

LP2950/2951

LINEAR INTEGRATED CIRCUIT

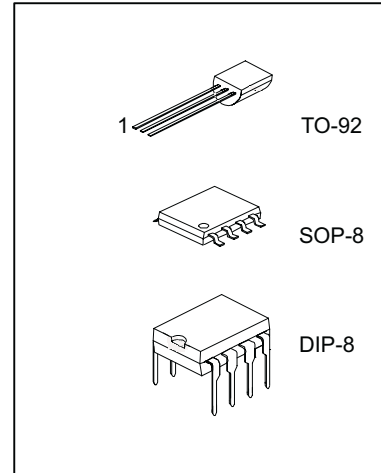
100 mA LOW-DROPOUT VOLTAGE REGULATOR

DESCRIPTION

The Contek LP2950/2951 is a monolithic integrated voltage regulator with low dropout voltage, and low quiescent current. It includes many features that suitable for different applications. Available in 3-pin TO-92, DIP-8 and SOP-8 packages.

FEATURES

- *High accuracy 3.0, 3.3, or 5V fixed output for TO-92 package.
- *Extremely low quiescent current and dropout voltage.
- *Extremely tight load and line regulation.
- *Current and thermal limiting.
- *Very low temperature coefficient.
- *Logic controlled shutdown and error flag available for DIP and SOP package.
- *Output voltage programmable for DIP and SOP package.



APPLICATIONS

- *Battery powered equipment.
- *High efficient linear regulator down to 1.24V.
- *Cellular phones.

ORDERING INFORMATION

PART NUMBER	TEMPERATURE RANGE	PACKAGE	ACCURACY
Contek LP2950-3.0	-40 ~ +125 C	3-Pin TO-92 plastic	1.0%
Contek LP2950-3.3	-40 ~ +125 C	3-Pin TO-92 plastic	2.0%
Contek LP2950	-40 ~ +125 C	3-Pin TO-92 plastic	1.0%
Contek LP2951F	-40 ~ +125 C	8-Pin SOP-8 plastic	2.0%
Contek LP2951P	-40 ~ +125 C	8-Pin DIP-8 plastic	2.0%



Contek Microelectronics Co., Ltd.

<http://www.contek-ic.com> E-mail: sales@contek-ic.com

LP2950/2951

LINEAR INTEGRATED CIRCUIT

PIN CONFIGURATIONS

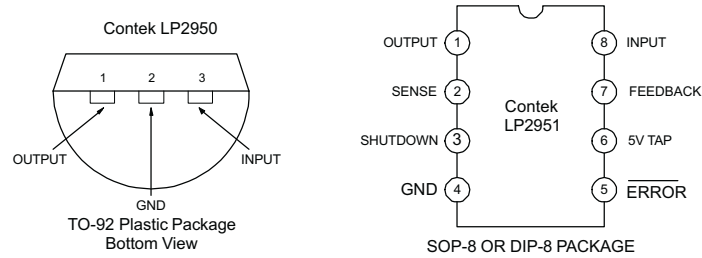
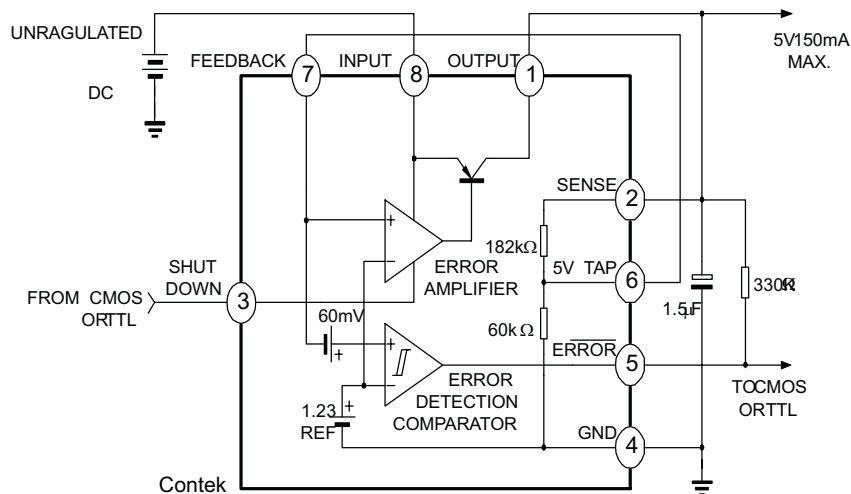


Fig. 1

BLOCK DIAGRAM



ABSOLUTE MAXIMUM RATINGS

PARAMETER	SYMBOL	VALUE	UNIT
Supply Voltage	V _{cc}	-0.3~+30	V
Feedback Voltage	V _{feedback}	-1.5~+30	V
Shutdown Voltage	V _{shutdown}	-0.3~+30	V
Comparator Output Voltage	V _{co}	-0.3~+30	V
Storage Temperature	T _{str}	-65~+150	C
Operating Junction Temperature	T _j	-40~+125	C



Contek Microelectronics Co.,Ltd.

<http://www.contek-ic.com> E-mail:sales@contek-ic.com

LINEAR INTEGRATED CIRCUIT

(Tested at $T_j=25^\circ\text{C}$, $V_{IN}=6\text{V}$, $I_L=100\text{A}$ and $C_L=1\text{F}$.unless otherwise specified)



<http://www.contek-ic.com> E-mail:sales@contek-ic.com

LP2950/2951

LINEAR INTEGRATED CIRCUIT

PARAMETER	PART NUMBER	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Lower Threshold Voltage		(Note 3)			7.6	%Vo
Hysteresis		(Note 3)		15		mV
Shutdown Input						
Input Logic Voltage		Low(Regulator ON) High(Regulator OFF)	2.0	1.3	0.70	V
Shutdown Pin Input Current		Vshutdown=2.4V		30	50	μA
		Vshutdown=30V		450	600	μA
Regulator Output Current Shutdown		Vshutdown>=2V, V IN<=30V, Vout=0, Feedback pin tied to 5V Tap.		3	10	μA

Note 1: Additional conditions for 8-pin versions are feedback tied to 5V Tap an Output tied to Output Sense (V_{out}=5V) and Vshutdown<=0.8V.

Note 2: 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.

Note 3: Comparator thresholds are expressed in terms of percentage value of voltage output.

APPLICATION CIRCUIT (10 Ampere Low Dropout Regulator)

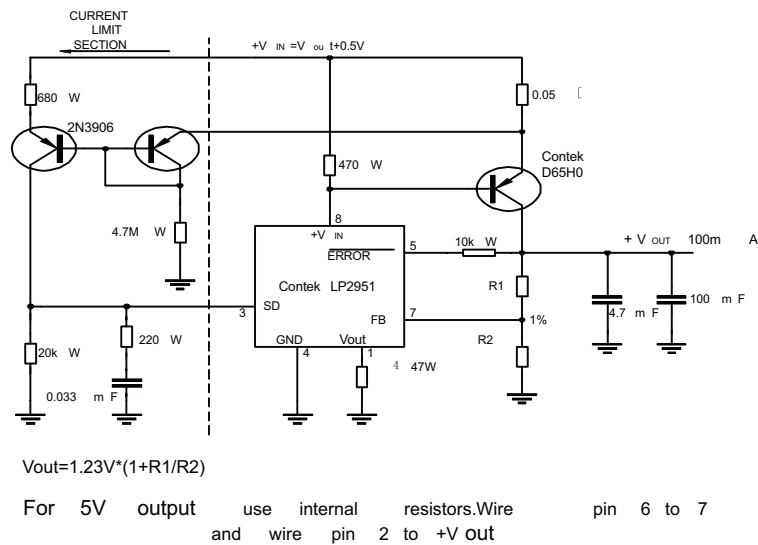


Fig.2



Contek Microelectronics Co.,Ltd.

<http://www.contek-ic.com> E-mail:sales@contek-ic.com

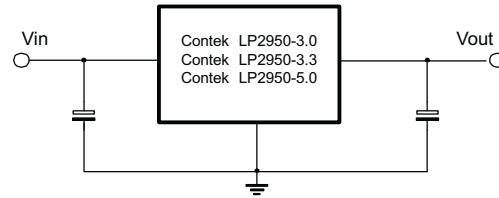


Fig. 3

TYPICAL PERFORMANCE CHARACTERISTICS

Fig.4 Dropout Characteristics

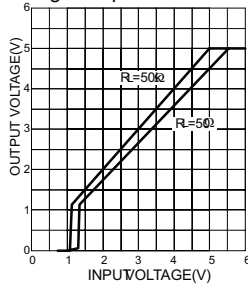


Fig.5 Input Current

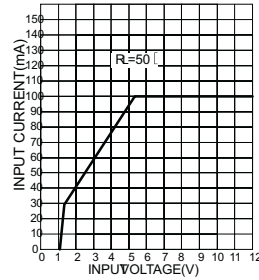


Fig.6 Dropout Voltage

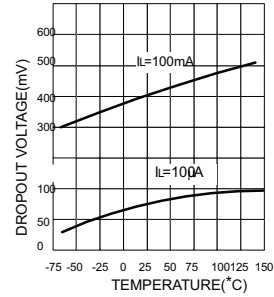


Fig.7 Ground Pin Current

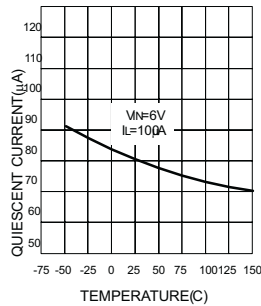


Fig.8 Ground Pin Current

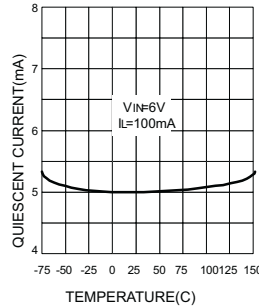


Fig.9 Shutdown Threshold Voltage

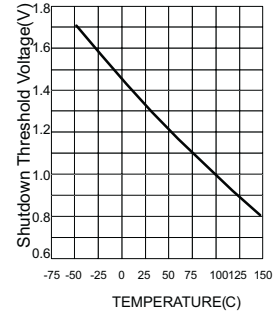


Fig.10 Short Circuit Current

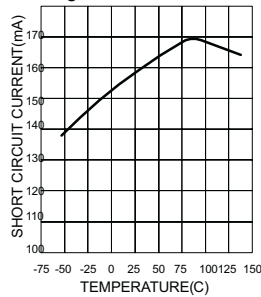
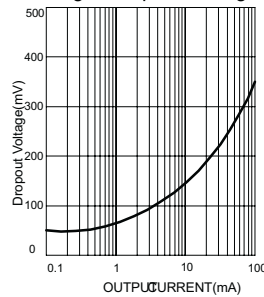


Fig.11 Dropout Voltage



CONTEK

Contek Microelectronics Co., Ltd.

<http://www.contek-ic.com> E-mail: sales@contek-ic.com