

WEJ78L05 Three-terminal positive voltage regulator

FEATURES

Maximum Output current

$$I_{OM}: 0.1 \text{ A}$$

Output voltage

$$V_o: 5 \text{ V}$$

Operating and storage junction temperature range

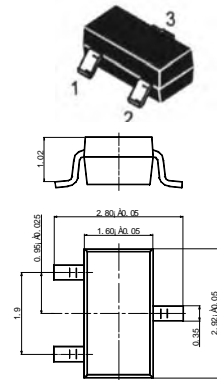
$$T_J, T_{stg}: -55^{\circ}\text{C to } +150^{\circ}\text{C}$$

SOT-23-3L

1. OUT

2. IN

3. GND



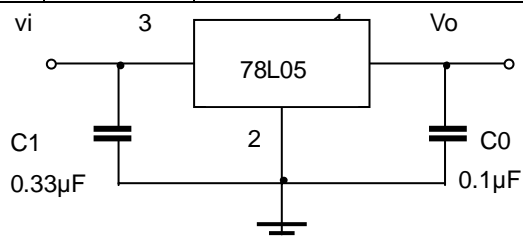
ABSOLUTE MAXIMUM RATINGS (Operating temperature range applies unless otherwise specified)

Parameter	Symbol	Value	Units
Input Voltage	V_I	30	V
Operating Junction Temperature Range	T_{OPR}	0~+125	$^{\circ}\text{C}$
Storage Temperature Range	T_{STG}	-55~+150	$^{\circ}\text{C}$

ELECTRICAL CHARACTERISTICS ($V_I=10\text{V}, I_o=40\text{mA}, 0^{\circ}\text{C}<T_J<125^{\circ}\text{C}, C_1=0.33\mu\text{F}, C_o=0.1\mu\text{F}$, unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Output voltage	V_o	$T_J=25^{\circ}\text{C}$	4.8	5.0	5.2	V
		$7\text{V}\leq V_I\leq 20\text{V}, I_o=1\text{mA}\sim 40\text{mA}$	4.75	5.0	5.25	V
		$7\text{V}\leq V_I\leq V_{MAX}, I_o=1\text{mA}\sim 70\text{mA}$	4.75	5.0	5.25	V (note)
Load Regulation	ΔV_o	$T_J=25^{\circ}\text{C}, I_o=1\text{mA}\sim 100\text{mA}$		11	60	mV
		$T_J=25^{\circ}\text{C}, I_o=1\text{mA}\sim 40\text{mA}$		5.0	30	mV
Line regulation	ΔV_o	$7\text{V}\leq V_I\leq 20\text{V}, T_J=25^{\circ}\text{C}$		32	150	mV
		$8\text{V}\leq V_I\leq 20\text{V}, T_J=25^{\circ}\text{C}$		26	100	mV
Quiescent Current	I_q	25°C		3.8	6	mA
Quiescent Current Change	ΔI_q	$8\text{V}\leq V_I\leq 20\text{V}$			1.5	mA
	ΔI_q	$1\text{mA}\leq V_I\leq 40\text{mA}$			0.1	mA
Output Noise Voltage	V_N	$10\text{Hz}\leq f\leq 100\text{KHz}$		42		μV
Ripple Rejection	RR	$8\text{V}\leq V_I\leq 18\text{V}, f=120\text{Hz}, T_J=25^{\circ}\text{C}$	41	80		dB
Dropout Voltage	V_d	$T_J=25^{\circ}\text{C}$		1.7		V

TYPICAL APPLICATION



Note 1: Bypass capacitors are recommended for optimum stability and transient response and should be located as close as Possible to the regulators.