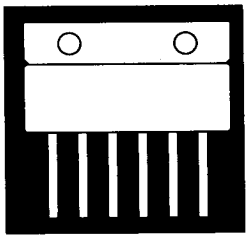
INTEGRATED BI-POLAR, FULL H BRIDGE MOTOR DRIVER



2 Amp, H Bridge Motor Driver In Hermetic 6-Pin SIP

FEATURES

- 6-Pin Power Isolated Package
- TTL Compatible Inputs
- Output Current 2 Amps
- Tri-State Outputs
- Thermal Shutdown
- Crossover Current Protection
- Single Supply Operation
- Re-Circulating Diodes Included

DESCRIPTION

The Omnirel OM9318SS is a full H bridge motor driver circuit contained in a 6-pin hermetic SIP power package with isolated heat sink tab. Direction and speed inputs are TTL compatible, allowing the user to control a motor requiring up to 2 Amps of current at 35 Volts with TTL input logic signals. Thermal shutdown and crossover current protection are included. Ideally suited for Military applications where small size, high reliability, high performance and package hermeticity is required.

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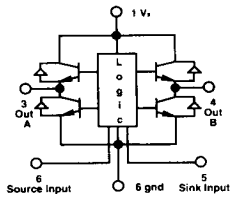
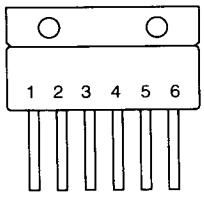
TRUTH TABLE

Pin 2	Pin 5	Pin 3	Pin 4
0	0	Hi	Lo
0	1	Hi	Open
1	0	Lo	Hi
1	1	Open	Hi

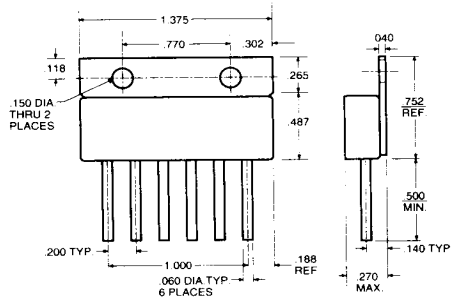
BLOCK DIAGRAM



PIN CONNECTION



MECHANICAL OUTLINE



Unless otherwise specified, the general tolerance is ±.010.

ABSOLUTE MAXIMUM RATINGS

Supply Voltage Range, V_S . . . . . 8.0 V to 35 V
Input Voltage Range, V_{IN} . . . . . -0.3 V to +7.0 V
Peak Output Current (100ms, 10% d-c), I_{DF} . . . . . ±3.5 A
Continuous Output Current, I_{OUT} . . . . . ±2.0 A
Operating Temperature Range, T_A . . . . . -55° C to 125° C
Storage Temperature Range, T_S . . . . . -65° C to 150° C

THERMAL CHARACTERISTICS:

θ_{JC} = 1.5° C/W θ_{JA} = 30° C/W Derate = 1.5 W/°C

ELECTRICAL CHARACTERISTICS:

T = 25° C, T_{TAB} = 70° C, V_S = 35 V unless otherwise noted.

CHARACTERISTIC	INPUT PIN 2	INPUT PIN 5	OUTPUT PIN 3 TO PIN 4	LIMIT MIN.	LIMIT MAX.	UNITS
Output Leakage Current	2.4 V	2.4 V	I_{OUT}		500	µA
	0.8 V	2.4 V	I_{OUT}		500	µA
Output Voltage @ I_O = 2.0 Amps	0.8 V	0.8V	V_{OUT}	31		Volts
	2.4 V	0.8 V	V_{OUT}	31		Volts
Input Lo Current	gnd	open	open		1.5	mA
	open	gnd	open		1.5	mA
Input Hi Current	2.4 V	open	open		50	µA
	open	2.4 V	open		50	µA
Diode Forward Voltage	open	open	Pin 2 to Pin 1 Pin 3 to Pin 1		2.2	Volts
I_f = 2.0 Amps	open	open	Pin 6 to Pin 3 Pin 6 to Pin 4		2.2	Volts
Supply Current	0.8 V	2.4 V	open		80	mA

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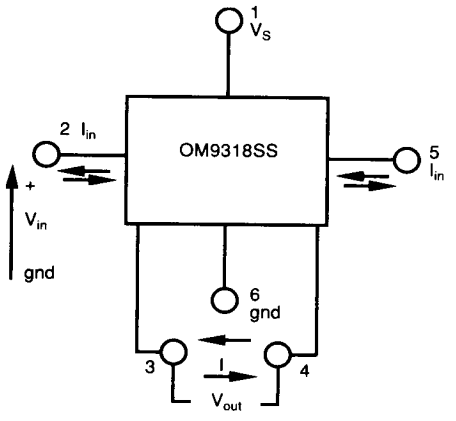
TEST FIGURE



TYPICAL APPLICATION