


**AS79LXXACP, AS79LXXCP Characteristics**  
 (Note 2)  $T_A = 0^\circ\text{C}$  to  $70^\circ\text{C}$  unless otherwise noted

AS79LXX Output Voltage, V	-9		-12		-15		Unit
	Min	Typ	Min	Typ	Min	Typ	
Input Voltage, V (unless otherwise noted)	-14		-17		-20		
Parameter	Conditions	Min	Typ	Max	Min	Typ	Max
Quiescent Current Change	$1\text{mA} \leq I_o \leq 100\text{mA}$ $1\text{mA} \leq I_o \leq 40\text{mA}$ $I_o = 100\text{mA}$ $V_{\text{MIN}} \leq V_{\text{IN}} \leq V_{\text{MAX}}$	0.3	0.3	0.3	0.3	0.3	0.3
Output Noise Voltage	$T_J = 25^\circ\text{C}, I_o = 100\text{mA}$ $f = 10\text{ Hz} + 10\text{ kHz}$	80	96	96	120	120	$\mu\text{V}$
Ripple Rejection	$T_J = 25^\circ\text{C}, I_o = 100\text{mA}$ $f = 120\text{ Hz}$	50	52	52	50	50	dB
Input Voltage Required to Maintain Line Regulation	$T_J = 25^\circ\text{C}, I_o = 100\text{mA}$ $I_o = 40\text{mA}$	-11.8	-14.6	-14.5	-17.7	-17.5	V

**Note 1:** Thermal resistance is  $232^\circ\text{C}/\text{W} \theta_{\text{JA}}$  at still air. The maximum junction temperature shall not exceed  $125^\circ\text{C}$  on electrical parameters.

**Note 2:** To ensure constant junction temperature, low duty cycle pulse testing is used.


**AS79LXX Series 3-Terminal Negative Regulators**
**General Description**

The AS79LXX series of 3-terminal negative voltage regulators features fixed output voltages of -9V, -12V, and -15V with output current capabilities in excess of 100 mA. These devices were designed using the latest computer techniques for optimizing the packaged IC thermal/electrical performance. The AS79LXX series, even when combined with a minimum output compensation capacitor of 0.1  $\mu\text{F}$ , exhibits an excellent transient response, a maximum line regulation of 0.07 %  $V_o/V$ , and a maximum load regulation of 0.01 %  $V_o/\text{mA}$ .

The AS79LXX series also includes, as self-protection circuitry: safe operating area circuitry for output transistor power dissipation limiting, a temperature independent short circuit current limit for peak output current limiting, and a thermal shutdown circuit to prevent excessive junction temperature. Although designed primarily as fixed voltage regulators, these devices may be combined with simple external circuitry for boosted and/or adjustable voltages and currents. The AS79LXX series is available in the 3-lead TO-92 package.

**Features**

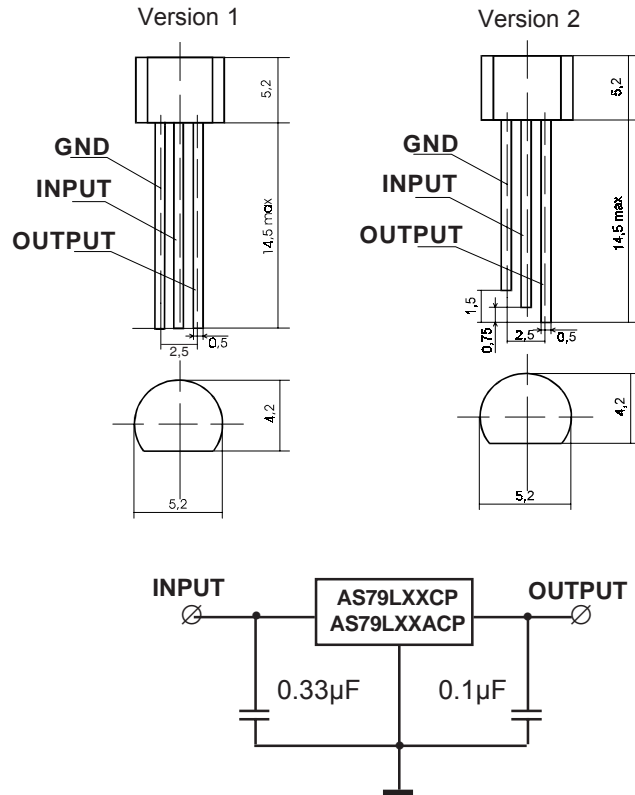
- Output voltage tolerances of  $\pm 10\%$  (AS79LXXCP),  $\pm 5\%$  (AS79LXXACP) over the temperature range.
- Preset output voltage error is less than  $\pm 5\%$  overload, line and temperature.
- Specified at an output current of 100 mA.
- Easily compensated with a small 0.1  $\mu\text{F}$  output capacitor.
- Internal short-circuit, thermal and safe operating area protection.
- Easily adjustable to higher output voltages.
- Maximum line regulation less than 0.07%  $V_{\text{OUT}}/V$ .
- Maximum load regulation less than 0.01%  $V_{\text{OUT}}/\text{mA}$ .
- TO-92 package.



**Absolute Maximum Ratings**

Input Voltage $V_o = -9V, -12V, -15V$	-35 V
Internal Power Dissipation (Note 1)	Internally Limited
Operating Temperature Range	0°C to +70°C
Maximum Junction Temperature	+125°C
Storage Temperature Range	-55°C to +150°C
Lead Temperature (Soldering, 10 sec.)	+260°C

**Connection Diagrams**



Order Number:  
 AS79L09CP  
 AS79L12CP  
 AS79L15CP  
 AS79L09ACP  
 AS79L12ACP  
 AS79L15ACP



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 (Note 2)  $T_A = 0^\circ\text{C}$  to  $70^\circ\text{C}$  unless otherwise noted

AS79LXX Output Voltage, V	-15		-20		Unit
	Min	Typ	Max	Max	
Output Voltage	-15.6	-15	-14.4	-14.25	V
Input Voltage, V (unless otherwise noted)	-15.75	-15	-14.25	-14.25	V
Parameter	-9		-14		
Output Voltage	-9.4	-9	-8.6	-8.55	V
Line Regulation	-9.45	-9	-8.55	-8.55	V
Load Regulation	-9.45	-9	-8.55	-8.55	V
Quiescent Current	-9.45	-9	-8.55	-8.55	V
Output Voltage	-12.5	-12	-11.5	-11.4	V
Line Regulation	-12.6	-12	-11.4	-11.4	V
Load Regulation	-12.6	-12	-11.4	-11.4	V
Quiescent Current	-12.6	-12	-11.4	-11.4	V
Output Voltage	-12.9	-12	-11.1	-10.8	V
Line Regulation	-13.2	-12	-10.8	-10.8	V
Load Regulation	-13.2	-12	-10.8	-10.8	V
Quiescent Current	-13.2	-12	-10.8	-10.8	V
Output Voltage	45	45	45	45	mV
Line Regulation	45	45	45	45	mV
Load Regulation	45	45	45	45	mV
Quiescent Current	125	100	100	100	mV
Output Voltage	60	60	60	60	mV
Line Regulation	60	60	60	60	mV
Load Regulation	60	60	60	60	mV
Quiescent Current	80	80	80	80	mV
Output Voltage	80	80	80	80	mV
Line Regulation	80	80	80	80	mV
Load Regulation	80	80	80	80	mV
Quiescent Current	100	100	100	100	mV