

## Features

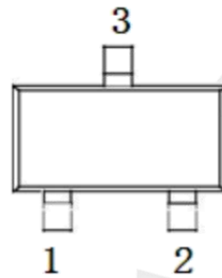
- 8 $\mu$ A Current at no Load
- $\pm 2\%$  Output Accuracy
- 250mA Output Current
- Current Limit Protection

## Applications

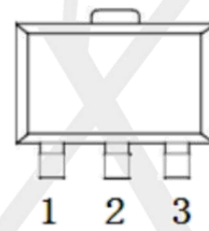
- Industrial Controls
- Home Automation
- Low Power Microcontrollers
- Portable, Battery Powered Equipment

## PIN CONFIGURATION

SOT23 & SOT23-3L



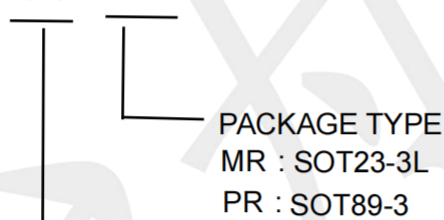
SOT89-3



Pin Number		Pin Name	Pin Function
SOT89-3	SOT23-3L		
PR	MR		
2	2	VOOUT	Output of the Regulator
1	1	GND	Ground
3	3	VIN	Input of Supply Voltage

## Ordering Information

# XC6206P332PR



OUTPUT VOLTAGE

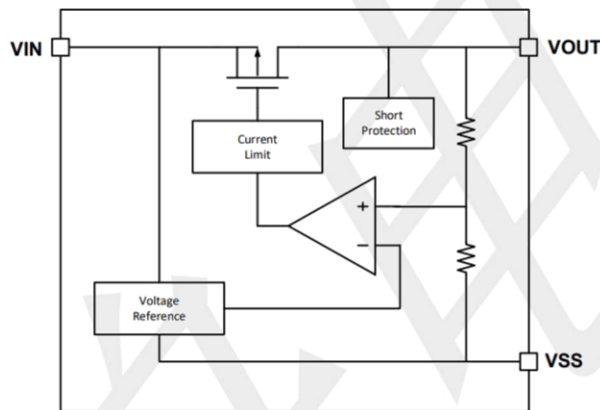
- 12: 1.2V
- 15: 1.5V
- 18: 1.8V
- 25: 2.5V
- 30: 3.0V
- 33: 3.3V
- 45: 4.5V
- 50: 5.0V

## Absolute Maximum Ratings

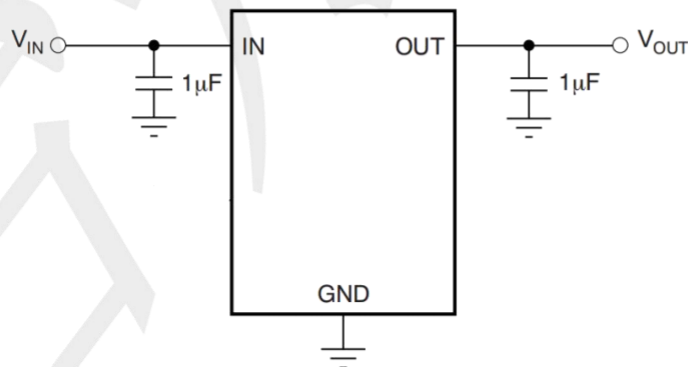
over operating free-air temperature range (unless otherwise noted)

		MIN	MAX	UNIT
V <sub>IN</sub>	Continuous input voltage range	-0.3	8	V
V <sub>OUT</sub>	Output voltage range	-0.3	V <sub>OUT</sub> +0.3	
I <sub>OUT</sub>	Output pin current	Internally limited		mA
Temperature	Operating junction, T <sub>J</sub>	-25	80	°C
	Storage, T <sub>stg</sub>	-40	125	

## BLOCK DIAGRAM



## Typical Application Circuit



## Electrical Characteristics

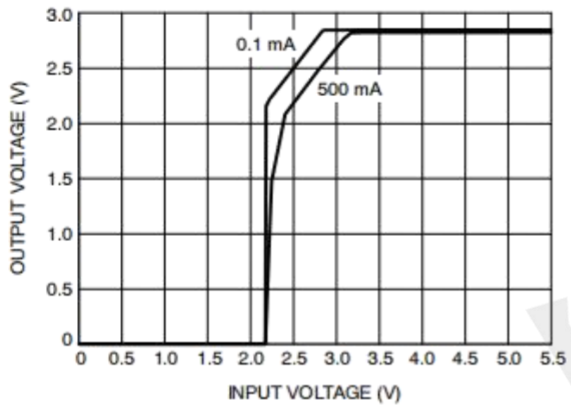
(VIN=7V, TA=25°C, unless otherwise specified)

PARAMETER	SYMBOL	TEST Conditions	MIN	TYP	MAX	UNIT
Supply Voltage	VIN		2	--	7	V
Output current	IOUT		0	--	250	mA
DC Output Voltage Accuracy		IOUT = 0.1mA	-2	--	2	%
Dropout Voltage (VIN-VOUT)	IOUT = 100mA	VOUT = 1.5V	--	420	--	mV
		VOUT = 1.8V	--	310	--	
		VOUT = 2.8V	--	220	--	
		VOUT = 3.0V	--	183	--	
		VOUT = 3.3V	--	161	--	
		VOUT = 4.5V	--	135	--	
		VOUT = 5.0V	--	122	--	
Maximum output current	Iout max	VIN= VOUT+1V	100	--	--	mA
Ground Current (IOUT = 0mA)	IQ	VOUT = 3.3V	--	8	--	uA
Shutdown Ground Current	ISD	VOUT = 0V	--	0.01	0.5	
VOUT Shutdown Leakage Current	ILEAK		--	0.01	0.5	
Line Regulation	ΔLINE	IOUT = 1mA, 2≤VIN≤7V	--	0.3	--	%
Load Regulation	ΔLOAD	10mA≤ IOUT ≤ 200mA	--	0.3	--	
Output Current Limit	ILIM	VOUT=0.9× VOUT(NOM)	250	300	350	mA
Power Supply Rejection Ratio	PSRR	VOUT = 5V, IOUT = 30mA, VIN = 7V, f = 1kHz	--	70	--	dB
Thermal Shutdown Temperature	TSD	IOUT = 10mA	--	160	--	°C
Thermal Shutdown Hysteresis	ΔTSD		--	15	--	
Package Thermal Resistance (Note 1)	θJA	Thermal Resistance Junction-toAmbient	--	100	--	°C/W
Total Power Dissipation	P <sub>DTOT</sub>	T <sub>C</sub> =25°C	--	1.25	--	W

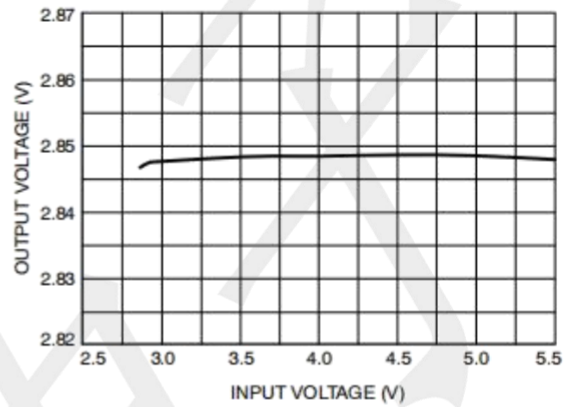
Note: 1. SOT89-3 devices are mounted on 1"x1" FR-4 substrate PC board, with minimum recommended pad layout.

## Typical Operating Characteristics (25 °C, unless otherwise noted)

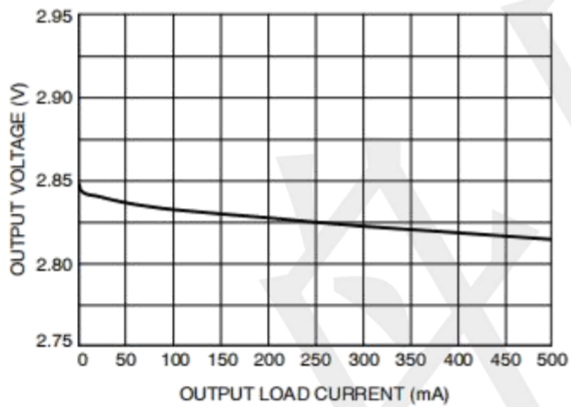
Unless otherwise specified:  $T_A = 25\text{ }^\circ\text{C}$ ,  $V_{IN} = V_O(\text{NOM}) + 1\text{ V}$ ,  $C_{OUT} = 1\text{ }\mu\text{F}$ ,  $C_{IN} = 1\text{ }\mu\text{F}$  all voltage options.



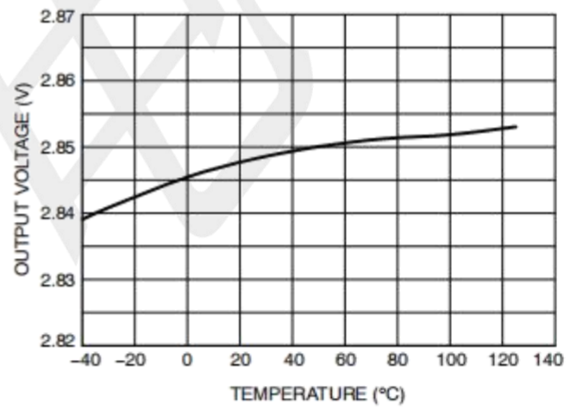
Dropout Characteristics



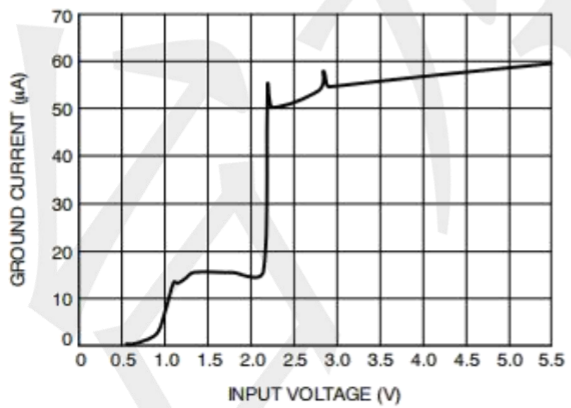
Line Regulation



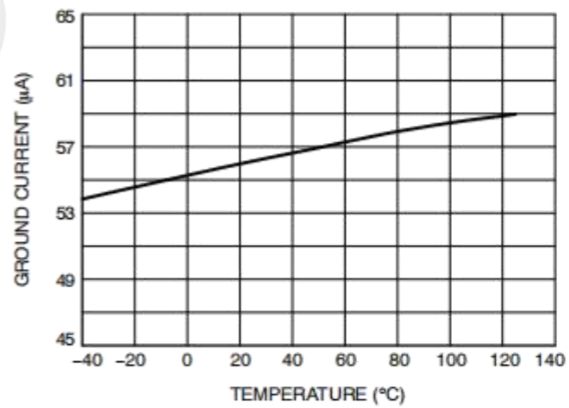
Load Regulation



Output Voltage vs. Temperature



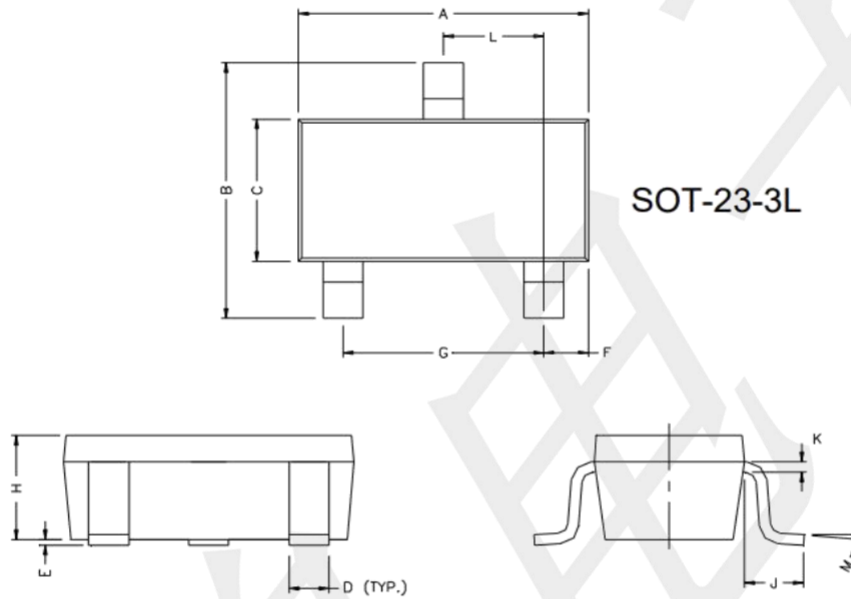
Ground Current vs. Input Voltage



Ground Current vs. Temperature

## Package information

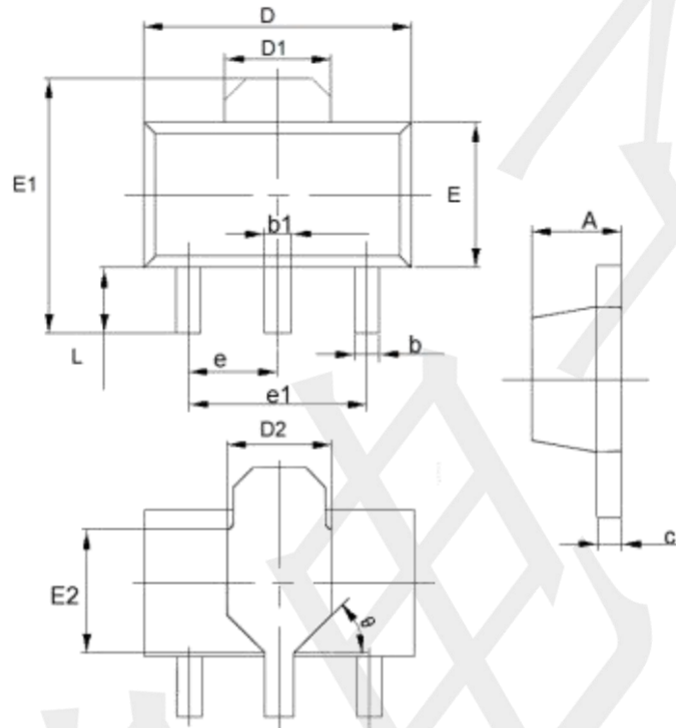
### SOT23-3L



REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	2.70	3.10	G	1.90	REF.
B	2.65	2.95	H	1.00	1.30
C	1.50	1.70	K	0.10	0.20
D	0.35	0.50	J	0.40	-
E	0	0.10	L	0.85	1.15
F	0.45	0.55	M	0°	10°

## Package information

SOT89-3



参数	尺寸 (mm)		尺寸 (Inch)	
	最小值	最大值	最小值	最大值
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°	

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