

GLP2950

100mA Low-Dropout Voltage Regulator

Description

The GLP2950 is a monolithic integrated voltage regulator with low dropout voltage, and low quiescent current. It includes many features that suitable for different applications.

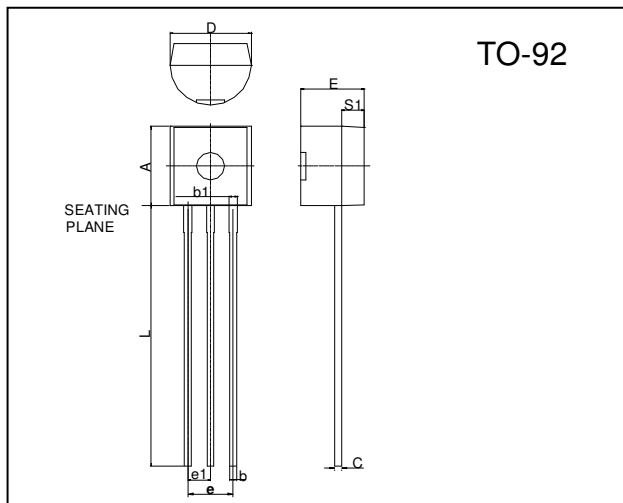
Features

- High accuracy 2.5, 3.0, 3.3, 3.6 or 5V fixed output
- Extremely low quiescent current and dropout voltage
- Extremely tight load and line regulation
- Current and thermal Limiting
- Very low temperature coefficient

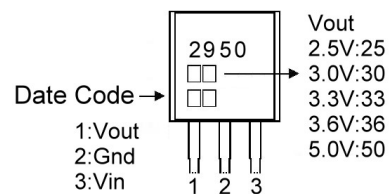
Applications

- Battery powered equipment
- Cellular Phones

Package Dimensions

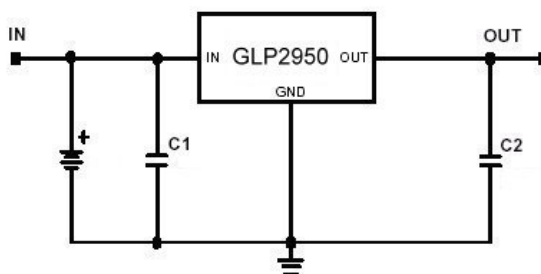


Marking :



REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	4.45	4.7	D	4.44	4.7
S1	1.02	-	E	3.30	3.81
b	0.36	0.51	L	12.70	-
b1	0.36	0.76	e1	1.150	1.390
C	0.36	0.51	e	2.42	2.66

Application Circuit



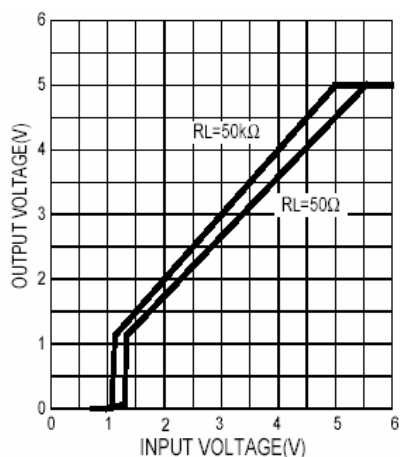
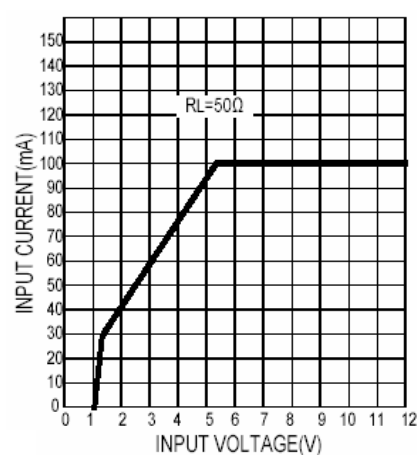
Absolute Maximum Ratings

Parameter	Symbol	Ratings	Unit
Input Voltage	V _{CC}	-0.3 ~ +30	V
Output Current	I _{OUT}	100	mA
Output Voltage	V _{OUT}	2.5 ~ 5.0	V
Storage Temperature	T _{stg}	-65 ~ +150	°C
Maximum Junction Temperature	T _{jmax}	150	°C
Operating Junction Temperature	T _j	-40 ~ +125	°C

Electrical Characteristics ($T_J=25^{\circ}\text{C}$, $V_{IN}=6\text{V}$, $I_O=100\mu\text{A}$, and $C_O=1\mu\text{F}$, unless otherwise specified)

Parameter	Symbol	Condition	Min	TYP	Max	Unit
Output Voltage	V_{OUT}	GLP2950-25	2.45	2.5	2.55	V
		GLP2950-30	2.94	3.0	3.06	
		GLP2950-33	3.23	3.3	3.36	
		GLP2950-36	3.53	3.6	3.67	
		GLP2950-50	4.90	5.0	5.10	
		$100\mu\text{A} \leq I_O \leq 100\text{mA}$ $T_J \leq T_{JMAX}$				
Line Regulation	REG_{LINE}	$V_O+1 \leq V_{IN} \leq 30\text{V}$	-	0.04	0.4	%
Load Regulation	REG_{LOAD}	$100\mu\text{A} \leq I_O \leq 100\text{mA}$	-	0.1	0.3	%
Current Limit	I_{LIM}	$V_{OUT}=0$	-	160	200	mA
Output Voltage Temperature Coefficient	TC		-	20		ppm/ $^{\circ}\text{C}$
Dropout Voltage	$V_{DROPOUT}$	$I_O=100\mu\text{A}$	-	50	80	mV
		$I_O=100\text{mA}(\text{Note1})$	-	380	450	
Ground Current	I_Q	$I_O=100\mu\text{A}$	-	75	120	μA
		$I_O=100\text{mA}$	-	8	12	mA
Dropout Ground Current		$V_{IN}=V_O-0.5\text{V}$, $I_O=100\mu\text{A}$	-	110	170	μA
Output Voltage Noise $f=10\text{Hz}\sim 100\text{kHz}$	eN	$C_O=1\mu\text{F}$	-	430	-	μV
		$C_O=200\mu\text{F}$	-	160	-	

Note 1: Dropout Voltage is defined as the input to output differential at which the output voltage drops 100mV below its nominal value measured at 1V differential.

Characteristics Curve**Fig 1. Dropout Characteristics****Fig 2. Input Current**

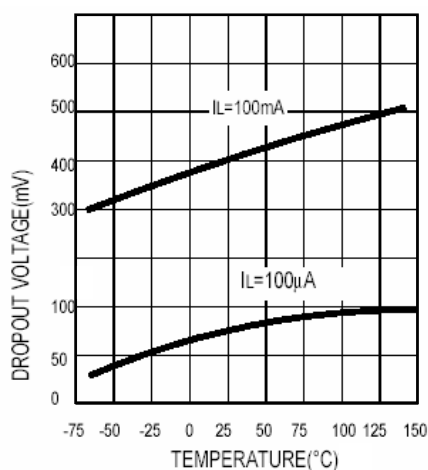


Fig 3. Dropout Voltage

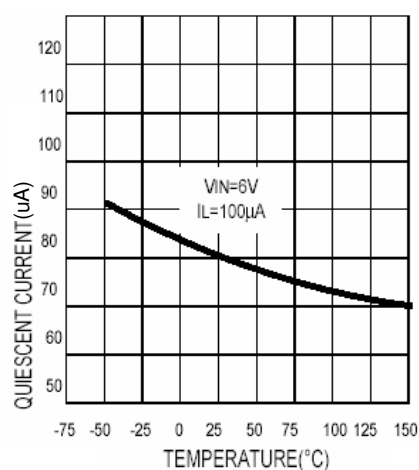


Fig 4. Ground Pin Current

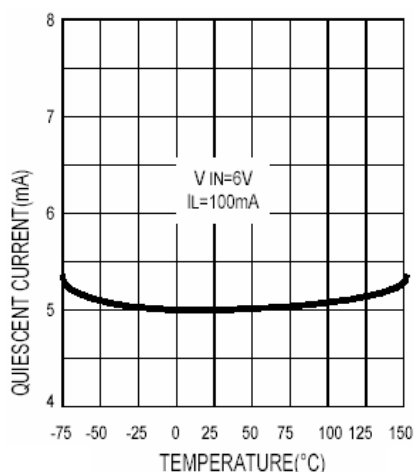


Fig 5. Ground Pin Current

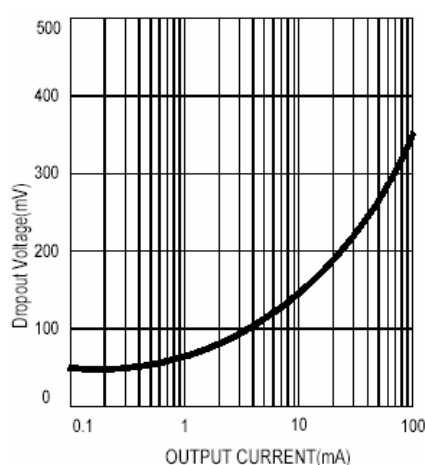


Fig 6. Dropout Voltage

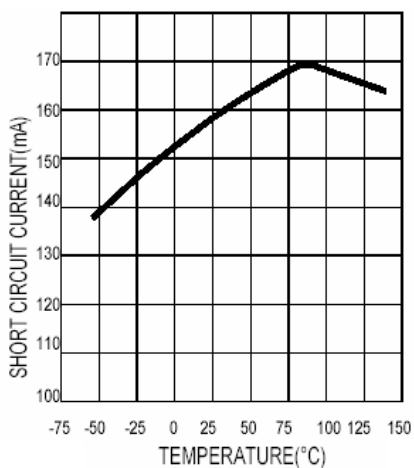


Fig 7. Short Circuit Current

Important Notice:

- All rights are reserved. Reproduction in whole or in part is prohibited without the prior written approval of GTM.
- GTM reserves the right to make changes to its products without notice.
- GTM semiconductor products are not warranted to be suitable for use in life-support Applications, or systems.
- GTM assumes no liability for any consequence of customer product design, infringement of patents, or application assistance.

Head Office And Factory:

- **Taiwan:** No. 17-1 Tatung Rd. Fu Kou Hsin-Chu Industrial Park, Hsin-Chu, Taiwan, R. O. C.
TEL : 886-3-597-7061 FAX : 886-3-597-9220, 597-0785
- **China:** (201203) No.255, Jang-Jiang Tsai-Lueng RD. , Pu-Dung-Hsin District, Shang-Hai City, China
TEL : 86-21-5895-7671 ~ 4 FAX : 86-21-38950165