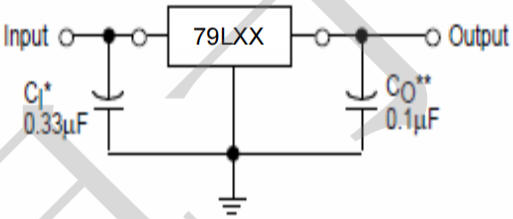
79LXX series
NEGATIVE VOLTAGE REGULATOR

FEATURES

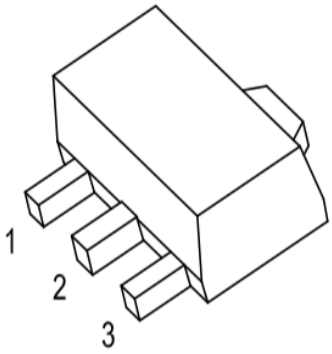
- Wide range of available,fixedoutput voltage.
  (VOUT : - 6.0V, - 9.0V, - 10V)
- uperior ripple rejection ratio for audio frequency
- Maximum output current 100mA
- Over current and over temperature protection

APPLICATIONS

Three-terminal Negative Fixed Voltage Regulators



1. GND
2. IN
3. OUT



SOT-89

MAXIMUM RATING operating temperature range applies unless otherwise specified

Symbol	Parameter	Value	Units
V_I	Input voltage	-30	V
P_D	Power dissipation	500	mW
Topr	Operating ambient temperature	0 to +150	℃
T_j, T_{stg}	Junction and Storage Temperature	-65 to +150	℃

ELECTRICAL CHARACTERISTICS

(V_{IN} = –11 V, I_{OUT} = 40 mA, 0°C ≤ Tj ≤ 125°C, C_{IN} = 0.33μF, C_L = 0.1μF,unless otherwise specified)

Parameter	Symbol	Test conditions	79L06			UNIT
			MIN	TYP	MAX	
Output voltage	V_O	T_j=25℃ V_{IN}=-10V ,1.0 mA ≤I_O≤70mA	-5.76 -5.70	-6.0	-6.24 -6.30	V
Load regulation	ΔV_{OLOAD}	T_j=25℃, 1.0 mA ≤ I_{OUT} ≤ 150 mA T_j=25℃, 1.0 mA ≤ I_{OUT} ≤ 150 mA T_j=25℃, 1.0 mA ≤ I_{OUT} ≤ 150 mA		17.5 12 5.5	 70 35	mV
Line regulation	ΔV_{OLINE}	T_j=25℃, -21V≤V_i≤-8.1V T_j=25℃, -21V≤V_i≤-9.0V		50 45	150 110	mV
Quiescent current	I_Q	T_j=25℃		-2.0	-4.0	mA
Quiescent current change	$\triangle I_Q$	T_j=25℃, -21V≤V_i≤-9.0V 1.0mA≤I_O≤40mA			1.5 1.0	mA
Voltage drop	V_{DROP}	T_j=25℃		1.3	_	V
Output short circuit current	I_{OS}	T_j=25℃		300		mA

ELECTRICAL CHARACTERISTICS

(V_{IN} = –14 V, I_{OUT} = 40 mA, 0°C ≤ Tj ≤ 125°C, C_{IN} = 0.33μF, C_L = 0.1μF,unless otherwise specified)

Parameter	Symbol	Test conditions	79L08			UNIT
			MIN	TYP	MAX	
Output voltage	V_O	T_j=25℃ V_{IN}=-14V ,1.0 mA ≤I_O≤70mA	-7.68 -7.60	-8.0	-8.32 -8.40	V
Load regulation	ΔV_{OLOAD}	T_j=25℃, 1.0 mA ≤ I_{OUT} ≤ 150 mA T_j=25℃, 1.0 mA ≤ I_{OUT} ≤ 150 mA T_j=25℃, 1.0 mA ≤ I_{OUT} ≤ 150 mA		22 15 7.0	 80 40	mV
Line regulation	ΔV_{OLINE}	T_j=25℃, -23V≤V_i≤-10.5V T_j=25℃, -23V≤V_i≤-11V		65 55	175 125	mV
Quiescent current	I_Q	T_j=25℃		-2.0	-4.0	mA
Quiescent current change	$\triangle I_Q$	T_j=25℃, -23V≤V_i≤-11V 1.0mA≤I_O≤40mA			1.5 1.0	mA
Voltage drop	V_{DROP}	T_j=25℃		1.3		V
Output short circuit current	I_{OS}	T_j=25℃		270		mA

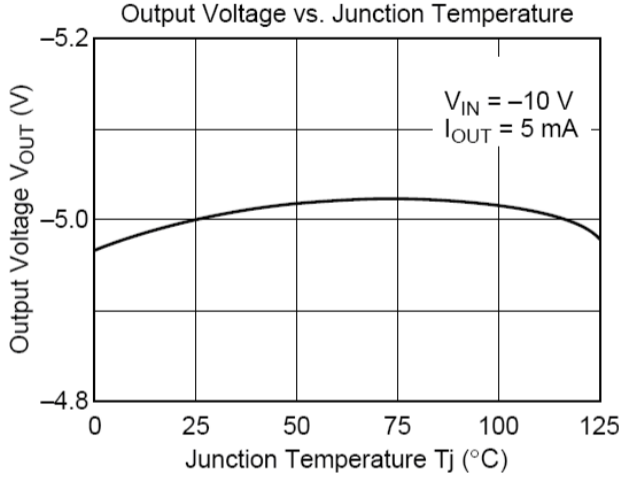
ELECTRICAL CHARACTERISTICS

(V_{IN} = –15 V, I_{OUT} = 40 mA, 0°C ≤ Tj ≤ 125°C, C_{IN} = 0.33μF, C_L = 0.1μF,unless otherwise specified)

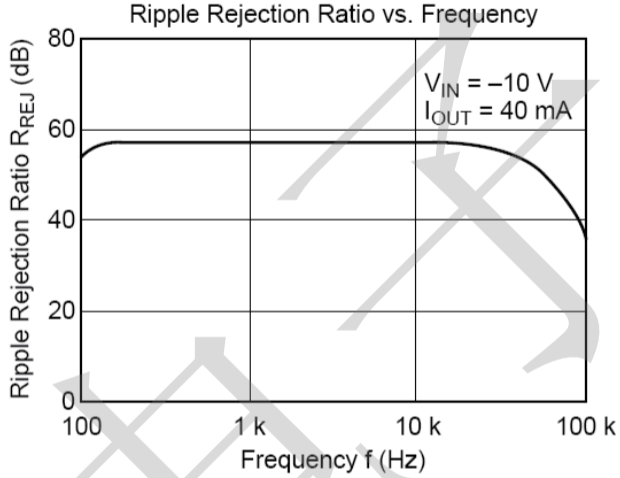
Parameter	Symbol	Test conditions	79L09			UNIT
			MIN	TYP	MAX	
Output voltage	V_O	T_j=25℃ V_{IN}=-15V ,1.0 mA ≤I_O≤70mA	-8.64 -8.55	-9.0	-9.36 -9.45	V
Load regulation	ΔV_{OLOAD}	T_j=25℃, 1.0 mA ≤ I_{OUT} ≤ 150 mA T_j=25℃, 1.0 mA ≤ I_{OUT} ≤ 150 mA T_j=25℃, 1.0 mA ≤ I_{OUT} ≤ 150 mA		24.5 17 8.0	 90 45	mV
Line regulation	ΔV_{OLINE}	T_j=25℃, -24V≤V_i≤-11.4V T_j=25℃, -24V≤V_i≤-12V		80 70	200 160	mV
Quiescent current	I_Q	T_j=25℃		-2.6	4.6	mA
Quiescent current change	$\triangle I_Q$	T_j=25℃, -24V≤V_i≤-12V 1.0mA≤I_O≤40mA			1.5 1.0	mA
Voltage drop	V_{DROP}	T_j=25℃		1.3		V
Output short circuit current	I_{OS}	T_j=25℃		270		mA

TYPICAL CHARACTERISTICS @ Ta=25℃ unless otherwise specified

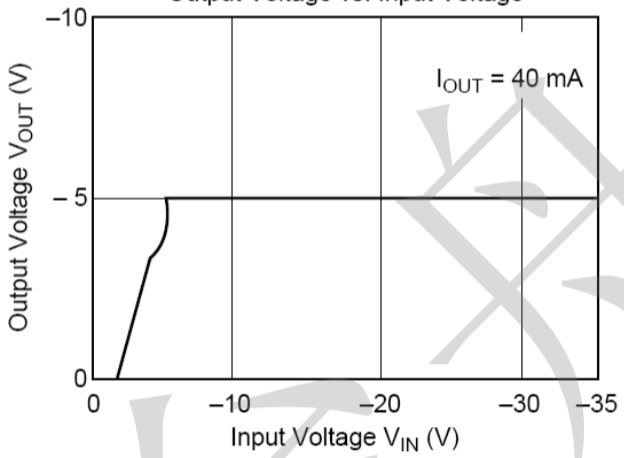
Output Voltage vs. Junction Temperature



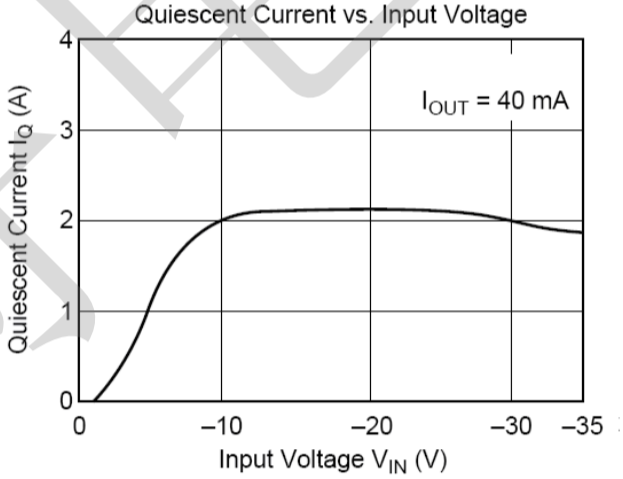
Ripple Rejection Ratio vs. Frequency



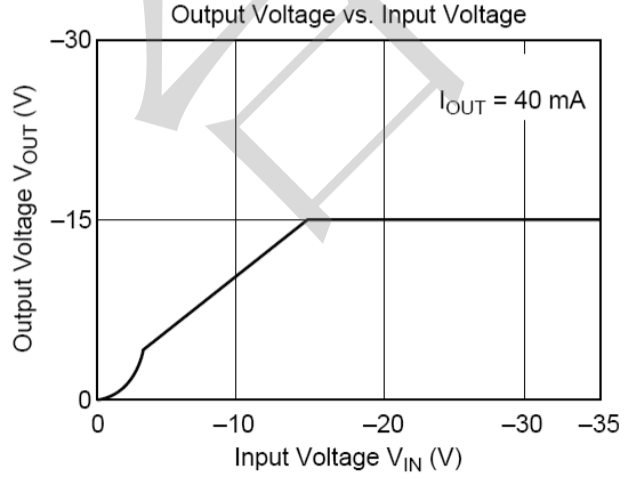
Output Voltage vs. Input Voltage



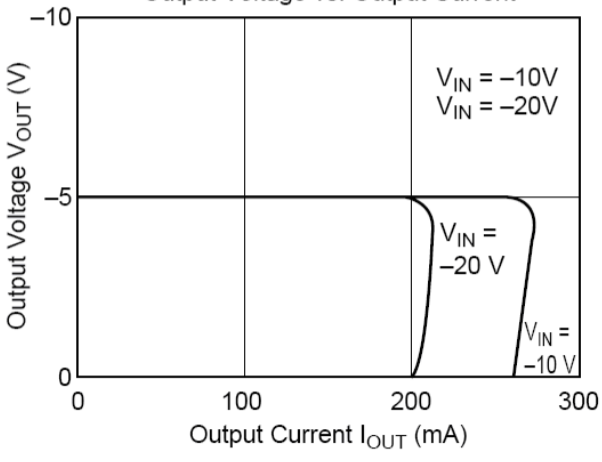
Quiescent Current vs. Input Voltage



Output Voltage vs. Input Voltage

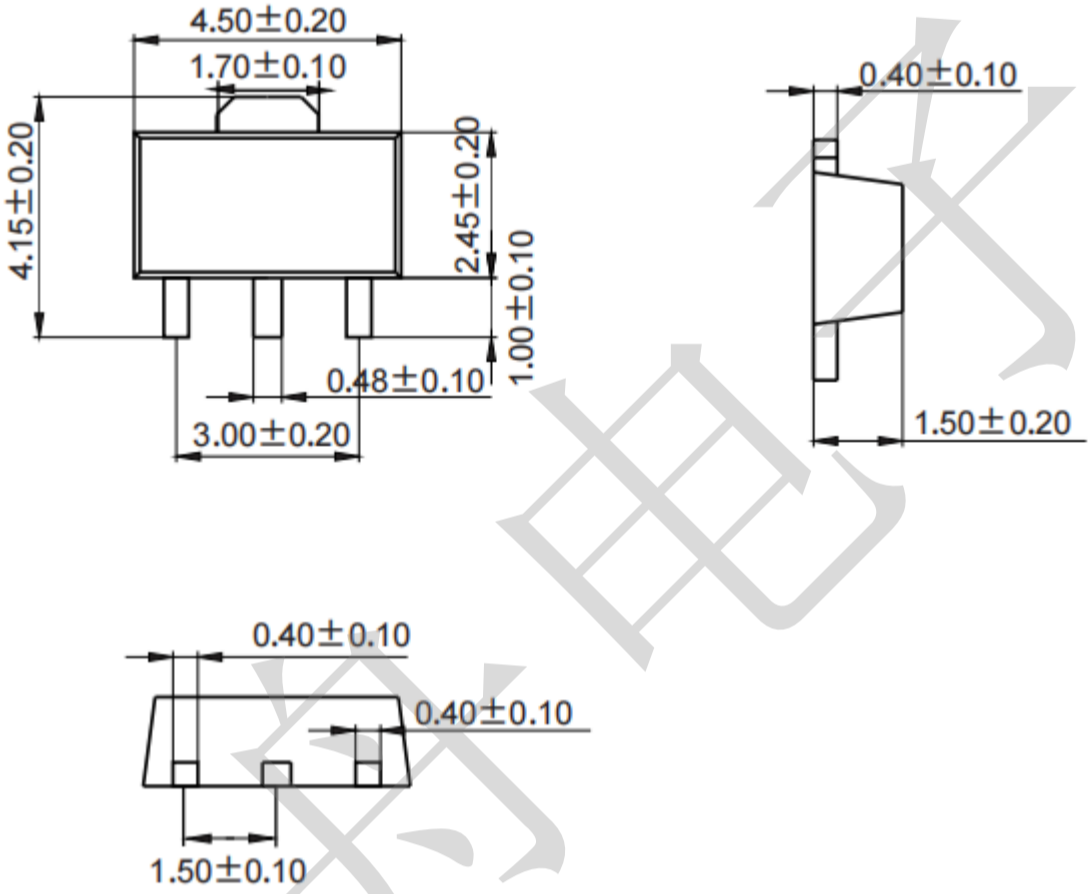


Output Voltage vs. Output Current



Package Outline Dimensions (unit:mm)

SOT-89



Mounting Pad Layout (unit: mm)