BST79601

1. Overview

BST79601 is a high-performance low-dropout linear regulator with low power consumption, high PSRR, fast startup, excellent load and linear transient response, etc., in C S ON-8 package. BST79601 output can use 1uF ceramic capacitors . The chip uses CMOS process to achieve low voltage difference (for example, 365mV voltage difference at 1A load), and the quiescent current consumed by BST79601 is very low when working (typical value is about 265uA). In addition, when the regulator is in standby mode, the power supply current is reduced to less than 1uA. Thanks to its high PSRR and fast response characteristics, it can support a variety of noise- sensitive analog devices, such as portable RF electronic devices.

2. Features

- With enable control function.
- Adjustable output voltage : 1.2 25 V to 5.5 V.
- High power supply rejection ratio: (53 dB at 10 kHz).
- Maximum drivable load current: 1 A.
- Fast start-up time (50μs).
- 1 μF ceramic capacitor is used for output capacitor.
- Excellent load and line transient response.
- CSON -8 ceramic package.

3. Functional Block Diagram

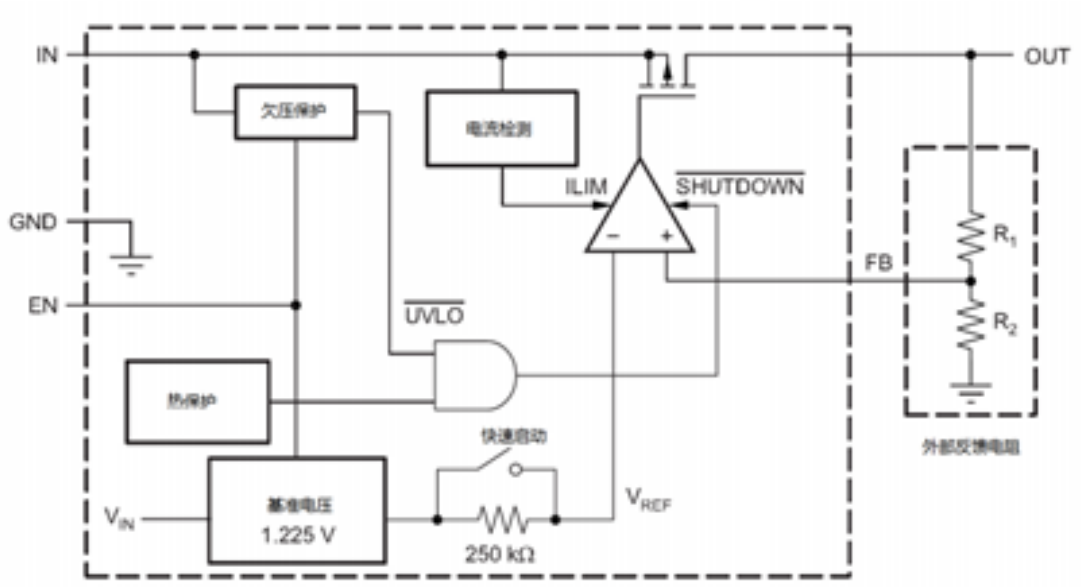


Figure 1Functional block diagram

Pin Information

Pin Assignment Diagram

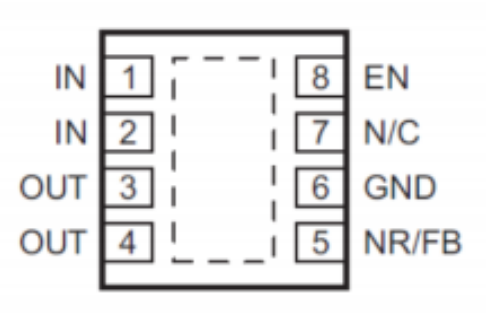


Figure 2BST79601 pinout

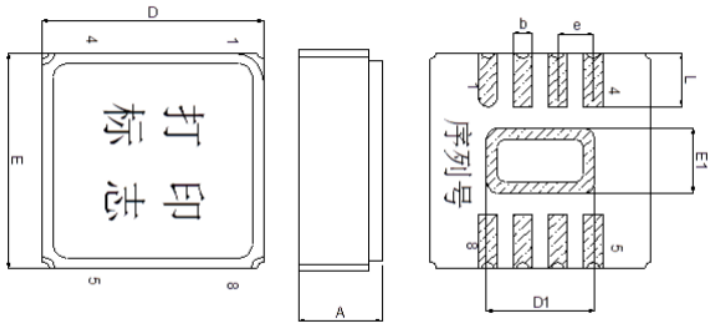
Pin Description

Table 1. Pin Description

Pin number	symbol	Function
1, 2	IN	Input terminal, connect a 2.2 uF or larger capacitor to ground
3, 4	OUT	Output terminal, connect 1 uF or larger capacitor to ground
5	NR/FB	The output voltage is sampled and fed back to the EA input terminal. A bypass capacitor can be connected to improve PSRR and reduce output noise.
6	GND	land
7	N/C	Empty feet
8	EN	Enable terminal, high level is valid, EN=IN when self-starting

4. Product appearance

Ceramic CSON8 package



单位为毫米

尺寸符号	数值		
	最小	公称	最大
D	3.90	—	4.40
E	3.80	—	4.30
D1	1.80	—	2.20
E1	1.00	—	1.40
e	—	0.65	—
b	0.25	—	0.45
L	0.80	—	1.20
A	—	—	2.00

Electrical parameters

Table 2. Electrical properties

characteristic	symbol	strip (Unless otherwise specified, V_I=2.7V~5.5V, I_O=1 mA, EN=V_I, -55°C ≦ T_A ≦ 125°C)	Limit value			unit
			Minimum	typical	maximum	
Input voltage range	V_{IN}		2.7	—	5.5	V
Reference voltage	V_{REF}	V_I=2.7V	1 .2	1.225	1.25	V
Output voltage range	V_{OUT}	V_I=5.5V	1.225	—	5.5-V_{DO}	V
Output voltage accuracy	-	1.225V ≦ V_O ≦ 5.0V, V_I =5.5V	0.97 V_O	VOUT	1.03 V_O	V
Maximum output current	I_O	V_I=2.7V	1	—	—	A
Quiescent Current	I_q	V_I=2.7V	—	2 65	385	1
Output voltage linear regulation (1)	△ $VO_{(△VI)}$	2.7V ≦ VI ≦ 5.5V	—	—	0.2	%/V
Load Regulation	△ $V_{O(△IO)}$	V_I=2.7V, 0 A ≦ I_O ≦ 1A	—	—	20	mV
Output current limit	I_{Limite}	V_I=2.7V	2	—	4.8	uA
Shutdown current (3)	I_{Shut}	VEN = 0V	—	—	10	1
F B Input Current	I_{FB}	VFB = 1.225V	—	—	1	μA
EN Input Current	I_{EN}	EN=0V	-1	—	1	μA
Minimum input voltage difference	V_{DO}	I_O = 1A, V_I = 3.2V	—	—	365	mV
EN high level input voltage	V_H	V_I=2.7V	1.7	—	VI	V
EN low level input voltage	V_L	V_I=2.7V	0	—	0.7	V
UVLO Threshold Voltage	V_{UVLO}	$V_{Irising}$	2.25	—	2.65	V
Undervoltage Lockout Hysteresis	$UVLO_{HYS}$			100		mV

1) Minimum input voltage V_{IN} =V_{OUT} +V_{DO} or 2.7V.
2) External resistor errors are not included in this specification.
3) For the adjustable version, this function is only applicable after startup, when V_{EN} changes from high to low .