

TP78L24T3

0.1A Fixed Voltage Regulators

WWW.TECHPUBLIC.COM

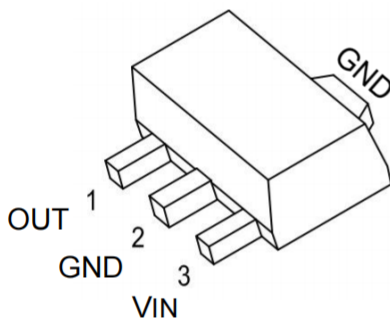
Features

- 3-Terminal regulators
- Maximum Output current 0.1A
- Output voltage V_o : 24V
- Compact package: SOT89-3

Applications

- HVAC Systems
- SMPS Post Regulation
- Test and Measurement Equipment
- Industrial Power Supplies

PIN CONFIGURATION



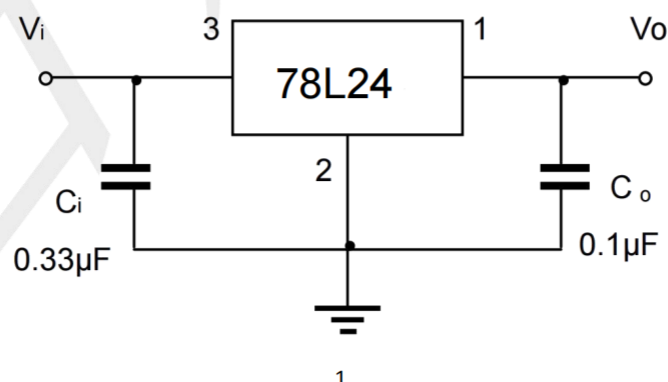
Pin Number	Pin Name	Pin Function
1	VOUT	Output of the Regulator
2	GND	Ground
3	VIN	Input of Supply Voltage

Absolute Maximum Ratings

over operating free-air temperature range (unless otherwise noted)

Symbol	Parameter	Rating	UNIT
VIN	Input voltage	35	V
R θ JA	Thermal Resistance Junction-ambient to Air	250	°C/W
PD	Continuous total dissipation (Ta= 25 °C)	0.5	W
TOPR	Operating Junction Temperature Range	-40~+150	°C
Tstg	Storage temperature range	-65~+150	°C

TYPICAL APPLICATION



Electrical Characteristics

($V_i=23V, I_o=40mA, C_i=0.33\mu F, C_o=0.1\mu F$, unless otherwise specified)

Parameter	Symbol	Test conditions		Min	Typ	Max	Unit
Output voltage	V_o	$26.5V \leq V_i \leq 30V, I_o=1mA$	$25^\circ C$	23.00	24	25.00	V
		$26.5V \leq V_i \leq 30V, I_o=1mA-40mA$	$0-125^\circ C$	22.80	24	25.20	V
		$V_i=30V, I_o=1mA-70mA$		22.80	24	25.20	V
Load Regulation	ΔV_o	$I_o=1mA-100mA, V_i=30V$	$25^\circ C$	--	25	150	mV
		$I_o=1mA-40mA, V_i=30V$	$25^\circ C$	--	15	75	mV
Line regulation	ΔV_o	$26.5V \leq V_i \leq 30V, I_o=40mA$	$25^\circ C$	--	65	300	mV
		$28V \leq V_i \leq 30V, I_o=40mA$	$25^\circ C$	--	58	250	mV
Quiescent Current	I_q		$25^\circ C$	--	4.6	6.5	mA
Quiescent Current Change	ΔI_q	$26.5V \leq V_i \leq 30V, I_o=40mA$	$0-125^\circ C$	--	--	2.5	mA
	ΔI_q	$1mA \leq I_o \leq 40mA, V_i=30V$	$0-125^\circ C$	--	--	0.1	mA
Output Noise Voltage	V_N	$10Hz \leq f \leq 100KHz$	$25^\circ C$	--	82	--	μV
Ripple Rejection	RR	$26.5V \leq V_i \leq 30V, f=120Hz$	$0-125^\circ C$	34	39	--	dB
Dropout Voltage	V_d		$25^\circ C$	--	1.7	--	V

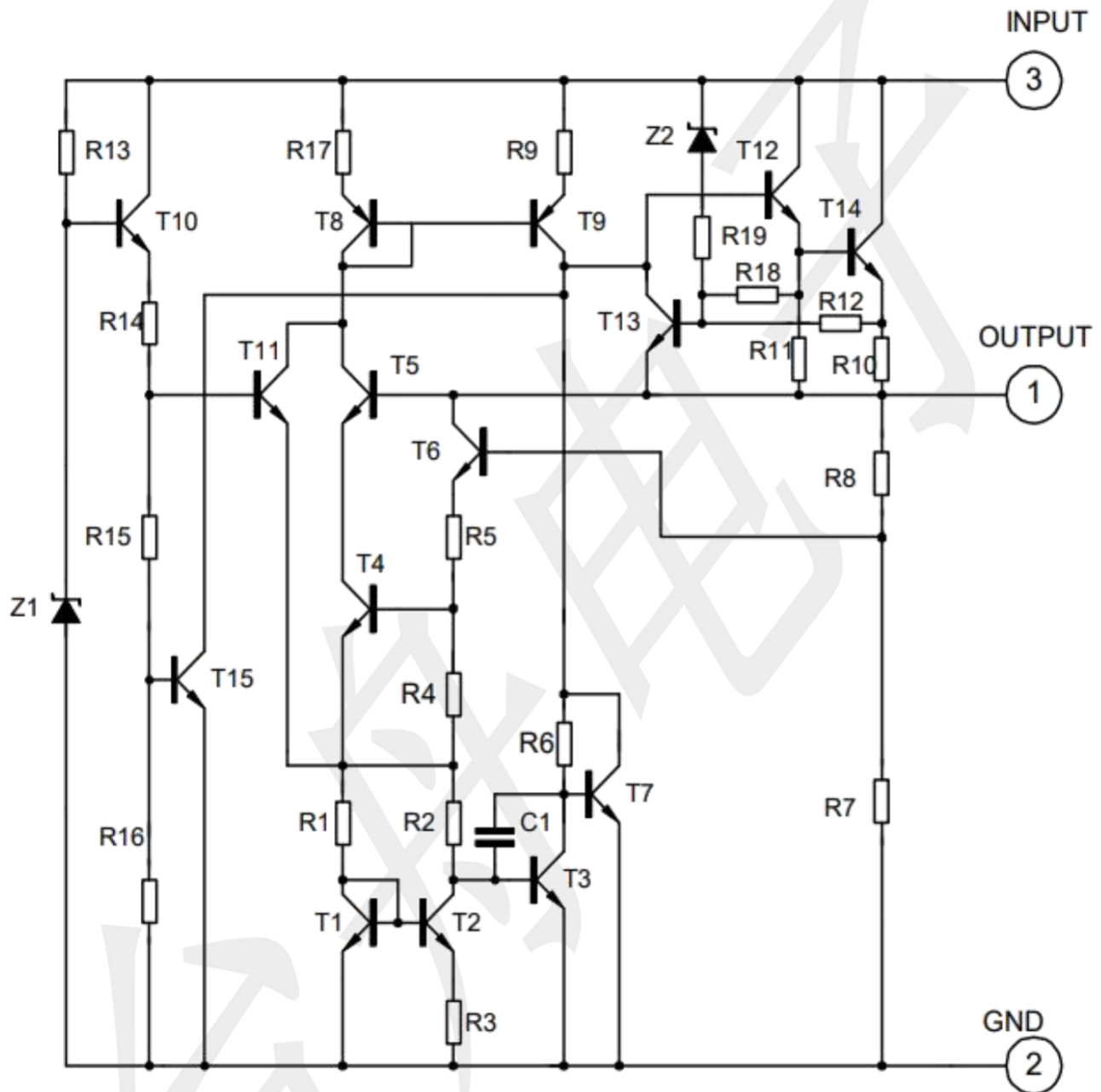
Note: Bypass capacitors are recommended for optimum stability and transient response and should be located as close as possible to the regulators.

TP78L24T3

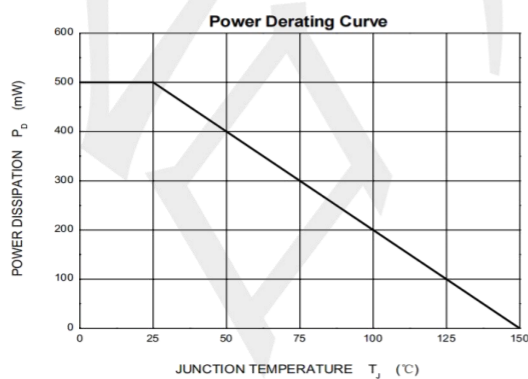
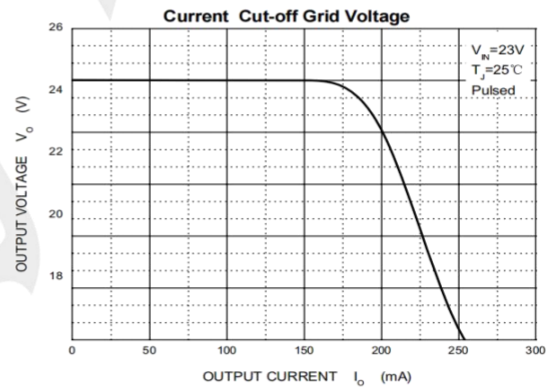
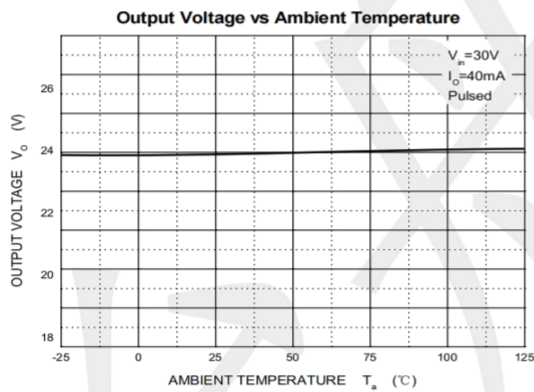
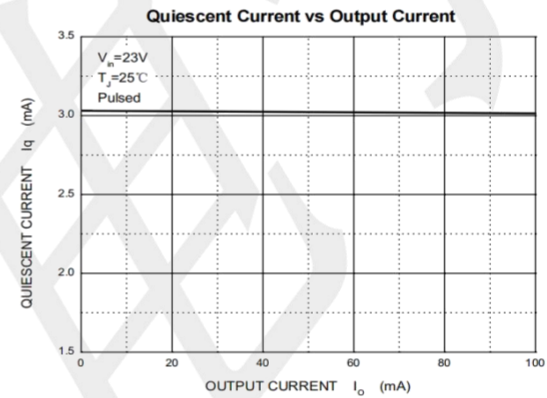
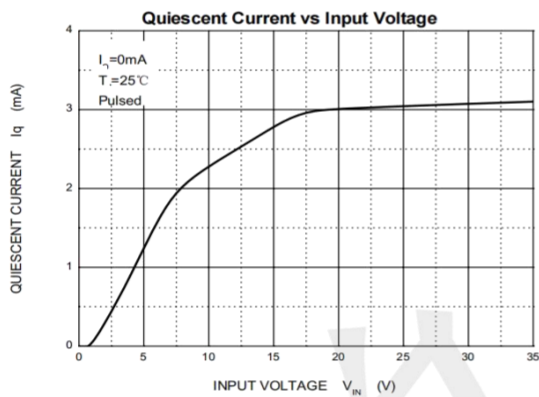
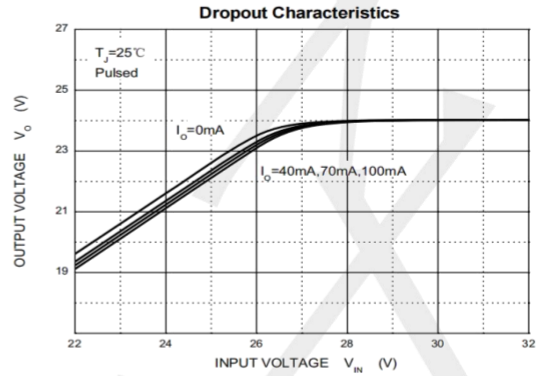
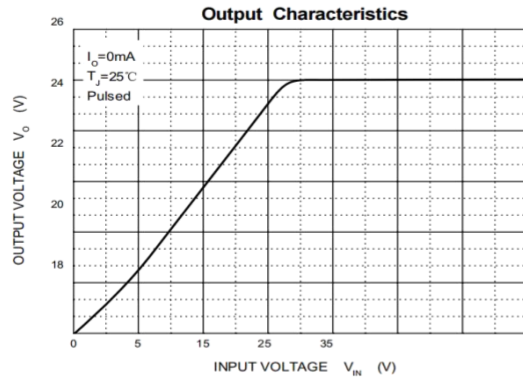
0.1A Fixed Voltage Regulators

WWW.TECHPUBLIC.COM

BLOCK DIAGRAM

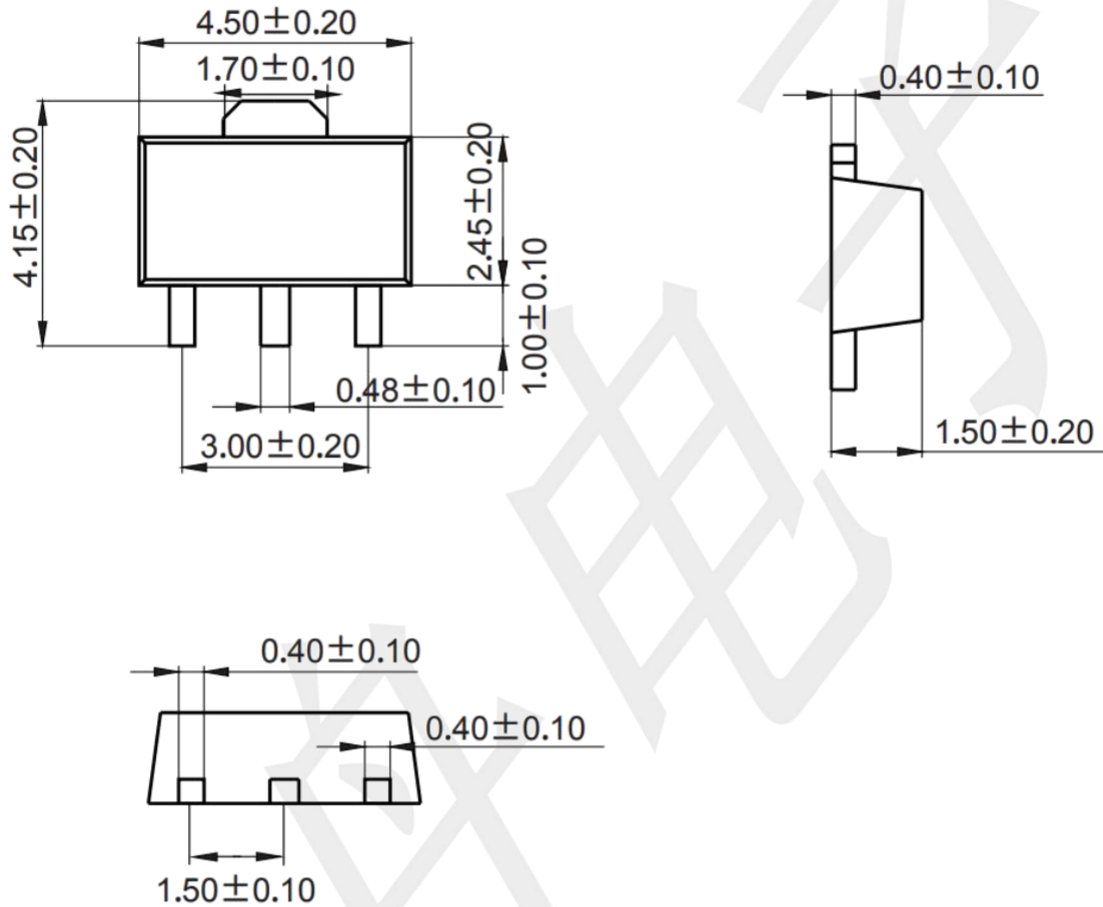


Typical Operating Characteristics



Package Outline Dimensions (unit: mm)

SOT89-3



Mounting Pad Layout (unit: mm)

