



Product Preview

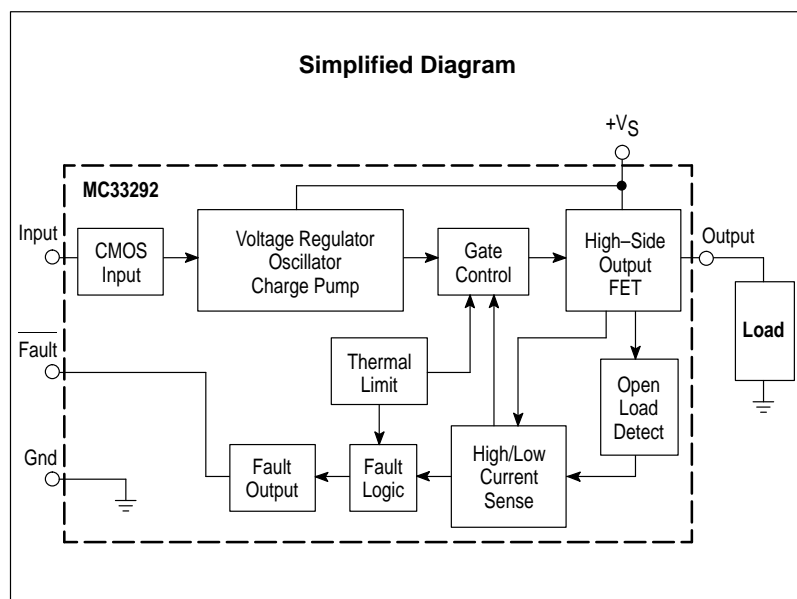
Single 4-Amp High-Side Switch

The MC33292 is a Single High-Side Switch designed originally for 12 V automotive applications but well suited for many other environments. It is designed to switch loads of 4.0 amperes from a 12 V supply. The MC33292 is designed to interface directly with a microcontroller to switch both inductive or incandescent loads. The device has many monitoring and protection features, among which are: low standby current, internal charge pump, on-state fault status reporting, reverse battery protection, internal output clamp, over temperature shutdown, and over current shutdown. The MC33292 incorporates SMARTMOS™ technology with CMOS logic and bipolar/MOS analog circuitry.

The MC33292 is packaged in a plastic 5-lead TO-220 power package and is parametrically specified over $-40^{\circ}\text{C} \leq T_A \leq +125^{\circ}\text{C}$ ambient temperature and $9.0\text{ V} \leq V_{\text{ign}} \leq 16\text{ V}$ voltage range.

- Designed for Automotive High-Side Switch Applications
- Operates with Supply Voltages of 9.0 V to 16 V
- CMOS Logic Compatible Input Control
- On-Board Charge Pump Requiring No External Components
- On-State Fault Reporting
- Output Current Less Than 50 μA with Output "Off"
- $R_{\text{DS(on)}}$ Less Than 250 $\text{m}\Omega$ with $V_{\text{ign}} = 16\text{ V}$, $I_{\text{out}} = 6.0\text{ A}$
- Internal Output Clamp for Switching Inductive Loads
- 7.0 A to 12 A Output Current Limit
- Open Load Fault Detection
- Shorted Load Detection and Shutdown
- Over Temperature Detection and Shutdown
- Greater Than 2000 V ESD Protection (Human Body Model)

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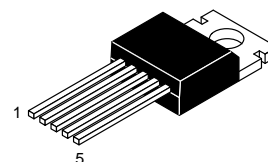


MC33292

SINGLE 4-AMP HIGH-SIDE SWITCH

SEMICONDUCTOR TECHNICAL DATA

- Pin 1. Output
2. Fault
3. V_S (+ Supply)
4. Input
5. Ground



T SUFFIX
PLASTIC PACKAGE
CASE 314C
(TO-220)

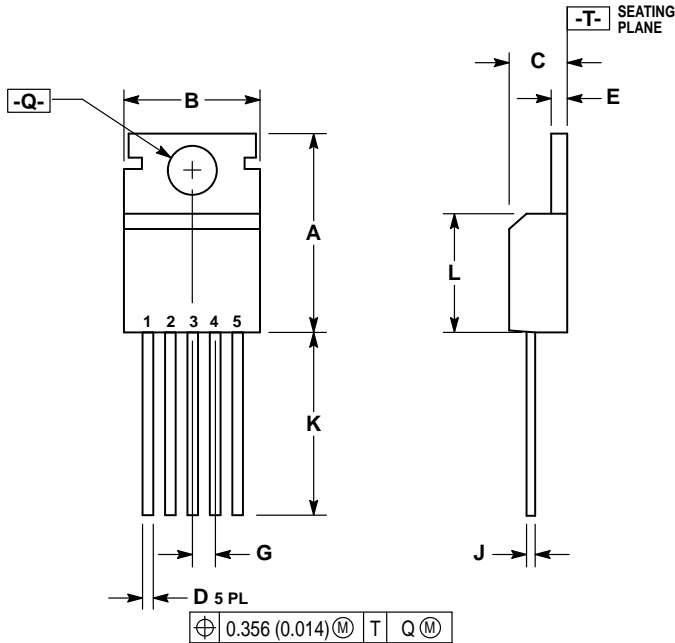
Pin 3 connected to package tab.

ORDERING INFORMATION

Device	Operating Temperature Range	Package
MC33292T	$T_A = -40^{\circ}$ to $+125^{\circ}\text{C}$	TO-220

OUTLINE DIMENSIONS


T SUFFIX
PLASTIC PACKAGE
CASE 314C-01
(TO-220)
ISSUE A



NOTES:

1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
2. CONTROLLING DIMENSION: INCH.
3. DIMENSION D DOES NOT INCLUDE INTERCONNECT BAR (DAMBAR) PROTRUSION. DIMENSION D INCLUDING PROTRUSION SHALL NOT EXCEED 10.92 (0.043) MAXIMUM.

DIM	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.610	0.625	15.59	15.88
B	0.380	0.420	9.65	10.67
C	0.160	0.190	4.06	4.83
D	0.020	0.040	0.51	1.02
E	0.035	0.055	0.89	1.40
G	0.067 BSC		1.702 BSC	
J	0.015	0.025	0.38	0.64
K	0.500	—	12.70	—
L	0.355	0.370	9.02	9.40
Q	0.139	0.147	3.53	3.73

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