

## R231206 - 2023-12-04

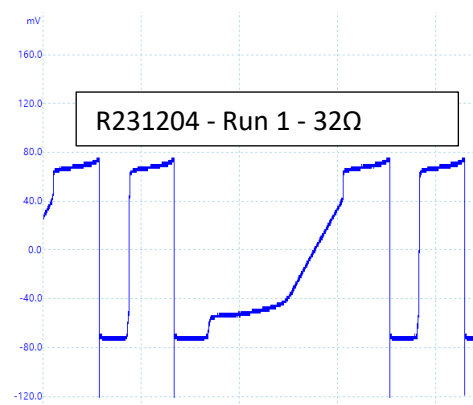
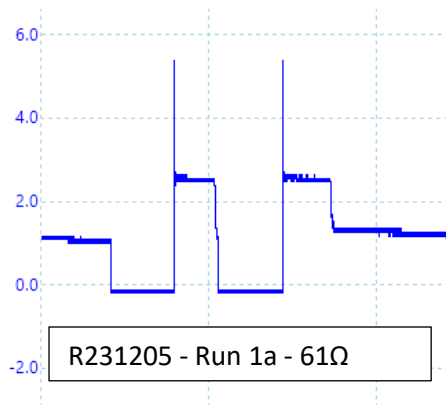
Setup changes compared to previous tests:

- A. Replaced input PSU for LA2 battery

Objectives:

Find out why the scope trace from R231205 looks different than R231203/ R231202 / R231203 / R231204

1. The shape in between the signals looks straight in R231205, but far from it in the other tests.
2. The shape is flipped in R231205, compared to the other tests.
3. The vertical scale is +/-10V in R231205, but +/-200mV in the other tests.



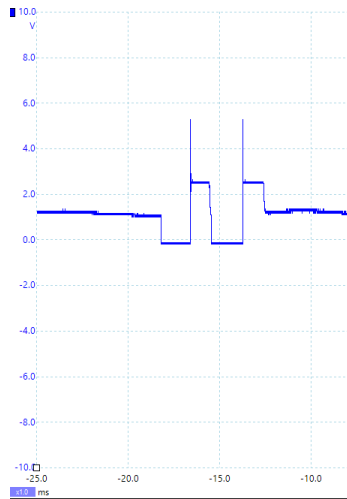
Results:

1. Shapes of all 3 test were straight, also when the exact same resistor value was of R231204-Run1 was used in Run.
2. Probe connections switched on Transistor (emitter/collector)
3. All 3 runs had the same scale, also when the exact same resistor value was of R231204-Run1 was used in Run.

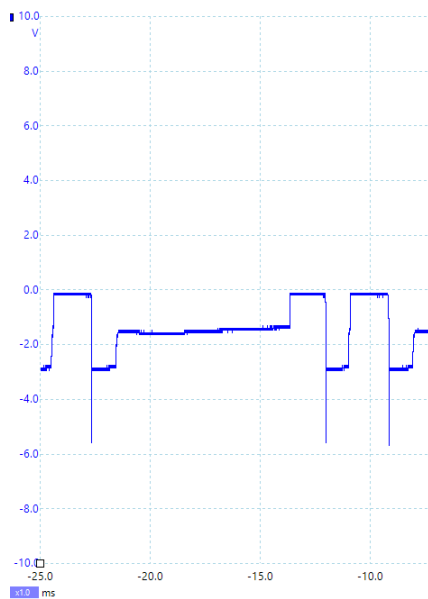
Conclusion

1. At the moment the only conclusion I seem to be able to draw that a 'conditioning effect has taken place in output batter LA1. The potential cause of the PSU at the input (instead of a battery) I already excluded in previous tests.

- **Run 1** – probe 10x, earth to **emitter** of Transistor 1, hot-tip to **collector** of Transistor 1
  - Resistance: 80  $\Omega$
  - Input battery running voltage: 12.36V
  - RPM: 215
  - Amp draw: 0.6
  - Pulse: double
  - Light bulb: 5W #1, no glow



- **Run 2** – probe 10x, earth to **collector** of Transistor 1, hot-tip to **emitter** of Transistor 1
  - Resistance: 80  $\Omega$
  - Input battery running voltage: 12.36V
  - RPM: 215
  - Amp draw: 0.6
  - Pulse: double
  - Light bulb: 5W #1, no glow



- **Run 3** - probe 10x, earth to **collector** of Transistor 1, hot-tip to **emitter** of Transistor 1
- Startup @ 32  $\Omega$  (same settings as R231204 Run 1)
  - RPM: 200
  - Input battery running voltage: 12.28V
  - Amp draw: 1.05
  - Pulse: double
  - Light bulb: 5W #1, no glow

