

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.

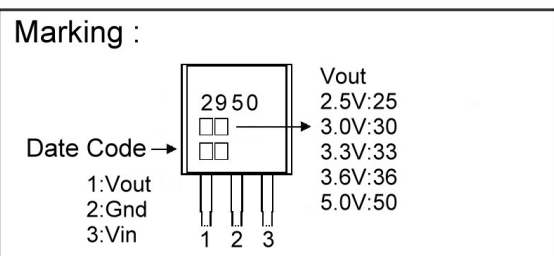
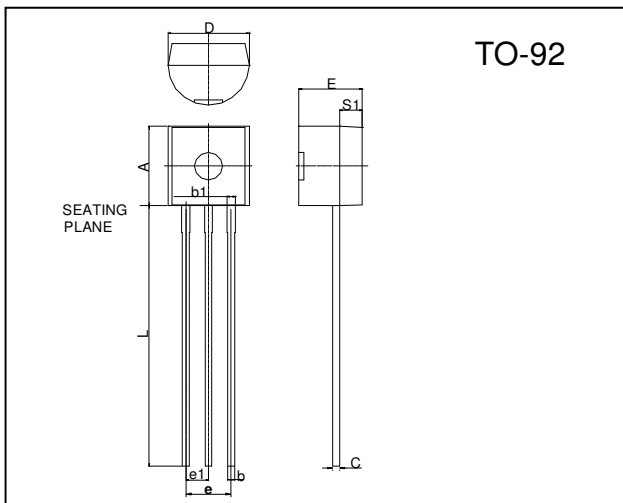
Features

- 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

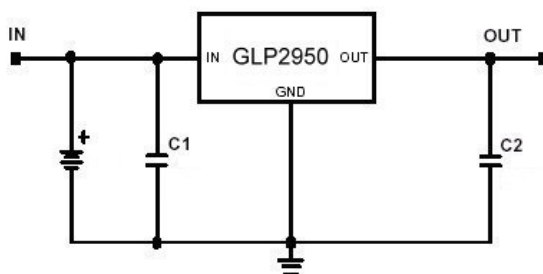
- Battery powered equipment
- Cellular Phones

Package Dimensions



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°C, V_{IN}=6V, I_O=100μA, and C_o=1μF, unless otherwise specified)

Parameter	Symbol	Condition	Min	TYP	Max	Unit	
Output Voltage	V _{OUT}	GLP2950-25	100μA ≤ I _O ≤ 100mA T _J ≤ T _{JMAX}	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	
Line Regulation	REG _{LINE}	V _O +1 ≤ V _{IN} ≤ 30V	-	0.04	0.4	%	
Load Regulation	REG _{LOAD}	100μA ≤ I _O ≤ 100mA	-	0.1	0.3	%	
Current Limit	I _{LIM}	V _{OUT} =0	-	160	200	mA	
Output Voltage Temperature Coefficient	TC		-	20		ppm/°C	
Dropout Voltage	V _{DROPOUT}	I _O =100μA	-	50	80	mV	
		I _O =100mA(Note1)	-	380	450		
Ground Current	I _Q	I _O =100μA	-	75	120	μA	
		I _O =100mA	-	8	12	mA	
Dropout Ground Current		V _{IN} =V _O -0.5V, I _O =100μA	-	110	170	μA	
Output Voltage Noise f=10Hz~100kHz	e _N	C _o =1μF	-	430	-	μV	
		C _o =200μF	-	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

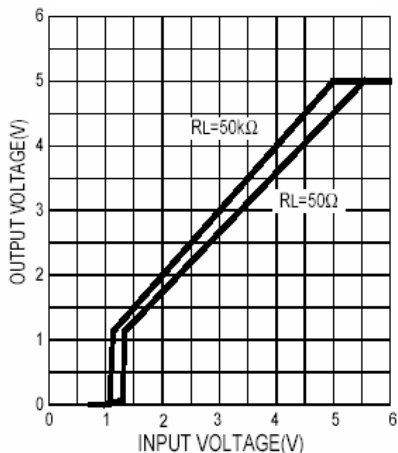


Fig 1. Dropout Characteristics

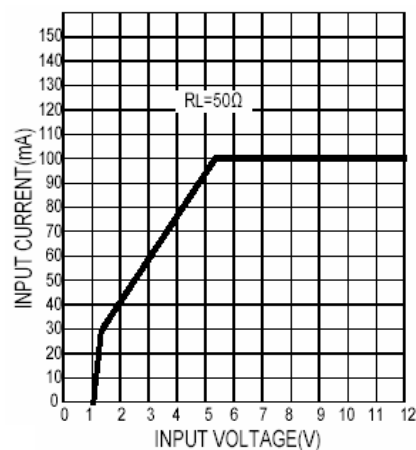


Fig 2. Input Current

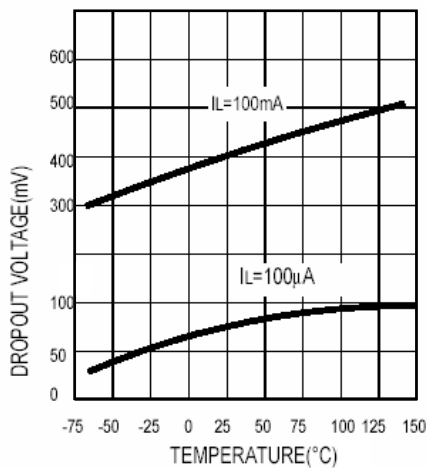


Fig 3. Dropout Voltage

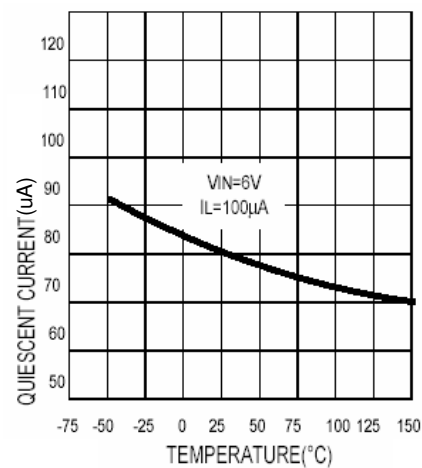


Fig 4. Ground Pin Current

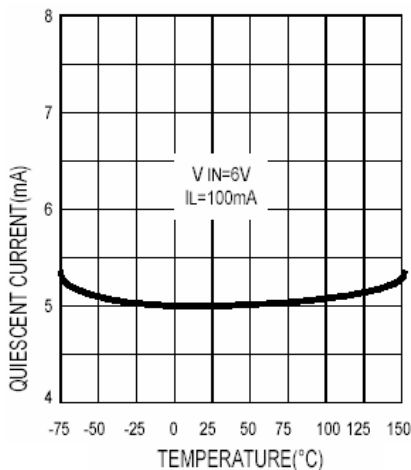


Fig 5. Ground Pin Current

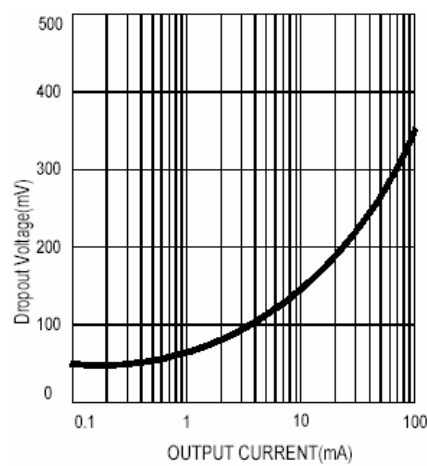


Fig 6. Dropout Voltage

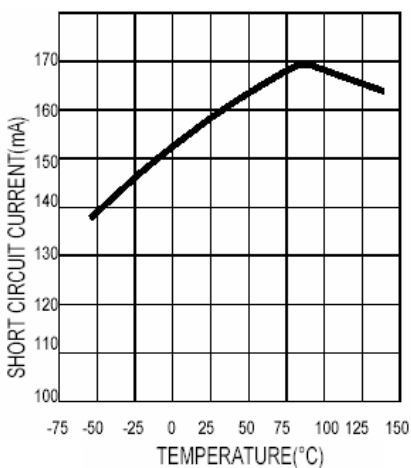


Fig 7. Short Circuit Current

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