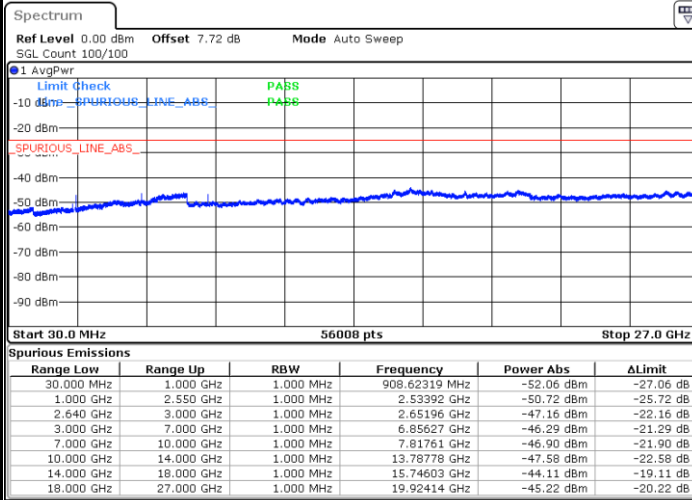




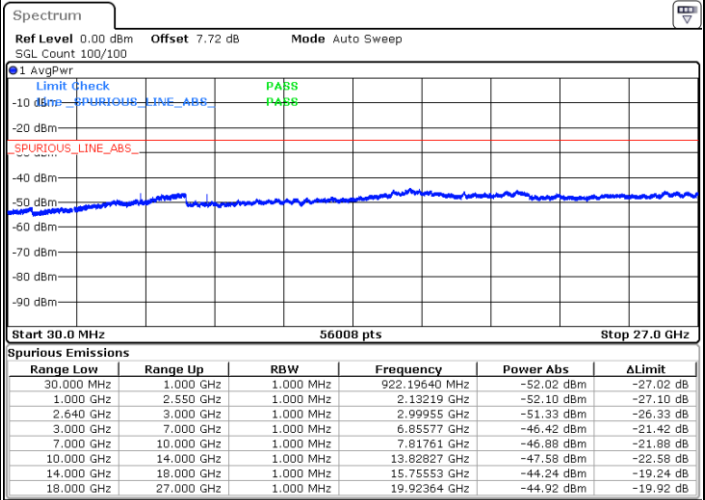
LTE Band 38 / 15MHz

Highest Channel / QPSK



Date: 3.NOV.2017 10:50:37

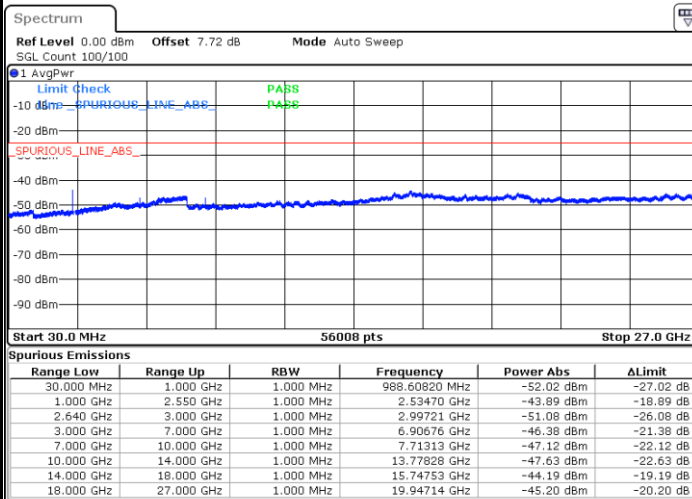
Highest Channel / 16QAM



Date: 3.NOV.2017 10:51:31

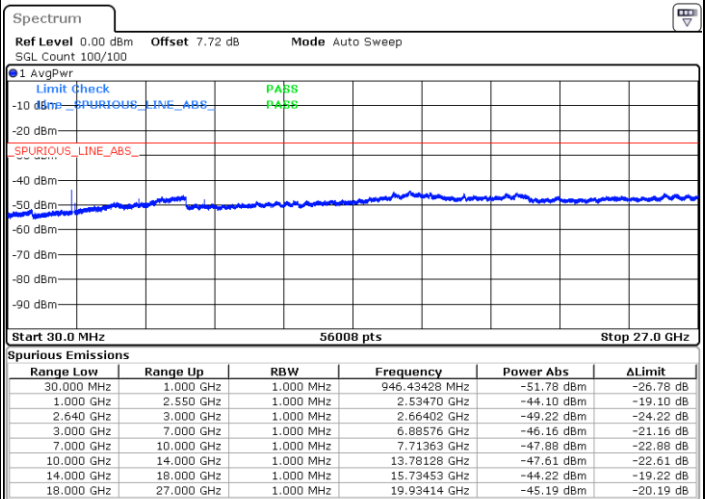
LTE Band 38 / 20MHz

Lowest Channel / QPSK



Date: 3.NOV.2017 10:52:26

Lowest Channel / 16QAM

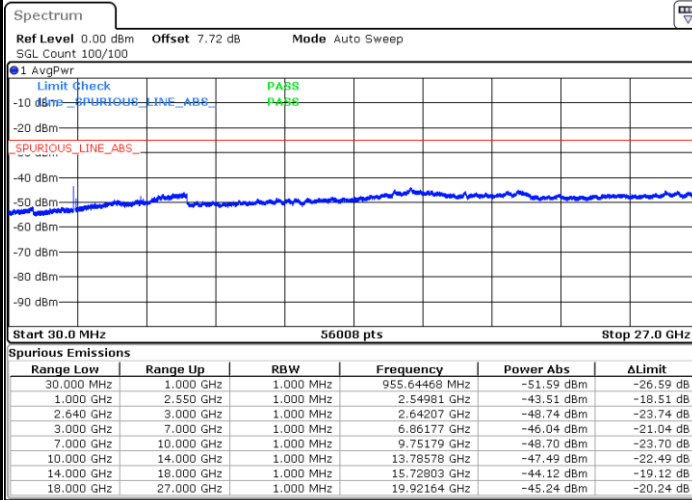


Date: 3.NOV.2017 10:53:21



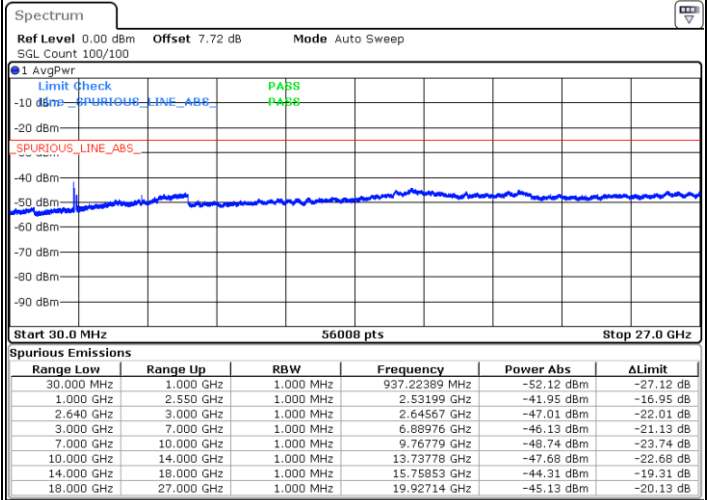
LTE Band 38 / 20MHz

Middle Channel / QPSK



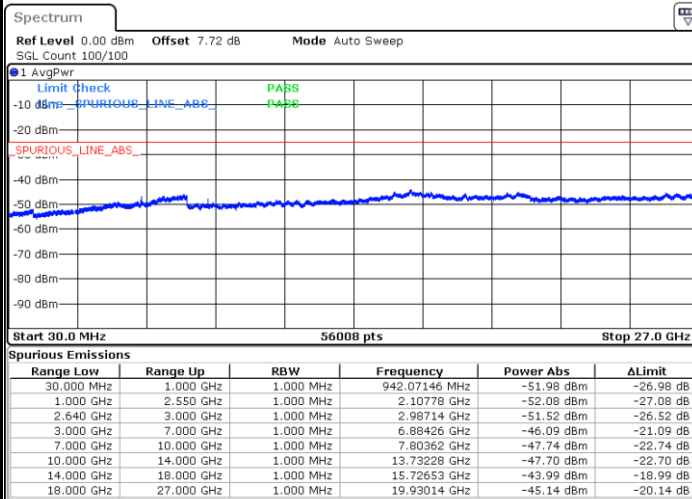
Date: 3.NOV.2017 10:54:15

Middle Channel / 16QAM



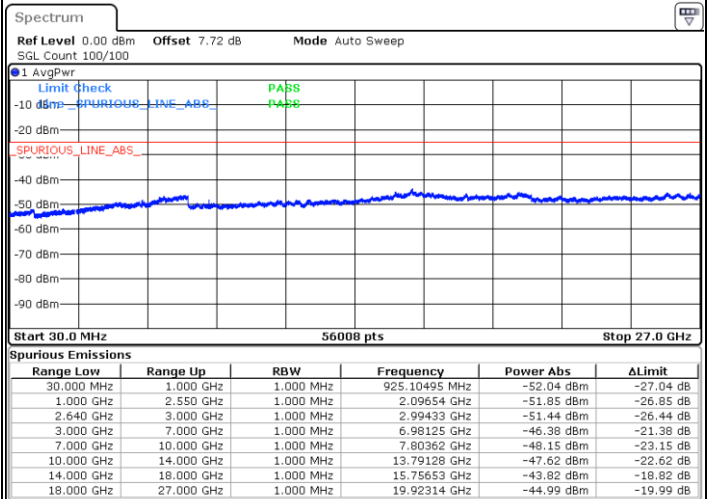
Date: 3.NOV.2017 10:55:10

Highest Channel / QPSK



Date: 3.NOV.2017 10:56:04

Highest Channel / 16QAM



Date: 3.NOV.2017 10:56:59

**Frequency Stability**

Test Conditions		LTE Band 2 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 10MHz	Note 2.
		Deviation (ppm)	Result
50	Normal Voltage	0.0035	PASS
40	Normal Voltage	0.0016	
30	Normal Voltage	0.0032	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0043	
0	Normal Voltage	0.0011	
-10	Normal Voltage	0.0016	
-20	Normal Voltage	0.0039	
-30	Normal Voltage	0.0004	
20	Maximum Voltage	0.0037	
20	Normal Voltage	0.0033	
20	Battery End Point	0.0003	

Note:

1. Normal Voltage =3.85 V. ; Battery End Point (BEP) =3.6 V. ; Maximum Voltage =4.4 V.
2. Note: The frequency fundamental emissions stay within the authorized frequency block.



Test Conditions		LTE Band 4 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 10MHz	Note 2.
		Deviation (ppm)	Result
50	Normal Voltage	0.0027	PASS
40	Normal Voltage	0.0037	
30	Normal Voltage	0.0012	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0024	
0	Normal Voltage	0.0005	
-10	Normal Voltage	0.0022	
-20	Normal Voltage	0.0028	
-30	Normal Voltage	0.0014	
20	Maximum Voltage	0.0031	
20	Normal Voltage	0.0035	
20	Battery End Point	0.0005	

Note:

1. Normal Voltage =3.85 V. ; Battery End Point (BEP) =3.6 V. ; Maximum Voltage =4.4 V.
2. Note: The frequency fundamental emissions stay within the authorized frequency block.



Test Conditions		LTE Band 5 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 10MHz	2.5ppm
		Deviation (ppm)	Result
50	Normal Voltage	0.0006	PASS
40	Normal Voltage	0.0033	
30	Normal Voltage	0.0044	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0033	
0	Normal Voltage	0.0045	
-10	Normal Voltage	0.0037	
-20	Normal Voltage	0.0004	
-30	Normal Voltage	0.0026	
20	Maximum Voltage	0.0000	
20	Normal Voltage	0.0032	
20	Battery End Point	0.0010	

Note: Normal Voltage =3.85 V. ; Battery End Point (BEP) =3.6 V. ; Maximum Voltage =4.4 V.



Test Conditions		LTE Band 7 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 10MHz	Note 2.
		Deviation (ppm)	Result
50	Normal Voltage	0.0006	PASS
40	Normal Voltage	0.0004	
30	Normal Voltage	0.0011	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0014	
0	Normal Voltage	0.0016	
-10	Normal Voltage	0.0001	
-20	Normal Voltage	0.0015	
-30	Normal Voltage	0.0017	
20	Maximum Voltage	0.0005	
20	Normal Voltage	0.0002	
20	Battery End Point	0.0009	

Note:

3. Normal Voltage =3.85 V. ; Battery End Point (BEP) =3.6 V. ; Maximum Voltage =4.4 V.
4. Note: The frequency fundamental emissions stay within the authorized frequency block.



Test Conditions		LTE Band 38 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 10MHz	Note 2.
		Deviation (ppm)	Result
50	Normal Voltage	0.0005	PASS
40	Normal Voltage	0.0004	
30	Normal Voltage	0.0013	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0012	
0	Normal Voltage	0.0015	
-10	Normal Voltage	0.0011	
-20	Normal Voltage	0.0001	
-30	Normal Voltage	0.0018	
20	Maximum Voltage	0.0003	
20	Normal Voltage	0.0002	
20	Battery End Point	0.0013	

Note:

1. Normal Voltage =3.85 V. ; Battery End Point (BEP) =3.6 V. ; Maximum Voltage =4.4 V.
2. Note: The frequency fundamental emissions stay within the authorized frequency block.



Appendix B. Test Results of Radiated Test

Radiated Spurious Emission

LTE Band 2 / 20MHz / QPSK									
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	3702	-38.68	-13	-25.68	-54.06	-40.40	5.08	6.80	H
	5553	-29.96	-13	-16.96	-49.69	-31.63	8.03	9.70	H
	7404	-44.67	-13	-31.67	-65.97	-47.05	9.43	11.81	H
	3702	-47.51	-13	-34.51	-60.12	-49.23	5.08	6.80	V
	5553	-39.23	-13	-26.23	-56.97	-40.90	8.03	9.70	V
	7404	-47.92	-13	-34.92	-69.06	-50.30	9.43	11.81	V
Middle	3741	-44.20	-13	-31.20	-58.44	-45.91	5.08	6.80	H
	5613	-33.50	-13	-20.50	-52.78	-35.17	8.03	9.70	H
	7485	-46.88	-13	-33.88	-68.18	-49.26	9.43	11.81	H
	3741	-48.21	-13	-35.21	-60.64	-49.92	5.08	6.80	V
	5613	-43.48	-13	-30.48	-60.57	-45.15	8.03	9.70	V
	7485	-48.28	-13	-35.28	-69.42	-50.66	9.43	11.81	V
Highest	3783	-39.92	-13	-26.92	-55.25	-41.64	5.08	6.80	H
	5673	-30.35	-13	-17.35	-50.03	-32.02	8.03	9.70	H
	7563	-44.89	-13	-31.89	-66.19	-47.27	9.43	11.81	H
	3783	-45.94	-13	-32.94	-59.45	-47.66	5.08	6.80	V
	5673	-38.43	-13	-25.43	-56.41	-40.10	8.03	9.70	V
	7563	-45.52	-13	-32.52	-66.66	-47.90	9.43	11.81	V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.



LTE Band 4 / 20MHz / QPSK									
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	3423	-45.85	-13	-32.85	-59.41	-49.82	4.87	8.84	H
	5133	-35.30	-13	-22.30	-54.56	-36.75	7.70	9.14	H
	6843	-43.13	-13	-30.13	-64.18	-44.81	8.98	10.66	H
	3423	-44.60	-13	-31.60	-60.19	-48.57	4.87	8.84	V
	5133	-40.76	-13	-27.76	-58.47	-42.20	7.70	9.14	V
	6846	-47.36	-13	-34.36	-68.16	-49.04	8.98	10.66	V
Middle	3447	-50.56	-13	-37.56	-62.59	-54.53	4.87	8.84	H
	5172	-35.37	-13	-22.37	-54.62	-36.81	7.70	9.14	H
	6894	-41.47	-13	-28.47	-62.52	-43.15	8.98	10.66	H
	3447	-47.25	-13	-34.25	-61.96	-51.22	4.87	8.84	V
	5172	-44.65	-13	-31.65	-60.83	-46.09	7.70	9.14	V
	6894	-48.29	-13	-35.29	-69.09	-49.97	8.98	10.66	V
Highest	3471	-43.01	-13	-30.01	-57.61	-46.98	4.87	8.84	H
	5208	-34.87	-13	-21.87	-54.19	-36.32	7.70	9.14	H
	6945	-44.42	-13	-31.42	-65.47	-46.10	8.98	10.66	H
	3471	-41.85	-13	-28.85	-57.86	-45.82	4.87	8.84	V
	5208	-43.41	-13	-30.41	-60.15	-44.86	7.70	9.14	V
	6945	-48.66	-13	-35.66	-69.46	-50.34	8.98	10.66	V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.



LTE Band 5 / 10MHz / QPSK									
Channel	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	1650	-56.79	-13	-43.79	-61.88	-58.70	1.14	5.20	H
	2474	-53.13	-13	-40.13	-64.24	-55.76	1.12	5.90	H
	3297	-61.29	-13	-48.29	-71.26	-64.50	1.34	6.70	H
	1650	-54.40	-13	-41.40	-59.73	-56.31	1.14	5.20	V
	2474	-57.21	-13	-44.21	-66.87	-59.84	1.12	5.90	V
	3297	-61.61	-13	-48.61	-71.74	-64.82	1.34	6.70	V
Middle	1664	-60.92	-13	-47.92	-61.24	-62.83	1.14	5.20	H
	2496	-55.25	-13	-42.25	-59.55	-57.88	1.12	5.90	H
	3327	-61.53	-13	-48.53	-65.65	-64.74	1.34	6.70	H
	1664	-61.97	-13	-48.97	-61.07	-63.88	1.14	5.20	V
	2496	-59.00	-13	-46.00	-62.07	-61.63	1.12	5.90	V
	3327	-60.45	-13	-47.45	-65.59	-63.66	1.34	6.70	V
Highest	1680	-59.24	-13	-46.24	-64.33	-61.15	1.14	5.20	H
	2518	-55.31	-13	-42.31	-66.42	-57.94	1.12	5.90	H
	3357	-60.79	-13	-47.79	-70.76	-64.00	1.34	6.70	H
	1680	-59.18	-13	-46.18	-64.51	-61.09	1.14	5.20	V
	2518	-57.45	-13	-44.45	-67.11	-60.08	1.12	5.90	V
	3357	-60.71	-13	-47.71	-70.84	-63.92	1.34	6.70	V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.



LTE Band 7 / 20MHz / QPSK									
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	5000	-26.51	-25	-1.51	-16.53	-33.23	2.40	9.12	H
	7505	-34.71	-25	-9.71	-30.31	-44.34	2.87	12.50	H
	10008	-53.71	-25	-28.71	-47.95	-62.63	3.18	12.10	H
	12501	-52.40	-25	-27.40	-50.95	-61.44	3.79	12.83	H
	5000	-37.60	-25	-12.60	-26.96	-44.32	2.40	9.12	V
	7505	-33.23	-25	-8.23	-30.49	-42.86	2.87	12.50	V
	10008	-55.70	-25	-30.70	-50.38	-64.62	3.18	12.10	V
	12501	-50.51	-25	-25.51	-47.64	-59.55	3.79	12.83	V
Middle	5052	-37.33	-25	-12.33	-26.55	-44.05	2.40	9.12	H
	7580	-42.97	-25	-17.97	-36.45	-52.60	2.87	12.50	H
	10107	-61.65	-25	-36.65	-55.89	-70.57	3.18	12.10	H
	5052	-43.68	-25	-18.68	-32.4	-50.40	2.40	9.12	V
	7580	-43.81	-25	-18.81	-38.73	-53.43	2.87	12.50	V
	10107	-58.32	-25	-33.32	-53	-67.24	3.18	12.10	V
Highest	5104	-33.97	-25	-8.97	-23.22	-40.69	2.40	9.12	H
	7652	-38.25	-25	-13.25	-32.69	-47.88	2.87	12.50	H
	10206	-54.84	-25	-29.84	-49.08	-63.76	3.18	12.10	H
	12753	-53.83	-25	-28.83	-52.38	-62.87	3.79	12.83	H
	5104	-40.92	-25	-15.92	-30.16	-47.64	2.40	9.12	V
	7652	-38.30	-25	-13.30	-34.55	-47.93	2.87	12.50	V
	10206	-56.47	-25	-31.47	-51.15	-65.39	3.18	12.10	V
	12753	-55.60	-25	-30.60	-52.73	-64.64	3.79	12.83	V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.



LTE Band 38 / 20MHz / QPSK									
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	5140	-36.27	-25	-11.27	-26.55	-43.10	2.46	9.29	H
	7715	-39.03	-25	-14.03	-35.99	-48.22	3.01	12.20	H
	10287	-57.62	-25	-32.62	-54.49	-66.35	3.52	12.25	H
	12852	-52.62	-25	-27.62	-56.07	-61.81	3.82	13.01	H
	5140	-45.38	-25	-20.38	-34.81	-52.21	2.46	9.29	V
	7715	-43.50	-25	-18.50	-38	-52.69	3.01	12.20	V
	10287	-57.23	-25	-32.23	-53.58	-65.96	3.52	12.25	V
	12852	-51.51	-25	-26.51	-54.95	-60.70	3.82	13.01	V
Middle	5172	-33.16	-25	-8.16	-23.62	-39.99	2.46	9.29	H
	7760	-32.97	-25	-7.97	-30.53	-42.16	3.01	12.20	H
	10341	-56.88	-25	-31.88	-53.75	-65.61	3.52	12.25	H
	5172	-41.01	-25	-16.01	-31.17	-47.84	2.46	9.29	V
	7760	-40.31	-25	-15.31	-35.61	-49.50	3.01	12.20	V
	10341	-58.73	-25	-33.73	-55.08	-67.46	3.52	12.25	V
Highest	5204	-27.33	-25	-2.33	-17.78	-34.16	2.46	9.29	H
	7804	-27.03	-25	-2.03	-24.73	-36.22	3.01	12.20	H
	10404	-54.35	-25	-29.35	-51.22	-63.08	3.52	12.25	H
	13005	-49.42	-25	-24.42	-52.87	-58.61	3.82	13.01	H
	5204	-37.95	-25	-12.95	-28.53	-44.78	2.46	9.29	V
	7804	-36.08	-25	-11.08	-32.67	-45.27	3.01	12.20	V
	10404	-58.66	-25	-33.66	-55.01	-67.39	3.52	12.25	V
	13005	-52.01	-25	-27.01	-55.45	-61.20	3.82	13.01	V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.