SIMPLE SWITCHER 3A STEP-DOWN VOLTAGE REGULATOR—YD2576

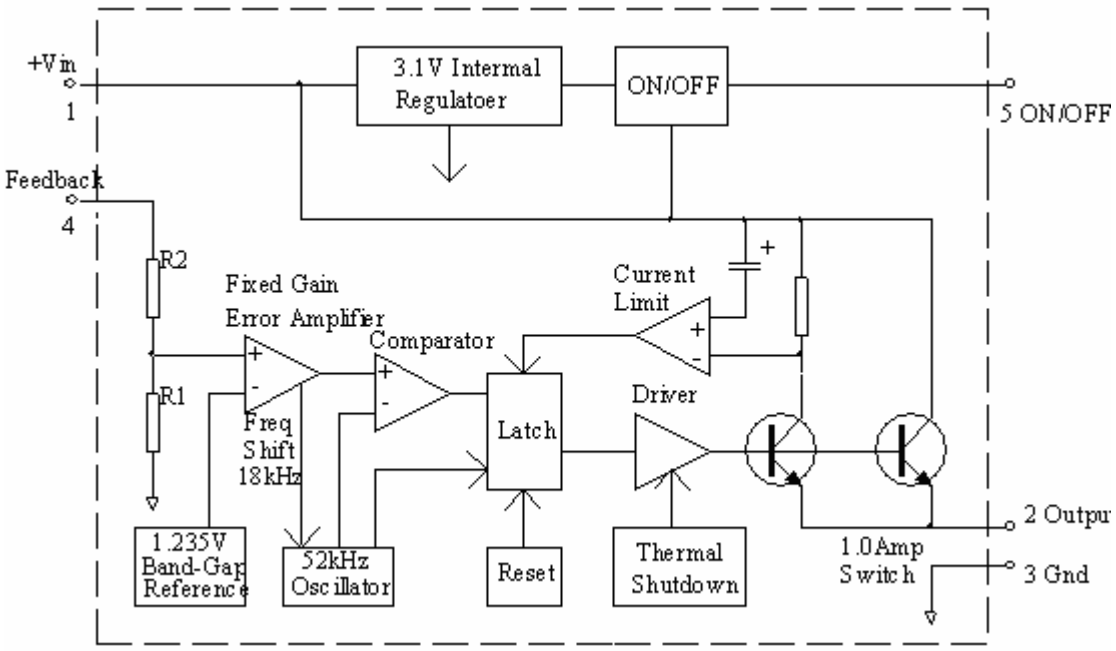
DESCRIPTION

The YD2576 series of regulators are monolithic integrated ciruits that provide all the active functions for a step-dpwn(buck) switching egulator,capable of driving 3A load with excellent line and regulation.

FEATURES

*Guaranteed 3A output current
*Requires only 4 external components
*52kHz fixed frequency internal oscillator
*High efficiency
*thermal shutdown and current limit protection

BLOCK DIAGRAM



注：R1=2.2K,R2=6.8K.

WuXi YouDa Electronics Co., Ltd

Add: No.5 Xijin Road, National Hi-Tech Industrial Development Zone, Wuxi Jiangsu China
Tel: 86-510-85205117 86-510-85205106 Fax: 86-510-85205110 Website: www.e-youda.com
SHENZHEN OFFICE Tel: 86-755-83740369 Fax: 86-755-83741418

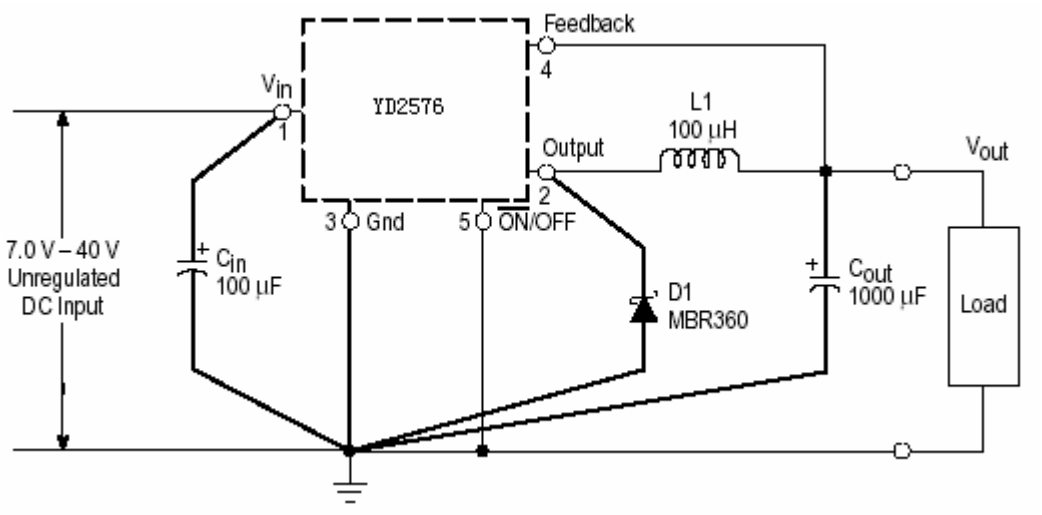
ABSOLUTE MAXIMUM RATINGS (Tamb=25℃)

PARAMETER	SYMBOL	VALUE	UNIT
Supply Voltage	Vcc	45	V
Power Dissipation	P_D	15	W
Operating Temperature	Topr	-25 to +75	℃
Storage Temperature	Tstg	-65 to +150	℃

ELECTRICAL CHARACTERISTICS (Vcc=12V,Tamb=25℃,Unless otherwise specified)

Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Output Voltage	Vout	Iload=0.5A	4.9	5	5.1	V
Output Voltage	Vout	0.5A≦Iload≦3A	4.8	5	5.2	V
		8V≦Vin≦40V	4.75	5	5.25	V
Efficiency	η	Iload=3A		77		%
Osillator Frequency	Fosc	Tj=25℃		52		kHz
		Tj=0to+125℃	47		58	kHz
		Tj=-40to+125℃	42		63	kHz
Saturation Voltage	Vsat	Tj=25℃		1.5	1.8	V
		Tj=-40to+125℃			2	V
Max Duty Cycle	DC		94	98		%
Current Limit	IcL	Tj=25℃	4.2	5.8	6.9	A
		Tj=-40to+125℃	3.5		7.5	A
Output Leakage	IL	Tj=25℃		0.8	2	mA
		Tj=-40to+125℃		6	20	mA
Quniescent Current	Iq	Tj=25℃		5	9	mA
		Tj=-40to+125℃			11	mA
Standby Quniescent Current	Istby	Pin5=5V		50	200	uA
Standby Threshold	V_{STB}			2		V

APPLICATION CIRCUIT



OUTLINE DRAWING