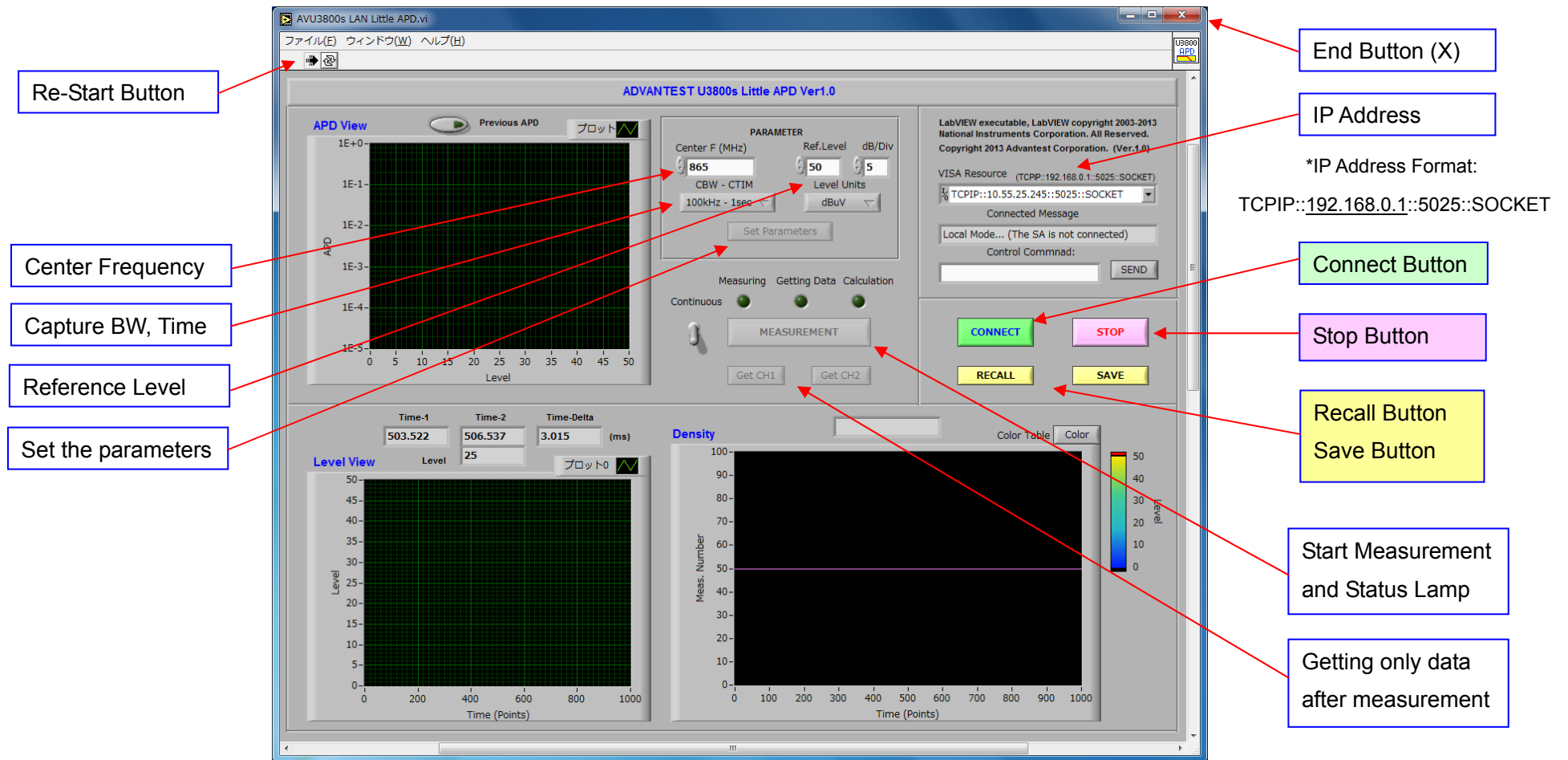


U3800 Cross Domain Analyzer (CDA) Little APD Manual

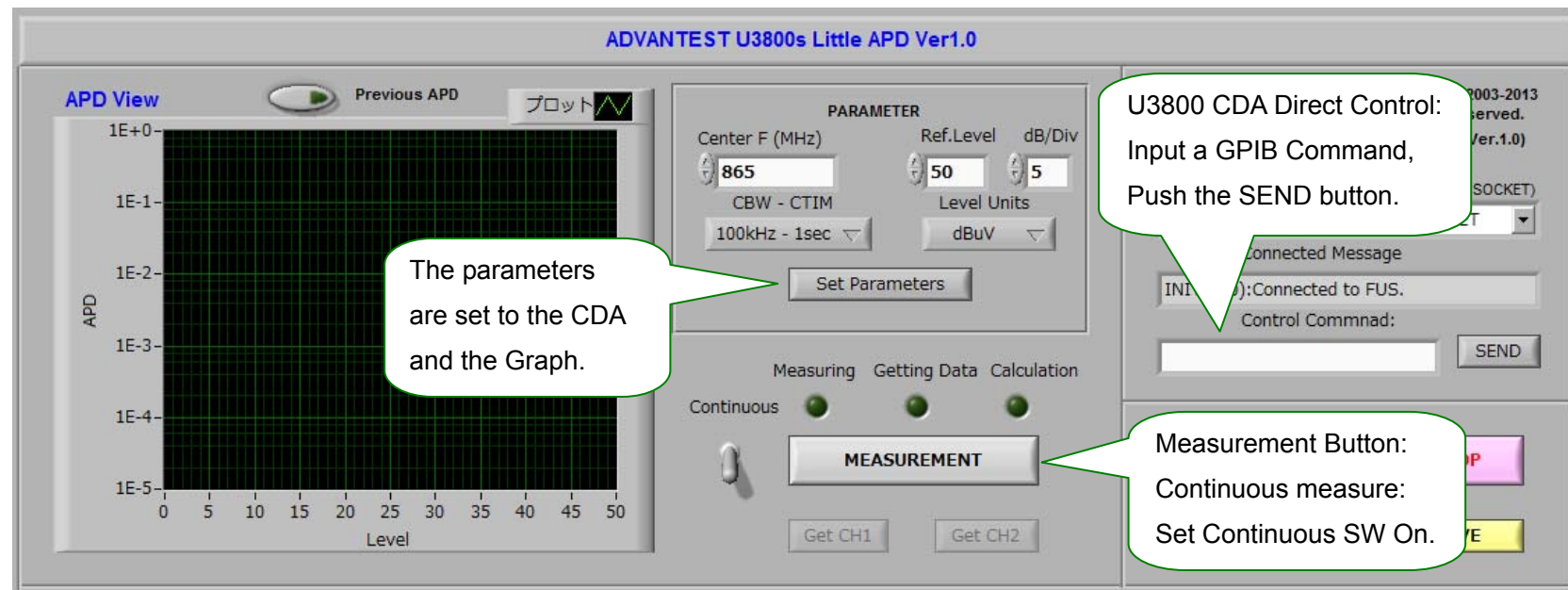
Ver.1.0: JAN/8/2014

ADVANTEST

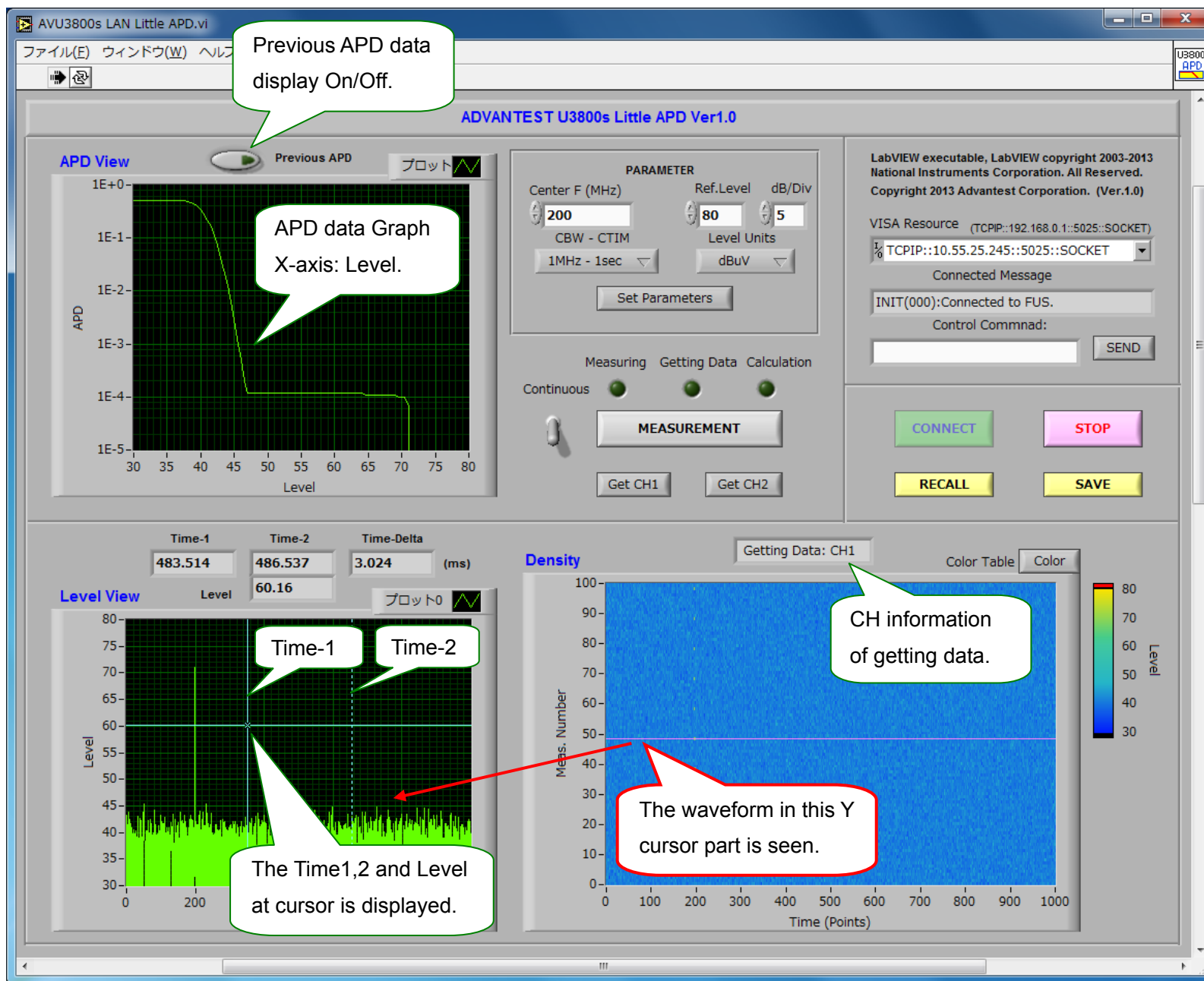
1. The installation: Execute the setup.exe in directory Installer. (Operating conditions: U3800, Windows XP and Microsoft network, etc.)
2. Driver: NI_VISA made by the National Instruments is necessary. When the PC has not the driver,
Please install the driver from the home page of NI or an attached driver. (There are for XP/2000 or VISTA/7)
3. The Start: All Program → U3800 Little APD → U3800 Little APD → Execute



4. Measurement preparation-1: Confirm the IP address of the U3800 Cross Domain Analyzer (CDA), and input it to the IP address column of the menu.
(The previous setting value is displayed at the start-up of software. In case of the same condition it, the correction is unnecessary.)
5. Measurement preparation-2: Input the measurement Center Frequency and select the Capture Band & Time. (The separate setting cannot be done.)
6. Measurement preparation-3: Input the Reference Level and dB/Div, select Level units. (dBm or dBuV)
7. Measurement preparation-4: Push the CONNECT Button. (when connect to the CDA) If it is only a data display of the recall file, it is unnecessary.
8. Start measurement: Push the MEASUREMENT Button. (The CANCEL button is displayed. Please push when you cancel.)
9. Continuous measurement: The Continuous switch is turned on. (Make it to turning off when stopping.)
10. Change in measurement condition: Change the parameters. And push the Set Parameters button when the measurement has stopped.
11. The Stop and the Re-start: It stops with the STOP button. Re-start: Push an upper right “=>” button and push the CONNECT button.
12. Display Small Help: When HELP is turned on with software, and the mouse is applied, the explanation is displayed. (Menu Bar → Help(H) → Display)



13. The example of the measurement screen is shown on the following page. (When the graph is not seen, it displays it by the scroll.)



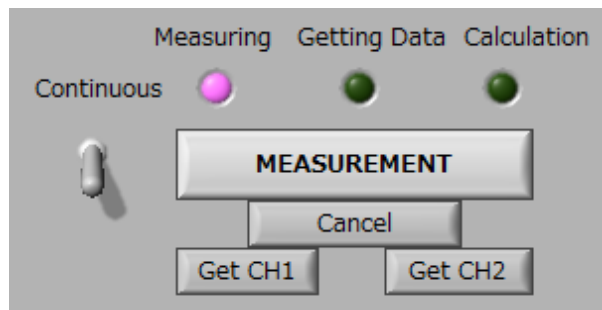
14. Explanation of graph

- **APD View:** After amplitude probability distribution is operated, the APD data is displayed. (Y-axis: APD, X-axis: Level)
- **Density:** All of the measurement data are displayed in the light and shade graph at the level. (Spectrogram Graph)
100 waveforms are sequentially arranged and displayed forward backward by the division of measuring time into 100.
The row selected with the cursor from among that is displayed as a time base waveform in a left graph.
- **Level View:** The Y cursor part in the Density graph is displayed. The level that changes by moving Y cursor can be observed.
Moreover, there are two cursors in the Level View graph, and the time of two places and the level of one place are displayed.

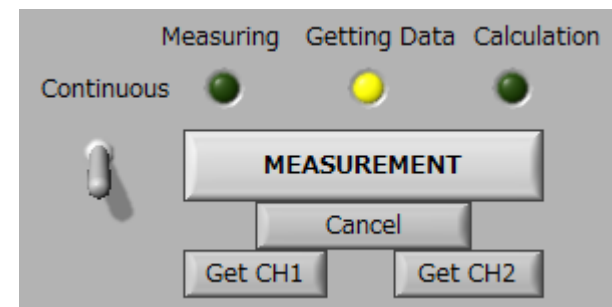
15. Measurement and data acquisition of each channel

■ Lamp Status

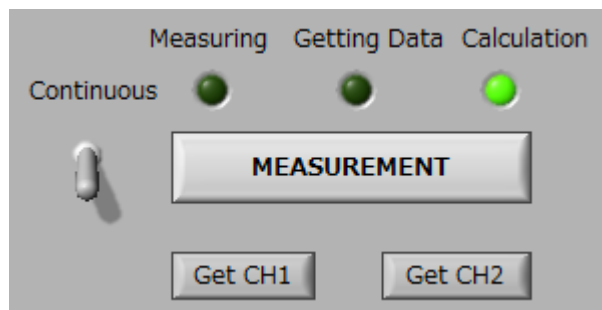
(1) During Measurement



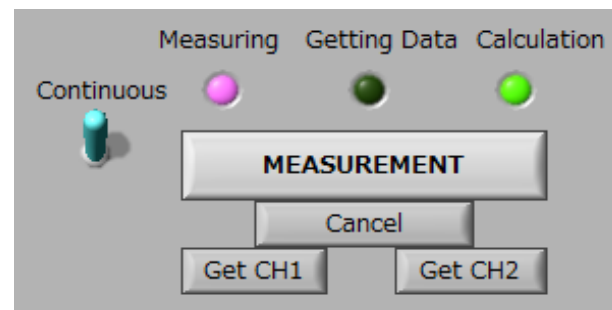
(2) Getting data from Analyzer (CDA)



(3) Calculation of APD



(4) Continuous Measurement (parallel execution)



■ Method of changing measurement channel:

Default measurement is CH1. (Afterwards, measure it with CH2 when measuring it with Get CH2 after data acquisition.)

Get CH1: When the measurement ends, the data of CH1 can be acquired. (Do not measure it.)

Get CH2: When the measurement ends, the data of CH2 can be acquired. (Do not measure it.)

■ Method of comparison of continuous data or comparison of two signal data:

The Previous key in the APD graph is turned on. Because the last measurement data of APD is displayed in yellow, APD can be compared.

Moreover, when it measures with CH1 (CH2) in the Channel comparison and the measurement ends, Push Get CH2 (Get CH1).

The following measurement is done with Channel to which Get CH1 (2) is pushed.

Density and the Level View graph become the data of the channel displayed in the channel information column of the acquisition data.

16. Utility Function

Four following items are set at the same time as CONNECT. (The menu is under main screen.)

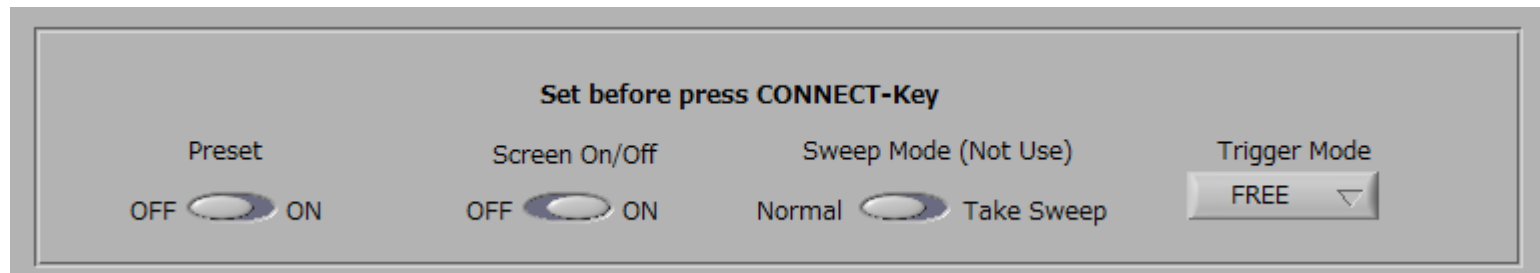
After CONNECT, it is not possible to set it. If the setting change is necessary, the Control Command function can be used.

*Preset: Cross Domain Analyzer's instrument preset ON/OFF

*Screen On/Off: Cross Domain Analyzer's screen display ON/OFF

*Sweep Mode: Get Trace mode: This software does not use this function.

*Trigger Mode: Sweep trigger mode



17. Save/ Recall Function

The measurement data in all graphs can be preserved by the Save function. Moreover, all graphs are displayed from data that does the recall in the Recall function. (If the Recall is done, the measurement is turned off)

Because the file format is CSV, a recallable file can be made by suiting to the file format shown on the following page and making the file.

Therefore, it is also possible to use the Density graph and the APD graph by the arbitrary data. Moreover, when the recall is done, the Line-1 comment line of the file is displayed in the Connected Message column. (It is possible to use it to confirm the file)

18. Format of saved code

Code of Capture BW, Time:

0: 3MHz, 100ms
1: 1MHz, 100ms
2: 1MHz, 1sec
3: 100kHz, 1sec
4: 100kHz, 10sec
5: 10kHz, 10sec

Code of Units:

0: dBm 1: dBuV

Code of Channel:

1: CH1 2: CH2

Level Step of APD:

Full scale of Level (X-axis) / 100

(101 Points)

-APD Graph Position vs APD data:

Left X-axis, ---

Right X-axis

-Example: Ref.L=50, dBuV, 5dB/Div

(0 dBuV), (0.5 dBuV), ---

(50 dBuV)

-Xls File Address: (Column-Line)

(CW-10), (CW-11), ---

(CW-110)

Format of CSV File

COLUMN: A B C D

(for Graph)

LINE:

Trace(1), Trace(2), Trace(3), Trace(n),

Trace(100), Dummy, APD

1. Comment:
2. Comment:
3. Center Frequency
4. Capture BW, Time
5. Ref. Level
6. dB/ Division
7. Units
8. Channel No.
9. Comment:
10. Data (1), Trace(1)
11. Data (2), Trace(1)
12. Data (3), Trace(1)
- n. Data (n), Trace(1)

	A	B	C	D	E	F	G	H
1	* AT Little APD: 20131226161712CH1							
2	* Data from line3: CF: CBW_Code(0-5): Ref: dB/Div: Units_(0/1)dBm/dBuV: CHx: *							
3	865							
4	3							
5	50							
6	5							
7	1							
8	1							
9	* Data from line10: Line (N Points) 0-1000: Column (N Times) 0-99 *							
10	4.398544	6.801193	6.343071	6.875549	3.700897	9.322853	4.984901	6.653
11	-5.07629	4.163025	0.302216	-0.42228	-1.91964	-6.78654	-3.125	-0.52
12	7.450432	8.515266	1.67907	-3.89063	-1.32211	-1.17391	-0.74589	1.746
13	2.992912	2.980583	-1.79128	-17.5619	-32.5383	5.129707	7.390106	-3
14	0.69252	4.742805	-3.4637	-1.18704	1.368889	9.231117	6.723	2.916
15	-7.60791	-12.7757	-10.283	-21.6552	-17.8991	-10.3265	5.415268	-9.40

[illegible]

Start-Line 10:

APD (101)

Start-Line 111:

Previous
APD
(101)

**1010. Data (1001),
Trace(1)**

1002	20.74909	22.15847	19.70104	21.87604	20.67744	18.84532	19.63481	20.84532
1003	15.36225	16.39913	17.93979	11.96495	14.69684	17.61782	16.69136	17.69136
1004	17.69067	13.31036	12.86048	11.95483	12.81536	16.56953	12.43263	16.56953
1005	23.30404	21.70303	21.43607	20.35028	20.78218	21.21912	22.29118	22.29118
1006	20.30067	19.33247	19.03398	19.08435	18.81081	17.99628	19.50404	16.50404
1007	8.931702	4.639313	4.665764	12.38612	12.00678	10.28552	9.661919	13.661919
1008	11.75314	9.601768	9.913582	12.77692	11.34133	12.43662	1.593559	12.43662
1009	-0.54349	5.810219	-6.58154	6.085068	2.474014	6.489502	2.58062	9.08062
1010	8.710999	13.70834	10.61594	7.397469	8.764328	6.436569	4.986572	8.636569
1011								
1012								

Trace(1)

Density Graph: (Front)

17.48984	18.38757	16.86025	0
15.28829	13.12282	14.38801	0
20.56178	19.37634	20.02542	0
19.81813	22.82092	18.6268	0
16.72985	16.13964	17.62773	0
4.446442	-15.8441	5.642792	0
10.87983	10.30782	11.67181	0
3.192528	0.267357	5.397079	0
5.847908	3.173882	3.888885	0

(Rear)