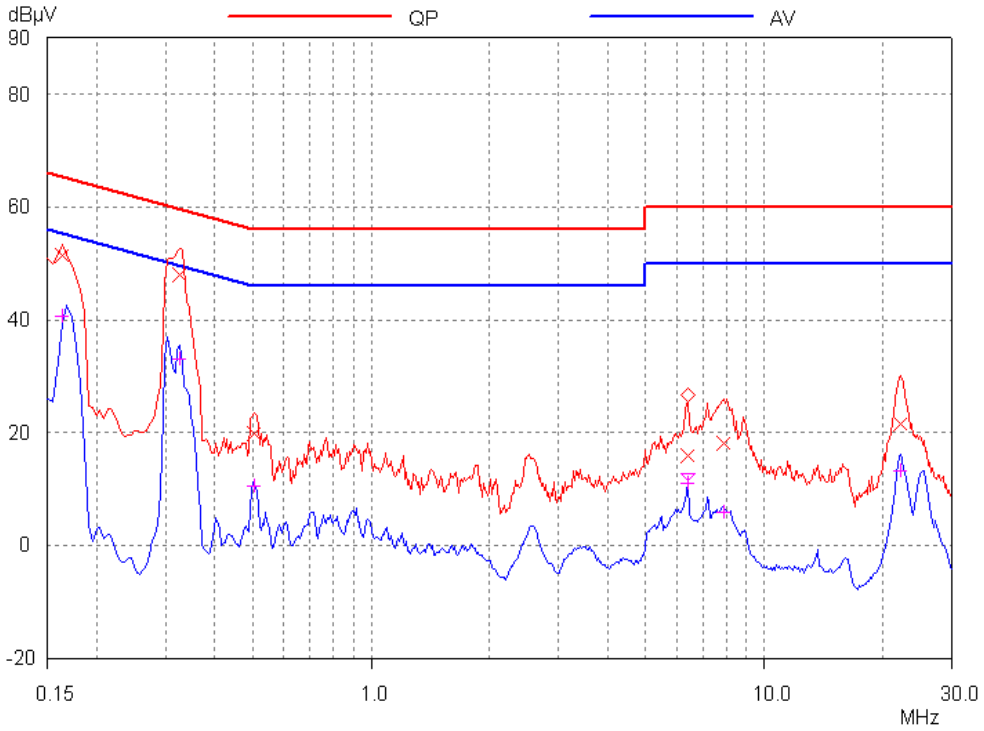
The bandwidth of the test receiver is set at 9 kHz.

9.3 Test Results

Note: The EUT was set to Transmitting Mode with AC power supply and the worse results and plots is shown as below

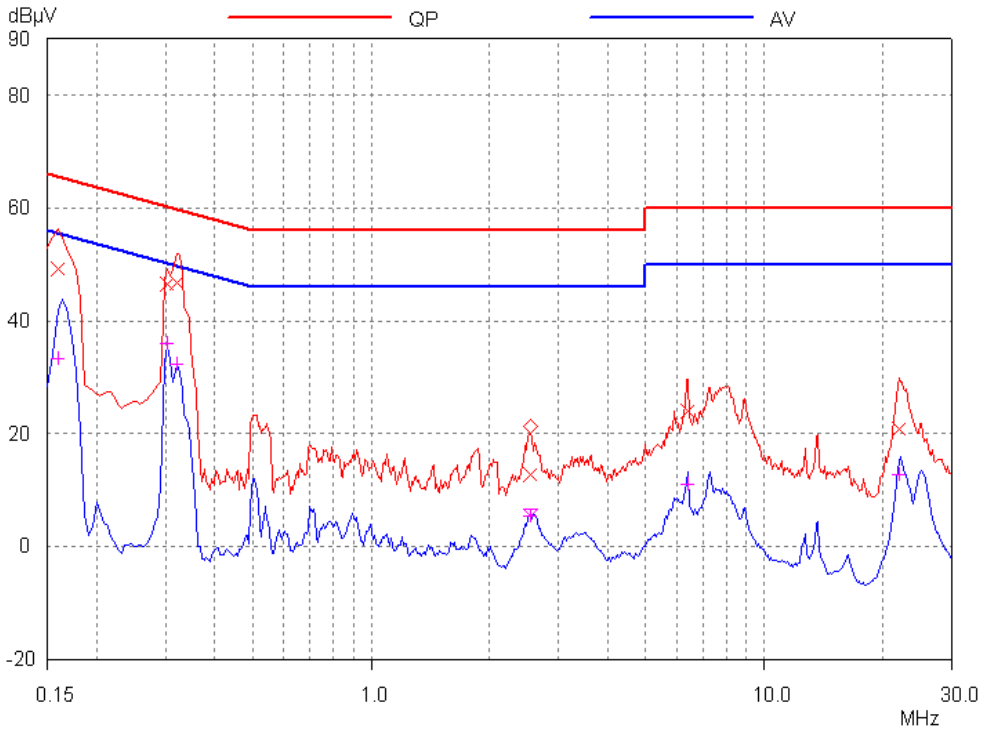
Test Curve:

L line:



Frequency (MHz)	Quasi-peak			Frequency (MHz)	Average		
	Level dB(µV)	Limit dB(µV)	Margin dB		Level dB(µV)	Limit dB(µV)	Margin dB
0.1635	51.33	65.28	13.95	0.1635	40.65	55.28	14.63
0.3255	48.03	59.57	11.54	0.3255	33.09	49.57	16.48
0.50549	19.73	56.00	36.27	0.50549	10.63	46.00	35.37
6.333	15.86	60.00	44.14	6.333	11.04	50.00	38.96
7.872	18.15	60.00	41.85	7.872	5.83	50.00	44.17
22.083	21.60	60.00	38.40	22.083	13.20	50.00	36.80

N line:



Frequency (MHz)	Quasi-peak			Frequency (MHz)	Average		
	Level dB(µV)	Limit dB(µV)	Margin dB		Level dB(µV)	Limit dB(µV)	Margin dB
0.159	49.14	65.52	16.38	0.159	33.28	55.52	22.24
0.303	46.55	60.16	13.61	0.303	35.90	50.16	14.26
0.321	46.84	59.68	12.84	0.321	32.40	49.68	17.28
2.535	12.75	56.00	43.25	2.535	5.34	46.00	40.66
6.333	23.88	60.00	36.12	6.333	11.06	50.00	38.94
21.9255	20.84	60.00	39.16	21.9255	12.76	50.00	37.24

10 Frequency Stability

Test result: **Pass**

10.1 Limit

The frequency stability shall be sufficient to ensure that an emission is maintained within the band of operation under all conditions of normal operation as specified in the user's manual.

10.2 Test Result:

Frequency Error - Temperature Variation

Configuration A1

L-MIMO-SC

Maximum Output Power 18dBm per port:

Supply Voltage DC (V)	Temperature (°C)	Frequency Stability (Hz)		
		Channel Position B (5260MHz)	Channel Position M (5300MHz)	Channel Position H (5320MHz)
-48.0	-30	-17.97	-13.94	-18.63
	-20	-12.27	-17.49	-14.90
	-10	-10.06	-10.74	-9.92
	0	-15.76	-15.57	-15.89
	10	-14.36	-10.89	-12.89
	20	-26.30	-26.85	-26.23
	30	-20.03	-24.72	-14.83
	40	-17.04	-19.77	-16.91
	50	-21.94	-21.99	-24.20

Configuration A2

L-MIMO-SC

Maximum Output Power 18dBm per port:

Supply Voltage DC (V)	Temperature (°C)	Frequency Stability (Hz)			
		Channel Position B (5500MHz)	Channel Position M for IC (5580MHz)	Channel Position M for FCC (5600MHz)	Channel Position H (5700MHz)
-48.0	-30	-14.67	-16.14	-14.97	-16.24
	-20	-14.24	-15.52	-13.89	-17.72
	-10	-12.04	-10.87	-9.39	-13.07
	0	-21.58	-14.88	-19.59	-15.14
	10	-14.01	-15.78	-13.76	-16.92
	20	-28.17	-25.37	-25.46	-27.20
	30	-14.23	-13.97	-16.82	-14.26
	40	-14.42	-14.04	-11.60	-14.31
	50	-17.97	-16.29	-17.48	-21.10

Frequency Error - Voltage Variation

Configuration A1

L-MIMO-SC

Maximum Output Power 18dBm per port:

Supply Voltage DC (V)	Temperature (°C)	Frequency Stability (Hz)		
		Channel Position B (5260MHz)	Channel Position M (5300MHz)	Channel Position H (5320MHz)
-48.0	20	-26.30	-26.85	-26.23
-40.8		-30.24	-30.48	-26.59
-55.2		-27.04	-28.83	-28.02

Configuration A2

L-MIMO-SC

Maximum Output Power 18dBm per port:

Supply Voltage DC (V)	Temperature (°C)	Frequency Stability (Hz)			
		Channel Position B (5500MHz)	Channel Position M for IC (5580MHz)	Channel Position M for FCC (5600MHz)	Channel Position H (5700MHz)
-48.0	20	-28.17	-25.37	-25.46	-27.20
-40.8		-25.86	-26.14	-26.71	-26.81
-55.2		-28.05	-24.32	-23.72	-24.83

Frequency Error - Temperature Variation

Configuration B1

L-MIMO-SC

Maximum Output Power 12dBm per port:

Supply Voltage DC (V)	Temperature (°C)	Frequency Stability (Hz)		
		Channel Position B (5260MHz)	Channel Position M (5300MHz)	Channel Position H (5320MHz)
-48.0	-30	-18.23	-15.83	-14.23
	-20	-14.66	-12.99	-16.74
	-10	-12.64	-10.23	-10.76
	0	-15.49	-13.74	-16.16
	10	-13.17	-12.29	-12.56
	20	-27.20	-27.53	-27.95
	30	-14.26	-14.32	-13.84
	40	-16.57	-16.22	-20.17
	50	-20.84	-21.44	-19.89

Configuration B2

L-MIMO-SC

Maximum Output Power 12dBm per port:

Supply Voltage DC (V)	Temperature (°C)	Frequency Stability (Hz)			
		Channel Position B (5500MHz)	Channel Position M for IC (5580MHz)	Channel Position M for FCC (5600MHz)	Channel Position H (5700MHz)
-48.0	-30	-19.76	-16.67	-15.74	-18.52
	-20	-15.39	-13.76	-15.15	-15.14
	-10	-12.38	-10.32	-10.59	-10.17
	0	-15.96	-14.44	-13.48	-13.79
	10	-14.14	-16.21	-18.07	-15.39
	20	-25.12	-27.69	-26.51	-27.33
	30	-14.84	-14.32	-14.09	-13.83
	40	-16.02	-15.89	-12.35	-15.26
	50	-15.91	-15.70	-18.34	-20.52

Frequency Error - Voltage Variation

Configuration B1

L-MIMO-SC

Maximum Output Power 12dBm per port:

Supply Voltage DC (V)	Temperature (°C)	Frequency Stability (Hz)		
		Channel Position B (5260MHz)	Channel Position M (5300MHz)	Channel Position H (5320MHz)
-40.8	20	-27.20	-27.53	-27.95
-48.0		-26.54	-31.50	-28.02
-55.2		-24.56	-30.90	-26.67

Configuration B2

L-MIMO-SC

Maximum Output Power 12dBm per port:

Supply Voltage DC (V)	Temperature (°C)	Frequency Stability (Hz)			
		Channel Position B (5500MHz)	Channel Position M for IC (5580MHz)	Channel Position M for FCC (5600MHz)	Channel Position H (5700MHz)
-40.8	20	-25.12	-27.69	-26.51	-27.33
-48.0		-27.62	-26.80	-28.01	-24.43
-55.2		-26.62	-28.69	-26.50	-26.48

********** END **********