

Operation Mode: CH.19

Frequency [MHz]	Reading [dBuV/m]	Duty Cycle Factor [dB]	A.F.+C.L.-A.G.+D.F. [dBm]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
4880	51.17	0	2.56	V	53.73	73.98	20.25	PK
4880	39.11	0.72	2.56	V	42.39	53.98	11.59	AV
7320	50.23	0	9.72	V	59.95	73.98	14.03	PK
7320	38.49	0.72	9.72	V	48.93	53.98	5.05	AV
4880	51.24	0	2.56	H	53.8	73.98	20.18	PK
4880	39.12	0.72	2.56	H	42.4	53.98	11.58	AV
7320	50.37	0	9.72	H	60.09	73.98	13.89	PK
7320	38.52	0.72	9.72	H	48.96	53.98	5.02	AV

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain + Distance Factor
+ Duty Cycle Factor
5. Distance extrapolation factor = $20 \log (\text{test distance} / \text{specific distance})$ (dB)
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.
7. 5.0 LE: 1M PHY

Operation Mode: CH.39

Frequency [MHz]	Reading [dBuV/m]	Duty Cycle Factor [dB]	A.F.+C.L.-A.G.+D.F. [dBm]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
4960	51.88	0	2.66	V	54.54	73.98	19.44	PK
4960	39.18	0.72	2.66	V	42.56	53.98	11.42	AV
7440	50.47	0	10.20	V	60.67	73.98	13.31	PK
7440	38.22	0.72	10.20	V	49.14	53.98	4.84	AV
4960	52.24	0	2.66	H	54.9	73.98	19.08	PK
4960	39.21	0.72	2.66	H	42.59	53.98	11.39	AV
7440	50.51	0	10.20	H	60.71	73.98	13.27	PK
7440	38.25	0.72	10.20	H	49.17	53.98	4.81	AV

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain + Distance Factor
+ Duty Cycle Factor
5. Distance extrapolation factor = $20 \log (\text{test distance} / \text{specific distance})$ (dB)
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.
7. 5.0 LE: 1M PHY

Operation Mode: CH.0

Frequency [MHz]	Reading [dBuV/m]	Duty Cycle Factor [dB]	A.F.+C.L.-A.G.+D.F. [dBm]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
4804	51.08	0	2.07	V	53.15	73.98	20.83	PK
4804	39.29	2.46	2.07	V	43.82	53.98	10.16	AV
7206	50.17	0	9.57	V	59.74	73.98	14.24	PK
7206	38.58	2.46	9.57	V	50.61	53.98	3.37	AV
4804	51.16	0	2.07	H	53.23	73.98	20.75	PK
4804	39.31	2.46	2.07	H	43.84	53.98	10.14	AV
7206	50.34	0	9.57	H	59.91	73.98	14.07	PK
7206	38.62	2.46	9.57	H	50.65	53.98	3.33	AV

*A.F. : Antenna Factor / C.L. : Cable Loss / A.G. : Amplifier Gain / D.F. : Distance Factor

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000 MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain + Distance Factor
+ Duty Cycle Factor
5. Distance extrapolation factor = $20 \log (\text{test distance} / \text{specific distance})$ (dB)
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.
7. 5.0 LE: 2M PHY

Operation Mode: CH.19

Frequency [MHz]	Reading [dBuV/m]	Duty Cycle Factor [dB]	A.F.+C.L.-A.G.+D.F. [dBm]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
4880	50.77	0	2.56	V	53.33	73.98	20.65	PK
4880	39.01	2.46	2.56	V	44.03	53.98	9.95	AV
7320	50.43	0	9.72	V	60.15	73.98	13.83	PK
7320	38.31	2.46	9.72	V	50.49	53.98	3.49	AV
4880	50.87	0	2.56	H	53.43	73.98	20.55	PK
4880	39.03	2.46	2.56	H	44.05	53.98	9.93	AV
7320	50.59	0	9.72	H	60.31	73.98	13.67	PK
7320	38.34	2.46	9.72	H	50.52	53.98	3.46	AV

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain + Distance Factor
+ Duty Cycle Factor
5. Distance extrapolation factor = $20 \log (\text{test distance} / \text{specific distance})$ (dB)
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.
7. 5.0 LE: 2M PHY

Operation Mode: CH.39

Frequency [MHz]	Reading [dBuV/m]	Duty Cycle Factor [dB]	A.F.+C.L.-A.G.+D.F. [dBm]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
4960	51.20	0	2.66	V	53.86	73.98	20.12	PK
4960	39.15	2.46	2.66	V	44.27	53.98	9.71	AV
7440	50.18	0	10.20	V	60.38	73.98	13.60	PK
7440	38.24	2.46	10.20	V	50.9	53.98	3.08	AV
4960	51.28	0	2.66	H	53.94	73.98	20.04	PK
4960	39.19	2.46	2.66	H	44.31	53.98	9.67	AV
7440	50.30	0	10.20	H	60.5	73.98	13.48	PK
7440	38.27	2.46	10.20	H	50.93	53.98	3.05	AV

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain + Distance Factor
+ Duty Cycle Factor
5. Distance extrapolation factor = $20 \log (\text{test distance} / \text{specific distance})$ (dB)
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.
7. 5.0 LE: 2M PHY

Operation Mode: CH.0

Frequency [MHz]	Reading [dBuV/m]	Duty Cycle Factor [dB]	A.F.+C.L.-A.G.+D.F. [dBm]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
4804	50.93	0	2.07	V	53.00	73.98	20.98	PK
4804	39.27	0.71	2.07	V	42.05	53.98	11.93	AV
7206	50.88	0	9.57	V	60.45	73.98	13.53	PK
7206	38.59	0.71	9.57	V	48.87	53.98	5.11	AV
4804	51.05	0	2.07	H	53.12	73.98	20.86	PK
4804	39.30	0.71	2.07	H	42.08	53.98	11.90	AV
7206	50.96	0	9.57	H	60.53	73.98	13.45	PK
7206	38.68	0.71	9.57	H	48.96	53.98	5.02	AV

*A.F. : Antenna Factor / C.L. : Cable Loss / A.G. : Amplifier Gain / D.F. : Distance Factor

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000 MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain + Distance Factor
+ Duty Cycle Factor
5. Distance extrapolation factor = $20 \log (\text{test distance} / \text{specific distance})$ (dB)
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.
7. 5.0 LE: Coded PHY_S8

Operation Mode: CH.19

Frequency [MHz]	Reading [dBuV/m]	Duty Cycle Factor [dB]	A.F.+C.L.-A.G.+D.F. [dBm]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
4880	50.82	0	2.56	V	53.38	73.98	20.60	PK
4880	39.15	0.71	2.56	V	42.42	53.98	11.56	AV
7320	50.29	0	9.72	V	60.01	73.98	13.97	PK
7320	38.47	0.71	9.72	V	48.9	53.98	5.08	AV
4880	50.89	0	2.56	H	53.45	73.98	20.53	PK
4880	39.18	0.71	2.56	H	42.45	53.98	11.53	AV
7320	50.48	0	9.72	H	60.2	73.98	13.78	PK
7320	38.52	0.71	9.72	H	48.95	53.98	5.03	AV

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain + Distance Factor
+ Duty Cycle Factor
5. Distance extrapolation factor = $20 \log (\text{test distance} / \text{specific distance})$ (dB)
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.
7. 5.0 LE: Coded PHY_S8

Operation Mode: CH.39

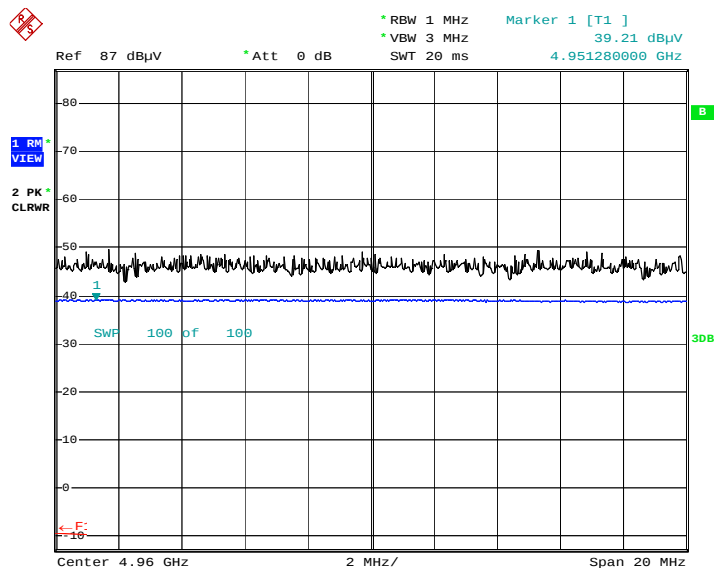
Frequency [MHz]	Reading [dBuV/m]	Duty Cycle Factor [dB]	A.F.+C.L.-A.G.+D.F. [dBm]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
4960	51.55	0	2.66	V	54.21	73.98	19.77	PK
4960	39.29	0.71	2.66	V	42.66	53.98	11.32	AV
7440	50.36	0	10.20	V	60.56	73.98	13.42	PK
7440	38.24	0.71	10.20	V	49.15	53.98	4.83	AV
4960	51.76	0	2.66	H	54.42	73.98	19.56	PK
4960	39.31	0.71	2.66	H	42.68	53.98	11.30	AV
7440	50.38	0	10.20	H	60.58	73.98	13.40	PK
7440	38.26	0.71	10.20	H	49.17	53.98	4.81	AV

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain + Distance Factor
+ Duty Cycle Factor
5. Distance extrapolation factor = $20 \log (\text{test distance} / \text{specific distance})$ (dB)
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.
7. 5.0 LE: Coded PHY_S8

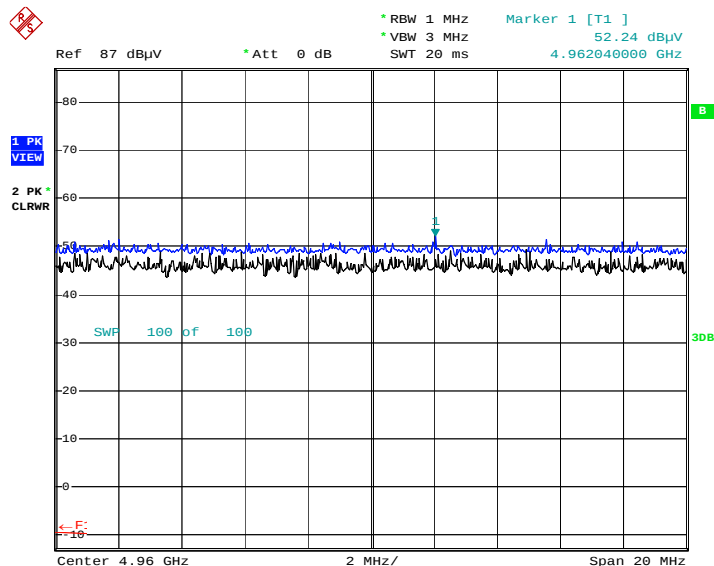
■ 5.0 LE: 1M PHY RESULT PLOTS (Worst case : Z-H)

Radiated Spurious Emissions plot – Average Reading (Ch.78 2nd Harmonic)



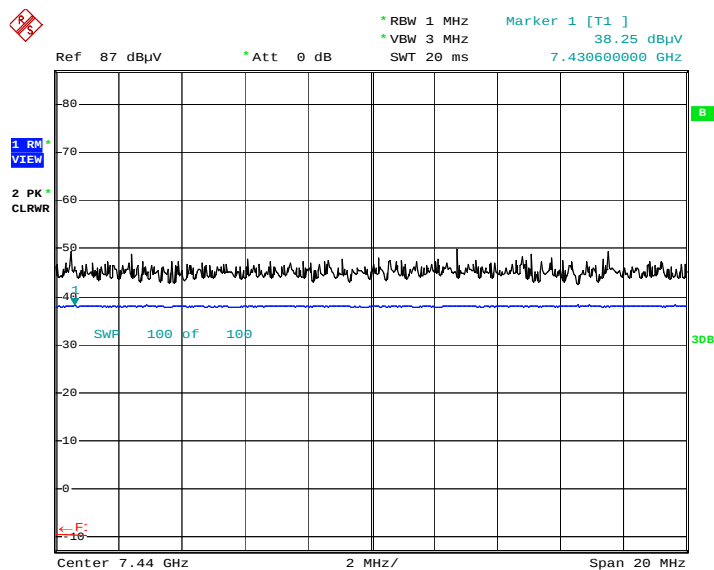
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Radiated Spurious Emissions plot – Peak Reading (Ch.78 2nd Harmonic)



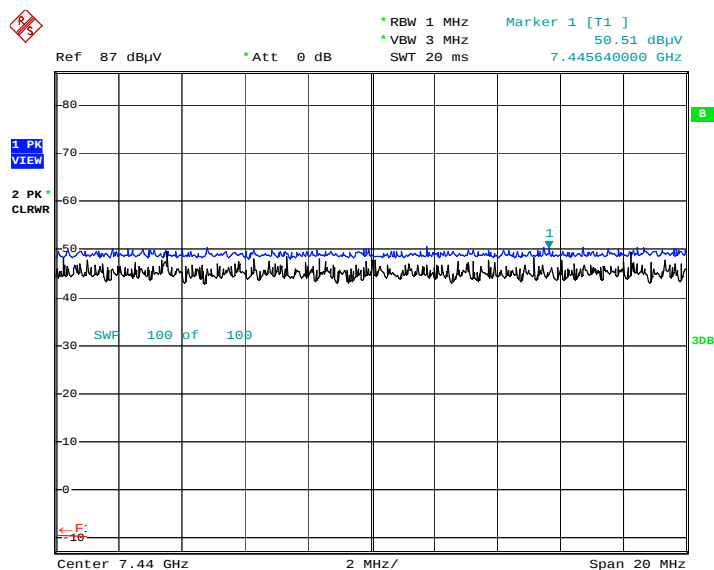
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Radiated Spurious Emissions plot – Average Reading (Ch.78 3rd Harmonic)



Date: 23.MAY.2003 08:37:13

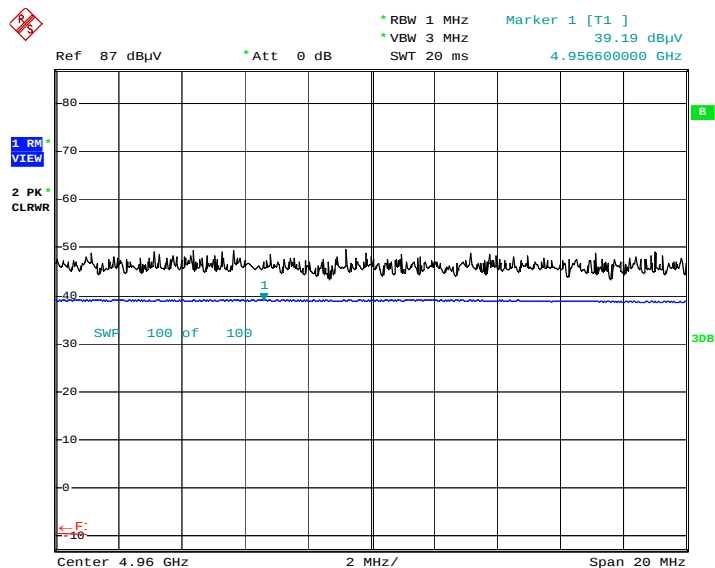
Radiated Spurious Emissions plot – Peak Reading (Ch.78 3rd Harmonic)



Date: 23.MAY.2003 08:36:29

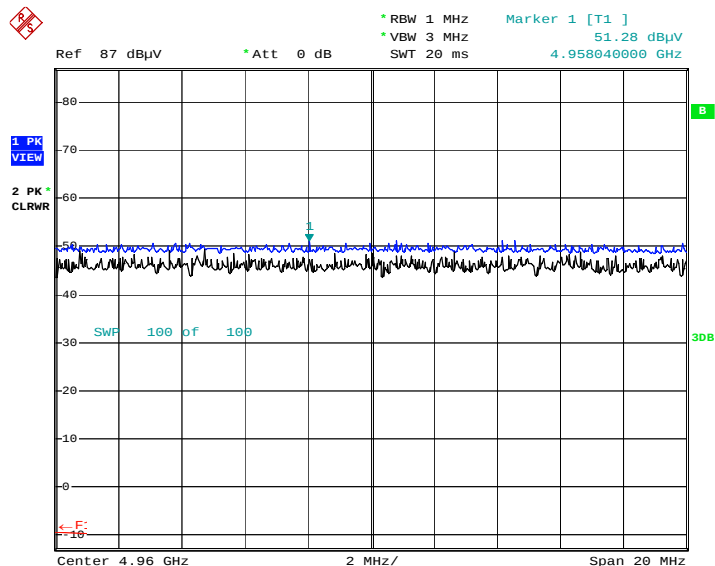
■ 5.0 LE: 2M PHY RESULT PLOTS (Worst case : Z-H)

Radiated Spurious Emissions plot – Average Reading (Ch.78 2nd Harmonic)



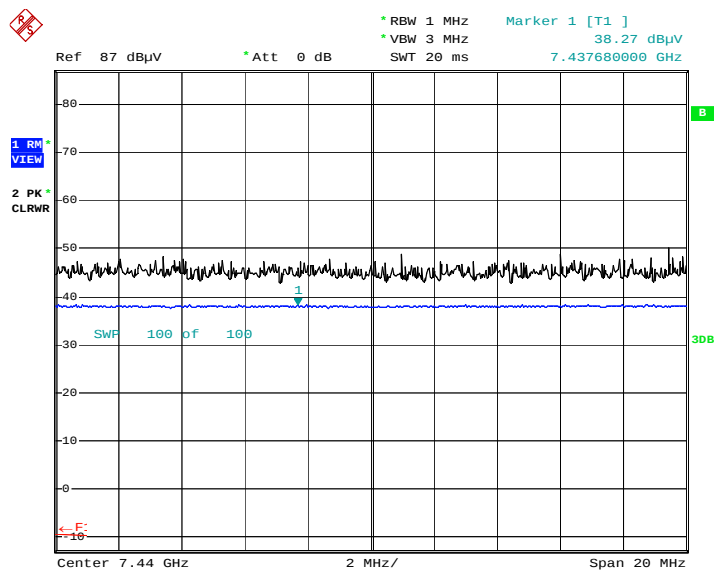
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Radiated Spurious Emissions plot – Peak Reading (Ch.78 2nd Harmonic)



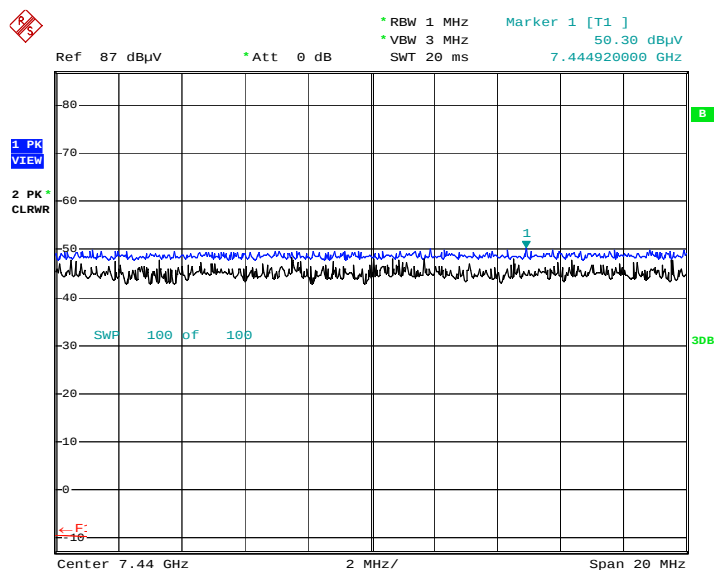
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Radiated Spurious Emissions plot – Average Reading (Ch.78 3rd Harmonic)



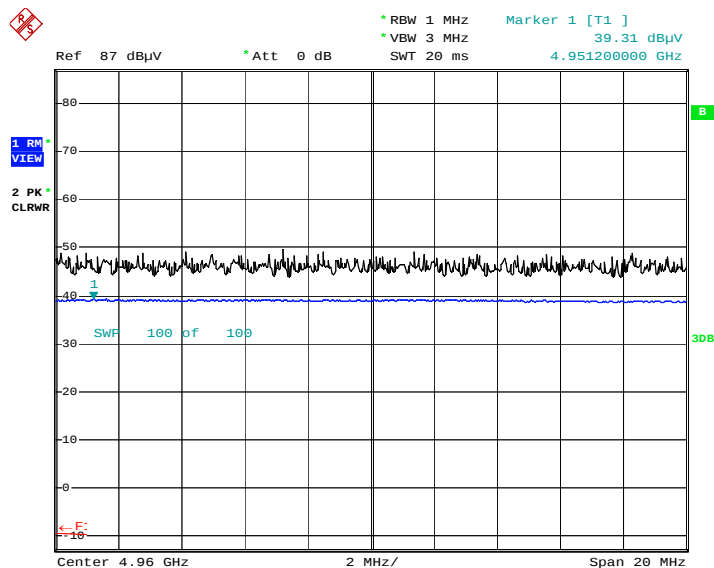
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Radiated Spurious Emissions plot – Peak Reading (Ch.78 3rd Harmonic)



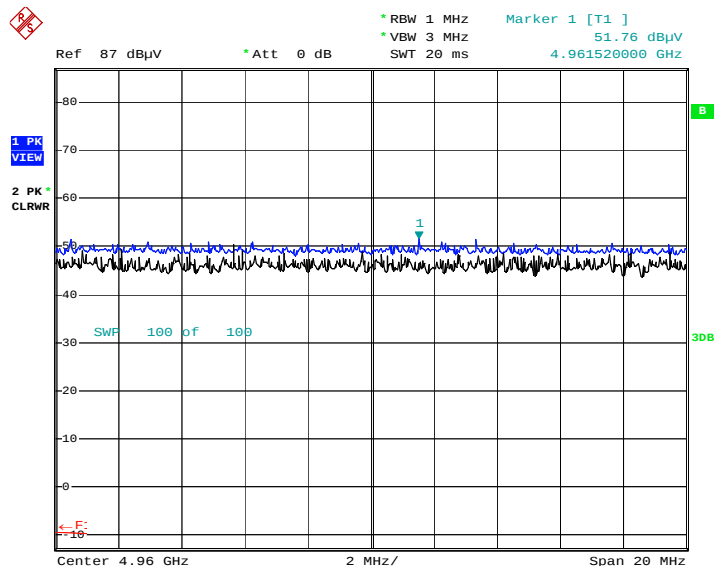
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■ 5.0 LE: Coded PHY_S8 RESULT PLOTS (Worst case : Z-H)
Radiated Spurious Emissions plot – Average Reading (Ch.78 2nd Harmonic)



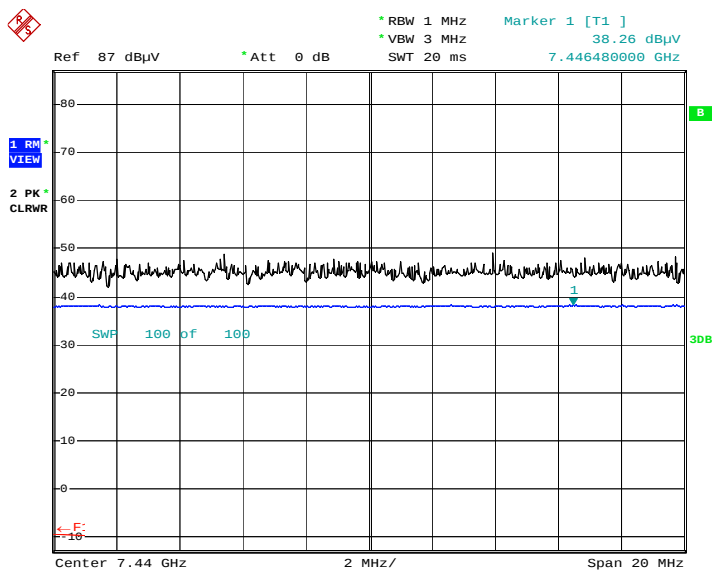
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Radiated Spurious Emissions plot – Peak Reading (Ch.78 2nd Harmonic)



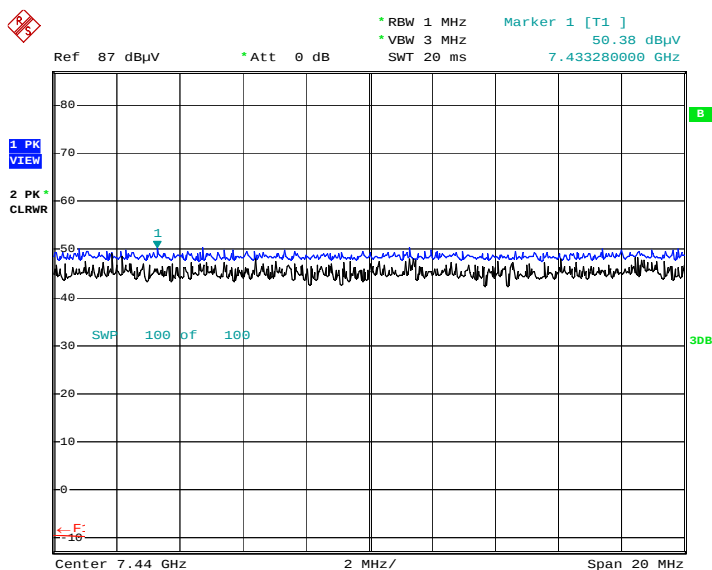
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Radiated Spurious Emissions plot – Average Reading (Ch.78 3rd Harmonic)



Date: 23.MAY.2003 08:38:01

Radiated Spurious Emissions plot – Peak Reading (Ch.78 3rd Harmonic)



Date: 23.MAY.2003 08:38:54

Note : Only the worst case plots for Radiated Spurious Emissions.

9.7.2 RADIATED RESTRICTED BAND EDGES

Test Requirements and limit, §15.247(d) §15.205, §15.209, RSS-Gen(Issue 5) 8.10

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement. Attenuation below the general limits specified in Section 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in section 15.209(a) (See section 15.205(c)).

Operation Mode	BT_LE
Operating Frequency	2402 MHz
Channel No.	0

Frequency [MHz]	Reading [dBuV/m]	Duty Cycle Factor [dB]	A.F.+C.L.+D.F. [dB]	Ant. Pol. [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
2390.0	18.86	0.00	35.36	H	54.22	73.98	19.76	PK
2390.0	7.10	0.72	35.36	H	43.18	53.98	10.80	AV
2390.0	18.68	0.00	35.36	V	54.04	73.98	19.94	PK
2390.0	7.10	0.72	35.36	V	43.18	53.98	10.80	AV

Notes:

1. Frequency range of measurement = 2310 MHz ~ 2390 MHz
2. Total = Reading Value + Antenna Factor + Cable Loss + Duty Cycle Factor + Distance Factor
3. Distance extrapolation factor = $20 \log (\text{test distance} / \text{specific distance})$ (dB)
4. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.
5. 5.0 LE: 1M PHY

Operation Mode	BT_LE
Operating Frequency	2480 MHz
Channel No.	39

Frequency [MHz]	Reading [dBuV/m]	Duty Cycle Factor [dB]	A.F.+C.L.+D.F. [dB]	Ant. Pol. [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
2483.5	19.65	0.00	35.73	H	55.38	73.98	18.60	PK
2483.5	7.99	0.72	35.73	H	44.44	53.98	9.54	AV
2483.5	19.24	0.00	35.73	V	54.97	73.98	19.01	PK
2483.5	7.96	0.72	35.73	V	44.41	53.98	9.57	AV

Notes:

1. Frequency range of measurement = 2483.5 MHz ~ 2500 MHz
2. Total = Reading Value + Antenna Factor + Cable Loss + Duty Cycle Factor + Distance Factor
3. Distance extrapolation factor = $20 \log (\text{test distance} / \text{specific distance})$ (dB)
4. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.
5. 5.0 LE: 1M PHY

Operation Mode	BT_LE
Operating Frequency	2402 MHz
Channel No.	0

Frequency [MHz]	Reading [dBuV/m]	Duty Cycle Factor [dB]	A.F.+C.L.+D.F. [dB]	Ant. Pol. [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
2390.0	18.89	0.00	35.36	H	54.25	73.98	19.73	PK
2390.0	7.22	2.46	35.36	H	45.04	53.98	8.94	AV
2390.0	18.78	0.00	35.36	V	54.14	73.98	19.84	PK
2390.0	7.21	2.46	35.36	V	45.03	53.98	8.95	AV

Notes:

1. Frequency range of measurement = 2310 MHz ~ 2390 MHz
2. Total = Reading Value + Antenna Factor + Cable Loss + Duty Cycle Factor + Distance Factor
3. Distance extrapolation factor = $20 \log (\text{test distance} / \text{specific distance})$ (dB)
4. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.
5. 5.0 LE: 2M PHY

Operation Mode	BT_LE
Operating Frequency	2480 MHz
Channel No.	39

Frequency [MHz]	Reading [dBuV/m]	Duty Cycle Factor [dB]	A.F.+C.L.+D.F. [dB]	Ant. Pol. [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
2483.5	20.44	0.00	35.73	H	56.17	73.98	17.81	PK
2483.5	9.75	2.46	35.73	H	47.94	53.98	6.04	AV
2483.5	19.99	0.00	35.73	V	55.72	73.98	18.26	PK
2483.5	9.24	2.46	35.73	V	47.43	53.98	6.55	AV

Notes:

1. Frequency range of measurement = 2483.5 MHz ~ 2500 MHz
2. Total = Reading Value + Antenna Factor + Cable Loss + Duty Cycle Factor + Distance Factor
3. Distance extrapolation factor = $20 \log (\text{test distance} / \text{specific distance})$ (dB)
4. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.
5. 5.0 LE: 2M PHY

Operation Mode	BT_LE
Operating Frequency	2402 MHz
Channel No.	0

Frequency [MHz]	Reading [dBuV/m]	Duty Cycle Factor [dB]	A.F.+C.L.+D.F. [dB]	Ant. Pol. [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
2390.0	18.99	0.00	35.36	H	54.35	73.98	19.63	PK
2390.0	7.74	0.71	35.36	H	43.81	53.98	10.17	AV
2390.0	18.80	0.00	35.36	V	54.16	73.98	19.82	PK
2390.0	7.73	0.71	35.36	V	43.80	53.98	10.18	AV

Notes:

1. Frequency range of measurement = 2310 MHz ~ 2390 MHz
2. Total = Reading Value + Antenna Factor + Cable Loss + Duty Cycle Factor + Distance Factor
3. Distance extrapolation factor = $20 \log (\text{test distance} / \text{specific distance})$ (dB)
4. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.
5. 5.0 LE: Coded PHY_S8

Operation Mode	BT_LE
Operating Frequency	2480 MHz
Channel No.	39

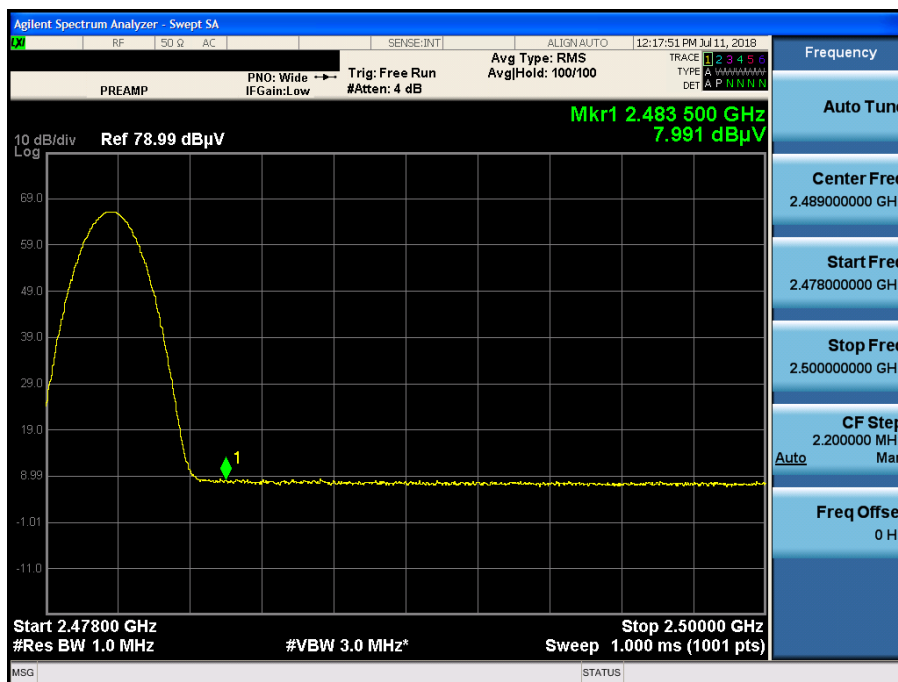
Frequency [MHz]	Reading [dBuV/m]	Duty Cycle Factor [dB]	A.F.+C.L.+D.F. [dB]	Ant. Pol. [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
2483.5	19.15	0.00	35.73	H	54.88	73.98	19.10	PK
2483.5	7.61	0.71	35.73	H	44.05	53.98	9.93	AV
2483.5	19.12	0.00	35.73	V	54.85	73.98	19.13	PK
2483.5	7.60	0.71	35.73	V	44.04	53.98	9.94	AV

Notes:

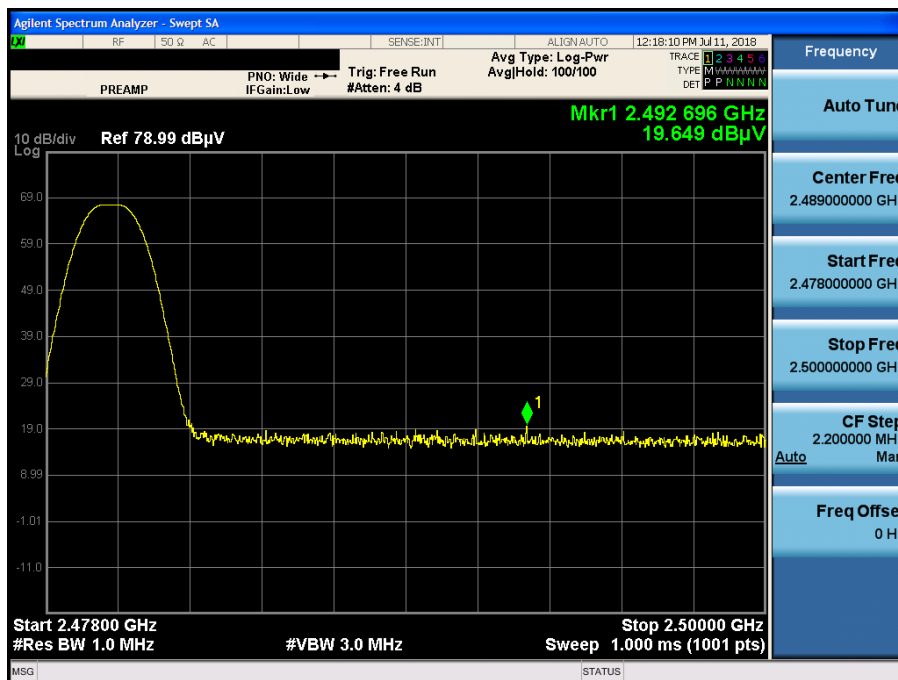
1. Frequency range of measurement = 2483.5 MHz ~ 2500 MHz
2. Total = Reading Value + Antenna Factor + Cable Loss + Duty Cycle Factor + Distance Factor
3. Distance extrapolation factor = $20 \log (\text{test distance} / \text{specific distance})$ (dB)
4. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.
5. 5.0 LE: Coded PHY_S8

■ 5.0 LE: 1M PHY RESULT PLOTS (Worst case : X-H)

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

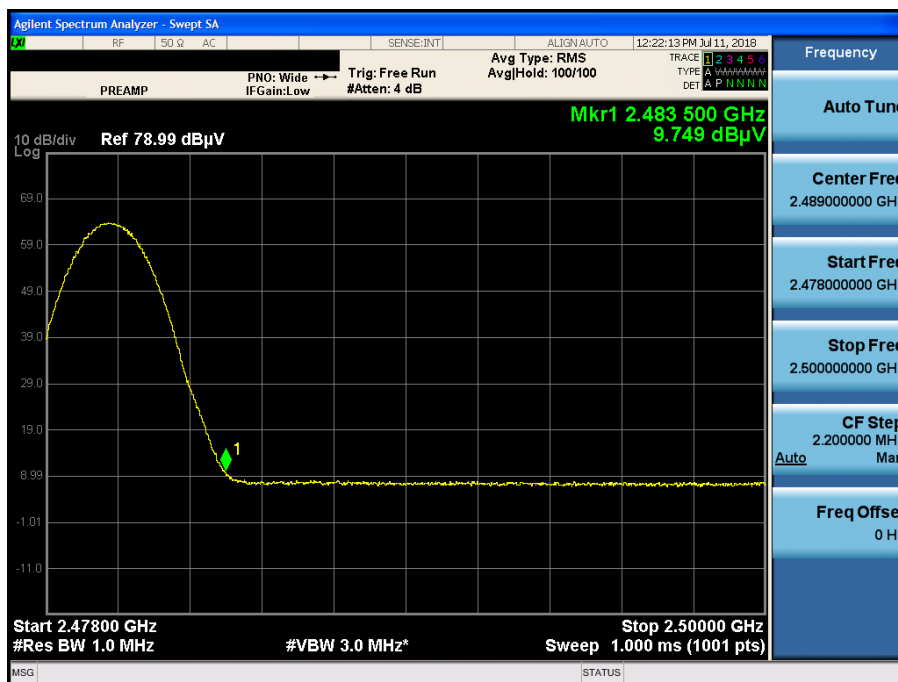


Radiated Restricted Band Edges plot – Peak Reading (Ch.39)

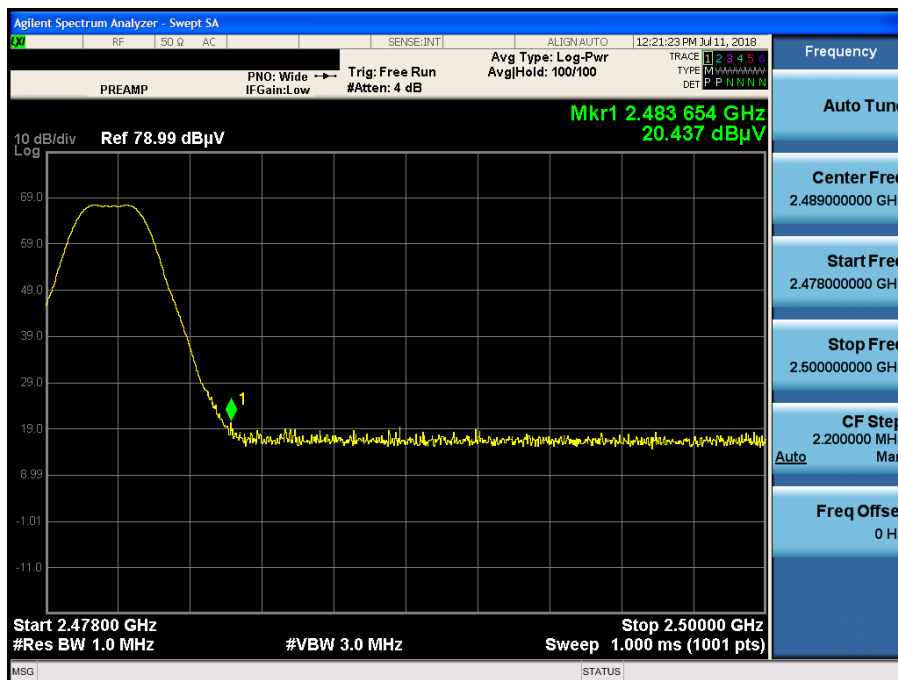


5.0 LE: 2M PHY RESULT PLOTS (Worst case : X-H)

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

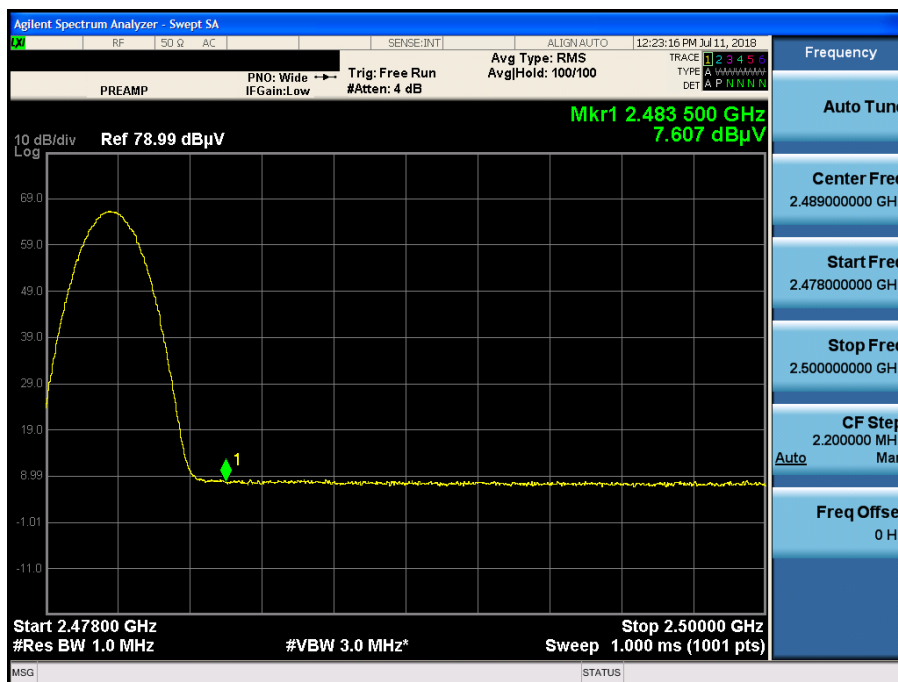


Radiated Restricted Band Edges plot – Peak Reading (Ch.39)

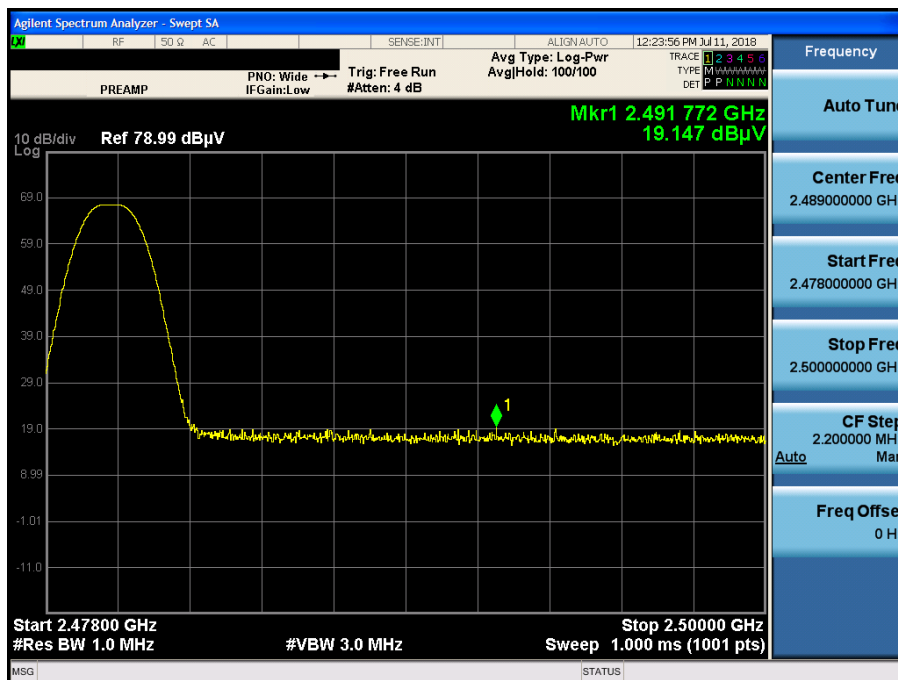


■ 5.0 LE: Coded PHY_S8 RESULT PLOTS (Worst case : X-H)

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



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



Note : Only the worst case plots for Radiated Restricted Band Edges.

9.7.3 RECEIVER SPURIOUS EMISSIONS

ISED Rule(s) RSS-Gen
Test Requirements: Blow the table
Operating conditions: Under normal test conditions
Method of testing: Radiated

S/A. Settings: F < 1 GHz: RBW: 120 kHz, VBW: 300 kHz (Quasi Peak)
F > 1 GHz: RBW: 1 MHz, VBW: 1 MHz (Peak)
Mode of operation: Receive

Frequency (MHz)	Field Strength (microvolts/m at 3 meters)
30 – 88	100
88 - 216	150
216 – 960	200
Above 960	500

Operation Mode: Receive:

30 MHz ~ 1 GHz

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

Above 1 GHz

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

9.8 POWERLINE CONDUCTED EMISSIONS

Test Requirements and limit, §15.207, RSS-Gen(Issue 5) Section 8.8

For an intentional radiator which is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed 250 microvolts (The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.50 MHz). The limits at specific frequency range is listed as follows:

Frequency Range (MHz)	Limits (dB μ V)	
	Quasi-peak	Average
0.15 to 0.50	66 to 56	56 to 46
0.50 to 5	56	46
5 to 30	60	50

Compliance with this provision shall be based on the measurement of the radio frequency voltage between each power line (LINE and NEUTRAL) and ground at the power terminals.

Test Configuration

See test photographs attached in Appendix 1 for the actual connections between EUT and support equipment.

TEST PROCEDURE

1. The EUT is placed on a wooden table 80 cm above the reference ground plane.
2. The EUT is connected via LISN to a test power supply.
3. The measurement results are obtained as described below:
4. Detectors – Quasi Peak and Average Detector.

Sample Calculation

Quasi-peak(Final Result) = Reading Value + Correction Factor

RESULT PLOTS

Conducted Emissions (Line 1)

EMI Auto Test(3)

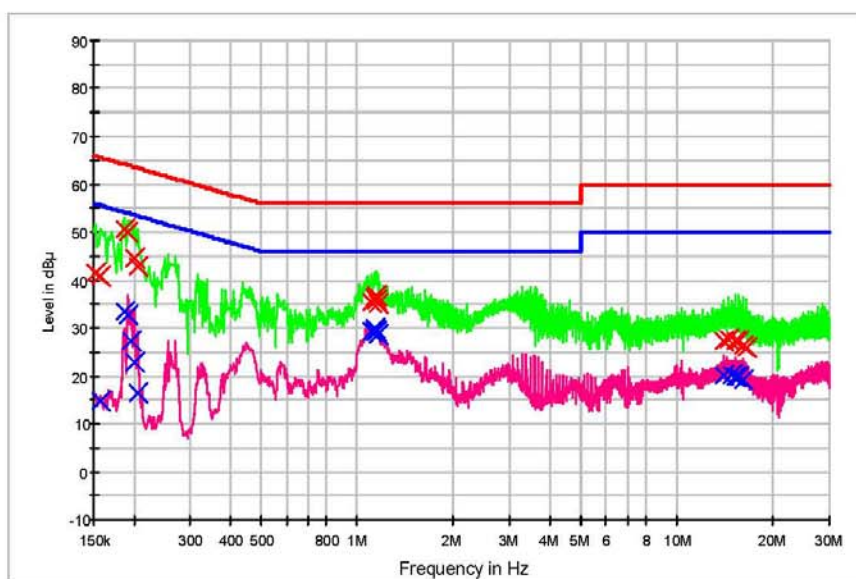
1 / 2

HCT TEST Report

Common Information

EUT: LGSBWAC92
Manufacturer: LG
Test Site: SHIELD ROOM
Operating Conditions: BT LE_MODE_N

FCC CLASS B



— FCC CLASS B_OP — FCC CLASS B_AV — Preview Result 1-PK+
— Preview Result 2-AVG — Final Result 1-OPK — Final Result 2-CAV

Final Result 1

Frequency (MHz)	QuasiPeak (dBuV)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)
0.152000	41.5	9.000	Off	N	9.6	24.4	65.9
0.158000	40.9	9.000	Off	N	9.6	24.7	65.6
0.188000	50.6	9.000	Off	N	9.6	13.5	64.1
0.192000	50.1	9.000	Off	N	9.6	13.9	63.9
0.202000	44.5	9.000	Off	N	9.6	19.0	63.5
0.206000	42.9	9.000	Off	N	9.6	20.5	63.4
1.104000	35.3	9.000	Off	N	9.7	20.7	56.0
1.108000	35.4	9.000	Off	N	9.7	20.6	56.0
1.134000	36.4	9.000	Off	N	9.7	19.6	56.0
1.142000	36.9	9.000	Off	N	9.7	19.1	56.0
1.148000	35.8	9.000	Off	N	9.7	20.2	56.0
1.164000	35.1	9.000	Off	N	9.7	20.9	56.0
14.070000	27.2	9.000	Off	N	10.1	32.8	60.0
14.570000	27.5	9.000	Off	N	10.1	32.5	60.0
15.194000	27.2	9.000	Off	N	10.1	32.8	60.0
15.508000	27.3	9.000	Off	N	10.1	32.7	60.0
16.130000	26.4	9.000	Off	N	10.1	33.6	60.0
16.442000	25.8	9.000	Off	N	10.1	34.2	60.0

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EMI Auto Test(3)

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Final Result 2

Frequency (MHz)	CAverage (dBuV)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)
0.158000	14.7	9.000	Off	N	9.6	40.8	55.6
0.188000	33.5	9.000	Off	N	9.6	20.7	54.1
0.192000	32.7	9.000	Off	N	9.6	21.2	53.9
0.196000	27.3	9.000	Off	N	9.6	26.5	53.8
0.200000	23.0	9.000	Off	N	9.6	30.6	53.6
0.206000	16.5	9.000	Off	N	9.6	36.9	53.4
1.114000	29.5	9.000	Off	N	9.7	16.5	46.0
1.130000	29.4	9.000	Off	N	9.7	16.6	46.0
1.134000	29.6	9.000	Off	N	9.7	16.4	46.0
1.138000	29.9	9.000	Off	N	9.7	16.1	46.0
1.154000	29.2	9.000	Off	N	9.7	16.8	46.0
1.164000	28.6	9.000	Off	N	9.7	17.4	46.0
14.070000	20.2	9.000	Off	N	10.1	29.8	50.0
14.822000	20.2	9.000	Off	N	10.1	29.8	50.0
14.884000	20.0	9.000	Off	N	10.1	30.0	50.0
15.196000	19.8	9.000	Off	N	10.1	30.2	50.0
15.506000	19.8	9.000	Off	N	10.1	30.2	50.0
16.130000	19.3	9.000	Off	N	10.1	30.7	50.0

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Conducted Emissions (Line 2)

EMI Auto Test(3)

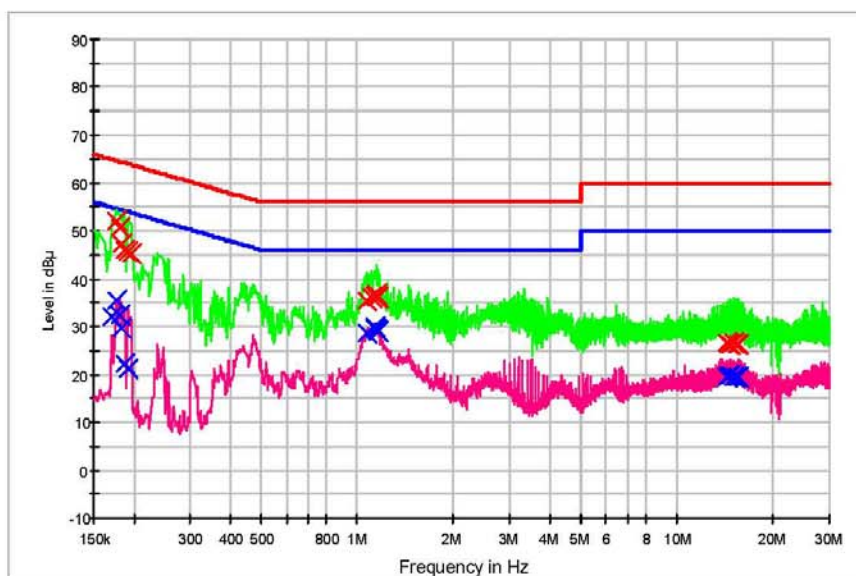
1 / 2

HCT TEST Report

Common Information

EUT: LGSBWAC92
Manufacturer: LG
Test Site: SHIELD ROOM
Operating Conditions: BT LE_MODE_L1

FCC CLASS B



— FCC CLASS B_OP — FCC CLASS B_AV — Preview Result 1-PK+
— Preview Result 2-AVG — Final Result 1-QPK — Final Result 2-CAV

Final Result 1

Frequency (MHz)	QuasiPeak (dBμV)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.176000	51.9	9.000	Off	L1	9.6	12.8	64.7
0.180000	50.8	9.000	Off	L1	9.6	13.7	64.5
0.184000	47.3	9.000	Off	L1	9.6	17.0	64.3
0.188000	46.0	9.000	Off	L1	9.6	18.1	64.1
0.192000	45.6	9.000	Off	L1	9.6	18.4	63.9
0.196000	45.3	9.000	Off	L1	9.6	18.4	63.8
1.066000	35.3	9.000	Off	L1	9.7	20.7	56.0
1.106000	36.2	9.000	Off	L1	9.7	19.8	56.0
1.130000	36.5	9.000	Off	L1	9.7	19.5	56.0
1.142000	36.8	9.000	Off	L1	9.7	19.2	56.0
1.152000	36.1	9.000	Off	L1	9.7	19.9	56.0
1.162000	36.0	9.000	Off	L1	9.7	20.0	56.0
14.276000	26.5	9.000	Off	L1	10.0	33.5	60.0
14.572000	26.2	9.000	Off	L1	10.0	33.8	60.0
14.694000	26.3	9.000	Off	L1	10.0	33.7	60.0
15.106000	26.4	9.000	Off	L1	10.0	33.6	60.0
15.314000	26.4	9.000	Off	L1	10.0	33.6	60.0
15.520000	26.2	9.000	Off	L1	10.0	33.8	60.0

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EMI Auto Test(3)

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Final Result 2

Frequency (MHz)	CAverage (dBuV)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)
0.170000	32.1	9.000	Off	L1	9.6	22.9	55.0
0.176000	35.5	9.000	Off	L1	9.6	19.2	54.7
0.180000	32.3	9.000	Off	L1	9.6	22.2	54.5
0.184000	29.6	9.000	Off	L1	9.6	24.7	54.3
0.188000	22.3	9.000	Off	L1	9.6	31.8	54.1
0.192000	21.2	9.000	Off	L1	9.6	32.7	53.9
1.066000	28.6	9.000	Off	L1	9.7	17.4	46.0
1.130000	29.6	9.000	Off	L1	9.7	16.4	46.0
1.134000	29.9	9.000	Off	L1	9.7	16.1	46.0
1.140000	29.8	9.000	Off	L1	9.7	16.2	46.0
1.146000	29.5	9.000	Off	L1	9.7	16.5	46.0
1.162000	29.1	9.000	Off	L1	9.7	16.9	46.0
14.276000	19.6	9.000	Off	L1	10.0	30.4	50.0
14.572000	19.7	9.000	Off	L1	10.0	30.3	50.0
14.692000	19.7	9.000	Off	L1	10.0	30.3	50.0
15.106000	19.7	9.000	Off	L1	10.0	30.3	50.0
15.314000	19.6	9.000	Off	L1	10.0	30.4	50.0
15.520000	19.6	9.000	Off	L1	10.0	30.4	50.0

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10. LIST OF TEST EQUIPMENT

10.1 LIST OF TEST EQUIPMENT(Conducted Test)

Manufacturer	Model / Equipment	Calibration Date	Calibration Interval	Serial No.
Rohde & Schwarz	ENV216 / LISN	12/20/2017	Annual	102245
Rohde & Schwarz	ESCI / Test Receiver	06/27/2018	Annual	100033
ESPAC	SU-642 /Temperature Chamber	03/30/2018	Annual	0093008124
Agilent	N9020A / Signal Analyzer	06/08/2018	Annual	MY51110085
Agilent	N9030A / Signal Analyzer	11/22/2017	Annual	MY49431210
Agilent	N1911A / Power Meter	04/16/2018	Annual	MY45100523
Agilent	N1921A / Power Sensor	04/16/2018	Annual	MY52260025
Agilent	87300B / Directional Coupler	11/20/2017	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
Rohde & Schwarz	CBT / Bluetooth Tester	05/17/2018	Annual	100422

10.2 LIST OF TEST EQUIPMENT(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
Emco	2090 / Controller	N/A	N/A	060520
Ets	Turn Table	N/A	N/A	N/A
Rohde & Schwarz	Loop Antenna	04/19/2017	Biennial	1513-175
Schwarzbeck	VULB 9168 / Hybrid Antenna	04/06/2017	Biennial	760
Schwarzbeck	BBHA 9120D / Horn Antenna	11/21/2017	Biennial	9120D-1191
Schwarzbeck	BBHA9170 / Horn Antenna(15 GHz ~ 40 GHz)	12/04/2017	Biennial	BBHA9170541
Rohde & Schwarz	FSP(9 kHz ~ 30 GHz) / Spectrum Analyzer	09/21/2017	Annual	836650/016
Rohde & Schwarz	FSV40-N / Spectrum Analyzer	09/27/2017	Annual	101068-SZ
Wainwright Instruments	WHKX10-2700-3000-18000-40SS / High Pass Filter	08/01/2017	Annual	4
Wainwright Instruments	WHKX8-6090-7000-18000-40SS / High Pass Filter	07/10/2018	Annual	5
Wainwright Instruments	WRCJV2400/2483.5-2370/2520-60/12SS / Band Reject Filter	01/03/2018	Annual	2
Wainwright Instruments	WRCJV5100/5850-40/50-8EEK / Band Reject Filter	01/03/2018	Annual	2
Api tech.	18B-03 / Attenuator (3 dB)	06/07/2018	Annual	2
WEINSCHL	56-10 / Attenuator(10 dB)	10/13/2017	Annual	72316
CERNEX	CBLU1183540 / Broadband Low Noise Amplifier	01/03/2018	Annual	24613
CERNEX	CBL06185030 / Broadband Low Noise Amplifier	01/03/2018	Annual	24615
CERNEX	CBL18265035 / Power Amplifier	01/10/2018	Annual	22966
CERNEX	CBL26405040 / Power Amplifier	06/29/2018	Annual	25956
TESCOM	TC-3000C / Bluetooth Tester	03/27/2018	Annual	3000C000276

11. APPENDIX A_EUT AND TEST SETUP PHOTO

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

No.	Description
1	HCT-RF-1807-FI014-P