

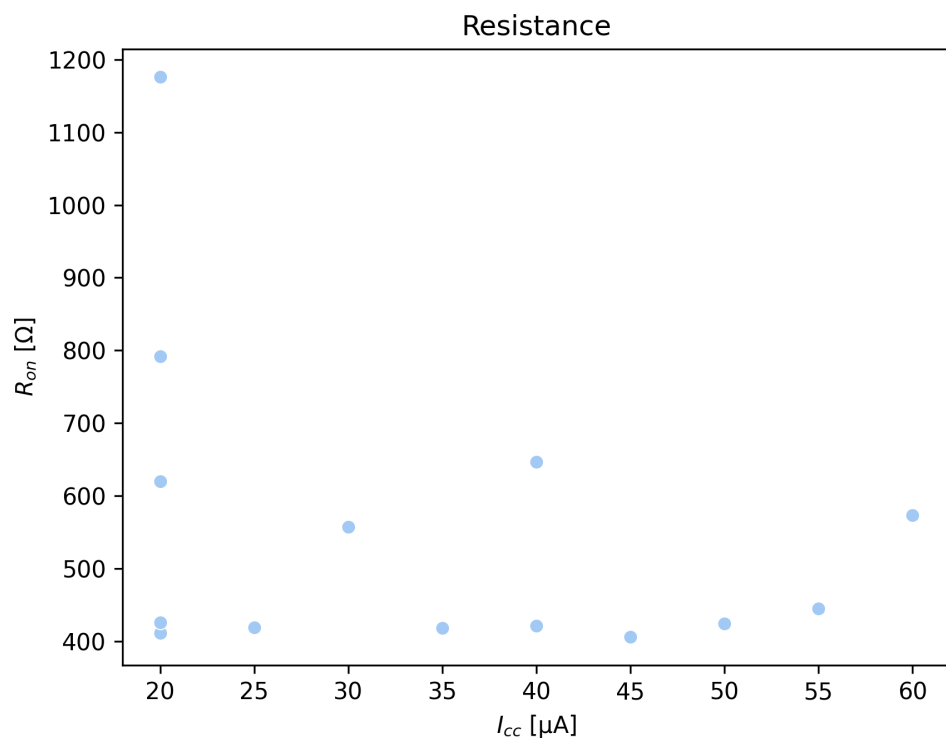
## (wafer2,2,0,-1,-1,0,4) Characteristics

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- **Cell Size:** 15um
- **Times Accessed:** 30
- **Last Measurement:** 2022/March/17 at 05:31:28PM

### Summary

Cycle #	Set Icc ( $\mu$ A)	Set Voltage (V)	R_on ( $\Omega$ )	R2
1	20.0	0.15	1176.17	1.000
2	20.0	4.20	411.25	1.000
3	20.0	2.10	791.62	1.000
4	20.0	3.10	425.66	1.000
5	20.0	3.65	620.05	1.000
6	25.0	2.85	419.02	1.000
7	30.0	2.75	556.83	1.000
8	35.0	3.60	418.09	1.000
9	40.0	3.10	646.72	1.000
10	40.0	2.95	420.93	1.000
11	45.0	3.45	405.61	1.000
12	50.0	3.15	424.12	1.000
13	55.0	2.30	444.85	1.000
14	60.0	2.80	573.20	1.000

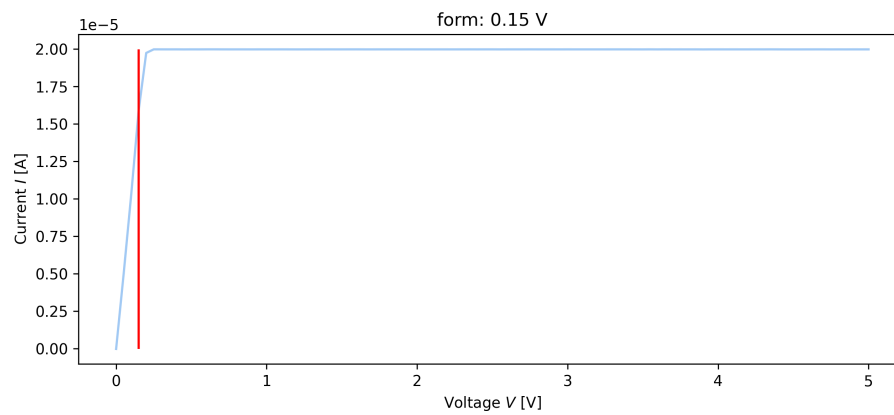


## form

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- **Time:** 04:52:58PM
- **Icc:** 20.0uA
- **Voltage Range:** 0V  $\rightarrow$  5V
- **Target Ramp Rate:** 1V/s
- **True Ramp Rate:** 1.776 V/s\*
- **Cycle:** 1
- **Set Voltage:** 0.15 V

Early form at 0.2 V

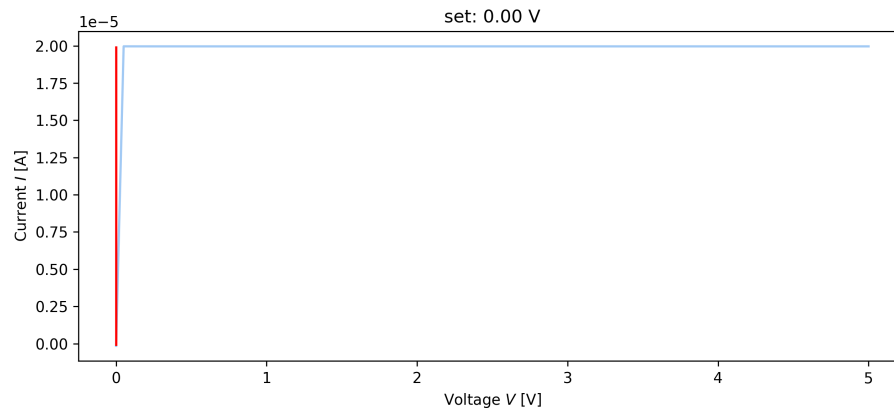


## set

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- **Time:** 04:54:56PM
- **Icc:** 20.0uA
- **Voltage Range:** 0V  $\rightarrow$  5V
- **Target Ramp Rate:** 1V/s
- **True Ramp Rate:** 1.839 V/s\*
- **Cycle:** 1
- **Error:** Set failed

Already set

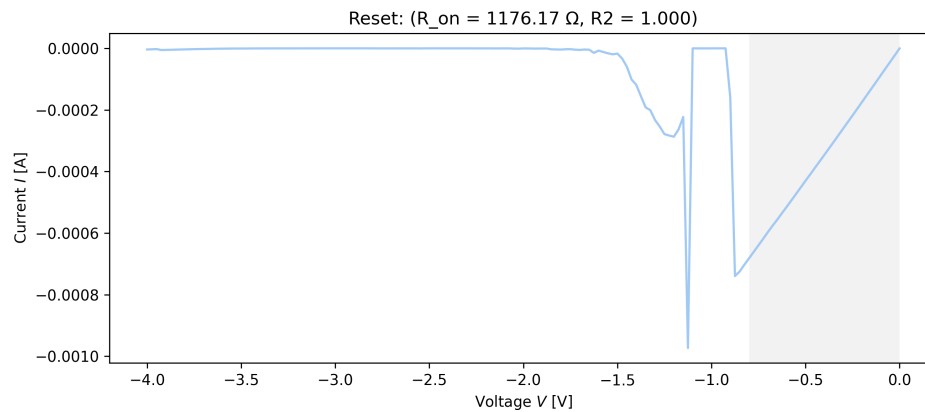


## reset

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- **Time:** 04:56:00PM
- **I<sub>cc</sub>:** 6.0mA
- **Voltage Range:** 0V → -4V
- **Target Ramp Rate:** 1V/s
- **True Ramp Rate:** -0.559 V/s\*
- **Cycle:** 1
- **Resistance:** 1176.17  $\Omega$
- **Linear Fit R2:** 1.000

Reset

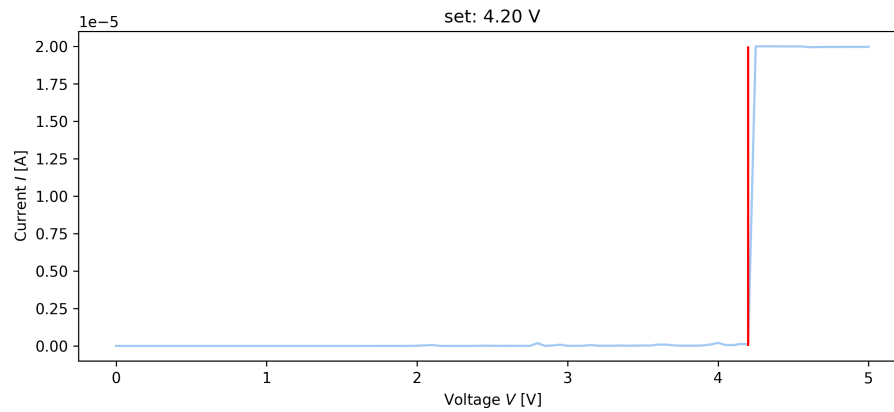


## set

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- **Time:** 04:58:08PM
- **Icc:** 20.0uA
- **Voltage Range:** 0V  $\rightarrow$  5V
- **Target Ramp Rate:** 1V/s
- **True Ramp Rate:** 1.069 V/s\*
- **Cycle:** 2
- **Set Voltage:** 4.20 V

Set at 4.25 V

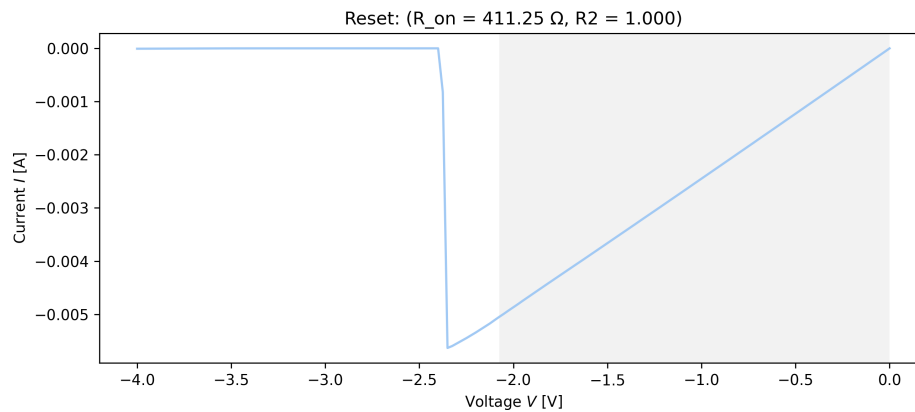


## reset

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- **Time:** 04:59:14PM
- **I<sub>cc</sub>:** 6.0mA
- **Voltage Range:** 0V → -4V
- **Target Ramp Rate:** 1V/s
- **True Ramp Rate:** -0.777 V/s\*
- **Cycle:** 2
- **Resistance:** 411.25 Ω
- **Linear Fit R<sup>2</sup>:** 1.000

Reset

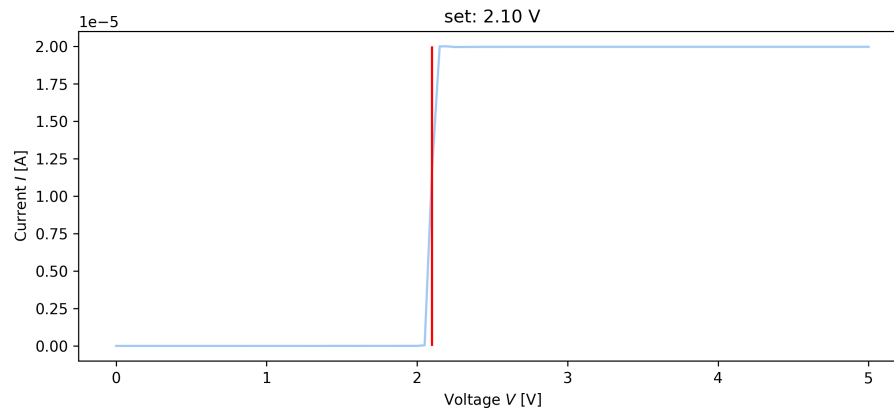


## set

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- **Time:** 05:00:05PM
- **Icc:** 20.0uA
- **Voltage Range:** 0V  $\rightarrow$  5V
- **Target Ramp Rate:** 1V/s
- **True Ramp Rate:** 1.069 V/s\*
- **Cycle:** 3
- **Set Voltage:** 2.10 V

Set at 2.15 V



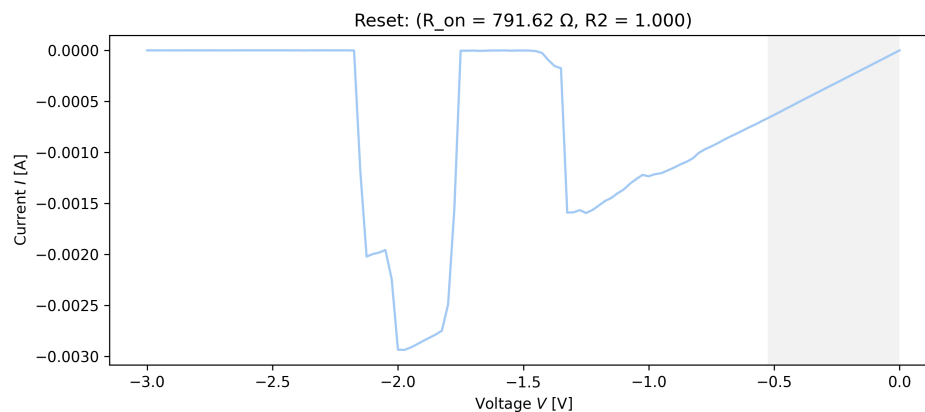


## reset

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- **Time:** 05:00:47PM
- **I<sub>cc</sub>:** 6.0mA
- **Voltage Range:** 0V → -3V
- **Target Ramp Rate:** 1V/s
- **True Ramp Rate:** -0.659 V/s\*
- **Cycle:** 3
- **Resistance:** 791.62 Ω
- **Linear Fit R2:** 1.000

Reset

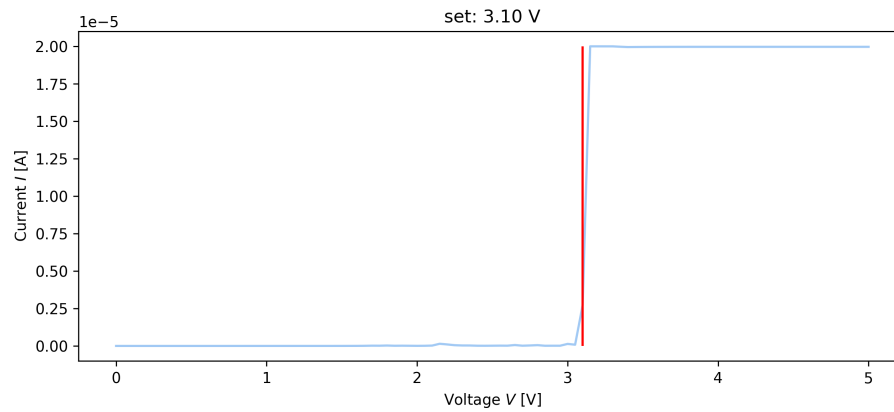


## set

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- **Time:** 05:01:30PM
- **Icc:** 20.0uA
- **Voltage Range:** 0V  $\rightarrow$  5V
- **Target Ramp Rate:** 1V/s
- **True Ramp Rate:** 1.069 V/s\*
- **Cycle:** 4
- **Set Voltage:** 3.10 V

Set at 3.15 V

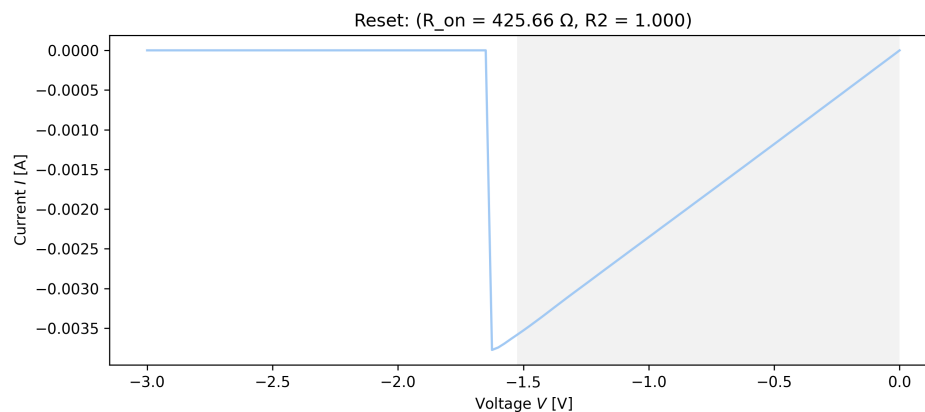


## reset

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- **Time:** 05:02:14PM
- **I<sub>cc</sub>:** 6.0mA
- **Voltage Range:** 0V → -3V
- **Target Ramp Rate:** 1V/s
- **True Ramp Rate:** -0.776 V/s\*
- **Cycle:** 4
- **Resistance:** 425.66 Ω
- **Linear Fit R<sup>2</sup>:** 1.000

Reset

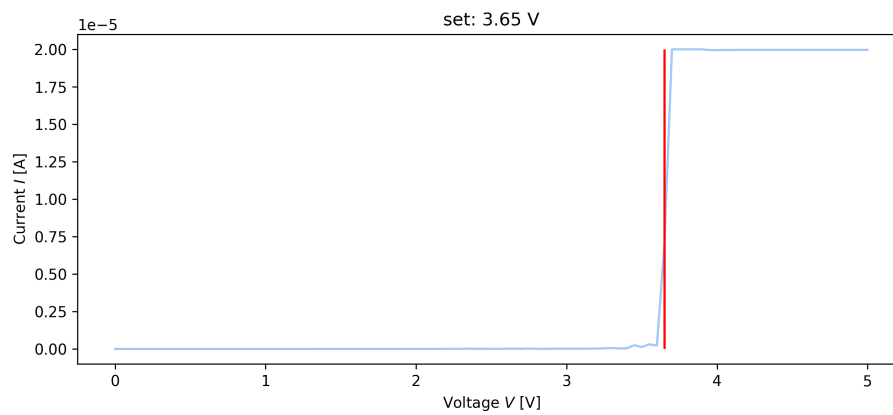


## set

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- **Time:** 05:02:58PM
- **Icc:** 20.0uA
- **Voltage Range:** 0V  $\rightarrow$  5V
- **Target Ramp Rate:** 1V/s
- **True Ramp Rate:** 1.069 V/s\*
- **Cycle:** 5
- **Set Voltage:** 3.65 V

Set lower than forming voltage

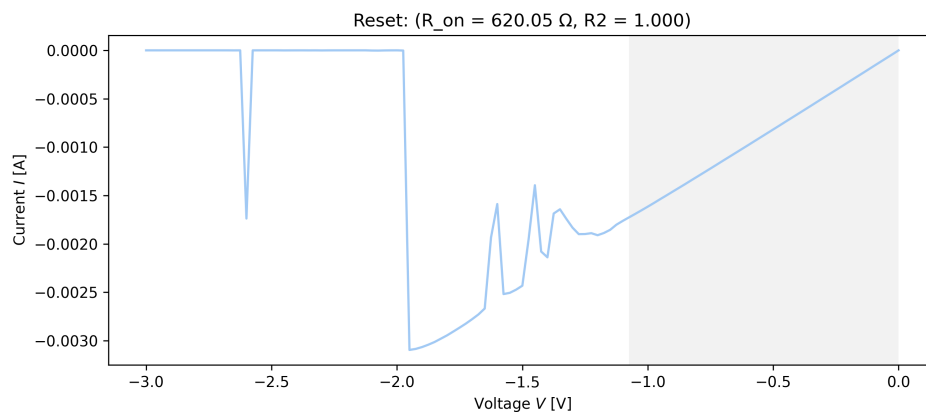


## reset

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- **Time:** 05:03:56PM
- **I<sub>cc</sub>:** 6.0mA
- **Voltage Range:** 0V → -3V
- **Target Ramp Rate:** 1V/s
- **True Ramp Rate:** -0.713 V/s\*
- **Cycle:** 5
- **Resistance:** 620.05  $\Omega$
- **Linear Fit R<sup>2</sup>:** 1.000

Reset

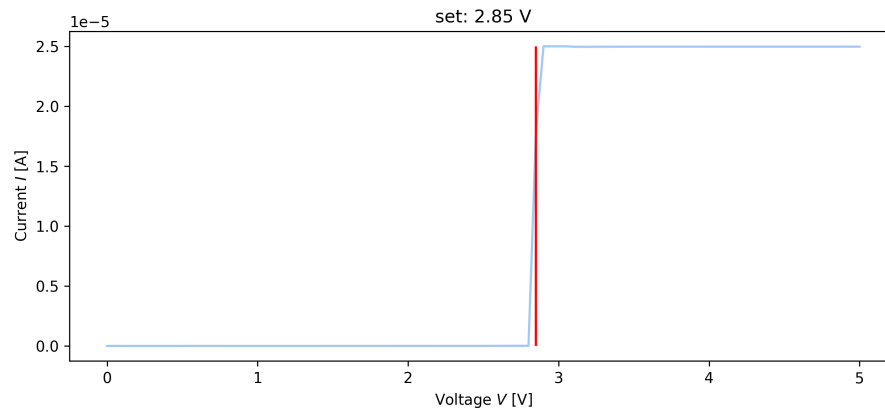


## set

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- **Time:** 05:04:52PM
- **Icc:** 25.0uA
- **Voltage Range:** 0V  $\rightarrow$  5V
- **Target Ramp Rate:** 1V/s
- **True Ramp Rate:** 1.069 V/s\*
- **Cycle:** 6
- **Set Voltage:** 2.85 V

Set at 2.9 V

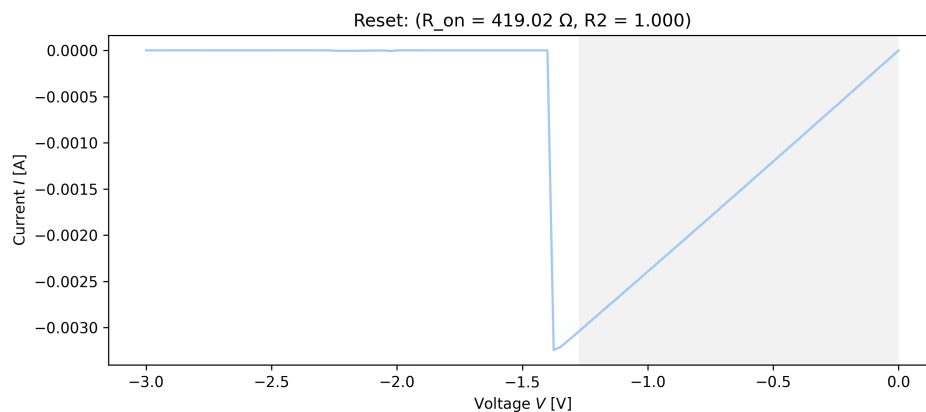


## reset

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- **Time:** 05:05:35PM
- **Icc:** 6.0mA
- **Voltage Range:** 0V  $\rightarrow$  -3V
- **Target Ramp Rate:** 1V/s
- **True Ramp Rate:** -0.777 V/s\*
- **Cycle:** 6
- **Resistance:** 419.02  $\Omega$
- **Linear Fit R2:** 1.000

Reset

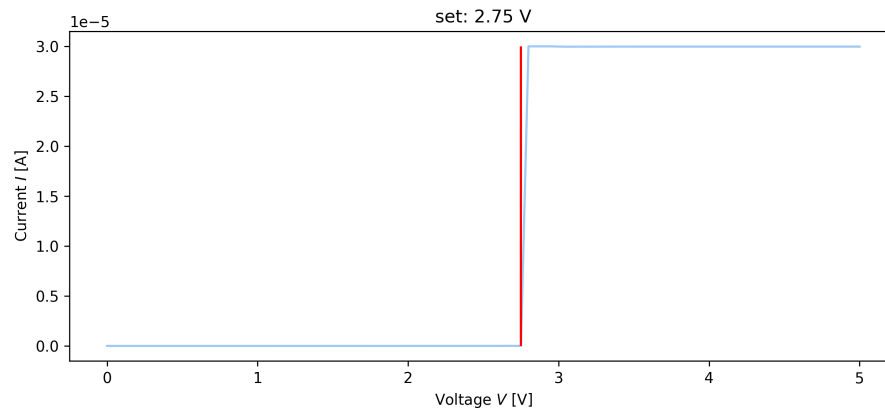


## set

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- **Time:** 05:06:50PM
- **Icc:** 30.0uA
- **Voltage Range:** 0V  $\rightarrow$  5V
- **Target Ramp Rate:** 1V/s
- **True Ramp Rate:** 1.069 V/s\*
- **Cycle:** 7
- **Set Voltage:** 2.75 V

Set at 2.8 V



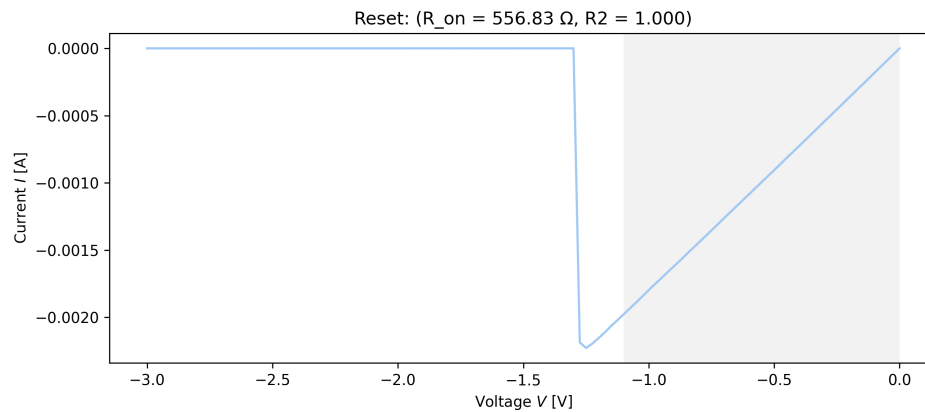


## reset

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- **Time:** 05:07:29PM
- **I<sub>cc</sub>:** 6.0mA
- **Voltage Range:** 0V → -3V
- **Target Ramp Rate:** 1V/s
- **True Ramp Rate:** -0.733 V/s\*
- **Cycle:** 7
- **Resistance:** 556.83  $\Omega$
- **Linear Fit R2:** 1.000

Reset

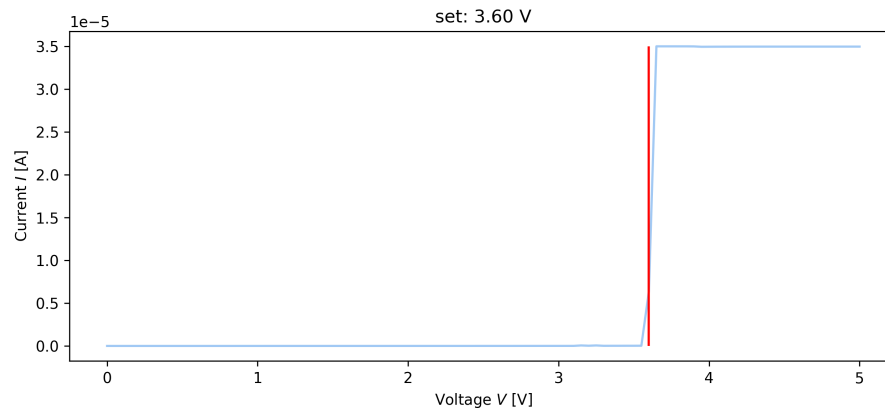


## set

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- **Time:** 05:11:44PM
- **Icc:** 35.0uA
- **Voltage Range:** 0V  $\rightarrow$  5V
- **Target Ramp Rate:** 1V/s
- **True Ramp Rate:** 1.069 V/s\*
- **Cycle:** 8
- **Set Voltage:** 3.60 V

Set at 3.15 V

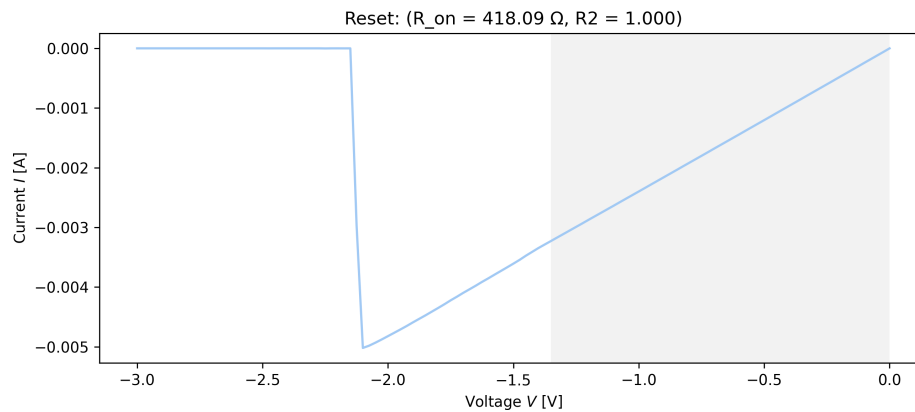


## reset

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- **Time:** 05:12:42PM
- **I<sub>cc</sub>:** 6.0mA
- **Voltage Range:** 0V → -3V
- **Target Ramp Rate:** 1V/s
- **True Ramp Rate:** -0.776 V/s\*
- **Cycle:** 8
- **Resistance:** 418.09 Ω
- **Linear Fit R<sup>2</sup>:** 1.000

Reset with lower resistance, this one makes sense

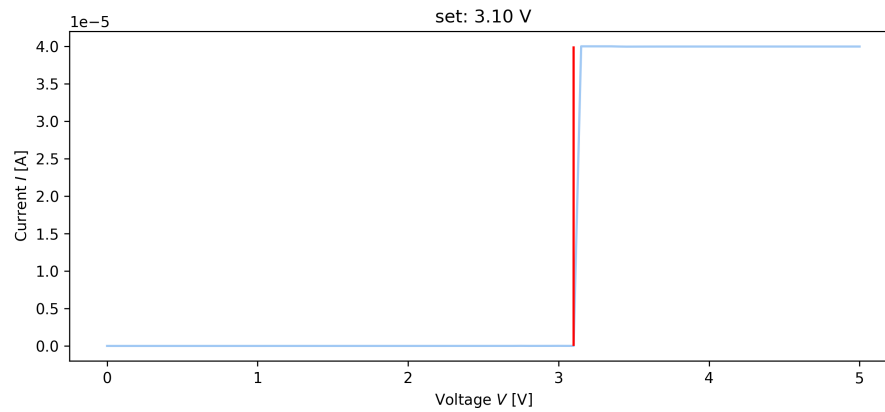


## set

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- **Time:** 05:15:32PM
- **Icc:** 40.0uA
- **Voltage Range:** 0V  $\rightarrow$  5V
- **Target Ramp Rate:** 1V/s
- **True Ramp Rate:** 1.069 V/s\*
- **Cycle:** 9
- **Set Voltage:** 3.10 V

Set at 3.15 V

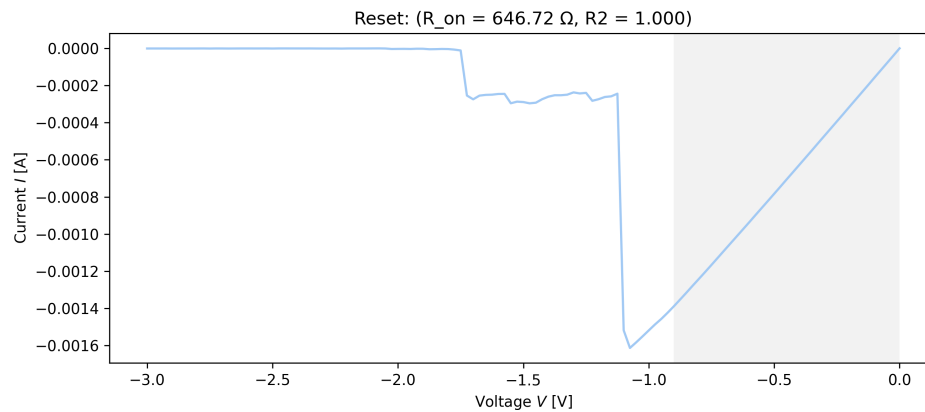


## reset

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- **Time:** 05:16:15PM
- **I<sub>cc</sub>:** 6.0mA
- **Voltage Range:** 0V → -3V
- **Target Ramp Rate:** 1V/s
- **True Ramp Rate:** -0.703 V/s\*
- **Cycle:** 9
- **Resistance:** 646.72 Ω
- **Linear Fit R<sup>2</sup>:** 1.000

Has a higher resistance despite being set at 40 uA.. doesn't make sense.

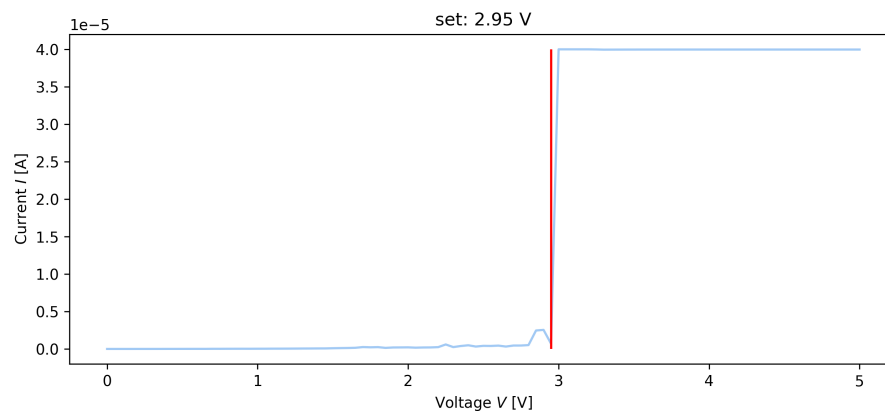


## set

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- **Time:** 05:17:05PM
- **Icc:** 40.0uA
- **Voltage Range:** 0V  $\rightarrow$  5V
- **Target Ramp Rate:** 1V/s
- **True Ramp Rate:** 1.069 V/s\*
- **Cycle:** 10
- **Set Voltage:** 2.95 V

Set at 3.0 V

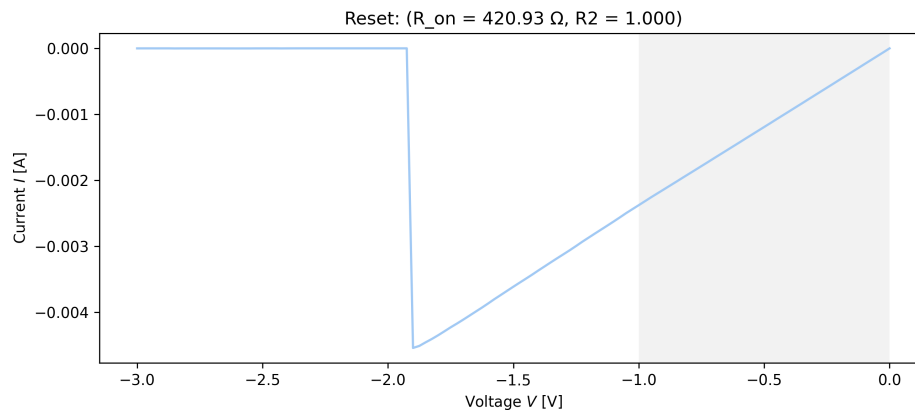


## reset

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- **Time:** 05:18:43PM
- **I<sub>cc</sub>:** 6.0mA
- **Voltage Range:** 0V → -3V
- **Target Ramp Rate:** 1V/s
- **True Ramp Rate:** -0.776 V/s\*
- **Cycle:** 10
- **Resistance:** 420.93 Ω
- **Linear Fit R<sup>2</sup>:** 1.000

Has a higher resistance despite being set at 40 uA.. doesn't make sense.

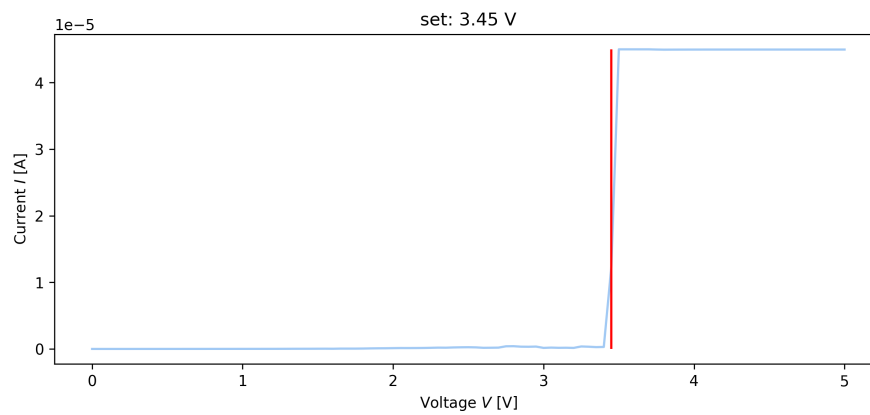


## set

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- **Time:** 05:21:12PM
- **I<sub>cc</sub>:** 45.0uA
- **Voltage Range:** 0V → 5V
- **Target Ramp Rate:** 1V/s
- **True Ramp Rate:** 1.069 V/s\*
- **Cycle:** 11
- **Set Voltage:** 3.45 V

Set at 3.5 V



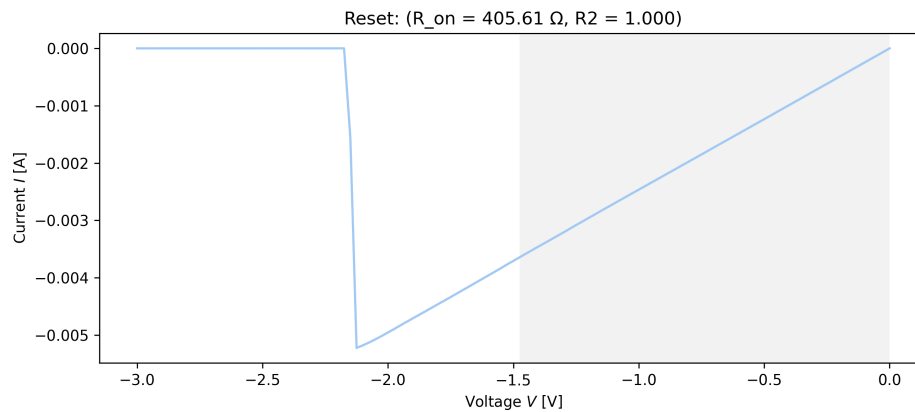


## reset

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- **Time:** 05:21:48PM
- **I<sub>cc</sub>:** 6.0mA
- **Voltage Range:** 0V → -3V
- **Target Ramp Rate:** 1V/s
- **True Ramp Rate:** -0.788 V/s\*
- **Cycle:** 11
- **Resistance:** 405.61 Ω
- **Linear Fit R2:** 1.000

This and every other reset starting from 184 has the same resistance. e.g. 176, 178, 180, 182, 184, 185

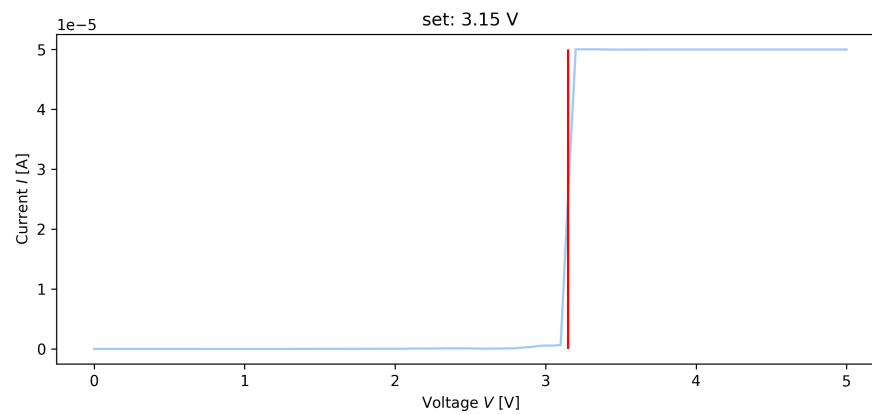


## set

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- **Time:** 05:24:35PM
- **Icc:** 50.0uA
- **Voltage Range:** 0V  $\rightarrow$  5V
- **Target Ramp Rate:** 1V/s
- **True Ramp Rate:** 1.069 V/s\*
- **Cycle:** 12
- **Set Voltage:** 3.15 V

Set at 3.2 V

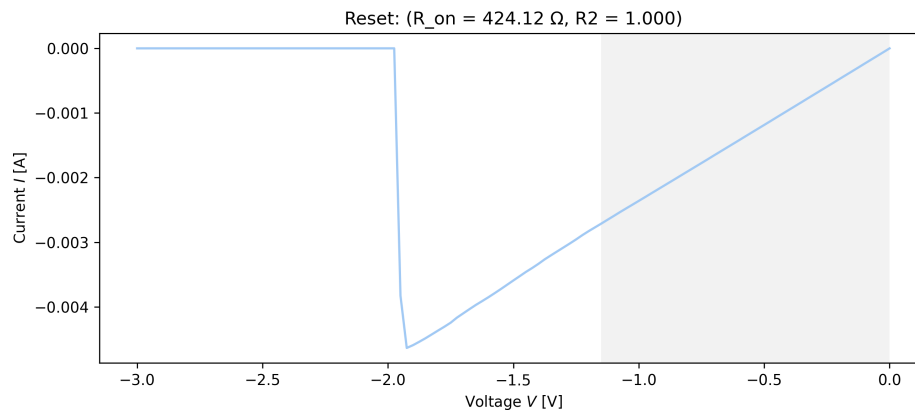


## reset

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- **Time:** 05:25:23PM
- **I<sub>cc</sub>:** 6.0mA
- **Voltage Range:** 0V → -3V
- **Target Ramp Rate:** 1V/s
- **True Ramp Rate:** -0.776 V/s\*
- **Cycle:** 12
- **Resistance:** 424.12 Ω
- **Linear Fit R<sup>2</sup>:** 1.000

Has same resistance: 176, 178, 180, 182, 184, 185, 186

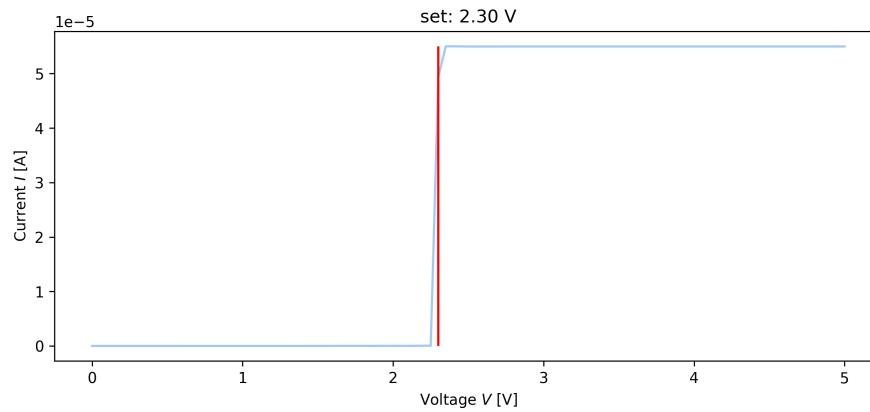


## set

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- **Time:** 05:26:37PM
- **I<sub>cc</sub>:** 55.0uA
- **Voltage Range:** 0V → 5V
- **Target Ramp Rate:** 1V/s
- **True Ramp Rate:** 1.069 V/s\*
- **Cycle:** 13
- **Set Voltage:** 2.30 V

Set at 2.35 V

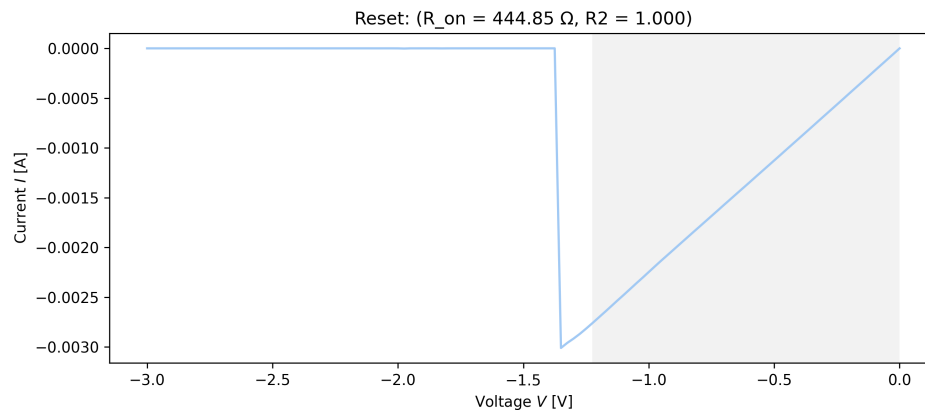


## reset

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- **Time:** 05:27:49PM
- **I<sub>cc</sub>:** 6.0mA
- **Voltage Range:** 0V → -3V
- **Target Ramp Rate:** 1V/s
- **True Ramp Rate:** -0.765 V/s\*
- **Cycle:** 13
- **Resistance:** 444.85 Ω
- **Linear Fit R<sup>2</sup>:** 1.000

Has same resistance: 176, 178, 180, 182, 184, 185, 186, 187

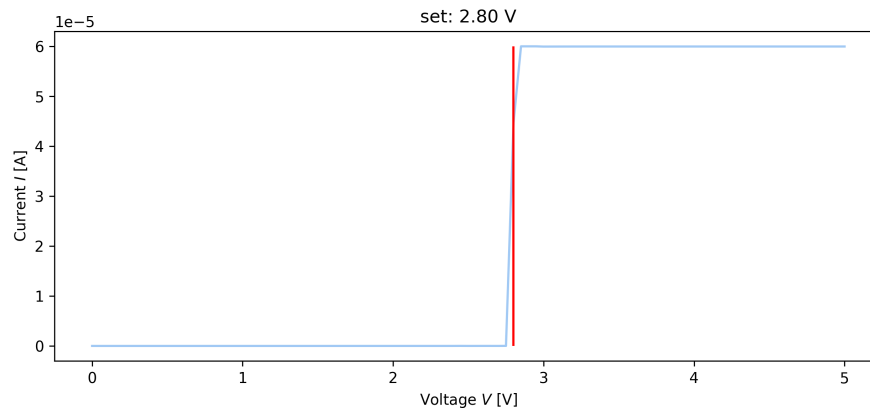


## set

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- **Time:** 05:30:32PM
- **Icc:** 60.0uA
- **Voltage Range:** 0V  $\rightarrow$  5V
- **Target Ramp Rate:** 1V/s
- **True Ramp Rate:** 1.069 V/s\*
- **Cycle:** 14
- **Set Voltage:** 2.80 V

Set at 2.85 V



## reset

---

- **Time:** 05:31:28PM
- **Icc:** 6.0mA
- **Voltage Range:** 0V  $\rightarrow$  -3V
- **Target Ramp Rate:** 1V/s
- **True Ramp Rate:** -0.723 V/s\*
- **Cycle:** 14
- **Resistance:** 573.20  $\Omega$
- **Linear Fit R2:** 1.000

No longer has same resistance

