ANALOG PRODUCTS

MC33883 FACT SHEET

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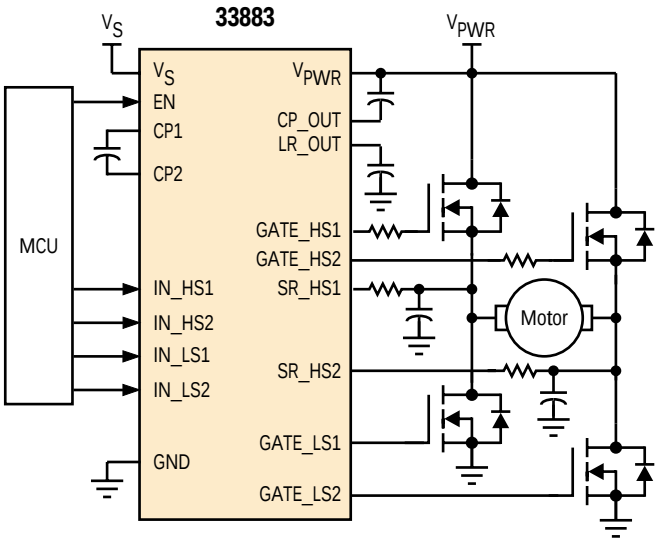
POWER ICs
PRE-DRIVER

33883 H-BRIDGE PRE-DRIVER

The 33883 is a pre-driver for two external low-side and two external high-side N-Channel power FETs configurable as four independent switches or as two half-bridges or one full H-Bridge in applications up to 55 V. The four parallel input-controlled gate drive outputs are independent of each other and capable of supplying source or sink currents of 1.0 A peak for fast PWM switching applications.

Simplified Application Diagram



APPLICATIONS

- Aircraft Systems
- Automotive Systems
- Robotics Systems
- Farm Equipment
- Actuator Control
- Fractional Horsepower DC-Motor Control
- Marine Applications
- Applications where External N-Channel High-Side and/or Low-Side Control is Required

CUSTOMER BENEFITS

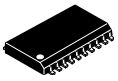
- Economical H-Bridge pre-driver uses few external parts and simple circuit hook-up
- Can be used in microprocessor or manual input controlled high-side or low-side switching applications
- Built-in charge pump for high-side N-channel turn-on enhancement
- Reduced PC board space resulting in enhanced reliability and lower costs
- Internal protection features for both IC and external FETs

Performance	Typical Values
Inputs	4
Outputs	4
Operating Voltage	5.5 – 55 V
CP Delivery Current	100 mA
PWM Capability	100 kHz
ESD	± 2000 V
Operating Temp	$-40°C \le T_A \le 125°C$
Junction Operating Temp	$-40°C \le T_J \le 150°C$

FEATURES

- Built-in charge pump
- Independent parallel input control of individual external power FETs
- Fast (100 kHz) PWM input control
- Enable input control
- Additional devices available for comparison in Analog Selector Guide SG1002/D

Protection	Detect	Limiting	Shut Down
Over Voltage V_S and V_{PWR}	•		•
Under Voltage V_S and V_{PWR}	•		•
Gate Outputs Short to GND	•		•
HSS Over Temperature	•		•
V_{GS} Voltage	•	•	

Ordering Information	Package	Ship Method	Motorola Part Number
	20 SOICW	Rail	**33883DW
		T/R	**33883DWR2

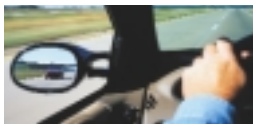
Data Sheet Order Number MC33883/D

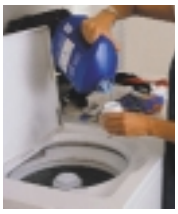
Contact Sales for Evaluation Kit Availability

**Prefix Index:
PC = Eng Samples; XC = In Qual; MC = Production

QUESTIONS

- Need a pre-driver to high- and/or low-side switch loads using N-channel power FETs (two HSS and two LSS, or two half-bridges, or one H-Bridge)?
- Do you have only a little PC board space available for load control?
- Are you looking for an easy-to-design high-side pre-driver with internal charge pump, capable of high-speed PWM switching?





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