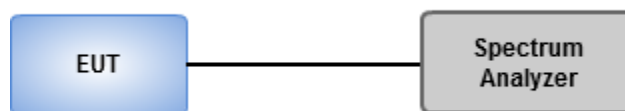


3.5 26dBc Bandwidth

3.5.1 Test Procedures

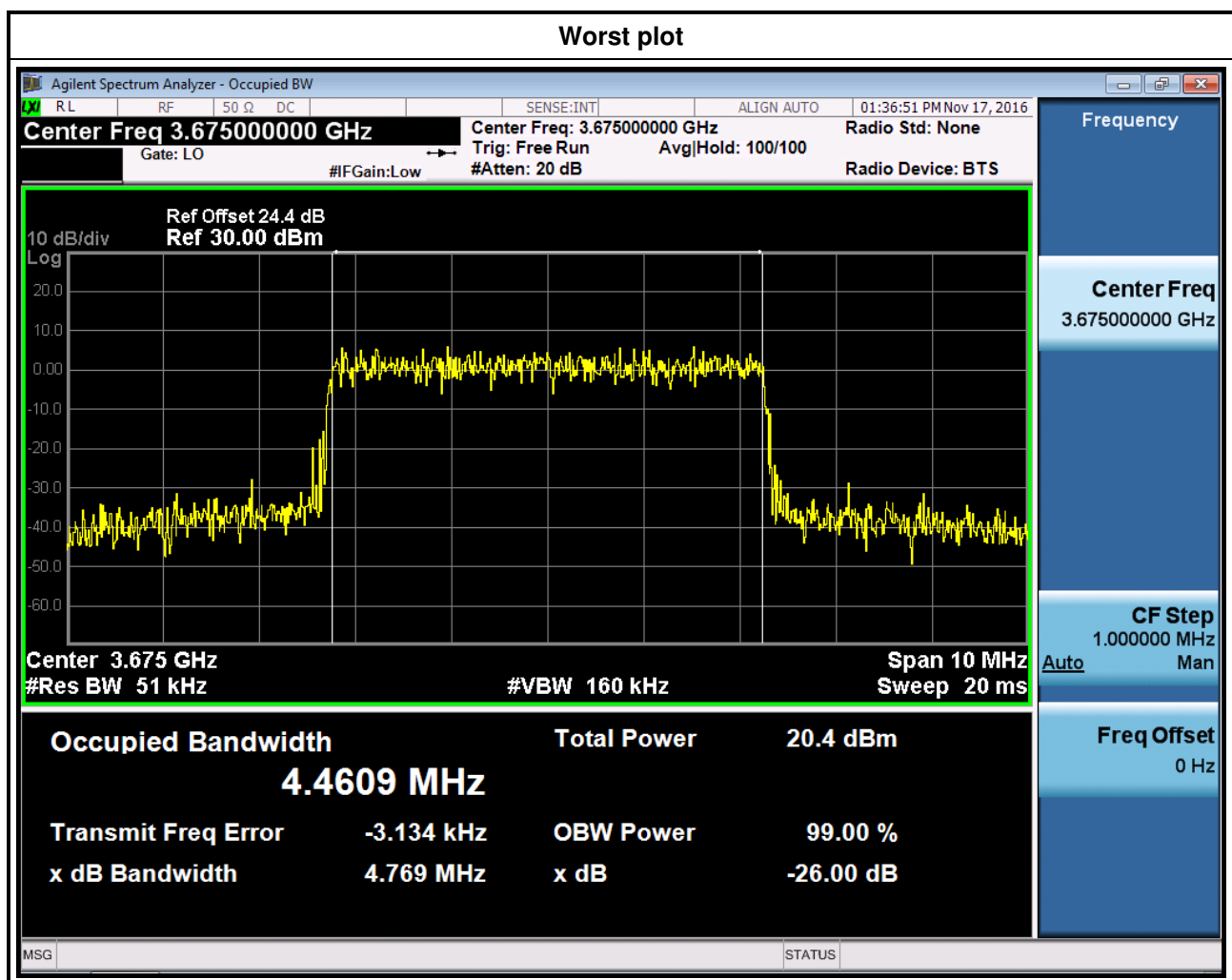
1. Set resolution bandwidth (RBW) = 100 kHz, Video bandwidth=300kHz.
2. Detector = Peak, Trace mode = max hold.
3. Sweep = auto couple, Allow the trace to stabilize.
4. Using 26dBc and occupied bandwidth measurement function of spectrum analyzer to measure 26dBc and occupied bandwidth.

3.5.2 Test Setup

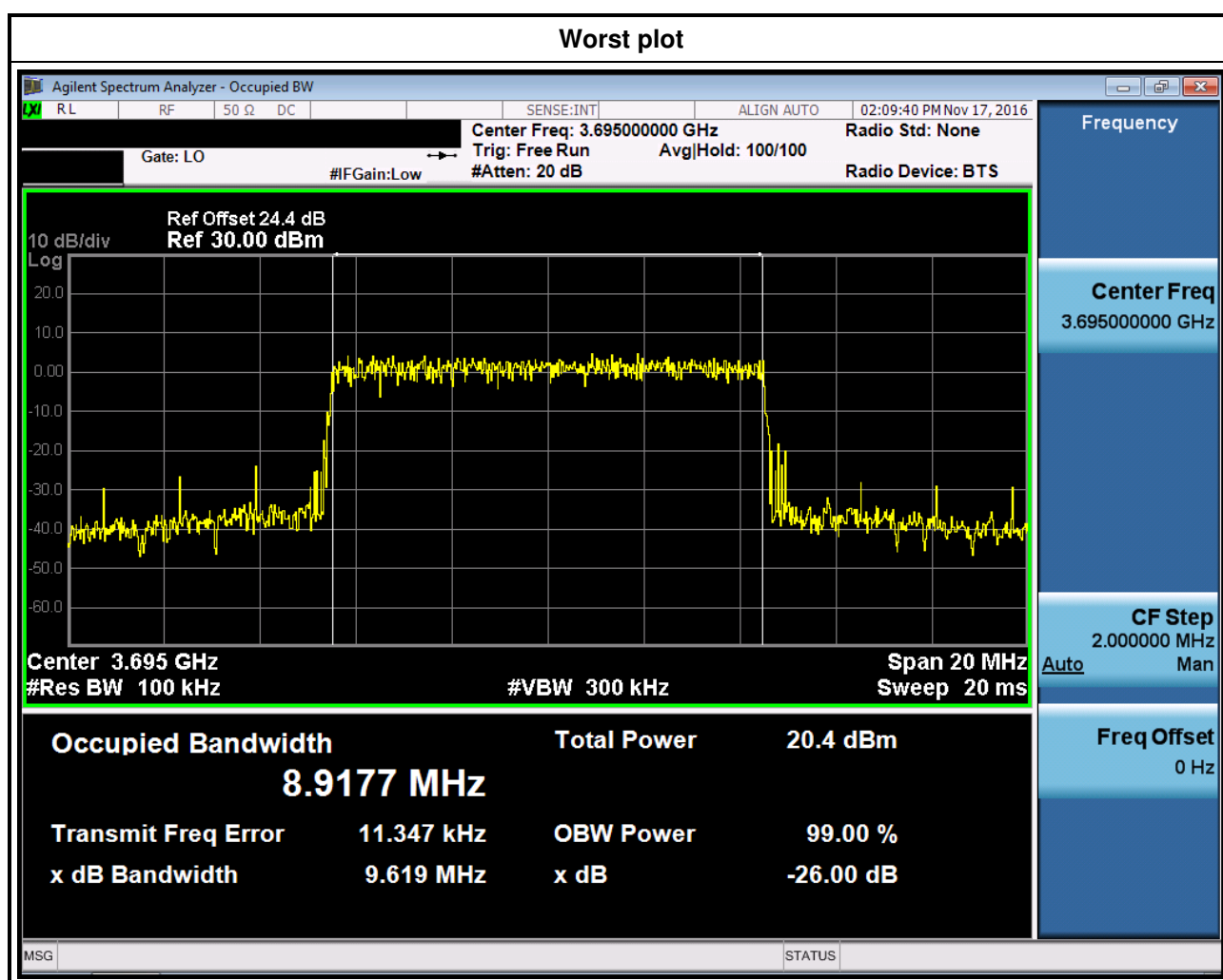


3.5.3 Test Result of 26dBc Bandwidth

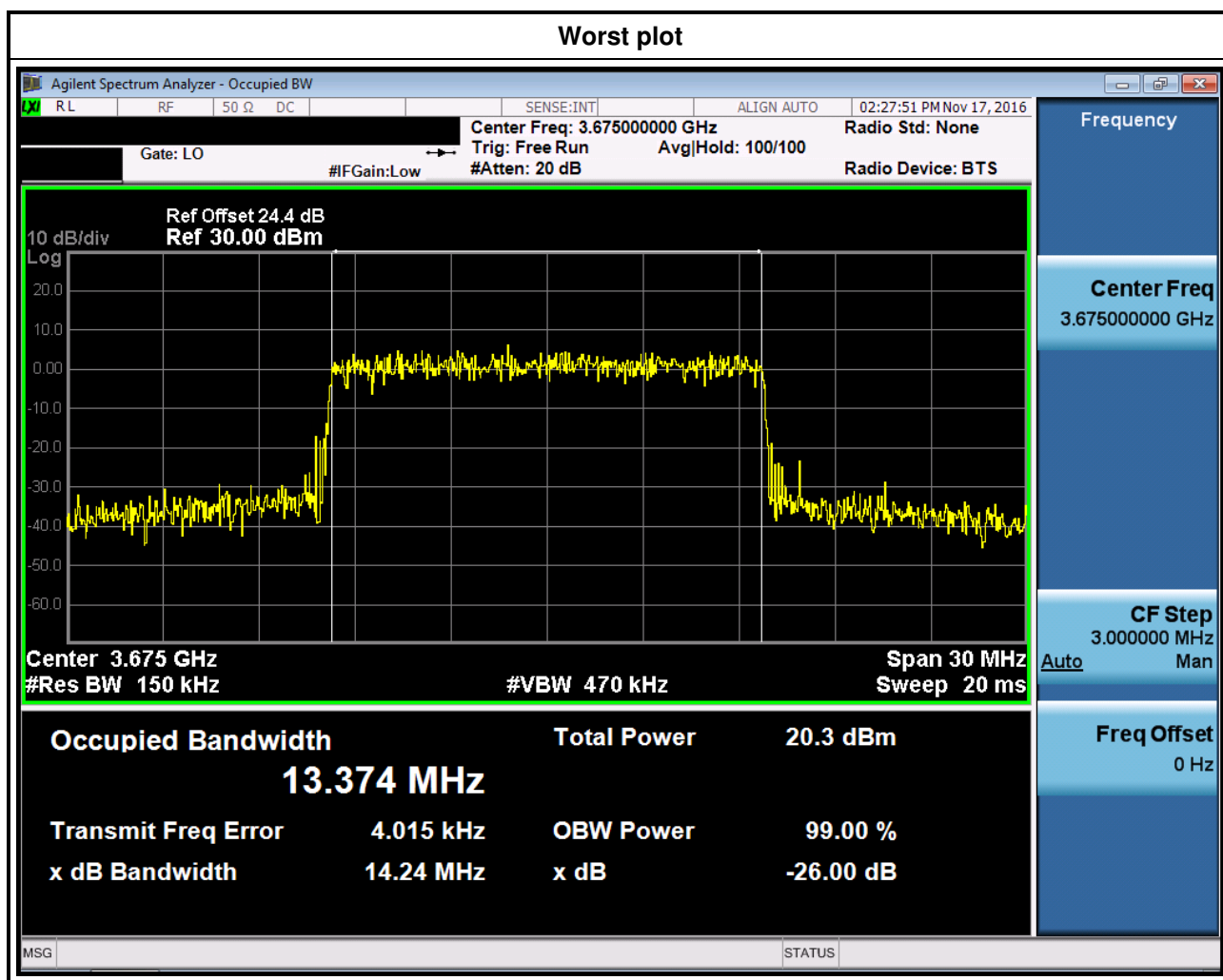
Channel Bandwidth	Modulation	Channel	Frequency (MHz)	26dBc Bandwidth (MHz)	Occupied Bandwidth (MHz)
5MHz	QPSK	44115	3652.5	4.734	4.4605
5MHz	QPSK	44340	3675.0	4.769	4.4609
5MHz	QPSK	44565	3697.5	4.671	4.4597
5MHz	16QAM	44115	3652.5	4.739	4.4600
5MHz	16QAM	44340	3675.0	4.762	4.4649
5MHz	16QAM	44565	3697.5	4.762	4.4606
5MHz	64QAM	44115	3652.5	4.744	4.4572
5MHz	64QAM	44340	3675.0	4.745	4.4583
5MHz	64QAM	44565	3697.5	4.745	4.4561



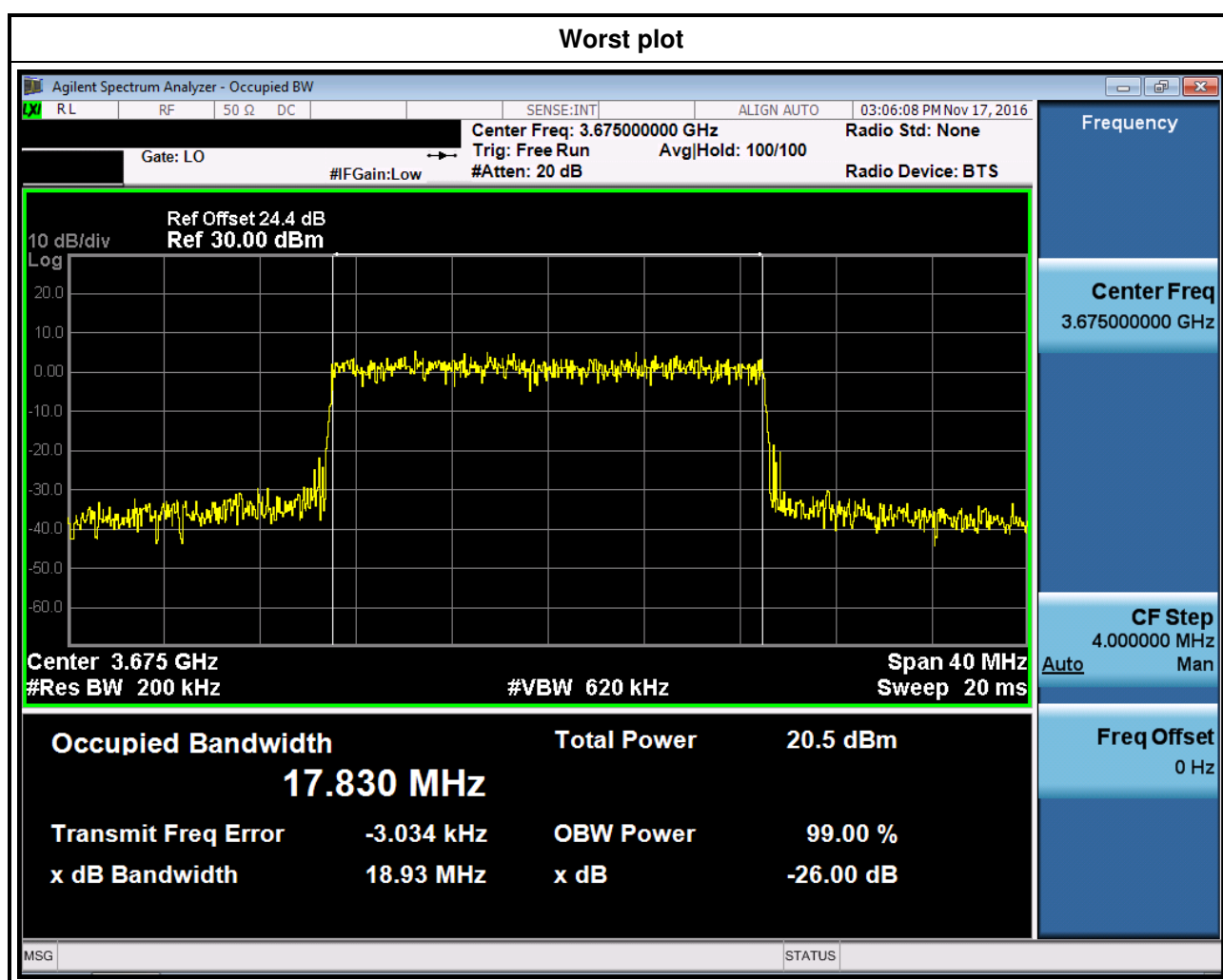
Channel Bandwidth	Modulation	Channel	Frequency (MHz)	26dBc Bandwidth (MHz)	Occupied Bandwidth (MHz)
10MHz	QPSK	44140	3655.0	9.402	8.9067
10MHz	QPSK	44340	3675.0	9.395	8.9363
10MHz	QPSK	44540	3695.0	9.292	8.9098
10MHz	16QAM	44140	3655.0	9.385	8.9133
10MHz	16QAM	44340	3675.0	9.387	8.9188
10MHz	16QAM	44540	3695.0	9.334	8.9136
10MHz	64QAM	44140	3655.0	9.479	8.9168
10MHz	64QAM	44340	3675.0	9.481	8.9196
10MHz	64QAM	44540	3695.0	9.619	8.9177



Channel Bandwidth	Modulation	Channel	Frequency (MHz)	26dBc Bandwidth (MHz)	Occupied Bandwidth (MHz)
15MHz	QPSK	44165	3657.5	14.16	13.371
15MHz	QPSK	44340	3675.0	14.16	13.365
15MHz	QPSK	44515	3692.5	14.16	13.377
15MHz	16QAM	44165	3657.5	14.22	13.345
15MHz	16QAM	44340	3675.0	14.23	13.346
15MHz	16QAM	44515	3692.5	14.22	13.345
15MHz	64QAM	44165	3657.5	14.23	13.362
15MHz	64QAM	44340	3675.0	14.24	13.374
15MHz	64QAM	44515	3692.5	14.16	13.376



Channel Bandwidth	Modulation	Channel	Frequency (MHz)	26dBc Bandwidth (MHz)	Occupied Bandwidth (MHz)
20MHz	QPSK	44190	3660.0	18.80	17.838
20MHz	QPSK	44340	3675.0	18.80	17.833
20MHz	QPSK	44490	3690.0	18.81	17.840
20MHz	16QAM	44190	3660.0	18.89	17.842
20MHz	16QAM	44340	3675.0	18.93	17.830
20MHz	16QAM	44490	3690.0	18.56	17.853
20MHz	64QAM	44190	3660.0	18.54	17.794
20MHz	64QAM	44340	3675.0	18.53	17.788
20MHz	64QAM	44490	3690.0	18.78	17.798



3.6 Frequency Stability

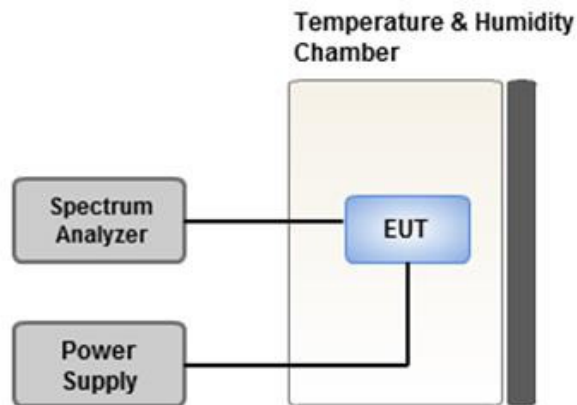
3.6.1 Limit of Frequency Stability

The frequency stability shall be less $\pm 2.5\text{ppm}$.

3.6.2 Test Procedures

1. EUT was placed at temperature chamber and connected to an external power supply.
2. Temperature and voltage condition shall be tested to confirm frequency stability.
3. Temperature range is from $-30\sim 50^{\circ}\text{C}$ and voltage range is from lowest to highest working voltage.
4. Tem Link up EUT and simulator. Confirm frequency drift value of simulator and record it.

3.6.3 Test Setup



3.6.4 Test Result of Frequency Stability

Channel Bandwidth: 5MHz

Frequency: 3675 MHz	Frequency Drift (ppm)	
Temperature (°C)	Frequency Error (ppm)	Limit (ppm)
T20°C Vmax	0.014	2.5
T20°C Vmin	0.013	2.5
T50°C Vnom	0.013	2.5
T40°C Vnom	0.016	2.5
T30°C Vnom	0.013	2.5
T20°C Vnom	0.012	2.5
T10°C Vnom	0.014	2.5
T0°C Vnom	0.014	2.5
T-10°C Vnom	0.013	2.5
T-20°C Vnom	0.012	2.5
T-30°C Vnom	0.014	2.5
Vnom [Vac]: 120	Vmax [Vac]: 138	Vmin [Vac]: 102
Tnom [°C]: 20	Tmax [°C]: 50	Tmin [°C]: -30

Channel Bandwidth: 10MHz

Frequency: 3675 MHz	Frequency Drift (ppm)	
Temperature (°C)	Frequency Error (ppm)	Limit (ppm)
T20°C Vmax	0.013	2.5
T20°C Vmin	0.013	2.5
T50°C Vnom	0.014	2.5
T40°C Vnom	0.013	2.5
T30°C Vnom	0.014	2.5
T20°C Vnom	0.012	2.5
T10°C Vnom	0.013	2.5
T0°C Vnom	0.014	2.5
T-10°C Vnom	0.013	2.5
T-20°C Vnom	0.015	2.5
T-30°C Vnom	0.016	2.5
Vnom [Vac]: 120	Vmax [Vac]: 138	Vmin [Vac]: 102
Tnom [°C]: 20	Tmax [°C]: 50	Tmin [°C]: -30

Channel Bandwidth: 15MHz

Frequency: 3675 MHz	Frequency Drift (ppm)	
Temperature (°C)	Frequency Error (ppm)	Limit (ppm)
T20°C _{Vmax}	0.014	2.5
T20°C _{Vmin}	0.013	2.5
T50°C _{Vnom}	0.010	2.5
T40°C _{Vnom}	0.012	2.5
T30°C _{Vnom}	0.013	2.5
T20°C _{Vnom}	0.013	2.5
T10°C _{Vnom}	0.014	2.5
T0°C _{Vnom}	0.011	2.5
T-10°C _{Vnom}	0.010	2.5
T-20°C _{Vnom}	0.011	2.5
T-30°C _{Vnom}	0.012	2.5
Vnom [Vac]: 120	Vmax [Vac]: 138	Vmin [Vac]: 102
Tnom [°C]: 20	Tmax [°C]: 50	Tmin [°C]: -30

Channel Bandwidth: 20MHz

Frequency: 3675 MHz	Frequency Drift (ppm)	
Temperature (°C)	Frequency Error (ppm)	Limit (ppm)
T20°C _{Vmax}	0.017	2.5
T20°C _{Vmin}	0.016	2.5
T50°C _{Vnom}	0.015	2.5
T40°C _{Vnom}	0.015	2.5
T30°C _{Vnom}	0.013	2.5
T20°C _{Vnom}	0.015	2.5
T10°C _{Vnom}	0.016	2.5
T0°C _{Vnom}	0.016	2.5
T-10°C _{Vnom}	0.015	2.5
T-20°C _{Vnom}	0.014	2.5
T-30°C _{Vnom}	0.014	2.5
Vnom [Vac]: 120	Vmax [Vac]: 138	Vmin [Vac]: 102
Tnom [°C]: 20	Tmax [°C]: 50	Tmin [°C]: -30

4 Test laboratory information

Established in 2012, ICC provides foremost EMC & RF Testing and advisory consultation services by our skilled engineers and technicians. Our services employ a wide variety of advanced edge test equipment and one of the widest certification extents in the business.

International Certification Corp (EMC and Wireless Communication Laboratory), it is our definitive objective is to institute long term, trust-based associations with our clients. The expectation we set up with our clients is based on outstanding service, practical expertise and devotion to a certified value structure. Our passion is to grant our clients with best EMC / RF services by oriented knowledgeable and accommodating staff.

Our Test sites are located at Linkou District and Kwei Shan District. Location map can be found on our website <http://www.icertifi.com.tw>.

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