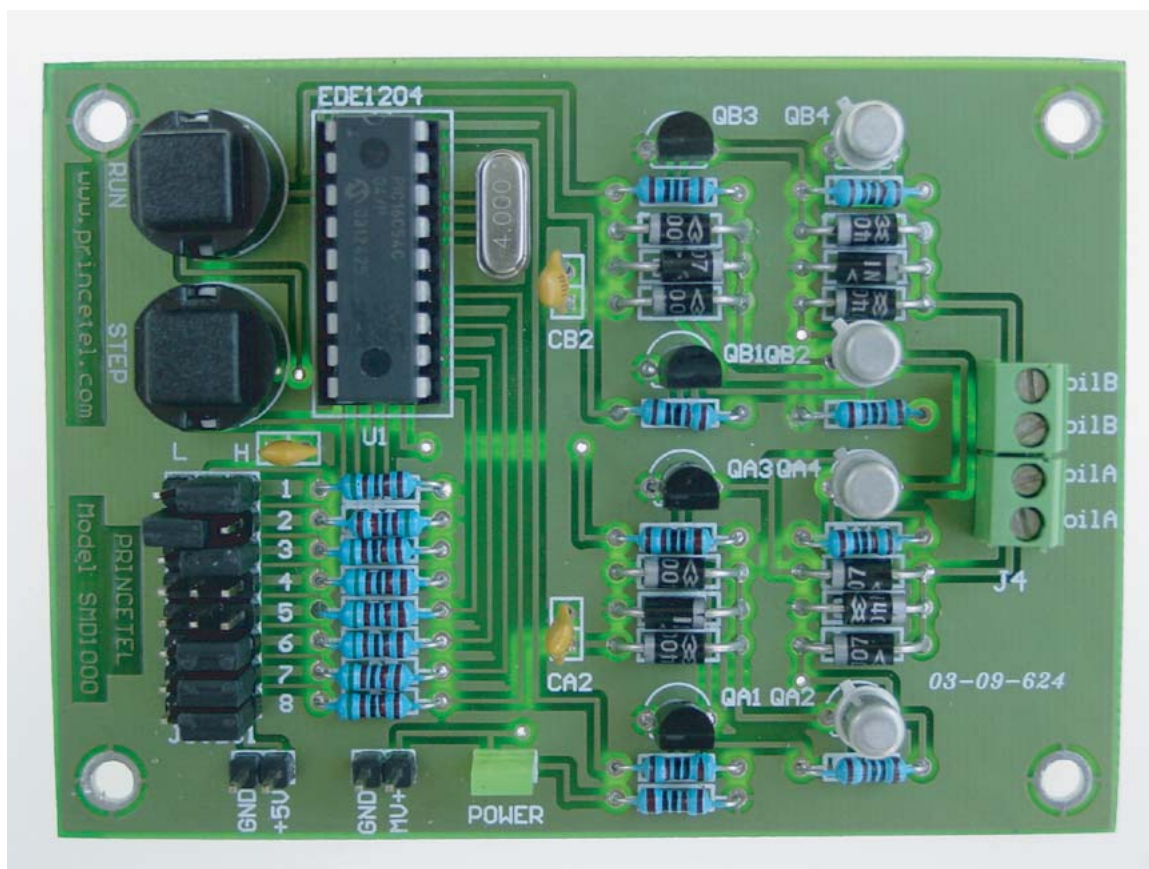




Bi-Polar Stepper Motor Driver



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Bipolar Stepper Motor Driver

Princetel's SMD1000 is a low-voltage bipolar stepper motor driver board. The board operates at 5 VDC while capable of driving bipolar stepper motors that require up to 24 V. Build-in clock at 4 MHz allows a rotational speeds up to 1,500 rpm. The small foot print of 65x90 mm makes it ideal for OEM applications. SMD1000 can be used with Princetel's PM VOAs to provide dual coil driving current to the micro bi-polar stepper motor.

Specifications

Board power supply voltage	3.0-5.5 VDC (Pin "+5 V")
Board operating current	25 mA
Build-in clock frequency	4 MHz
Maximum driving current/coil	500 mA
Motor voltage	0-24 V (Pin "MV+" on board)
Control signal voltage	TTL/CMOS compatible
Operating temperature	0 to 70 C
Storage temperature	-40 to 85 C
Weight	34 g
Price	\$199/EA

Control logic

1	0: Disable driver (free spin), 1: inherent "braking" effect		
2	1: CW, 0: CCW (Rev. wire sequence to change direction)		
3	1: Full step, 0: half step		
4	Step: Single step on falling edge in "STEP" mode (pin 5)		
5	1: STEP mode*, 0: RUN mode		
678	Speed (rpm)	Full step	Half step
000		9.1	4.6
001		10.3	5.3
010		12.0	6.2
011		14.6	7.3
100		18.2	9.2
101		24.0	12.0
110		36.4	18.2
111		70.6	36.4

*SMD1000 board has a build-in clock at 4 MHz, the "STEP" pin (4) may be driven at speeds up to 5 kHz, resulting in a motor speed over 1,500 rpm for a motor with 1.8-degree step. All stepper motors require ramped acceleration to such high rpm rates; do not instantly apply high speed step requests immediately to a stopped motor. Motor type and load will determine maximum acceleration rate. However, ordinary speed ranges do not require a ramped acceleration.

