

# ILC7262

## Dual CMOS LDO

### Features

- All-CMOS design in an 8-lead SOIC package
- $\pm 2\%$  precision outputs
- $2.2\mu\text{A}$  of  $I_q$
- Short-circuit protected outputs
- Voltage options allow:
  - Dual 50mA 5.0 & 3.3V Regulator
  - Dual 50mA 5.0 & 3.0V Regulator
  - Dual 125mA 5V to 3.0V & 3.3V Converter

### Applications

- Battery-powered Equipment
- Portable communications
- PDAs and palmtops

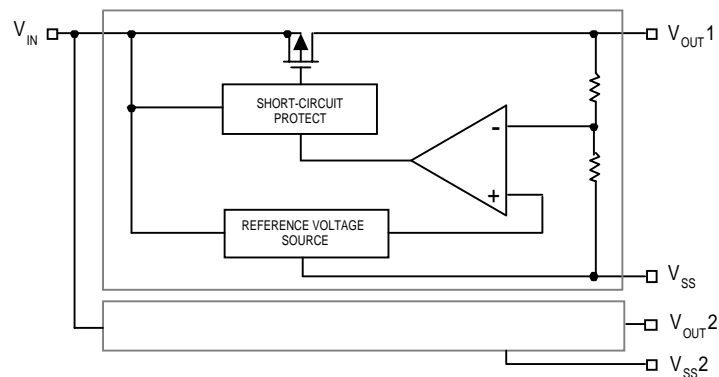
### Description

Dual 125mA CMOS LDO in an SO-8 package. This part offers 120mV dropout voltage on each output at 100mA typical (5V part), and nearly zero dropout below 5mA. Each output is independently short-circuit protected.

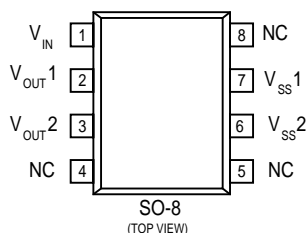
Its all-CMOS design means that only  $2.2\mu\text{A}$  of current is required to run the part.

$\pm 2\%$  accurate outputs come in a number of configurations, to allow for flexible yet compact portable system designs.

### Block Diagram



## Pin Assignments



## Absolute Maximum Ratings

Parameter	Min.	Max.	Unit
Input Voltage	$V_{IN}$	12	V
Output Current	$I_{OUT}$	500	mA
Output Voltage	$V_{OUT}$	$V_{SS}-0.3 \sim V_{IN}+0.3$	V
Continuous Total Power Dissipation	$P_D$	300	mW
Operating Ambient Temperature	$T_{opr}$	-30~+80	°C
Storage Temperature	$T_{stg}$	-40~+125	°C

## Electrical Characteristics

ILC7262 COMMON CHARACTERISTICS  $T_A = 25^\circ\text{C}$

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Units
Supply Voltage	$V_{OUT}$	$V_{IN} = 6.0\text{V}$	4.90	5.0	5.10	V
Input Voltage	$V_{IN}$				10.0	mA

## Electrical Characteristics ILC7262

$V_{OUT}$  SECTION:  $V_{OUT}(T) = 5.0\text{V}$ ,  $T_A = 25^\circ\text{C}$

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Units
Output Voltage	$V_{OUT}$	$I_{OUT} = 40\text{mA}$ , $V_{IN} = 6.0\text{V}$	4.90	5.0	5.10	V
Maximum Output Current	$I_{OUT(max)}$	$V_{IN} = 6.0\text{V}$ , $V_{OUT} \geq 4.5\text{V}$	250			mA
Load Stability	$\Delta V_{OUT}$	$V_{IN} = 6.0\text{V}$ , $1\text{mA} \leq I_{OUT} \leq 100\text{mA}$		40	80	mV
Input/Output Voltage Differential	$V_{dif}$	$I_{OUT} = 100\text{mA}$ $I_{OUT} = 200\text{mA}$		120 380	300 600	mV
Input Stability	$\frac{\Delta V_{OUT}}{\Delta V_{IN} \cdot V_{OUT}}$	$I_{OUT} = 40\text{mA}$ $6.0\text{V} \leq V_{IN} \leq 10.0\text{V}$		0.2	0.3	%/V
Output Voltage Temperature Characteristics	$\frac{\Delta V_{OUT}}{\Delta T_{opr} \cdot V_{OUT}}$	$I_{OUT} = 40\text{mA}$ $-30^\circ\text{C} \leq T_{opr} \leq 80^\circ\text{C}$		$\pm 100$		ppm/°C

## Electrical Characteristics ILC7262

V<sub>OUT2</sub> SECTION: V<sub>OUT(T)</sub> = 3.3V, T<sub>A</sub> = 25°C

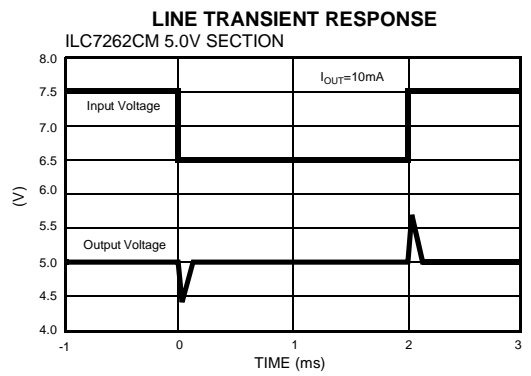
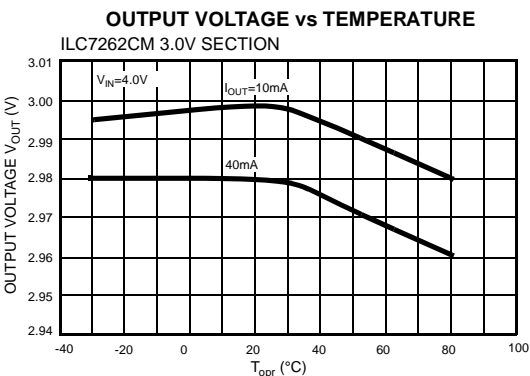
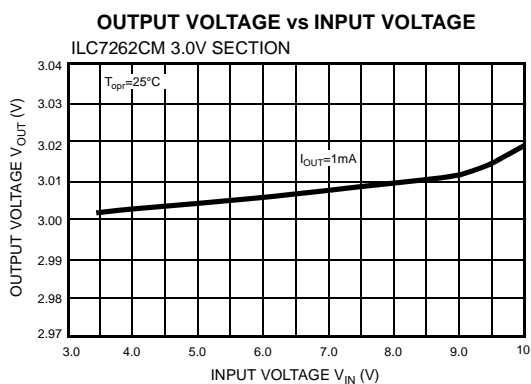
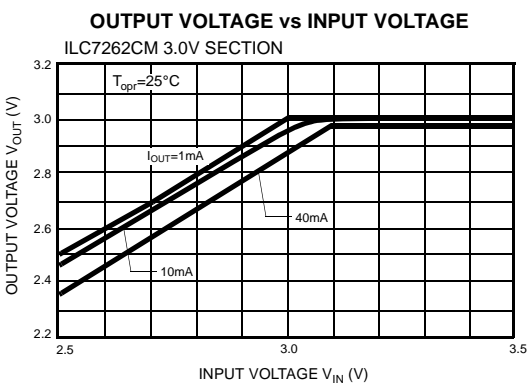
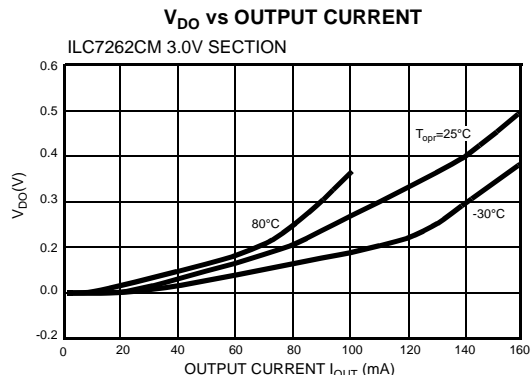
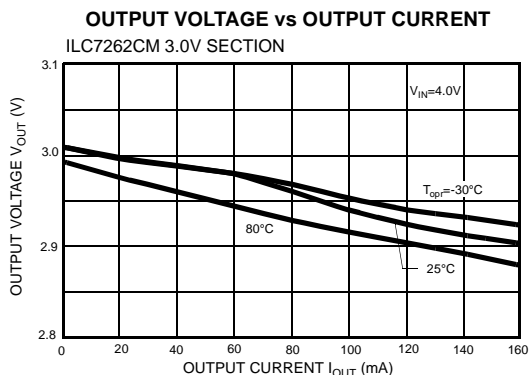
Parameter	Symbol	Conditions	Min.	Typ.	Max.	Units
Output Voltage	V <sub>OUT</sub>	I <sub>OUT</sub> = 40mA, V <sub>IN</sub> = 6.0V	3.234	3.30	3.37	V
Maximum Output Current	I <sub>OUT(max)</sub>	V <sub>IN</sub> = 6.0V, V <sub>OUT</sub> ≥ 2.97V	165			mA
Load Stability	ΔV <sub>OUT</sub>	V <sub>IN</sub> = 6.0V, 1mA ≤ I <sub>OUT</sub> ≤ 80mA		45	90	mV
Input/Output Voltage Differential	V <sub>dif</sub>	I <sub>OUT</sub> = 80mA I <sub>OUT</sub> = 160mA		180 400	360 700	mV
Input Stability	$\frac{\Delta V_{OUT}}{\Delta V_{IN} \cdot V_{OUT}}$	I <sub>OUT</sub> = 40mA 6.0V ≤ V <sub>IN</sub> ≤ 10.0V		0.2	0.3	%/V
Output Voltage Temperature Characteristics	$\frac{\Delta V_{OUT}}{\Delta T_{opr} \cdot V_{OUT}}$	I <sub>OUT</sub> = 40mA -30°C ≤ T <sub>opr</sub> ≤ 80°C		±100		ppm/°C

## Electrical Characteristics ILC7262

V<sub>OUT2</sub> SECTION: V<sub>OUT(T)</sub> = 3.0V, T<sub>A</sub> = 25°C

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Units
Output Voltage	V <sub>OUT</sub>	I <sub>OUT</sub> = 40mA, V <sub>IN</sub> = 6.0V	2.94	3.0	3.06	V
Maximum Output Current	I <sub>OUT(max)</sub>	V <sub>IN</sub> = 6.0V, V <sub>OUT</sub> ≥ 2.7V	150			mA
Load Stability	ΔV <sub>OUT</sub>	V <sub>IN</sub> = 6.0V, 1mA ≤ I <sub>OUT</sub> ≤ 80mA		45	90	mV
Input/Output Voltage Differential	V <sub>dif</sub>	I <sub>OUT</sub> = 80mA I <sub>OUT</sub> = 160mA		180 400	360 700	mV
Input Stability	$\frac{\Delta V_{OUT}}{\Delta V_{IN} \cdot V_{OUT}}$	I <sub>OUT</sub> = 40mA 6.0V ≤ V <sub>IN</sub> ≤ 10.0V		0.2	0.3	%/V
Output Voltage Temperature Characteristics	$\frac{\Delta V_{OUT}}{\Delta T_{opr} \cdot V_{OUT}}$	I <sub>OUT</sub> = 40mA -30°C ≤ T <sub>opr</sub> ≤ 80°C		±100		ppm/°C

# Typical Performance Characteristics General conditions for all curves



## Ordering Information

Product Number	Package
ILC7262CS-50/30	Dual 50mA 5V & 3.0V Regulator
ILC7262CS-50/33	Dual 50mA 5V & 3.3V Regulator
ILC7262CS-33/30	Dual 125mA 5V to 3.0V & 3.3V Converter

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