BL78L05
3-TERMINAL POSITIVE VOLTAGE REGULATORS

上海贝岭
SHANGHAI BELLING

FEATURES

- Maximum Output current: 0.1A
- Output Voltage: 5V
- Thermal Overload Protection

PIN CONNECTION

1 2 3
OUT GND IN
SOT89-3
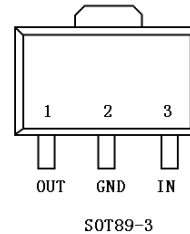
Absolute Maximum Ratings (Ta=25°C)

Characteristics		Symbol	Value	Unit
Input Voltage		Vi	30	V
Power Dissipation	TO-92	Pd	625	m W
	SOT-89		350	
	SOP8		500*	
Operating ambient Temperature Range		Topr	-25～ +125	℃
Storage Temperature Range		Tstg	-55～ +150	℃

ELECTRICAL CHARACTERISTICS

(unless otherwise noted, Vi=10V,Io=40mA, -30<Tj<85℃,C1=0.33μF,Co=0.1μF)（Note1）

Characteristics	Test conditions	Symbol	Min	Typ	Max	Unit
Output Voltage	Tj=25℃	Vo	4.82	5	5.18	V
	7V≤Vi≤20V; Io=1mA~40mA		4.8		5.2	V
	7V≤Vi≤Vmax;Io=1mA~70mA		4.8		5.2	V（Note2）
Load Regulation	VIN=10V; Io=1mA~100mA	Δ Vo	-60		60	m V
	VIN=10V; Io=1mA~40mA		-30		30	m V
Line Regulation	IOUT=40mA; 7V≤Vi≤20V	Δ Vo	-150		150	m V
	IOUT=40mA; 8V≤Vi≤20V		-100		100	m V
Quiescent Current		Iq			5.5	m A
Quiescent Current Change	8V≤Vi≤20V	Δ Iq	-1.5		1.5	m A
	1mA≤Io≤40mA		-0.1		0.1	m A
Ripple Rejection	10V≤Vi≤20V; f=120Hz; Tj=25°C	RR	40			d B
Dropout Voltage	Tj=25°C	Vd		2.2		V
Short Circuit Current Limit	Tj=25°C	Isc		0.41		V

Note 1: *The Maximum steady state usable output current and input voltage are very dependent on the heating sinking and/or lead temperature length of the package. The date above represent pulse test conditions with junction temperatures as indicated at the initiation of test.*
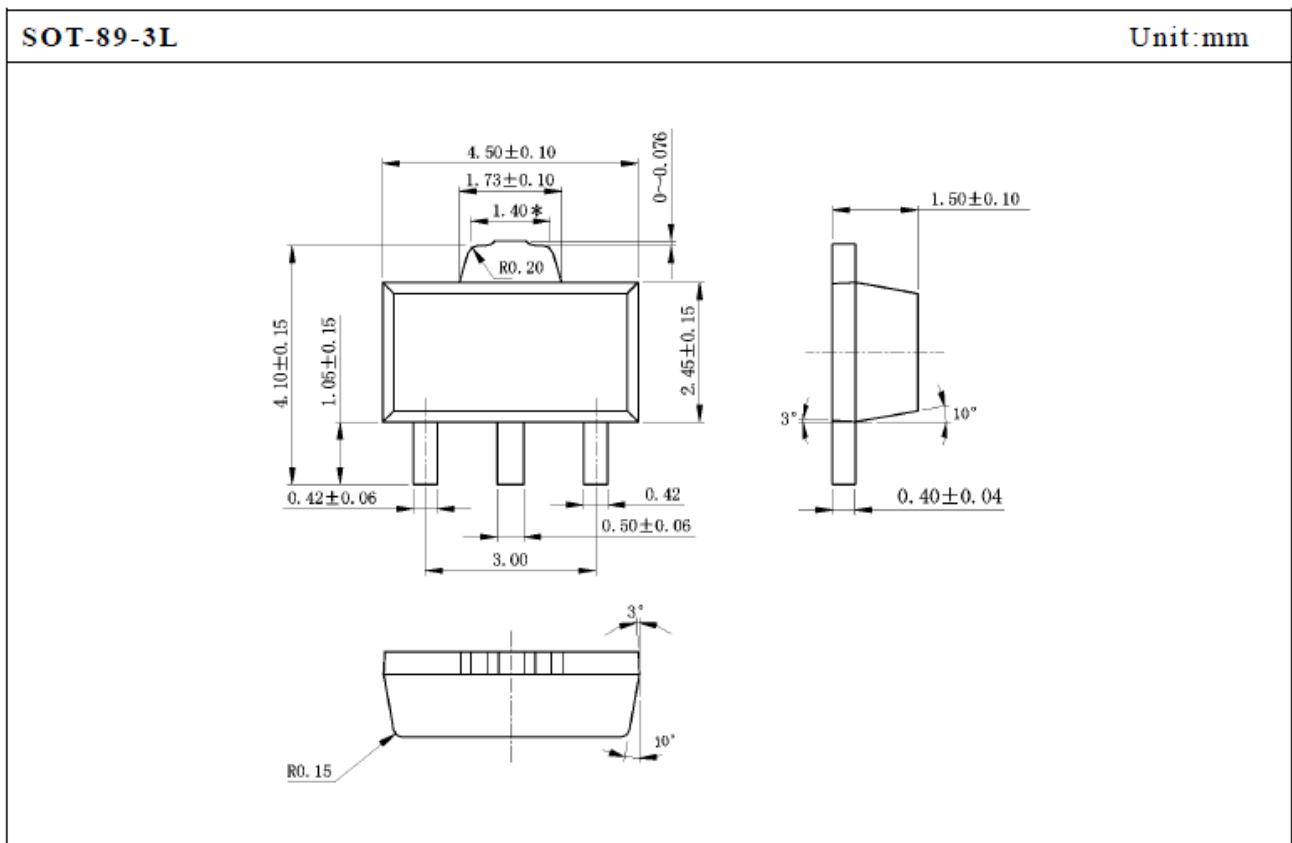
Note 2: *Power dissipation To-92<0.625W, SOT-89<0.35W,SOP8<0.5W*

APPLICATION CIRCUIT
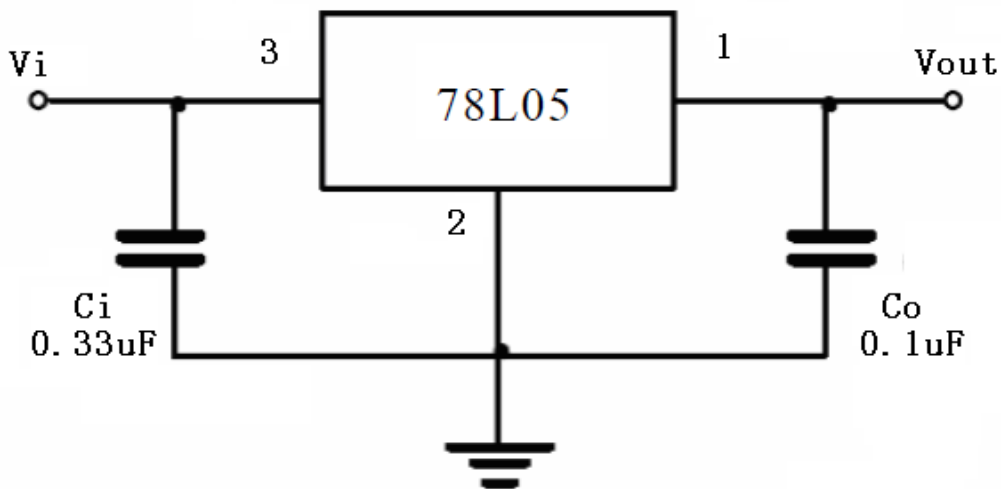
Bypass capacitors Co of at least 0.1uF are recommended for optimum stability and transient response.
It should be located as close as possible (recommended to be less than 10mm) to the regulators.

OUTLINE DRAWING

SOT-89-3L   Unit:mm

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