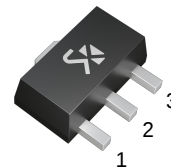


3-Terminal Negative Voltage Regulator

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		μV

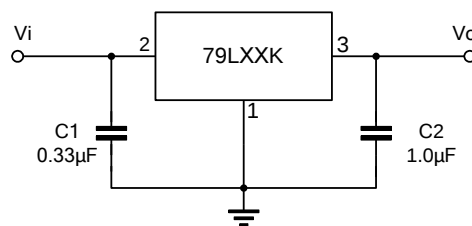
79L06K Electrical Characteristics ($T_a = 25^\circ C$) (Unless otherwise specified, $0^\circ C \leq T_J \leq 125^\circ C$, $V_I = -12V$, $I_O = 40mA$, $C_1 = 0.33\mu F$, $C_2 = 1.0\mu F$)

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		μV

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

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		μV

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

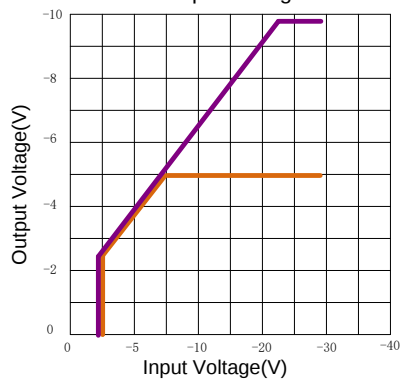


Fig.2 Load Characteristics (T_j=25°C)

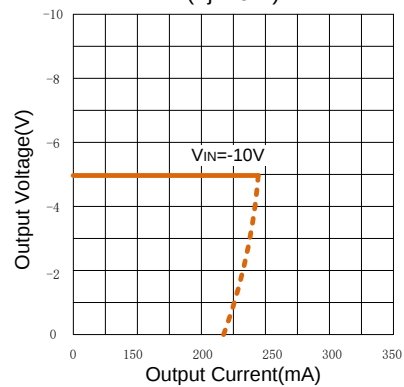


Fig.3 Short Circuit Current (T_j=25°C)

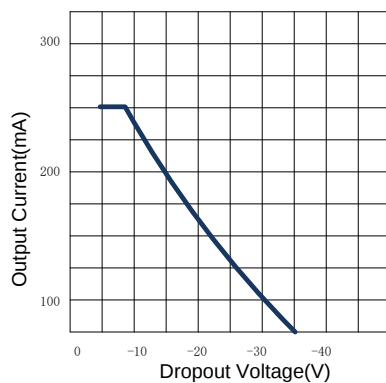


Fig.4 Output Voltage vs. Junction temperature

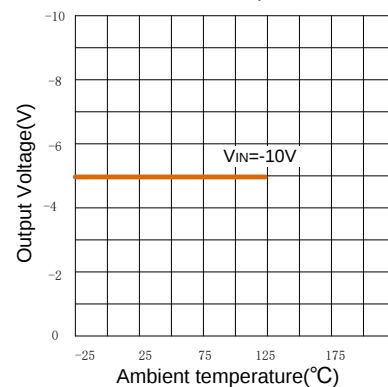


Fig.5 79L05K Dropout Characteristics (T_j=25°C)

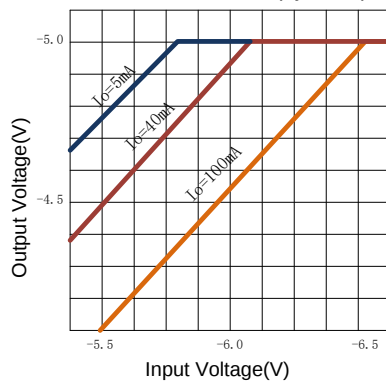
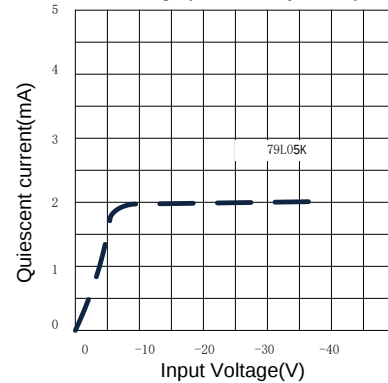


Fig.6 Current vs. Input Voltage (I_O=0mA, T_j=25°C)



SOT-89 PACKAGE OUTLINE

Unit: mm

