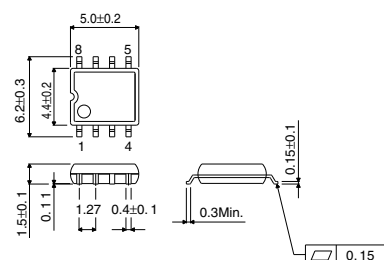


Power management switch BD6522F

●Description

BD6522F is a power management switch IC that includes Low ON resistance MOSFET. The built-in soft start circuit and the error detection circuit protect output. In addition, this IC includes discharge circuit that discharge residual voltage when the output is OFF.

●Dimension (Units : mm)



SOP8

●Features

- 1) Low ON resistance switch: Typ.=50mΩ
- 2) Output current capacity: 0~2 A
- 3) Reverse current prevention when the switch is OFF.
- 4) Built-in soft start circuit
- 5) UVLO
- 6) Temperature protection circuit with latch function
- 7) Built-in discharging circuit (When output is OFF.)

●Applications

Battery driven equipment such as notebook PC, PDA etc.

●Absolute Maximum Ratings (Ta=25°C)

Parameter	Symbol	Limits	Unit
Supply voltage	V _{DD}	-0.3 ~ +6.0	V
CTRL pin voltage	V _{CTRL}	-0.3 ~ +6.0	V
Output pin voltage	V _{OUT}	-0.3 ~ V _{DD} +0.3	V
Storage temperature range	T _{STG}	-55 ~ +125	°C
Power dissipation	P _d	450 *	mW

*Derating : 4.5mW/°C for operation above Ta=25°C

©This product is not designed for protection against radioactive rays.

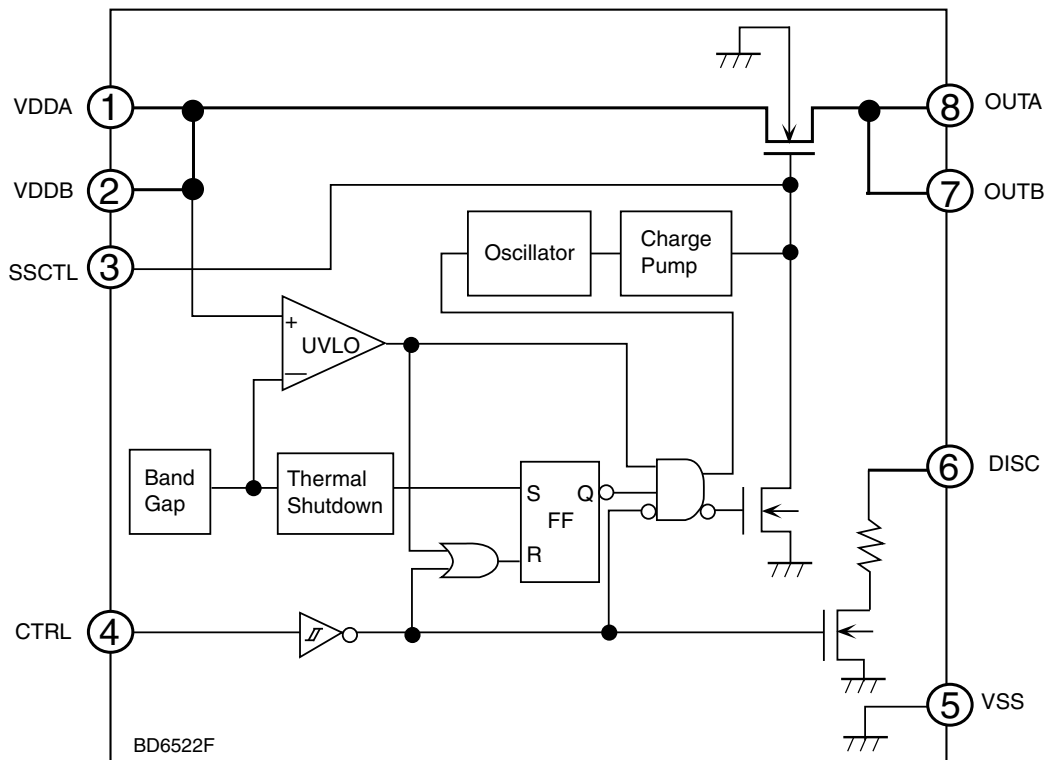
● Recommended Operating Conditions (Ta=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit
Operating voltage range	V _{DD}	3.0	—	5.5	V
Switch current	I _{SW}	0	—	2	A
Operating temperature range	T _{OPR}	—25	—	+85	°C

● Electrical characteristics (Unless otherwise noted : Ta=25°C, V_{DD}=5V)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
ON resistance	R _{ON1}	—	50	70	mΩ	V _{DD} =5V, V _{CTRL} =5V
	R _{ON2}	—	60	85	mΩ	V _{DD} =3.3V, V _{CTRL} =3.3V
VDD operating current	I _{DD}	—	110	220	μA	V _{CTRL} =5V, OUT=OPEN
	I _{DDST}	—	—	2	μA	V _{CTRL} =0V, OUT=OPEN
CTRL input voltage	V _{CTRL_L}	—	—	0.7	V	V _{CTRL} =Low Level
	V _{CTRL_H}	2.5	—	—	V	V _{CTRL} =High Level
CTRL input current	I _{CTRL}	—1	0	1	μA	V _{CTRL} =L, H
OUT rise time	T _{ON}	—	1000	3500	μS	R _L =10Ω, SSCTL=OPEN CTRL=H->OUT=90%
OUT fall time	T _{OFF}	—	4	20	μS	R _L =10Ω, SSCTL=OPEN CTRL=L->OUT=10%
Switch discharge resistance	R _{SWDC}	—	350	600	Ω	V _{DD} =5V, V _{CTRL} =0V
UVLO detection voltage	V _{UVLO_H}	2.3	2.5	2.7	V	V _{DD} increasing
	V _{UVLO_L}	2.1	2.3	2.5	V	V _{DD} decreasing
UVLO hysteresis voltage	V _{HYS}	100	200	300	mV	V _{HYS} =V _{UVLO_H} —V _{UVLO_L}
Over temperature threshold	T _{TS}	—	135	—	°C	V _{CTRL} =5V

● Block Diagram





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