



# **“Look Ma, No State Machines”**

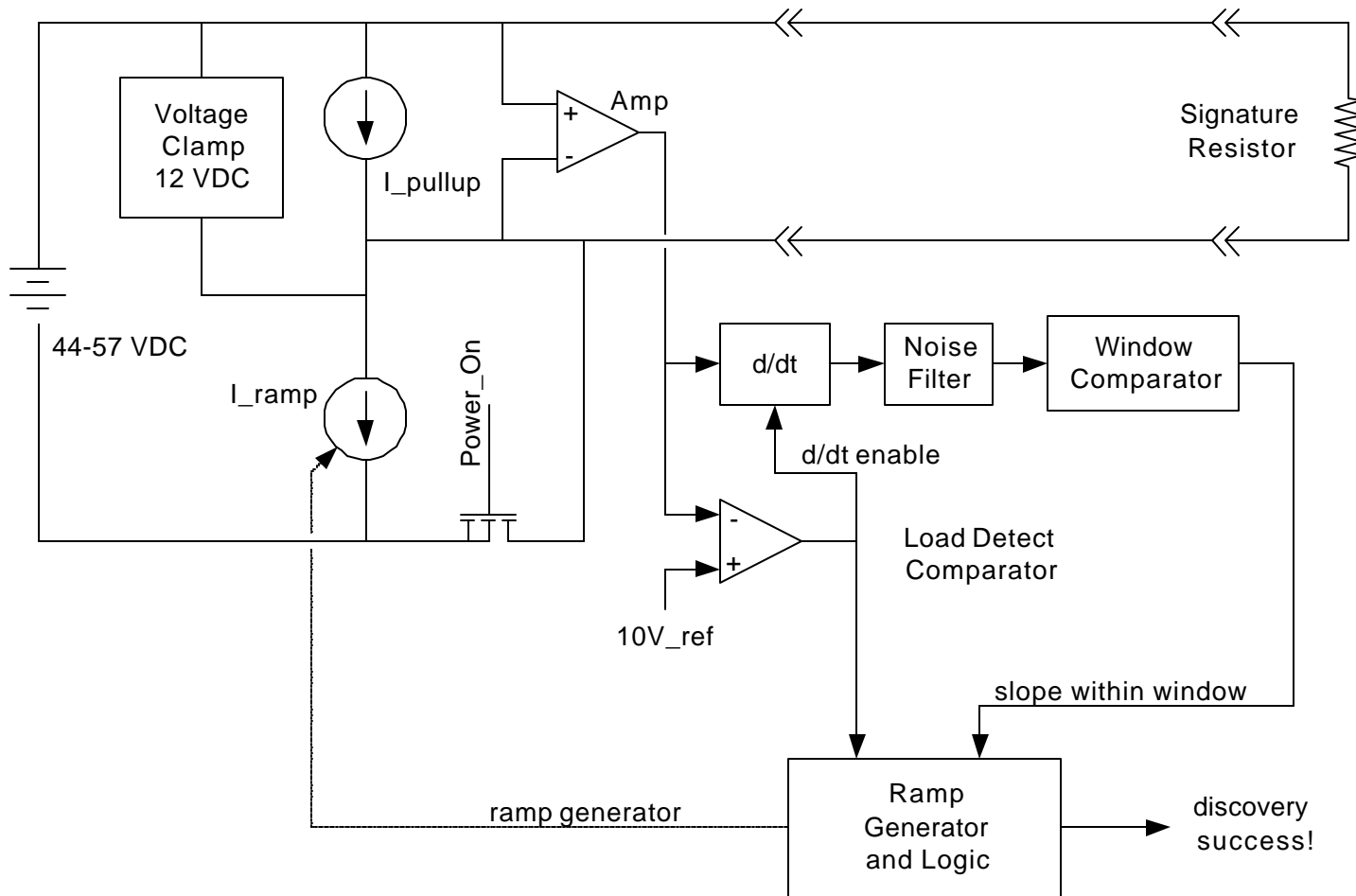
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## One possible Resistor Discovery Method

- An Idea for analog IC detection without a state machine (an idea from Supertex)



open circuit voltage: 12V  
maximum output current: ~1ma

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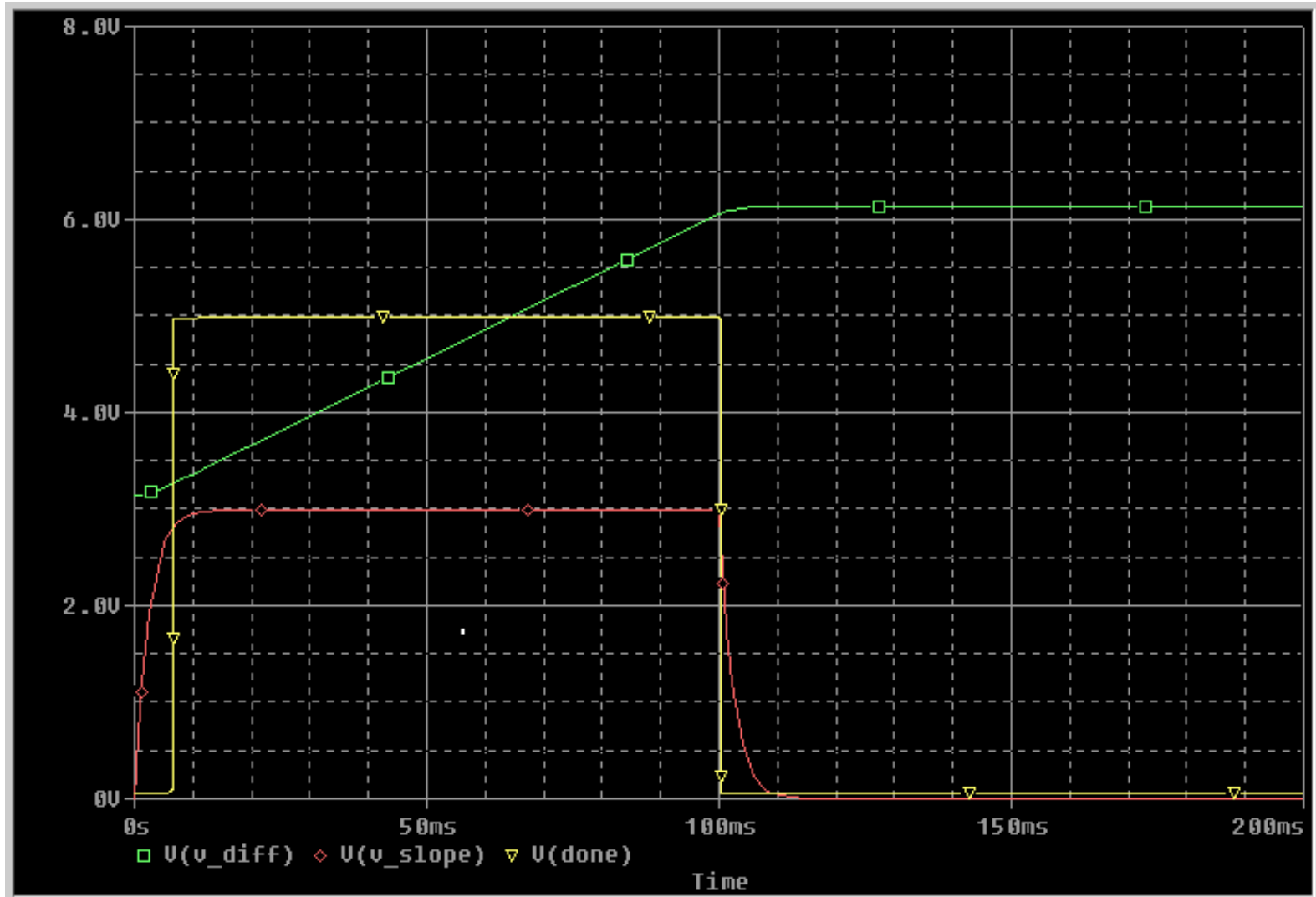
an idea from Supertex



## One possible Resistor Discovery Method

- **Waveforms**

- ramp current (green)
- output of filter from the differentiator (red)
- The single bit output for discovered or “done” (yellow)



## One possible Resistor Discovery Method

- **Features:**
  - 12V open circuit
  - limited output current during discovery, harmless to legacy equipment
  - can be adapted to the expected signature
  - could be implemented if a behavioral spec is created for 802.3af
  
- **Future Developments and Enhancements:**
  
- **varying the ramp times and ramp rates in order to minimize the influence of 50/60 Hz noise**
  
- **comparison of ramp up and ramp down rates**
  
  
- **Summary:**
  
- **Innovation is possible, different methods can be used.**
- **what is needed is a flexible and behavioral 802.3af spec**