

VERY LOW DROP VOLTAGE REGULATORS WITH INHIBIT

PRELIMINARY DATA

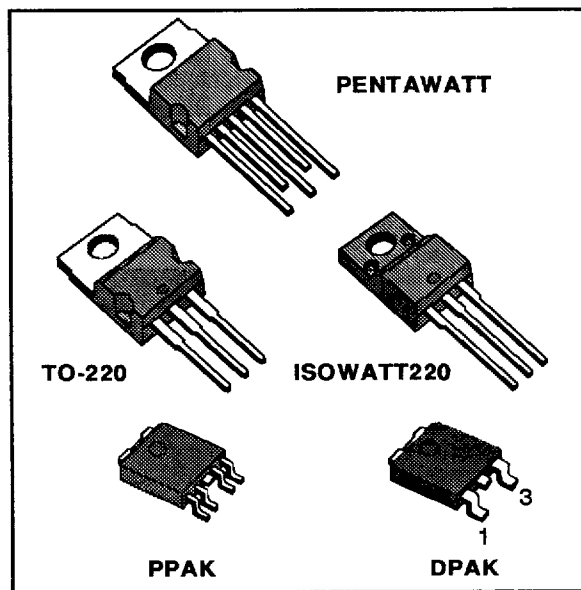
- VERY LOW DROPOUT VOLTAGE
(0.45V TYP. - 0.9V TYP. FOR 1.25 AND 1.5V)
- VERY LOW QUIESCENT CURRENT
(TYP. 50 μ A IN OFF MODE, 500 μ A IN ON MODE)
- OUTPUT CURRENT UP TO 500 mA
- LOGIC-CONTROLLED ELECTRONIC SHUTDOWN
- OUTPUT VOLTAGES OF 1.25; 1.5; 2.5; 2.7; 3; 3.3; 3.5; 4; 4.5; 4.7; 5; 5.2; 5.5; 6; 8; 12V
- INTERNAL CURRENT AND THERMAL LIMIT
- ONLY 2.2 μ F FOR STABILITY
- AVAILABLE IN $\pm 1\%$ (AC) OR $\pm 2\%$ (C) SELECTION AT 25 °C
- SUPPLY VOLTAGE REJECTION: 80 db (TYP.)
- TEMPERATURE RANGE: -40 TO 125 °C

DESCRIPTION

The LF00 series are very Low Drop regulators available in PENTAWATT, TO-220, ISOWATT220, DPAK and PPAK package and in a wide range of output voltages.

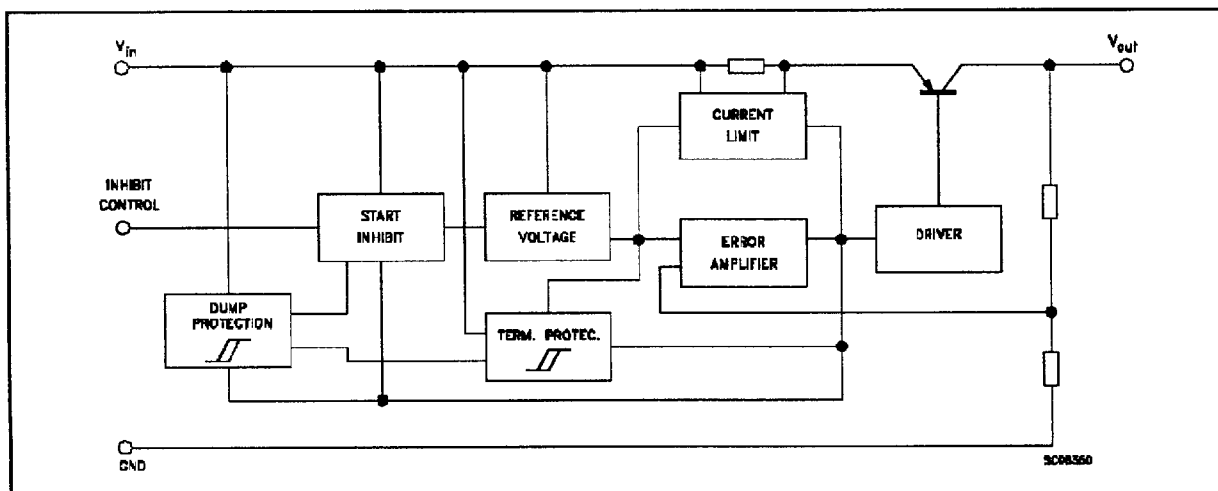
The very Low Drop voltage (0.45V) and the very low quiescent current make them particularly suitable for Low Noise, Low Power applications and specially in battery powered systems.

In the 5 pins configuration (PENTAWATT and PPAK) a Shutdown Logic Control function is available (pin 2, TTL compatible). This means that



when the device is used as a local regulator, it is possible to put a part of the board in standby, decreasing the total power consumption. In the three terminal configuration the device has the same electrical performance, but is fixed in the ON state. It requires only a 2.2 μ F capacitor for stability allowing space and cost saving.

SCHEMATIC DIAGRAM



LF00AC/C SERIES

ABSOLUTE MAXIMUM RATINGS

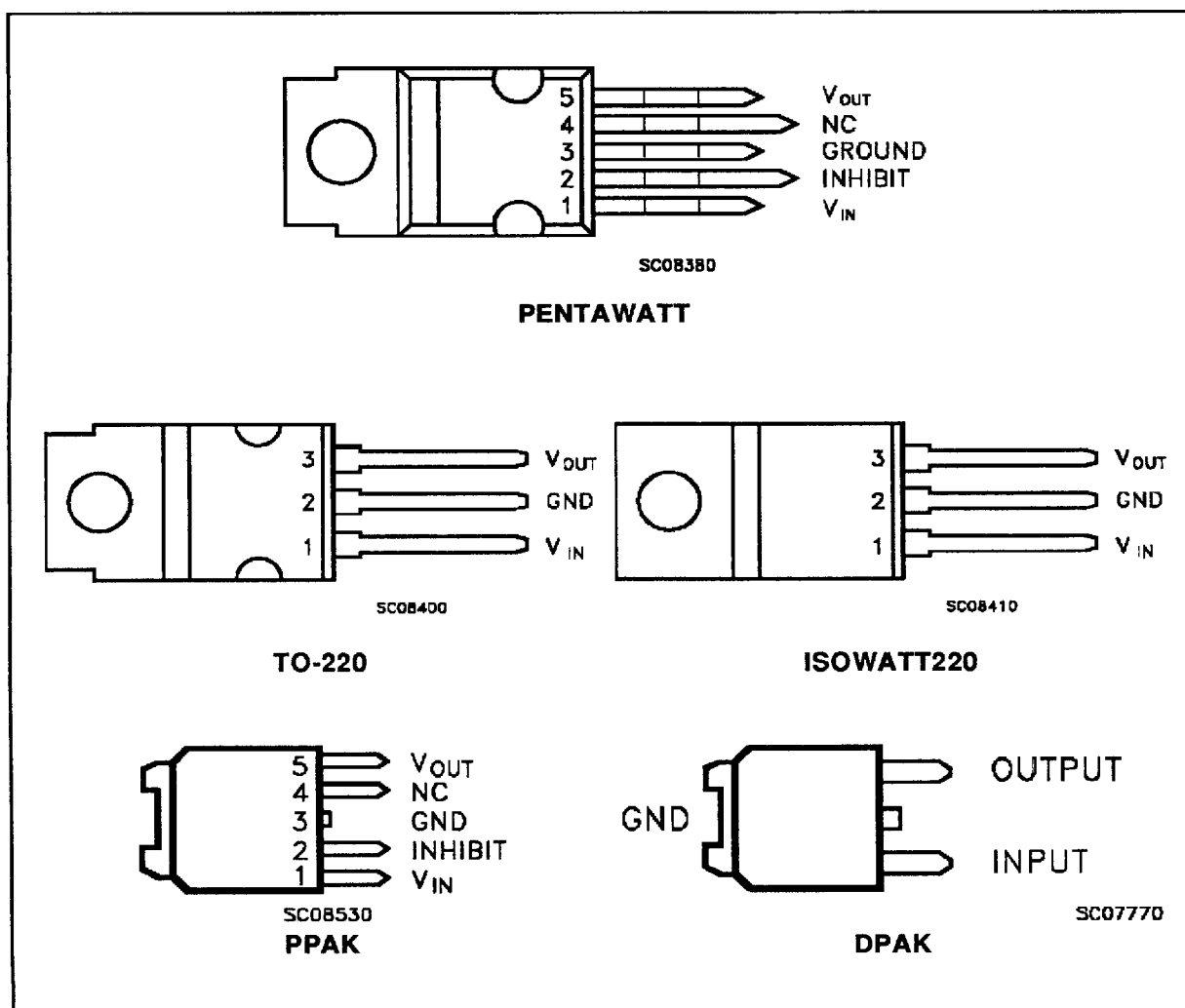
Symbol	Parameter	Value	Unit
V_i	DC Input Voltage	-0.5 to 40 (*)	V
I_o	Output Current	Internally limited	
P_{tot}	Power Dissipation	Internally limited	
T_{stg}	Storage Temperature Range	- 40 to 150	°C
T_{op}	Operating Junction Temperature Range	- 40 to 125	°C

(*) For $18 < V_{IN} < 40$ the regulator is in shut-down

THERMAL DATA

Symbol	Parameter	PENTAWATT	TO-220	ISOWATT220	DPAK/PPAK	Unit
$R_{thj-case}$	Thermal Resistance Junction-case	3	3	4	8	°C/W
$R_{thj-amb}$	Thermal Resistance Junction-ambient	50	50	60		°C/W

CONNECTION DIAGRAM (top view)

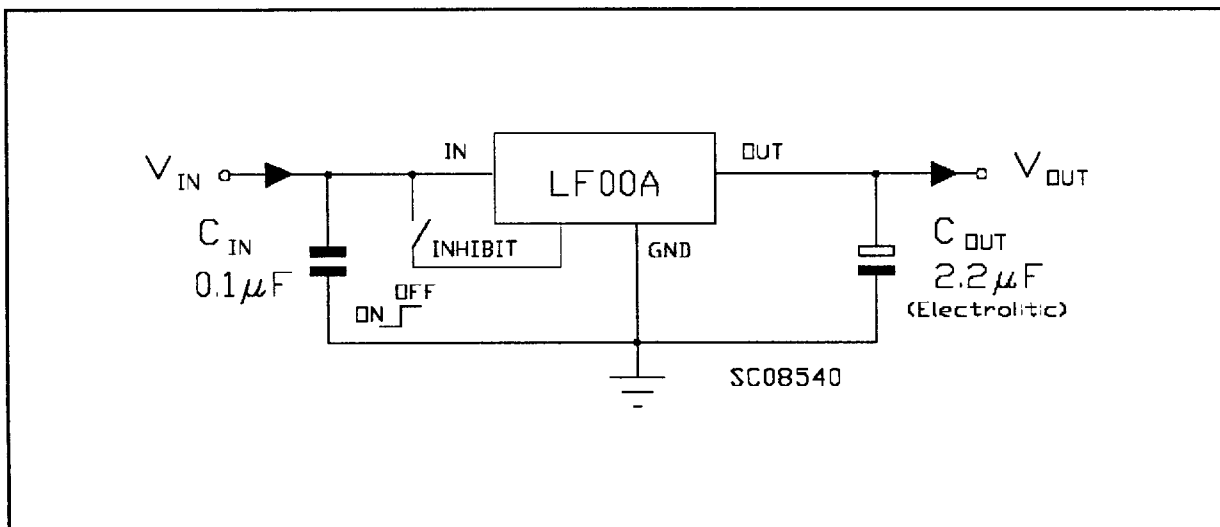


ORDERING NUMBERS

Type	PENTAWATT	TO-220	ISOWATT220	DPAK	PPAK	Output Voltage
LF12C (*)	LF12CV5V	LF12CV	LF12CP	LF12CDT	LF12CPT	1.25 V
LF12AC (*)	LF12ACV5V	LF12ACV	LF12ACP	LF12ACDT	LF12ACPT	1.25 V
LF15C (*)	LF15CV5V	LF15CV	LF15CP	LF15CDT	LF15CPT	1.5 V
LF15AC (*)	LF15ACV5V	LF15ACV	LF15ACP	LF15ACDT	LF15ACPT	1.5 V
LF25C	LF25CV5V	LF25CV	LF25CP	LF25CDT	LF25CPT	2.5 V
LF25AC	LF25ACV5V	LF25ACV	LF25ACP	LF25ACDT	LF25ACPT	2.5 V
LF27C	LF27CV5V	LF27CV	LF27CP	LF27CDT	LF27CPT	2.7 V
LF27AC	LF27ACV5V	LF27ACV	LF27ACP	LF27ACDT	LF27ACPT	2.7 V
LF30C	LF30CV5V	LF30CV	LF30CP	LF30CDT	LF30CPT	3 V
LF30AC	LF30ACV5V	LF30ACV	LF30ACP	LF30ACDT	LF30ACPT	3 V
LF33C	LF33CV5V	LF33CV	LF33CP	LF33CDT	LF33CPT	3.3 V
LF33AC	LF33ACV5V	LF33ACV	LF33ACP	LF33ACDT	LF33ACPT	3.3 V
LF35C	LF35CV5V	LF35CV	LF35CP	LF35CDT	LF35CPT	3.5 V
LF35AC	LF35ACV5V	LF35ACV	LF35ACP	LF35ACDT	LF35ACPT	3.5 V
LF40C	LF40CV5V	LF40CV	LF40CP	LF40CDT	LF40CPT	4 V
LF40AC	LF40ACV5V	LF40ACV	LF40ACP	LF40ACDT	LF40ACPT	4 V
LF45C	LF45CV5V	LF45CV	LF45CP	LF45CDT	LF45CPT	4.5 V
LF45AC	LF45ACV5V	LF45ACV	LF45ACP	LF45ACDT	LF45ACPT	4.5 V
LF47C	LF47CV5V	LF47CV	LF47CP	LF47CDT	LF47CPT	4.75 V
LF47AC	LF47ACV5V	LF47ACV	LF47ACP	LF47ACDT	LF47ACPT	4.75 V
LF50C	LF50CV5V	LF50CV	LF50CP	LF50CDT	LF50CPT	5 V
LF50AC	LF50ACV5V	LF50ACV	LF50ACP	LF50ACDT	LF50ACPT	5 V
LF52C	LF52CV5V	LF52CV	LF52CP	LF52CDT	LF52CPT	5.2 V
LF52AC	LF52ACV5V	LF52ACV	LF52ACP	LF52ACDT	LF52ACPT	5.2 V
LF55C	LF55CV5V	LF55CV	LF55CP	LF55CDT	LF55CPT	5.5 V
LF55AC	LF55ACV5V	LF55ACV	LF55ACP	LF55ACDT	LF55ACPT	5.5 V
LF60C	LF60CV5V	LF60CV	LF60CP	LF60CDT	LF60CPT	6 V
LF60AC	LF60ACV5V	LF60ACV	LF60ACP	LF60ACDT	LF60ACPT	6 V
LF80C	LF80CV5V	LF80CV	LF80CP	LF80CDT	LF80CPT	8 V
LF80AC	LF80ACV5V	LF80ACV	LF80ACP	LF80ACDT	LF80ACPT	8 V
LF120C	LF120CV5V	LF120CV	LF120CP	LF120CDT	LF120CPT	12 V
LF120AC	LF120ACV5V	LF120ACV	LF120ACP	LF120ACDT	LF120ACPT	12 V

(*) Available on request

TEST CIRCUITS



LF00AC/C SERIES

ELECTRICAL CHARACTERISTICS FOR LF12AC (refer to the test circuits, $T_j = 25^\circ\text{C}$,
 $C_i = 0.1\ \mu\text{F}$, $C_o = 2.2\ \mu\text{F}$ unless otherwise specified)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
V_o	Output Voltage	$I_o = 50\ \text{mA}$, $V_i = 3.3\ \text{V}$ $I_o = 50\ \text{mA}$, $V_i = 3.3\ \text{V}$ $-25 < T_a < 85^\circ\text{C}$	1.238 1.225	1.25	1.263 1.275	V V
V_i	Operating Input Voltage	$I_o = 500\ \text{mA}$			16	V
I_{out}	Output Current Limit		800			mA
ΔV_o	Line Regulation	$V_i = 2.5\ \text{to}\ 16\ \text{V}$, $I_o = 5\ \text{mA}$		2	10	mV
ΔV_o	Load Regulation	$V_i = 2.8\ \text{V}$ $I_o = 5\ \text{to}\ 500\ \text{mA}$		2	10	mV
I_d	Quiescent Current	ON MODE $V_i = 2.5\ \text{to}\ 16\ \text{V}$ $I_o = 0\ \text{mA}$ $V_i = 2.6\ \text{to}\ 16\ \text{V}$ $I_o = 500\ \text{mA}$		0.5	1 12	mA mA
		OFF MODE $V_i = 6\ \text{V}$		50	100	μA
SVR	Supply Voltage Rejection	$I_o = 5\ \text{mA}$ $V_i = 3.5\ \text{V} \pm 1\text{V}$ $f = 120\ \text{Hz}$ $f = 1\ \text{KHz}$ $f = 10\ \text{KHz}$		82		dB
				77		dB
				60		dB
eN	Output Noise Voltage	$B = 10\ \text{Hz to}\ 100\ \text{KHz}$		50		μV
V_d	Dropout Voltage	$I_o = 200\ \text{mA}$ $I_o = 500\ \text{mA}$		0.25	0.45	V
				0.5	0.90	V
V_{il}	Control Input Logic Low	$-40 < T_a < 125^\circ\text{C}$			0.8	V
V_{ih}	Control Input Logic High	$-40 < T_a < 125^\circ\text{C}$	2			V
I_i	Control Input Current	$V_i = 6\ \text{V}$, $V_c = 6\ \text{V}$		10		μA
C_o	Output Bypass Capacitance	$\text{ESR} = 0.1\ \text{to}\ 10\ \Omega$ $I_o = 0\ \text{to}\ 500\ \text{mA}$	2	10		μF

ELECTRICAL CHARACTERISTICS FOR LF15AC (refer to the test circuits, $T_j = 25^\circ\text{C}$,
 $C_i = 0.1\ \mu\text{F}$, $C_o = 2.2\ \mu\text{F}$ unless otherwise specified)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
V_o	Output Voltage	$I_o = 50\ \text{mA}$, $V_i = 3.5\ \text{V}$ $I_o = 50\ \text{mA}$, $V_i = 3.5\ \text{V}$ $-25 < T_a < 85^\circ\text{C}$	1.485 1.470	1.5	1.515 1.530	V V
V_i	Operating Input Voltage	$I_o = 500\ \text{mA}$			16	V
I_{out}	Output Current Limit		800			mA
ΔV_o	Line Regulation	$V_i = 2.5\ \text{to}\ 16\ \text{V}$, $I_o = 5\ \text{mA}$		2	10	mV
ΔV_o	Load Regulation	$V_i = 2.8\ \text{V}$ $I_o = 5\ \text{to}\ 500\ \text{mA}$		2	10	mV
I_d	Quiescent Current	ON MODE $V_i = 2.5\ \text{to}\ 16\ \text{V}$ $I_o = 0\ \text{mA}$ $V_i = 2.8\ \text{to}\ 16\ \text{V}$ $I_o = 500\ \text{mA}$		0.5	1 12	mA mA
		OFF MODE $V_i = 6\ \text{V}$		50	100	μA
SVR	Supply Voltage Rejection	$I_o = 5\ \text{mA}$ $V_i = 3.5\ \text{V} \pm 1\text{V}$ $f = 120\ \text{Hz}$ $f = 1\ \text{KHz}$ $f = 10\ \text{KHz}$		82		dB
				77		dB
				60		dB
eN	Output Noise Voltage	$B = 10\ \text{Hz to}\ 100\ \text{KHz}$		50		μV
V_d	Dropout Voltage	$I_o = 200\ \text{mA}$ $I_o = 500\ \text{mA}$		0.25	0.45	V
				0.5	0.90	V
V_{il}	Control Input Logic Low	$-40 < T_a < 125^\circ\text{C}$			0.8	V
V_{ih}	Control Input Logic High	$-40 < T_a < 125^\circ\text{C}$	2			V
I_i	Control Input Current	$V_i = 6\ \text{V}$, $V_c = 6\ \text{V}$		10		μA
C_o	Output Bypass Capacitance	$\text{ESR} = 0.1\ \text{to}\ 10\ \Omega$ $I_o = 0\ \text{to}\ 500\ \text{mA}$	2	10		μF

ELECTRICAL CHARACTERISTICS FOR LF25AC (refer to the test circuits, $T_j = 25\text{ }^{\circ}\text{C}$,
 $C_i = 0.1\text{ }\mu\text{F}$, $C_o = 2.2\text{ }\mu\text{F}$ unless otherwise specified)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
V_o	Output Voltage	$I_o = 50\text{ mA}$, $V_i = 4.5\text{ V}$ $I_o = 50\text{ mA}$, $V_i = 4.5\text{ V}$ $-25 < T_a < 85\text{ }^{\circ}\text{C}$	2.475 2.450	2.5	2.525 2.550	V V
V_i	Operating Input Voltage	$I_o = 500\text{ mA}$			16	V
I_{out}	Output Current Limit		800			mA
ΔV_o	Line Regulation	$V_i = 3.5\text{ to }16\text{ V}$, $I_o = 5\text{ mA}$		2	10	mV
ΔV_o	Load Regulation	$V_i = 3.8\text{ V}$ $I_o = 5\text{ to }500\text{ mA}$		2	10	mV
I_d	Quiescent Current	ON MODE $V_i = 3.5\text{ to }16\text{ V}$ $I_o = 0\text{ mA}$ $V_i = 3.8\text{ to }16\text{ V}$ $I_o = 500\text{ mA}$		0.5	1 12	mA mA
		OFF MODE $V_i = 6\text{ V}$		50	100	μA
SVR	Supply Voltage Rejection	$I_o = 5\text{ mA}$ $V_i = 4.5\text{ V} \pm 1\text{ V}$ $f = 120\text{ Hz}$ $f = 1\text{ KHz}$ $f = 10\text{ KHz}$		82		dB
				77		dB
				60		dB
eN	Output Noise Voltage	$B = 10\text{ Hz to }100\text{ KHz}$		50		μV
V_d	Dropout Voltage	$I_o = 200\text{ mA}$ $I_o = 500\text{ mA}$		0.20	0.35	V
				0.40	0.70	V
V_{il}	Control Input Logic Low	$-40 < T_a < 125\text{ }^{\circ}\text{C}$			0.8	V
V_{ih}	Control Input Logic High	$-40 < T_a < 125\text{ }^{\circ}\text{C}$	2			V
I_i	Control Input Current	$V_i = 6\text{ V}$, $V_o = 6\text{ V}$		10		μA
C_o	Output Bypass Capacitance	$\text{ESR} = 0.1\text{ to }10\text{ }\Omega$ $I_o = 0\text{ to }500\text{ mA}$	2	10		μF

ELECTRICAL CHARACTERISTICS FOR LF27AC (refer to the test circuits, $T_j = 25\text{ }^{\circ}\text{C}$,
 $C_i = 0.1\text{ }\mu\text{F}$, $C_o = 2.2\text{ }\mu\text{F}$ unless otherwise specified)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
V_o	Output Voltage	$I_o = 50\text{ mA}$, $V_i = 4.7\text{ V}$ $I_o = 50\text{ mA}$, $V_i = 4.7\text{ V}$ $-25 < T_a < 85\text{ }^{\circ}\text{C}$	2.673 2.646	2.7	2.727 2.754	V V
V_i	Operating Input Voltage	$I_o = 500\text{ mA}$			16	V
I_{out}	Output Current Limit		800			mA
ΔV_o	Line Regulation	$V_i = 3.7\text{ to }16\text{ V}$, $I_o = 5\text{ mA}$		2	10	mV
ΔV_o	Load Regulation	$V_i = 4\text{ V}$ $I_o = 5\text{ to }500\text{ mA}$		2	10	mV
I_d	Quiescent Current	ON MODE $V_i = 3.7\text{ to }16\text{ V}$ $I_o = 0\text{ mA}$ $V_i = 4\text{ to }16\text{ V}$ $I_o = 500\text{ mA}$		0.5	1 12	mA mA
		OFF MODE $V_i = 6\text{ V}$		50	100	μA
SVR	Supply Voltage Rejection	$I_o = 5\text{ mA}$ $V_i = 4.7\text{ V} \pm 1\text{ V}$ $f = 120\text{ Hz}$ $f = 1\text{ KHz}$ $f = 10\text{ KHz}$		82		dB
				77		dB
				60		dB
eN	Output Noise Voltage	$B = 10\text{ Hz to }100\text{ KHz}$		50		μV
V_d	Dropout Voltage	$I_o = 200\text{ mA}$ $I_o = 500\text{ mA}$		0.2	0.35	V
				0.4	0.7	V
V_{il}	Control Input Logic Low	$-40 < T_a < 125\text{ }^{\circ}\text{C}$			0.8	V
V_{ih}	Control Input Logic High	$-40 < T_a < 125\text{ }^{\circ}\text{C}$	2			V
I_i	Control Input Current	$V_i = 6\text{ V}$, $V_o = 6\text{ V}$		10		μA
C_o	Output Bypass Capacitance	$\text{ESR} = 0.1\text{ to }10\text{ }\Omega$ $I_o = 0\text{ to }500\text{ mA}$	2	10		μF

LF00AC/C SERIES

ELECTRICAL CHARACTERISTICS FOR LF30AC (refer to the test circuits, $T_j = 25^\circ\text{C}$, $C_i = 0.1\ \mu\text{F}$, $C_o = 2.2\ \mu\text{F}$ unless otherwise specified)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
V_o	Output Voltage	$I_o = 50\ \text{mA}$, $V_i = 5\ \text{V}$ $I_o = 50\ \text{mA}$, $V_i = 5\ \text{V}$ $-25 < T_a < 85^\circ\text{C}$	2.970 2.940	3	3.030 3.060	V V
V_i	Operating Input Voltage	$I_o = 500\ \text{mA}$			16	V
I_{out}	Output Current Limit		800			mA
ΔV_o	Line Regulation	$V_i = 4\ \text{to}\ 16\ \text{V}$, $I_o = 5\ \text{mA}$		2	10	mV
ΔV_o	Load Regulation	$V_i = 4.3\ \text{V}$ $I_o = 5\ \text{to}\ 500\ \text{mA}$		2	10	mV
I_d	Quiescent Current	ON MODE $V_i = 4\ \text{to}\ 16\ \text{V}$ $I_o = 0\ \text{mA}$ $V_i = 4.3\ \text{to}\ 16\ \text{V}$ $I_o = 500\ \text{mA}$		0.5	1 12	mA mA
		OFF MODE $V_i = 6\ \text{V}$		50	100	μA
SVR	Supply Voltage Rejection	$I_o = 5\ \text{mA}$ $V_i = 5\ \text{V} \pm 1\ \text{V}$ $f = 120\ \text{Hz}$ $f = 1\ \text{KHz}$ $f = 10\ \text{KHz}$				
				81		dB
				76		dB
				60		dB
eN	Output Noise Voltage	$B = 10\ \text{Hz to } 100\ \text{KHz}$		50		μV
V_d	Dropout Voltage	$I_o = 200\ \text{mA}$ $I_o = 500\ \text{mA}$		0.2	0.35	V
				0.4	0.7	V
V_{il}	Control Input Logic Low	$-40 < T_a < 125^\circ\text{C}$			0.8	V
V_{ih}	Control Input Logic High	$-40 < T_a < 125^\circ\text{C}$	2			V
I_i	Control Input Current	$V_i = 6\ \text{V}$, $V_c = 6\ \text{V}$		10		μA
C_o	Output Bypass Capacitance	$\text{ESR} = 0.1\ \text{to } 10\ \Omega$ $I_o = 0\ \text{to } 500\ \text{mA}$	2	10		μF

ELECTRICAL CHARACTERISTICS FOR LF33AC (refer to the test circuits, $T_j = 25^\circ\text{C}$, $C_i = 0.1\ \mu\text{F}$, $C_o = 2.2\ \mu\text{F}$ unless otherwise specified)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
V_o	Output Voltage	$I_o = 50\ \text{mA}$, $V_i = 5.3\ \text{V}$ $I_o = 50\ \text{mA}$, $V_i = 5.3\ \text{V}$ $-25 < T_a < 85^\circ\text{C}$	3.267 3.234	3.3	3.333 3.366	V V
V_i	Operating Input Voltage	$I_o = 500\ \text{mA}$			16	V
I_{out}	Output Current Limit		800			mA
ΔV_o	Line Regulation	$V_i = 4.3\ \text{to } 16\ \text{V}$, $I_o = 5\ \text{mA}$		2	10	mV
ΔV_o	Load Regulation	$V_i = 4.6\ \text{V}$ $I_o = 5\ \text{to } 500\ \text{mA}$		2	10	mV
I_d	Quiescent Current	ON MODE $V_i = 4.3\ \text{to } 16\ \text{V}$ $I_o = 0\ \text{mA}$ $V_i = 4.6\ \text{to } 16\ \text{V}$ $I_o = 500\ \text{mA}$		0.5	1 12	mA mA
		OFF MODE $V_i = 6\ \text{V}$		50	100	μA
SVR	Supply Voltage Rejection	$I_o = 5\ \text{mA}$ $V_i = 5.3\ \text{V} \pm 1\ \text{V}$ $f = 120\ \text{Hz}$ $f = 1\ \text{KHz}$ $f = 10\ \text{KHz}$				
				80		dB
				75		dB
				60		dB
eN	Output Noise Voltage	$B = 10\ \text{Hz to } 100\ \text{KHz}$		50		μV
V_d	Dropout Voltage	$I_o = 200\ \text{mA}$ $I_o = 500\ \text{mA}$		0.2	0.35	V
				0.4	0.7	V
V_{il}	Control Input Logic Low	$-40 < T_a < 125^\circ\text{C}$			0.8	V
V_{ih}	Control Input Logic High	$-40 < T_a < 125^\circ\text{C}$	2			V
I_i	Control Input Current	$V_i = 6\ \text{V}$, $V_c = 6\ \text{V}$		10		μA
C_o	Output Bypass Capacitance	$\text{ESR} = 0.1\ \text{to } 10\ \Omega$ $I_o = 0\ \text{to } 500\ \text{mA}$	2	10		μF

ELECTRICAL CHARACTERISTICS FOR LF35AC (refer to the test circuits, $T_j = 25\text{ }^{\circ}\text{C}$, $C_i = 0.1\text{ }\mu\text{F}$, $C_o = 2.2\text{ }\mu\text{F}$ unless otherwise specified)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
V_o	Output Voltage	$I_o = 50\text{ mA}$, $V_i = 5.5\text{ V}$ $I_o = 50\text{ mA}$, $V_i = 5.5\text{ V}$ -25< T_a <85 $^{\circ}\text{C}$	3.465 3.430	3.5	3.535 3.570	V V
V_i	Operating Input Voltage	$I_o = 500\text{ mA}$			16	V
I_{out}	Output Current Limit		800			mA
ΔV_o	Line Regulation	$V_i = 4.5\text{ to }16\text{ V}$, $I_o = 5\text{ mA}$		2	10	mV
ΔV_o	Load Regulation	$V_i = 4.8\text{ V}$ $I_o = 5\text{ to }500\text{ mA}$		2	10	mV
I_d	Quiescent Current	ON MODE $V_i = 4.5\text{ to }16\text{ V}$ $I_o = 0\text{ mA}$ $V_i = 4.8\text{ to }16\text{ V}$ $I_o = 500\text{ mA}$ OFF MODE $V_i = 6\text{ V}$		0.5 50	1 100	mA mA μA
SVR	Supply Voltage Rejection	$I_o = 5\text{ mA}$ $V_i = 5.5\text{ V} \pm 1\text{ V}$ $f = 120\text{ Hz}$ $f = 1\text{ KHz}$ $f = 10\text{ KHz}$		79 74 60		dB dB dB
eN	Output Noise Voltage	$B = 10\text{ Hz to }100\text{ KHz}$		50		μV
V_d	Dropout Voltage	$I_o = 200\text{ mA}$ $I_o = 500\text{ mA}$		0.2 0.4	0.35 0.7	V V
V_{il}	Control Input Logic Low	-40 < T_a < 125 $^{\circ}\text{C}$			0.8	V
V_{ih}	Control Input Logic High	-40 < T_a < 125 $^{\circ}\text{C}$	2			V
I_i	Control Input Current	$V_i = 6\text{ V}$, $V_c = 6\text{ V}$		10		μA
C_o	Output Bypass Capacitance	ESR = 0.1 to 10 Ω $I_o = 0\text{ to }500\text{ mA}$	2	10		μF

ELECTRICAL CHARACTERISTICS FOR LF40AC (refer to the test circuits, $T_j = 25\text{ }^{\circ}\text{C}$, $C_i = 0.1\text{ }\mu\text{F}$, $C_o = 2.2\text{ }\mu\text{F}$ unless otherwise specified)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
V_o	Output Voltage	$I_o = 50\text{ mA}$, $V_i = 6\text{ V}$ $I_o = 50\text{ mA}$, $V_i = 6\text{ V}$ -25< T_a <85 $^{\circ}\text{C}$	3.960 3.920	4	4.040 4.080	V V
V_i	Operating Input Voltage	$I_o = 500\text{ mA}$			16	V
I_{out}	Output Current Limit		800			mA
ΔV_o	Line Regulation	$V_i = 5\text{ to }16\text{ V}$, $I_o = 5\text{ mA}$		3	15	mV
ΔV_o	Load Regulation	$V_i = 5.3\text{ V}$ $I_o = 5\text{ to }500\text{ mA}$		2	10	mV
I_d	Quiescent Current	ON MODE $V_i = 5\text{ to }16\text{ V}$ $I_o = 0\text{ mA}$ $V_i = 5.3\text{ to }16\text{ V}$ $I_o = 500\text{ mA}$ OFF MODE $V_i = 6\text{ V}$		0.5 50	1 100	mA mA μA
SVR	Supply Voltage Rejection	$I_o = 5\text{ mA}$ $V_i = 6\text{ V} \pm 1\text{ V}$ $f = 120\text{ Hz}$ $f = 1\text{ KHz}$ $f = 10\text{ KHz}$		78 73 60		dB dB dB
eN	Output Noise Voltage	$B = 10\text{ Hz to }100\text{ KHz}$		50		μV
V_d	Dropout Voltage	$I_o = 200\text{ mA}$ $I_o = 500\text{ mA}$		0.2 0.4	0.35 0.70	V V
V_{il}	Control Input Logic Low	-40 < T_a < 125 $^{\circ}\text{C}$			0.8	V
V_{ih}	Control Input Logic High	-40 < T_a < 125 $^{\circ}\text{C}$	2			V
I_i	Control Input Current	$V_i = 6\text{ V}$, $V_c = 6\text{ V}$		10		μA
C_o	Output Bypass Capacitance	ESR = 0.1 to 10 Ω $I_o = 0\text{ to }500\text{ mA}$	2	10		μF

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ELECTRICAL CHARACTERISTICS FOR LF45AC (refer to the test circuits, $T_j = 25^\circ\text{C}$, $C_i = 0.1\ \mu\text{F}$, $C_o = 2.2\ \mu\text{F}$ unless otherwise specified)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
V_o	Output Voltage	$I_o = 50\ \text{mA}$, $V_i = 6.5\ \text{V}$ $I_o = 50\ \text{mA}$, $V_i = 6.5\ \text{V}$ $-25 < T_a < 85^\circ\text{C}$	4.455 4.410	4.5	4.545 4.590	V V
V_i	Operating Input Voltage	$I_o = 500\ \text{mA}$			16	V
I_{out}	Output Current Limit		800			mA
ΔV_o	Line Regulation	$V_i = 5.5\ \text{to}\ 16\ \text{V}$, $I_o = 5\ \text{mA}$		3	15	mV
ΔV_o	Load Regulation	$V_i = 5.8\ \text{V}$ $I_o = 5\ \text{to}\ 500\ \text{mA}$		2	10	mV
I_d	Quiescent Current	ON MODE $V_i = 5.5\ \text{to}\ 16\ \text{V}$ $I_o = 0\ \text{mA}$ $V_i = 5.8\ \text{to}\ 16\ \text{V}$ $I_o = 500\ \text{mA}$ OFF MODE $V_i = 6\ \text{V}$		0.5 50	1 100	mA mA μA
SVR	Supply Voltage Rejection	$I_o = 5\ \text{mA}$ $V_i = 6.5\ \text{V} \pm 1\ \text{V}$ $f = 120\ \text{Hz}$ $f = 1\ \text{KHz}$ $f = 10\ \text{KHz}$		77 72 60		dB dB dB
eN	Output Noise Voltage	$B = 10\ \text{Hz to}\ 100\ \text{KHz}$		50		μV
V_d	Dropout Voltage	$I_o = 200\ \text{mA}$ $I_o = 500\ \text{mA}$		0.2 0.4	0.35 0.70	V V
V_{il}	Control Input Logic Low	$-40 < T_a < 125^\circ\text{C}$			0.8	V
V_{ih}	Control Input Logic High	$-40 < T_a < 125^\circ\text{C}$	2			V
I_i	Control Input Current	$V_i = 6\ \text{V}$, $V_c = 6\ \text{V}$		10		μA
C_o	Output Bypass Capacitance	$\text{ESR} = 0.1\ \text{to}\ 10\ \Omega$ $I_o = 0\ \text{to}\ 500\ \text{mA}$	2	10		μF

ELECTRICAL CHARACTERISTICS FOR LF47AC (refer to the test circuits, $T_j = 25^\circ\text{C}$, $C_i = 0.1\ \mu\text{F}$, $C_o = 2.2\ \mu\text{F}$ unless otherwise specified)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
V_o	Output Voltage	$I_o = 50\ \text{mA}$, $V_i = 6.7\ \text{V}$ $I_o = 50\ \text{mA}$, $V_i = 6.7\ \text{V}$ $-25 < T_a < 85^\circ\text{C}$	4.653 4.606	4.7	4.747 4.794	V V
V_i	Operating Input Voltage	$I_o = 500\ \text{mA}$			16	V
I_{out}	Output Current Limit		800			mA
ΔV_o	Line Regulation	$V_i = 5.7\ \text{to}\ 16\ \text{V}$, $I_o = 5\ \text{mA}$		3	15	mV
ΔV_o	Load Regulation	$V_i = 6\ \text{V}$ $I_o = 5\ \text{to}\ 500\ \text{mA}$		2	10	mV
I_d	Quiescent Current	ON MODE $V_i = 5.7\ \text{to}\ 16\ \text{V}$ $I_o = 0\ \text{mA}$ $V_i = 6\ \text{to}\ 16\ \text{V}$ $I_o = 500\ \text{mA}$ OFF MODE $V_i = 6\ \text{V}$		0.5 50	1 100	mA mA μA
SVR	Supply Voltage Rejection	$I_o = 5\ \text{mA}$ $V_i = 6.7\ \text{V} \pm 1\ \text{V}$ $f = 120\ \text{Hz}$ $f = 1\ \text{KHz}$ $f = 10\ \text{KHz}$		77 72 60		dB dB dB
eN	Output Noise Voltage	$B = 10\ \text{Hz to}\ 100\ \text{KHz}$		50		μV
V_d	Dropout Voltage	$I_o = 200\ \text{mA}$ $I_o = 500\ \text{mA}$		0.2 0.4	0.35 0.7	V V
V_{il}	Control Input Logic Low	$-40 < T_a < 125^\circ\text{C}$			0.8	V
V_{ih}	Control Input Logic High	$-40 < T_a < 125^\circ\text{C}$	2			V
I_i	Control Input Current	$V_i = 6\ \text{V}$, $V_c = 6\ \text{V}$		10		μA
C_o	Output Bypass Capacitance	$\text{ESR} = 0.1\ \text{to}\ 10\ \Omega$ $I_o = 0\ \text{to}\ 500\ \text{mA}$	2	10		μF

ELECTRICAL CHARACTERISTICS FOR LF50AC (refer to the test circuits, $T_j = 25\text{ }^{\circ}\text{C}$, $C_i = 0.1\text{ }\mu\text{F}$, $C_o = 2.2\text{ }\mu\text{F}$ unless otherwise specified)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
V_o	Output Voltage	$I_o = 50\text{ mA}$, $V_i = 7\text{ V}$ $I_o = 50\text{ mA}$, $V_i = 7\text{ V}$ $-25 < T_a < 85\text{ }^{\circ}\text{C}$	4.950 4.900	5	5.050 5.100	V V
V_i	Operating Input Voltage	$I_o = 500\text{ mA}$			16	V
I_{out}	Output Current Limit		800			mA
ΔV_o	Line Regulation	$V_i = 6\text{ to }16\text{ V}$, $I_o = 5\text{ mA}$		3	15	mV
ΔV_o	Load Regulation	$V_i = 6.3\text{ V}$ $I_o = 5\text{ to }500\text{ mA}$		2	10	mV
I_d	Quiescent Current	ON MODE $V_i = 6\text{ to }16\text{ V}$ $I_o = 0\text{ mA}$ $V_i = 6.3\text{ to }16\text{ V}$ $I_o = 500\text{ mA}$		0.5	1 12	mA mA
		OFF MODE $V_i = 6\text{ V}$		50	100	μA
SVR	Supply Voltage Rejection	$I_o = 5\text{ mA}$ $V_i = 7\text{ V} \pm 1\text{ V}$ $f = 120\text{ Hz}$ $f = 1\text{ KHz}$ $f = 10\text{ KHz}$		76 71 60		dB dB dB
eN	Output Noise Voltage	$B = 10\text{ Hz to }100\text{ KHz}$		50		μV
V_d	Dropout Voltage	$I_o = 200\text{ mA}$ $I_o = 500\text{ mA}$		0.2 0.4	0.35 0.7	V V
V_{il}	Control Input Logic Low	$-40 < T_a < 125\text{ }^{\circ}\text{C}$			0.8	V
V_{ih}	Control Input Logic High	$-40 < T_a < 125\text{ }^{\circ}\text{C}$	2			V
I_i	Control Input Current	$V_i = 6\text{ V}$, $V_c = 6\text{ V}$		10		μA
C_o	Output Bypass Capacitance	$\text{ESR} = 0.1\text{ to }10\text{ }\Omega$ $I_o = 0\text{ to }500\text{ mA}$	2	10		μF

ELECTRICAL CHARACTERISTICS FOR LF52AC (refer to the test circuits, $T_j = 25\text{ }^{\circ}\text{C}$, $C_i = 0.1\text{ }\mu\text{F}$, $C_o = 2.2\text{ }\mu\text{F}$ unless otherwise specified)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
V_o	Output Voltage	$I_o = 50\text{ mA}$, $V_i = 7.2\text{ V}$ $I_o = 50\text{ mA}$, $V_i = 7.2\text{ V}$ $-25 < T_a < 85\text{ }^{\circ}\text{C}$	5.148 5.096	5.2	5.252 5.304	V V
V_i	Operating Input Voltage	$I_o = 500\text{ mA}$			16	V
I_{out}	Output Current Limit		800			mA
ΔV_o	Line Regulation	$V_i = 6.2\text{ to }16\text{ V}$, $I_o = 5\text{ mA}$		3	15	mV
ΔV_o	Load Regulation	$V_i = 6.5\text{ V}$ $I_o = 5\text{ to }500\text{ mA}$		2	10	mV
I_d	Quiescent Current	ON MODE $V_i = 6.2\text{ to }16\text{ V}$ $I_o = 0\text{ mA}$ $V_i = 6.5\text{ to }16\text{ V}$ $I_o = 500\text{ mA}$		0.5	1 12	mA mA
		OFF MODE $V_i = 6\text{ V}$		50	100	μA
SVR	Supply Voltage Rejection	$I_o = 5\text{ mA}$ $V_i = 7.2\text{ V} \pm 1\text{ V}$ $f = 120\text{ Hz}$ $f = 1\text{ KHz}$ $f = 10\text{ KHz}$		76 71 60		dB dB dB
eN	Output Noise Voltage	$B = 10\text{ Hz to }100\text{ KHz}$		50		μV
V_d	Dropout Voltage	$I_o = 200\text{ mA}$ $I_o = 500\text{ mA}$		0.2 0.4	0.35 0.7	V V
V_{il}	Control Input Logic Low	$-40 < T_a < 125\text{ }^{\circ}\text{C}$			0.8	V
V_{ih}	Control Input Logic High	$-40 < T_a < 125\text{ }^{\circ}\text{C}$	2			V
I_i	Control Input Current	$V_i = 6\text{ V}$, $V_c = 6\text{ V}$		10		μA
C_o	Output Bypass Capacitance	$\text{ESR} = 0.1\text{ to }10\text{ }\Omega$ $I_o = 0\text{ to }500\text{ mA}$	2	10		μF

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ELECTRICAL CHARACTERISTICS FOR LF55AC (refer to the test circuits, $T_j = 25\text{ }^{\circ}\text{C}$,
 $C_i = 0.1\text{ }\mu\text{F}$, $C_o = 2.2\text{ }\mu\text{F}$ unless otherwise specified)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
V_o	Output Voltage	$I_o = 50\text{ mA}$, $V_i = 7.5\text{ V}$ $I_o = 50\text{ mA}$, $V_i = 7.5\text{ V}$ $-25 < T_a < 85\text{ }^{\circ}\text{C}$	5.455 5.390	5.5	5.555 5.610	V V
V_i	Operating Input Voltage	$I_o = 500\text{ mA}$			16	V
I_{out}	Output Current Limit		800			mA
ΔV_o	Line Regulation	$V_i = 6.5\text{ to }16\text{ V}$, $I_o = 5\text{ mA}$		3	15	mV
ΔV_o	Load Regulation	$V_i = 6.8\text{ V}$ $I_o = 5\text{ to }500\text{ mA}$		2	10	mV
I_d	Quiescent Current	ON MODE $V_i = 6.5\text{ to }16\text{ V}$ $I_o = 0\text{ mA}$ $V_i = 6.8\text{ to }16\text{ V}$ $I_o = 500\text{ mA}$		0.5	1 12	mA mA
		OFF MODE $V_i = 6\text{ V}$		50	100	μA
SVR	Supply Voltage Rejection	$I_o = 5\text{ mA}$ $V_i = 7.5\text{ V} \pm 1\text{ V}$ $f = 120\text{ Hz}$ $f = 1\text{ KHz}$ $f = 10\text{ KHz}$		76		dB
				71		dB
				60		dB
eN	Output Noise Voltage	$B = 10\text{ Hz to }100\text{ KHz}$		50		μV
V_d	Dropout Voltage	$I_o = 200\text{ mA}$ $I_o = 500\text{ mA}$		0.2	0.35	V
				0.4	0.70	V
V_{il}	Control Input Logic Low	$-40 < T_a < 125\text{ }^{\circ}\text{C}$			0.8	V
V_{ih}	Control Input Logic High	$-40 < T_a < 125\text{ }^{\circ}\text{C}$	2			V
I_i	Control Input Current	$V_i = 6\text{ V}$, $V_c = 6\text{ V}$		10		μA
C_o	Output Bypass Capacitance	$\text{ESR} = 0.1\text{ to }10\text{ }\Omega$ $I_o = 0\text{ to }500\text{ mA}$	2	10		μF

ELECTRICAL CHARACTERISTICS FOR LF60AC (refer to the test circuits, $T_j = 25\text{ }^{\circ}\text{C}$,
 $C_i = 0.1\text{ }\mu\text{F}$, $C_o = 2.2\text{ }\mu\text{F}$ unless otherwise specified)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
V_o	Output Voltage	$I_o = 50\text{ mA}$, $V_i = 8\text{ V}$ $I_o = 50\text{ mA}$, $V_i = 8\text{ V}$ $-25 < T_a < 85\text{ }^{\circ}\text{C}$	5.940 5.880	6	6.060 6.120	V V
V_i	Operating Input Voltage	$I_o = 500\text{ mA}$			16	V
I_{out}	Output Current Limit		800			mA
ΔV_o	Line Regulation	$V_i = 7\text{ to }16\text{ V}$, $I_o = 5\text{ mA}$		4	20	mV
ΔV_o	Load Regulation	$V_i = 7.3\text{ V}$ $I_o = 5\text{ to }500\text{ mA}$		2	10	mV
I_d	Quiescent Current	ON MODE $V_i = 7\text{ to }16\text{ V}$ $I_o = 0\text{ mA}$ $V_i = 7.3\text{ to }16\text{ V}$ $I_o = 500\text{ mA}$		0.7	1.5 12	mA mA
		OFF MODE $V_i = 9\text{ V}$		70	140	μA
SVR	Supply Voltage Rejection	$I_o = 5\text{ mA}$ $V_i = 8\text{ V} \pm 1\text{ V}$ $f = 120\text{ Hz}$ $f = 1\text{ KHz}$ $f = 10\text{ KHz}$		75		dB
				70		dB
				60		dB
eN	Output Noise Voltage	$B = 10\text{ Hz to }100\text{ KHz}$		50		μV
V_d	Dropout Voltage	$I_o = 200\text{ mA}$ $I_o = 500\text{ mA}$		0.2	0.35	V
				0.4	0.7	V
V_{il}	Control Input Logic Low	$-40 < T_a < 125\text{ }^{\circ}\text{C}$			0.8	V
V_{ih}	Control Input Logic High	$-40 < T_a < 125\text{ }^{\circ}\text{C}$	2			V
I_i	Control Input Current	$V_i = 9\text{ V}$, $V_c = 6\text{ V}$		10		μA
C_o	Output Bypass Capacitance	$\text{ESR} = 0.1\text{ to }10\text{ }\Omega$ $I_o = 0\text{ to }500\text{ mA}$	2	10		μF

ELECTRICAL CHARACTERISTICS FOR LF80AC (refer to the test circuits, $T_j = 25\text{ }^{\circ}\text{C}$, $C_i = 0.1\text{ }\mu\text{F}$, $C_o = 2.2\text{ }\mu\text{F}$ unless otherwise specified)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
V_o	Output Voltage	$I_o = 50\text{ mA}$, $V_i = 10\text{ V}$ $I_o = 50\text{ mA}$, $V_i = 10\text{ V}$ $-25 < T_a < 85\text{ }^{\circ}\text{C}$	7.920 7.840	8	8.080 8.160	V V
V_i	Operating Input Voltage	$I_o = 500\text{ mA}$			16	V
I_{out}	Output Current Limit		800			mA
ΔV_o	Line Regulation	$V_i = 9\text{ to }16\text{ V}$, $I_o = 5\text{ mA}$		4	20	mV
ΔV_o	Load Regulation	$V_i = 9.3\text{ V}$ $I_o = 5\text{ to }500\text{ mA}$		2	10	mV
I_d	Quiescent Current	ON MODE $V_i = 9\text{ to }16\text{ V}$ $I_o = 0\text{ mA}$ $V_i = 9.3\text{ to }16\text{ V}$ $I_o = 500\text{ mA}$		0.7	1.5 12	mA mA
		OFF MODE $V_i = 9\text{ V}$		70	140	μA
SVR	Supply Voltage Rejection	$I_o = 5\text{ mA}$ $V_i = 10\text{ V} \pm 1\text{ V}$				
		$f = 120\text{ Hz}$		72		dB
		$f = 1\text{ KHz}$		67		dB
		$f = 10\text{ KHz}$		60		dB
eN	Output Noise Voltage	$B = 10\text{ Hz to }100\text{ KHz}$		50		μV
V_d	Dropout Voltage	$I_o = 200\text{ mA}$		0.2	0.35	V
		$I_o = 500\text{ mA}$		0.4	0.7	V
V_{il}	Control Input Logic Low	$-40 < T_a < 125\text{ }^{\circ}\text{C}$			0.8	V
V_{ih}	Control Input Logic High	$-40 < T_a < 125\text{ }^{\circ}\text{C}$	2			V
I_i	Control Input Current	$V_i = 9\text{ V}$, $V_c = 6\text{ V}$		10		μA
C_o	Output Bypass Capacitance	$\text{ESR} = 0.1\text{ to }10\text{ }\Omega$ $I_o = 0\text{ to }500\text{ mA}$	2	10		μF

ELECTRICAL CHARACTERISTICS FOR LF120AC (refer to the test circuits, $T_j = 25\text{ }^{\circ}\text{C}$, $C_i = 0.1\text{ }\mu\text{F}$, $C_o = 2.2\text{ }\mu\text{F}$ unless otherwise specified)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
V_o	Output Voltage	$I_o = 50\text{ mA}$, $V_i = 15\text{ V}$ $I_o = 50\text{ mA}$, $V_i = 15\text{ V}$ $-25 < T_a < 85\text{ }^{\circ}\text{C}$	11.880 11.760	12	12.120 12.240	V V
V_i	Operating Input Voltage	$I_o = 500\text{ mA}$			16	V
I_{out}	Output Current Limit		800			mA
ΔV_o	Line Regulation	$V_i = 13\text{ to }16\text{ V}$, $I_o = 5\text{ mA}$		8	40	mV
ΔV_o	Load Regulation	$V_i = 13.3\text{ V}$ $I_o = 5\text{ to }500\text{ mA}$		2	10	mV
I_d	Quiescent Current	ON MODE $V_i = 13\text{ to }16\text{ V}$ $I_o = 0\text{ mA}$ $V_i = 13.3\text{ to }16\text{ V}$ $I_o = 500\text{ mA}$		0.7	1.5 12	mA mA
		OFF MODE $V_i = 13\text{ V}$		70	140	μA
SVR	Supply Voltage Rejection	$I_o = 5\text{ mA}$ $V_i = 14\text{ V} \pm 1\text{ V}$				
		$f = 120\text{ Hz}$		69		dB
		$f = 1\text{ KHz}$		64		dB
		$f = 10\text{ KHz}$		54		dB
eN	Output Noise Voltage	$B = 10\text{ Hz to }100\text{ KHz}$		50		μV
V_d	Dropout Voltage	$I_o = 200\text{ mA}$		0.2	0.35	V
		$I_o = 500\text{ mA}$		0.4	0.7	V
V_{il}	Control Input Logic Low	$-40 < T_a < 125\text{ }^{\circ}\text{C}$			0.8	V
V_{ih}	Control Input Logic High	$-40 < T_a < 125\text{ }^{\circ}\text{C}$	2			V
I_i	Control Input Current	$V_i = 13\text{ V}$, $V_c = 6\text{ V}$		10		μA
C_o	Output Bypass Capacitance	$\text{ESR} = 0.1\text{ to }10\text{ }\Omega$ $I_o = 0\text{ to }500\text{ mA}$	2	10		μF

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ELECTRICAL CHARACTERISTICS FOR LF12C (refer to the test circuits, $T_j = 25\text{ }^{\circ}\text{C}$, $C_i = 0.1\text{ }\mu\text{F}$, $C_o = 2.2\text{ }\mu\text{F}$ unless otherwise specified)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
V_o	Output Voltage	$I_o = 50\text{ mA}$, $V_i = 3.3\text{ V}$ $I_o = 50\text{ mA}$, $V_i = 3.3\text{ V}$ $-25 < T_a < 85\text{ }^{\circ}\text{C}$	1.225 1.2	1.25	1.275 1.3	V V
V_i	Operating Input Voltage	$I_o = 500\text{ mA}$			16	V
I_{out}	Output Current Limit		800			mA
ΔV_o	Line Regulation	$V_i = 2.5\text{ to }16\text{ V}$, $I_o = 5\text{ mA}$		2	12	mV
ΔV_o	Load Regulation	$V_i = 2.8\text{ V}$ $I_o = 5\text{ to }500\text{ mA}$		2	10	mV
I_d	Quiescent Current	ON MODE $V_i = 2.5\text{ to }16\text{ V}$ $I_o = 0\text{ mA}$ $V_i = 2.6\text{ to }16\text{ V}$ $I_o = 500\text{ mA}$		0.5	1 12	mA mA
		OFF MODE $V_i = 6\text{ V}$		50	100	μA
SVR	Supply Voltage Rejection	$I_o = 5\text{ mA}$ $V_i = 3.5\text{ V} \pm 1\text{ V}$ $f = 120\text{ Hz}$ $f = 1\text{ KHz}$ $f = 10\text{ KHz}$		82		dB
				77		dB
				60		dB
eN	Output Noise Voltage	$B = 10\text{ Hz to }100\text{ KHz}$		50		μV
V_d	Dropout Voltage	$I_o = 200\text{ mA}$ $I_o = 500\text{ mA}$		0.25	0.45	V
				0.5	0.90	V
V_{il}	Control Input Logic Low	$-40 < T_a < 125\text{ }^{\circ}\text{C}$			0.8	V
V_{ih}	Control Input Logic High	$-40 < T_a < 125\text{ }^{\circ}\text{C}$	2			V
I_i	Control Input Current	$V_i = 6\text{ V}$, $V_c = 6\text{ V}$		10		μA
C_o	Output Bypass Capacitance	$\text{ESR} = 0.1\text{ to }10\text{ }\Omega$ $I_o = 0\text{ to }500\text{ mA}$	2	10		μF

ELECTRICAL CHARACTERISTICS FOR LF15C (refer to the test circuits, $T_j = 25\text{ }^{\circ}\text{C}$, $C_i = 0.1\text{ }\mu\text{F}$, $C_o = 2.2\text{ }\mu\text{F}$ unless otherwise specified)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
V_o	Output Voltage	$I_o = 50\text{ mA}$, $V_i = 3.5\text{ V}$ $I_o = 50\text{ mA}$, $V_i = 3.5\text{ V}$ $-25 < T_a < 85\text{ }^{\circ}\text{C}$	1.47 1.44	1.5	1.53 1.56	V V
V_i	Operating Input Voltage	$I_o = 500\text{ mA}$			16	V
I_{out}	Output Current Limit		800			mA
ΔV_o	Line Regulation	$V_i = 2.5\text{ to }16\text{ V}$, $I_o = 5\text{ mA}$		2	12	mV
ΔV_o	Load Regulation	$V_i = 2.8\text{ V}$ $I_o = 5\text{ to }500\text{ mA}$		2	10	mV
I_d	Quiescent Current	ON MODE $V_i = 2.5\text{ to }16\text{ V}$ $I_o = 0\text{ mA}$ $V_i = 2.8\text{ to }16\text{ V}$ $I_o = 500\text{ mA}$		0.5	1 12	mA mA
		OFF MODE $V_i = 6\text{ V}$		50	100	μA
SVR	Supply Voltage Rejection	$I_o = 5\text{ mA}$ $V_i = 3.5\text{ V} \pm 1\text{ V}$ $f = 120\text{ Hz}$ $f = 1\text{ KHz}$ $f = 10\text{ KHz}$		82		dB
				77		dB
				60		dB
eN	Output Noise Voltage	$B = 10\text{ Hz to }100\text{ KHz}$		50		μV
V_d	Dropout Voltage	$I_o = 200\text{ mA}$ $I_o = 500\text{ mA}$		0.25	0.45	V
				0.5	0.90	V
V_{il}	Control Input Logic Low	$-40 < T_a < 125\text{ }^{\circ}\text{C}$			0.8	V
V_{ih}	Control Input Logic High	$-40 < T_a < 125\text{ }^{\circ}\text{C}$	2			V
I_i	Control Input Current	$V_i = 6\text{ V}$, $V_c = 6\text{ V}$		10		μA
C_o	Output Bypass Capacitance	$\text{ESR} = 0.1\text{ to }10\text{ }\Omega$ $I_o = 0\text{ to }500\text{ mA}$	2	10		μF

ELECTRICAL CHARACTERISTICS FOR LF25C (refer to the test circuits, $T_j = 25\text{ }^{\circ}\text{C}$, $C_i = 0.1\text{ }\mu\text{F}$, $C_o = 2.2\text{ }\mu\text{F}$ unless otherwise specified)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
V_o	Output Voltage	$I_o = 50\text{ mA}$, $V_i = 4.5\text{ V}$ $I_o = 50\text{ mA}$, $V_i = 4.5\text{ V}$ $-25 < T_a < 85\text{ }^{\circ}\text{C}$	2.45 2.4	2.5	2.55 2.6	V V
V_i	Operating Input Voltage	$I_o = 500\text{ mA}$			16	V
I_{out}	Output Current Limit		800			mA
ΔV_o	Line Regulation	$V_i = 3.5\text{ to }16\text{ V}$, $I_o = 5\text{ mA}$		2	12	mV
ΔV_o	Load Regulation	$V_i = 3.8\text{ V}$ $I_o = 5\text{ to }500\text{ mA}$		2	10	mV
I_d	Quiescent Current	ON MODE $V_i = 3.5\text{ to }16\text{ V}$ $I_o = 0\text{ mA}$ $V_i = 3.8\text{ to }16\text{ V}$ $I_o = 500\text{ mA}$		0.5	1 12	mA mA
		OFF MODE $V_i = 6\text{ V}$		50	100	μA
SVR	Supply Voltage Rejection	$I_o = 5\text{ mA}$ $V_i = 4.5\text{ V} \pm 1\text{ V}$ $f = 120\text{ Hz}$ $f = 1\text{ KHz}$ $f = 10\text{ KHz}$		82		dB
				77		dB
				60		dB
eN	Output Noise Voltage	$B = 10\text{ Hz to }100\text{ KHz}$		50		μV
V_d	Dropout Voltage	$I_o = 200\text{ mA}$		0.2	0.35	V
		$I_o = 500\text{ mA}$		0.4	0.7	V
V_{il}	Control Input Logic Low	$-40 < T_a < 125\text{ }^{\circ}\text{C}$			0.8	V
V_{ih}	Control Input Logic High	$-40 < T_a < 125\text{ }^{\circ}\text{C}$	2			V
I_i	Control Input Current	$V_i = 6\text{ V}$, $V_o = 6\text{ V}$		10		μA
C_o	Output Bypass Capacitance	$\text{ESR} = 0.1\text{ to }10\text{ }\Omega$ $I_o = 0\text{ to }500\text{ mA}$	2	10		μF

ELECTRICAL CHARACTERISTICS FOR LF27C (refer to the test circuits, $T_j = 25\text{ }^{\circ}\text{C}$, $C_i = 0.1\text{ }\mu\text{F}$, $C_o = 2.2\text{ }\mu\text{F}$ unless otherwise specified)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
V_o	Output Voltage	$I_o = 50\text{ mA}$, $V_i = 4.7\text{ V}$ $I_o = 50\text{ mA}$, $V_i = 4.7\text{ V}$ $-25 < T_a < 85\text{ }^{\circ}\text{C}$	2.646 2.592	2.7	2.754 2.808	V V
V_i	Operating Input Voltage	$I_o = 500\text{ mA}$			16	V
I_{out}	Output Current Limit		800			mA
ΔV_o	Line Regulation	$V_i = 3.7\text{ to }16\text{ V}$, $I_o = 5\text{ mA}$		2	12	mV
ΔV_o	Load Regulation	$V_i = 4\text{ V}$ $I_o = 5\text{ to }500\text{ mA}$		2	10	mV
I_d	Quiescent Current	ON MODE $V_i = 3.7\text{ to }16\text{ V}$ $I_o = 0\text{ mA}$ $V_i = 4\text{ to }16\text{ V}$ $I_o = 500\text{ mA}$		0.5	1 12	mA mA
		OFF MODE $V_i = 6\text{ V}$		50	100	μA
SVR	Supply Voltage Rejection	$I_o = 5\text{ mA}$ $V_i = 4.7\text{ V} \pm 1\text{ V}$ $f = 120\text{ Hz}$ $f = 1\text{ KHz}$ $f = 10\text{ KHz}$		82		dB
				77		dB
				60		dB
eN	Output Noise Voltage	$B = 10\text{ Hz to }100\text{ KHz}$		50		μV
V_d	Dropout Voltage	$I_o = 200\text{ mA}$		0.2	0.35	V
		$I_o = 500\text{ mA}$		0.4	0.7	V
V_{il}	Control Input Logic Low	$-40 < T_a < 125\text{ }^{\circ}\text{C}$			0.8	V
V_{ih}	Control Input Logic High	$-40 < T_a < 125\text{ }^{\circ}\text{C}$	2			V
I_i	Control Input Current	$V_i = 6\text{ V}$, $V_o = 6\text{ V}$		10		μA
C_o	Output Bypass Capacitance	$\text{ESR} = 0.1\text{ to }10\text{ }\Omega$ $I_o = 0\text{ to }500\text{ mA}$	2	10		μF

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ELECTRICAL CHARACTERISTICS FOR LF30C (refer to the test circuits, $T_j = 25^\circ\text{C}$, $C_i = 0.1\ \mu\text{F}$, $C_o = 2.2\ \mu\text{F}$ unless otherwise specified)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
V_o	Output Voltage	$I_o = 50\ \text{mA}$, $V_i = 5\ \text{V}$ $I_o = 50\ \text{mA}$, $V_i = 5\ \text{V}$ $-25 < T_a < 85^\circ\text{C}$	2.94 2.88	3	3.06 3.12	V V
V_i	Operating Input Voltage	$I_o = 500\ \text{mA}$			16	V
I_{out}	Output Current Limit		800			mA
ΔV_o	Line Regulation	$V_i = 4\ \text{to}\ 16\ \text{V}$, $I_o = 5\ \text{mA}$		2	12	mV
ΔV_o	Load Regulation	$V_i = 4.3\ \text{V}$ $I_o = 5\ \text{to}\ 500\ \text{mA}$		2	10	mV
I_d	Quiescent Current	ON MODE $V_i = 4\ \text{to}\ 16\ \text{V}$ $I_o = 0\ \text{mA}$ $V_i = 4.3\ \text{to}\ 16\ \text{V}$ $I_o = 500\ \text{mA}$		0.5	1 12	mA mA
		OFF MODE $V_i = 6\ \text{V}$		50	100	μA
SVR	Supply Voltage Rejection	$I_o = 5\ \text{mA}$ $V_i = 5\ \text{V} \pm 1\ \text{V}$				
		$f = 120\ \text{Hz}$		81		dB
		$f = 1\ \text{KHz}$		76		dB
		$f = 10\ \text{KHz}$		60		dB
eN	Output Noise Voltage	$B = 10\ \text{Hz to}\ 100\ \text{KHz}$		50		μV
V_d	Dropout Voltage	$I_o = 200\ \text{mA}$		0.2	0.35	V
		$I_o = 500\ \text{mA}$		0.4	0.7	V
V_{il}	Control Input Logic Low	$-40 < T_a < 125^\circ\text{C}$			0.8	V
V_{ih}	Control Input Logic High	$-40 < T_a < 125^\circ\text{C}$	2			V
I_i	Control Input Current	$V_i = 6\ \text{V}$, $V_o = 6\ \text{V}$		10		μA
C_o	Output Bypass Capacitance	$\text{ESR} = 0.1\ \text{to}\ 10\ \Omega$ $I_o = 0\ \text{to}\ 500\ \text{mA}$	2	10		μF

ELECTRICAL CHARACTERISTICS FOR LF33C (refer to the test circuits, $T_j = 25^\circ\text{C}$, $C_i = 0.1\ \mu\text{F}$, $C_o = 2.2\ \mu\text{F}$ unless otherwise specified)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
V_o	Output Voltage	$I_o = 50\ \text{mA}$, $V_i = 5.3\ \text{V}$ $I_o = 50\ \text{mA}$, $V_i = 5.3\ \text{V}$ $-25 < T_a < 85^\circ\text{C}$	3.234 3.168	3.3	3.366 3.432	V V
V_i	Operating Input Voltage	$I_o = 500\ \text{mA}$			16	V
I_{out}	Output Current Limit		800			mA
ΔV_o	Line Regulation	$V_i = 4.3\ \text{to}\ 16\ \text{V}$, $I_o = 5\ \text{mA}$		2	12	mV
ΔV_o	Load Regulation	$V_i = 4.6\ \text{V}$ $I_o = 5\ \text{to}\ 500\ \text{mA}$		2	10	mV
I_d	Quiescent Current	ON MODE $V_i = 4.3\ \text{to}\ 16\ \text{V}$ $I_o = 0\ \text{mA}$ $V_i = 4.6\ \text{to}\ 16\ \text{V}$ $I_o = 500\ \text{mA}$		0.5	1 12	mA mA
		OFF MODE $V_i = 6\ \text{V}$		50	100	μA
SVR	Supply Voltage Rejection	$I_o = 5\ \text{mA}$ $V_i = 5.3\ \text{V} \pm 1\ \text{V}$				
		$f = 120\ \text{Hz}$		80		dB
		$f = 1\ \text{KHz}$		75		dB
		$f = 10\ \text{KHz}$		60		dB
eN	Output Noise Voltage	$B = 10\ \text{Hz to}\ 100\ \text{KHz}$		50		μV
V_d	Dropout Voltage	$I_o = 200\ \text{mA}$		0.2	0.35	V
		$I_o = 500\ \text{mA}$		0.4	0.7	V
V_{il}	Control Input Logic Low	$-40 < T_a < 125^\circ\text{C}$			0.8	V
V_{ih}	Control Input Logic High	$-40 < T_a < 125^\circ\text{C}$	2			V
I_i	Control Input Current	$V_i = 6\ \text{V}$, $V_o = 6\ \text{V}$		10		μA
C_o	Output Bypass Capacitance	$\text{ESR} = 0.1\ \text{to}\ 10\ \Omega$ $I_o = 0\ \text{to}\ 500\ \text{mA}$	2	10		μF

ELECTRICAL CHARACTERISTICS FOR LF35C (refer to the test circuits, $T_j = 25^\circ\text{C}$, $C_i = 0.1\ \mu\text{F}$, $C_o = 2.2\ \mu\text{F}$ unless otherwise specified)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
V_o	Output Voltage	$I_o = 50\ \text{mA}$, $V_i = 5.5\ \text{V}$ $I_o = 50\ \text{mA}$, $V_i = 5.5\ \text{V}$ $-25 < T_a < 85^\circ\text{C}$	3.43 3.36	3.5	3.57 3.64	V V
V_i	Operating Input Voltage	$I_o = 500\ \text{mA}$			16	V
I_{out}	Output Current Limit		800			mA
ΔV_o	Line Regulation	$V_i = 4.5\ \text{to}\ 16\ \text{V}$, $I_o = 5\ \text{mA}$		2	12	mV
ΔV_o	Load Regulation	$V_i = 4.8\ \text{V}$ $I_o = 5\ \text{to}\ 500\ \text{mA}$		2	10	mV
I_d	Quiescent Current	ON MODE $V_i = 4.5\ \text{to}\ 16\ \text{V}$ $I_o = 0\ \text{mA}$ $V_i = 4.8\ \text{to}\ 16\ \text{V}$ $I_o = 500\ \text{mA}$ OFF MODE $V_i = 6\ \text{V}$		0.5 50	1 100	mA mA μA
SVR	Supply Voltage Rejection	$I_o = 5\ \text{mA}$ $V_i = 5.5\ \text{V} \pm 1\text{V}$ $f = 120\ \text{Hz}$ $f = 1\ \text{KHz}$ $f = 10\ \text{KHz}$		79 74 60		dB dB dB
eN	Output Noise Voltage	$B = 10\ \text{Hz to}\ 100\ \text{KHz}$		50		μV
V_d	Dropout Voltage	$I_o = 200\ \text{mA}$ $I_o = 500\ \text{mA}$		0.2 0.4	0.35 0.7	V V
V_{il}	Control Input Logic Low	$-40 < T_a < 125^\circ\text{C}$			0.8	V
V_{ih}	Control Input Logic High	$-40 < T_a < 125^\circ\text{C}$	2			V
I_i	Control Input Current	$V_i = 6\ \text{V}$, $V_c = 6\ \text{V}$		10		μA
C_o	Output Bypass Capacitance	$\text{ESR} = 0.1\ \text{to}\ 10\ \Omega$ $I_o = 0\ \text{to}\ 500\ \text{mA}$	2	10		μF

ELECTRICAL CHARACTERISTICS FOR LF40C (refer to the test circuits, $T_j = 25^\circ\text{C}$, $C_i = 0.1\ \mu\text{F}$, $C_o = 2.2\ \mu\text{F}$ unless otherwise specified)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
V_o	Output Voltage	$I_o = 50\ \text{mA}$, $V_i = 6\ \text{V}$ $I_o = 50\ \text{mA}$, $V_i = 6\ \text{V}$ $-25 < T_a < 85^\circ\text{C}$	3.92 3.84	4	4.08 4.16	V V
V_i	Operating Input Voltage	$I_o = 500\ \text{mA}$			16	V
I_{out}	Output Current Limit		800			mA
ΔV_o	Line Regulation	$V_i = 5\ \text{to}\ 16\ \text{V}$, $I_o = 5\ \text{mA}$		3	18	mV
ΔV_o	Load Regulation	$V_i = 5.3\ \text{V}$ $I_o = 5\ \text{to}\ 500\ \text{mA}$		2	10	mV
I_d	Quiescent Current	ON MODE $V_i = 5\ \text{to}\ 16\ \text{V}$ $I_o = 0\ \text{mA}$ $V_i = 5.3\ \text{to}\ 16\ \text{V}$ $I_o = 500\ \text{mA}$ OFF MODE $V_i = 6\ \text{V}$		0.5 50	1 100	mA mA μA
SVR	Supply Voltage Rejection	$I_o = 5\ \text{mA}$ $V_i = 6\ \text{V} \pm 1\text{V}$ $f = 120\ \text{Hz}$ $f = 1\ \text{KHz}$ $f = 10\ \text{KHz}$		78 73 60		dB dB dB
eN	Output Noise Voltage	$B = 10\ \text{Hz to}\ 100\ \text{KHz}$		50		μV
V_d	Dropout Voltage	$I_o = 200\ \text{mA}$ $I_o = 500\ \text{mA}$		0.2 0.4	0.35 0.7	V V
V_{il}	Control Input Logic Low	$-40 < T_a < 125^\circ\text{C}$			0.8	V
V_{ih}	Control Input Logic High	$-40 < T_a < 125^\circ\text{C}$	2			V
I_i	Control Input Current	$V_i = 6\ \text{V}$, $V_c = 6\ \text{V}$		10		μA
C_o	Output Bypass Capacitance	$\text{ESR} = 0.1\ \text{to}\ 10\ \Omega$ $I_o = 0\ \text{to}\ 500\ \text{mA}$	2	10		μF

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ELECTRICAL CHARACTERISTICS FOR LF45C (refer to the test circuits, $T_j = 25\text{ }^{\circ}\text{C}$, $C_i = 0.1\text{ }\mu\text{F}$, $C_o = 2.2\text{ }\mu\text{F}$ unless otherwise specified)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
V_o	Output Voltage	$I_o = 50\text{ mA}$, $V_i = 6.5\text{ V}$ $I_o = 50\text{ mA}$, $V_i = 6.5\text{ V}$ $-25 < T_a < 85\text{ }^{\circ}\text{C}$	4.41 4.32	4.5	4.59 4.68	V V
V_i	Operating Input Voltage	$I_o = 500\text{ mA}$			16	V
I_{out}	Output Current Limit		800			mA
ΔV_o	Line Regulation	$V_i = 5.5\text{ to }16\text{ V}$, $I_o = 5\text{ mA}$		3	18	mV
ΔV_o	Load Regulation	$V_i = 5.8\text{ V}$ $I_o = 5\text{ to }500\text{ mA}$		2	10	mV
I_d	Quiescent Current	ON MODE $V_i = 5.5\text{ to }16\text{ V}$ $I_o = 0\text{ mA}$ $V_i = 5.8\text{ to }16\text{ V}$ $I_o = 500\text{ mA}$		0.5	1 12	mA mA
		OFF MODE $V_i = 6\text{ V}$		50	100	μA
SVR	Supply Voltage Rejection	$I_o = 5\text{ mA}$ $V_i = 6.5\text{ V} \pm 1\text{ V}$ $f = 120\text{ Hz}$ $f = 1\text{ KHz}$ $f = 10\text{ KHz}$		77		dB
				72		dB
				60		dB
eN	Output Noise Voltage	$B = 10\text{ Hz to }100\text{ KHz}$		50		μV
V_d	Dropout Voltage	$I_o = 200\text{ mA}$ $I_o = 500\text{ mA}$		0.2	0.35	V
				0.4	0.70	V
V_{il}	Control Input Logic Low	$-40 < T_a < 125\text{ }^{\circ}\text{C}$			0.8	V
V_{ih}	Control Input Logic High	$-40 < T_a < 125\text{ }^{\circ}\text{C}$	2			V
I_i	Control Input Current	$V_i = 6\text{ V}$, $V_o = 6\text{ V}$		10		μA
C_o	Output Bypass Capacitance	$\text{ESR} = 0.1\text{ to }10\text{ }\Omega$ $I_o = 0\text{ to }500\text{ mA}$	2	10		μF

ELECTRICAL CHARACTERISTICS FOR LF47C (refer to the test circuits, $T_j = 25\text{ }^{\circ}\text{C}$, $C_i = 0.1\text{ }\mu\text{F}$, $C_o = 2.2\text{ }\mu\text{F}$ unless otherwise specified)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
V_o	Output Voltage	$I_o = 50\text{ mA}$, $V_i = 6.7\text{ V}$ $I_o = 50\text{ mA}$, $V_i = 6.7\text{ V}$ $-25 < T_a < 85\text{ }^{\circ}\text{C}$	4.606 4.512	4.7	4.794 4.888	V V
V_i	Operating Input Voltage	$I_o = 500\text{ mA}$			16	V
I_{out}	Output Current Limit		800			mA
ΔV_o	Line Regulation	$V_i = 5.7\text{ to }16\text{ V}$, $I_o = 5\text{ mA}$		3	18	mV
ΔV_o	Load Regulation	$V_i = 6\text{ V}$ $I_o = 5\text{ to }500\text{ mA}$		2	10	mV
I_d	Quiescent Current	ON MODE $V_i = 5.7\text{ to }16\text{ V}$ $I_o = 0\text{ mA}$ $V_i = 6\text{ to }16\text{ V}$ $I_o = 500\text{ mA}$		0.5	1 12	mA mA
		OFF MODE $V_i = 6\text{ V}$		50	100	μA
SVR	Supply Voltage Rejection	$I_o = 5\text{ mA}$ $V_i = 6.7\text{ V} \pm 1\text{ V}$ $f = 120\text{ Hz}$ $f = 1\text{ KHz}$ $f = 10\text{ KHz}$		77		dB
				72		dB
				60		dB
eN	Output Noise Voltage	$B = 10\text{ Hz to }100\text{ KHz}$		50		μV
V_d	Dropout Voltage	$I_o = 200\text{ mA}$ $I_o = 500\text{ mA}$		0.2	0.35	V
				0.4	0.7	V
V_{il}	Control Input Logic Low	$-40 < T_a < 125\text{ }^{\circ}\text{C}$			0.8	V
V_{ih}	Control Input Logic High	$-40 < T_a < 125\text{ }^{\circ}\text{C}$	2			V
I_i	Control Input Current	$V_i = 6\text{ V}$, $V_o = 6\text{ V}$		10		μA
C_o	Output Bypass Capacitance	$\text{ESR} = 0.1\text{ to }10\text{ }\Omega$ $I_o = 0\text{ to }500\text{ mA}$	2	10		μF

ELECTRICAL CHARACTERISTICS FOR LF50C (refer to the test circuits, $T_j = 25\text{ }^{\circ}\text{C}$, $C_i = 0.1\text{ }\mu\text{F}$, $C_o = 2.2\text{ }\mu\text{F}$ unless otherwise specified)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
V_o	Output Voltage	$I_o = 50\text{ mA}$, $V_i = 7\text{ V}$ $I_o = 50\text{ mA}$, $V_i = 7\text{ V}$ $-25 < T_a < 85\text{ }^{\circ}\text{C}$	4.9 4.8	5	5.1 5.2	V V
V_i	Operating Input Voltage	$I_o = 500\text{ mA}$			16	V
I_{out}	Output Current Limit		800			mA
ΔV_o	Line Regulation	$V_i = 6\text{ to }16\text{ V}$, $I_o = 5\text{ mA}$		3	18	mV
ΔV_o	Load Regulation	$V_i = 6.3\text{ V}$ $I_o = 5\text{ to }500\text{ mA}$		2	10	mV
I_d	Quiescent Current	ON MODE $V_i = 6\text{ to }16\text{ V}$ $I_o = 0\text{ mA}$ $V_i = 6.3\text{ to }16\text{ V}$ $I_o = 500\text{ mA}$		0.5	1 12	mA mA
		OFF MODE $V_i = 6\text{ V}$		50	100	μA
SVR	Supply Voltage Rejection	$I_o = 5\text{ mA}$ $V_i = 7\text{ V} \pm 1\text{ V}$ $f = 120\text{ Hz}$ $f = 1\text{ KHz}$ $f = 10\text{ KHz}$		76		dB
				71		dB
				60		dB
eN	Output Noise Voltage	$B = 10\text{ Hz to }100\text{ KHz}$		50		μV
V_d	Dropout Voltage	$I_o = 200\text{ mA}$		0.2	0.35	V
		$I_o = 500\text{ mA}$		0.4	0.7	V
V_{il}	Control Input Logic Low	$-40 < T_a < 125\text{ }^{\circ}\text{C}$			0.8	V
V_{ih}	Control Input Logic High	$-40 < T_a < 125\text{ }^{\circ}\text{C}$	2			V
I_i	Control Input Current	$V_i = 6\text{ V}$, $V_c = 6\text{ V}$		10		μA
C_o	Output Bypass Capacitance	$\text{ESR} = 0.1\text{ to }10\text{ }\Omega$ $I_o = 0\text{ to }500\text{ mA}$	2	10		μF

ELECTRICAL CHARACTERISTICS FOR LF52C (refer to the test circuits, $T_j = 25\text{ }^{\circ}\text{C}$, $C_i = 0.1\text{ }\mu\text{F}$, $C_o = 2.2\text{ }\mu\text{F}$ unless otherwise specified)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
V_o	Output Voltage	$I_o = 50\text{ mA}$, $V_i = 7.2\text{ V}$ $I_o = 50\text{ mA}$, $V_i = 7.2\text{ V}$ $-25 < T_a < 85\text{ }^{\circ}\text{C}$	5.096 4.992	5.2	5.304 5.408	V V
V_i	Operating Input Voltage	$I_o = 500\text{ mA}$			16	V
I_{out}	Output Current Limit		800			mA
ΔV_o	Line Regulation	$V_i = 6.2\text{ to }16\text{ V}$, $I_o = 5\text{ mA}$		3	18	mV
ΔV_o	Load Regulation	$V_i = 6.5\text{ V}$ $I_o = 5\text{ to }500\text{ mA}$		2	10	mV
I_d	Quiescent Current	ON MODE $V_i = 6.2\text{ to }16\text{ V}$ $I_o = 0\text{ mA}$ $V_i = 6.5\text{ to }16\text{ V}$ $I_o = 500\text{ mA}$		0.5	1 12	mA mA
		OFF MODE $V_i = 6\text{ V}$		50	100	μA
SVR	Supply Voltage Rejection	$I_o = 5\text{ mA}$ $V_i = 7.2\text{ V} \pm 1\text{ V}$ $f = 120\text{ Hz}$ $f = 1\text{ KHz}$ $f = 10\text{ KHz}$		76		dB
				71		dB
				60		dB
eN	Output Noise Voltage	$B = 10\text{ Hz to }100\text{ KHz}$		50		μV
V_d	Dropout Voltage	$I_o = 200\text{ mA}$		0.2	0.35	V
		$I_o = 500\text{ mA}$		0.4	0.7	V
V_{il}	Control Input Logic Low	$-40 < T_a < 125\text{ }^{\circ}\text{C}$			0.8	V
V_{ih}	Control Input Logic High	$-40 < T_a < 125\text{ }^{\circ}\text{C}$	2			V
I_i	Control Input Current	$V_i = 6\text{ V}$, $V_c = 6\text{ V}$		10		μA
C_o	Output Bypass Capacitance	$\text{ESR} = 0.1\text{ to }10\text{ }\Omega$ $I_o = 0\text{ to }500\text{ mA}$	2	10		μF

LF00AC/C SERIES

ELECTRICAL CHARACTERISTICS FOR LF55C (refer to the test circuits, $T_j = 25\text{ }^{\circ}\text{C}$, $C_i = 0.1\text{ }\mu\text{F}$, $C_o = 2.2\text{ }\mu\text{F}$ unless otherwise specified)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
V_o	Output Voltage	$I_o = 50\text{ mA}$, $V_i = 7.5\text{ V}$	5.39	5.5	5.61	V
		$I_o = 50\text{ mA}$, $V_i = 7.5\text{ V}$ $-25 < T_a < 85\text{ }^{\circ}\text{C}$	5.28		5.72	V
V_i	Operating Input Voltage	$I_o = 500\text{ mA}$			16	V
I_{out}	Output Current Limit		800			mA
ΔV_o	Line Regulation	$V_i = 6.5\text{ to }16\text{ V}$, $I_o = 5\text{ mA}$		3	18	mV
ΔV_o	Load Regulation	$V_i = 6.8\text{ V}$, $I_o = 5\text{ to }500\text{ mA}$		2	10	mV
I_d	Quiescent Current	ON MODE				
		$V_i = 6.5\text{ to }16\text{ V}$, $I_o = 0\text{ mA}$		0.5	1	mA
		$V_i = 6.8\text{ to }16\text{ V}$, $I_o = 500\text{ mA}$			12	mA
		OFF MODE $V_i = 6\text{ V}$		50	100	μA
SVR	Supply Voltage Rejection	$I_o = 5\text{ mA}$, $V_i = 7.5\text{ V} \pm 1\text{ V}$				
		$f = 120\text{ Hz}$		76		dB
		$f = 1\text{ KHz}$		71		dB
		$f = 10\text{ KHz}$		60		dB
eN	Output Noise Voltage	$B = 10\text{ Hz to }100\text{ KHz}$		50		μV
V_d	Dropout Voltage	$I_o = 200\text{ mA}$		0.2	0.35	V
		$I_o = 500\text{ mA}$		0.4	0.70	V
V_{il}	Control Input Logic Low	$-40 < T_a < 125\text{ }^{\circ}\text{C}$			0.8	V
V_{ih}	Control Input Logic High	$-40 < T_a < 125\text{ }^{\circ}\text{C}$	2			V
I_i	Control Input Current	$V_i = 6\text{ V}$, $V_c = 6\text{ V}$		10		μA
C_o	Output Bypass Capacitance	$\text{ESR} = 0.1\text{ to }10\text{ }\Omega$, $I_o = 0\text{ to }500\text{ mA}$	2	10		μF

ELECTRICAL CHARACTERISTICS FOR LF60C (refer to the test circuits, $T_j = 25\text{ }^{\circ}\text{C}$, $C_i = 0.1\text{ }\mu\text{F}$, $C_o = 2.2\text{ }\mu\text{F}$ unless otherwise specified)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
V_o	Output Voltage	$I_o = 50\text{ mA}$, $V_i = 8\text{ V}$	5.88	6	6.12	V
		$I_o = 50\text{ mA}$, $V_i = 8\text{ V}$ $-25 < T_a < 85\text{ }^{\circ}\text{C}$	5.76		6.24	V
V_i	Operating Input Voltage	$I_o = 500\text{ mA}$			16	V
I_{out}	Output Current Limit		800			mA
ΔV_o	Line Regulation	$V_i = 7\text{ to }16\text{ V}$, $I_o = 5\text{ mA}$		4	24	mV
ΔV_o	Load Regulation	$V_i = 7.3\text{ V}$, $I_o = 5\text{ to }500\text{ mA}$		2	10	mV
I_d	Quiescent Current	ON MODE				
		$V_i = 7\text{ to }16\text{ V}$, $I_o = 0\text{ mA}$		0.7	1.5	mA
		$V_i = 7.3\text{ to }16\text{ V}$, $I_o = 500\text{ mA}$			12	mA
		OFF MODE $V_i = 9\text{ V}$		70	140	μA
SVR	Supply Voltage Rejection	$I_o = 5\text{ mA}$, $V_i = 8\text{ V} \pm 1\text{ V}$				
		$f = 120\text{ Hz}$		75		dB
		$f = 1\text{ KHz}$		70		dB
		$f = 10\text{ KHz}$		60		dB
eN	Output Noise Voltage	$B = 10\text{ Hz to }100\text{ KHz}$		50		μV
V_d	Dropout Voltage	$I_o = 200\text{ mA}$		0.2	0.35	V
		$I_o = 500\text{ mA}$		0.4	0.7	V
V_{il}	Control Input Logic Low	$-40 < T_a < 125\text{ }^{\circ}\text{C}$			0.8	V
V_{ih}	Control Input Logic High	$-40 < T_a < 125\text{ }^{\circ}\text{C}$	2			V
I_i	Control Input Current	$V_i = 9\text{ V}$, $V_c = 6\text{ V}$		10		μA
C_o	Output Bypass Capacitance	$\text{ESR} = 0.1\text{ to }10\text{ }\Omega$, $I_o = 0\text{ to }500\text{ mA}$	2	10		μF

ELECTRICAL CHARACTERISTICS FOR LF80C (refer to the test circuits, $T_j = 25^\circ\text{C}$, $C_i = 0.1\ \mu\text{F}$, $C_o = 2.2\ \mu\text{F}$ unless otherwise specified)

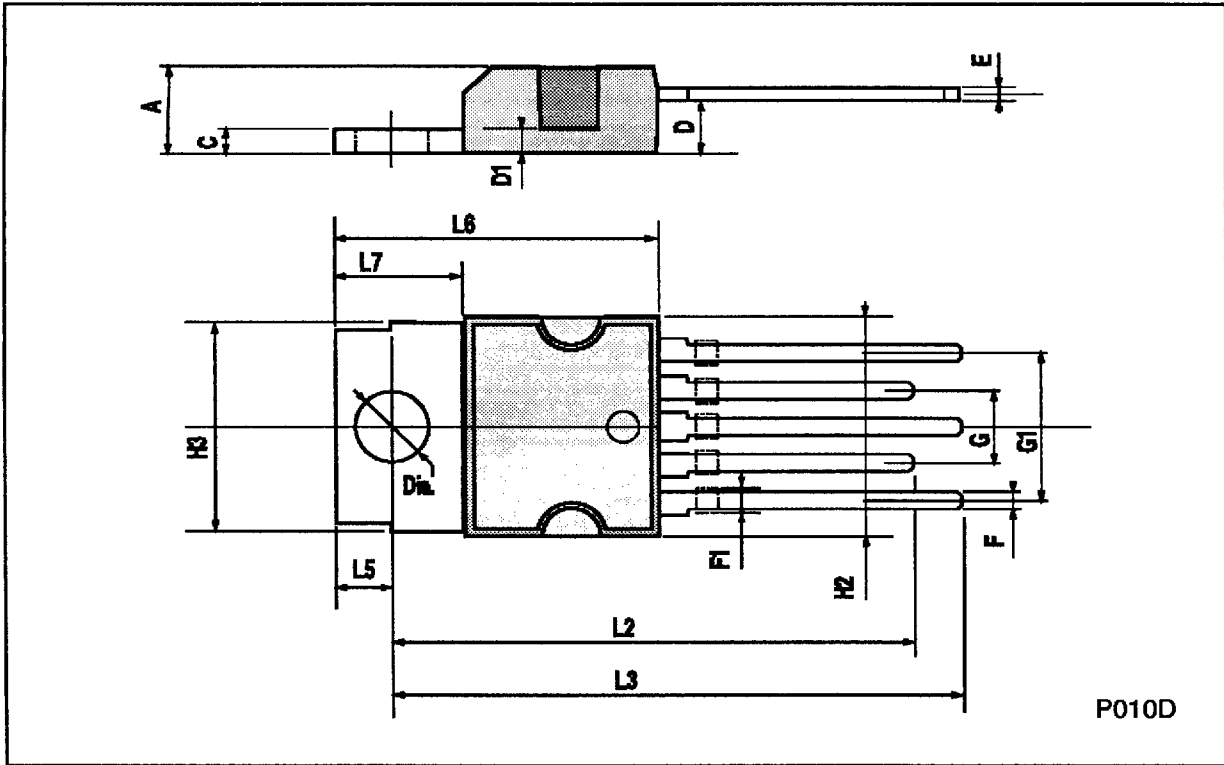
Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
V_o	Output Voltage	$I_o = 50\ \text{mA}$, $V_i = 10\ \text{V}$ $I_o = 50\ \text{mA}$, $V_i = 10\ \text{V}$ $-25 < T_a < 85^\circ\text{C}$	7.84 7.68	8	8.16 8.32	V V
V_i	Operating Input Voltage	$I_o = 500\ \text{mA}$			16	V
I_{out}	Output Current Limit		800			mA
ΔV_o	Line Regulation	$V_i = 9\ \text{to}\ 16\ \text{V}$, $I_o = 5\ \text{mA}$		4	24	mV
ΔV_o	Load Regulation	$V_i = 9.3\ \text{V}$ $I_o = 5\ \text{to}\ 500\ \text{mA}$		2	10	mV
I_d	Quiescent Current	ON MODE $V_i = 9\ \text{to}\ 16\ \text{V}$ $I_o = 0\ \text{mA}$ $V_i = 9.3\ \text{to}\ 16\ \text{V}$ $I_o = 500\ \text{mA}$ OFF MODE $V_i = 9\ \text{V}$		0.7 70	1.5 140	mA mA μA
SVR	Supply Voltage Rejection	$I_o = 5\ \text{mA}$ $V_i = 10\ \text{V} \pm 1\ \text{V}$ $f = 120\ \text{Hz}$ $f = 1\ \text{KHz}$ $f = 10\ \text{KHz}$		72 67 60		dB dB dB
eN	Output Noise Voltage	$B = 10\ \text{Hz to}\ 100\ \text{KHz}$		50		μV
V_d	Dropout Voltage	$I_o = 200\ \text{mA}$ $I_o = 500\ \text{mA}$		0.2 0.4	0.35 0.7	V V
V_{il}	Control Input Logic Low	$-40 < T_a < 125^\circ\text{C}$			0.8	V
V_{ih}	Control Input Logic High	$-40 < T_a < 125^\circ\text{C}$	2			V
I_i	Control Input Current	$V_i = 9\ \text{V}$, $V_c = 6\ \text{V}$		10		μA
C_o	Output Bypass Capacitance	$\text{ESR} = 0.1\ \text{to}\ 10\ \Omega$ $I_o = 0\ \text{to}\ 500\ \text{mA}$	2	10		μF

ELECTRICAL CHARACTERISTICS FOR LF120C (refer to the test circuits, $T_j = 25^\circ\text{C}$, $C_i = 0.1\ \mu\text{F}$, $C_o = 2.2\ \mu\text{F}$ unless otherwise specified)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
V_o	Output Voltage	$I_o = 50\ \text{mA}$, $V_i = 14\ \text{V}$ $I_o = 50\ \text{mA}$, $V_i = 14\ \text{V}$ $-25 < T_a < 85^\circ\text{C}$	11.76 11.52	12	12.24 12.48	V V
V_i	Operating Input Voltage	$I_o = 500\ \text{mA}$			16	V
I_{out}	Output Current Limit		800			mA
ΔV_o	Line Regulation	$V_i = 13\ \text{to}\ 16\ \text{V}$, $I_o = 5\ \text{mA}$		8	48	mV
ΔV_o	Load Regulation	$V_i = 13.3\ \text{V}$ $I_o = 5\ \text{to}\ 500\ \text{mA}$		2	10	mV
I_d	Quiescent Current	ON MODE $V_i = 13\ \text{to}\ 16\ \text{V}$ $I_o = 0\ \text{mA}$ $V_i = 13.3\ \text{to}\ 16\ \text{V}$ $I_o = 500\ \text{mA}$ OFF MODE $V_i = 13\ \text{V}$		0.7 70	1.5 140	mA mA μA
SVR	Supply Voltage Rejection	$I_o = 5\ \text{mA}$ $V_i = 14\ \text{V} \pm 1\ \text{V}$ $f = 120\ \text{Hz}$ $f = 1\ \text{KHz}$ $f = 10\ \text{KHz}$		69 64 54		dB dB dB
eN	Output Noise Voltage	$B = 10\ \text{Hz to}\ 100\ \text{KHz}$		50		μV
V_d	Dropout Voltage	$I_o = 200\ \text{mA}$ $I_o = 500\ \text{mA}$		0.2 0.4	0.35 0.7	V V
V_{il}	Control Input Logic Low	$-40 < T_a < 125^\circ\text{C}$			0.8	V
V_{ih}	Control Input Logic High	$-40 < T_a < 125^\circ\text{C}$	2			V
I_i	Control Input Current	$V_i = 13\ \text{V}$, $V_c = 6\ \text{V}$		10		μA
C_o	Output Bypass Capacitance	$\text{ESR} = 0.1\ \text{to}\ 10\ \Omega$ $I_o = 0\ \text{to}\ 500\ \text{mA}$	2	10		μF

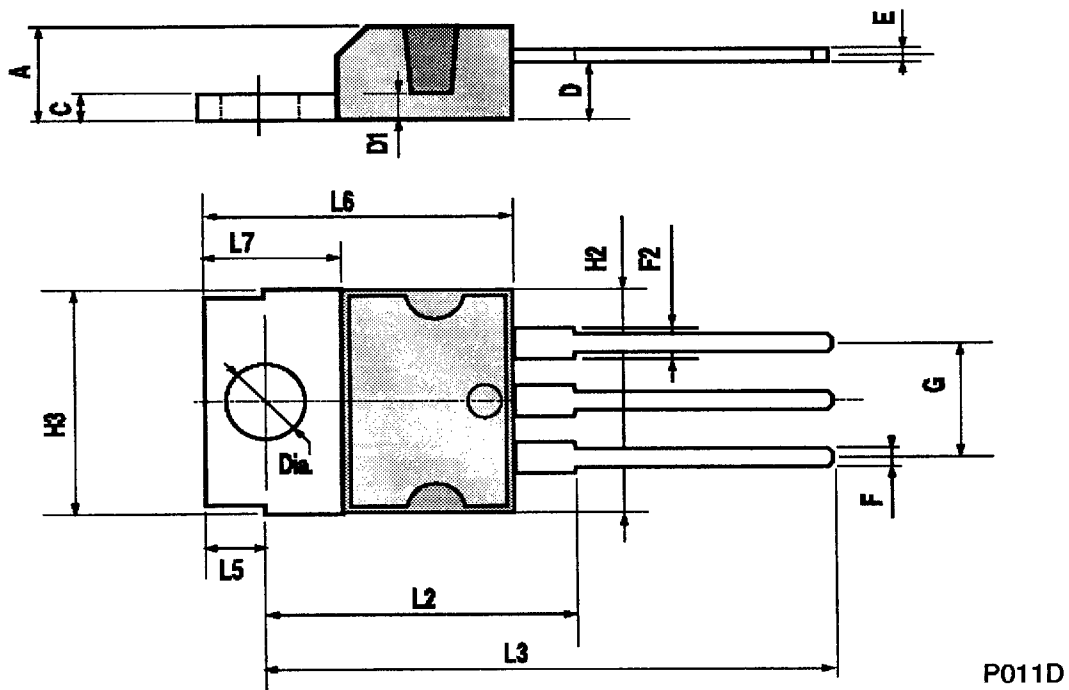
Pentawatt (In- Line) MECHANICAL DATA

DIM.	mm			inch		
	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
A			4.8			0.189
C			1.37			0.054
D	2.4		2.8	0.094		0.110
D1	1.2		1.35	0.047		0.053
E	0.35		0.55	0.014		0.022
F	0.8		1.05	0.031		0.041
F1	1		1.4	0.039		0.055
G	3.2	3.4	3.6	0.126	0.134	0.142
G1	6.6	6.8	7	0.260	0.268	0.276
H2			10.4			0.409
H3	10.05		10.4	0.396		0.409
L2	23.05	23.4	23.8	0.907	0.921	0.937
L3	25.3	25.65	26.1	0.996	1.010	1.028
L5	2.6		3	0.102		0.118
L6	15.1		15.8	0.594		0.622
L7	6		6.6	0.236		0.260
Dia	3.65		3.85	0.144		0.152



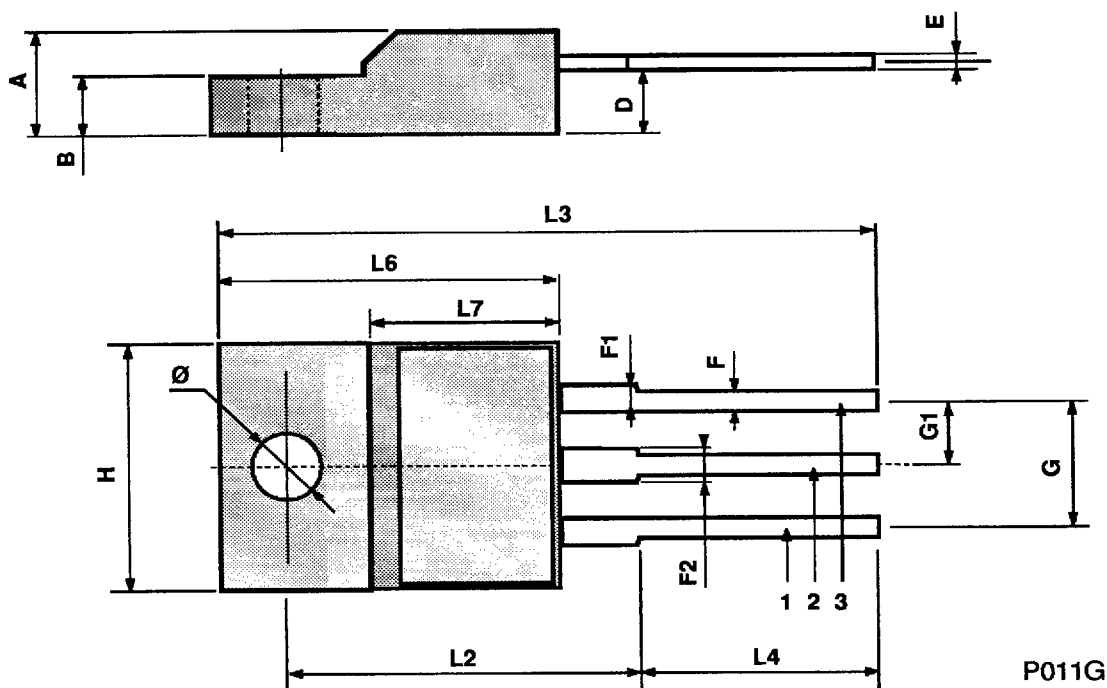
TO-220 MECHANICAL DATA

DIM.	mm			inch		
	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
A			4.8			0.189
C			1.37			0.054
D	2.4		2.8	0.094		0.110
D1	1.2		1.35	0.047		0.053
E	0.35		0.55	0.014		0.022
F	0.8		1.05	0.031		0.041
F2	1.15		1.4	0.045		0.055
G	4.95	5.08	5.21	0.195	0.200	0.205
H2			10.4			0.409
H3	10.05		10.4	0.396		0.409
L2		16.2			0.638	
L3	26.3	26.7	27.1	1.035	1.051	1.067
L5	2.6		3	0.102		0.118
L6	15.1		15.8	0.594		0.622
L7	6		6.6	0.236		0.260
Dia.	3.65		3.85	0.144		0.152



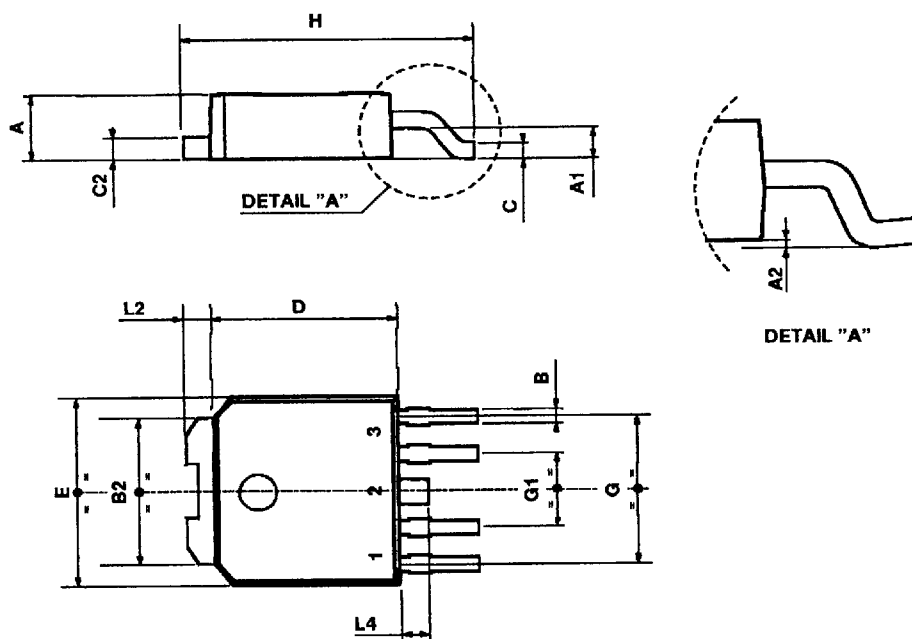
ISOWATT220 MECHANICAL DATA

DIM.	mm			inch		
	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
A	4.4		4.6	0.173		0.181
B	2.5		2.7	0.098		0.106
D	2.5		2.75	0.098		0.108
E	0.4		0.7	0.015		0.027
F	0.75		1	0.030		0.039
F1	1.15		1.7	0.045		0.067
F2	1.15		1.7	0.045		0.067
G	4.95		5.2	0.195		0.204
G1	2.4		2.7	0.094		0.106
H	10		10.4	0.393		0.409
L2		16			0.630	
L3	28.6		30.6	1.126		1.204
L4	9.8		10.6	0.385		0.417
L6	15.9		16.4	0.626		0.645
L7	9		9.3	0.354		0.366
Ø	3		3.2	0.118		0.126



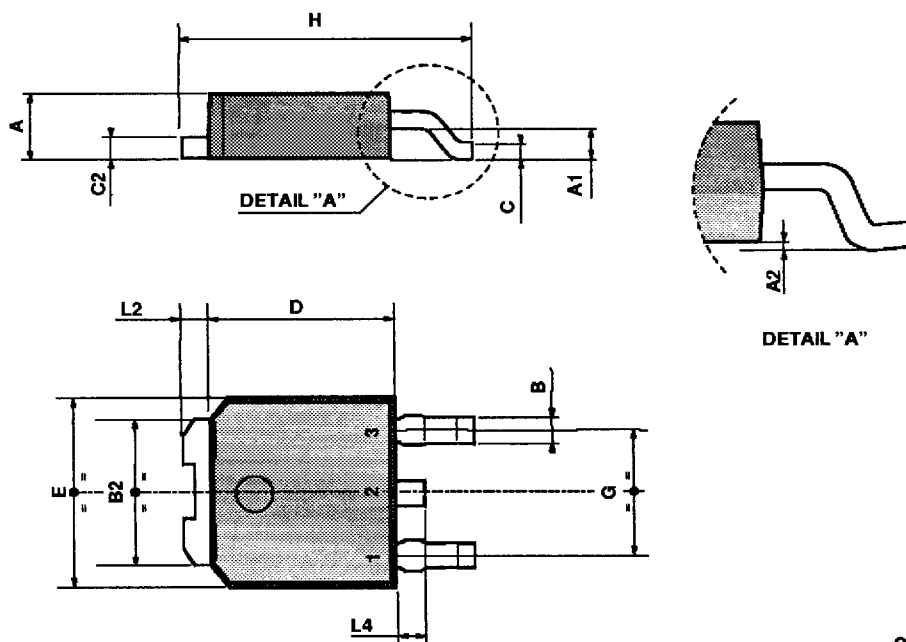
PPAK MECHANICAL DATA

DIM.	mm			inch		
	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
A	2.2		2.4	0.086		0.094
A1	0.9		1.1	0.035		0.043
A2	0.03		0.23	0.001		0.009
B		0.5			0.019	
B2	5.2		5.4	0.204		0.212
C	0.45		0.53	0.017		0.021
C2		0.5			0.019	
D	6		6.2	0.236		0.244
E	6.4		6.6	0.252		0.260
G		5.08			0.200	
G1		2.54			0.100	
H	9.35		10.1	0.368		0.397
L2		0.8			0.031	
L4	0.6		1	0.023		0.039



TO-252 (DPAK) MECHANICAL DATA

DIM.	mm			inch		
	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
A	2.2		2.4	0.086		0.094
A1	0.9		1.1	0.035		0.043
A2	0.03		0.23	0.001		0.009
B	0.64		0.9	0.025		0.035
B2	5.2		5.4	0.204		0.212
C	0.45		0.6	0.017		0.023
C2	0.48		0.6	0.019		0.023
D	6		6.2	0.236		0.244
E	6.4		6.6	0.252		0.260
G	4.4		4.6	0.173		0.181
H	9.35		10.1	0.368		0.397
L2		0.8			0.031	
L4	0.6		1	0.023		0.039



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