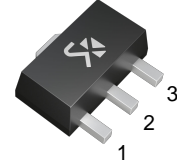


## 3-Terminal Negative Voltage Regulator

### FEATURE

- Output current up to 100mA
- Fixed output voltage of -5V,-6V,-8V
- Thermal overload shutdown protection
- Short circuit current limiting



1: GND 2: IN 3: OUT  
SOT-89 PLASTIC PACKAGE

### ABSOLUTE MAXIMUM RATINGS (Operating temperature range applies unless otherwise specified)

Characteristic	Symbol	Value	Units
Input voltage(for $V_o=-5\sim-8V$ )	$V_{IN}$	-30	V
Output Current	$I_{OUT}$	100	mA
Junction Temperature	$T_J$	+125	°C
Operating Temperature	$T_{OPR}$	0~+125	°C
Storage Temperature Range	$T_{STG}$	-65~+150	°C

### 79L05K Electrical Characteristics ( $T_a = 25^\circ C$ ) (Unless otherwise specified, $0^\circ C \leq T_J \leq 125^\circ C$ , $V_I = -10V$ , $I_O = 40mA$ , $C_1 = 0.33\mu F$ , $C_2 = 1.0\mu F$ )

Parameter	Symbol	Test conditions	MIN	TYP	MAX	Unit
Output Voltage	$V_o$	$V_{IN}=-10V, I_o=40mA$	-4.8	-5.0	-5.2	V
Line Regulation	$V_o-V_{IN}$	$V_{IN}=-7\sim-20V, I_o=40mA$		15	150	mV
Load Regulation	$V_o-I_o$	$V_{IN}=-10V, I_o=1\sim 100mA$		7	60	mV
Quiescent current	$I_Q$	$V_{IN}=-10V, I_o=40mA$		2.0	6.0	mA
Ripple Rejection	RR	$V_{IN}=-8\sim-18V$ , $I_o=40mA, E_{in}=1V_{p-p}, f=120Hz$	41	71		dB
Output Noise Voltage	$V_{NO}$	$V_{IN}=-10V$ , $BW=10Hz\sim 100kHz, I_o=40mA$		120		$\mu V$

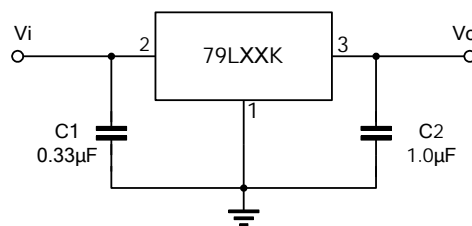
### 79L06K Electrical Characteristics ( $T_a = 25^\circ C$ ) (Unless otherwise specified, $0^\circ C \leq T_J \leq 125^\circ C$ , $V_I = -12V$ , $I_O = 40mA$ , $C_1 = 0.33\mu F$ , $C_2 = 1.0\mu F$ )

Parameter	Symbol	Test conditions	MIN	TYP	MAX	Unit
Output Voltage	$V_o$	$V_{IN}=-12V, I_o=40mA$	-5.76	-6.0	-6.24	V
Line Regulation	$V_o-V_{IN}$	$V_{IN}=-6\sim-21V, I_o=40mA$		18	160	mV
Load Regulation	$V_o-I_o$	$V_{IN}=-12V, I_o=1\sim 100mA$		8	72	mV
Quiescent current	$I_Q$	$V_{IN}=-12V, I_o=40mA$		2.0	6.0	mA
Ripple Rejection	RR	$V_{IN}=-9\sim-19V$ , $I_o=40mA, E_{in}=1V_{p-p}, f=120Hz$	40	70		dB
Output Noise Voltage	$V_{NO}$	$V_{IN}=-12V$ , $BW=10Hz\sim 100kHz, I_o=40mA$		144		$\mu V$

**79L08K Electrical Characteristics ( $T_a = 25^\circ\text{C}$ )** (Unless otherwise specified,  $0^\circ\text{C} \leq T_J \leq 125^\circ\text{C}$ ,  $V_I = -14\text{ V}$ ,  $I_O = 40\text{ mA}$ ,  $C_1 = 0.33\ \mu\text{F}$ ,  $C_2 = 1.0\ \mu\text{F}$ )

Parameter	Symbol	Test conditions	MIN	TYP	MAX	Unit
Output Voltage	$V_O$	$V_{IN} = -14\text{V}, I_O = 40\text{mA}$	-7.68	-8.0	-8.32	V
Line Regulation	$V_O - V_{IN}$	$V_{IN} = -10 \sim -23\text{V}, I_O = 40\text{mA}$		24	175	mV
Load Regulation	$V_O - I_O$	$V_{IN} = -14\text{V}, I_O = 1 \sim 100\text{mA}$		10	80	mV
Quiescent current	$I_Q$	$V_{IN} = -14\text{V}, I_O = 40\text{mA}$		2.0	6.0	mA
Ripple Rejection	RR	$V_{IN} = -11 \sim -21\text{V}$ , $I_O = 40\text{mA}, E_{in} = 1\text{Vp-p}, f = 140\text{Hz}$	39	68		dB
Output Noise Voltage	$V_{NO}$	$V_{IN} = -14\text{V}$ , $BW = 10\text{Hz} \sim 100\text{kHz}, I_O = 40\text{mA}$		190		$\mu\text{V}$

## TYPICAL APPLICATION



Note 1: To specify an output voltage, substitute voltage value for "XX".

Note 2: Bypass capacitors are recommended for optimum stability and transient response and should be located as close as possible to the regulators.

## TYPICAL PERFORMANCE CHARACTERISTICS

Fig.1 Input Voltage vs. Output Voltage

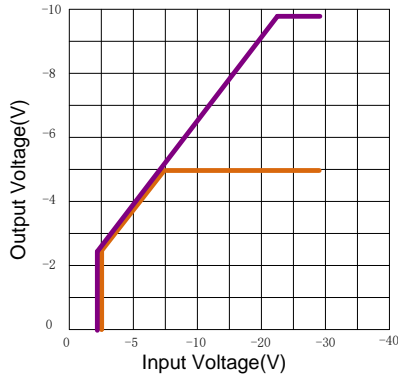


Fig.2 Load Characteristics (T<sub>j</sub>=25°C)

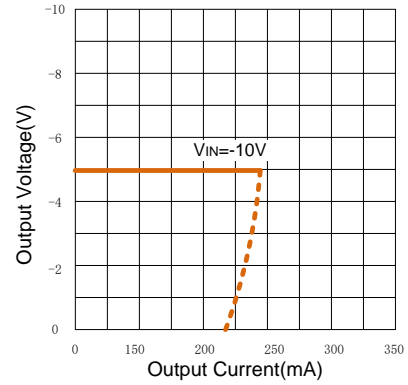


Fig.3 Short Circuit Current (T<sub>j</sub>=25°C)

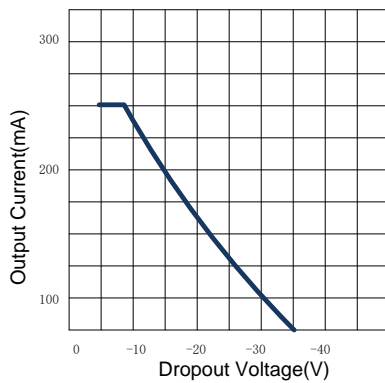


Fig.4 Output Voltage vs. Junction temperature

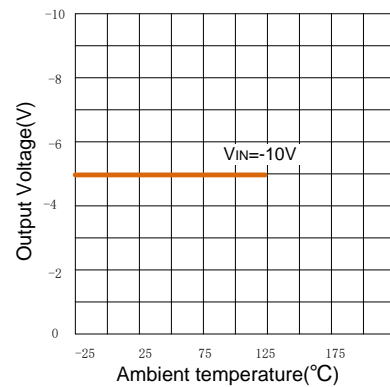


Fig.5 79L05K Dropout Characteristics (T<sub>j</sub>=25°C)

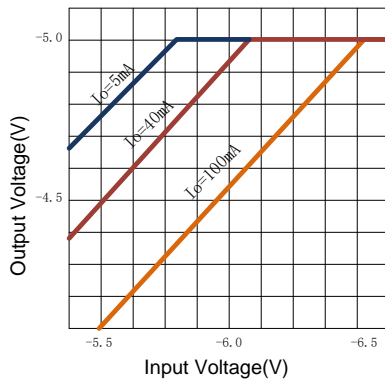
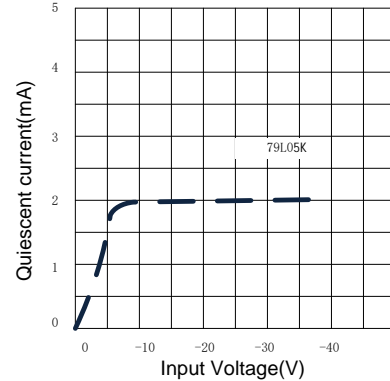
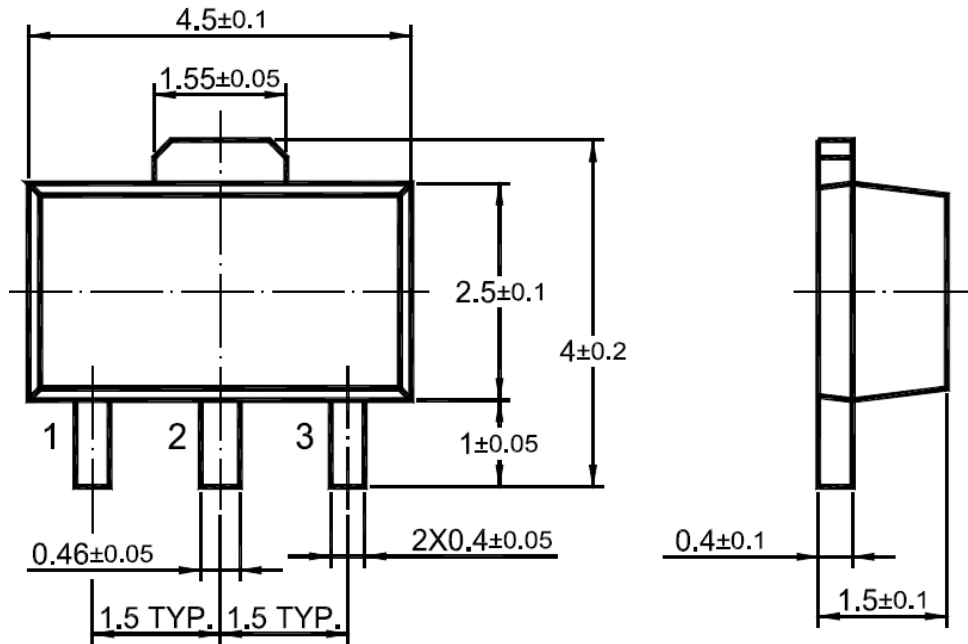


Fig.6 Current vs. Input Voltage (I<sub>o</sub>=0mA, T<sub>j</sub>=25°C)



## SOT-89 PACKAGE OUTLINE

Unit: mm



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