

General 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 μ 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.

Features

- All-CMOS design in an 8-lead SOIC package
- \pm 2% precision outputs
- 2.2 μ A of Iq
- 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

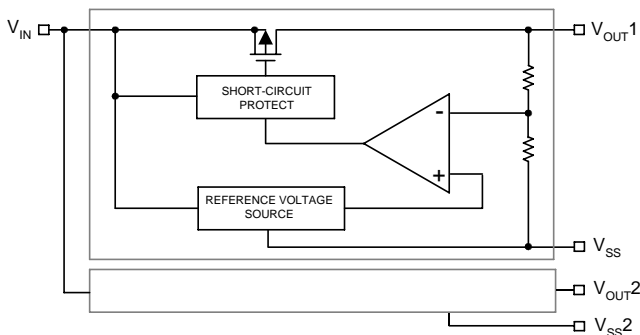
- Battery-powered Equipment
- Portable communications
- PDAs and palmtops

Ordering Information

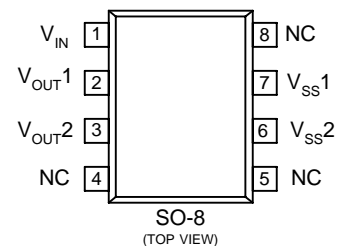
ILC7262CS-50/30	Dual 50mA 5v & 3.0V Regulator
ILC7262CS-50/33	Dual 50mA 5V & 3.3V Regulator
ILC7262CS-33/30	Dual 125mA 5V to 3.0 V & 3.3V Converter

*Standard Product offering comes in tape & reel, quantity 1000 per reel, orientation right.

Block Diagram



Pin-Package Configurations



Absolute Maximum Ratings ($T_A = 25^\circ\text{C}$)

Parameter	Symbol	Ratings	Units
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	$^\circ\text{C}$
Storage Temperature	T_{stg}	-40~+125	$^\circ\text{C}$

Note: The total of I_{OUT} 's must be less than $P_d / (V_{IN}-V_{OUT1}) + P_d / (V_{IN}-V_{OUT2})$

Electrical Characteristics

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

Parameter	Symbol	Conditions	Min	Typ	Max	Units
Supply Current	I_{SS}	$V_{IN} = 6.0\text{V}$		2.2	6.0	μA
Input Voltage	V_{IN}				10.0	V

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_{OUTmax}	$V_{IN} = 6.0\text{V}$, $V_{OUT} \geq 4.5\text{V}$	250			mA
Load Stability	ΔV_{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	$\frac{\Delta V_{OUT}}{\Delta T_{opr} \cdot V_{OUT}}$	$I_{OUT} = 40\text{mA}$ $-30^\circ\text{C} \leq T_{opr} \leq 80^\circ\text{C}$		± 100		ppm/ $^\circ\text{C}$

Note:

- V_{OUT} means the output voltage when " $V_{OUT} + 1.0\text{V}$ " is provided at the V_{IN} pin while maintaining a certain I_{OUT} value.
- V_{dif} is defined as " $V_{IN}-V_{OUT}$ " where $V_{OUT} = V_{SET} \times 0.98$.

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V_{OUT2} SECTION: V_{OUT(T)} = 3.3V, T_A = 25°C

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

Electrical Characteristics ILC7262

V_{OUT2} SECTION: V_{OUT(T)} = 3.0V, T_A = 25°C

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

Typical Performance Characteristics *General conditions for all curves*

