

GENERAL DESCRIPTION

BL8073G series are a group of positive voltage output, high precise, and low power consumption voltage regulator. Voltages are selectable in 100mV steps within a range of 1.2V to 5.0V. It also can be customized on command.

BL8073G series have 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 $\pm 2\%$.

BL8073G series are available in SOT-23-5 package, which is lead (Pb)- free.

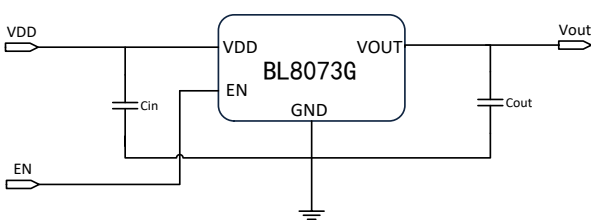
FEATURES

- Low Quiescent Current: 100uA at 5V
- High PSRR: 65dB range to 1KHz
- Low Dropout: 350mV@Iout=1A, Vout=3.3V
- Low temperature coefficient: $\pm 100\text{ppm}/^\circ\text{C}$
- Output voltage range: 1.2V~5.0V
- Maximum output current: 1A
- Highly Accurate: $\pm 2\%$
- Low ESR Ceramic Capacitor Compatible
- Thermal shutdown
- Overcurrent protection

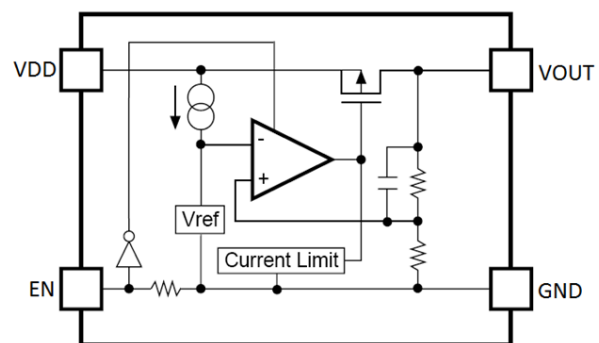
APPLICATIONS

- Reference Voltage Source
- Battery Powered Equipment
- PC Peripherals
- Wireless Devices
- Instrumentation

TYPICAL APPLICATION



BLOCK DIAGRAM



BL8073G

ORDERING INFORMATION

BL8073G ①②③④⑤

Code	Description
①	Temperature&RoHS: C:-40~85°C ,Pb Free RoHS Std.
②	Package type: B5:SOT-23-5
③	Packing type: TR:Tape&Reel (Standard)
④	Output voltage: e.g. 12=1.2V 18=1.8V 25=2.5V 33=3.3V 50=5.0V
⑤	Voltage accuracy: 1=±1%(Customized) Blank(default)=±2%

MARKING DESCRIPTON

Output Voltage Code X

VOUT	Code	VOUT	Code	VOUT	Code
1.2V	2	2.9V	9	4.3V	3
1.3V	3	3.0V	0	4.4V	4
1.4V	4	3.1V	1	4.5V	5
1.5V	5	3.2V	2	4.6V	6
1.8V	8	3.3V	3	4.7V	7
2.0V	0	3.4V	4	4.8V	8
2.1V	1	3.5V	5	4.9V	9
2.2V	2	3.6V	6	5.0V	0
2.3V	3	3.7V	7	5.1V	1
2.4V	4	3.8V	8	5.2V	2
2.5V	5	3.9V	9	5.3V	3
2.6V	6	4.0V	0	5.4V	4
2.7V	7	4.1V	1	5.5V	5
2.8V	8	4.2V	2		

XX: Output Voltage, e.g. 18=1.8V 33=3.3V

Y: The Year of manufacturing, "1" stands for year 2011, "2" stands for year 2012, and "8" stands for year 2018.

W: The week of manufacturing. "A" stands for week 1, "Z" stands for week 26, "A" stands for week 27, "Z" stands for week 52.

PIN CONFIGURATION

Product Classification		BL8073GCB5TR□□
JBXYW	JB:Product Code	
	X:Output Voltage	
	YW:Date Code	
VDD	Supply Voltage Input	
GND	Ground Pin	
EN	Chip Enable	
NC	No Connection	
VOUT	Output Voltage	

ABSOLUTE MAXIMUM RATING

Parameter	Value
Max Input Voltage	8V
Max Operating Junction Temperature (T _J)	125°C
Ambient Temperature (T _A)	-40°C~85°C
Power Dissipation	SOT-23-5 400mW
Storage Temperature (T _S)	-65°C~150°C
Lead Temperature & Time	260°C, 10 Sec

RECOMMENDED WORK CONDITIONS

Parameter	Value
Input Voltage Range	Max. 6V
Ambient Temperature	-40°C~85°C
Operating Junction Temperature (T _J)	125°C

ELECTRICAL CHARACTERISTICS

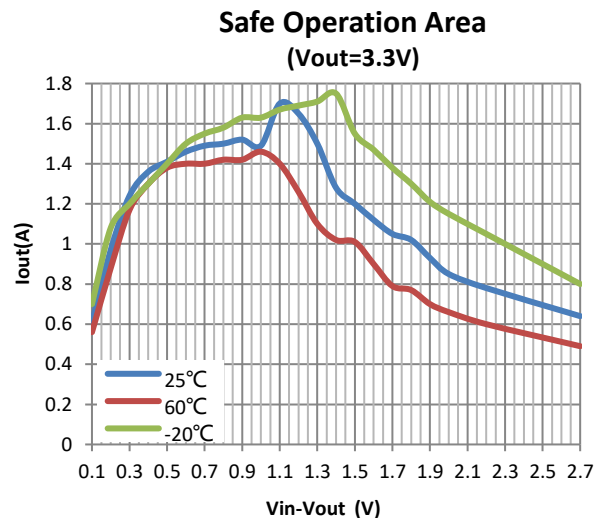
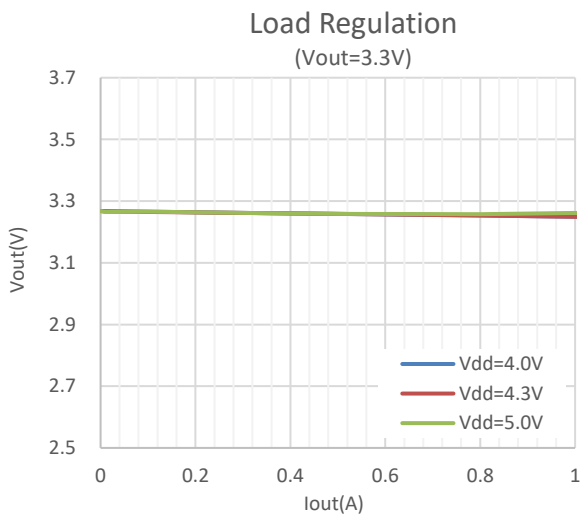
Test Conditions: $C_{IN}=4.7\mu F, C_{OUT}=4.7\mu F, T_A=25^\circ C$, unless otherwise specified.

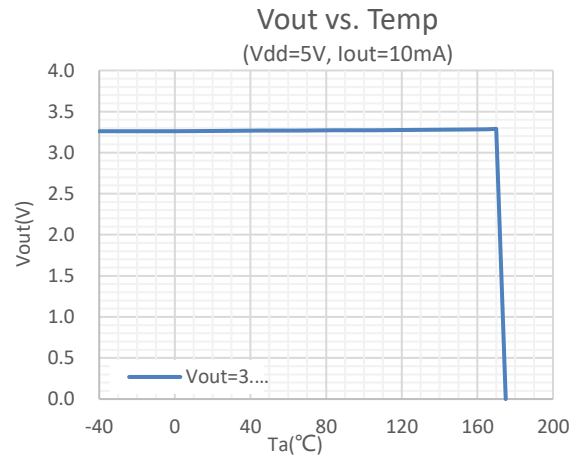
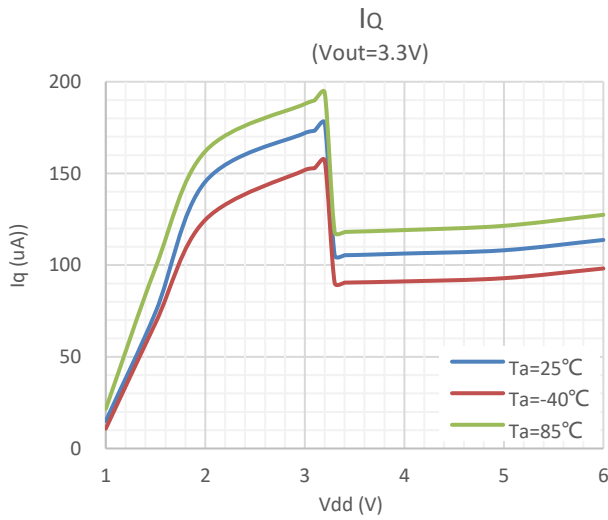
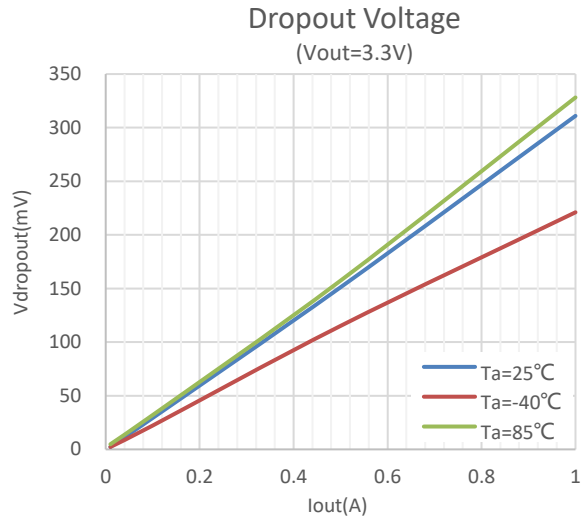
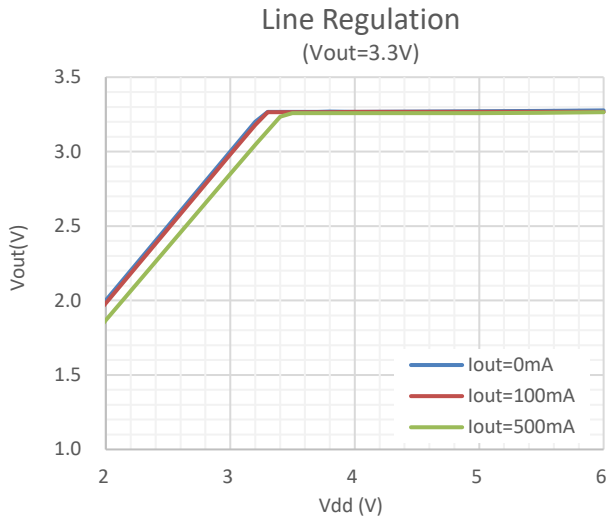
Symbol	Parameter	Conditions	Min	Typ	Max	Units
V_{DD}	Input Voltage		1.5*		6	V
V_{OUT}	Output Voltage	$V_{OUT}>1.5$	$V_{OUT} \times 0.98$	V_{OUT}	$V_{OUT} \times 1.02$	V
		$V_{OUT} \leq 1.5$	$V_{OUT} - 0.03$		$V_{OUT} + 0.03$	
$I_{OUT} (Max.)^{**}$	Maximum Output Current	$V_{DD}-V_{OUT}=1V$	1			A
V_{DROP}	Dropout Voltage	$V_{OUT} = 3.3V, I_{OUT}=1A$		300	500	mV
$\frac{\Delta V_{out}}{\Delta V_{in} \cdot V_{out}}$	Line Regulation	$I_{OUT}=10mA, 4V \leq V_{DD} \leq 6V$		0.05	0.2	%/V
ΔV_{out}	Load Regulation	$V_{DD} = \text{Set } V_{OUT} + 1V$ $1mA \leq I_{OUT} \leq 2.5A$		30	60	mV
I_s	Supply Current	$V_{DD} = \text{Set } V_{OUT} + 1V, V_{OUT}$ Floating		100	150	μA
$\frac{\Delta V_{out}}{\Delta T \cdot V_{out}}$	Output Voltage Temperature Coefficient	$I_{OUT}=10mA$		± 100		ppm/ $^\circ C$
PSRR	Ripple Rejection	$f=100Hz, \text{Ripple}=0.5Vp-p,$ $V_{DD} = \text{Set } V_{OUT} + 1V$		65		dB
Rpd	EN Pull down Resistance			5		$M\Omega$
Venh	EN Input Voltage "H"		0.95		V_{in}	V
Venl	EN Input Voltage "L"		0		0.25	V

Note: * $I_{out}=350mA @ V_{in}=1.5V, V_{out}=1.2V$

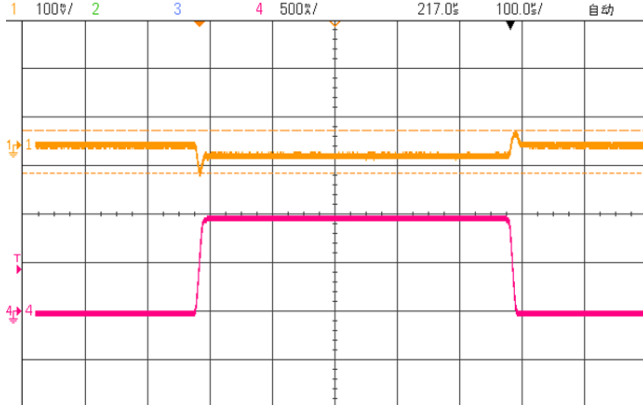
**The maximum power rating of each package is a constant, so along with the change of I_{LOAD} , the $V_{DD}-V_{OUT}$ should be controlled to a certain range to ensure the normal operation.

TYPICAL PERFORMANCE CHARACTERISTICS

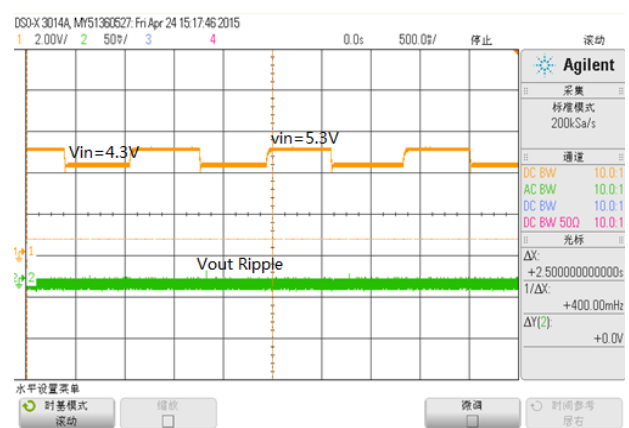




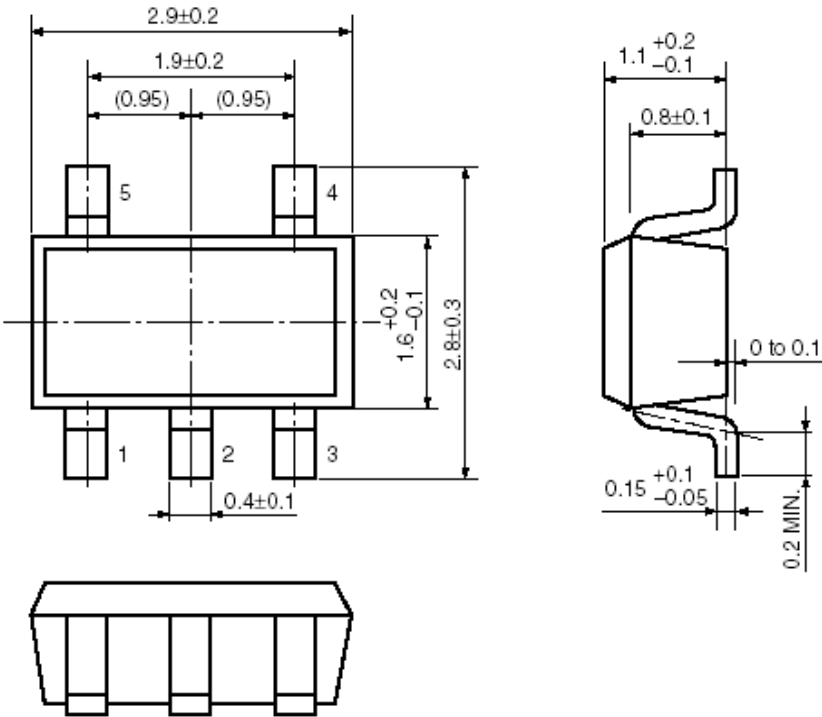
Load Transient Response (Vin=5V, Vout=3.3V) Cin=1uF, Cout=1uF, Iout=10mA-100mA



Line Transient Response (Vin=5V, Vout=3.3V) Cin=1uF, Cout=1uF, Iout=10mA, Vin=4.3V-5.3V



PACKAGE LINE

Package	SOT-23-5	Devices per reel	3000Pcs	Unit	mm
Package Dimension:  <p> The technical drawing illustrates the SOT-23-5 package dimensions. The top view shows a total width of 2.9 ± 0.2 mm, with a central width of 1.9 ± 0.2 mm. The distance between the two inner leads is 0.95 mm, and the distance between the two outer leads is 0.4 ± 0.1 mm. The lead length is 1.6 ± 0.1 mm, and the total height is 2.8 ± 0.3 mm. The side view shows a lead width of 1.1 ± 0.2 mm, a lead thickness of 0.8 ± 0.1 mm, and a lead height of 0.15 ± 0.1 mm. The lead angle is 0.2 MIN. The distance between the two inner leads is 0 to 0.1 mm. </p>					

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深圳公司

深圳市泰德兰电子有限公司

地址：深圳市福田区彩田南路 2010 号中深花园 A 座六层

电话：0755-83322522 传真：0755-83648400

手机：131-89714166 Q Q：2853781768