

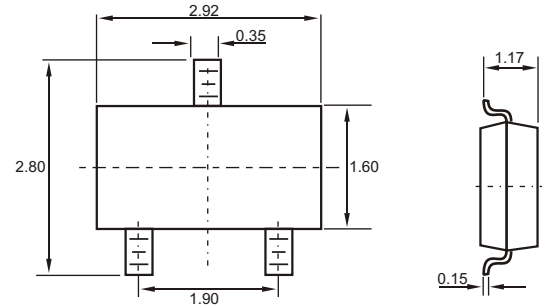
SOT-23-3L



1. OUT
2. IN
3. GND

Features

- ✧ Maximum Output current I_O : 0.1 A
- ✧ Output voltage V_O : 5 V
- ✧ Continuous total dissipation P_D : 0.35 W ($T_a = 25^\circ\text{C}$)



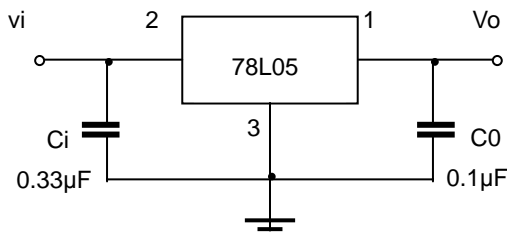
ABSOLUTE MAXIMUM RATINGS (Operating temperature range applies unless otherwise specified)

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)

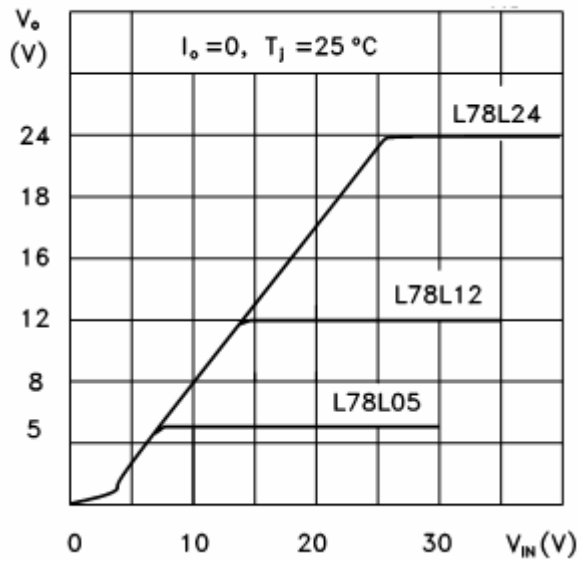
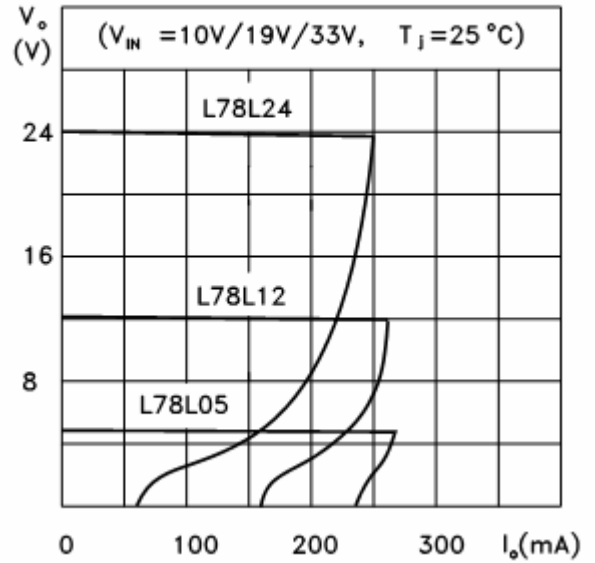
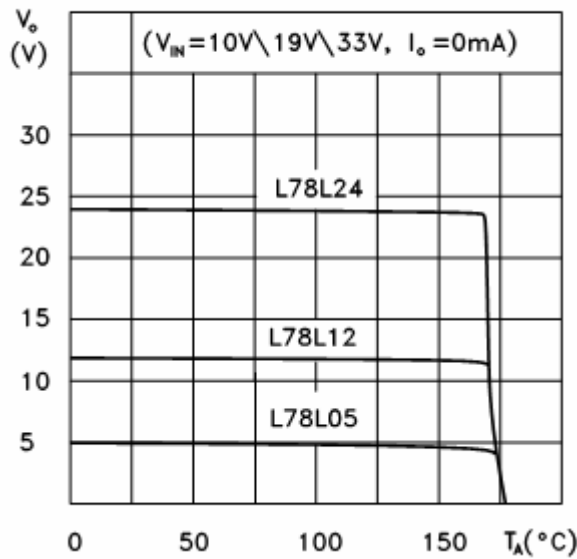
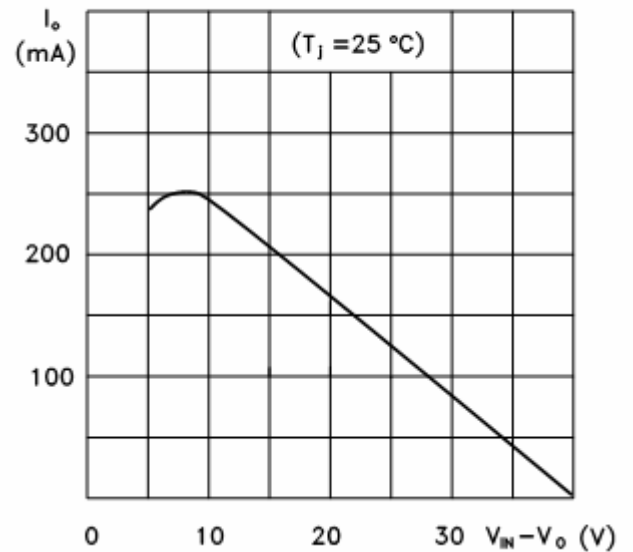
Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT	
Output voltage	V_o	25°C	4.8	5.0	5.2	V	
		0-125 $^\circ\text{C}$	$7\text{V} \leq V_i \leq 20\text{V}, I_o=1\text{mA} \sim 40\text{mA}$	4.75	5.0	5.25	V
			$I_o=1\text{mA} \sim 70\text{mA}$	4.75	5.0	5.25	V
Load Regulation	ΔV_o	$I_o=1\text{mA} \sim 100\text{mA}, 25^\circ\text{C}$		15	60	mV	
		$I_o=1\text{mA} \sim 40\text{mA}, 25^\circ\text{C}$		8	30	mV	
Line regulation	ΔV_o	$7\text{V} \leq V_i \leq 20\text{V}, 25^\circ\text{C}$		32	150	mV	
		$8\text{V} \leq V_i \leq 20\text{V}, 25^\circ\text{C}$		26	100	mV	
Quiescent Current	I_q	25°C		3.8	6	mA	
Quiescent Current Change	ΔI_q	$8\text{V} \leq V_i \leq 20\text{V}, 0-125^\circ\text{C}$			1.5	mA	
		$1\text{mA} \leq I_o \leq 40\text{mA}, 0-125^\circ\text{C}$			0.1	mA	
Output Noise Voltage	V_N	$10\text{Hz} \leq f \leq 100\text{KHz}, 25^\circ\text{C}$		42		μV	
Ripple Rejection	RR	$8\text{V} \leq V_i \leq 20\text{V}, f=120\text{Hz}, 0-125^\circ\text{C}$	41	49		dB	
Dropout Voltage	V_d	25°C		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

L78L05/12/24 Output Characteristics

L78L05/12/24 Load Characteristics

L78L05/12/24 Thermal Shutdown

L78L00 Series Short Circuit Output Current

L78L05 Quiescent Current vs Input Voltage
