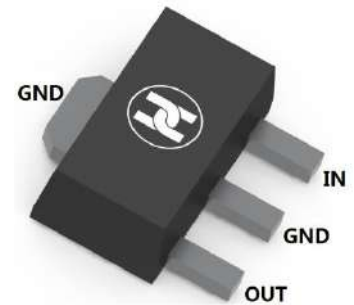


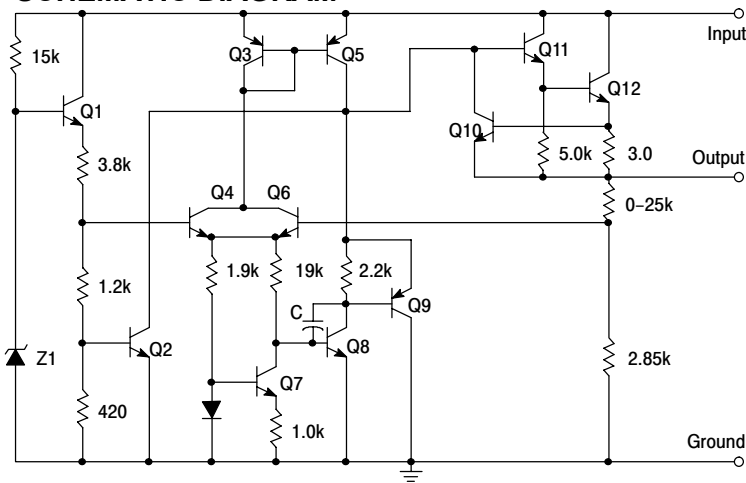
PLASTIC-ENCAPSULATE VOLTAGE REGULATORS

FEATURES

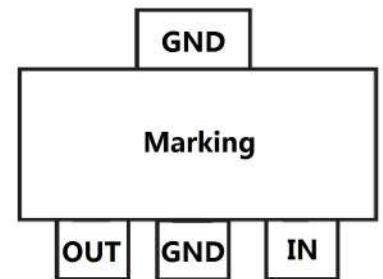
- Maximum Output Current I_o : 0.1 A
- Output Voltage V_o : 3.3; 5; 6; 8; 9; 10; 12; 15; 18; 20; 24V
- Thermal Overload Protection
- Short Circuit Protection
- No External Components Are Required
- Continuous Total Dissipation
 P_D : 0.60 W ($T_a = 25\text{ }^\circ\text{C}$)
- Surface Mount device



SCHEMATIC DIAGRAM



SOT-89

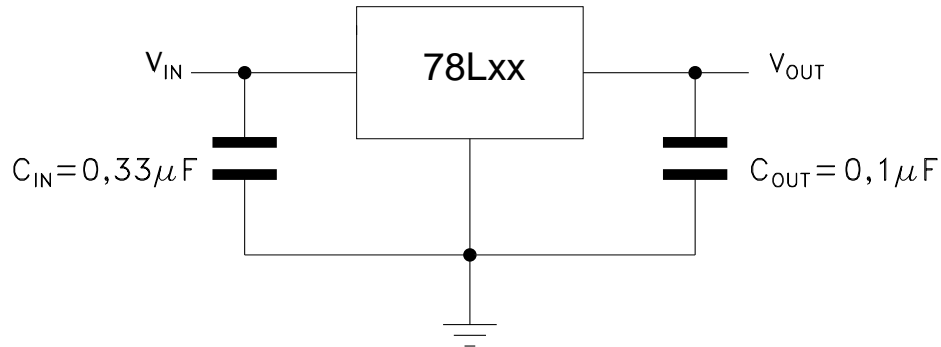


MECHANICAL DATA

- Case: SOT-89
- Case Material: Molded Plastic. UL flammability
- Classification Rating: 94V-0
- Weight: 0.055 grams (approximate)
- Marking: 78L05-78L33

MAXIMUM RATINGS (Operating temperature range applies unless otherwise specified)

Parameter	Symbol	Value	Unit	
Input Voltage	V_i	$V_o=3.3\text{V to }9\text{V}$	30	V
		$V_o=12\text{V to }15\text{V}$	35	V
		$V_o=18\text{V to }24\text{V}$	40	V
Power Dissipation	P_D	600	mW	
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	160	$^\circ\text{C/W}$	
Operating Temperature	T_{opr}	-40~+125	$^\circ\text{C}$	
Storage Temperature Range	T_{STG}	-55 ~+150	$^\circ\text{C}$	

PLASTIC-ENCAPSULATE VOLTAGE REGULATORS
TEST CIRCUIT


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

**ELECTRICAL CHARACTERISTICS OF 78L05 AT SPECIFIED VIRTUAL JUNCTION TEMPERATURE
($V_i=10V, I_o=40mA, C_i=0.33\mu F, C_o=0.1\mu F$, unless otherwise specified)**

Parameter	Symbol	Min	Typ	Max	Unit	Conditions
Output voltage	V_o	4.80	5.0	5.20	V	$T_J=+25^\circ C$
		4.75	5.0	5.25	V	$7V \leq V_i \leq 20V, I_o=1mA \sim 40mA, 0^\circ C \leq T_J \leq +125^\circ C$
		4.75	5.0	5.25	V	$7V \leq V_i \leq 20V, I_o=1mA \sim 70mA, 0^\circ C \leq T_J \leq +125^\circ C$
Load Regulation	ΔV_o		15	60	mV	$I_o=1mA \sim 100mA, T_J=+25^\circ C$
			8	30	mV	$I_o=1mA \sim 40mA, T_J=+25^\circ C$
Line regulation	ΔV_o		32	150	mV	$7V \leq V_i \leq 20V$
			26	100	mV	$8V \leq V_i \leq 20V, T_J=+25^\circ C$
Quiescent Current	I_q		3.8	6	mA	$T_J=+25^\circ C$
Quiescent Current Change	ΔI_q			1.5	mA	$8V \leq V_i \leq 20V, -25^\circ C \leq T_J \leq +125^\circ C$
				0.1	mA	$1mA \leq I_i \leq 40mA, -25^\circ C \leq T_J \leq +125^\circ C$
Output Noise Voltage	V_N		42		$\mu V/V_o$	$10Hz \leq f \leq 100kHz, T_J=+25^\circ C$
Ripple Rejection	RR	41	49		dB	$8V \leq V_i \leq 20V, f=120Hz, -25^\circ C \leq T_J \leq +125^\circ C$
Dropout Voltage	V_d		1.7		V	$T_J=+25^\circ C$

*Pulse Test

PLASTIC-ENCAPSULATE VOLTAGE REGULATORS
**ELECTRICAL CHARACTERISTICS OF 78L06 AT SPECIFIED VIRTUAL JUNCTION TEMPERATURE
($V_i=10V, I_o=40mA, C_i=0.33\mu F, C_o=0.1\mu F$, unless otherwise specified)**

Parameter	Symbol	Min	Typ	Max	Unit	Conditions
Output voltage	V_o	5.75	6.0	6.25	V	$T_J=+25^\circ C$
		5.7	6.0	6.3	V	$8V \leq V_i \leq 20V, I_o=1mA \sim 40mA, 0^\circ C \leq T_J \leq +125^\circ C$
		5.7	6.0	6.3	V	$8V \leq V_i \leq 20V, I_o=1mA \sim 70mA, 0^\circ C \leq T_J \leq +125^\circ C$
Load Regulation	ΔV_o		16	80	mV	$I_o=1mA \sim 100mA, T_J=+25^\circ C$
			9	40	mV	$I_o=1mA \sim 40mA, T_J=+25^\circ C$
Line regulation	ΔV_o		35	175	mV	$8V \leq V_i \leq 20V$
			29	125	mV	$9V \leq V_i \leq 20V, T_J=+25^\circ C$
Quiescent Current	I_q		3.9	6	mA	$T_J=+25^\circ C$
Quiescent Current Change	ΔI_q			1.5	mA	$9V \leq V_i \leq 20V, 0^\circ C \leq T_J \leq +125^\circ C$
				0.1	mA	$1mA \leq I_o \leq 40mA, 0^\circ C \leq T_J \leq +125^\circ C$
Output Noise Voltage	V_N		46		$\mu V/V_o$	$10Hz \leq f \leq 100kHz, T_J=+25^\circ C$
Ripple Rejection	RR	40	48		dB	$9V \leq V_i \leq 19V, f=120Hz, 0^\circ C \leq T_J \leq +125^\circ C$
Dropout Voltage	V_d		1.7		V	$T_J=+25^\circ C$

*Pulse Test

**ELECTRICAL CHARACTERISTICS OF 78L08 AT SPECIFIED VIRTUAL JUNCTION TEMPERATURE
($V_i=10V, I_o=40mA, C_i=0.33\mu F, C_o=0.1\mu F$, unless otherwise specified)**

Parameter	Symbol	Min	Typ	Max	Unit	Conditions
Output voltage	V_o	7.7	8.0	8.3	V	$T_J=+25^\circ C$
		7.6	8.0	8.4	V	$10.5V \leq V_i \leq 23V, I_o=1mA \sim 40mA, 0^\circ C \leq T_J \leq +125^\circ C$
		7.6	8.0	8.4	V	$10.5V \leq V_i \leq 23V, I_o=1mA \sim 70mA, 0^\circ C \leq T_J \leq +125^\circ C$
Load Regulation	ΔV_o		18	80	mV	$I_o=1mA \sim 100mA, T_J=+25^\circ C$
			10	40	mV	$I_o=1mA \sim 40mA, T_J=+25^\circ C$
Line regulation	ΔV_o		42	175	mV	$10.5V \leq V_i \leq 23V$
			36	125	mV	$11V \leq V_i \leq 23V, T_J=+25^\circ C$
Quiescent Current	I_q		4	6	mA	$T_J=+25^\circ C$
Quiescent Current Change	ΔI_q			1.5	mA	$11V \leq V_i \leq 23V, 0^\circ C \leq T_J \leq +125^\circ C$
				0.1	mA	$1mA \leq I_o \leq 40mA, 0^\circ C \leq T_J \leq +125^\circ C$
Output Noise Voltage	V_N		54		$\mu V/V_o$	$10Hz \leq f \leq 100kHz, T_J=+25^\circ C$
Ripple Rejection	RR	37	46		dB	$13V \leq V_i \leq 23V, f=120Hz, 0^\circ C \leq T_J \leq +125^\circ C$
Dropout Voltage	V_d		1.7		V	$T_J=+25^\circ C$

*Pulse Test

PLASTIC-ENCAPSULATE VOLTAGE REGULATORS
**ELECTRICAL CHARACTERISTICS OF 78L09 AT SPECIFIED VIRTUAL JUNCTION TEMPERATURE
($V_i=16V, I_o=40mA, C_i=0.33\mu F, C_o=0.1\mu F$, unless otherwise specified)**

Parameter	Symbol	Min	Typ	Max	Unit	Conditions
Output voltage	V_o	8.64	9.0	9.36	V	$T_J=+25^\circ C$
		8.55	9.0	9.45	V	$12V \leq V_i \leq 24V, I_o=1mA \sim 40mA, 0^\circ C \leq T_J \leq +125^\circ C$
		8.55	9.0	9.45	V	$12V \leq V_i \leq 24V, I_o=1mA \sim 70mA, 0^\circ C \leq T_J \leq +125^\circ C$
Load Regulation	ΔV_o		19	90	mV	$I_o=1mA \sim 100mA, T_J=+25^\circ C$
			11	40	mV	$I_o=1mA \sim 40mA, T_J=+25^\circ C$
Line regulation	ΔV_o		45	175	mV	$12V \leq V_i \leq 24V$
			40	125	mV	$13V \leq V_i \leq 24V, T_J=+25^\circ C$
Quiescent Current	I_q		4.1	6.0	mA	$T_J=+25^\circ C$
Quiescent Current Change	ΔI_q			1.5	mA	$13V \leq V_i \leq 24V, 0^\circ C \leq T_J \leq +125^\circ C$
				0.1	mA	$1mA \leq I_o \leq 40mA, 0^\circ C \leq T_J \leq +125^\circ C$
Output Noise Voltage	V_N	58			$\mu V/V_o$	$10Hz \leq f \leq 100kHz, T_J=+25^\circ C$
Ripple Rejection	RR		45		dB	$15V \leq V_i \leq 25V, f=120Hz, 0^\circ C \leq T_J \leq +125^\circ C$
Dropout Voltage	V_d		1.7		V	$T_J=+25^\circ C$

*Pulse Test

**ELECTRICAL CHARACTERISTICS OF 78L10 AT SPECIFIED VIRTUAL JUNCTION TEMPERATURE
($V_i=16V, I_o=40mA, C_i=0.33\mu F, C_o=0.1\mu F$, unless otherwise specified)**

Parameter	Symbol	Min	Typ	Max	Unit	Conditions
Output voltage	V_o	9.2	10	10.8	V	$T_J=+25^\circ C$
		9	10	11	V	$12.5V \leq V_i \leq 23V, I_o=1mA \sim 40mA, 0^\circ C \leq T_J \leq +125^\circ C$
		9	10	11	V	$V_i=16V, I_o=1mA \sim 70mA, 0^\circ C \leq T_J \leq +125^\circ C$
Load Regulation	ΔV_o		21	80	mV	$I_o=1mA \sim 100mA, T_J=+25^\circ C$
			12	40	mV	$I_o=1mA \sim 40mA, T_J=+25^\circ C$
Line regulation	ΔV_o		50	230	mV	$12.5V \leq V_i \leq 23V, T_J=+25^\circ C$
			45	170	mV	$13V \leq V_i \leq 23V, T_J=+25^\circ C$
Quiescent Current	I_q		4.1	6.0	mA	$T_J=+25^\circ C$
Quiescent Current Change	ΔI_q			1.5	mA	$13V \leq V_i \leq 23V, 0^\circ C \leq T_J \leq +125^\circ C$
				0.1	mA	$1mA \leq I_o \leq 40mA, 0^\circ C \leq T_J \leq +125^\circ C$
Output Noise Voltage	V_N		60		$\mu V/V_o$	$10Hz \leq f \leq 100kHz, T_J=+25^\circ C$
Ripple Rejection	RR	37	45		dB	$14V \leq V_i \leq 23V, f=120Hz, 0^\circ C \leq T_J \leq +125^\circ C$
Dropout Voltage	V_d		1.7		V	$T_J=+25^\circ C$

*Pulse Test

PLASTIC-ENCAPSULATE VOLTAGE REGULATORS
**ELECTRICAL CHARACTERISTICS OF 78L12 AT SPECIFIED VIRTUAL JUNCTION TEMPERATURE
($V_i=19V, I_o=40mA, C_i=0.33\mu F, C_o=0.1\mu F$, unless otherwise specified)**

Parameter	Symbol	Min	Typ	Max	Unit	Conditions
Output voltage	V_o	11.5	12	12.5	V	$T_J=+25^\circ C$
		11.4	12	12.6	V	$14V \leq V_i \leq 27V, I_o=1mA \sim 40mA, 0^\circ C \leq T_J \leq +125^\circ C$
		11.4	12	12.6	V	$14V \leq V_i \leq 27V, I_o=1mA \sim 70mA, 0^\circ C \leq T_J \leq +125^\circ C$
Load Regulation	ΔV_o		22	100	mV	$I_o=1mA \sim 100mA, T_J=+25^\circ C$
			13	50	mV	$I_o=1mA \sim 40mA, T_J=+25^\circ C$
Line regulation	ΔV_o		55	250	mV	$14.5V \leq V_i \leq 27V$
			49	200	mV	$16V \leq V_i \leq 27V, T_J=+25^\circ C$
Quiescent Current	I_q		4.3	6.5	mA	$T_J=+25^\circ C$
Quiescent Current Change	ΔI_q			1.5	mA	$16V \leq V_i \leq 27V, 0^\circ C \leq T_J \leq +125^\circ C$
				0.1	mA	$1mA \leq I_o \leq 40mA, 0^\circ C \leq T_J \leq +125^\circ C$
Output Noise Voltage	V_N		70		$\mu V/V_o$	$10Hz \leq f \leq 100kHz, T_J=+25^\circ C$
Ripple Rejection	RR	37	42		dB	$15V \leq V_i \leq 25V, f=120Hz, 0^\circ C \leq T_J \leq +125^\circ C$
Dropout Voltage	V_d		1.7		V	$T_J=+25^\circ C$

*Pulse Test

**ELECTRICAL CHARACTERISTICS OF 78L15 AT SPECIFIED VIRTUAL JUNCTION TEMPERATURE
($V_i=23V, I_o=40mA, C_i=0.33\mu F, C_o=0.1\mu F$, unless otherwise specified)**

Parameter	Symbol	Min	Typ	Max	Unit	Conditions
Output voltage	V_o	14.4	15	15.6	V	$T_J=+25^\circ C$
		14.25	15	15.75	V	$17.5V \leq V_i \leq 30V, I_o=1mA \sim 40mA, 0^\circ C \leq T_J \leq +125^\circ C$
		14.25	15	15.75	V	$V_i=23V, I_o=1mA \sim 70mA, 0^\circ C \leq T_J \leq +125^\circ C$
Load Regulation	ΔV_o		25	150	mV	$V_i=23V, I_o=1mA \sim 100mA, T_J=25^\circ C$
			15	75	mV	$V_i=23V, I_o=1mA \sim 40mA, T_J=25^\circ C$
Line regulation	ΔV_o		65	300	mV	$17.5V \leq V_i \leq 30V, I_o=40mA, T_J=25^\circ C$
			58	250	mV	$19V \leq V_i \leq 30V, I_o=40mA, T_J=25^\circ C$
Quiescent Current	I_q		4.6	6.5	mA	$T_J=+25^\circ C$
Quiescent Current Change	ΔI_q			1.5	mA	$19V \leq V_i \leq 30V, I_o=40mA, 0^\circ C \leq T_J \leq +125^\circ C$
				0.1	mA	$1mA \leq I_o \leq 40mA, V_i=23V, 0^\circ C \leq T_J \leq +125^\circ C$
Output Noise Voltage	V_N		82		$\mu V/V_o$	$10Hz \leq f \leq 100kHz, T_J=+25^\circ C$
Ripple Rejection	RR	34	39		dB	$18.5V \leq V_i \leq 28.5V, f=120Hz, 0^\circ C \leq T_J \leq +125^\circ C$
Dropout Voltage	V_d		1.7		V	$T_J=+25^\circ C$

*Pulse Test

PLASTIC-ENCAPSULATE VOLTAGE REGULATORS
**ELECTRICAL CHARACTERISTICS OF 78L18 AT SPECIFIED VIRTUAL JUNCTION TEMPERATURE
($V_i=26V, I_o=40mA, C_i=0.33\mu F, C_o=0.1\mu F$, unless otherwise specified)**

Parameter	Symbol	Min	Typ	Max	Unit	Conditions
Output voltage	V_o	17.3	18	18.7	V	$T_J=+25^\circ C$
		17.1	18	18.9	V	$20.5V \leq V_i \leq 33V, I_o=1mA \sim 40mA, 0^\circ C \leq T_J \leq +125^\circ C$
		17.1	18	18.9	V	$V_i=26V, I_o=1mA \sim 70mA, 0^\circ C \leq T_J \leq +125^\circ C$
Load Regulation	ΔV_o		27	180	mV	$V_i=26V, I_o=1mA \sim 100mA, T_J=25^\circ C$
			19	90	mV	$V_i=26V, I_o=1mA \sim 40mA, T_J=25^\circ C$
Line regulation	ΔV_o		70	360	mV	$20.5V \leq V_i \leq 33V, I_o=40mA, T_J=25^\circ C$
			64	300	mV	$22V \leq V_i \leq 33V, I_o=40mA, T_J=25^\circ C$
Quiescent Current	I_q		4.7	6.5	mA	$T_J=+25^\circ C$
Quiescent Current Change	ΔI_q			1.5	mA	$22V \leq V_i \leq 33V, I_o=40mA, 0^\circ C \leq T_J \leq +125^\circ C$
				0.1	mA	$1mA \leq I_o \leq 40mA, V_i=26V, 0^\circ C \leq T_J \leq +125^\circ C$
Output Noise Voltage	V_N		89		$\mu V/V_o$	$10Hz \leq f \leq 100kHz, T_J=+25^\circ C$
Ripple Rejection	RR	32	36		dB	$21.5V \leq V_i \leq 31.5V, f=120Hz, 0^\circ C \leq T_J \leq +125^\circ C$
Dropout Voltage	V_d		1.7		V	$T_J=+25^\circ C$

*Pulse Test

**ELECTRICAL CHARACTERISTICS OF 78L20 AT SPECIFIED VIRTUAL JUNCTION TEMPERATURE
($V_i=29V, I_o=40mA, C_i=0.33\mu F, C_o=0.1\mu F$, unless otherwise specified)**

Parameter	Symbol	Min	Typ	Max	Unit	Conditions
Output voltage	V_o	18.4	20	21.6	V	$T_J=+25^\circ C$
		18	20	22	V	$24V \leq V_i \leq 33V, I_o=1mA \sim 40mA, 0^\circ C \leq T_J \leq +125^\circ C$
		18	20	22	V	$V_i=29V, I_o=1mA \sim 70mA, 0^\circ C \leq T_J \leq +125^\circ C$
Load Regulation	ΔV_o		29	180	mV	$V_i=29V, I_o=1mA \sim 100mA, T_J=25^\circ C$
			17	90	mV	$V_i=29V, I_o=1mA \sim 40mA, T_J=25^\circ C$
Line regulation	ΔV_o		75	330	mV	$22.5V \leq V_i \leq 34V, I_o=40mA, T_J=25^\circ C$
			70	280	mV	$24V \leq V_i \leq 34V, I_o=40mA, T_J=25^\circ C$
Quiescent Current	I_q		4.7	6.5	mA	$T_J=+25^\circ C$
Quiescent Current Change	ΔI_q			1.5	mA	$25V \leq V_i \leq 33V, I_o=40mA, 0^\circ C \leq T_J \leq +125^\circ C$
				0.2	mA	$1mA \leq I_o \leq 40mA, V_i=26V, 0^\circ C \leq T_J \leq +125^\circ C$
Output Noise Voltage	V_N		120		$\mu V/V_o$	$10Hz \leq f \leq 100kHz, T_J=+25^\circ C$
Ripple Rejection	RR	31	38		dB	$25V \leq V_i \leq 35V, f=120Hz, 0^\circ C \leq T_J \leq +125^\circ C$
Dropout Voltage	V_d		1.7		V	$T_J=+25^\circ C$

*Pulse Test

PLASTIC-ENCAPSULATE VOLTAGE REGULATORS
**ELECTRICAL CHARACTERISTICS OF 78L24 AT SPECIFIED VIRTUAL JUNCTION TEMPERATURE
($V_i=33V, I_o=40mA, C_i=0.33\mu F, C_o=0.1\mu F$, unless otherwise specified)**

Parameter	Symbol	Min	Typ	Max	Unit	Conditions
Output voltage	V_o	22.1	24	25.9	V	$T_J=+25^\circ C$
		21.6	24	26.4	V	$27V \leq V_i \leq 38V, I_o=1mA \sim 40mA, 0^\circ C \leq T_J \leq +125^\circ C$
		21.6	24	26.4	V	$V_i=33V, I_o=1mA \sim 70mA, 0^\circ C \leq T_J \leq +125^\circ C$
Load Regulation	ΔV_o		29	200	mV	$V_i=33V, I_o=1mA \sim 100mA, T_J=25^\circ C$
			21	100	mV	$V_i=33V, I_o=1mA \sim 40mA, T_J=25^\circ C$
Line regulation	ΔV_o		75	350	mV	$27V \leq V_i \leq 38V, I_o=40mA, T_J=25^\circ C$
			70	300	mV	$28V \leq V_i \leq 38V, I_o=40mA, T_J=25^\circ C$
Quiescent Current	I_q		4.7	6.5	mA	$T_J=+25^\circ C$
Quiescent Current Change	ΔI_q			1.5	mA	$28V \leq V_i \leq 38V, I_o=40mA, 0^\circ C \leq T_J \leq +125^\circ C$
				0.2	mA	$1mA \leq I_o \leq 40mA, V_i=33V, 0^\circ C \leq T_J \leq +125^\circ C$
Output Noise Voltage	V_N		200		$\mu V/V_o$	$10Hz \leq f \leq 100kHz, T_J=+25^\circ C$
Ripple Rejection	RR	30	37		dB	$29V \leq V_i \leq 35V, f=120Hz, I_o=40mA, 0^\circ C \leq T_J \leq +125^\circ C$
Dropout Voltage	V_d		1.7		V	$T_J=+25^\circ C$

*Pulse Test

**ELECTRICAL CHARACTERISTICS OF 78L33 AT SPECIFIED VIRTUAL JUNCTION TEMPERATURE
($V_i=8.3V, I_o=40mA, C_i=0.33\mu F, C_o=0.1\mu F$, unless otherwise specified)**

Parameter	Symbol	Min	Typ	Max	Unit	Conditions
Output voltage	V_o	3.168	3.3	3.432	V	$T_J=+25^\circ C$
		3.135	3.3	3.465	V	$5.3V \leq V_i \leq 20V, I_o=1mA \sim 40mA, -40^\circ C \leq T_J \leq +125^\circ C$
		3.135	3.3	3.465	V	$V_i=8.3V, I_o=1mA \sim 70mA, -40^\circ C \leq T_J \leq +125^\circ C$
Load Regulation	ΔV_o			60	mV	$V_i=8.3V, I_o=1mA \sim 100mA, T_J=25^\circ C$
				30	mV	$V_i=8.3V, I_o=1mA \sim 40mA, T_J=25^\circ C$
Line regulation	ΔV_o			150	mV	$5.3V \leq V_i \leq 20V, I_o=40mA, T_J=25^\circ C$
				100	mV	$6.3V \leq V_i \leq 20V, I_o=40mA, T_J=25^\circ C$
Quiescent Current	I_q			6	mA	$T_J=+25^\circ C$
Quiescent Current Change	ΔI_q			1.5	mA	$6.3V \leq V_i \leq 20V, I_o=40mA, -40^\circ C \leq T_J \leq +125^\circ C$
				0.1	mA	$1mA \leq I_o \leq 40mA, V_i=8.3V, -40^\circ C \leq T_J \leq +125^\circ C$
Output Noise Voltage	V_N		40		$\mu V/V_o$	$10Hz \leq f \leq 100kHz, T_J=+25^\circ C$
Ripple Rejection	RR	41	49		dB	$6.3V \leq V_i \leq 16.3V, f=120Hz, I_o=40mA, -40^\circ C \leq T_J \leq +125^\circ C$
Dropout Voltage	V_d		1.7		V	$T_J=+25^\circ C$

*Pulse Test

PLASTIC-ENCAPSULATE VOLTAGE REGULATORS

Typical Characteristics

Figure 1 : 78L05/12 Output Voltage vs Ambient Temperature

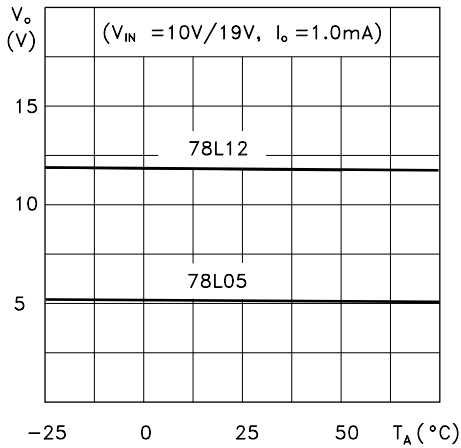


Figure 4 : 78L05/12 Quiescent Current vs Output Current

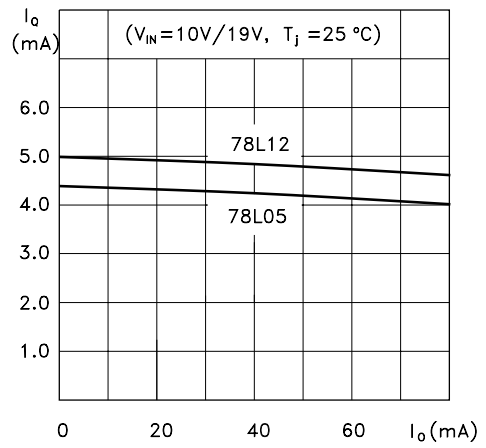


Figure 2 : 78L05/12/24 Load Characteristics

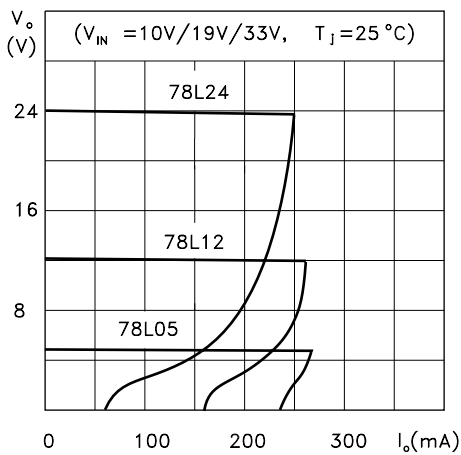


Figure 5 : 78L05 Quiescent Current vs Input Voltage

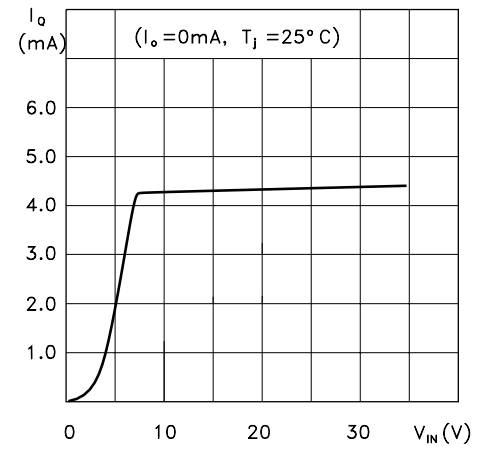


Figure 3 : 78L05/12/24 Thermal Shutdown

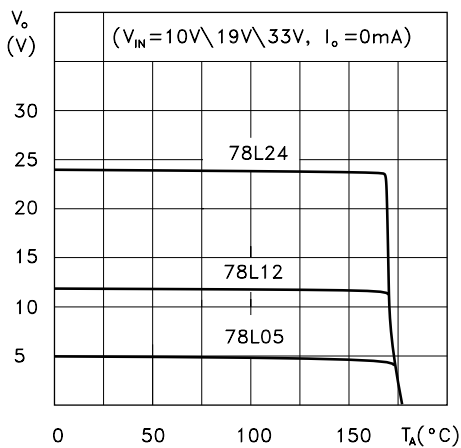
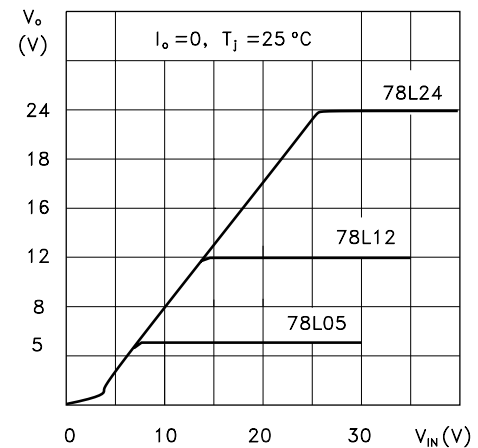


Figure 6 : 78L05/12/24 Output Characteristics



PLASTIC-ENCAPSULATE VOLTAGE REGULATORS

Figure 7 : 78L05/12/24RippleRejection

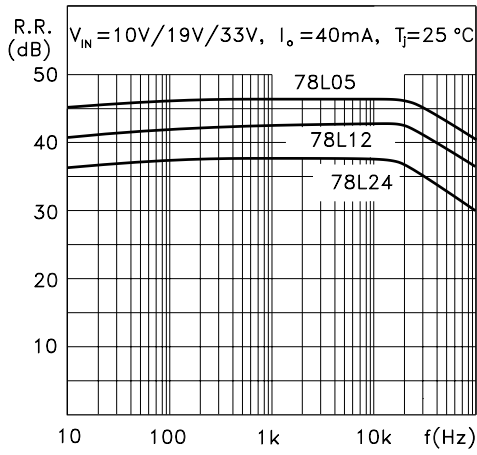


Figure 9 : 78L00SeriesShortCircuitOutput Current

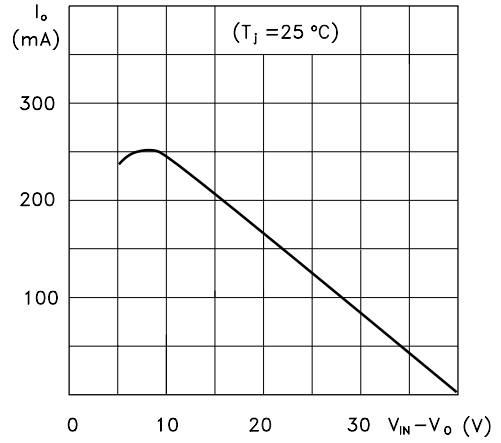
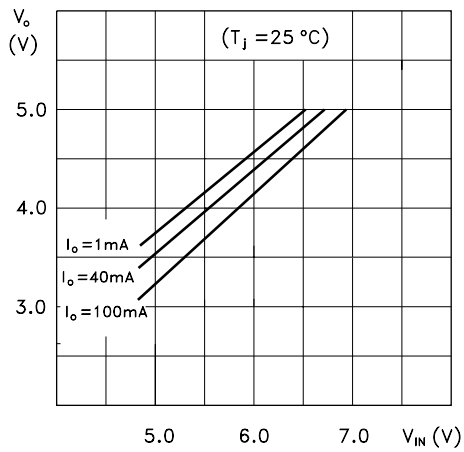


Figure 8 : 78L05DropoutCharacteristics



PLASTIC-ENCAPSULATE VOLTAGE REGULATORS

TYPICAL APPLICATION

Table 10 : High Output Current Short Circuit Protected

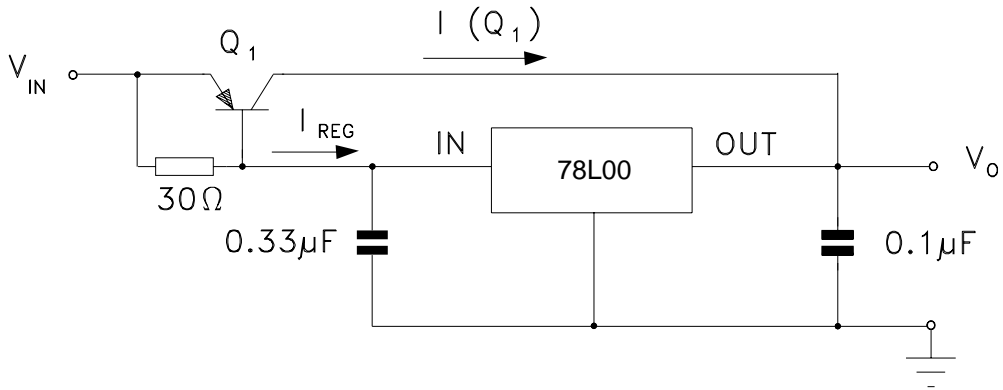


Figure 11 : Edit Boost Circuit

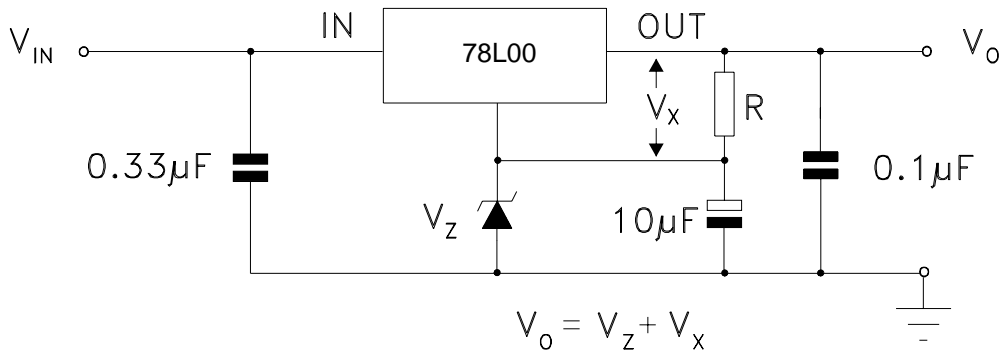


Figure 12 : Current Regulator

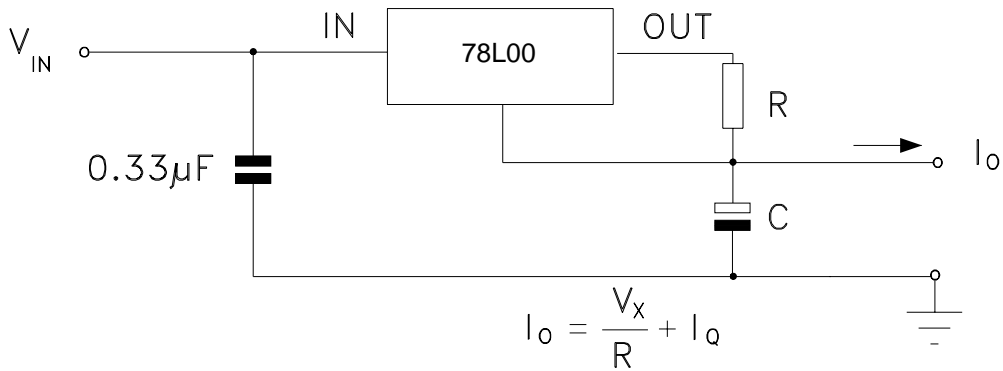
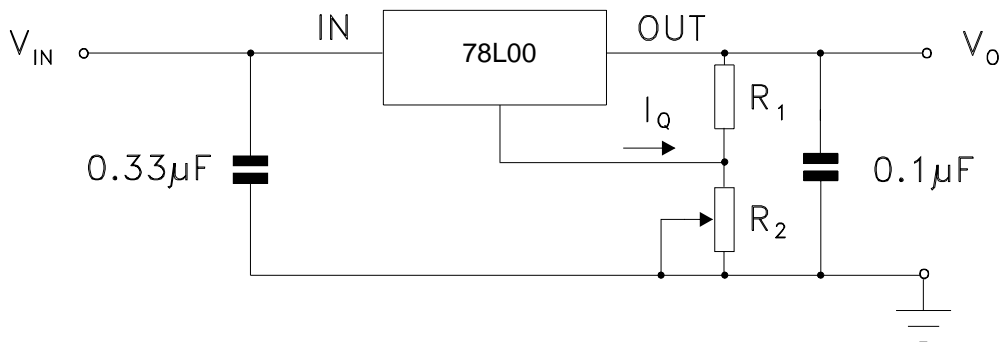
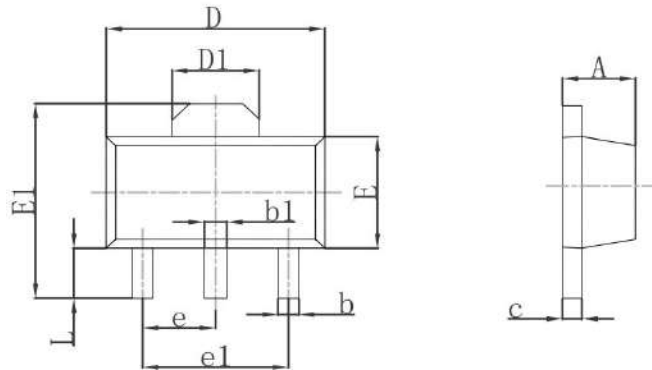


Figure 13 : Adjustable Output Regulator



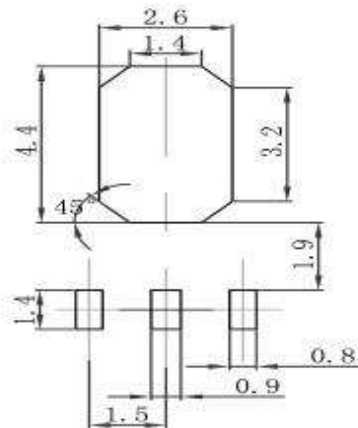
PLASTIC-ENCAPSULATE VOLTAGE REGULATORS

SOT-89 Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	1.400	1.600	0.055	0.063
b	0.320	0.520	0.013	0.020
b1	0.400	0.580	0.016	0.023
c	0.350	0.440	0.014	0.017
D	4.400	4.600	0.173	0.181
D1	1.550REF		0.061REF	
E	2.300	2.600	0.091	0.102
E1	3.940	4.250	0.155	0.167
e	1.500TYP		0.060TYP	
e1	3.000TYP		0.118TYP	
L	0.900	1.200	0.035	0.047

SOT-89 Suggested Pad Layout



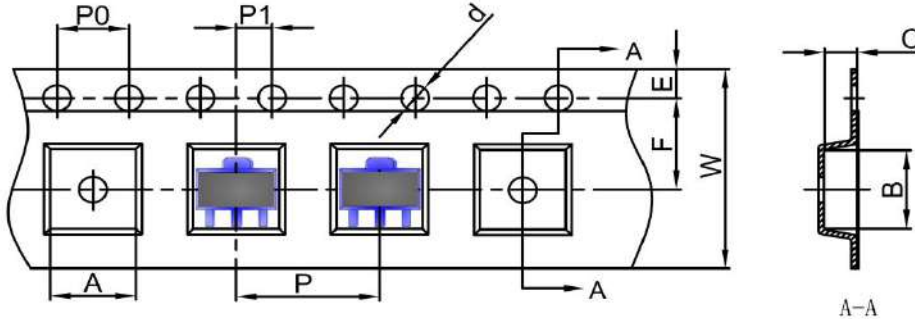
Note:

1. Controlling dimension: in millimeters
2. General tolerance: $\pm 0.05\text{mm}$
3. The pad layout is for reference purposes only

PLASTIC-ENCAPSULATE VOLTAGE REGULATORS

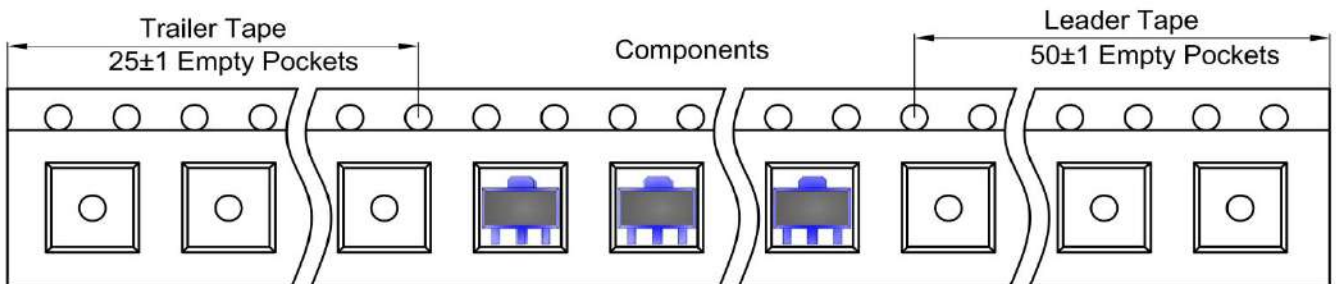
SOT-89 Tape and Reel

SOT-89 Embossed Carrier Tape

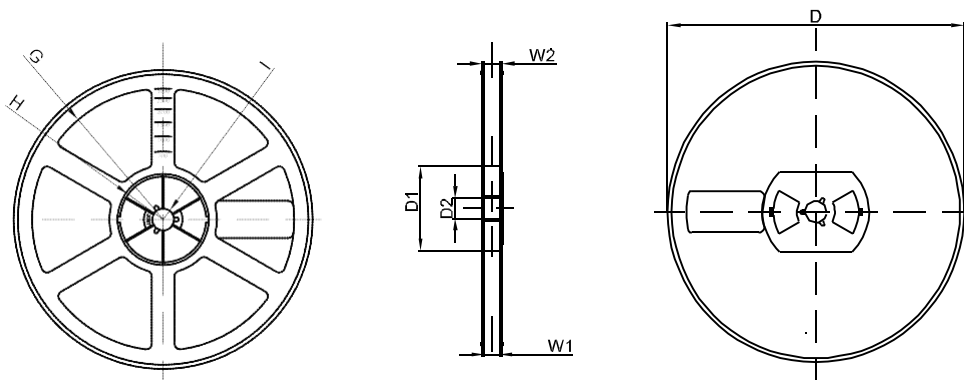


DIMENSIONS ARE IN MILLIMETER										
TYPE	A	B	C	d	E	F	P0	P	P1	W
SOT-89	4.85	4.45	1.85	Ø1.50	1.75	5.50	4.00	8.00	2.00	12.00
TOLERANCE	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1

SOT-89 Tape Leader and Trailer



SOT-89 Reel



DIMENSIONS ARE IN MILLIMETER								
REEL OPTION	D	D1	D2	G	H	I	W1	W2
7" DIA	Ø178	54.40	13.00	R78	R25.60	R6.50	13.20	16.50
TOLERANCE	±2	±1	±1	±1	±1	±1	±1	±1