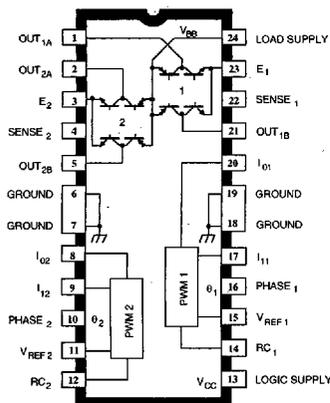


2919

DUAL FULL-BRIDGE PWM MOTOR DRIVER

A2919EB



Dwg. PP-006

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

Motor Supply Voltage, V_{BB}	45 V
Output Current, I_{OUT} (Peak, $t_w \leq 20 \mu\text{s}$)	$\pm 1.0 \text{ A}$
(Continuous)	$\pm 750 \text{ mA}$
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
Operating Temperature Range, T_A	-40°C to $+85^\circ\text{C}$
Storage Temperature Range, T_S	-55°C to $+150^\circ\text{C}$

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 $+150^\circ\text{C}$.

The A2919EB and A2919ELB motor drivers are designed to drive both windings of a bipolar stepper motor or bidirectionally control two dc motors over a temperature range of -40°C to $+85^\circ\text{C}$. Both bridges are capable of sustaining 45 V and include internal pulse-width modulation (PWM) control of the output current to 750 mA. The outputs have been optimized for a low output-saturation voltage drop (less than 1.8 V total source plus sink at 500 mA).

For PWM current control, the maximum output current is determined by the user's selection of a reference voltage and sensing resistor. Two logic-level inputs select output current limits of 0%, 41%, 67%, or 100% of the maximum level. A PHASE input to each bridge determines load current direction. Thermal protection circuitry disables the outputs if the chip temperature exceeds safe operating limits.

Representative electrical characteristics (at an ambient temperature of $+25^\circ\text{C}$) for the commercial type A2919SB/SLB are shown in Section 3. Complete, detailed technical information on the A2919EB/ELB is available on request. These devices are also available on special order for operation to $+125^\circ\text{C}$.

The A2919EB is supplied in a 24-pin dual in-line plastic batwing package with a copper lead-frame and heat sinkable tabs for improved power dissipation capabilities. The A2919ELB is supplied in a 24-lead surface-mountable SOIC. Their batwing construction provides for maximum package power dissipation in the smallest possible construction. For applications not requiring quarter-step operation, but desire lower detent or running current, the similar UDQ2916B/EB/LB may be preferred.

FEATURES

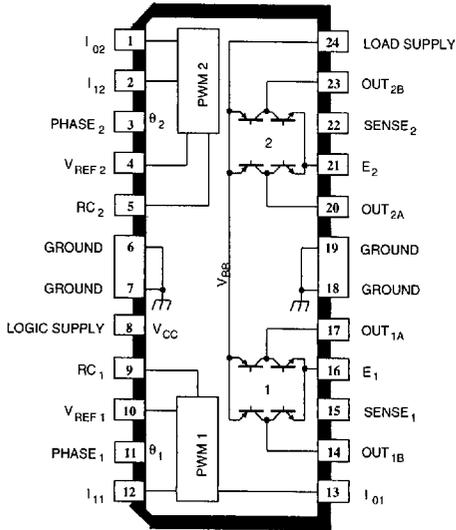
- 750 mA Continuous Output Current
- 45 V Output Sustaining Voltage
- Internal Clamp Diodes
- Internal PWM Current Control
- Low Output Saturation Voltage
- Internal Thermal Shutdown Circuitry
- Half- or Quarter-Step Operation of Bipolar Stepper Motors

Always order by complete part number:

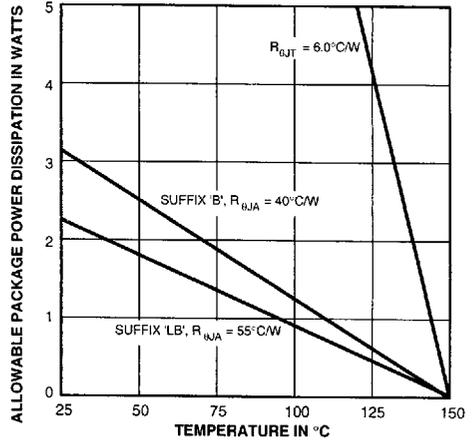
Part Number	Package	$R_{\theta JA}$	$R_{\theta JT}$
A2919EB	24-Pin DIP	40°C/W	6.0°C/W
A2919ELB	24-Lead SOIC	50°C/W	6.0°C/W

2919 DUAL FULL-BRIDGE MOTOR DRIVER

A2919ELB



Dwg. PP-047



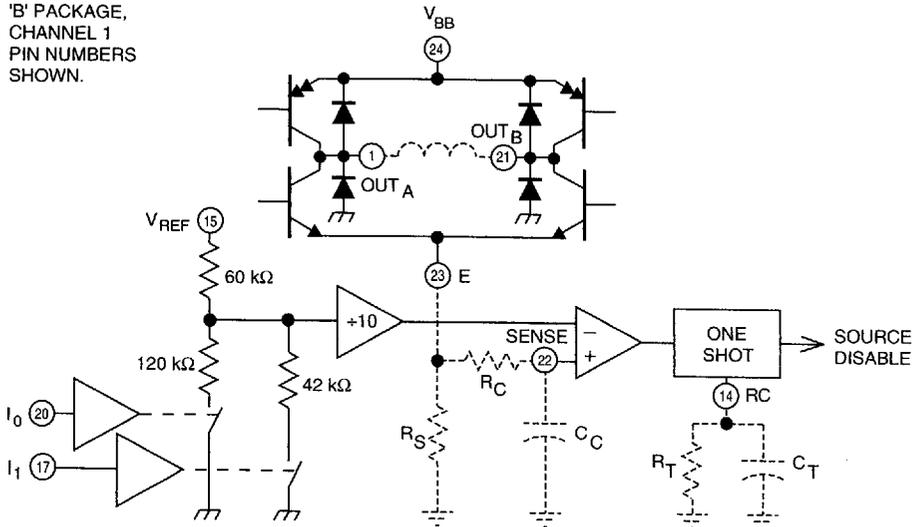
Dwg. GP-049A

TRUTH TABLE

PHASE	OUT _A	OUT _B
H	H	L
L	L	H

PWM CURRENT-CONTROL CIRCUITRY

'B' PACKAGE,
CHANNEL 1
PIN NUMBERS
SHOWN.



Dwg. EP-007-3