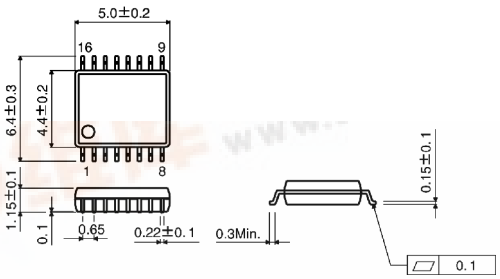
DC/DC Converter+Reset
BH6557FV

●Description

The BH6557FV is a variable output DC/DC converter IC with reset. The DC/DC converter output voltage value and reset voltage value can be adjusted by external resistance.

●Dimension (Units : mm)



SSOP-B16

●Features

1) Synchronous rectification enables high efficiency
2) Built-in charge pump circuits for operating output power MOS
3) Built-in variable reset circuit
4) Built-in power MOS Tr requires fewer external components
5) Mute circuit built-in
6) Built-in thermal shut down circuit
7) SSOP-B16 package has a smaller board footprint

●Applications

CD-ROM

●Absolute Maximum Ratings (Ta=25˚C)

Parameter	Symbol	Limits	Unit
Power MOS supply voltage	PowVcc	9	V
Control circuit supply voltage	PrePcc	9	V
Pre driver supply voltage	VG(9pin)	12	V
Output current from DSW terminal	Iswomax	1 [2]	A
Power dissipation	Pd	560 [1]	mW
Operating temperature range	Topr	−30 ~ +85	˚C
Storage temperature range	Tstg	−55 ~ +150	˚C

1 Derating : 4.5mV/˚C for operation above Ta=25˚C.
On less than 3% (percentage occupied by copper foil), 70mm 70mm, t=1.6mm, glass epoxy mounting.
2 Intermittent current at maximum applied time of 5msec, 1/10 duty (Max.)

●Recommended Operating Conditions (Ta=25˚C)

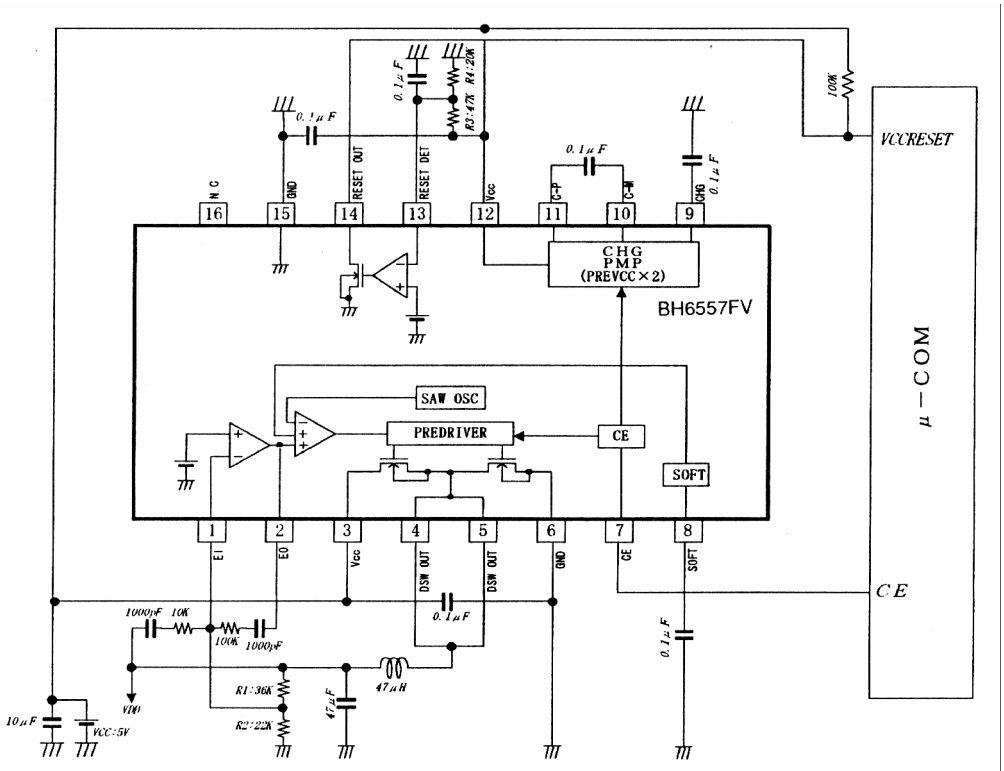
Parameter	Symbol	Min.	Typ.	Max.	Unit
Power MOS supply voltage	PowVcc	4.5	5.0	5.5	V
Control circuit supply voltage	PreVcc	4.5	5.0	5.5	V
Pre-driver supply voltage [3]	VG(9pin)	8.0	10.0	11.5	V
Variable DC/DC converter output current [4]	$Io_{(Variable\ DC/DC)}$	—	300	500	mA
Ambient temperature	Ta	−10	25	70	˚C
Variable DC/DC converter output voltage	VDD	1.7	—	Vcc-1	V
Reset threshold voltage range 1 [5]	Vthrst 1	3.5	—	Vcc	V
Reset threshold voltage range 2 [6]	Vthrst 2	1.25	—	Vcc	V

3 In case supply voltage provided outside without using charge-pump built-in.
4 L=47μH, C=47μF is used.
5 Setting voltage range when 12pin(PreVcc) is monitored.
6 Setting voltage range when the desired voltage except 12pin(PreVcc) is monitored.

●Electrical characteristics (Unless otherwise noted, Ta=25˚C, PREVCC=5V)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Current in standby mode	IST	—	170	290	μA	CE=0V
Quiescent current	ICC	—	1.45	2.60	mA	
EI terminal threshold voltage	VEITH	1.20	1.25	1.30	V	(5˚C Ta 75˚C : design guaranteed)
EO terminal output voltage H	VEOH	1.48	1.68	1.88	V	IEO=−100μA
EO terminal output voltage L	VEOL	—	0.01	0.15	V	IEO=100μA
DSW terminal ON resistance H	RDSWONH	—	0.42	0.87		IL=500mA
DSW terminal ON resistance L	RDSWONL	—	0.30	0.60		IL=−500mA
Charge-pump output voltage	VG	7.7	9.7	11.7	V	Operating
Reset detection threshold voltage	VDETON	1.20	1.25	1.30	V	

●Application circuit



※R１、R２はＤＣ/ＤＣコンバータ出力電圧が３．３Ｖ、
R３、R４はリセットＯＮスレシ電圧が４．２Ｖとなるような設定