

2918

DUAL FULL-BRIDGE PWM MOTOR DRIVER

The A2918EWH and A2918EWV motor drivers are designed to drive both windings of a bipolar stepper motor or bidirectionally control two dc motors. All bridges are capable of sustaining 45 V and include internal pulse-width modulation (PWM) control of the output current to 1.5 A.

For PWM current control, the maximum output current is determined by the user's selection of a reference voltage and sensing resistor. A PHASE input to each bridge determines load current direction. Active low ENABLE inputs control the four drivers in each bridge.

The bridges include both ground clamp and flyback diodes for protection against inductive transients. Internally generated delays prevent cross-over currents when switching current direction. Special power-up sequencing is not required. Thermal protection circuitry disables the outputs if the chip temperature exceeds safe operating limits.

Representative electrical characteristics (at an ambient temperature of +25°C) for the commercial type A2918SWH/SWV are shown in Section 3. Complete, detailed technical information on the A2918EWH/EWV is available on request. These devices are also available on special order for operation to +125°C.

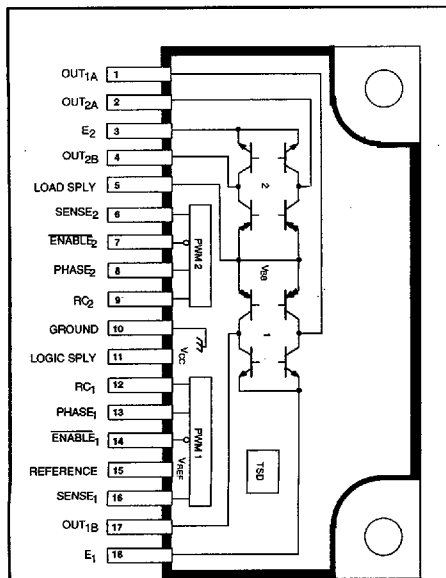
The A2918EWH/V are supplied in an 18-lead power-tab package with staggered lead forming. The tab is internally insulated from the device and requires no external isolation.

FEATURES

- ± 1.5 A Continuous Output Current
- 45 V Output Sustaining Voltage
- Internal PWM Current Control
- Low Output Saturation Voltage
- Internal Clamp Diodes
- Internal Thermal Shutdown Circuitry
- Similar to Dual PBL3718 or Dual PBL3770

Always order by complete part number:

Part Number	Application
A2918EWH	For Horizontal Mount
A2918EWV	For Vertical Mount



Dwg. PP-051

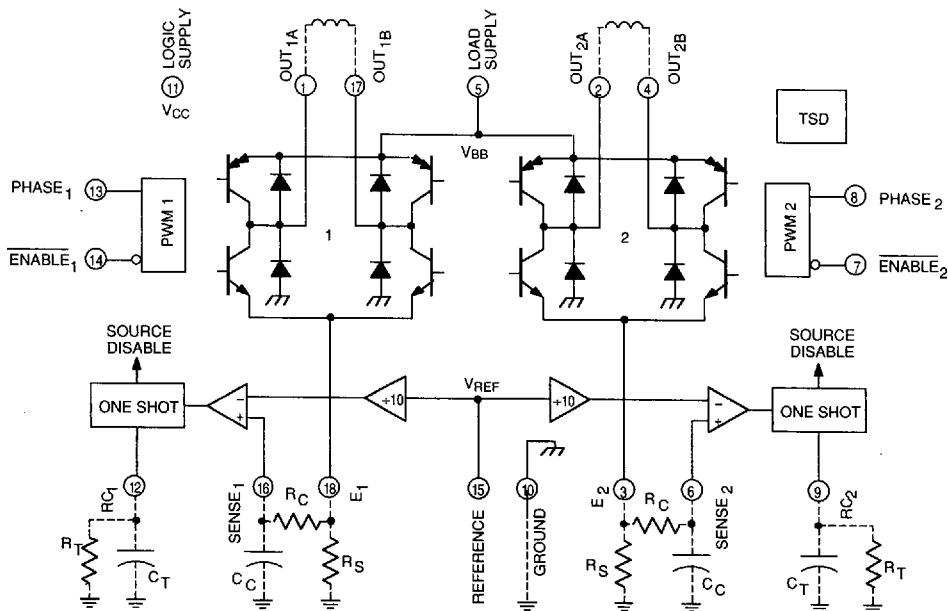
ABSOLUTE MAXIMUM RATINGS at $T_J \leq +150^\circ\text{C}$

Motor Supply Voltage, V_{BB}	45 V
Output Current, I_{OUT} ($t_w \leq 20 \mu\text{s}$)	± 1.75 A
(Continuous)	± 1.5 A
Logic Supply Voltage, V_{CC}	7.0 V
Logic Input Voltage Range, V_{IN}	-0.3 V to +7.0 V
Output Emitter Voltage, V_E	1.5 V
Package Power Dissipation, P_D	See Graph
Operating Temperature Range, T_A	-40°C to +85°C
Storage Temperature Range, T_S	-40°C to +150°C

Output current rating may be limited by duty cycle, ambient temperature, and heat sinking. Under any set of conditions, do not exceed the specified peak current rating or a junction temperature of +150°C.

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FUNCTIONAL BLOCK DIAGRAM



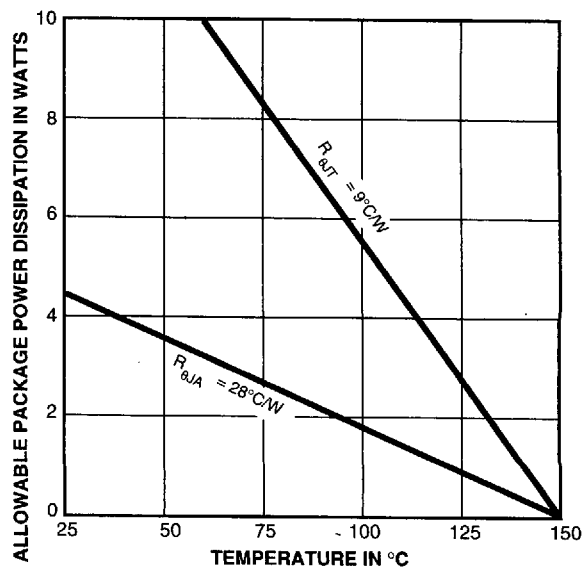
Dwg. FP-033

TRUTH TABLE

Enable	Phase	Out _A	Out _B
L	H	H	L
L	L	L	H
H	X	Z	Z

X = Don't care

Z = High impedance



Dwg. GP-043