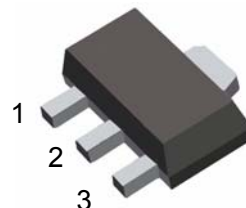


FEATURES

Maximum Output current
 I_{OM} : 0.1 A
 Output voltage
 V_o : 8 V
 Continuous total dissipation
 P_D : 0.5W

SOT-89

1. OUT
 2. GND
 3. IN



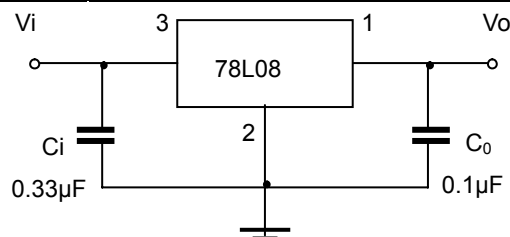
ABSOLUTE MAXIMUM RATINGS (Operating temperature range applies unless otherwise specified)

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

ELECTRICAL CHARACTERISTICS ($V_i=14V$, $I_o=40mA$, $C_i=0.33\mu F$, $C_o=0.1\mu F$, unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Output voltage	V_o	25°C	7.7	8.0	8.3	V
		10.5V ≤ V_i ≤ 23V, $I_o=1mA \sim 40mA$	7.6	8.0	8.4	V
		$I_o=1mA \sim 70mA$	7.6	8.0	8.4	V
Load Regulation	ΔV_o	$I_o=1mA \sim 100mA$	25°C	18	80	mV
		$I_o=1mA \sim 40mA$	25°C	10	40	mV
Line regulation	ΔV_o	10.5V ≤ V_i ≤ 23V	25°C	42	175	mV
		11V ≤ V_i ≤ 23V	25°C	36	125	mV
Quiescent Current	I_q	25°C		4	6	mA
Quiescent Current Change	ΔI_q	11V ≤ V_i ≤ 23V	0-125°C		1.5	mA
	ΔI_q	1mA ≤ I_o ≤ 40mA	0-125°C		0.1	mA
Output Noise Voltage	V_N	10Hz ≤ f ≤ 100KHz	25°C	54		uV
Ripple Rejection	RR	13V ≤ V_i ≤ 23V, $f=120Hz$	0-125°C	37	46	dB
Dropout Voltage	V_d	25°C		1.7		V

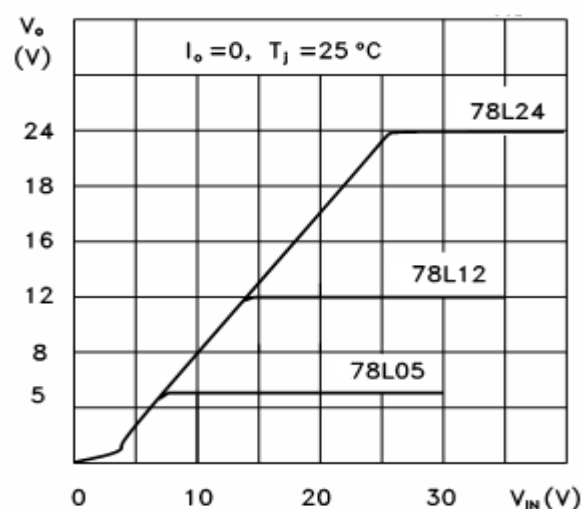
TYPICAL APPLICATION



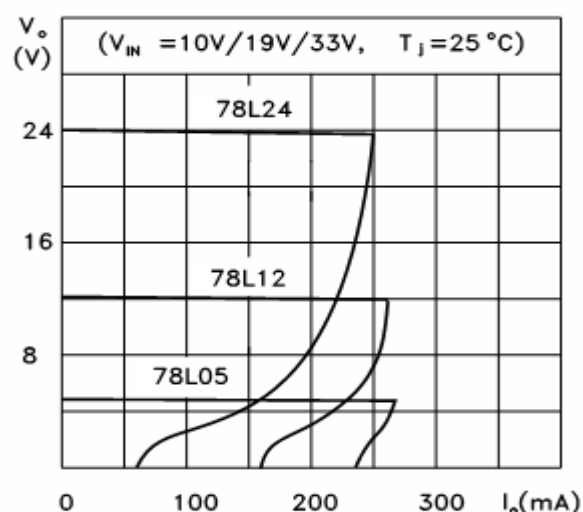
Note: Bypass capacitors are recommended for optimum stability and transient response and should be located as close as possible to the regulators.

Typical Characteristics

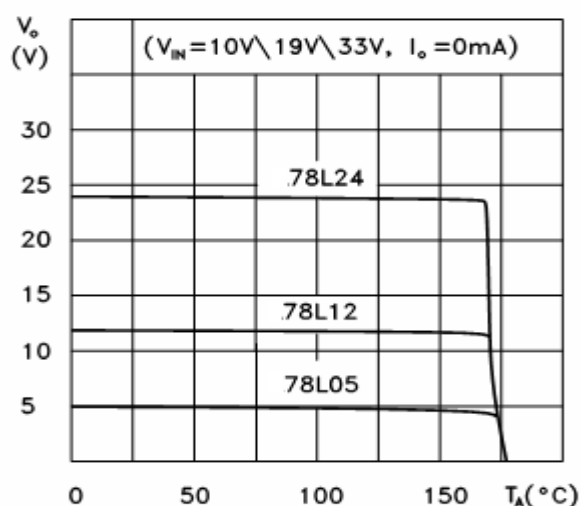
78L05/12/24 Output Characteristics



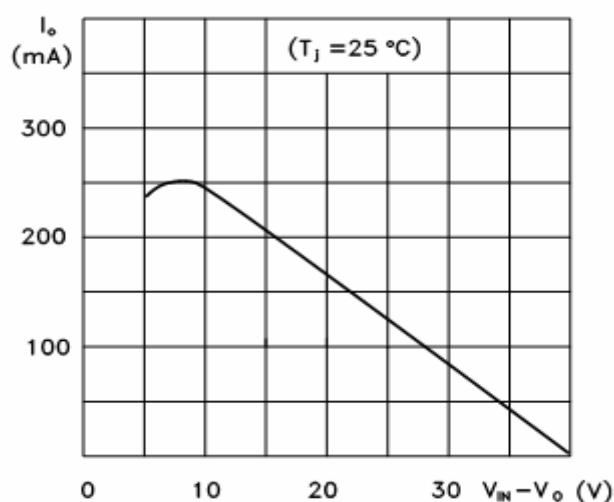
78L05/12/24 Load Characteristics



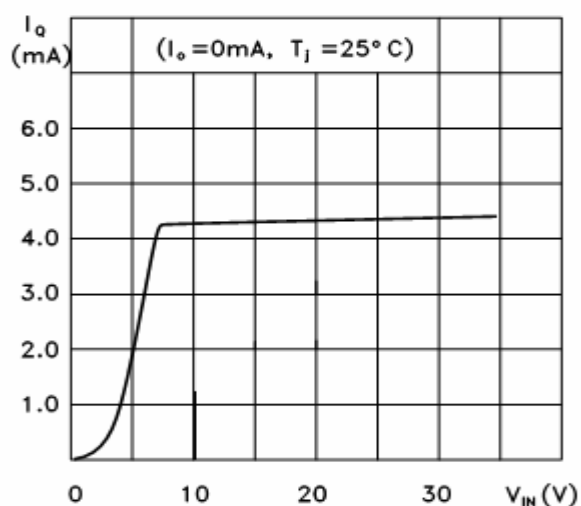
78L05/12/24 Thermal Shutdown



78L00 Series Short Circuit Output Current



78L05 Quiescent Current vs Input Voltage



Power dissipation vs. ambient temperature

