

ANALOG PRODUCTS

MC33288 FACT SHEET



POWER ICs
HIGH-SIDE SWITCH

33288 DUAL HIGH-SIDE SWITCH (20 mΩ R_{DS(on)})

The 33288 is a multi-chip dual high-side power switch for automotive as well as industrial and other incandescent flasher or inductive load applications. This multi-chip device consists of two 20 mΩ R_{DS(on)} fully protected high-side switches in a surface mount power package. It interfaces directly with a microcontroller and monitors the lamp current and reports an open lamp failure using a current recopy circuit.

Compared to standard flashers, the 33288 is capable of driving incandescent loads directly or multiple relay controlled loads. In contrast to mechanical solutions, the device offers high reliability as well as protection and diagnostic features.

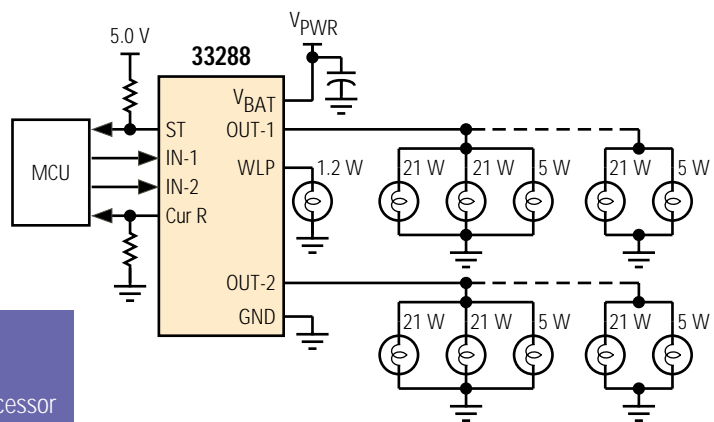
APPLICATIONS

- Aircraft Systems
- Automotive Systems
- Robotic Systems
- Farm Equipment
- Industrial Actuator Controls
- Fractional Horsepower DC-Motor Controls
- Marine Applications
- Incandescent Lamp Control
- Applications where High-Side Switch Control with Diagnostics is Necessary

CUSTOMER BENEFITS

- Simple system with minimal component count
- Simple system design with direct interfacing to a microprocessor
- Easily used in stand-alone manual circuit modes (non-microprocessor applications)
- Simplified high-side switching of inductive loads due to internally clamped outputs
- Applicable for high-side switching of capacitive, incandescent, or inductive loads
- Increased switching efficiency with very low power dissipation (low R_{DS(on)})
- Reduced PC board space resulting in enhanced reliability and lower costs
- Internal safety features with output status reporting

Simplified Application Diagram

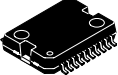


Performance	Typical Values
Outputs	2
R _{DS(on)} @ 25°C	0.020 Ω
Operating Voltage	8.0 – 35 V
Peak Current	30 A each output
ESD	± 2000 V
Operating Temp	-40°C ≤ T _A ≤ 125°C
Junction Operating Temp	-40°C ≤ T _J ≤ 150°C

FEATURES

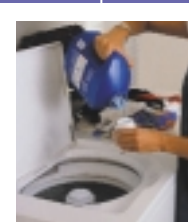
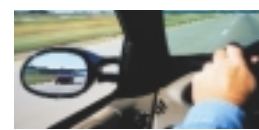
- 20 mΩ $R_{DS(on)}$ outputs
- Standby current less than 5.0 μA at V_{PWR} below 14 V
- Maximum breakdown voltage greater than 40 V
- Protected in case of loss of ground
- 8.0 A nominal current per channel
- 1.2 W warning lamp driver
- Current recopy to monitor lamp output current
- Reverse battery polarity protected
- Additional devices available for comparison in Analog Selector Guide SG1002/D

Protection	Detect	Limiting	Shut Down	Auto Retry	Status Reporting
Under Voltage	•		•	•	
Over Current/SC	•	•			
Over Temperature	•		•	•	•
Open Load	•			•	•
Short to GND	•	•			

Ordering Information	Package	Ship Method	Motorola Part Number
	20 HSOP	Rail T/R	**33288DH **33288DHR2
Data Sheet Order Number			MC33288/D
Contact Sales for Evaluation Kit Availability			
**Prefix Index: PC = Eng Samples; XC = In Qual; MC = Production			

QUESTIONS

- Do you need to reduce system costs of high-side switching two loads using a microcontroller?
- Do you have only a little PC board space available for load control?
- Do you have to design a dual high-efficiency switch to control capacitive, incandescent, or resistive loads over a wide temperature range?
- Are you looking for an easy-to-design high-side switch, capable of switching two loads?
- Do you require a "smart" switch having internal protection features as well as fault reporting?



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