



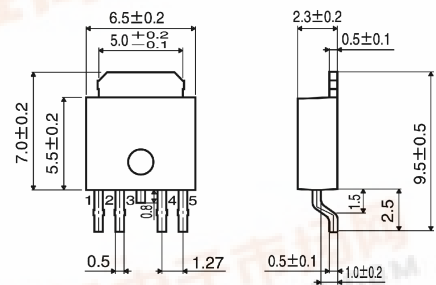
99W068A

High Voltage high side switch **BA4910FP**

Description

The BA4910FP is a high voltage high side switch which has an output that can be turned ON/OFF by a CTL pin. Circuit current of 1μA (Typ.) at standby is perfect for power saving. Applications are various including car stereos and printers.

Dimension (Units:mm)



TO252-5

Features

- 1) Maximum voltage of 50V PNP
- 2) Due to built-in output current control, IC is protected from destruction caused by output short circuits
- 3) Built-in over current detection delay circuit
- 4) Surge resistant due to over voltage protection circuit being built-in.
- 5) Built-in temperature protection circuit to protect IC from thermal destruction

Applications

Car Stereos

Absolute Maximum Ratings (Ta=25°C)

| Parameter | Symbol | Limits | Unit |
|-----------------------------|----------------------|-------------|------|
| Applied voltage 1 | V _{CC} | 50 | V |
| Applied voltage 2 | CTL | 10 | V |
| Power dissipation | P _d | 1000 *1 | mW |
| Operating temperature range | T _{opr} | - 40 ~ +85 | °C |
| Storage temperature range | T _{stg} | - 55 ~ +150 | °C |
| Peak supply voltage | V _{CC} PEAK | 60 *2 | V |

*1 Derating: 8.0mW/°C for operation above Ta=25°C.

*2 tr ≥1msec. Applied voltage: within 200msec.



Recommended Operating Conditions (Ta=25°C)

| Parameter | Symbol | Min. | Typ. | Max. | Unit |
|----------------------|-----------------|------|------|------|------|
| Power supply voltage | V _{IN} | 8.5 | 14.4 | 16 | V |

Electrical Characteristics

| Parameter | Symbol | Min. | Typ. | Max. | Unit | Conditions |
|-------------------------------|--------------------|------|------|------|------|--|
| <INPUT> | | | | | | |
| Stand by current | I _{st} | - | - | 10 | μA | CTL pin=0V |
| Operating current | I _{cc} | 3.3 | 5.5 | 7.7 | mA | CTL pin=5V, I _o =0mA |
| <OUTPUT> | | | | | | |
| Dropout voltage | ΔV _{o1} | - | 0.5 | 1.0 | V | I _o =400mA |
| Load regulation | ΔV _{o2} | - | 450 | 900 | mV | I _o =0~400mA |
| Output current | I _o | 500 | - | 800 | mA | V _o V _{IN} -ΔV _{o1MAX} *1 |
| <CTL pin> | | | | | | |
| Standby level | V _{thsw1} | - | - | 1.5 | V | |
| Active level | V _{thsw2} | 3.8 | - | v | V | |
| Input high current | I _{insh} | 16 | 27 | 38 | μA | V _{th} =3.5V |
| <Delay time setting CP pin> | | | | | | |
| Threshold voltage | VΔ _{th} | 0.8 | 0.85 | 0.9 | V | Δ(V _{th} -V _{CP}) |
| Capacitor charging current *2 | I _{cp} | 1.2 | 2.0 | 2.8 | μA | |

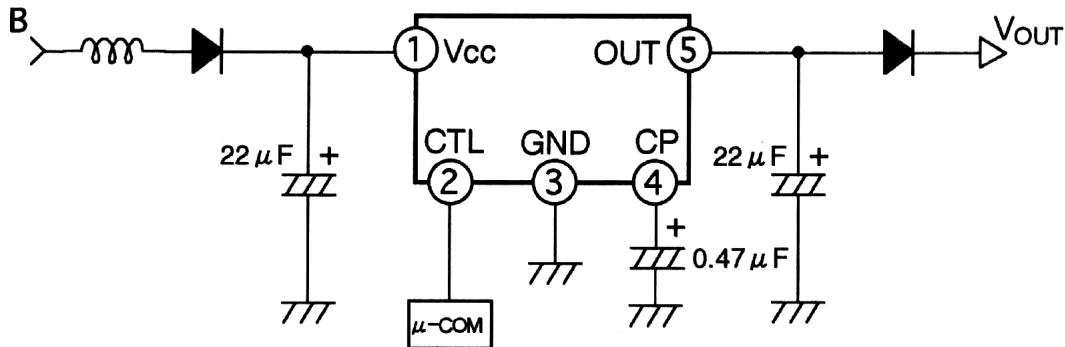
*1 ΔV_{o1MAX}=Maximum of minimum I/O differential voltage

*2 When CP=0.47μF, delay time =200msec.(TYP)

○ This product is not designed with anti-radiation capability.

○ Output current can be used within min. of I_o.

Application circuit



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