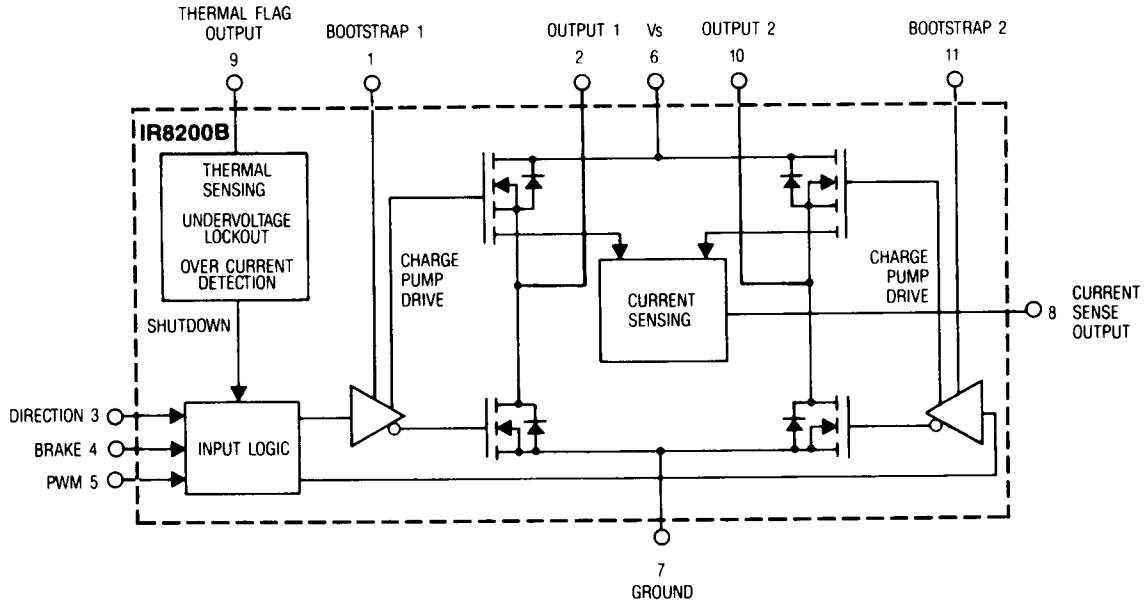


3A, 55V DMOS H-BRIDGE

IR8200B



FEATURES

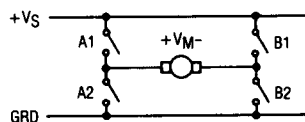
- High Efficiency H-Bridge DMOS Output Stage
 - High Current Output — 3A Continuous.
 - 6A Peak.
 - up to 55 Volts Operation.
 - Low $R_{ds(on)}$ — 0.3 ohm per switch.
- Lossless HEXSense(TM) Current Sensing
 - 380 μ A/A Analog Feedback.
- Thermal Flag Output at 145°C.
- Rugged Internal Clamp Diodes.
 - $T_{rr} = 100$ ns.
- On-board Protection.
 - Thermal Shutdown at 170°C.
 - Undervoltage Lockout at 11V.
 - Overcurrent Shutdown above 6A.
 - Deadband of 60ns to avoid Shoot-Through.
- CMOS Control.
 - Low Quiescent Current — 20 mA.
 - User Selectable Drivers.
 - Charge Pump or Bootstrap.
- User Friendly Inputs.
 - TTL and CMOS Compatible.
 - On-Chip Decoding of Motor Oriented Commands.
 - PWM, Direction and Brake.
- High Power package.
 - 11 pin Single In-line. (1.5 ϕ JC)

PART NUMBER	V _{IN} (V)	V _{OUT} (V)	I _O CONT (A)	I _O PEAK (A)	CASE OUTLINE (1)	NOTES	CASE STYLE
IR8200B	11-55	11-55	3	6	P1		11 PIN SIP PLASTIC

COMPARISON BETWEEN LOCKED ANTI PHASE & SIGN/MAGNITUDE PWM CONTROL AS RELATED TO THE IR8200

CHARACTERISTIC	LOCKED ANTI PHASE	SIGN/MAGNITUDE
Output ripple voltage	Relatively high	Relatively low
Input ripple current	Relatively high	Relatively low
Control discontinuity around zero	No	Yes (generally)
Current Sensing	Sense signal is chopped. May need "reconstruction"	Sense signal always represents load current, (except for regeneration)
Diode commutation losses	Low	Lower
Switching losses	Low	More than 50% lower for same frequency
Load power regeneration	Yes	Yes

TWO CONTROL MODES FOR THE IR8200B



	LOCKED ANTI PHASE	SIGN/MAGNITUDE
DEVICE SEQUENCE	 BOTH SIDES TOGGLED	 ONE SIDE TOGGLED
VOLTAGE SEEN BY THE LOAD		
REVERSAL	+V _M IF D > 0.5 -V _M IF D < 0.5 D = DUTY CYCLE	+V _M IF B2 ON -V _M IF A2 ON

(1) For case outline drawing see page 144.