

# ACT5026 10 AMP 3-PHASE BRUSHLESS DC MOTOR CONTROLLER

## Features

*Preliminary*

- V Supply 28V to 40V
- 10 Amps Continuous Current (Up to 85°C)
- Package Size 1.7" x 1.3" x 0.275"
- 4 Quadrant Control
- 3 Phase Commutational Logic
- ±15VDC Regulators for External & Internal Use
- Military Processing Available
- MIL-PRF-38534 Compliant Circuits Available
- Full Military (-55°C to +125°C) Temperature Range

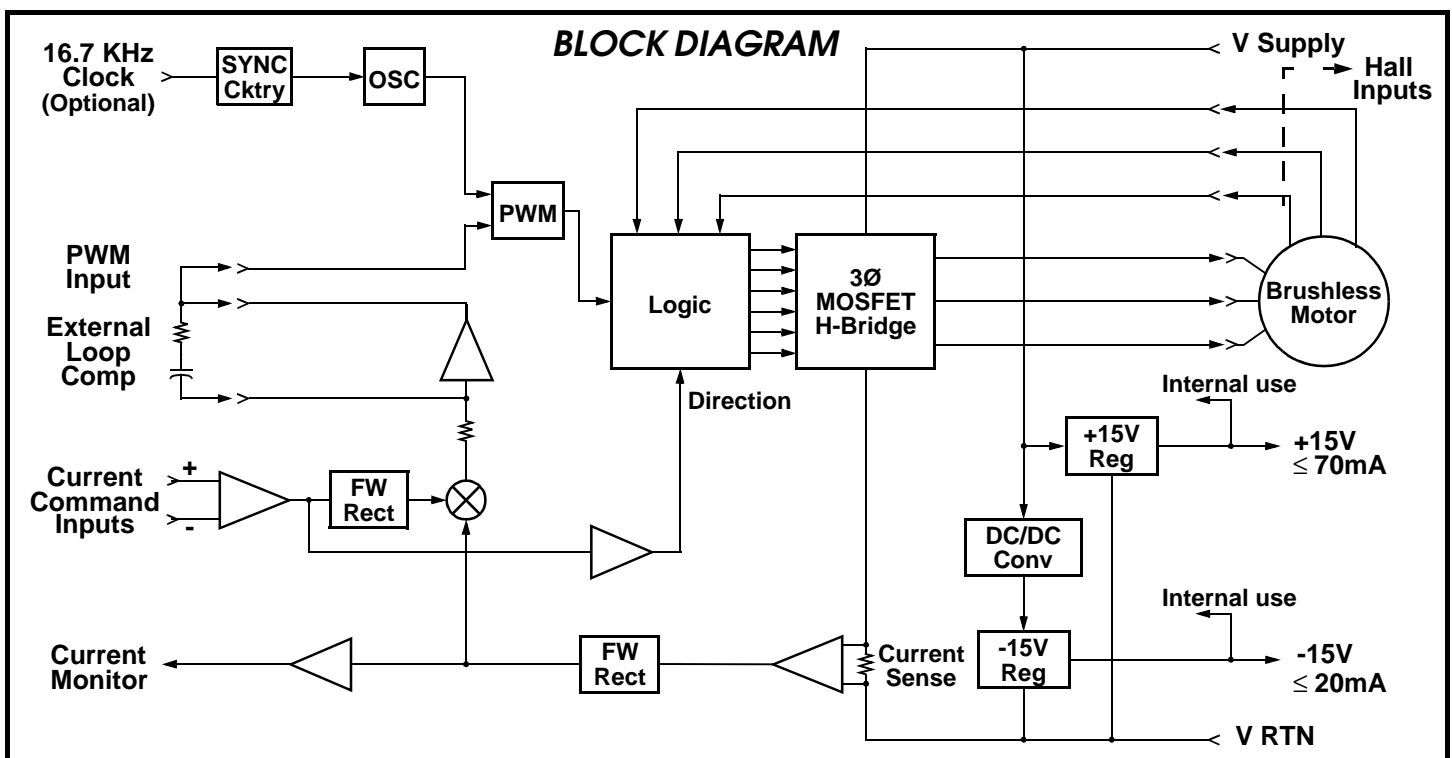


## General Description

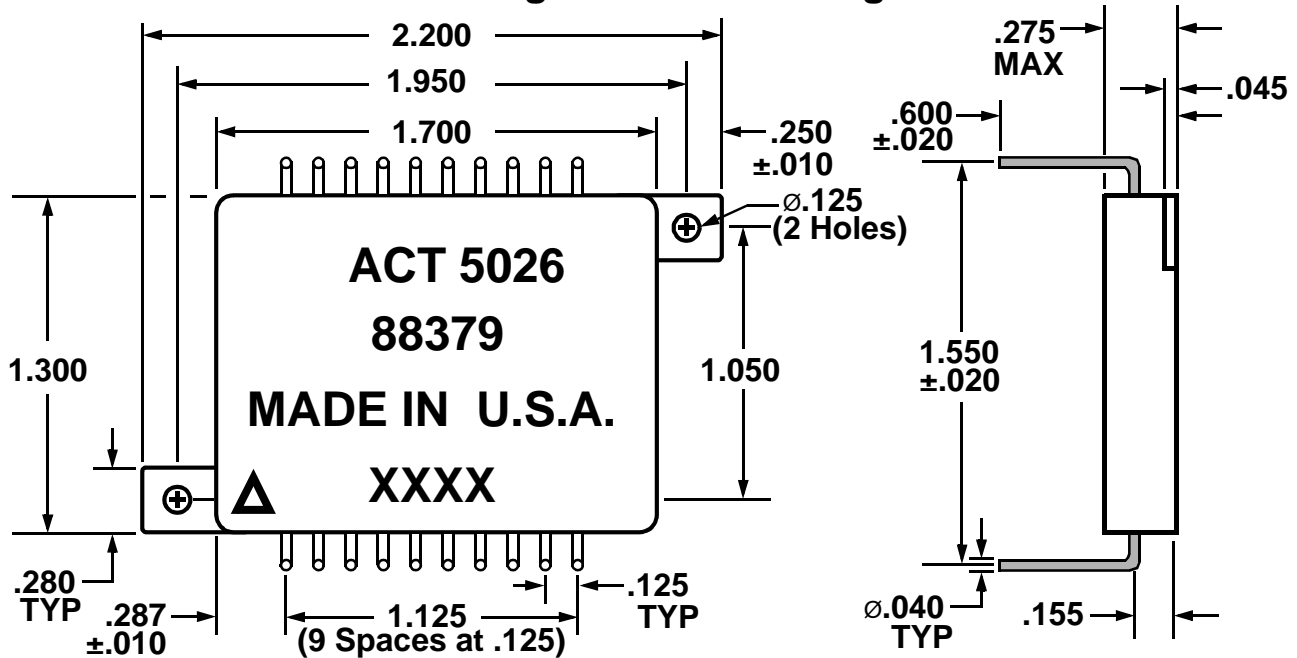
The ACT5026 combines a high power MOSFET 3 phase H-bridge output stage with all of the control circuitry required to form a closed loop motor controller. The input command voltage linearly controls the motor current with a scale-factor of 2 Amps per volt and a small-signal bandwidth of 2KHz. Input command polarity determines Motor direction. Only one supply is necessary due to the internal regulators and converter which provide ±15 Volts for internal as well as external use.

The circuitry includes:

- Fully Differential Input Amplifier
- A Pulse Width Modulator Internally clocked at 16.7KHz (Has external Sync pin)
- ± 15 Volt regulated outputs derived from main supply
- Internal Current Sense Resistor
- External Loop Compensation pins to tailor to specific motors
- Current Monitor Output with Scale Factor of 1.67 Volts/Amp



### Package Outline Drawing



### Pinout Descriptions

PIN Number	FUNCTION
1	+15V OUTPUT
2	EXTERNAL CAP +
3	EXTERNAL CAP -
4	-15V OUTPUT
8	COMMUTATOR INPUT A
7	COMMUTATOR INPUT B
6	COMMUTATOR INPUT C
13	CURRENT MONITOR OUT
15	CURRENT COMMAND (+)
14	CURRENT COMMAND RETURN (-)
17	MOTOR DRIVE OUTPUT A
18	MOTOR DRIVE OUTPUT B
19	MOTOR DRIVE OUTPUT C
20	V SUPPLY
10	V RETURN SIGNAL
16	V RETURN PWR
5	CLOCK
12	LOOP COMPENSATION, ERROR AMP OUTPUT
9	LOOP COMPENSATION, ERROR AMP SUMMING NODE
11	PWM INPUT

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