上海贝岭 SHANGHAI BELLING

BL8569

Dual 500mA High PSRR Linear Regulator

DESCRIPTION

BL8569 dual,low-noise,low-dropout regulator delivers at least 500mA of continuous output current. The output voltage for each regulator is set independently by trimming.Voltages are selectable in 100mV steps within a range of 1.2V to 4.5V. The BL8569 includes two independent logic-controlled shutdown inputs and allows the output of each regulator to be turned of independently.

BL8569 includes high accuracy voltage reference, error amplifier, current limit circuit and output driver module.

BL8569 has excellent load and line transient response and good temperature characteristics, which can assure the stability of chip and power system. And it uses trimming technique to guarantee output voltage accuracy within±2%.

BL8569 is available in SOT-23-6 package which is lead(Pb)- free

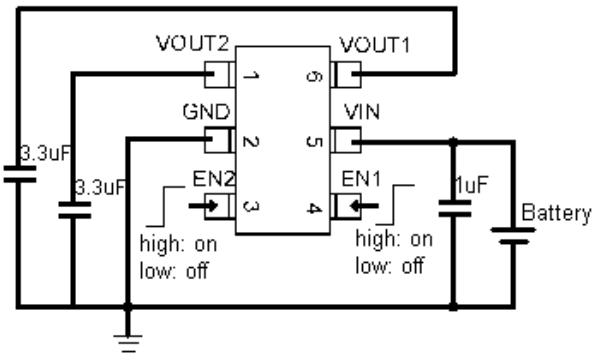
FEATURES

- Two low dropout voltage regulators
- 500mA output current for each LDO
- Low output noise (50uVRMS)
- Low dropout Voltage:0.08V@150mA(Typ)
- Standby Mode: 0.1uA
- High Ripple Rijection:72dB@1000Hz (Typ)
- Excellent Line regulation: 0.05%/V
- Independent Shutdown controls
- 1.2V to 4.5V Factory-Preset Output
- Output Current Limit
- Highly Accurate: ±2%

APPLICATIONS

- Cellular phones
- Cordless phones and radio communication equipment
- Battery Powered equipment
- Notebook and hand-hold equipment
- Wireless LAN
- GPS receivers

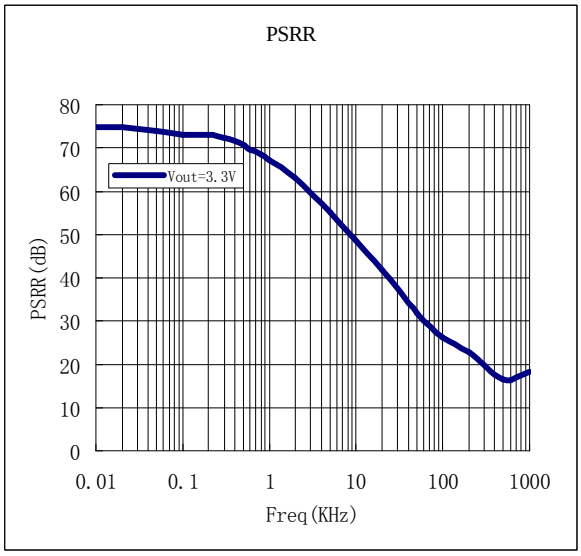
TYPICAL APPLICATION



APPLICATION HINTS

NOTE:
Input capacitor (Cin=1uF) and Output capacitor (Cout=1uF/3.3uF) are recommended in all application circuit.

ELECTRICAL CHARACTERISTICS



ORDERING INFORMATION

BL8569 [1] [2] [3] [4] [5]

Code	Description
[1]	Temperature&Rohs: C:-40~85°C ,Pb Free Rohs Std.
[2]	Package type: B6:SOT-23-6
[3]	Packing type: TR:Tape&Reel (Standard)
[4]	CH1 Output voltage: e.g. 15=1.5V 28=2.8V 45=4.5V
[5]	CH2 Output voltage: e.g. 15=1.5V 28=2.8V 45=4.5V

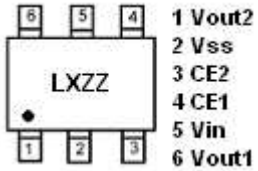
MARKING DESCRIPTON

L: Product Code
X: Output Voltage

Code	Vout1	Vout2	Code	Vout1	Vout2
B	1.5V	2.8V	M	2.8V	1.8V
C	1.5V	3.0V	O	2.8V	2.8V
D	1.5V	3.3V	P	2.8V	3.0V
E	1.5V	4.0V	Q	3.0V	2.5V
G	1.8V	2.5V	R	3.0V	3.0V
H	1.8V	2.8V	S	3.0V	3.3V
I	1.8V	3.0V	T	3.3V	1.8V
J	1.8V	3.3V	U	3.3V	3.3V

Z: The Year of manufacturing,"7" stands for year 2007,"8" stands for year 2008,and "$\overline{0}$" stands for year 2010.
Z: The week of manufacturing. "A" stands for week 1,"Z" stands for week 26,"$\overline{A}$" stands for week 27,"$\overline{Z}$" stands for week 52.

PIN CONFIGURATION

Product Classification		BL8569CB6TR□□
Marking		
LXZZ	L:Product Code	
	X:Output Voltage	
	ZZ:Data Code	

Vss	Ground Pin
Vin	Supply Voltage Input
Vout1	CH1 Output Voltage
CE1	Chip Enable1
CE2	Chip Enable2
Vout2	CH2 Output Voltage

ABSOLUTE MAXIMUM RATING

Parameter		Value
Max Input Voltage		8V
Operating Junction Temperature(Tj)		125°C
Ambient Temperature(Ta)		-40°C -85°C
Power Dissipation	SOT-23-6	250mW
Storage Temperature(Ts)		-40°C -150°C
Lead Temperature & Time		260°C,10S

Note:
Exceed these limits to damage to the device. Exposure to absolute maximum rating conditions may affect device reliability.

RECOMMENDED WORK CONDITIONS

Parameter	Value
Input Voltage Range	Max. 6V
Ambient Temperature	-40°C –85°C

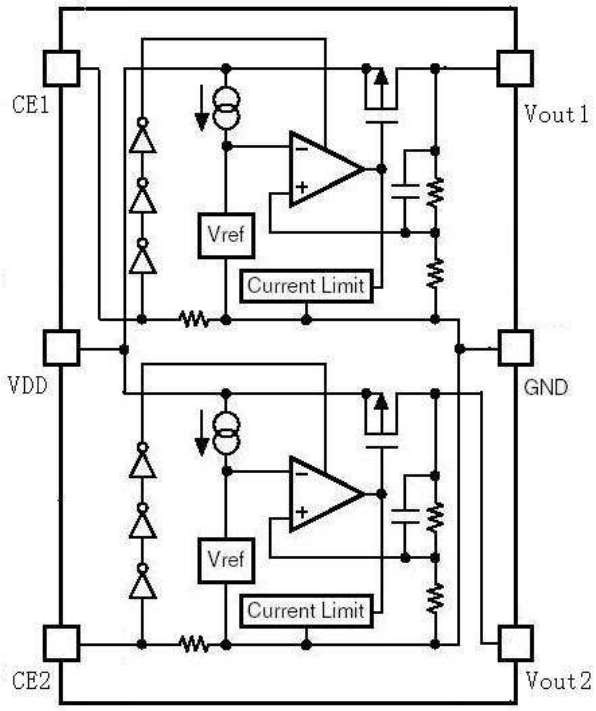
ELECTRICAL CHARACTERISTICS

（Test Conditions: Cin=1uF,Cout=3.3uF,TA=25°C, unless otherwise specified.）

BL8569, For Arbitrary Output Voltage

Symbol	Parameter	Conditions	Min	Typ	Max	Units
Vin	Input Voltage		1.2		6	V
Vout	Output Voltage	Vin=Set Vout+1V 1mA≤Iout≤30mA	Vout x0.98	Vout1	Vout X1.02	V
Iout (Max.)	Maximun Output Current		600			mA
Vdrop	Dropout Voltage,Vout≥2.8V	Iout=50mA		25	40	mV
		Iout=100mA		50	75	mV
		Iout=150mA		75	115	mV
		Iout=400mA		220	280	mV
$\frac{\Delta Vout}{\Delta Vin \cdot Vout}$	Line Regulation	Iout=40mA 2.8V≤Vin≤6V		0.05	0.1	%/V
$\Delta Vout / \Delta Iout$	Load Regulation	Vin=Set Vout+1V 1mA≤Iout≤500mA		100	150	mV
Iss	Supply Current	Vin=Set Vout+1V		30	50	uA
Istandby	Supply Current (Standby)	Vin=Set Vout+1V Vce=0V		0.1	1.0	uA
$\frac{\Delta Vout}{\Delta T \cdot Vout}$	Output Voltage Temperature Coefficiency	Vin=Set Vout+1V Iout=30mA		±50		ppm/°C
PSRR	Ripple Rejection	F=1000Hz, Ripple=0.5Vp-p Vin=Set Vout+1V		72		dB
Ilim	Short Current Limit	Vout=0V		500		mA
Vceh	CE Input Voltage “H”		1.4			V
Vcel	CE Input Voltage “L”				0.25	V
en	Output Noise	BW=10Hz~100kHz		50		uVrms

BLOCK DIAGRAM



Explanation

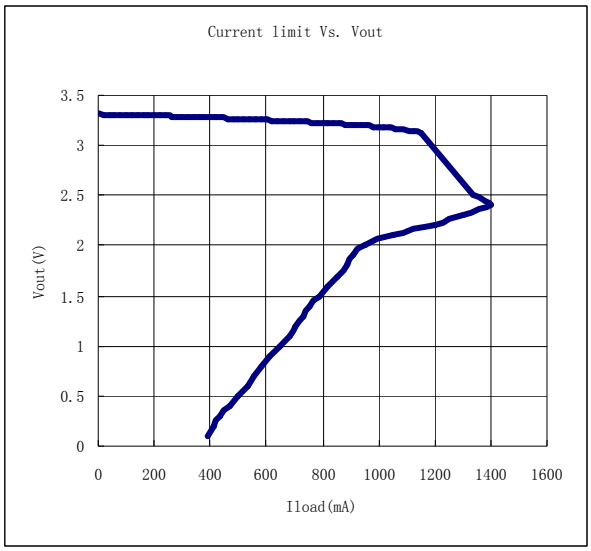
BL8569 series are highly accurate ,Dual,low noise,CMOS low dropout voltage regulators.
The output voltage for each regulator is set independently by trimming. Voltages are selectable in 100mV steps within a range of 1.2V to 4.5V . It also can be customized on command.

BL8569 includes high accuracy voltage reference, error amplifier, current limit circuit and output driver module.

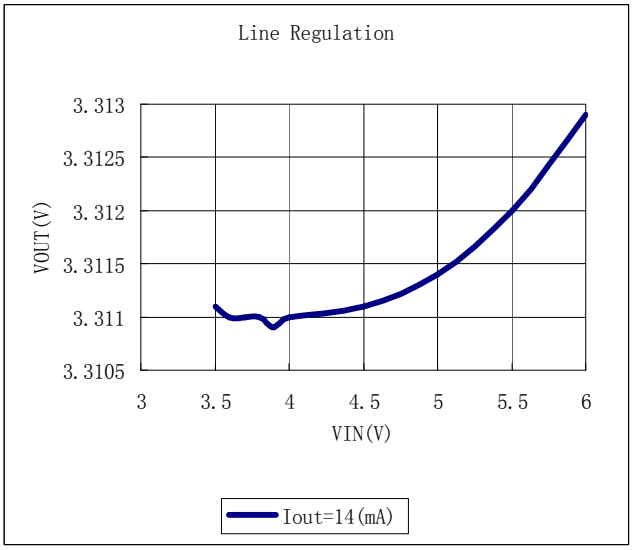
BL8569 has excellent load and line transient response and good temperature characteristics, which can assure the stability of chip and power system. And it uses trimming technique to guarantee output voltage accuracy within±2%.

TYPICAL PERFORMANCE CHARACTERISTICS

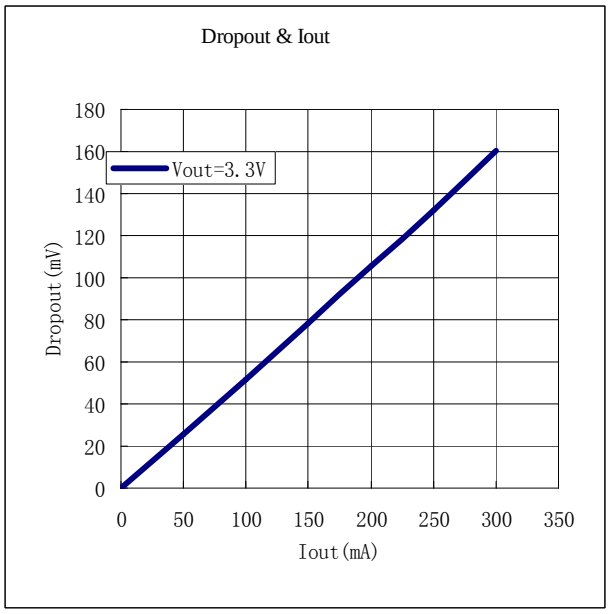
1) Output Voltage vs. Output Current (with output short protection)



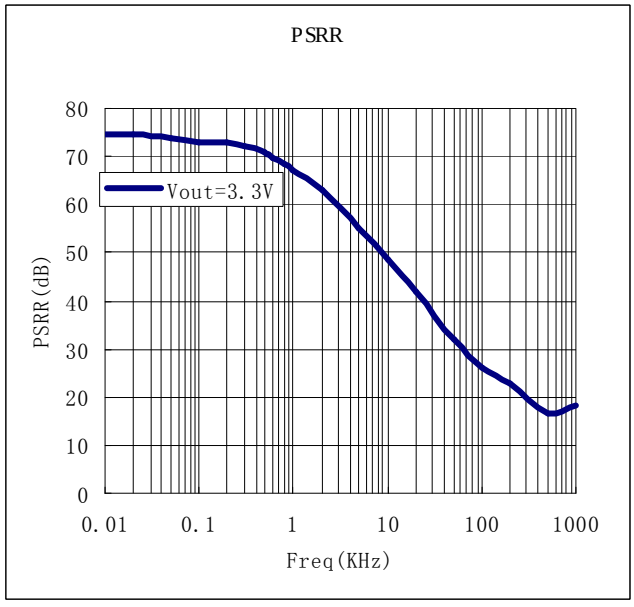
2) Output Voltage vs. Input Voltage



3) Dropout Voltage vs. Output Current

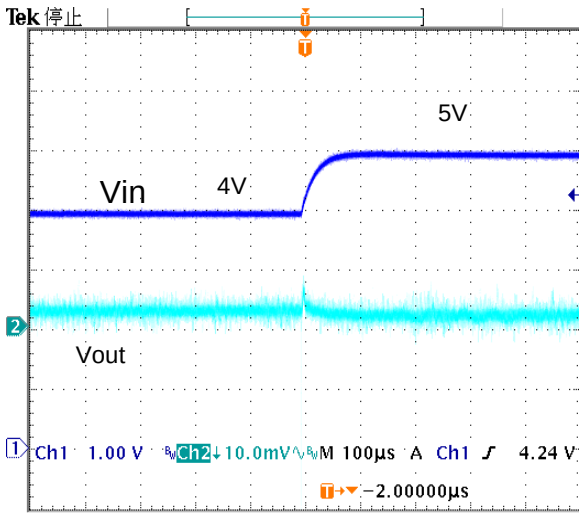


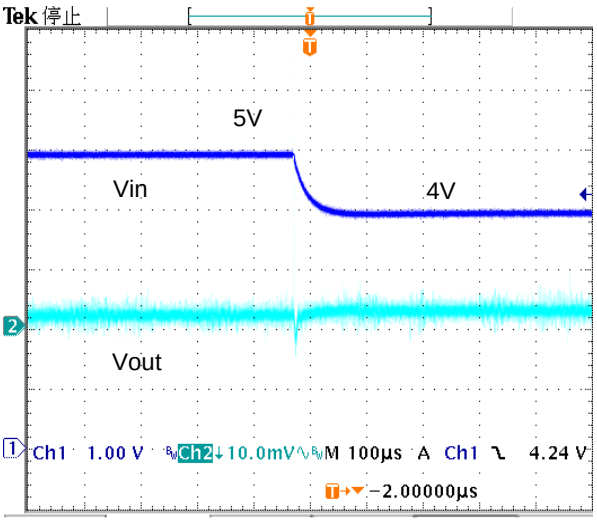
4) Ripple rejection vs. Frequency



5) Line transient response

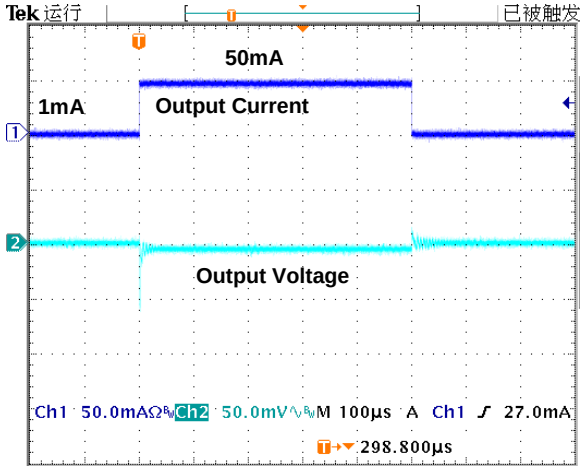
Cin=Cout=1uF Iout=25mA vout=3.3V

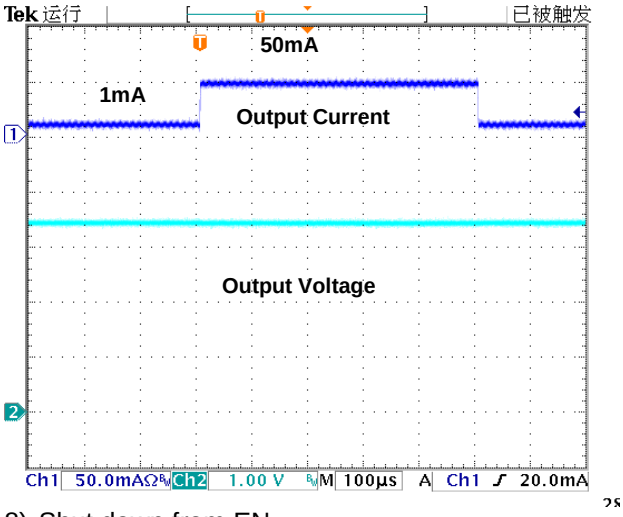




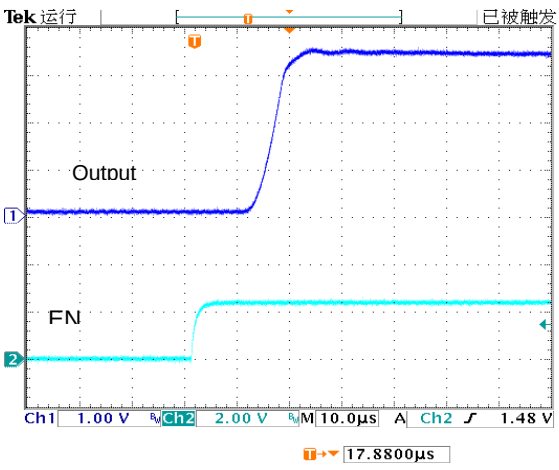
6) Load transient response

Cin=Cout=1uF Vin=4.5v Vout=3.3V

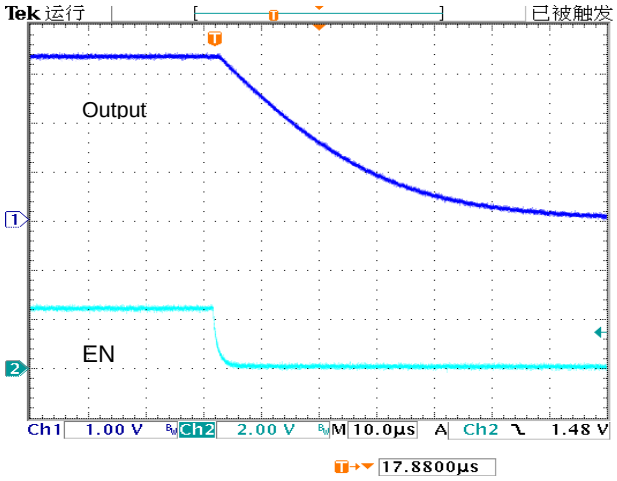




7) Start up from EN



8) Shut down from EN



PACKAGE LINE

Package	SOT-23-6	Devices per reel	3000Pcs	Unit	mm

Package dimension：

