

THV1031

3ch Buck, Boost and Inverting Controller

General Description

THine's new 3ch Buck/Boost & Inverting controller enables simple & low cost multi-channel power supply system design. Ch-1 is selectable Buck/Boost controller, ch-2 is Buck converter, and ch-3 is selectable Inverting / Buck converter.

All channels are PWM controllers and are designed to make phase compensation easy for output ceramic capacitors.

SS_1,2,3, DTC_1,3, and SCP pins help to design user defined soft start time, dead time and timer latch delay time. Utilizing those pins and P_GOOD 1,2,3, the ensured sequence control can be easily set and linked to the external circuit.

This IC is suitable for power supply system of TFT LCD bias and for system board with multi-channel power supply.

Features

- TSSOP 30Pin package
- Input Voltage range : 4.2 to 15.0V
- Push Pull output for direct Power Mos driving
- Optimized for Ceramic output capacitor
- Complete PWM mode controller
- Adjustable switching frequency up to 1MHz by external resistor
- Timer Latch Protection
- System UVLO Function
- Adjustable Soft Start time by external capacitor
- Adjustable Timer Latch Delay time by external capacitor
- Adjustable Dead Time Control by external resistor
- Boost mode selectable on ch-1
- Inverting mode selectable on ch-3
- Buck mode selectable on ch-1, 2, 3

Applications

- TFT LCD Bias voltage supply
- General use

Pin Assignment

TSSOP 30Pin			
1	SYSUVLO	XP_DET	30
2	SCP	PGND2	29
3	FB_1	P_GOOD1	28
4	INV_1	OUT_1	27
5	SS_1	SLCT_1	26
6	DTC_1	OUT_2	25
7	FB_2	P_GOOD2	24
8	INV_2	PGND1	23
9	SS_2	P_GOOD3	22
10	SGND	OUT_3	21
11	VREF	SLCT_3	20
12	FB_3	VCC	19
13	INV_3	RT	18
14	NON_INV_3	DTC_3	17
15	SS_VREF	SS_3	16

TOP VIEW