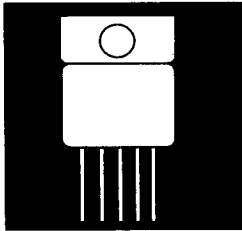


INTEGRATED BI-POLAR, 1/2 H BRIDGE MOTOR DRIVER



3.5 Amp, 1/2 H Bridge Motor Driver In Hermetic MO-078AA Package

FEATURES

- TTL Inputs
- 3.5 Amp Peak Output
- Thermal Shutdown
- Small Isolated Hermetic Package
- Crossover Current Protection
- Single Supply Operation To 35 Volts
- Tri-State Output

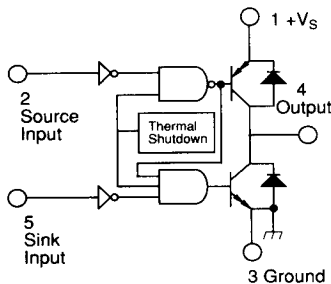
DESCRIPTION

The Omnirel OM9317SC and OM9322SC are 1/2 H bridge bi-polar drivers that will source and sink up to 2.0 Amps of output current continuous and up to 3.5 Amps peak. Both the source and sink output transistors are controlled with TTL compatible input signals. Internal logic and time delays prevent both source and sink transistors from turning on simultaneously and internal thermal protection protects the devices from overloads and excessive heating. This device is especially useful for driving small motors. Multiple devices can be used to form full H, triple 1/2 H and dual H bridges for driving d.c., 3 phase brushless d.c. and dual coil stepper motors.

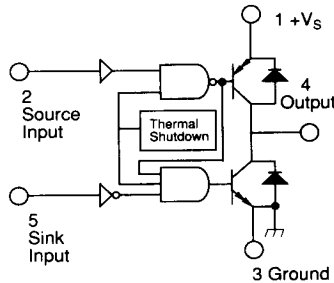
5

BLOCK DIAGRAM

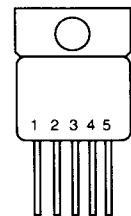
OM9317SC
Inverting



OM9322SC
Non-Inverting



PIN CONNECTION

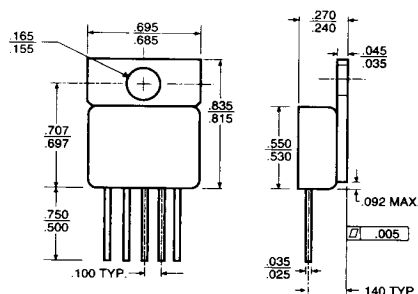


1 V_S
2 Source IN
3 Grd
4 Output
5 Sink IN

TRUTH TABLE

Source Driver Pin 2	Sink Driver Pin 5	Output, Pin 4	
		OM9317SC	OM9322SC
Low	Low	High	Low
Low	High	High	High Z
High	Low	Low	High
High	High	High Z	High

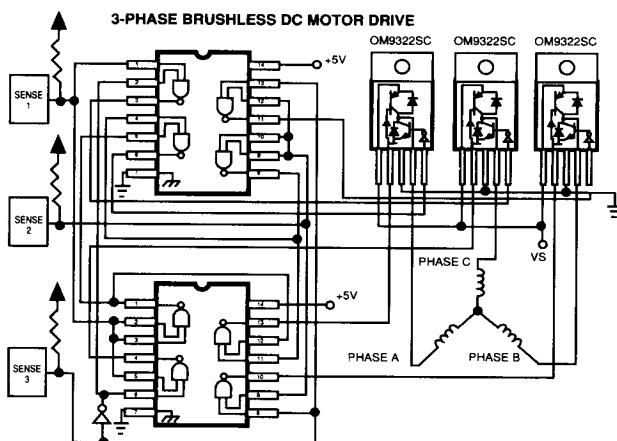
MECHANICAL OUTLINE



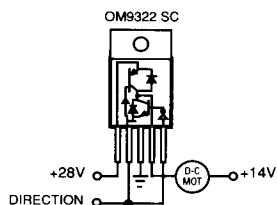
ELECTRICAL CHARACTERISTICS: $T_A = 25^\circ\text{C}$, $T_{TAB} = 70^\circ\text{C}$, $V_S = 35\text{ V}$ unless otherwise noted.

CHARACTERISTIC	Source Driver Input, Pin 2		Sink Driver Input, Pin 5	Output, Pin 4	Min.	Limits Max.	Units
	OM9317SC	OM9322SC					
Output Leakage Current	2.4 V	0.8 V	2.4 V	0 V	-	-500	μA
	2.4 V	0.8 V	2.4 V	35 V	-	500	μA
Output Sustaining Voltage	2.4 V	0.8 V	0.8 to 2.4 V	2.0 A	35	-	V
Output Saturation Voltage	0.8 V	2.4 V	2.4 V	-2.0 A	33	-	V
	2.4 V	0.8 V	0.8 V	2.0 A	-	2.0	V
Output Source Current	0.8 V	2.4 V	2.4 V	-	-2.0	-	A
Output Sink Current	2.4 V	0.8 V	0.8 V	-	2.0	-	A
Input Open-Circuit Voltage	-250 μA	-250 μA	-250 μA	-	-	7.5	V
Input Current	-	2.4 V	2.4 V	NC	-	-700	μA
	2.4 V	-	2.4 V	NC	-	10	μA
	0.8 V	0.8 V	0.8 V	NC	-	-1.6	mA
Propagation Delay	2.4 V	0.8 V	0.8 to 2.4 V	2.0 A	-	750	ns
	0.8 to 2.4 V	2.4 to 0.8 V	2.4 V	2.0 A	-	2.0	μs
Clamp Diode Forward Voltage	NC	NC	NC	2.0 A	-	2.2	V
Supply Current	0.8 V	2.4 V	NC	NC	-	35	mA

TYPICAL APPLICATIONS



SINGLE-WINDING DC OR STEPPER MOTOR DRIVE



FULL-BRIDGE DC SERVO MOTOR DRIVE

