

FEATURES

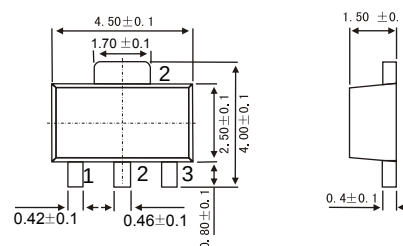
Maximum Output current I_O : 0.1 A

Output voltage V_O : 5 V

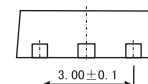
Continuous total dissipation

P_D : 0.5 W ($T_a = 25^\circ\text{C}$)

SOT-89
RoHS
COMPLIANT

Pb
Pb-Free


1.OUTPUT
2.GND
3.INPUT



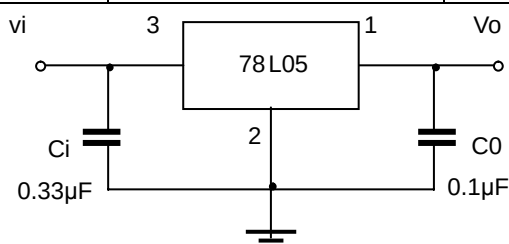
Dimensions In Millimeters

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

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

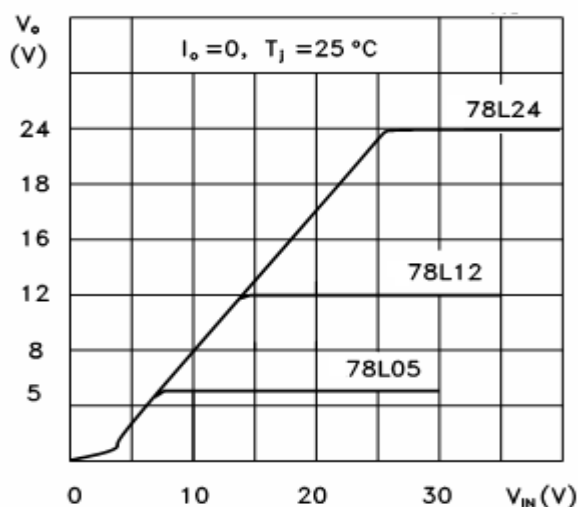
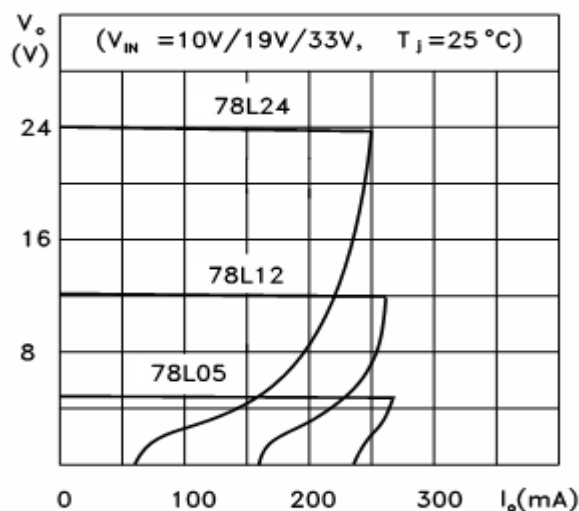
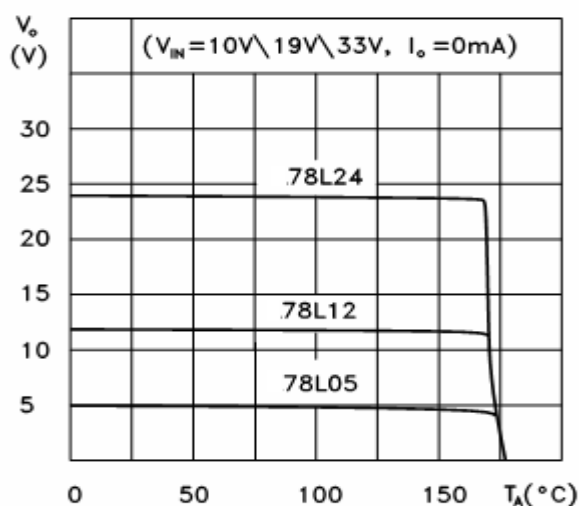
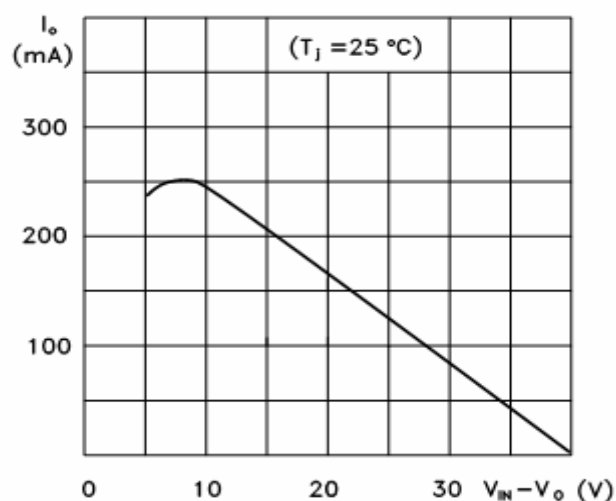
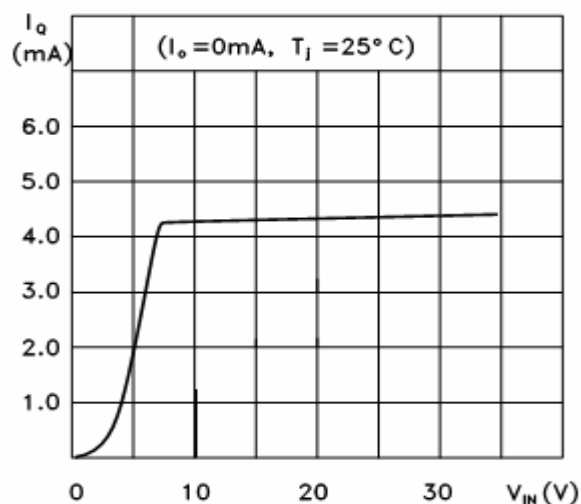
ELECTRICAL CHARACTERISTICS ($V_I=10\text{V}$, $I_O=40\text{mA}$, $C_i=0.33\mu\text{F}$, $C_o=0.1\mu\text{F}$, unless otherwise specified)

Parameter	Symbol	Test conditions		MIN	TYP	MAX	UNIT
Output voltage	Vo		25℃	4.8	5.0	5.2	V
		7V≤Vi≤20V, Io=1mA~40mA	0-125℃	4.75	5.0	5.25	V
		Io=1mA~70mA		4.75	5.0	5.25	V
Load Regulation	ΔVo	Io=1mA~100mA	25℃		15	60	mV
		Io=1mA~40mA	25℃		8	30	mV
Line regulation	ΔVo	7V≤Vi≤20V			32	150	mV
		8V≤Vi≤20V	25℃		26	100	mV
Quiescent Current	Iq		25℃		3.8	6	mA
Quiescent Current Change	ΔIq	8V≤Vi≤20V	0-125℃			1.5	mA
	ΔIq	1mA≤Vi,≤40mA	0-125℃			0.1	mA
Output Noise Voltage	VN	10Hz≤f≤100KHz	25℃		42		uV
Ripple Rejection	RR	8V≤Vi≤20V,f=120Hz	0-125℃	41	49		dB
Dropout Voltage	Vd		25℃		1.7		V

TYPICAL APPLICATION


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

Typical Characteristics

78L05/12/24 Output Characteristics

78L05/12/24 Load Characteristics

78L05/12/24 Thermal Shutdown

78L00 Series Short Circuit Output Current

78L05 Quiescent Current vs Input Voltage

Power dissipation vs. ambient temperature
