

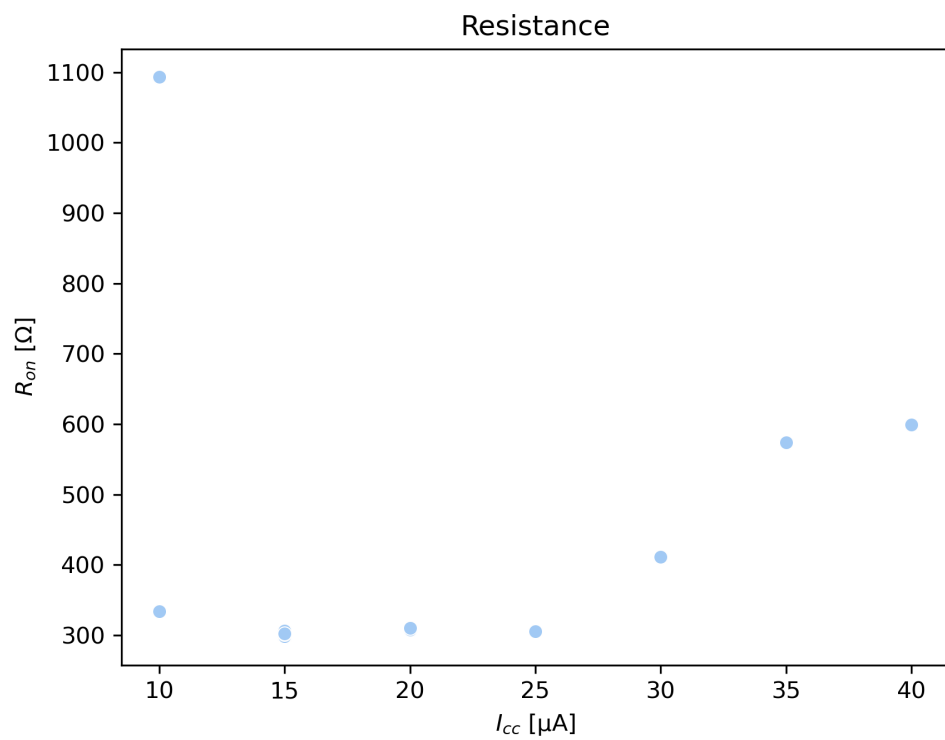
## (device,0,0,-1,-1,2,2) Characteristics

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- **Cell Size:** 10um
- **Times Accessed:** 27
- **Last Measurement:** 2022/February/28 at 05:01PM

### Summary

Cycle #	Set Icc ( $\mu$ A)	Set Voltage (V)	R_on ( $\Omega$ )	R2
1	10.0	2.80	333.83	1.000
2	10.0	2.80	96753327.60	0.194
3	20.0	4.15	309.44	1.000
4	20.0	4.15	308.05	1.000
5	20.0	4.15	310.35	1.000
6	25.0	4.35	305.26	1.000
7	30.0	4.55	411.54	1.000
8	35.0	4.50	574.24	0.998
9	40.0	4.40	599.46	0.998
10	10.0	2.20	1093.37	1.000
11	15.0	4.55	306.12	1.000
12	15.0	4.55	297.47	1.000
13	15.0	4.55	297.90	1.000
14	15.0	4.55	298.43	1.000
15	15.0	4.55	301.28	1.000
16	15.0	4.55	302.05	1.000

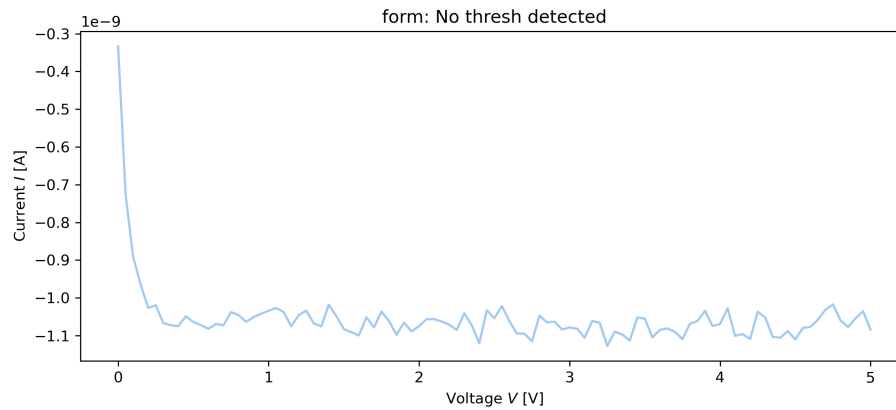


## form

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- **Time:** 04:16:09PM
- **Icc:** 10.0uA
- **Voltage Range:** 0V  $\rightarrow$  5V
- **Target Ramp Rate:** 1V/s
- **True Ramp Rate:** 1.069 V/s\*
- **Cycle:** 1
- **Error:** Set failed

Failure to form. Bad probe to pad contact. A: Copper, B: Platinum.

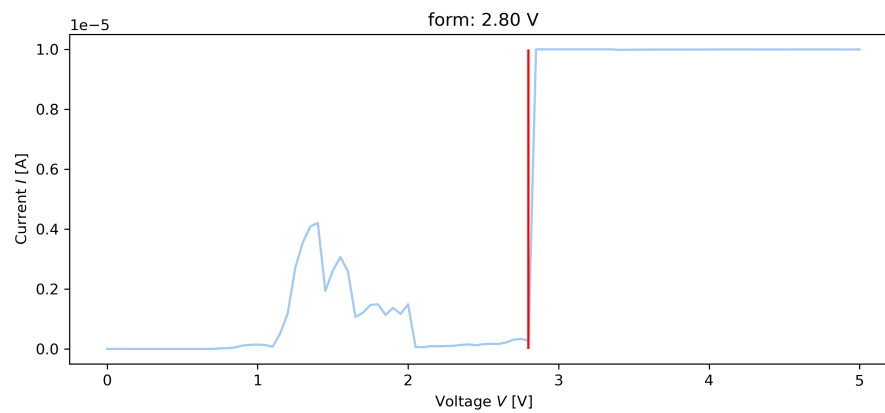


## form

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- **Time:** 04:16:59PM
- **Icc:** 10.0uA
- **Voltage Range:** 0V  $\rightarrow$  5V
- **Target Ramp Rate:** 1V/s
- **True Ramp Rate:** 1.072 V/s\*
- **Cycle:** 1
- **Set Voltage:** 2.80 V

Success, but strange curve in the beginning. A: Copper, B: Platinum.

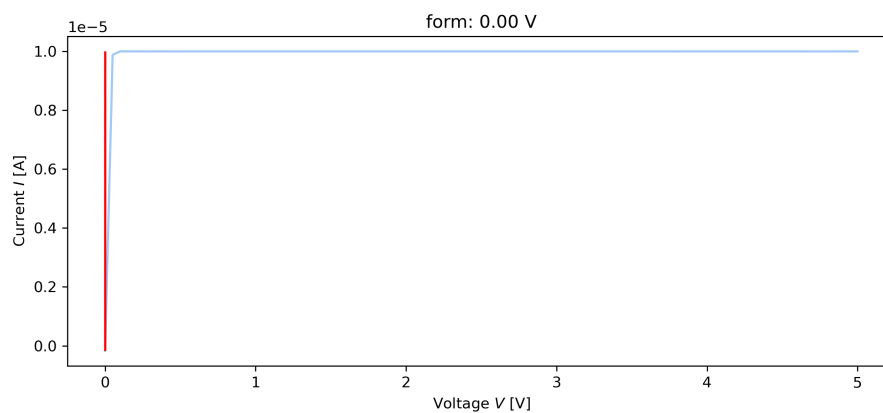


## form

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- **Time:** 04:17PM
- **Icc:** 10.0uA
- **Voltage Range:** 0V  $\rightarrow$  5V
- **Target Ramp Rate:** 1V/s
- **True Ramp Rate:** 1.842 V/s\*
- **Cycle:** 1
- **Error:** Set failed

Intention was just to observe, form success confirmed. A: Copper, B: Platinum.

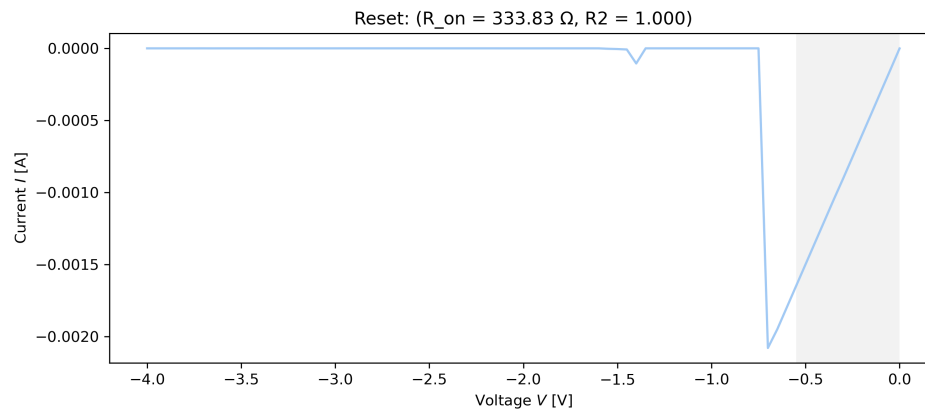


## reset

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- **Time:** 04:19PM
- **I<sub>cc</sub>:** 5.0mA
- **Voltage Range:** 0V → -4V
- **Target Ramp Rate:** 1V/s
- **True Ramp Rate:** -1.342 V/s\*
- **Cycle:** 1
- **Resistance:** 333.83 Ω
- **Linear Fit R2:** 1.000

Success. AV column missing, copied from run 2202281620. This run was a near perfect reset. A: Copper, B: Platinum.

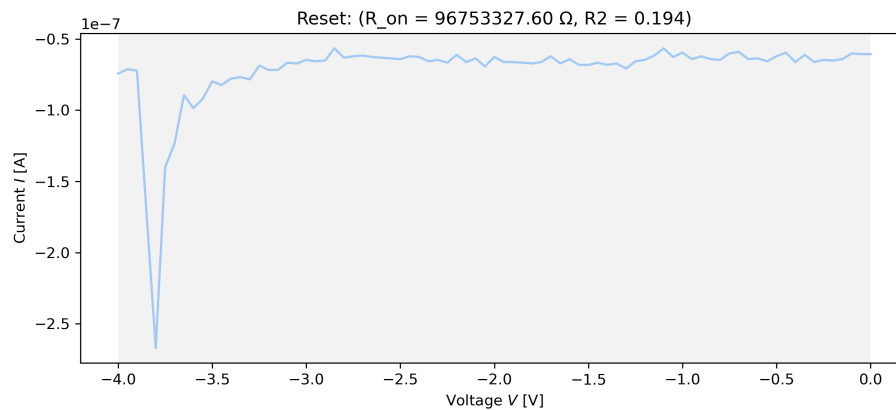


## reset

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- **Time:** 04:20PM
- **I<sub>cc</sub>:** 5.0mA
- **Voltage Range:** 0V → -4V
- **Target Ramp Rate:** 1V/s
- **True Ramp Rate:** -1.068 V/s\*
- **Cycle:** 2
- **Resistance:** 96753327.60 Ω
- **Linear Fit R2:** 0.194

Retry and observation from run 2202281619 due to missing AV column. A: Copper, B: Platinum.

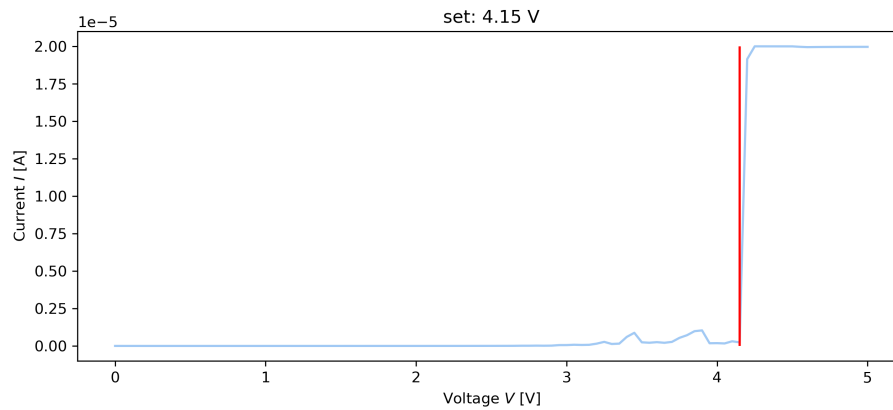


## set

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- **Time:** 04:26PM
- **Icc:** 20.0uA
- **Voltage Range:** 0V  $\rightarrow$  5V
- **Target Ramp Rate:** 1V/s
- **True Ramp Rate:** 1.069 V/s\*
- **Cycle:** 3
- **Set Voltage:** 4.15 V

Successfull set. A: Copper, B: Platinum.



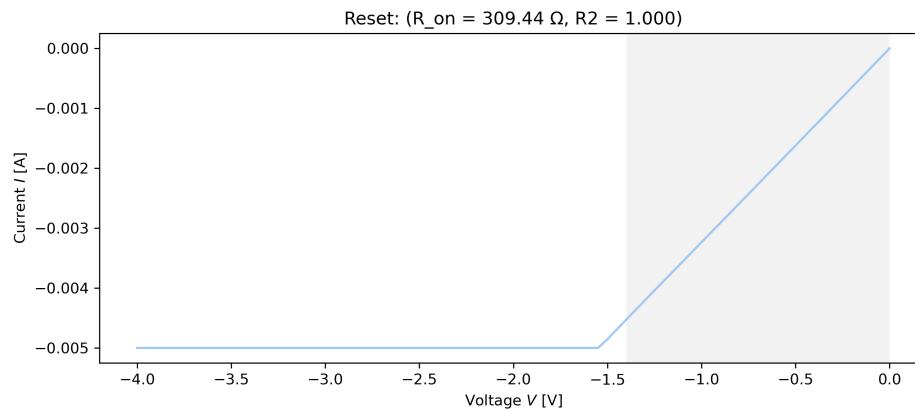


## reset

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- **Time:** 04:29PM
- **I<sub>cc</sub>:** 5.0mA
- **Voltage Range:** 0V → -4V
- **Target Ramp Rate:** 1V/s
- **True Ramp Rate:** -1.609 V/s\*
- **Cycle:** 3
- **Resistance:** 309.44 Ω
- **Linear Fit R<sup>2</sup>:** 1.000

Failure to reset. A: Copper, B: Platinum.

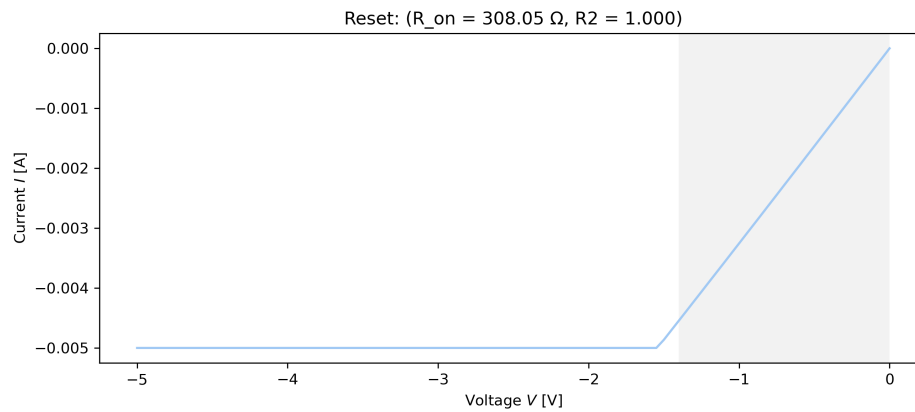


## reset

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- **Time:** 04:30PM
- **I<sub>cc</sub>:** 5.0mA
- **Voltage Range:** 0V → -5V
- **Target Ramp Rate:** 1V/s
- **True Ramp Rate:** -1.609 V/s\*
- **Cycle:** 4
- **Resistance:** 308.05 Ω
- **Linear Fit R<sup>2</sup>:** 1.000

Reset failure. A: Copper, B: Platinum

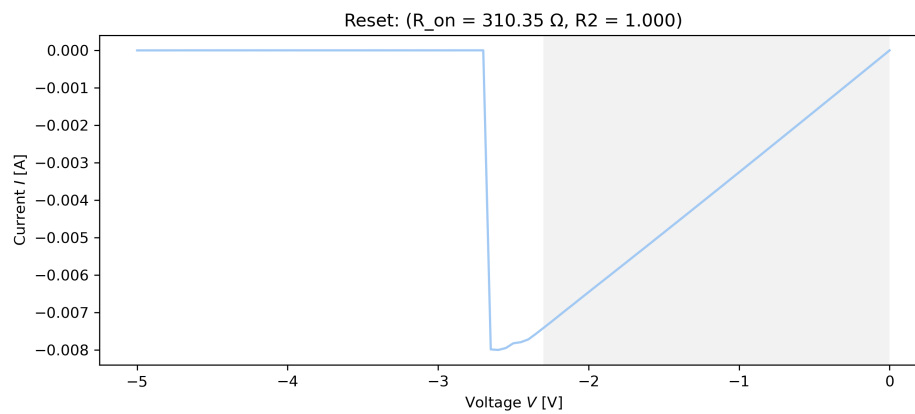


## reset

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- **Time:** 04:31PM
- **I<sub>cc</sub>:** 8.0mA
- **Voltage Range:** 0V → -5V
- **Target Ramp Rate:** 1V/s
- **True Ramp Rate:** -1.608 V/s\*
- **Cycle:** 5
- **Resistance:** 310.35 Ω
- **Linear Fit R<sup>2</sup>:** 1.000

Reset success. A: Copper, B: Platinum.

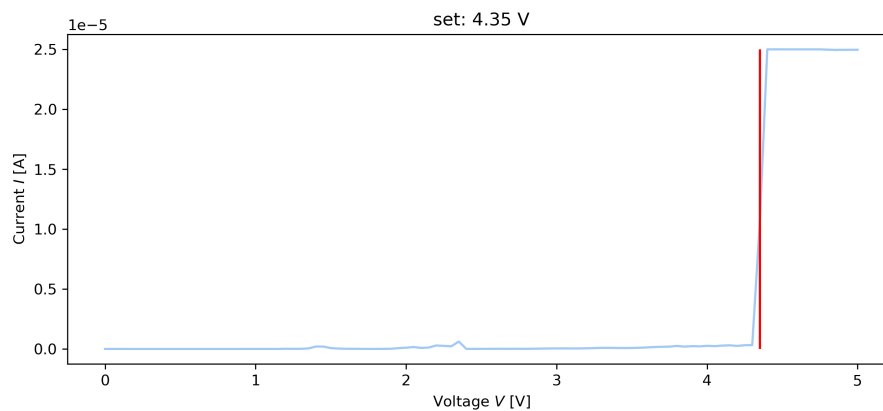


## set

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- **Time:** 04:34PM
- **I<sub>cc</sub>:** 25.0uA
- **Voltage Range:** 0V → 5V
- **Target Ramp Rate:** 1V/s
- **True Ramp Rate:** 1.069 V/s\*
- **Cycle:** 6
- **Set Voltage:** 4.35 V

Successful set. A: Copper, B: Platinum.

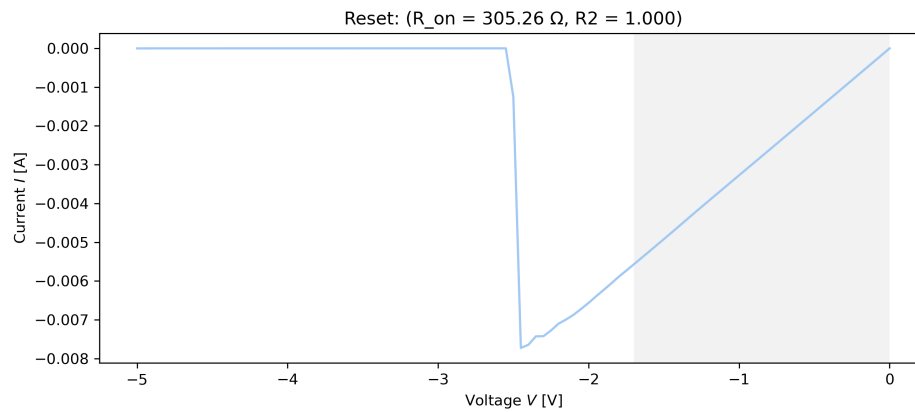


## reset

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- **Time:** 04:36PM
- **I<sub>cc</sub>:** 8.0mA
- **Voltage Range:** 0V → -5V
- **Target Ramp Rate:** 1V/s
- **True Ramp Rate:** -1.609 V/s\*
- **Cycle:** 6
- **Resistance:** 305.26 Ω
- **Linear Fit R<sup>2</sup>:** 1.000

Successful reset. A: Copper, B: Platinum.

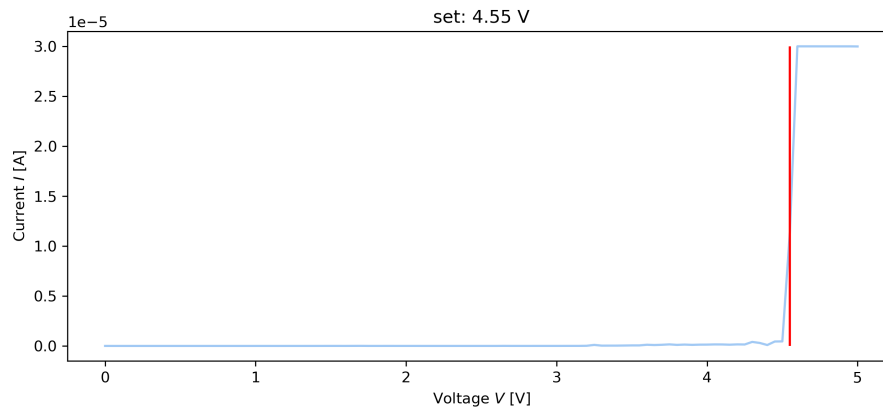


## set

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- **Time:** 04:37PM
- **Icc:** 30.0uA
- **Voltage Range:** 0V  $\rightarrow$  5V
- **Target Ramp Rate:** 1V/s
- **True Ramp Rate:** 1.069 V/s\*
- **Cycle:** 7
- **Set Voltage:** 4.55 V

Set success. A: Copper, B: Platinum.

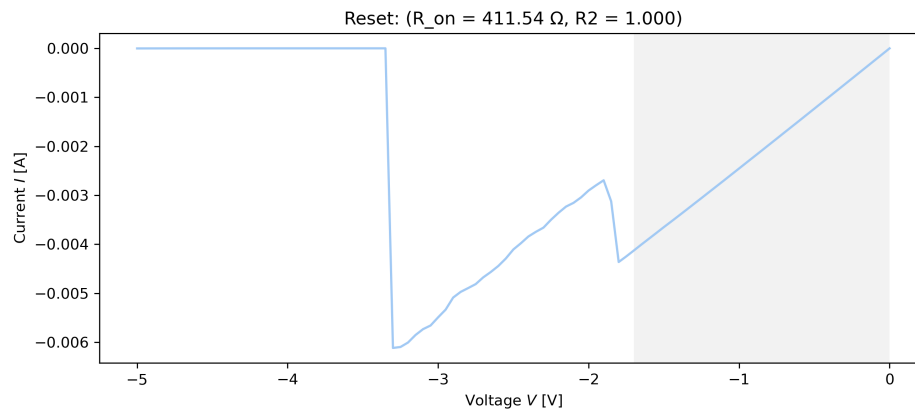


## reset

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- **Time:** 04:38PM
- **I<sub>cc</sub>:** 8.0mA
- **Voltage Range:** 0V → -5V
- **Target Ramp Rate:** 1V/s
- **True Ramp Rate:** -1.514 V/s\*
- **Cycle:** 7
- **Resistance:** 411.54 Ω
- **Linear Fit R<sup>2</sup>:** 1.000

Reset success. But not smooth. A: Copper, B: Platinum.

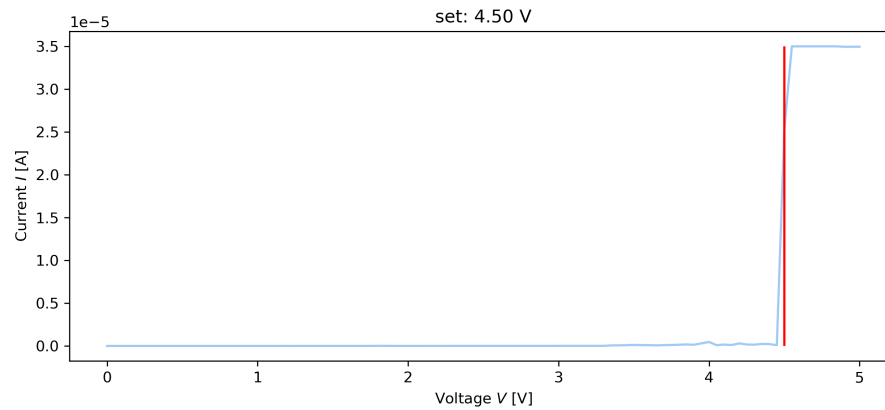


## set

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- **Time:** 04:40PM
- **Icc:** 35.0uA
- **Voltage Range:** 0V  $\rightarrow$  5V
- **Target Ramp Rate:** 1V/s
- **True Ramp Rate:** 1.068 V/s\*
- **Cycle:** 8
- **Set Voltage:** 4.50 V

Set success. A: Copper, B: platinum



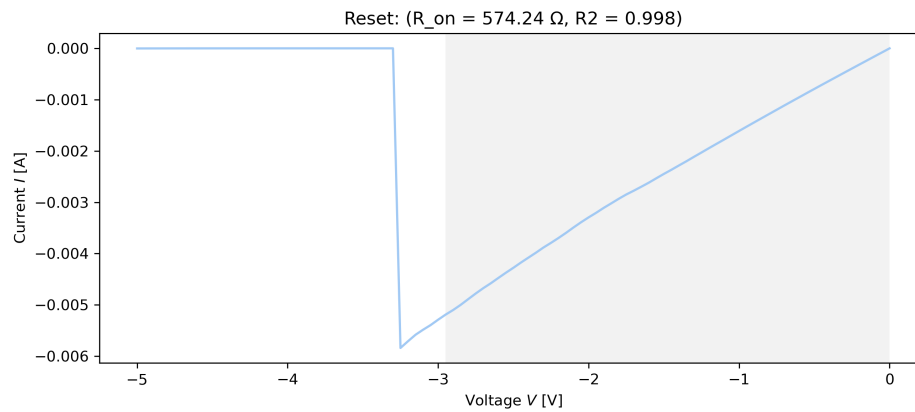


## reset

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- **Time:** 04:41PM
- **I<sub>cc</sub>:** 8.0mA
- **Voltage Range:** 0V → -5V
- **Target Ramp Rate:** 1V/s
- **True Ramp Rate:** -1.352 V/s\*
- **Cycle:** 8
- **Resistance:** 574.24 Ω
- **Linear Fit R<sup>2</sup>:** 0.998

Successful reset, very smooth. A: Copper, B: Platinum.

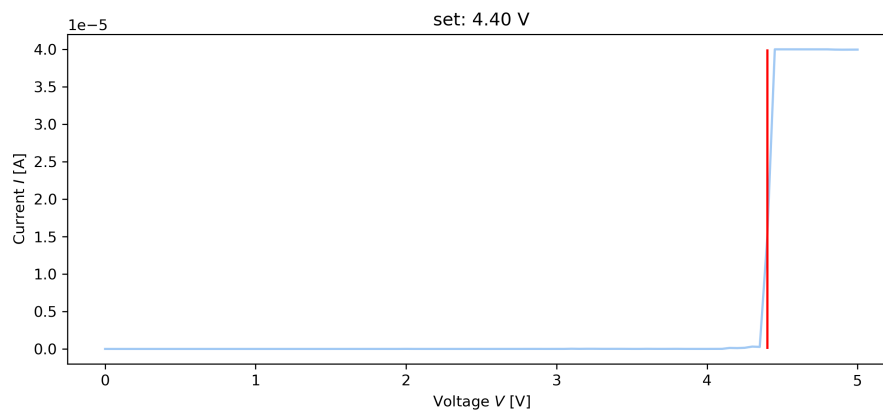


## set

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- **Time:** 04:45:00PM
- **Icc:** 40.0uA
- **Voltage Range:** 0V  $\rightarrow$  5V
- **Target Ramp Rate:** 1V/s
- **True Ramp Rate:** 1.069 V/s\*
- **Cycle:** 9
- **Set Voltage:** 4.40 V

Set sucess. A: Copper, B: Platinum.

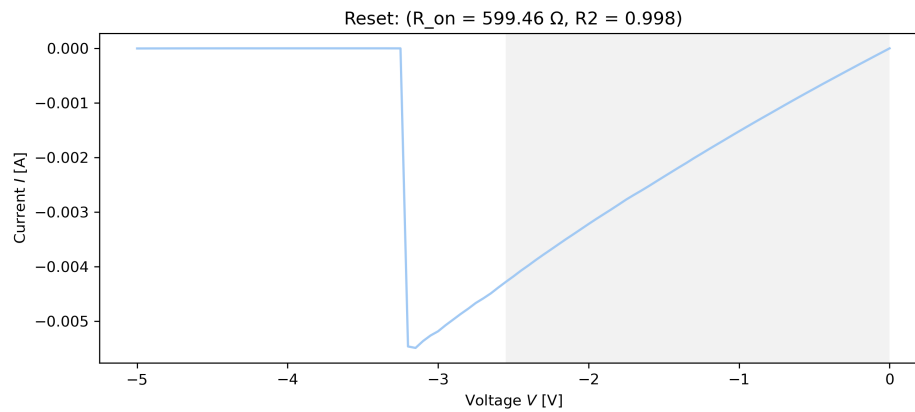


## reset

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- **Time:** 04:45:54PM
- **I<sub>cc</sub>:** 8.0mA
- **Voltage Range:** 0V → -5V
- **Target Ramp Rate:** 1V/s
- **True Ramp Rate:** -1.351 V/s\*
- **Cycle:** 9
- **Resistance:** 599.46 Ω
- **Linear Fit R<sup>2</sup>:** 0.998

Successful reset. A: Copper, B: Platinum

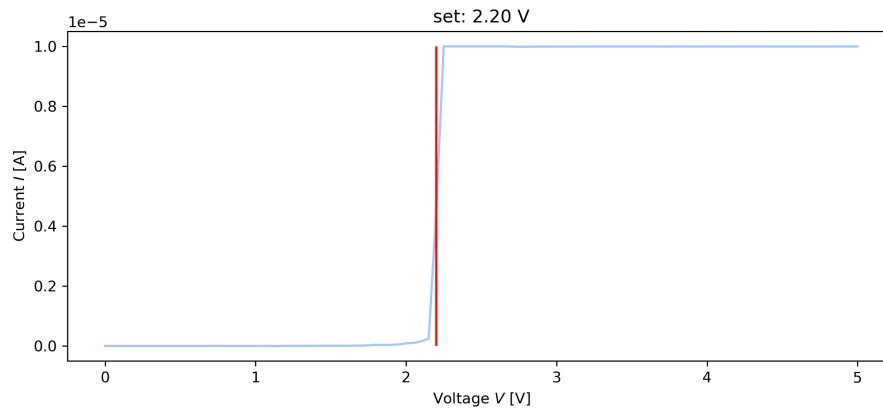


## set

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- **Time:** 04:47PM
- **Icc:** 10.0uA
- **Voltage Range:** 0V  $\rightarrow$  5V
- **Target Ramp Rate:** 1V/s
- **True Ramp Rate:** 1.069 V/s\*
- **Cycle:** 10
- **Set Voltage:** 2.20 V

Successful set. A: Copper, B: Platinum.

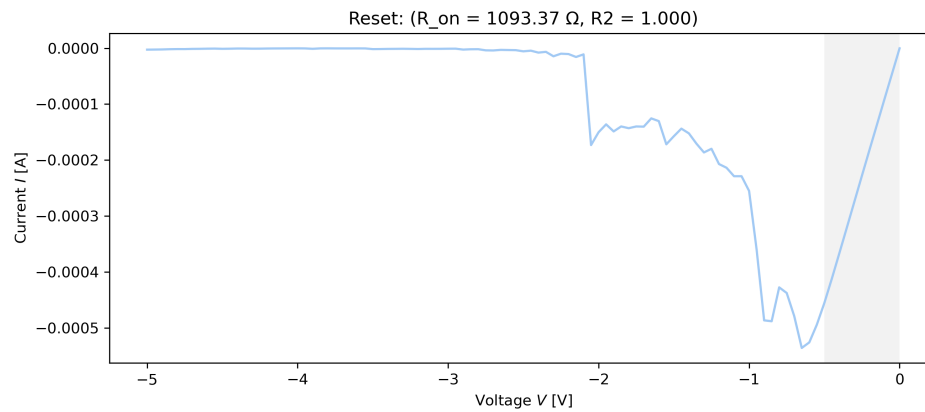


## reset

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- **Time:** 04:48PM
- **Icc:** 8.0mA
- **Voltage Range:** 0V  $\rightarrow$  -5V
- **Target Ramp Rate:** 1V/s
- **True Ramp Rate:** -1.091 V/s\*
- **Cycle:** 10
- **Resistance:** 1093.37  $\Omega$
- **Linear Fit R2:** 1.000

Successful reset, but very janky. A: Copper, B: Platinum.

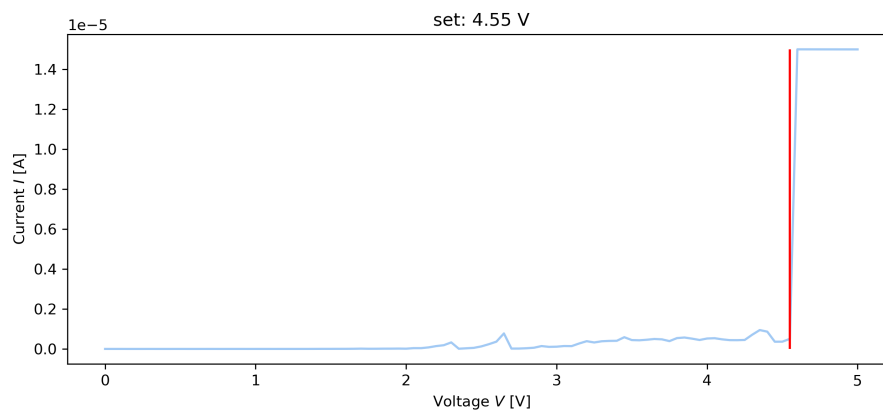


## set

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- **Time:** 04:51PM
- **I<sub>cc</sub>:** 15.0uA
- **Voltage Range:** 0V → 5V
- **Target Ramp Rate:** 1V/s
- **True Ramp Rate:** 1.069 V/s\*
- **Cycle:** 11
- **Set Voltage:** 4.55 V

Successful set. A: Copper, B: Platinum.

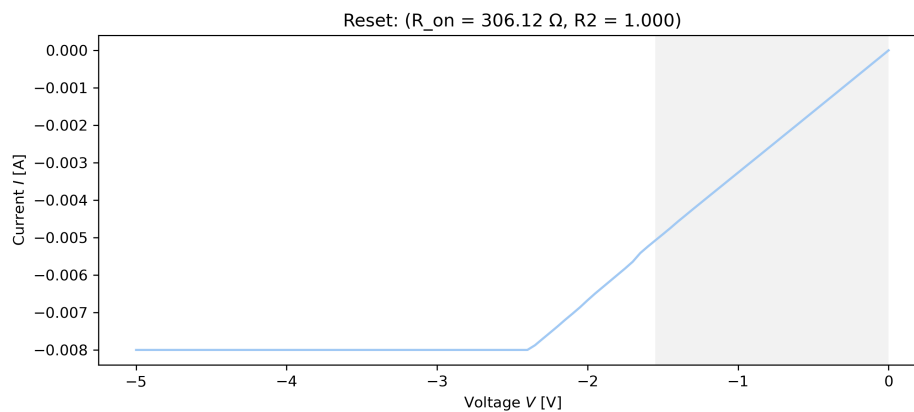


## reset

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- **Time:** 04:54PM
- **I<sub>cc</sub>:** 8.0mA
- **Voltage Range:** 0V → -5V
- **Target Ramp Rate:** 1V/s
- **True Ramp Rate:** -1.609 V/s\*
- **Cycle:** 11
- **Resistance:** 306.12 Ω
- **Linear Fit R2:** 1.000

Reset failed. A: Copper, B: Platinum

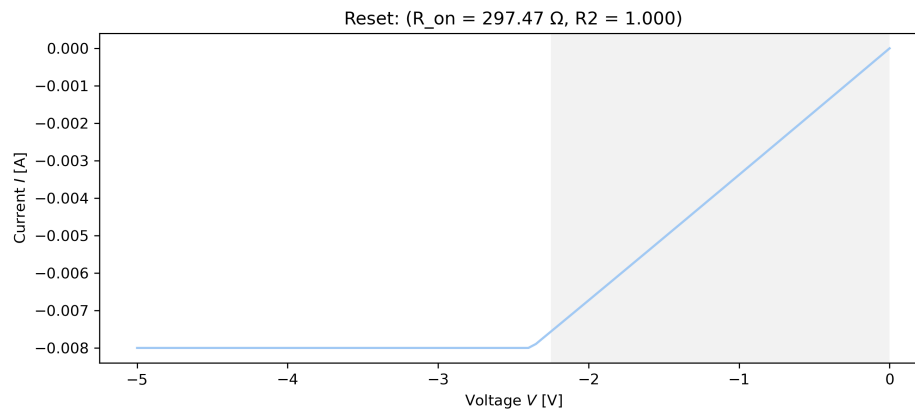


## reset

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- **Time:** 04:55:04PM
- **I<sub>cc</sub>:** 8.0mA
- **Voltage Range:** 0V → -5V
- **Target Ramp Rate:** 1V/s
- **True Ramp Rate:** -1.609 V/s\*
- **Cycle:** 12
- **Resistance:** 297.47 Ω
- **Linear Fit R2:** 1.000

Reset failed. A: Copper, B: Platinum.



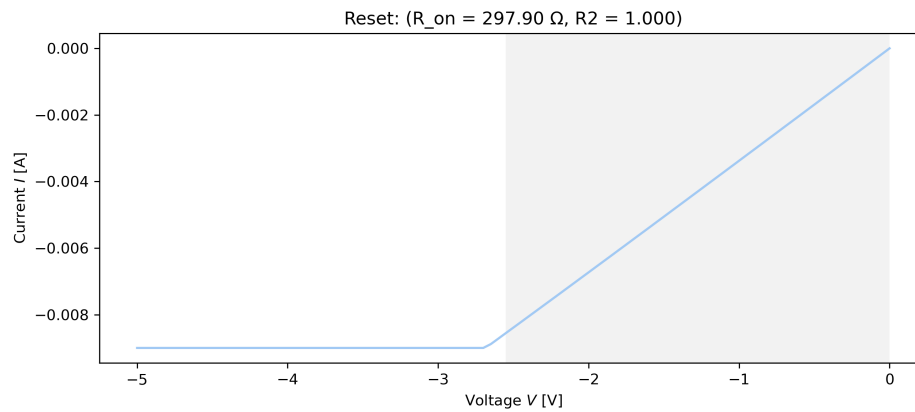


## reset

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- **Time:** 04:55:32PM
- **I<sub>cc</sub>:** 9.0mA
- **Voltage Range:** 0V → -5V
- **Target Ramp Rate:** 1V/s
- **True Ramp Rate:** -1.609 V/s\*
- **Cycle:** 13
- **Resistance:** 297.90 Ω
- **Linear Fit R<sup>2</sup>:** 1.000

Reset failed. Something wrong, cell is possibly burnt out (i.e. too strong of a filament. A: Copper, B: Platinum).

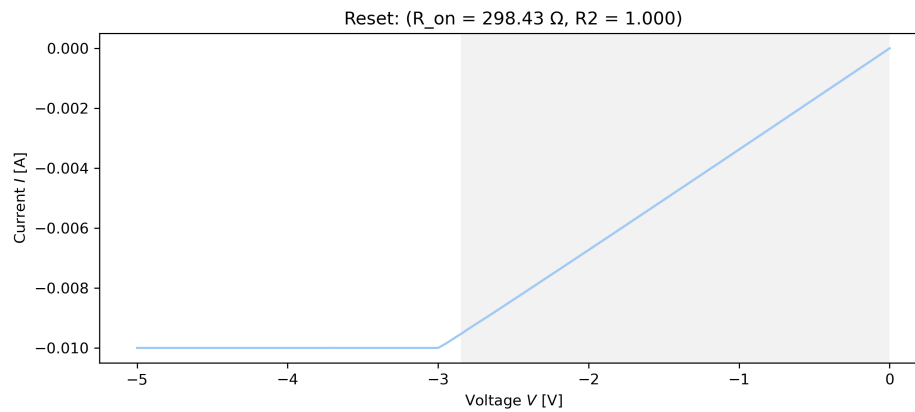


## reset

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- **Time:** 04:57PM
- **Icc:** 10.0mA
- **Voltage Range:** 0V  $\rightarrow$  -5V
- **Target Ramp Rate:** 1V/s
- **True Ramp Rate:** -1.610 V/s\*
- **Cycle:** 14
- **Resistance:** 298.43  $\Omega$
- **Linear Fit R2:** 1.000

Reset failed. A: Copper, B: Platinum

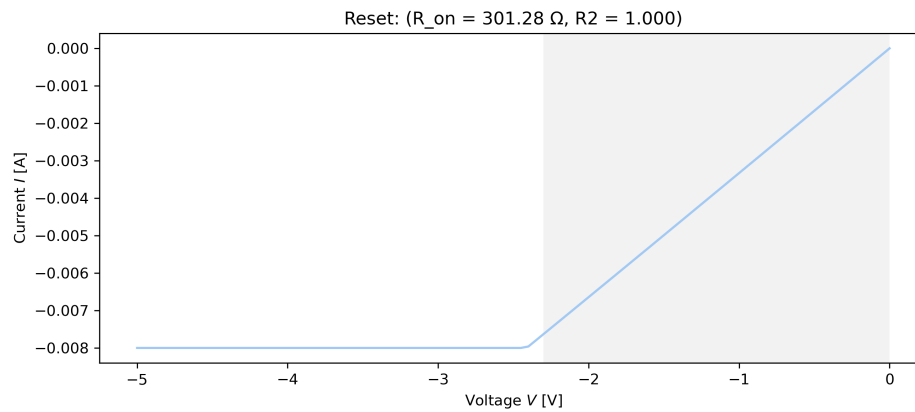


## reset

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- **Time:** 04:59:04PM
- **I<sub>cc</sub>:** 8.0mA
- **Voltage Range:** 0V → -5V
- **Target Ramp Rate:** 1V/s
- **True Ramp Rate:** -1.610 V/s\*
- **Cycle:** 15
- **Resistance:** 301.28 Ω
- **Linear Fit R<sup>2</sup>:** 1.000

Failed reset again. A: Copper, B: Platinum.



## reset

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- **Time:** 04:59:43PM
- **I<sub>cc</sub>:** 15.0mA
- **Voltage Range:** 0V → -5V
- **Target Ramp Rate:** 1V/s
- **True Ramp Rate:** -1.087 V/s\*
- **Cycle:** 16
- **Resistance:** 302.05 Ω
- **Linear Fit R<sup>2</sup>:** 1.000

Reset fail. Cell damage confirmed. A: Copper, B: Platinum.

