

JY5P Three-terminal Voltage Regulator

DESCRIPTION

JY5P series is a high-precision three-terminal voltage regulator. This series of chips can provide high current output capability under small voltage difference conditions, and has good load regulation. At the same time, the chip integrates a high-precision reference voltage source and an output power tube over-current protection circuit, making it especially suitable for applications with strict battery life requirements.

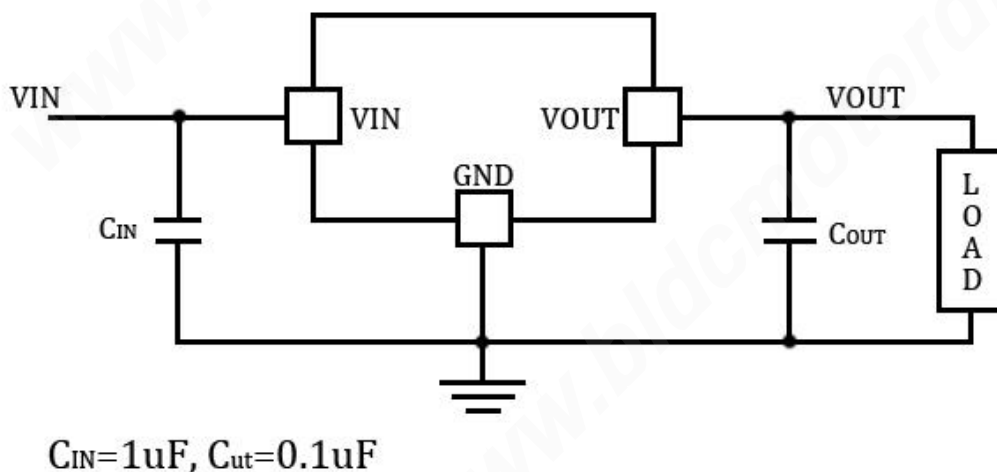
FEATURES

- High-precision output voltage: $5V(\pm 2\%)$
- Quiescent current consumption: Typical 2mA
- Maximum working voltage : 35V
- Low output voltage temperature coefficient
- Max. Output Current: 250mA
- Package: SOT89

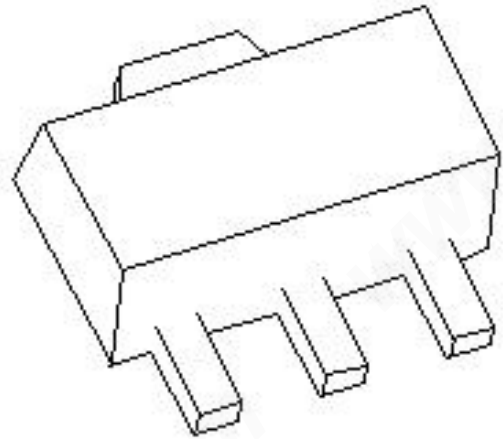
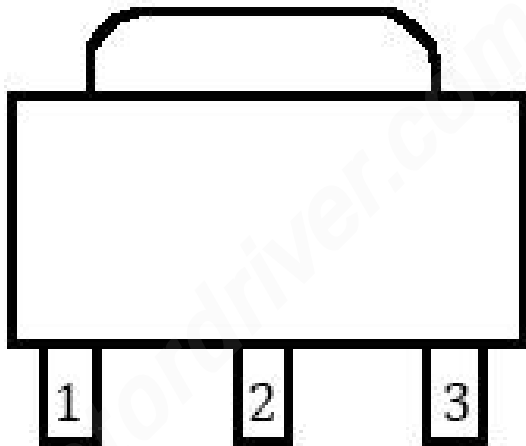
APPLICATION

- Mobile phone, PDA, P3 player, etc.
- Other handheld portable devices

TYPICAL APPLICATION CIRCUIT



PACKAGE AND PIN FEATURES



SOT89

Pin Name	Pin No.	Description
V _{OUT}	1	Output
GND	2	Ground
V _{IN}	3	Input

ABSOLUTE MAXIMUM RATING

Description	Limit	Unit
V _{IN} -V _{OUT}	± 35	V
Output current range I _{OUT}	250	mA
Operating Temperature Range	-40-125	°C
Storage Temperature Range	-55-150	°C

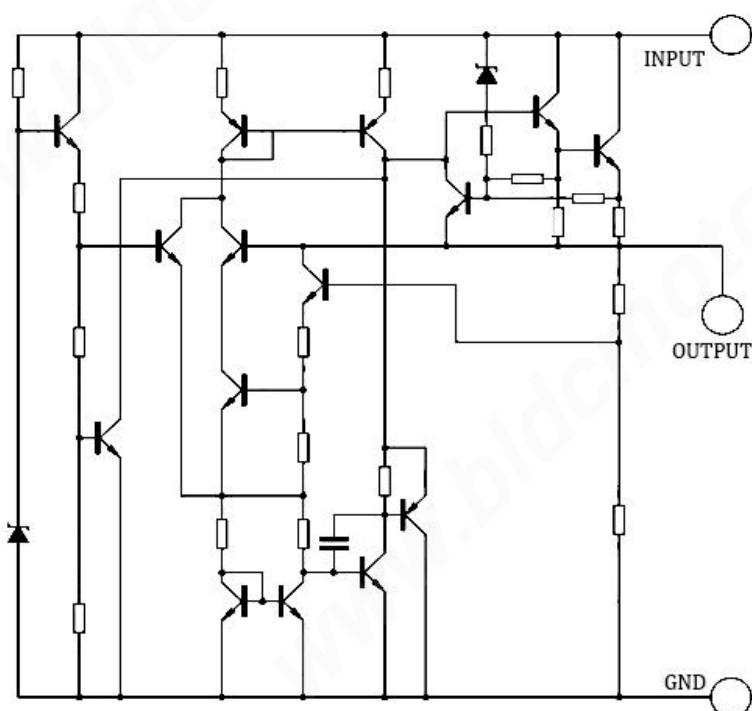
Note: If the parameters exceed the range of "absolute maximum value", it may cause permanent damage to the chip. The above is only the limit range. Under such limit conditions, the technical indicators of the chip will not be guaranteed. Working near the "absolute maximum" for a long time will affect the reliability of the chip

ELECTRICAL CHARACTERISTICS ($V_{out}=5.0V$)

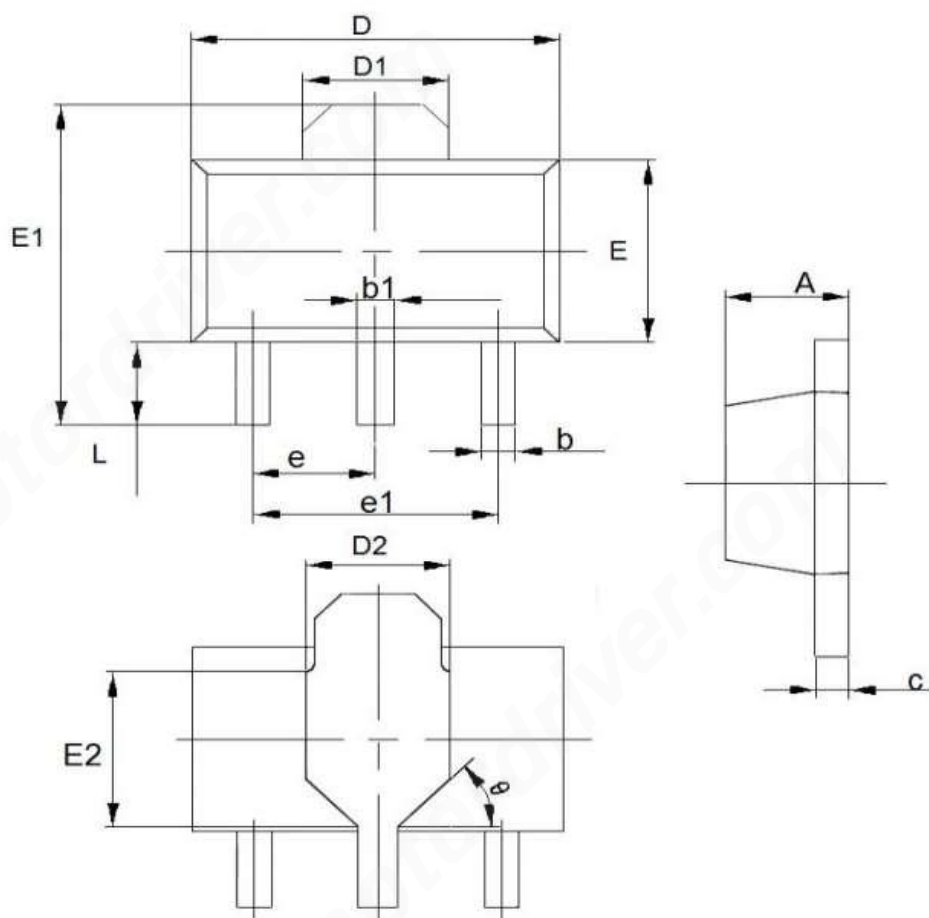
Symbol	Parameter	Testing Conditions	Min.	Typ.	Max.	Unit
I_Q	Quiescent Current			2.0	5.0	mA
V_{out}	Output Voltage	$7V \leq V_{IN} \leq 20V$ $1mA \leq I_{OUT} \leq 80mA$	4.9		5.1	V
$\Delta V_{OUTLINE}$	line regulation	$7V \leq V_{IN} \leq 20V$		5	80	mV
$\Delta V_{OUTLOAD}$	Load Regulation	$1mA \leq I_{OUT} \leq 40mA$		10	30	mV
		$1mA \leq I_{OUT} \leq 100mA$		15	50	
ΔV_{OUTTEP}	Output temperature coefficient	$I_{OUT}=50mA$		0.65		mV/°C
I_{OUT}	Output current				250	mA
V_{DROP}	Low Dropout	$I_{OUT}=80mA$		1.7		V
PSRR	Power Supply Rejection Ratio			49		dB
$V_{OUTNOISE}$	Output noise voltage	BW=10Hz to 100KHz		40		uV

Note: $C_{IN}=1\mu F$, $C_{OUT}=0.1\mu F$, $T_A=25^\circ C$

BLOCK DIAGRAM



PACKAGE OUTLINE



Symbol	Dimensions (mm)		Dimensions (Inch)	
	Min.	Max.		
A	1.4	1.6	0.0551	0.0630
b	0.32	0.52	0.0126	0.0205
b1	0.4	0.58	0.0157	0.0228
c	0.35	0.45	0.0138	0.0177
D	4.4	4.6	0.1732	0.1811
D1	1.55(TYP)		0.061(TYP)	
D2	1.75(TYP)		0.0689(TYP)	
e1	3.0(TYP)		0.1181(TYP)	
E	2.3	2.6	0.0906	0.1023
E1	3.94	4.4	0.1551	0.1732
E2	1.9(TYP)		0.0748(TYP)	
e	1.5(TYP)		0.0591(TYP)	
L	0.8	1.2	0.0315	0.0472
θ	45°		45°	