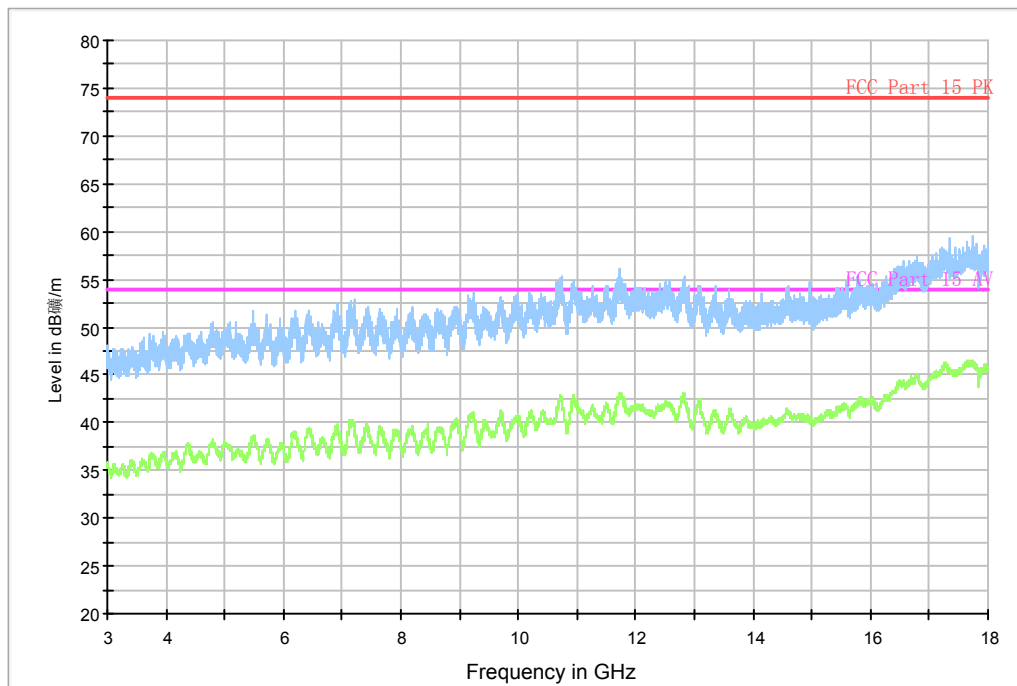


RE - 3GHz-18GHz



**Fig.A.6.2.31 Transmitter Spurious Emission - Radiated (802.11n-HT20, Ch11, 3 GHz-18 GHz)**

## **A.7. AC Power-line Conducted Emission**

### **Method of Measurement: See ANSI C63.10-2013-clause 6.2**

- 1 The one EUT cable configuration and arrangement and mode of operation that produced the emission with the highest amplitude relative to the limit is selected for the final measurement, while applying the appropriate modulating signal to the EUT.
- 2 If the EUT is relocated from an exploratory test site to a final test site, the highest emissions shall be remaximized at the final test location before final ac power-line conducted emission measurements are performed.
- 3 The final test on all current-carrying conductors of all of the power cords to the equipment that comprises the EUT (but not the cords associated with other non-EUT equipment in the system) is then performed for the full frequency range for which the EUT is being tested for compliance without further variation of the EUT arrangement, cable positions, or EUT mode of operation.
- 4 If the EUT is comprised of equipment units that have their own separate ac power connections, e.g., floor-standing equipment with independent power cords for each shelf that are able to connect directly to the ac power network, each current-carrying conductor of one unit is measured while the other units are connected to a second (or more) LISN(s). All units shall be separately measured. If a power strip is provided by the manufacturer, to supply all of the units making up the EUT, only the conductors in the power cord of the power strip shall be measured.
- 5 If the EUT uses a detachable antenna, these measurements shall be made with a suitable dummy load connected to the antenna output terminals; otherwise, the tests shall be made with the antenna connected and, if adjustable, fully extended. When measuring the ac conducted emissions from a device that operates between 150 kHz and 30 MHz a non-detachable antenna may be replaced with a dummy load for the measurements within the fundamental emission band of the transmitter, but only for those measurements.<sup>36</sup> Record the six highest EUT emissions relative to the limit of each of the current-carrying conductors of the power cords of the equipment that comprises the EUT over the frequency range specified by the procuring or regulatory agency. Diagram or photograph the test setup that was used. See Clause 8 for full reporting requirements.

### **Test Condition:**

<b>Voltage (V)</b>	<b>Frequency (Hz)</b>
120	60

**Measurement Result and limit:**

WLAN (Quasi-peak Limit)

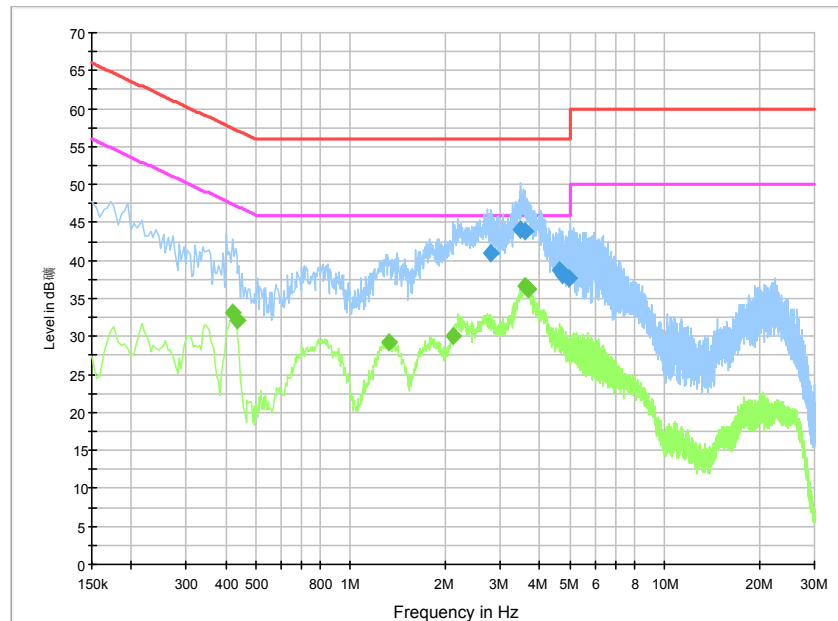
Frequency range (MHz)	Quasi-peak Limit (dBμV)	Result (dBμV)		Conclusion
		With charger		
		802.11b	Idle	
0.15 to 0.5	66 to 56	Fig.A.7.1	Fig.A.7.2	P
0.5 to 5	56			
5 to 30	60			
NOTE: The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.5 MHz.				

WLAN (Average Limit)

Frequency range (MHz)	Average Limit (dBμV)	Result (dBμV)		Conclusion
		With charger		
		802.11b	Idle	
0.15 to 0.5	56 to 46	Fig.A.7.1	Fig.A.7.2	P
0.5 to 5	46			
5 to 30	50			
NOTE: The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.5 MHz.				

**Conclusion: Pass**

**Test graphs as below:**



**Fig.A.7.1 AC Powerline Conducted Emission-802.11b with CBA0066AG0C1**

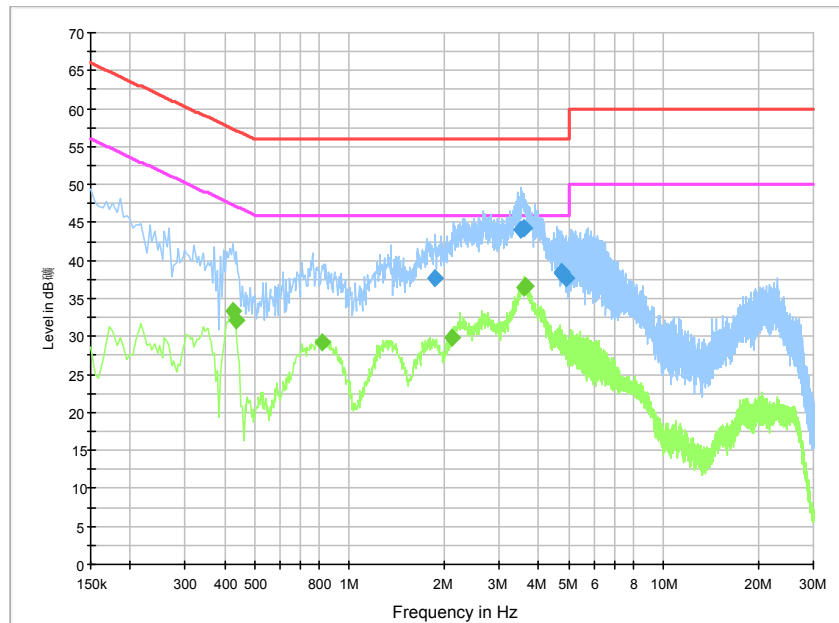
Note: The graphic result above is the maximum of the measurements for both phase line and neutral line.

Final Result 1

Frequency (MHz)	QuasiPeak (dBμV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
2.809500	40.9	GND	L1	10.4	15.1	56.0
3.493500	44.1	GND	L1	10.4	11.9	56.0
3.606000	44.0	GND	L1	10.4	12.0	56.0
4.650000	38.7	GND	L1	10.5	17.3	56.0
4.740000	38.0	GND	L1	10.5	18.0	56.0
4.965000	37.8	GND	L1	10.5	18.2	56.0

Final Result 2

Frequency (MHz)	Average (dBμV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.420000	33.2	GND	N	10.4	14.2	47.4
0.433500	32.1	GND	N	10.4	15.1	47.2
1.329000	29.2	GND	N	10.4	16.8	46.0
2.121000	30.0	GND	L1	10.4	16.0	46.0
3.592500	36.6	GND	L1	10.4	9.4	46.0
3.660000	36.1	GND	L1	10.4	9.9	46.0



**Fig.A.7.2 AC Powerline Conducted Emission-Idle with CBA0066AG0C1**

Note: The graphic result above is the maximum of the measurements for both phase line and neutral line.

Final Result 1

Frequency (MHz)	QuasiPeak (dBμV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
1.878000	37.7	GND	N	10.4	18.3	56.0
3.507000	44.1	GND	L1	10.4	11.9	56.0
3.606000	44.3	GND	L1	10.4	11.7	56.0
4.713000	38.3	GND	L1	10.5	17.7	56.0
4.731000	38.4	GND	L1	10.5	17.6	56.0
4.897500	37.7	GND	L1	10.5	18.3	56.0

Final Result 2

Frequency (MHz)	Average (dBμV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.424500	33.4	GND	N	10.4	13.9	47.4
0.433500	32.1	GND	N	10.4	15.1	47.2
0.816000	29.3	GND	N	10.4	16.7	46.0
2.112000	29.8	GND	L1	10.4	16.2	46.0
3.583500	36.5	GND	L1	10.4	9.5	46.0
3.619500	36.6	GND	L1	10.4	9.4	46.0

## **ANNEX B: Accreditation Certificate**



**China National Accreditation Service for Conformity Assessment**  
**LABORATORY ACCREDITATION CERTIFICATE**  
(Registration No. CNAS L0570 )

**Telecommunication Technology Labs,**  
**Academy of Telecommunication Research, MIIT**  
No.52, Huayuan North Road, Haidian District, Beijing, China  
No.51, Xueyuan Road, Haidian District, Beijing, China  
TCL International E City, No. 1001 Zhongshanyuan Road, Nanshan  
District, Shenzhen, Guangdong Province

*is accredited in accordance with ISO/IEC 17025:2005 General Requirements for the Competence of Testing and Calibration Laboratories(CNAS-CL01 Accreditation Criteria for the Competence of Testing and Calibration Laboratories) for the competence to undertake testing and calibration service as described in the schedule attached to this certificate.*

*The scope of accreditation is detailed in the attached schedule bearing the same registration number as above. The schedule form an integral part of this certificate.*

Date of Issue: 2015-11-13  
Date of Expiry: 2017-06-19  
Date of Initial Accreditation: 1998-07-03

Signed on behalf of China National Accreditation Service for Conformity Assessment 

China National Accreditation Service for Conformity Assessment(CNAS) is authorized by Certification and Accreditation Administration of the People' s Republic of China (CNCA) to operate the national accreditation schemes for conformity assessment. CNAS is a signatory of the International Laboratory Accreditation Cooperation Mutual Recognition Arrangement (ILAC MRA) and the Asia Pacific Laboratory Accreditation Cooperation Mutual Recognition Arrangement (APLAC MRA). The validity of the certificate can be checked on CNAS website at <http://www.cnas.org.cn/english/findanaccreditedbody/index.shtml>

\*\*\*END OF REPORT\*\*\*