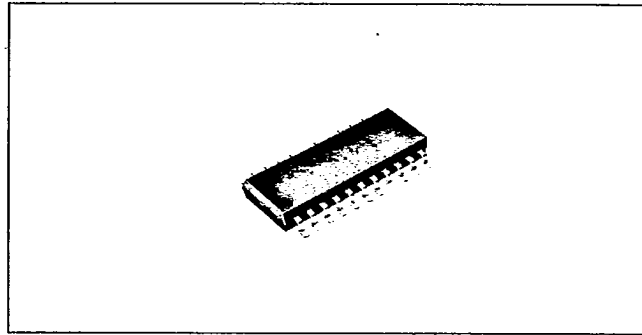


5-Output Switching Regulator

BA6132F

ROHM



The BA6132F is a monolithic switching regulator which contains five independent switching regulator blocks.

Features

1. All the control circuitry required for the switching regulators is internally implemented.
2. High efficiency PWM type circuitry.
3. Output On/Off control capability (only one block).
4. Low current consumption (7 mA typ.)
5. Reference can be externally controlled.

Dimensions (Unit: mm)

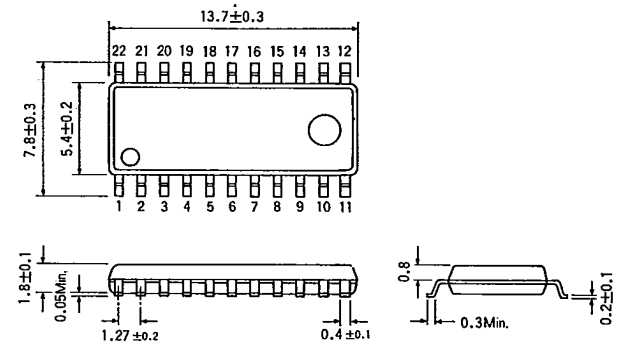


Fig. 1

Block Diagram

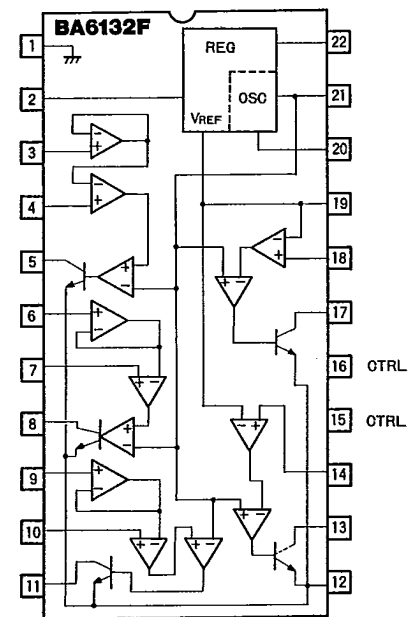


Fig. 2

Absolute Maximum Ratings (Ta=25°C)

Parameter	Symbol	Limits	Unit
Supply voltage	V _{CC}	18	V
Power dissipation	P _d	600*	mW
Operating temperature range	T _{opr}	-20 ~ 75	°C
Storage temperature range	T _{stg}	-55 ~ 125	°C
REF control voltage	V _{rc}	5	V

*Derating is done at 6mW/°C for operation above Ta=25°C.

Control Mode

Control pin	Output pin	Pin 5(M3)	Pin 8(M2)	Pin 11(M1)	Pin 13(9V)	Pin 17(5V)
Pin 15;L, pin 16;L		ON	ON	ON	ON	ON
Pin 15;L, pin 16;H		OFF	OFF	OFF	ON	ON
Pin 15;H, pin 16;L		OFF	OFF	OFF	OFF	ON
Pin 15;H, pin 16;H		OFF	OFF	OFF	OFF	ON

Blocks 1 to 3 allow external control of the error amplifier's reference voltage, providing a wide output control range. The reference input pins for blocks 4 and 5 are internally connected to V_{REG} (pin 19).

Electrical Characteristics (Unless otherwise specified, $T_a=25^\circ\text{C}$, $V_{CC}=12\text{V}$)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Circuit current	I_{CC}	—	7	—	mA	Rated load
Oscillation frequency temperature regulation	$f_{OSC}/\Delta T$	—	± 3	—	%	$T_a = -10 \sim 60^\circ\text{C}$
Maximum oscillation frequency	f_{max}	—	100	—	kHz	—
Pins 5, 8, 11 drive current	$I_{5,8,11}$	—	20	—	mA	Maximum drive current
Pin 13 drive current	I_{13}	—	30	—	mA	Maximum drive current
Pin 17 drive current	I_{17}	—	10	—	mA	Maximum drive current
Control voltage-high	HCTRL	—	2.7 ~ 7	—	V	—
Control voltage-low	HCTRL	—	0 ~ 0.9	—	V	—

Application Example

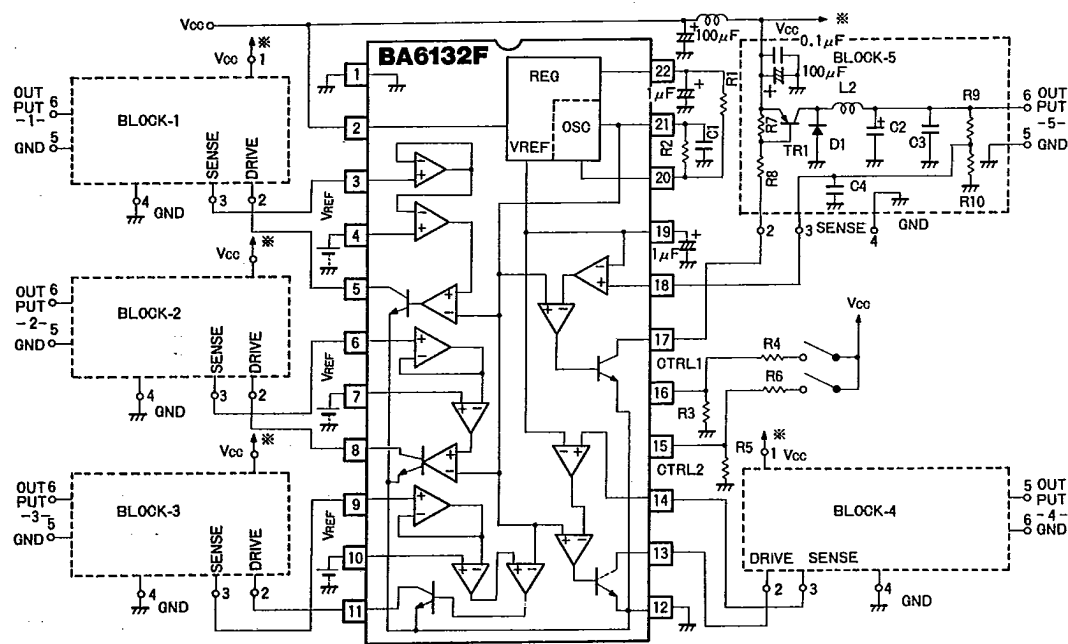


Fig. 3