SGS-THOMSON MICROELECTRONICS

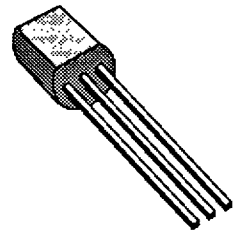
LE00A/C SERIES

VERY LOW DROP WITH INHIBIT VOLTAGE REGULATORS

PRELIMINARY DATA

- VERY LOW DROPOUT VOLTAGE (0.2V TYP.)
- VERY LOW QUIESCENT CURRENT (TYP. 50μA IN OFF MODE, 0.5mA IN ON MODE, NO LOAD)
- OUTPUT CURRENT UP TO 100 mA
- OUTPUT VOLTAGES OF 1.25; 1.5; 2.5; 2.7; 3; 3.3; 3.5; 4; 4.5; 4.7; 5; 5.2; 5.5; 6; 8V
- INTERNAL CURRENT AND THERMAL LIMIT
- ONLY 2.2μF FOR STABILITY
- AVAILABLE IN ± 1% (A) OR ± 2% (C) SELECTION AT 25 °C
- SUPPLY VOLTAGE REJECTION: 80 db (TYP.)
- TEMPERATURE RANGE: -40 TO 125 °C

SO-8

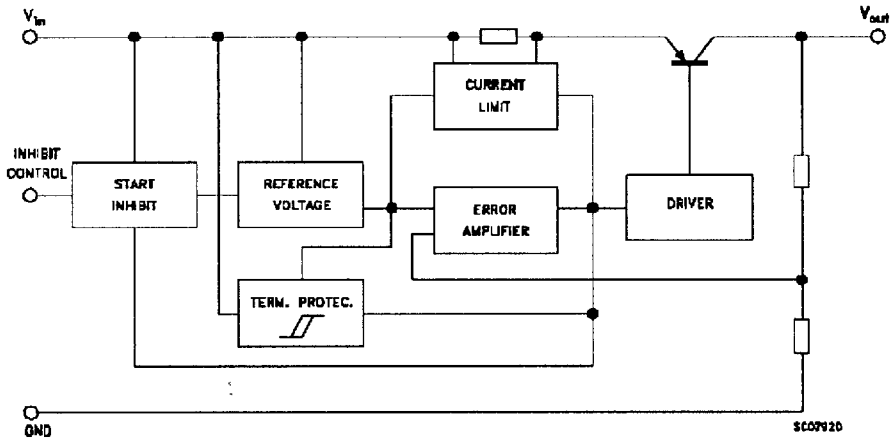


TO-92

DESCRIPTION

The LE00 regulator series are very Low Drop regulators available in SO-8 and TO-92 packages and in a wide range of output voltages.
The very Low Drop voltage (0.2V) and the very low quiescent current make them particularly suitable for Low Noise Low Power applications and specially in battery powered systems.
They are pin to pin compatible with the older L78L00 series. Furthermore in the 8 pin configuration (SO-8) they employ a Shutdown Logic Control (pin 5, TTL compatible). This means that when the device is used as a local regulator, it's possible to put in stand by a part of the board even more decreasing the total power consumption. In the three terminal configuration (TO-92) the device is even in ON STATE, mantaining the same electrical performances. It needs only 2.2μF capacitor for stability allowing room and cost saving effect.

SCHEMATIC DIAGRAM

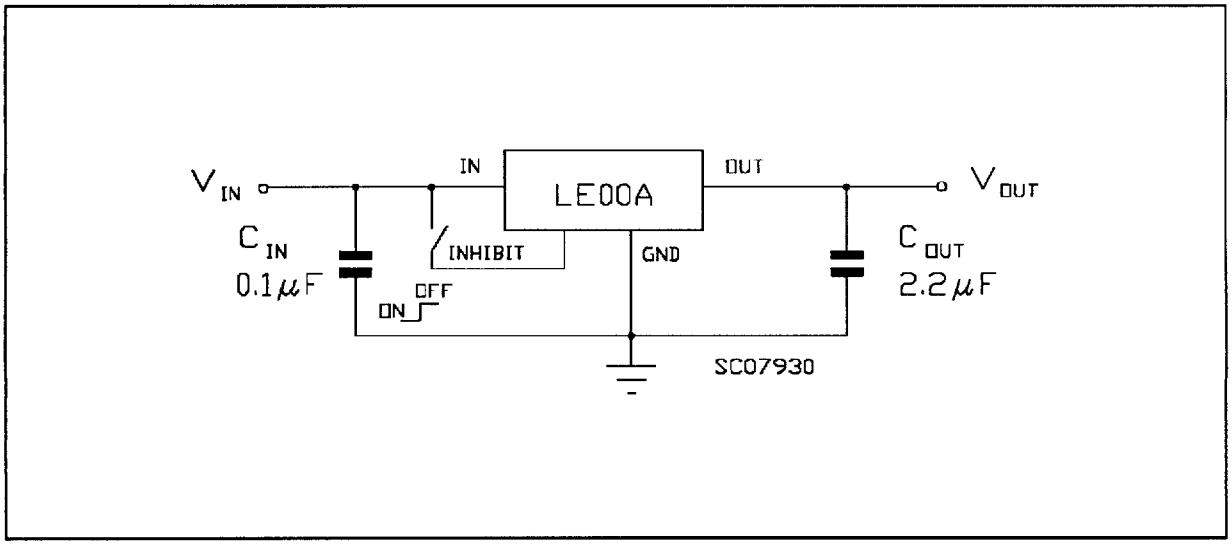


ABSOLUTE MAXIMUM RATING

Symbol	Parameter	Value	Unit
V_i	DC Input Voltage	20	V
I_o	Output Current	Internally limited (*)	
P_{tot}	Power Dissipation	Internally limited (*)	
T_{stg}	Storage Temperature Range	- 40 to 150	°C
T_{op}	Operating Junction Temperature Range	- 40 to 125	°C

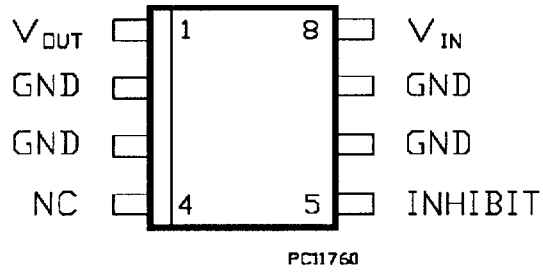
(*) Our SO-8 package used for Voltage Regulators is modified internally to have pins 2, 3, 6 and 7 electrically commoned to the die attach flag. This particular frame decreases the total thermal resistance of the package and increases its ability to dissipate power when an appropriate area of copper on the printed circuit board is available for heatsinking. The external dimensions are the same as for the standard SO-8

TEST CIRCUITS

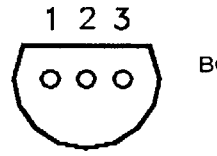


Note: If the Inhibit pin is left floating, the regualtor is in ON mode. However, to avoid any noise picking-up, it is suggested to ground it when the Inhibit function is not used.

CONNECTION DIAGRAM AND ORDERING NUMBERS (top view)



SO-8



pin 1 = OUT
pin 2 = GND
pin 3 = IN

TO-92

ORDERING NUMBERS

Type	SO-8	TO-92	Output Voltage
LE12AC	LE12ACD	LE12ACZ	1.25 V
LE12C	LE12CD	LE12CZ	1.25 V
LE15AC	LE15ACD	LE15ACZ	1.5 V
LE15C	LE15CD	LE15CZ	1.5 V
LE25AC	LE25ACD	LE25ACZ	2.5 V
LE25C	LE25CD	LE25CZ	2.5 V
LE27AC	LE27ACD	LE27ACZ	2.7 V
LE27C	LE27CD	LE27CZ	2.7 V
LE30AC	LE30ACD	LE30ACZ	3 V
LE30C	LE30CD	LE30CZ	3 V
LE33AC	LE33ACD	LE33ACZ	3.3 V
LE33C	LE33CD	LE33CZ	3.3 V
LE35AC	LE35ACD	LE35ACZ	3.5 V
LE35C	LE35CD	LE35CZ	3.5 V
LE40AC	LE40ACD	LE40ACZ	4 V
LE40C	LE40CD	LE40CZ	4 V
LE45AC	LE45ACD	LE45ACZ	4.5 V
LE45C	LE45CD	LE45CZ	4.5 V
LE47AC	LE47ACD	LE47ACZ	4.7 V
LE47C	LE47CD	LE47CZ	4.7 V
LE50AC	LE50ACD	LE50ACZ	5 V
LE50C	LE50CD	LE50CZ	5 V
LE52AC	LE52ACD	LE52ACZ	5.2 V
LE52C	LE52CD	LE52CZ	5.2 V
LE55AC	LE55ACD	LE55ACZ	5.5 V
LE55C	LE55CD	LE55CZ	5.5 V
LE60AC (*)	LE60ACD	LE60ACZ	6 V
LE60C (*)	LE60CD	LE60CZ	6 V
LE80AC (*)	LE80ACD	LE80ACZ	8 V
LE80C (*)	LE80CD	LE80CZ	8 V

(*) Available on request

ELECTRICAL CHARACTERISTICS FOR LE12AC (refer to the test circuits, T_j = 25 °C, C_i = 0.1 µF, C_o = 2.2 µF unless otherwise specified)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
V_o	Output Voltage	I_o = 10 mA, V_i = 3.3 V I_o = 10 mA, V_i = 3.3 V -25<T_a<85 °C	1.225 1.2	1.25	1.275 1.3	V V
V_i	Operating Input Voltage	I_o = 100 mA	2.5		18	V
I_{out}	Output Current Limit		150			mA
ΔV_o	Line Regulation	V_i = 2.5 to 18 V, I_o = 0.5 mA		3	15	mV
ΔV_o	Load Regulation	V_i = 2.8 V I_o = 0.5 to 100 mA		3	15	mV
I_d	Quiescent Current	ON MODE V_i = 2.5 to 18 V I_o = 0 mA V_i = 2.5 to 18 V I_o = 100 mA		 0.5 1.5	 1 3	 mA mA
		OFF MODE V_i = 6 V		50	100	µA
SVR	Supply Voltage Rejection	I_o = 5 mA V_i = 3.5 V ± 1V f = 120 Hz f = 1 KHz f = 10 KHz		 82 77 60		 dB dB dB
eN	Output Noise Voltage	B = 10 Hz to 100 KHz		50		µV
V_d	Dropout Voltage	I_o = 100 mA -40 < T_a < 125 °C		1.25		V
V_{il}	Control Input Logic Low	-40 < T_a < 125 °C			0.8	V
V_{ih}	Control Input Logic High	-40 < T_a < 125 °C	2			V
I_i	Control Input Current	V_i = 6 V, V_c = 6 V		10		µA
C_O	Output Bypass Capacitance	ESR = 0.1 to 10 Ω I_o = 0 to 100 mA	2	10		µF

ELECTRICAL CHARACTERISTICS FOR LE12C (refer to the test circuits, T_j = 25 °C, C_i = 0.1 µF, C_o = 2.2 µF unless otherwise specified)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
V_o	Output Voltage	I_o = 10 mA, V_i = 3.3 V I_o = 10 mA, V_i = 3.3 V -25<T_a<85 °C	1.225 1.2	1.25	1.275 1.3	V V
V_i	Operating Input Voltage	I_o = 100 mA	2.5		18	V
I_{out}	Output Current Limit		150			mA
ΔV_o	Line Regulation	V_i = 2.5 to 18 V, I_o = 0.5 mA		3	20	mV
ΔV_o	Load Regulation	V_i = 2.8 V I_o = 0.5 to 100 mA		3	25	mV
I_d	Quiescent Current	ON MODE V_i = 2.5 to 18 V I_o = 0 mA V_i = 2.5 to 18 V I_o = 100 mA		 0.5 1.5	 1 3	 mA mA
		OFF MODE V_i = 6 V		50	100	µA
SVR	Supply Voltage Rejection	I_o = 5 mA V_i = 3.5 V ± 1V f = 120 Hz f = 1 KHz f = 10 KHz		 82 77 60		 dB dB dB
eN	Output Noise Voltage	B = 10 Hz to 100 KHz		50		µV
V_d	Dropout Voltage	I_o = 100 mA -40 < T_a < 125 °C		1.25		V
V_{il}	Control Input Logic Low	-40 < T_a < 125 °C			0.8	V
V_{ih}	Control Input Logic High	-40 < T_a < 125 °C	2			V
I_i	Control Input Current	V_i = 6 V, V_c = 6 V		10		µA
C_O	Output Bypass Capacitance	ESR = 0.1 to 10 Ω I_o = 0 to 100 mA	2	10		µF

ELECTRICAL CHARACTERISTICS FOR LE15AC (refer to the test circuits, T_j = 25 °C, C_i = 0.1 µF, C_o = 2.2 µF unless otherwise specified)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
V_o	Output Voltage	I_o = 10 mA, V_i = 3.5 V I_o = 10 mA, V_i = 3.5 V -25<T_a<85 °C	1.47 1.44	1.5	1.53 1.56	V V
V_i	Operating Input Voltage	I_o = 100 mA	2.5		18	V
I_{out}	Output Current Limit		150			mA
ΔV_o	Line Regulation	V_i = 2.5 to 18 V, I_o = 0.5 mA		3	15	mV
ΔV_o	Load Regulation	V_i = 2.8 V I_o = 0.5 to 100 mA		3	15	mV
I_d	Quiescent Current	ON MODE V_i = 2.5 to 18 V I_o = 0 mA V_i = 2.5 to 18 V I_o = 100 mA		 0.5 1.5	 1 3	 mA mA
		OFF MODE V_i = 6 V		50	100	µA
SVR	Supply Voltage Rejection	I_o = 5 mA V_i = 3.5 V ± 1V f = 120 Hz f = 1 KHz f = 10 KHz		 82 77 60		 dB dB dB
eN	Output Noise Voltage	B = 10 Hz to 100 KHz		50		µV
V_d	Dropout Voltage	I_o = 100 mA -40 < T_a < 125 °C		1		V
V_{il}	Control Input Logic Low	-40 < T_a < 125 °C			0.8	V
V_{ih}	Control Input Logic High	-40 < T_a < 125 °C	2			V
I_i	Control Input Current	V_i = 6 V, V_c = 6 V		10		µA
C_O	Output Bypass Capacitance	ESR = 0.1 to 10 Ω I_o = 0 to 100 mA	2	10		µF

ELECTRICAL CHARACTERISTICS FOR LE15C (refer to the test circuits, T_j = 25 °C, C_i = 0.1 µF, C_o = 2.2 µF unless otherwise specified)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
V_o	Output Voltage	I_o = 10 mA, V_i = 3.5 V I_o = 10 mA, V_i = 3.5 V -25<T_a<85 °C	1.47 1.44	1.5	1.53 1.56	V V
V_i	Operating Input Voltage	I_o = 100 mA	2.5		18	V
I_{out}	Output Current Limit		150			mA
ΔV_o	Line Regulation	V_i = 2.5 to 18 V, I_o = 0.5 mA		3	20	mV
ΔV_o	Load Regulation	V_i = 2.8 V I_o = 0.5 to 100 mA		3	25	mV
I_d	Quiescent Current	ON MODE V_i = 2.5 to 18 V I_o = 0 mA V_i = 2.5 to 18 V I_o = 100 mA		 0.5 1.5	 1 3	 mA mA
		OFF MODE V_i = 6 V		50	100	µA
SVR	Supply Voltage Rejection	I_o = 5 mA V_i = 3.5 V ± 1V f = 120 Hz f = 1 KHz f = 10 KHz		 82 77 60		 dB dB dB
eN	Output Noise Voltage	B = 10 Hz to 100 KHz		50		µV
V_d	Dropout Voltage	I_o = 100 mA -40 < T_a < 125 °C		1		V
V_{il}	Control Input Logic Low	-40 < T_a < 125 °C			0.8	V
V_{ih}	Control Input Logic High	-40 < T_a < 125 °C	2			V
I_i	Control Input Current	V_i = 6 V, V_c = 6 V		10		µA
C_O	Output Bypass Capacitance	ESR = 0.1 to 10 Ω I_o = 0 to 100 mA	2	10		µF

ELECTRICAL CHARACTERISTICS FOR LE25AC (refer to the test circuits, T_j = 25 °C, C_i = 0.1 µF, C_o = 2.2 µF unless otherwise specified)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
V_o	Output Voltage	I_o = 10 mA, V_i = 4.5 V I_o = 10 mA, V_i = 4.5 V -25<T_a<85 °C	2.475 2.45	2.5	2.525 2.55	V V
V_i	Operating Input Voltage	I_o = 100 mA			18	V
I_{out}	Output Current Limit		150			mA
ΔV_o	Line Regulation	V_i = 3.2 to 18 V, I_o = 0.5 mA		3	15	mV
ΔV_o	Load Regulation	V_i = 3.5 V I_o = 0.5 to 100 mA		3	15	mV
I_d	Quiescent Current	ON MODE V_i = 3.5 to 18 V I_o = 0 mA V_i = 3.5 to 18 V I_o = 100 mA		 0.5 1.5	 1 3	 mA mA
		OFF MODE V_i = 6 V		50	100	µA
SVR	Supply Voltage Rejection	I_o = 5 mA V_i = 4.5 V ± 1V f = 120 Hz f = 1 KHz f = 10 KHz		 82 77 60		 dB dB dB
eN	Output Noise Voltage	B = 10 Hz to 100 KHz		50		µV
V_d	Dropout Voltage	I_o = 100 mA I_o = 100 mA -40 < T_a < 125 °C		0.2	0.4 0.5	V V
V_{il}	Control Input Logic Low	-40 < T_a < 125 °C			0.8	V
V_{ih}	Control Input Logic High	-40 < T_a < 125 °C	2			V
I_i	Control Input Current	V_i = 6 V, V_c = 6 V		10		µA
C_O	Output Bypass Capacitance	ESR = 0.1 to 10 Ω I_o = 0 to 100 mA	2	10		µF

ELECTRICAL CHARACTERISTICS FOR LE25C (refer to the test circuits, T_j = 25 °C, C_i = 0.1 µF, C_o = 2.2 µF unless otherwise specified)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
V_o	Output Voltage	I_o = 10 mA, V_i = 3.3 V I_o = 10 mA, V_i = 3.3 V -25<T_a<85 °C	2.45 2.4	2.5	2.55 2.6	V V
V_i	Operating Input Voltage	I_o = 100 mA			18	V
I_{out}	Output Current Limit		150			mA
ΔV_o	Line Regulation	V_i = 3.2 to 18 V, I_o = 0.5 mA		3	20	mV
ΔV_o	Load Regulation	V_i = 3.5 V I_o = 0.5 to 100 mA		3	25	mV
I_d	Quiescent Current	ON MODE V_i = 3.5 to 18 V I_o = 0 mA V_i = 3.5 to 18 V I_o = 100 mA		 0.5 1.5	 1 3	 mA mA
		OFF MODE V_i = 6 V		50	100	µA
SVR	Supply Voltage Rejection	I_o = 5 mA V_i = 4.5 V ± 1V f = 120 Hz f = 1 KHz f = 10 KHz		 82 77 60		 dB dB dB
eN	Output Noise Voltage	B = 10 Hz to 100 KHz		50		µV
V_d	Dropout Voltage	I_o = 100 mA I_o = 100 mA -40 < T_a < 125 °C		0.2	0.4 0.5	V V
V_{il}	Control Input Logic Low	-40 < T_a < 125 °C			0.8	V
V_{ih}	Control Input Logic High	-40 < T_a < 125 °C	2			V
I_i	Control Input Current	V_i = 6 V, V_c = 6 V		10		µA
C_O	Output Bypass Capacitance	ESR = 0.1 to 10 Ω I_o = 0 to 100 mA	2	10		µF

ELECTRICAL CHARACTERISTICS FOR LE27AC (refer to the test circuits, T_j = 25 °C, C_i = 0.1 µF, C_o = 2.2 µF unless otherwise specified)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
V_o	Output Voltage	I_o = 10 mA, V_i = 4.7 V I_o = 10 mA, V_i = 4.7 V -25<T_a<85 °C	2.673 2.646	2.7	2.727 2.754	V V
V_i	Operating Input Voltage	I_o = 100 mA			18	V
I_{out}	Output Current Limit		150			mA
ΔV_o	Line Regulation	V_i = 3.4 to 18 V, I_o = 0.5 mA		3	15	mV
ΔV_o	Load Regulation	V_i = 3.7 V I_o = 0.5 to 100 mA		3	15	mV
I_d	Quiescent Current	ON MODE V_i = 3.7 to 18 V I_o = 0 mA V_i = 3.7 to 18 V I_o = 100 mA		 0.5 1.5	 1 3	 mA mA
		OFF MODE V_i = 6 V		50	100	µA
SVR	Supply Voltage Rejection	I_o = 5 mA V_i = 4.7 V ± 1V f = 120 Hz f = 1 KHz f = 10 KHz		 82 77 60		 dB dB dB
eN	Output Noise Voltage	B = 10 Hz to 100 KHz		50		µV
V_d	Dropout Voltage	I_o = 100 mA I_o = 100 mA -40 < T_a < 125 °C		0.2	0.4 0.5	V V
V_{il}	Control Input Logic Low	-40 < T_a < 125 °C			0.8	V
V_{ih}	Control Input Logic High	-40 < T_a < 125 °C	2			V
I_i	Control Input Current	V_i = 6 V, V_c = 6 V		10		µA
C_O	Output Bypass Capacitance	ESR = 0.1 to 10 Ω I_o = 0 to 100 mA	2	10		µF

ELECTRICAL CHARACTERISTICS FOR LE27C (refer to the test circuits, T_j = 25 °C, C_i = 0.1 µF, C_o = 2.2 µF unless otherwise specified)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
V_o	Output Voltage	I_o = 10 mA, V_i = 4.7 V I_o = 10 mA, V_i = 4.7 V -25<T_a<85 °C	2.646 2.592	2.7	2.754 2.808	V V
V_i	Operating Input Voltage	I_o = 100 mA			18	V
I_{out}	Output Current Limit		150			mA
ΔV_o	Line Regulation	V_i = 3.4 to 18 V, I_o = 0.5 mA		3	20	mV
ΔV_o	Load Regulation	V_i = 3.7 V I_o = 0.5 to 100 mA		3	25	mV
I_d	Quiescent Current	ON MODE V_i = 3.7 to 18 V I_o = 0 mA V_i = 3.7 to 18 V I_o = 100 mA		 0.5 1.5	 1 3	 mA mA
		OFF MODE V_i = 6 V		50	100	µA
SVR	Supply Voltage Rejection	I_o = 5 mA V_i = 4.7 V ± 1V f = 120 Hz f = 1 KHz f = 10 KHz		 82 77 60		 dB dB dB
eN	Output Noise Voltage	B = 10 Hz to 100 KHz		50		µV
V_d	Dropout Voltage	I_o = 100 mA I_o = 100 mA -40 < T_a < 125 °C		0.2	0.4 0.5	V V
V_{il}	Control Input Logic Low	-40 < T_a < 125 °C			0.8	V
V_{ih}	Control Input Logic High	-40 < T_a < 125 °C	2			V
I_i	Control Input Current	V_i = 6 V, V_c = 6 V		10		µA
C_O	Output Bypass Capacitance	ESR = 0.1 to 10 Ω I_o = 0 to 100 mA	2	10		µF

ELECTRICAL CHARACTERISTICS FOR LE30AC (refer to the test circuits, T_j = 25 °C, C_i = 0.1 µF, C_o = 2.2 µF unless otherwise specified)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
V_o	Output Voltage	I_o = 10 mA, V_i = 5 V I_o = 10 mA, V_i = 5 V -25<T_a<85 °C	2.970 2.940	3	3.030 3.060	V V
V_i	Operating Input Voltage	I_o = 100 mA			18	V
I_{out}	Output Current Limit		150			mA
ΔV_o	Line Regulation	V_i = 3.7 to 18 V, I_o = 0.5 mA		3	15	mV
ΔV_o	Load Regulation	V_i = 4 V I_o = 0.5 to 100 mA		3	15	mV
I_d	Quiescent Current	ON MODE V_i = 4 to 18 V I_o = 0 mA V_i = 4 to 18 V I_o = 100 mA		 0.5 1.5	 1 3	 mA mA
		OFF MODE V_i = 6 V		50	100	µA
SVR	Supply Voltage Rejection	I_o = 5 mA V_i = 5 V ± 1V f = 120 Hz f = 1 KHz f = 10 KHz		 81 76 60		 dB dB dB
eN	Output Noise Voltage	B = 10 Hz to 100 KHz		50		µV
V_d	Dropout Voltage	I_o = 100 mA I_o = 100 mA -40 < T_a < 125 °C		0.2	0.4 0.5	V V
V_{il}	Control Input Logic Low	-40 < T_a < 125 °C			0.8	V
V_{ih}	Control Input Logic High	-40 < T_a < 125 °C	2			V
I_I	Control Input Current	V_i = 6 V, V_c = 6 V		10		µA
C_O	Output Bypass Capacitance	ESR = 0.1 to 10 Ω I_o = 0 to 100 mA	2	10		µF

ELECTRICAL CHARACTERISTICS FOR LE30C (refer to the test circuits, T_j = 25 °C, C_i = 0.1 µF, C_o = 2.2 µF unless otherwise specified)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
V_o	Output Voltage	I_o = 10 mA, V_i = 5 V I_o = 10 mA, V_i = 5 V -25<T_a<85 °C	2.940 2.880	3	3.060 3.120	V V
V_i	Operating Input Voltage	I_o = 100 mA			18	V
I_{out}	Output Current Limit		150			mA
ΔV_o	Line Regulation	V_i = 3.7 to 18 V, I_o = 0.5 mA		3	20	mV
ΔV_o	Load Regulation	V_i = 4 V I_o = 0.5 to 100 mA		3	25	mV
I_d	Quiescent Current	ON MODE V_i = 4 to 18 V I_o = 0 mA V_i = 4 to 18 V I_o = 100 mA		 0.5 1.5	 1 3	 mA mA
		OFF MODE V_i = 6 V		50	100	µA
SVR	Supply Voltage Rejection	I_o = 5 mA V_i = 5 V ± 1V f = 120 Hz f = 1 KHz f = 10 KHz		 81 76 60		 dB dB dB
eN	Output Noise Voltage	B = 10 Hz to 100 KHz		50		µV
V_d	Dropout Voltage	I_o = 100 mA I_o = 100 mA -40 < T_a < 125 °C		0.2	0.4 0.5	V V
V_{il}	Control Input Logic Low	-40 < T_a < 125 °C			0.8	V
V_{ih}	Control Input Logic High	-40 < T_a < 125 °C	2			V
I_i	Control Input Current	V_i = 6 V, V_c = 6 V		10		µA
C_O	Output Bypass Capacitance	ESR = 0.1 to 10 Ω I_o = 0 to 100 mA	2	10		µF

ELECTRICAL CHARACTERISTICS FOR LE33AC (refer to the test circuits, T_j = 25 °C, C_i = 0.1 µF, C_o = 2.2 µF unless otherwise specified)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
V_o	Output Voltage	I_o = 10 mA, V_i = 5.3 V I_o = 10 mA, V_i = 5.3 V -25<T_a<85 °C	3.267 3.234	3.3	3.333 3.366	V V
V_i	Operating Input Voltage	I_o = 100 mA			18	V
I_{out}	Output Current Limit		150			mA
ΔV_o	Line Regulation	V_i = 4 to 18 V, I_o = 0.5 mA		3	15	mV
ΔV_o	Load Regulation	V_i = 4.3 V I_o = 0.5 to 100 mA		3	15	mV
I_d	Quiescent Current	ON MODE V_i = 4.3 to 18 V I_o = 0 mA V_i = 4.3 to 18 V I_o = 100 mA		 0.5 1.5	 1 3	 mA mA
		OFF MODE V_i = 6 V		50	100	µA
SVR	Supply Voltage Rejection	I_o = 5 mA V_i = 5.3 V ± 1V f = 120 Hz f = 1 KHz f = 10 KHz		 80 75 60		 dB dB dB
eN	Output Noise Voltage	B = 10 Hz to 100 KHz		50		µV
V_d	Dropout Voltage	I_o = 100 mA I_o = 100 mA -40 < T_a < 125 °C		0.2	0.4 0.5	V V
V_{il}	Control Input Logic Low	-40 < T_a < 125 °C			0.8	V
V_{ih}	Control Input Logic High	-40 < T_a < 125 °C	2			V
I_i	Control Input Current	V_i = 6 V, V_c = 6 V		10		µA
C_O	Output Bypass Capacitance	ESR = 0.1 to 10 Ω I_o = 0 to 100 mA	2	10		µF

ELECTRICAL CHARACTERISTICS FOR LE33C (refer to the test circuits, T_j = 25 °C, C_i = 0.1 µF, C_o = 2.2 µF unless otherwise specified)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
V_o	Output Voltage	I_o = 10 mA, V_i = 5.3 V I_o = 10 mA, V_i = 5.3 V -25<T_a<85 °C	3.234 3.168	3.3	3.366 3.432	V V
V_i	Operating Input Voltage	I_o = 100 mA			18	V
I_{out}	Output Current Limit		150			mA
ΔV_o	Line Regulation	V_i = 4 to 18 V, I_o = 0.5 mA		3	20	mV
ΔV_o	Load Regulation	V_i = 4.3 V I_o = 0.5 to 100 mA		3	25	mV
I_d	Quiescent Current	ON MODE V_i = 4.3 to 18 V I_o = 0 mA V_i = 4.3 to 18 V I_o = 100 mA		 0.5 1.5	 1 3	 mA mA
		OFF MODE V_i = 6 V		50	100	µA
SVR	Supply Voltage Rejection	I_o = 5 mA V_i = 5.3 V ± 1V f = 120 Hz f = 1 KHz f = 10 KHz		 80 75 60		 dB dB dB
eN	Output Noise Voltage	B = 10 Hz to 100 KHz		50		µV
V_d	Dropout Voltage	I_o = 100 mA I_o = 100 mA -40 < T_a < 125 °C		0.2	0.4 0.5	V V
V_{il}	Control Input Logic Low	-40 < T_a < 125 °C			0.8	V
V_{ih}	Control Input Logic High	-40 < T_a < 125 °C	2			V
I_i	Control Input Current	V_i = 6 V, V_c = 6 V		10		µA
C_O	Output Bypass Capacitance	ESR = 0.1 to 10 Ω I_o = 0 to 100 mA	2	10		µF

ELECTRICAL CHARACTERISTICS FOR LE35AC (refer to the test circuits, T_j = 25 °C, C_i = 0.1 µF, C_o = 2.2 µF unless otherwise specified)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
V_o	Output Voltage	I_o = 10 mA, V_i = 5.5 V I_o = 10 mA, V_i = 5.5 V -25<T_a<85 °C	3.465 3.43	3.5	3.535 3.57	V V
V_i	Operating Input Voltage	I_o = 100 mA			18	V
I_{out}	Output Current Limit		150			mA
ΔV_o	Line Regulation	V_i = 4.2 to 18 V, I_o = 0.5 mA		3	15	mV
ΔV_o	Load Regulation	V_i = 4.5 V I_o = 0.5 to 100 mA		3	15	mV
I_d	Quiescent Current	ON MODE V_i = 4.5 to 18 V I_o = 0 mA V_i = 4.5 to 18 V I_o = 100 mA		 0.5 1.5	 1 3	 mA mA
		OFF MODE V_i = 6 V		50	100	µA
SVR	Supply Voltage Rejection	I_o = 5 mA V_i = 5.5 V ± 1V f = 120 Hz f = 1 KHz f = 10 KHz		 79 74 60		 dB dB dB
eN	Output Noise Voltage	B = 10 Hz to 100 KHz		50		µV
V_d	Dropout Voltage	I_o = 100 mA I_o = 100 mA -40 < T_a < 125 °C		0.2	0.4 0.5	V V
V_{il}	Control Input Logic Low	-40 < T_a < 125 °C			0.8	V
V_{ih}	Control Input Logic High	-40 < T_a < 125 °C	2			V
I_i	Control Input Current	V_i = 6 V, V_c = 6 V		10		µA
C_O	Output Bypass Capacitance	ESR = 0.1 to 10 Ω I_o = 0 to 100 mA	2	10		µF

ELECTRICAL CHARACTERISTICS FOR LE35C (refer to the test circuits, T_j = 25 °C, C_i = 0.1 µF, C_o = 2.2 µF unless otherwise specified)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
V_o	Output Voltage	I_o = 10 mA, V_i = 5.5 V I_o = 10 mA, V_i = 5.5 V -25<T_a<85 °C	3.43 3.36	3.5	3.57 3.64	V V
V_i	Operating Input Voltage	I_o = 100 mA			18	V
I_{out}	Output Current Limit		150			mA
ΔV_o	Line Regulation	V_i = 4.2 to 18 V, I_o = 0.5 mA		3	20	mV
ΔV_o	Load Regulation	V_i = 4.5 V I_o = 0.5 to 100 mA		3	25	mV
I_d	Quiescent Current	ON MODE V_i = 4.5 to 18 V I_o = 0 mA V_i = 4.5 to 18 V I_o = 100 mA		 0.5 1.5	 1 3	 mA mA
		OFF MODE V_i = 6 V		50	100	µA
SVR	Supply Voltage Rejection	I_o = 5 mA V_i = 5.5 V ± 1V f = 120 Hz f = 1 KHz f = 10 KHz		 79 74 60		 dB dB dB
eN	Output Noise Voltage	B = 10 Hz to 100 KHz		50		µV
V_d	Dropout Voltage	I_o = 100 mA I_o = 100 mA -40 < T_a < 125 °C		0.2	0.4 0.5	V V
V_{il}	Control Input Logic Low	-40 < T_a < 125 °C			0.8	V
V_{ih}	Control Input Logic High	-40 < T_a < 125 °C	2			V
I_i	Control Input Current	V_i = 6 V, V_c = 6 V		10		µA
C_O	Output Bypass Capacitance	ESR = 0.1 to 10 Ω I_o = 0 to 100 mA	2	10		µF

ELECTRICAL CHARACTERISTICS FOR LE40AC (refer to the test circuits, T_j = 25 °C, C_i = 0.1 µF, C_o = 2.2 µF unless otherwise specified)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
V_o	Output Voltage	I_o = 10 mA, V_i = 6 V I_o = 10 mA, V_i = 6 V -25<T_a<85 °C	3.96 3.92	4	4.04 4.08	V V
V_i	Operating Input Voltage	I_o = 100 mA			18	V
I_{out}	Output Current Limit		150			mA
ΔV_o	Line Regulation	V_i = 4.7 to 18 V, I_o = 0.5 mA		4	20	mV
ΔV_o	Load Regulation	V_i = 5 V I_o = 0.5 to 100 mA		3	15	mV
I_d	Quiescent Current	ON MODE V_i = 5 to 18 V I_o = 0 mA V_i = 5 to 18 V I_o = 100 mA		 0.5 1.5	 1 3	 mA mA
		OFF MODE V_i = 6 V		50	100	µA
SVR	Supply Voltage Rejection	I_o = 5 mA V_i = 6 V ± 1V f = 120 Hz f = 1 KHz f = 10 KHz		 78 73 60		 dB dB dB
eN	Output Noise Voltage	B = 10 Hz to 100 KHz		50		µV
V_d	Dropout Voltage	I_o = 100 mA I_o = 100 mA -40 < T_a < 125 °C		0.2	0.4 0.5	V V
V_{il}	Control Input Logic Low	-40 < T_a < 125 °C			0.8	V
V_{ih}	Control Input Logic High	-40 < T_a < 125 °C	2			V
I_i	Control Input Current	V_i = 6 V, V_c = 6 V		10		µA
C_O	Output Bypass Capacitance	ESR = 0.1 to 10 Ω I_o = 0 to 100 mA	2	10		µF

ELECTRICAL CHARACTERISTICS FOR LE40C (refer to the test circuits, T_j = 25 °C, C_i = 0.1 µF, C_o = 2.2 µF unless otherwise specified)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
V_o	Output Voltage	I_o = 10 mA, V_i = 6 V I_o = 10 mA, V_i = 6 V -25<T_a<85 °C	3.92 3.84	4	4.08 4.16	V V
V_i	Operating Input Voltage	I_o = 100 mA			18	V
I_{out}	Output Current Limit		150			mA
ΔV_o	Line Regulation	V_i = 4.7 to 18 V, I_o = 0.5 mA		4	30	mV
ΔV_o	Load Regulation	V_i = 5 V I_o = 0.5 to 100 mA		3	25	mV
I_d	Quiescent Current	ON MODE V_i = 5 to 18 V I_o = 0 mA V_i = 5 to 18 V I_o = 100 mA		 0.5 1.5	 1 3	 mA mA
		OFF MODE V_i = 6 V		50	100	µA
SVR	Supply Voltage Rejection	I_o = 5 mA V_i = 6 V ± 1V f = 120 Hz f = 1 KHz f = 10 KHz		 78 73 60		 dB dB dB
eN	Output Noise Voltage	B = 10 Hz to 100 KHz		50		µV
V_d	Dropout Voltage	I_o = 100 mA I_o = 100 mA -40 < T_a < 125 °C		0.2	0.4 0.5	V V
V_{il}	Control Input Logic Low	-40 < T_a < 125 °C			0.8	V
V_{ih}	Control Input Logic High	-40 < T_a < 125 °C	2			V
I_i	Control Input Current	V_i = 6 V, V_c = 6 V		10		µA
C_O	Output Bypass Capacitance	ESR = 0.1 to 10 Ω I_o = 0 to 100 mA	2	10		µF

ELECTRICAL CHARACTERISTICS FOR LE45AC (refer to the test circuits, T_j = 25 °C, C_i = 0.1 µF, C_o = 2.2 µF unless otherwise specified)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
V_o	Output Voltage	I_o = 10 mA, V_i = 6.5 V I_o = 10 mA, V_i = 6.5 V -25<T_a<85 °C	4.445 4.41	4.5	4.545 4.59	V V
V_i	Operating Input Voltage	I_o = 100 mA			18	V
I_{out}	Output Current Limit		150			mA
ΔV_o	Line Regulation	V_i = 5.2 to 18 V, I_o = 0.5 mA		4	20	mV
ΔV_o	Load Regulation	V_i = 5.5 V I_o = 0.5 to 100 mA		3	15	mV
I_d	Quiescent Current	ON MODE V_i = 5.5 to 18 V I_o = 0 mA V_i = 5.5 to 18 V I_o = 100 mA		 0.5 1.5	 1 3	 mA mA
		OFF MODE V_i = 6 V		50	100	µA
SVR	Supply Voltage Rejection	I_o = 5 mA V_i = 6.5 V ± 1V f = 120 Hz f = 1 KHz f = 10 KHz		 77 72 60		 dB dB dB
eN	Output Noise Voltage	B = 10 Hz to 100 KHz		50		µV
V_d	Dropout Voltage	I_o = 100 mA I_o = 100 mA -40 < T_a < 125 °C		0.2	0.4 0.5	V V
V_{il}	Control Input Logic Low	-40 < T_a < 125 °C			0.8	V
V_{ih}	Control Input Logic High	-40 < T_a < 125 °C	2			V
I_i	Control Input Current	V_i = 6 V, V_c = 6 V		10		µA
C_O	Output Bypass Capacitance	ESR = 0.1 to 10 Ω I_o = 0 to 100 mA	2	10		µF

ELECTRICAL CHARACTERISTICS FOR LE45C (refer to the test circuits, T_j = 25 °C, C_i = 0.1 µF, C_o = 2.2 µF unless otherwise specified)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
V_o	Output Voltage	I_o = 10 mA, V_i = 6.5 V I_o = 10 mA, V_i = 6.5 V -25<T_a<85 °C	4.41 4.32	4.5	4.59 4.68	V V
V_i	Operating Input Voltage	I_o = 100 mA			18	V
I_{out}	Output Current Limit		150			mA
ΔV_o	Line Regulation	V_i = 5.2 to 18 V, I_o = 0.5 mA		4	30	mV
ΔV_o	Load Regulation	V_i = 5.5 V I_o = 0.5 to 100 mA		3	25	mV
I_d	Quiescent Current	ON MODE V_i = 5.5 to 18 V I_o = 0 mA V_i = 5.5 to 18 V I_o = 100 mA		 0.5 1.5	 1 3	 mA mA
		OFF MODE V_i = 6 V		50	100	µA
SVR	Supply Voltage Rejection	I_o = 5 mA V_i = 6.5 V ± 1V f = 120 Hz f = 1 KHz f = 10 KHz		 77 72 60		 dB dB dB
eN	Output Noise Voltage	B = 10 Hz to 100 KHz		50		µV
V_d	Dropout Voltage	I_o = 100 mA I_o = 100 mA -40 < T_a < 125 °C		0.2	0.4 0.5	V V
V_{il}	Control Input Logic Low	-40 < T_a < 125 °C			0.8	V
V_{ih}	Control Input Logic High	-40 < T_a < 125 °C	2			V
I_i	Control Input Current	V_i = 6 V, V_c = 6 V		10		µA
C_O	Output Bypass Capacitance	ESR = 0.1 to 10 Ω I_o = 0 to 100 mA	2	10		µF

ELECTRICAL CHARACTERISTICS FOR LE47AC (refer to the test circuits, T_j = 25 °C, C_i = 0.1 µF, C_o = 2.2 µF unless otherwise specified)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
V_o	Output Voltage	I_o = 10 mA, V_i = 6.7 V I_o = 10 mA, V_i = 6.7 V -25<T_a<85 °C	4.653 4.606	4.7	4.747 4.794	V V
V_i	Operating Input Voltage	I_o = 100 mA			18	V
I_{out}	Output Current Limit		150			mA
ΔV_o	Line Regulation	V_i = 5.4 to 18 V, I_o = 0.5 mA		4	20	mV
ΔV_o	Load Regulation	V_i = 5.7 V I_o = 0.5 to 100 mA		3	15	mV
I_d	Quiescent Current	ON MODE V_I = 5.7 to 18 V I_o = 0 mA V_i = 5.7 to 18 V I_o = 100 mA		 0.5 1.5	 1 3	 mA mA
		OFF MODE V_i = 6 V		50	100	µA
SVR	Supply Voltage Rejection	I_o = 5 mA V_i = 6.7 V ± 1V f = 120 Hz f = 1 KHz f = 10 KHz		 77 72 60		 dB dB dB
eN	Output Noise Voltage	B = 10 Hz to 100 KHz		50		µV
V_d	Dropout Voltage	I_o = 100 mA I_o = 100 mA -40 < T_a < 125 °C		0.2	0.4 0.5	V V
V_{il}	Control Input Logic Low	-40 < T_a < 125 °C			0.8	V
V_{ih}	Control Input Logic High	-40 < T_a < 125 °C	2			V
I_i	Control Input Current	V_i = 6 V, V_c = 6 V		10		µA
C_O	Output Bypass Capacitance	ESR = 0.1 to 10 Ω I_o = 0 to 100 mA	2	10		µF

ELECTRICAL CHARACTERISTICS FOR LE47C (refer to the test circuits, T_j = 25 °C, C_i = 0.1 µF, C_o = 2.2 µF unless otherwise specified)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
V_o	Output Voltage	I_o = 10 mA, V_i = 6.7 V I_o = 10 mA, V_i = 6.7 V -25<T_a<85 °C	4.606 4.512	4.7	4.794 4.888	V V
V_i	Operating Input Voltage	I_o = 100 mA			18	V
I_{out}	Output Current Limit		150			mA
ΔV_o	Line Regulation	V_i = 5.4 to 18 V, I_o = 0.5 mA		4	30	mV
ΔV_o	Load Regulation	V_i = 5.7 V I_o = 0.5 to 100 mA		3	25	mV
I_d	Quiescent Current	ON MODE V_I = 5.7 to 18 V I_o = 0 mA V_i = 5.7 to 18 V I_o = 100 mA		 0.5 1.5	 1 3	 mA mA
		OFF MODE V_i = 6 V		50	100	µA
SVR	Supply Voltage Rejection	I_o = 5 mA V_i = 6.7 V ± 1V f = 120 Hz f = 1 KHz f = 10 KHz		 77 72 60		 dB dB dB
eN	Output Noise Voltage	B = 10 Hz to 100 KHz		50		µV
V_d	Dropout Voltage	I_o = 100 mA I_o = 100 mA -40 < T_a < 125 °C		0.2	0.4 0.5	V V
V_{il}	Control Input Logic Low	-40 < T_a < 125 °C			0.8	V
V_{ih}	Control Input Logic High	-40 < T_a < 125 °C	2			V
I_i	Control Input Current	V_i = 6 V, V_c = 6 V		10		µA
C_O	Output Bypass Capacitance	ESR = 0.1 to 10 Ω I_o = 0 to 100 mA	2	10		µF

ELECTRICAL CHARACTERISTICS FOR LE50AC (refer to the test circuits, T_j = 25 °C, C_i = 0.1 µF, C_o = 2.2 µF unless otherwise specified)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
V_o	Output Voltage	I_o = 10 mA, V_i = 7 V I_o = 10 mA, V_i = 7 V -25<T_a<85 °C	4.95 4.9	5	4.05 5.1	V V
V_i	Operating Input Voltage	I_o = 100 mA			18	V
I_{out}	Output Current Limit		150			mA
ΔV_o	Line Regulation	V_i = 5.7 to 18 V, I_o = 0.5 mA		4	20	mV
ΔV_o	Load Regulation	V_i = 6 V I_o = 0.5 to 100 mA		3	15	mV
I_d	Quiescent Current	ON MODE V_i = 6 to 18 V I_o = 0 mA V_i = 6 to 18 V I_o = 100 mA		 0.5 1.5	 1 3	 mA mA
		OFF MODE V_i = 6 V		50	100	µA
SVR	Supply Voltage Rejection	I_o = 5 mA V_i = 7 V ± 1V f = 120 Hz f = 1 KHz f = 10 KHz		 76 71 60		 dB dB dB
eN	Output Noise Voltage	B = 10 Hz to 100 KHz		50		µV
V_d	Dropout Voltage	I_o = 100 mA I_o = 100 mA -40 < T_a < 125 °C		0.2	0.4 0.5	V V
V_{il}	Control Input Logic Low	-40 < T_a < 125 °C			0.8	V
V_{ih}	Control Input Logic High	-40 < T_a < 125 °C	2			V
I_i	Control Input Current	V_i = 6 V, V_c = 6 V		10		µA
C_O	Output Bypass Capacitance	ESR = 0.1 to 10 Ω I_o = 0 to 100 mA	2	10		µF

ELECTRICAL CHARACTERISTICS FOR LE50C (refer to the test circuits, T_j = 25 °C, C_i = 0.1 µF, C_o = 2.2 µF unless otherwise specified)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
V_o	Output Voltage	I_o = 10 mA, V_i = 7 V I_o = 10 mA, V_i = 7 V -25<T_a<85 °C	4.9 4.8	5	5.1 5.2	V V
V_i	Operating Input Voltage	I_o = 100 mA			18	V
I_{out}	Output Current Limit		150			mA
ΔV_o	Line Regulation	V_i = 5.7 to 18 V, I_o = 0.5 mA		4	30	mV
ΔV_o	Load Regulation	V_i = 6 V I_o = 0.5 to 100 mA		3	25	mV
I_d	Quiescent Current	ON MODE V_i = 6 to 18 V I_o = 0 mA V_i = 6 to 18 V I_o = 100 mA		 0.5 1.5	 1 3	 mA mA
		OFF MODE V_i = 6 V		50	100	µA
SVR	Supply Voltage Rejection	I_o = 5 mA V_i = 7 V ± 1V f = 120 Hz f = 1 KHz f = 10 KHz		 76 71 60		 dB dB dB
eN	Output Noise Voltage	B = 10 Hz to 100 KHz		50		µV
V_d	Dropout Voltage	I_o = 100 mA I_o = 100 mA -40 < T_a < 125 °C		0.2	0.4 0.5	V V
V_{il}	Control Input Logic Low	-40 < T_a < 125 °C			0.8	V
V_{ih}	Control Input Logic High	-40 < T_a < 125 °C	2			V
I_i	Control Input Current	V_i = 6 V, V_c = 6 V		10		µA
C_O	Output Bypass Capacitance	ESR = 0.1 to 10 Ω I_o = 0 to 100 mA	2	10		µF

ELECTRICAL CHARACTERISTICS FOR LE52AC (refer to the test circuits, T_j = 25 °C, C_i = 0.1 µF, C_o = 2.2 µF unless otherwise specified)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
V_o	Output Voltage	I_o = 10 mA, V_i = 7.2 V I_o = 10 mA, V_i = 7.2 V -25<T_a<85 °C	5.148 5.096	5.2	5.252 5.304	V V
V_i	Operating Input Voltage	I_o = 100 mA			18	V
I_{out}	Output Current Limit		150			mA
ΔV_o	Line Regulation	V_i = 5.9 to 18 V, I_o = 0.5 mA		4	20	mV
ΔV_o	Load Regulation	V_i = 6.2 V I_o = 0.5 to 100 mA		3	15	mV
I_d	Quiescent Current	ON MODE V_i = 6.2 to 18 V I_o = 0 mA V_i = 6.2 to 18 V I_o = 100 mA		 0.5 1.5	 1 3	 mA mA
		OFF MODE V_i = 6 V		50	100	µA
SVR	Supply Voltage Rejection	I_o = 5 mA V_i = 7.2 V ± 1V f = 120 Hz f = 1 KHz f = 10 KHz		 76 71 60		 dB dB dB
eN	Output Noise Voltage	B = 10 Hz to 100 KHz		50		µV
V_d	Dropout Voltage	I_o = 100 mA I_o = 100 mA -40 < T_a < 125 °C		0.2	0.4 0.5	V V
V_{il}	Control Input Logic Low	-40 < T_a < 125 °C			0.8	V
V_{ih}	Control Input Logic High	-40 < T_a < 125 °C	2			V
I_i	Control Input Current	V_i = 6 V, V_c = 6 V		10		µA
C_O	Output Bypass Capacitance	ESR = 0.1 to 10 Ω I_o = 0 to 100 mA	2	10		µF

ELECTRICAL CHARACTERISTICS FOR LE52C (refer to the test circuits, T_j = 25 °C, C_i = 0.1 µF, C_o = 2.2 µF unless otherwise specified)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
V_o	Output Voltage	I_o = 10 mA, V_i = 7.2 V I_o = 10 mA, V_i = 7.2 V -25<T_a<85 °C	5.096 4.992	5.2	5.304 5.408	V V
V_i	Operating Input Voltage	I_o = 100 mA			18	V
I_{out}	Output Current Limit		150			mA
ΔV_o	Line Regulation	V_i = 5.9 to 18 V, I_o = 0.5 mA		4	30	mV
ΔV_o	Load Regulation	V_i = 6.2 V I_o = 0.5 to 100 mA		3	25	mV
I_d	Quiescent Current	ON MODE V_i = 6.2 to 18 V I_o = 0 mA V_i = 6.2 to 18 V I_o = 100 mA		 0.5 1.5	 1 3	 mA mA
		OFF MODE V_i = 6 V		50	100	µA
SVR	Supply Voltage Rejection	I_o = 5 mA V_i = 7.2 V ± 1V f = 120 Hz f = 1 KHz f = 10 KHz		 76 71 60		 dB dB dB
eN	Output Noise Voltage	B = 10 Hz to 100 KHz		50		µV
V_d	Dropout Voltage	I_o = 100 mA I_o = 100 mA -40 < T_a < 125 °C		0.2	0.4 0.5	V V
V_{il}	Control Input Logic Low	-40 < T_a < 125 °C			0.8	V
V_{ih}	Control Input Logic High	-40 < T_a < 125 °C	2			V
I_i	Control Input Current	V_i = 6 V, V_c = 6 V		10		µA
C_O	Output Bypass Capacitance	ESR = 0.1 to 10 Ω I_o = 0 to 100 mA	2	10		µF

ELECTRICAL CHARACTERISTICS FOR LE55AC (refer to the test circuits, T_j = 25 °C, C_i = 0.1 µF, C_o = 2.2 µF unless otherwise specified)

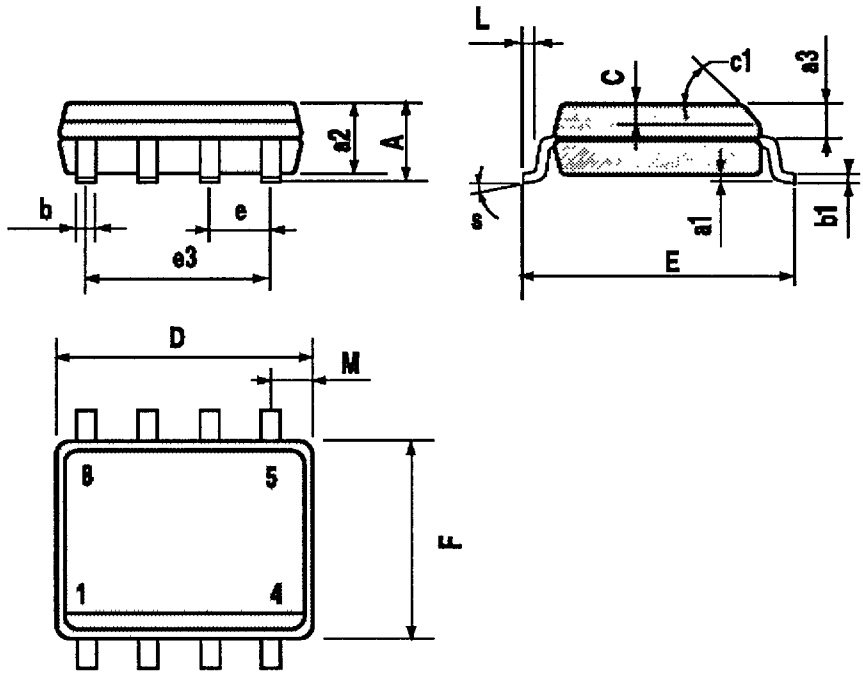
Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
V_o	Output Voltage	I_o = 10 mA, V_i = 7.5 V I_o = 10 mA, V_i = 7.5 V -25<T_a<85 °C	5.445 5.39	5.5	5.55 5.61	V V
V_i	Operating Input Voltage	I_o = 100 mA			18	V
I_{out}	Output Current Limit		150			mA
ΔV_o	Line Regulation	V_i = 6.2 to 18 V, I_o = 0.5 mA		4	20	mV
ΔV_o	Load Regulation	V_i = 6.5 V I_o = 0.5 to 100 mA		3	15	mV
I_d	Quiescent Current	ON MODE V_i = 6.2 to 18 V I_o = 0 mA V_i = 6.5 to 18 V I_o = 100 mA		 0.5 1.5	 1 3	 mA mA
		OFF MODE V_i = 6 V		50	100	µA
SVR	Supply Voltage Rejection	I_o = 5 mA V_i = 7.5 V ± 1V f = 120 Hz f = 1 KHz f = 10 KHz		 76 71 60		 dB dB dB
eN	Output Noise Voltage	B = 10 Hz to 100 KHz		50		µV
V_d	Dropout Voltage	I_o = 100 mA I_o = 100 mA -40 < T_a < 125 °C		0.2	0.4 0.5	V V
V_{il}	Control Input Logic Low	-40 < T_a < 125 °C			0.8	V
V_{ih}	Control Input Logic High	-40 < T_a < 125 °C	2			V
I_i	Control Input Current	V_i = 6 V, V_c = 6 V		10		µA
C_O	Output Bypass Capacitance	ESR = 0.1 to 10 Ω I_o = 0 to 100 mA	2	10		µF

ELECTRICAL CHARACTERISTICS FOR LE55C (refer to the test circuits, T_j = 25 °C, C_i = 0.1 µF, C_o = 2.2 µF unless otherwise specified)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
V_o	Output Voltage	I_o = 10 mA, V_i = 7.5 V I_o = 10 mA, V_i = 7.5 V -25<T_a<85 °C	5.39 5.28	5.5	5.61 5.72	V V
V_i	Operating Input Voltage	I_o = 100 mA			18	V
I_{out}	Output Current Limit		150			mA
ΔV_o	Line Regulation	V_i = 6.2 to 18 V, I_o = 0.5 mA		4	30	mV
ΔV_o	Load Regulation	V_i = 6.5 V I_o = 0.5 to 100 mA		3	25	mV
I_d	Quiescent Current	ON MODE V_i = 6.5 to 18 V I_o = 0 mA V_i = 6.5 to 18 V I_o = 100 mA		 0.5 1.5	 1 3	 mA mA
		OFF MODE V_i = 6 V		50	100	µA
SVR	Supply Voltage Rejection	I_o = 5 mA V_i = 7.5 V ± 1V f = 120 Hz f = 1 KHz f = 10 KHz		 76 71 60		 dB dB dB
eN	Output Noise Voltage	B = 10 Hz to 100 KHz		50		µV
V_d	Dropout Voltage	I_o = 100 mA I_o = 100 mA -40 < T_a < 125 °C		0.2	0.4 0.5	V V
V_{il}	Control Input Logic Low	-40 < T_a < 125 °C			0.8	V
V_{ih}	Control Input Logic High	-40 < T_a < 125 °C	2			V
I_i	Control Input Current	V_i = 6 V, V_c = 6 V		10		µA
C_O	Output Bypass Capacitance	ESR = 0.1 to 10 Ω I_o = 0 to 100 mA	2	10		µF

SO8 MECHANICAL DATA

DIM.	mm			inch		
	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
A			1.75			0.068
a1	0.1		0.25	0.003		0.009
a2			1.65			0.064
a3	0.65		0.85	0.025		0.033
b	0.35		0.48	0.013		0.018
b1	0.19		0.25	0.007		0.010
C	0.25		0.5	0.010		0.019
c1	45° (typ.)					
D	4.8		5.0	0.188		0.196
E	5.8		6.2	0.228		0.244
e		1.27			0.050	
e3		3.81			0.150	
F	3.8		4.0	0.14		0.157
L	0.4		1.27	0.015		0.050
M			0.6			0.023
S	8° (max.)					



P013M

TO-92 MECHANICAL DATA

DIM.	mm			inch		
	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
A	4.58		5.33	0.180		0.210
B	4.45		5.2	0.175		0.204
C	3.2		4.2	0.126		0.165
D	12.7			0.500		
E		1.27			0.050	
F	0.4		0.51	0.016		0.020
G	0.35			0.14