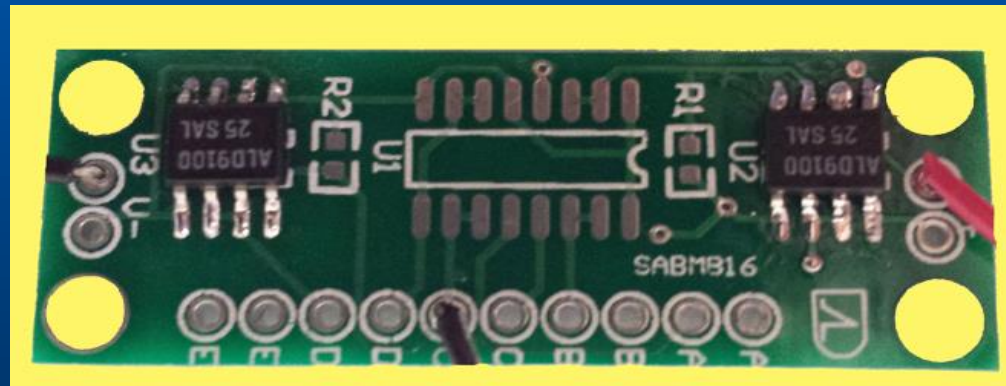




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A plug and play PCB solution for automatically balancing supercapacitors



Actual board size
0.6 x 1.6 inches



Features & Benefits

- **Single or pair of dual or quad SAB MOSFET devices installed per board.**
- **Two dual and one quad SAB MOSFET can also be installed in the same PCB. The dual chips are connected in series**
- **The high charging and discharge supercapacitor load currents do not pass through the semiconductor chips.**
- **Each SABMB16 PCB can be cascaded to the next SABMB16 PCB to form a series chain to parallel a series connected chain of supercapacitor cells.**
- **Optional reverse biased external power diodes can be installed where necessary across each SAB MOSFET.**
- **No user circuit design or hardware engineering is necessary.**
- **Cost savings alternative to op-amp based balancing schemes.**



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- **Little or no additional power dissipation.**
- **Protects supercapacitors from premature failure due to over-voltage and over-current conditions.**
- **Rated for RoHS compatible/industrial temperature range of -40C to +85C**
- **Long life battery operated applications where capacitances ranging from 0.1 F to more than 3000 F are required.**
- **Simple (auto-balancing) solution and implementation for protecting supercapacitors**



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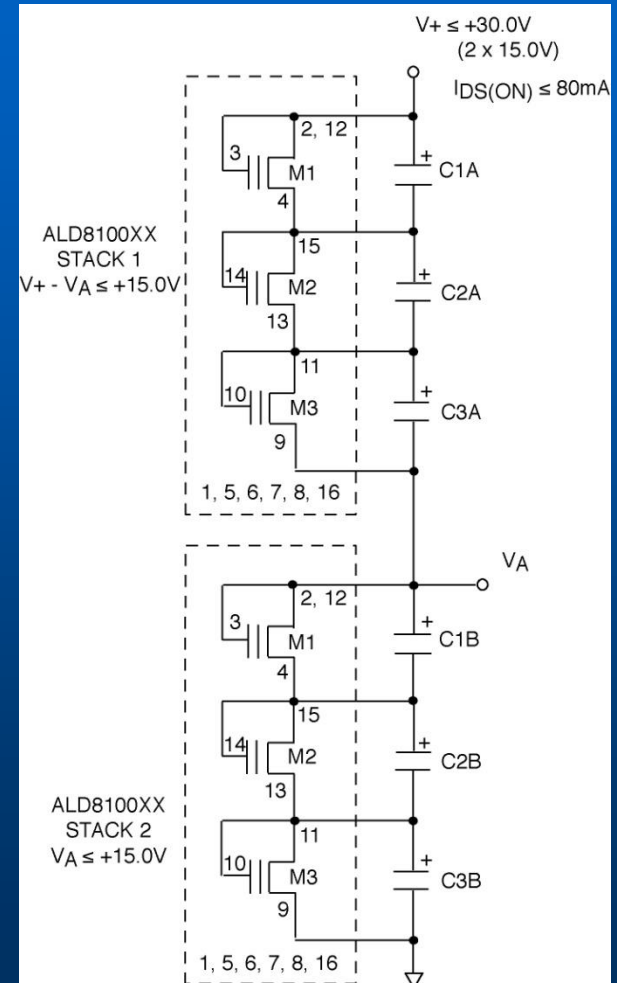
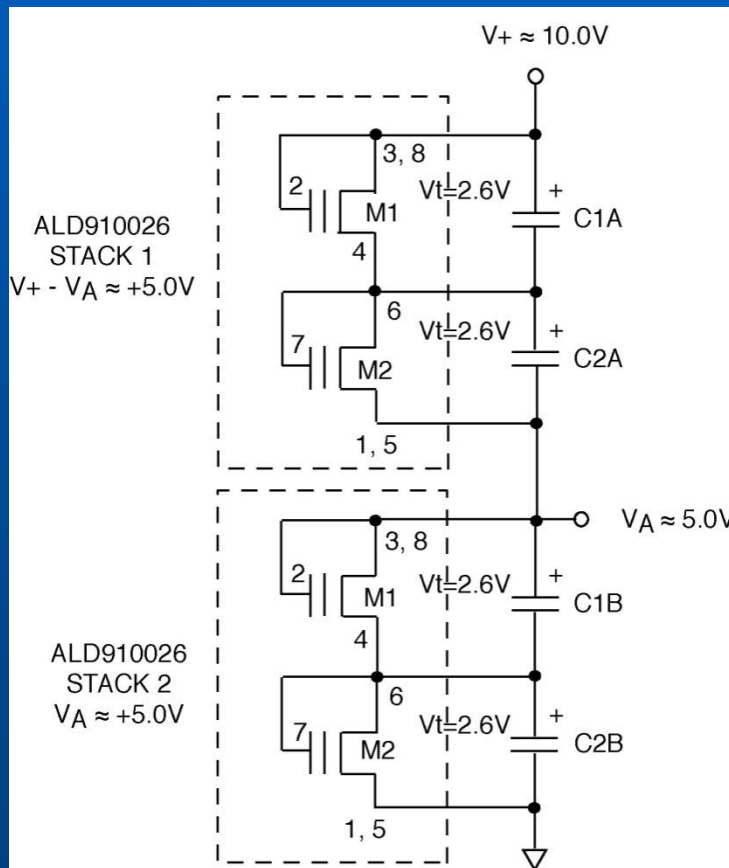
SABMB16 PCB Family

- **Universal plug & play PCB family designed to automatically balance supercapacitors with a ALD SAB MOSFETs for prototyping, evaluation and production.**
- **SABMB16 PCBs balancing virtually any size supercapacitor**
- **Blank version made with RoHS compliant FR4 material ready for mounting up to two ALD SAB MOSFETs.**
- **Four standard SABMB boards are also available with populated installed and fully tested SAB MOSFETs, each capable of automatically balancing up to 4 supercapacitors.**
- **Ideally suited for balancing series stacked networks ranging from two to more than a hundred supercapacitors.**



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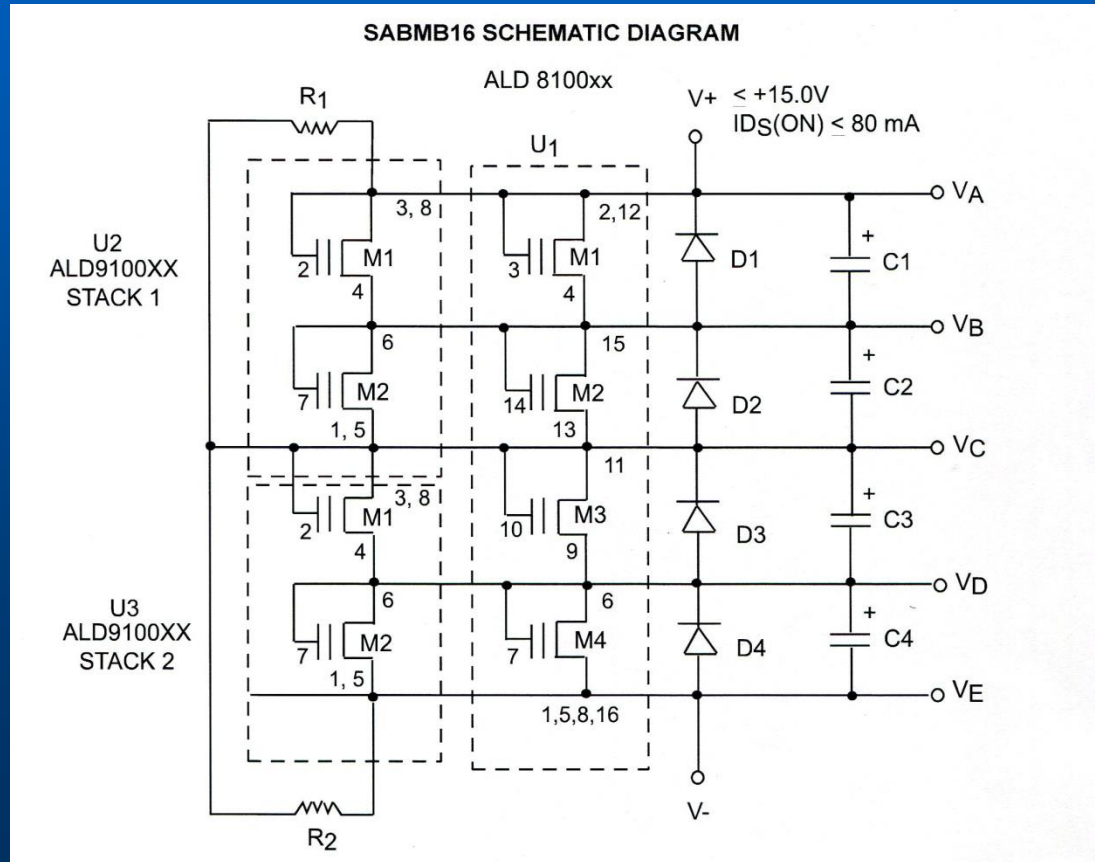
Higher Voltage Cell Stacks





Schematic Diagram

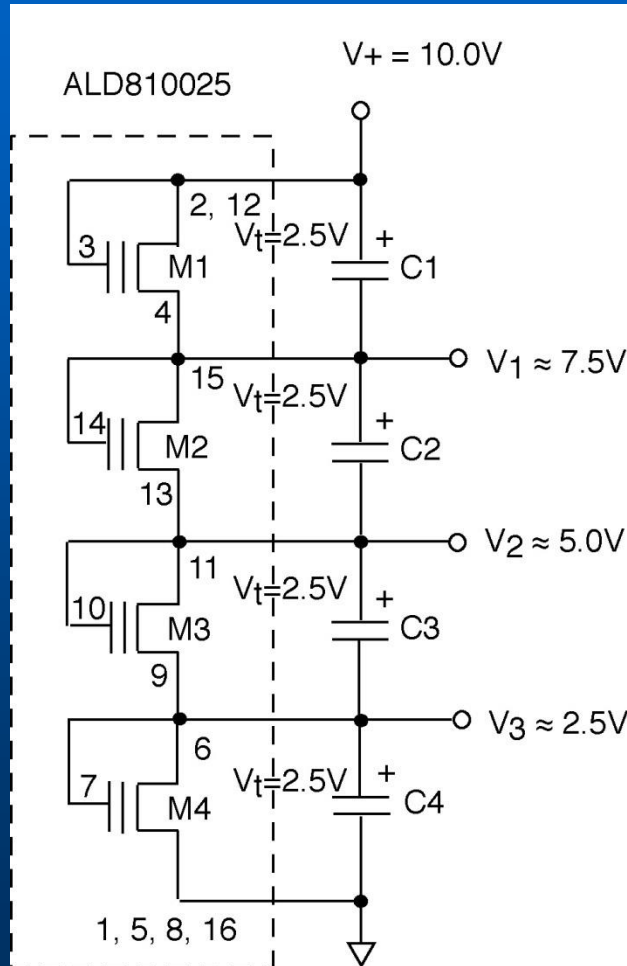
Basic connection diagram for use with 3 SAB MOSFET Devices
subject only to a maximum voltage per board of 15V





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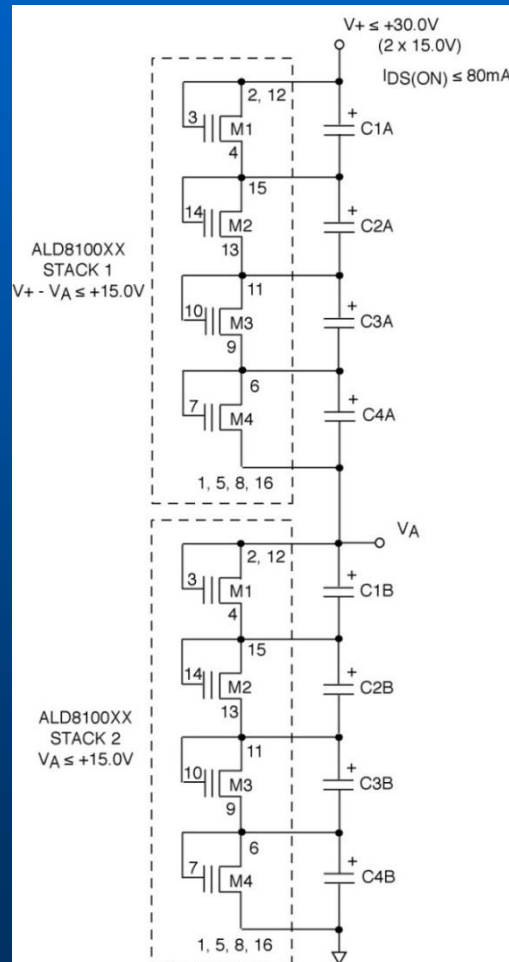
4-Cell MOSFET/Supercapacitor





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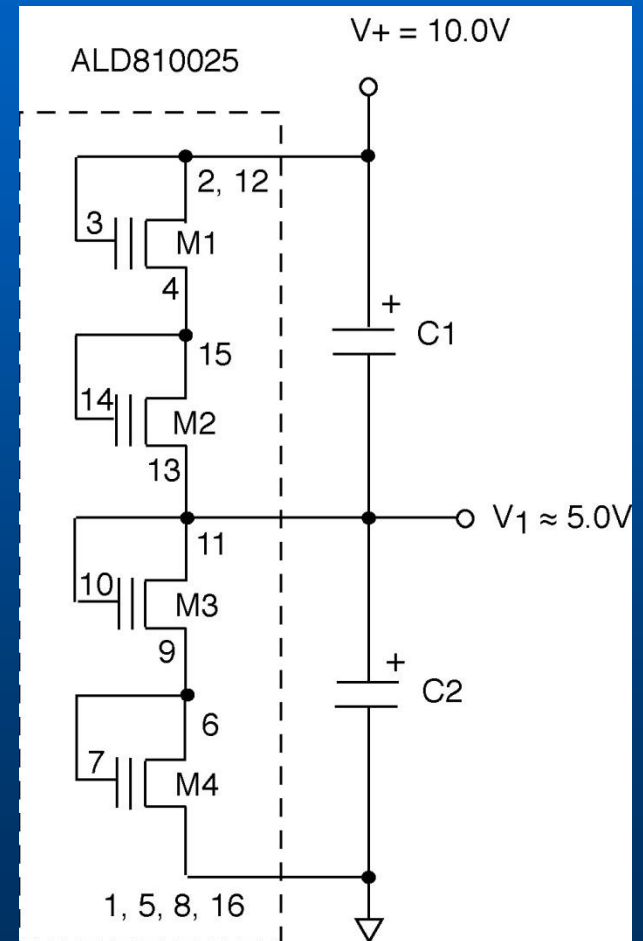
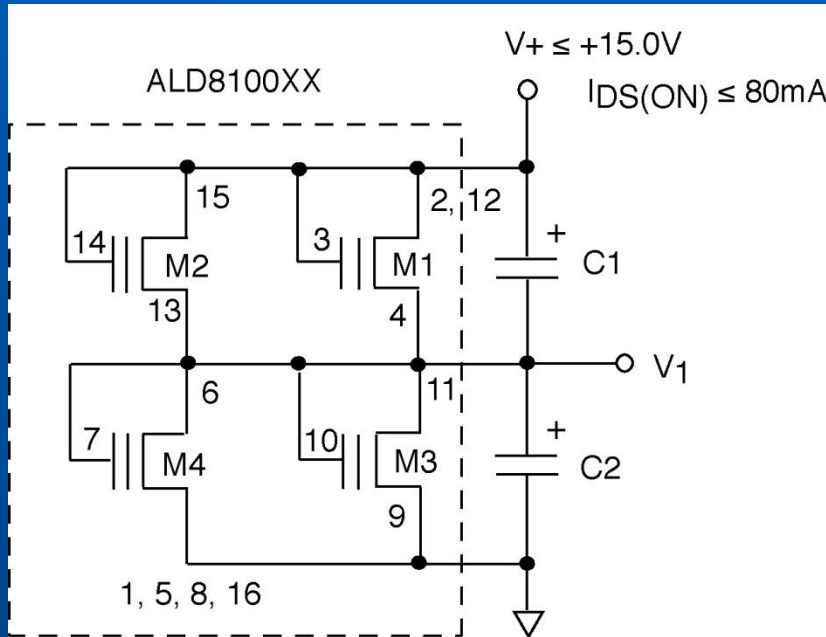
More Higher Voltage Cell Stacks





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Some Other Configurations





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Benefits

- No clocking or dead times
- Fast response time
- Continuous auto balancing --- no sleep modes
- Wide time constant ranges, from superfast to very slow
- From microseconds to days



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Why SAB™ MOSFET?

Breakthrough for leakage imbalances

- Addresses supercap balancing problem
- Lower cost and board space
- Advanced, precise and yet simple to use
- Reduces or eliminates leakages
- No other components needed



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Auto Balancing SAB MOSFETS Provide:

- Zero power in steady state mode
- Always active
- Ability to balance multiple components in one package
- Easily stackable to higher voltages
- Fully automatic regulation and control



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Summary

- Breakthrough in Supercap Balancing methods
- Better in function, cost and leakages
- Fully automatic operation
- Simple to apply and use
- Precision MOSFET Array technology
- Proven manufacturing technology