### Modern Motion…

Miga Analog Driver, V5 Technical Notes

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The Miga Analog Driver V5 (MAD-V5) is a simple MOSFET switch designed to safely power the MigaOne™ actuators across a wide range of speeds or input voltages.

The MAD-V5 allows either push-button operation, or external GATE (CNTL) signals to actuate the MigaOne until the END limit is reached (goes LOW). The MAD-V5 then cuts power momentarily, preventing overheating of the SMA wires. The Gate transistor allows up to 30V input, but it is recommended to use logic (2.5 to 5-Volt) levels. Pulse-Width-Modulated (PWM) signals can be applied at the Gate to control the actuation speed for a set voltage. For instance, the application of +28VDC power to the MigaOne would result in very fast actuation (~70ms). But with a PWM signal with a 50% duty cycle [Ton/(Ton+Toff)], the actuation speed would be significantly reduced: offering simple PWM speed control of the MigaOne actuators.

Miga Analog Driver V5 -Pinout Diagram

Vin: +5 to 30V
Gate or CNTL
GND
To Actuator V+
Actuator End Switch
Actuator GND
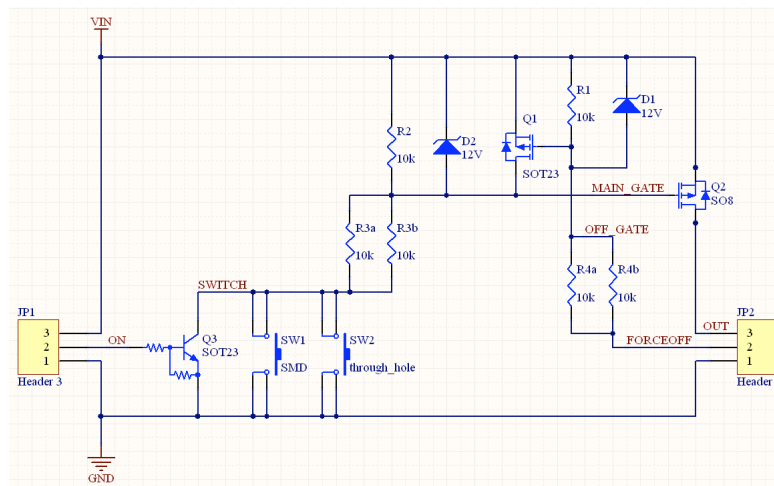
JP1: Your power supply and/or micro-controller
JP2: MigaOne actuator, 3-Pin Molex connector (note V+ location for polarity)
Note: Maximum peak current: 7A, maximum continuous current: 5A.
Refer to the *MigaOne Application Notes* for more details.