TESTING LABORATORY
CERTIFICATE #4820.01

FCC PART 15C

TEST REPORT

For

MPOW TECHNOLOGY CO., LIMITED

FLAT/RM 605 6/F FA YUEN COMMERCIAL BUILDING 75-77 FA YUEN STREET
MONGKOK KL HONG KONG

FCC ID: 2AMH2-CA166A

Report Type:	**Product Name:**
Original Report	AUTO-LOCK WIRELESS CAR CHARGER MOUNT

Report Number:	RDG210125015-00
Report Date:	2021-02-07
Reviewed By:	Ivan Cao Assistant Manager
Test Laboratory:	Bay Area Compliance Laboratories Corp. (Dongguan) No.12, Pulong East 1st Road, Tangxia Town, Dongguan, Guangdong, China Tel: +86-769-86858888 Fax: +86-769-86858891 www.baclcorp.com.cn

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GENERAL INFORMATION

Product Description for Equipment Under Test (EUT)

EUT Name:	AUTO-LOCK WIRELESS CAR CHARGER MOUNT
EUT Model:	CA166A
Multiple Model:	CA166B,CA166C
Operation Frequency:	110.5-205kHz
Maximum Wireless Output:	10W
Rated Input Voltage:	DC 5V or 9V from adapter
Serial Number:	RDG210125015-RF-S1
EUT Received Date:	2021.01.26
EUT Received Status:	Good

Note: The series product, models CA166A,CA166B,CA166C are electrically identical, CA166A was fully tested .The difference between them was explained in the declaration letter.

Objective

This Type approval report is prepared on behalf of *MPOW TECHNOLOGY CO., LIMITED* in accordance with Part 2, Subpart J, and Part 15, Subparts A and C of the Federal Communications Commission's rules.

The objective is to determine the compliance of the EUT with FCC rules, 15.203, 15.205, 15.209.

Test Methodology

All measurements detailed in this Test Report were performed in accordance with ANSI C63.10-2013 "American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices".

All emissions measurement was performed and Bay Area Compliance Laboratories Corp. (Dongguan). The radiated testing was performed at an antenna-to-EUT distance of 3 meters.

Measurement Uncertainty

Parameter	Measurement Uncertainty
Occupied Channel Bandwidth	±5 %
radiated Emissions	9kHz~30MHz: 4.12dB 30M~200MHz: 4.58 dB for Horizontal, 4.59 dB for Vertical 200M~1GHz: 4.83 dB for Horizontal, 5.85 dB for Vertical
Temperature	±1℃
Humidity	±5%
DC and low frequency voltages	±0.4%
Duty Cycle	1%
AC Power Lines Conducted Emission	3.12 dB (150 kHz to 30 MHz)

Note: Otherwise required by the applicant or Product Regulations, Decision Rule in this report did not consider the uncertainty. The extended uncertainty given in this report is obtained by combining the standard uncertainty times the coverage factor K with the 95% confidence interval.

Test Facility

The Test site used by Bay Area Compliance Laboratories Corp. (Dongguan) to collect test data is located on the No.12, Pulong East 1st Road, Tangxia Town, Dongguan, Guangdong, China.

The lab has been recognized as the FCC accredited lab under the KDB 974614 D01 and is listed in the FCC Public Access Link (PAL) database, FCC Registration No. : 897218, the FCC Designation No. : CN1220.

The lab has been recognized by Innovation, Science and Economic Development Canada to test to Canadian radio equipment requirements, the CAB identifier : CN0022.

Declarations

BACL is not responsible for the authenticity of any test data provided by the applicant. Data included from the applicant that may affect test results are marked with a triangle symbol "△". Customer model name, addresses, names, trademarks etc. are not considered data.

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.

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SYSTEM TEST CONFIGURATION

Justification

The system was configured for testing in a test mode

The device is a wireless charger operation on frequency 110.5 kHz - 205 kHz.

Test was performed at Maximum wireless load mode(10 W output), which was controlled by Adjustable wireless Charging Load.

EUT Exercise Software

No software used in test.

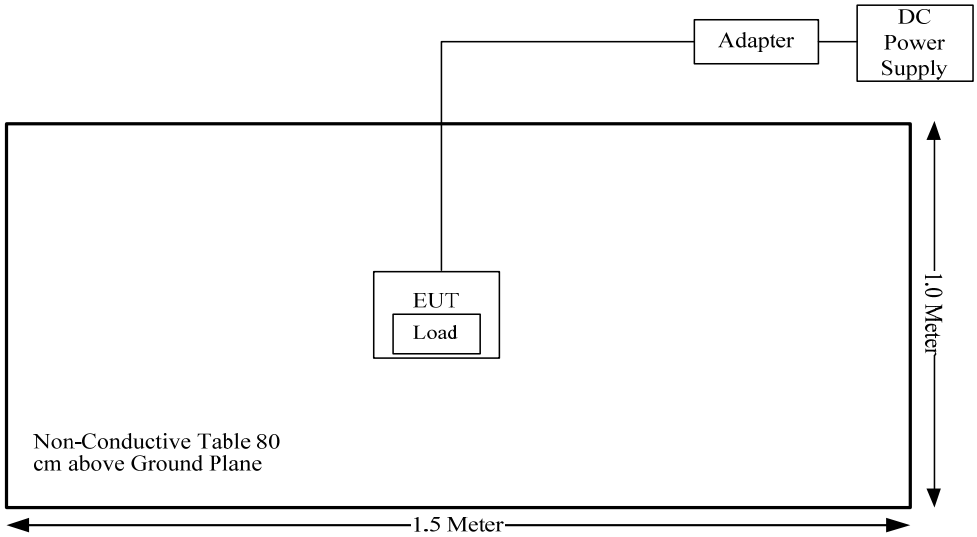
Support Equipment List and Details

Manufacturer	Description	Model	Serial Number
C-Car	Car Charger adapter	CD122	CD122
HUIER	Wireless Charging Load	WXC15WL	HEWX15W002
Pro instrument	DC Power Supply	pps3300	3300012

Support Cable List and Details

Cable Description	Shielding Type	Ferrite Core	Length (m)	From	To
USB Cable	yes	no	0.8	USB Port of adapter	Type-C port of EUT

Block Diagram of Test Setup



SUMMARY OF TEST RESULTS

FCC Rules	Description of Test	Result
FCC§15.203	Antenna Requirement	Compliance
FCC§15.207	AC Line Conducted Emission	Not Applicable
§15.209 §15.205	Radiated Emission Test	Compliance

Not Applicable: the device is powered by Car Battery.

FCC§15.203 - ANTENNA REQUIREMENT

Applicable Standard

An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section.

Antenna Connected Construction

The EUT has one integral antenna arrangement, which was permanently attached and fulfill the requirement of this section. Please refer to the EUT photos.

Result: Compliance.

FCC §15.205 & §15.209 - RADIATED EMISSIONS TEST

Applicable Standard

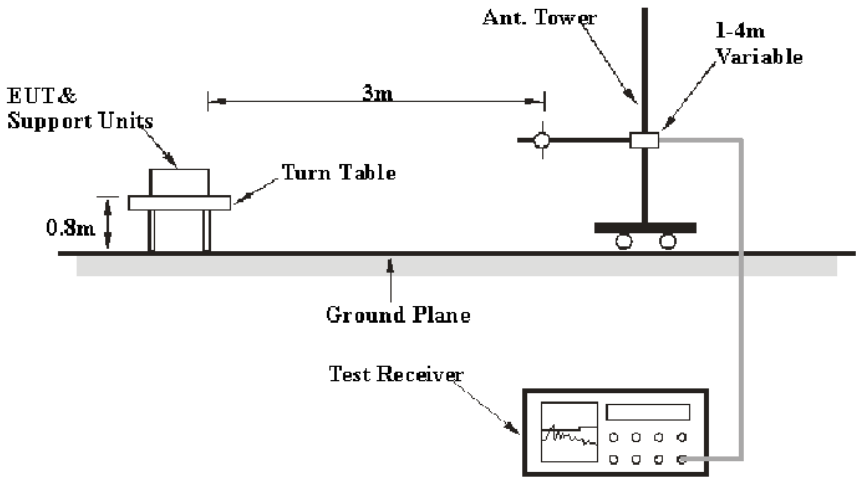
As per FCC Part 15.209

(a) Except as provided elsewhere in this subpart, the emissions from an intentional radiator shall not exceed the field strength levels specified in the following table:

Frequency (MHz)	Field strength (microvolts/meter)	Measurement distance (meters)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	30
30-88	100**	3
88-216	150**	3
216-960	200**	3
Above 960	500	3

**Except as provided in paragraph (g), fundamental emissions from intentional radiators operating under this section shall not be located in the frequency bands 54-72 MHz, 76-88 MHz, 174-216 MHz or 470-806 MHz. However, operation within these frequency bands is permItted under other sections of this part, e.g., §§15.231 and 15.241.

EUT Setup



The radiated emission tests were performed in the 3-meter chamber test site, using the setup accordance with the ANSI C63.10-2013. The specification used was the FCC Part Subpart C limits.

The spacing between the peripherals was 10 cm.

EMI Test Receiver Setup

The system was investigated from 9 kHz to 1 GHz.

During the radiated emission test, the EMI test Receiver was set with the following configurations:

Frequency Range	RBW	Video B/W	Measurement
9 kHz – 150 kHz	200 Hz	1 kHz	QP/Average
150 kHz – 30 MHz	9 kHz	30 kHz	QP/Average
30 MHz – 1000 MHz	120 kHz	300 kHz	QP

The emission limits shown in the above table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9-90 kHz, 110-490 kHz and above 1000 MHz. Radiated emission limits in these three bands are based on measurements employing an average detector.

If the maximized peak measured value complies with the limit, then it is unnecessary to perform an QP/Average measurement

Corrected Amplitude & Margin Calculation

The Corrected Amplitude is calculated by adding the Antenna Factor and Cable Loss, and subtracting the Amplifier Gain from the Amplitude reading. The basic equation is as follows:

Corr. Ampl. = Meter Reading + Antenna Factor + Cable Loss - Amplifier Gain

The "**Margin**" column of the following data tables indicates the degree of compliance with the applicable limit. For example, a margin of 7dB means the emission is 7dB below the limit. The equation for margin calculation is as follows:

Margin = Limit - Corr. Ampl.

Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
EMCO	Passive Loop	6512	9706-1206	2020-03-05	2023-03-05
Sunol Sciences	Antenna	JB3	A060611-1	2020-11-10	2023-11-10
R&S	EMI Test Receiver	ESR3	102453	2020-09-12	2021-09-12
Unknown	Coaxial Cable	C-NJNJ-50	C-0075-01	2020-09-05	2021-09-05
Unknown	Coaxial Cable	C-NJNJ-50	C-0400-01	2020-09-05	2021-09-05
Unknown	Coaxial Cable	C-NJNJ-50	C-1400-01	2020-05-06	2021-05-06
HP	Amplifier	8447D	2727A05902	2020-09-05	2021-09-05
Farad	Test Software	EZ-EMC	V1.1.4.2	N/A	N/A

**** Statement of Traceability:*** *Bay Area Compliance Laboratories Corp. (Dongguan) attests that all calibrations have been performed, traceable to National Primary Standards and International System of Units (SI).*

Test Results Summary

According to the data in the following table, the EUT complied with the FCC Part 15.209&15.205.

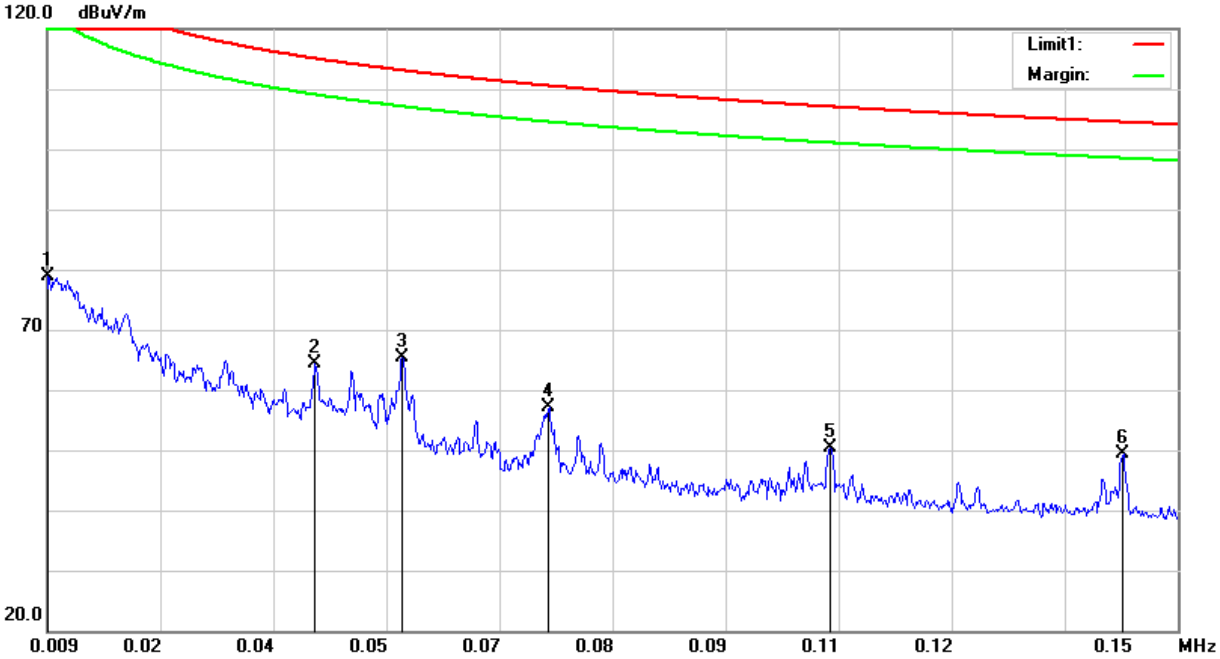
Test Data

Environmental Conditions

Temperature:	23.3°C
Relative Humidity:	44%
ATM Pressure:	100.8 kPa
Test Engineer:	Jalon Liu
Test date:	2021-02-04

1) Below 150kHz:

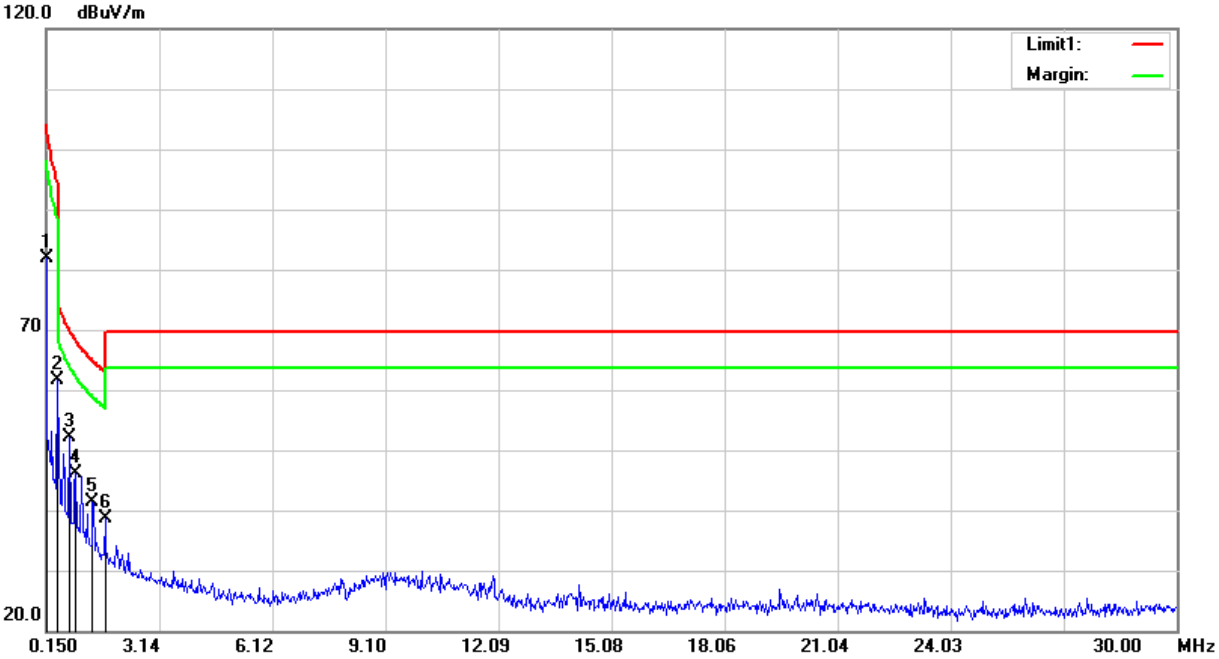
Horizontal:



Frequency (MHz)	Receiver Reading (dBµV)	Detector	Correction Factor (dB/m)	Cord. Amp. (dBµV/m)	Limit (dBµV/m)	Margin (dB)
0.0091	-9.78	peak	88.61	78.83	128.42	49.59
0.0424	-10.22	peak	74.70	64.48	115.06	50.58
0.0533	-7.59	peak	72.98	65.39	113.07	47.68
0.0714	-12.50	peak	69.57	57.07	110.53	53.46
0.1067	-15.88	peak	66.34	50.46	107.04	56.58
0.1431	-14.80	peak	64.26	49.46	104.49	55.03

2) Below 30 MHz

Horizontal:

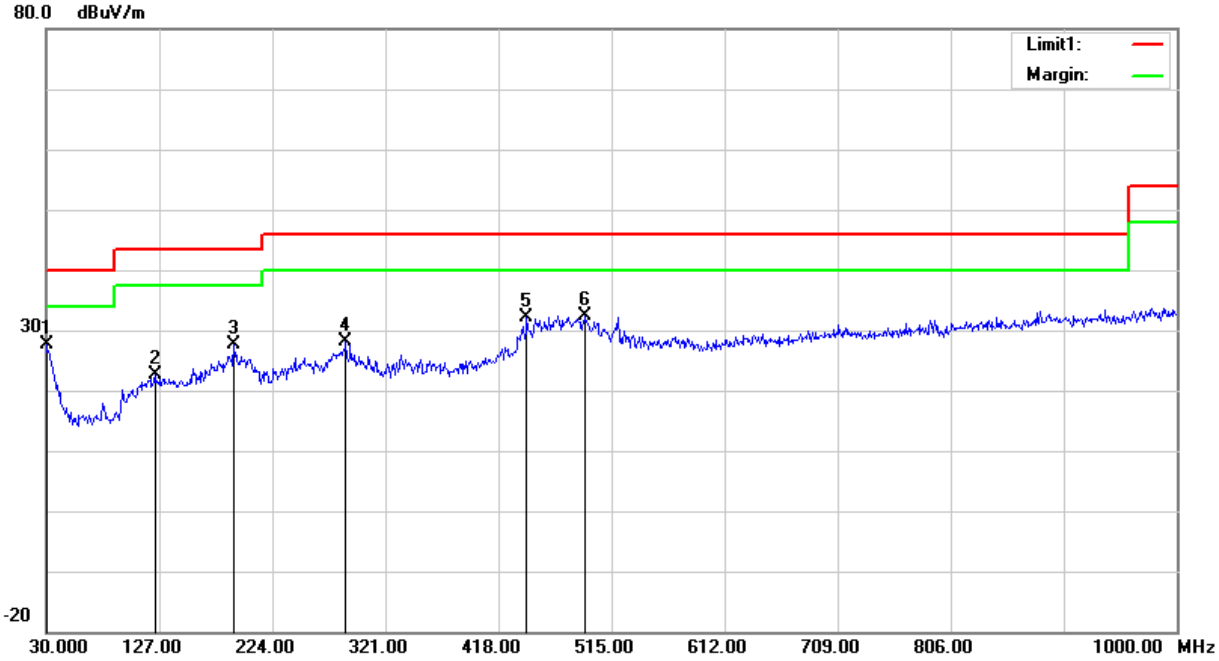


Frequency (MHz)	Receiver Reading (dBµV)	Detector	Correction Factor (dB/m)	Cord. Amp. (dBµV/m)	Limit (dBµV/m)	Margin (dB)
0.1500*	43.35	peak	38.53	81.88	104.08	22.20
0.4485	33.43	peak	28.24	61.67	94.57	32.90
0.7470	28.13	peak	24.00	52.13	70.13	18.00
0.9261	23.55	peak	22.48	46.03	68.27	22.24
1.3736	21.70	peak	19.68	41.38	64.84	23.46
1.7020	20.90	peak	17.83	38.73	62.98	24.25

***Fundamental**

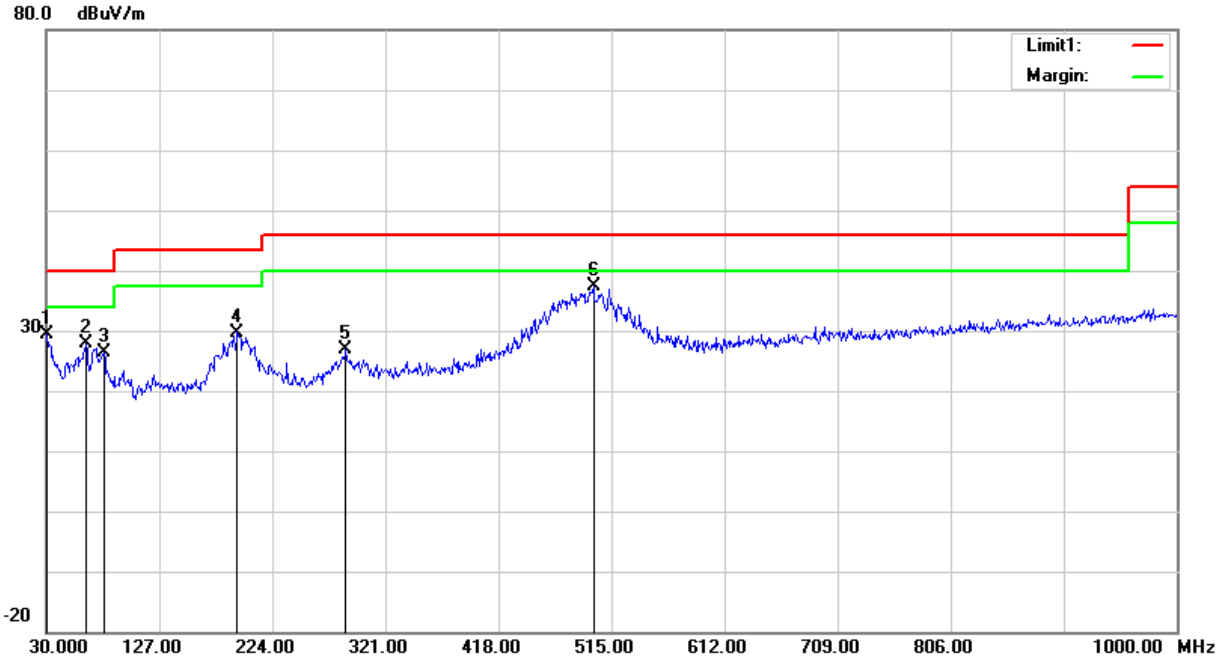
3) Below 1GHz

Horizontal:



Frequency (MHz)	Receiver Reading (dBµV)	Detector	Correction Factor (dB/m)	Cord. Amp. (dBµV/m)	Limit (dBµV/m)	Margin (dB)
30.0000	26.27	peak	1.46	27.73	40.00	12.27
123.1200	27.28	peak	-4.76	22.52	43.50	20.98
191.0200	34.49	peak	-6.94	27.55	43.50	15.95
287.0500	31.93	peak	-3.89	28.04	46.00	17.96
442.2500	33.53	peak	-1.28	32.25	46.00	13.75
492.6900	32.82	peak	-0.47	32.35	46.00	13.65

Vertical:



Frequency (MHz)	Receiver Reading (dBµV)	Detector	Correction Factor (dB/m)	Cord. Amp. (dBµV/m)	Limit (dBµV/m)	Margin (dB)
30.9700	28.66	peak	0.74	29.40	40.00	10.60
63.9500	39.73	peak	-11.87	27.86	40.00	12.14
79.4700	37.71	peak	-11.40	26.31	40.00	13.69
193.9300	36.46	peak	-6.71	29.75	43.50	13.75
287.0500	30.69	peak	-3.89	26.80	46.00	19.20
499.4800	37.70	peak	-0.39	37.31	46.00	8.69

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