

High Voltage high side switch

BA4910FP

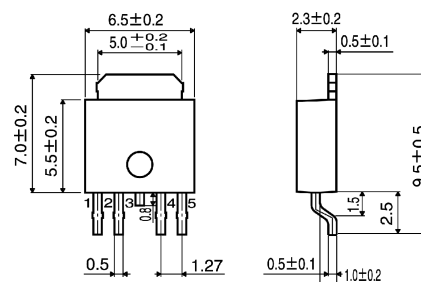
Description

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.

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

Dimension (Units:mm)



TO252-5

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 _{o1} MAX *1
<CTL pin>						
Standby level	V _{thsw1}	-	-	1.5	V	
Active level	V _{thsw2}	3.8	-	v	V	
Input high current	I _{insw}	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	

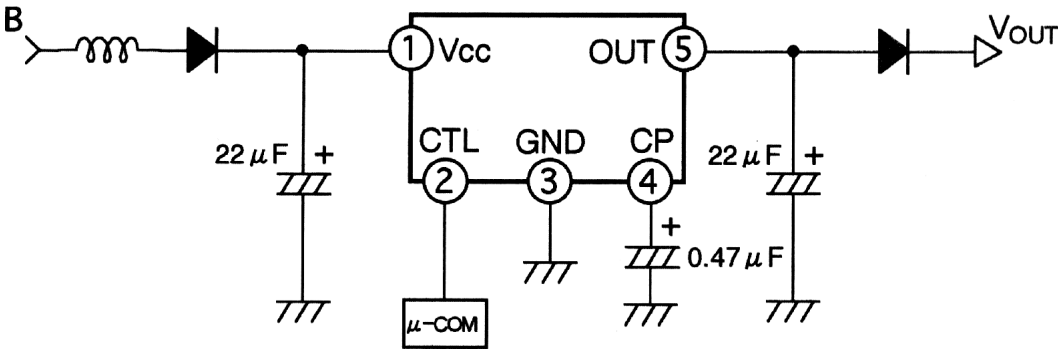
*1 ΔV_{o1}MAX=Maximum of minimum I/O differential voltage

*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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