

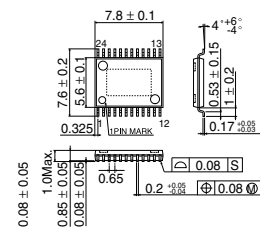
2ch switching regulator controller

BD9851EFV

● Description

BD9851EFV is a 2 channel DC/DC switching regulator controller. Switching of step-down and step-up for channel1 can be managed by setting pin. Channel 2 is available for step-down and inversion, suitable for various applications. This IC is available for 3MHz of switching frequency by high-speed driver technology and provides power configuration with space saving.

● Dimension (Unit : mm)



HTSSOP-B20

● Features

- 1) Built-in 2 channels for switching of step-down/step-up and step-down/inversion
- 2) FET (Nch/Pch) direct drive
- 3) 3MHz switching frequency available (Variable externally)
- 4) Power package of HTSSOP-B20
- 5) Built-in standby function

● Applications

TFT panel, TA/router, digital household appliances

● Absolute Maximum Ratings (Ta=25°C)

| Parameter | Symbol | Limits | Unit |
|-----------------------------|--------|------------|------|
| Power supply voltage | Vcc | 20 | V |
| Power dissipation | Pd | 1000 * | mW |
| Operating temperature range | Topr | -40 ~ +85 | °C |
| Storage temperature range | Tstg | -55 ~ +150 | °C |

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

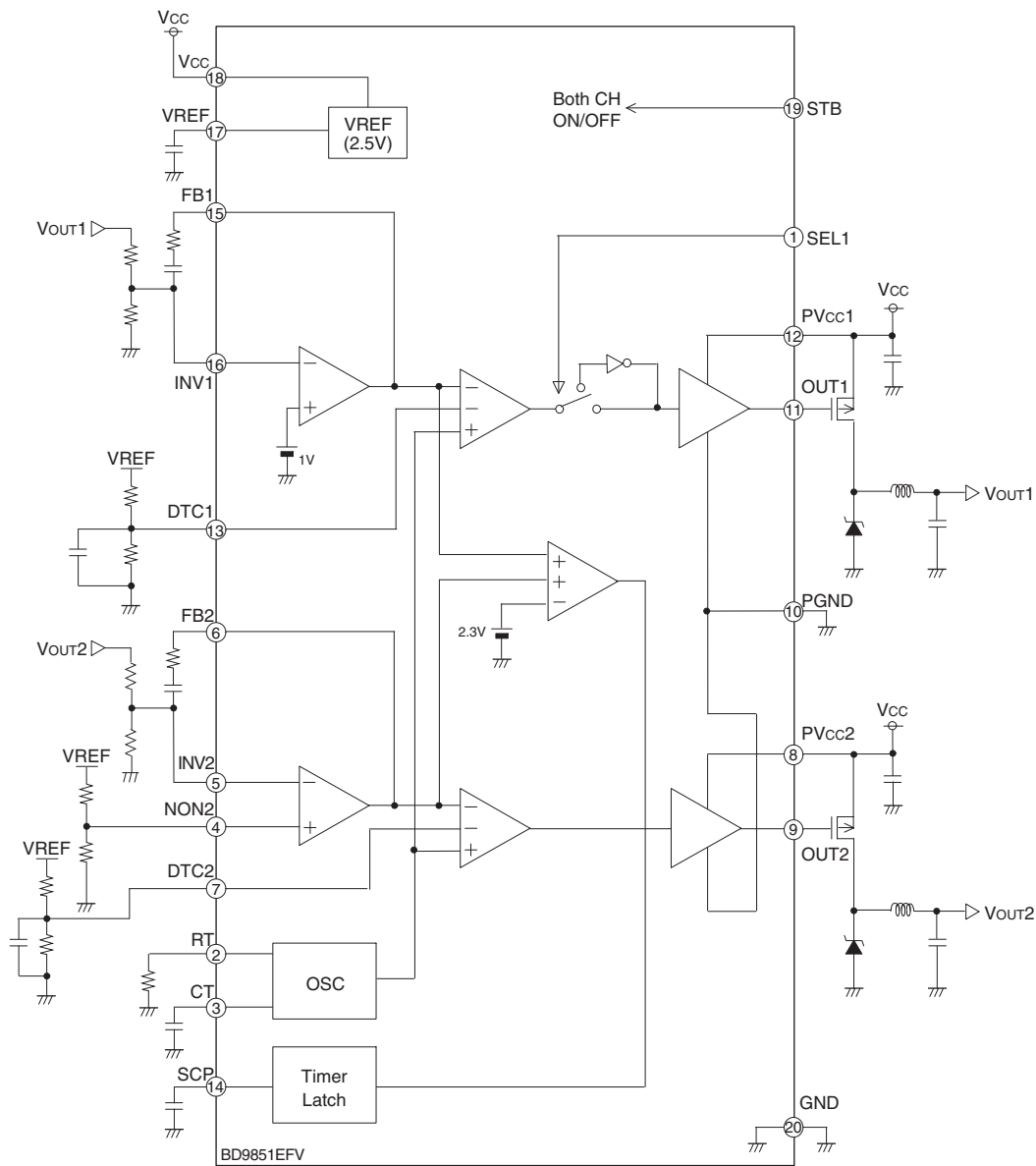
● Recommended Operating Conditions (Ta=25°C)

| Parameter | Symbol | Min. | Typ. | Max. | Unit |
|-----------------------|--------|------|------|------|------|
| Power supply voltage | Vcc | 4 | 12 | 18 | V |
| Oscillating frequency | fosc | 10 | 300 | 3000 | kHz |

● Electrical characteristics (Unless otherwise noted: Ta=25°C, Vcc=12V)

| Parameter | Symbol | Min. | Typ. | Max. | Unit | Conditions |
|-----------------------------------|------------------|-------|-------|-------|------|---|
| VREF output voltage | VREF | 2.475 | 2.500 | 2.525 | V | I _o =-0.1mA |
| Oscillating frequency | f _{osc} | 270 | 300 | 330 | kHz | R _T =24kΩ, C _T =220pF |
| Error amplifier threshold voltage | V _{INV} | 0.98 | 1.00 | 1.02 | V | |
| Gate drive ON resistance | R _{ON} | - | 2.5 | - | Ω | |
| Low current consumption | I _{cc} | - | 2.5 | - | mA | STB=3V |

● Application Circuit



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