



General Description

The low side MOSFET driver MOSDRIVER XC06 is a high power, high speed driver solution for externally connected power MOS transistors. Impulses with a minimum length of 500ns can be driven to a maximum capacitive load of 5nF. DC currents of up to 2A are feasible.

Equipped with several protection functions, the circuit ensures reliable operation of the actual power MOS transistor (Gate voltage limitation, defined DC levels in stand-by ensured by integrated clamping resistor). The circuit can be disabled by an additional control input.

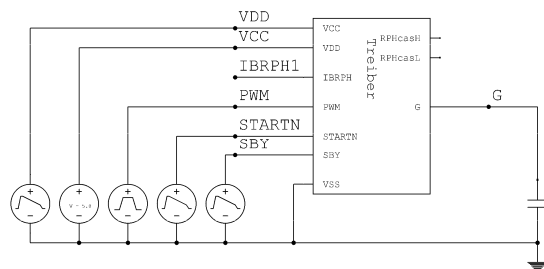
Ratings, Parameters and Conditions

| Parameter / Condition | Symbol | Min | Typ. | Max | Unit | Comment |
|---|--------------------|------|------|----------------------|------|--------------------------|
| Electrical Parameters: | | | | | | |
| Supply Voltage, logic level | V _{CC} | 4.75 | 5 | 5.25 | V | |
| Supply Voltage, high level | V _{DD} | 8 | 12 | 25 | V | |
| Active Supply Current | I _{dd} | | 25 | | mA | |
| Output Voltage High | V _{GH} | 7 | 8.5 | 10 | V | @I _{OH} =-100mA |
| Output Voltage Low | V _{GL} | | 1.0 | 2.2 | V | @I _{OL} =200mA |
| Maximum Output Voltage | V _{GMAX} | | | 15 | V | V _{DD} =20V |
| Output Voltage Before StartUp and after LockOut | V _{GST} | | | 1 | V | |
| RiseTime | t _{GR} | 10 | 25 | 110 | ns | @1nF load |
| FallTime | t _{GF} | 5 | | 55 | ns | @1nF load |
| Absolute Maximum Ratings: | | | | | | |
| Operating Temperature | T _{range} | -40 | | 140 | °C | |
| Supply Voltage | V _{dd} | -0.3 | | 25 | V | |
| Input Voltage | V _{in} | -0.3 | | V _{dd} +0.7 | | |
| Output Voltage | V _{out} | -0.3 | | V _{dd} +0.7 | | |
| Operating Conditions: | | | | | | |
| Ambient Temperature | T _{amb} | -20 | 27 | 80 | °C | |

IO-Description

| Interface | I/O | Function | Comment |
|-----------|--------|---|---------|
| VSS | input | Supply | |
| VCC | Input | Supply | |
| VDD | Input | Logic Level Supply | |
| SBY | Input | Enable Signals; logic and threshold level resp. | |
| STARTN | Input | Logic Level Input Signal | |
| PWM | Input | Bias | |
| IBRPH | Input | Bias | |
| RPHcasH | | | |
| RPHcasL | | | |
| G | Output | External MOSFET Gate Drive Output | |

Block schematic, ext. component diagram



For more information please contact
PE GmbH at:
info@pe-gmbh.com

or visit our web site at:
www.pe-gmbh.com

Dieses Projekt wird im Rahmen der Technologieförderung mit Mitteln des Europäischen Fonds für regionale Entwicklung (EFRE) und mit Mitteln des Freistaates Sachsen gefördert.