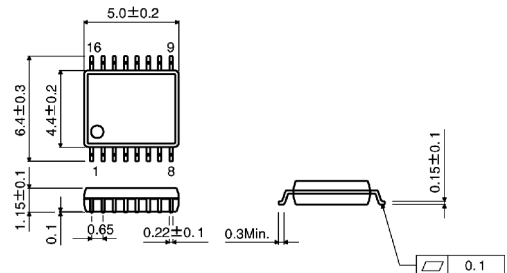


DC/DC Converter+Reset BH6557FV

●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 | Is womax | 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.

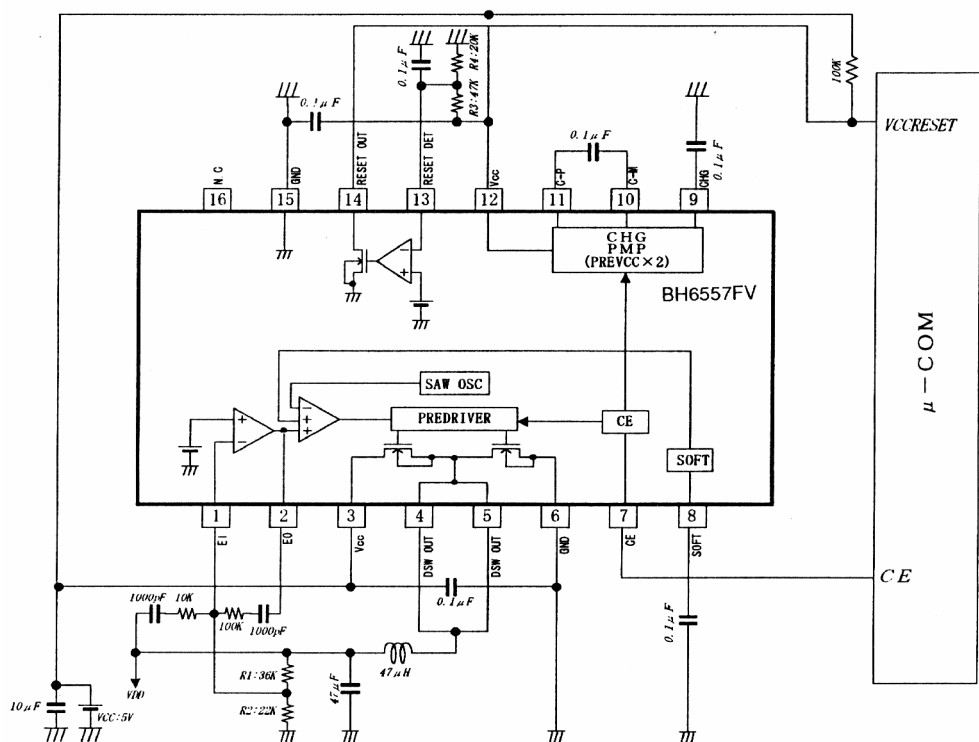
⁵ Setting voltage range when 12pin(PreVcc) is monitored.

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