

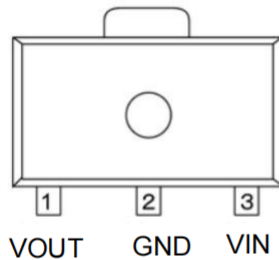
Features

- 2 μ A Current at no Load
- $\pm 2\%$ Output Accuracy
- 150mA Output Current
- Current Limit Protection

Applications

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

PIN CONFIGURATION



SOT89-3

Pin Name	Pin Function
VOUT	Output of the Regulator
GND	Ground
VIN	Input of Supply Voltage

Ordering Information

XC6202P502PR

PACKAGE TYPE
PR :SOT89-3

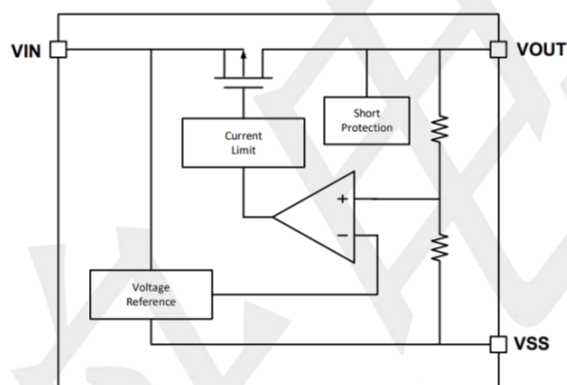
OUTPUT VOLTAGE
15: 1.5V
18: 1.8V
25: 2.5V
30: 3.0V
33: 3.3V
45: 4.5V
50: 5.0V

Absolute Maximum Ratings

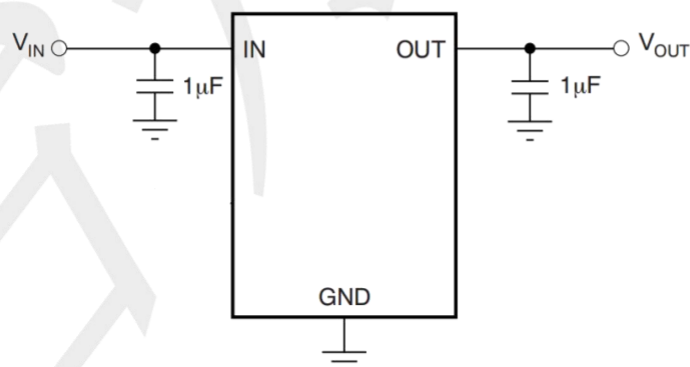
over operating free-air temperature range (unless otherwise noted)

		MIN	MAX	UNIT
VIN	Continuous input voltage range	-0.3	22	V
VOUT	Output voltage range	-0.3	VOUT+0.3	
IOUT	Output pin current	Internally limited		mA
Temperature	Operating junction, TJ	-25	80	°C
	Storage, Tstg	-40	125	

BLOCK DIAGRAM



Typical Application Circuit



Electrical Characteristics

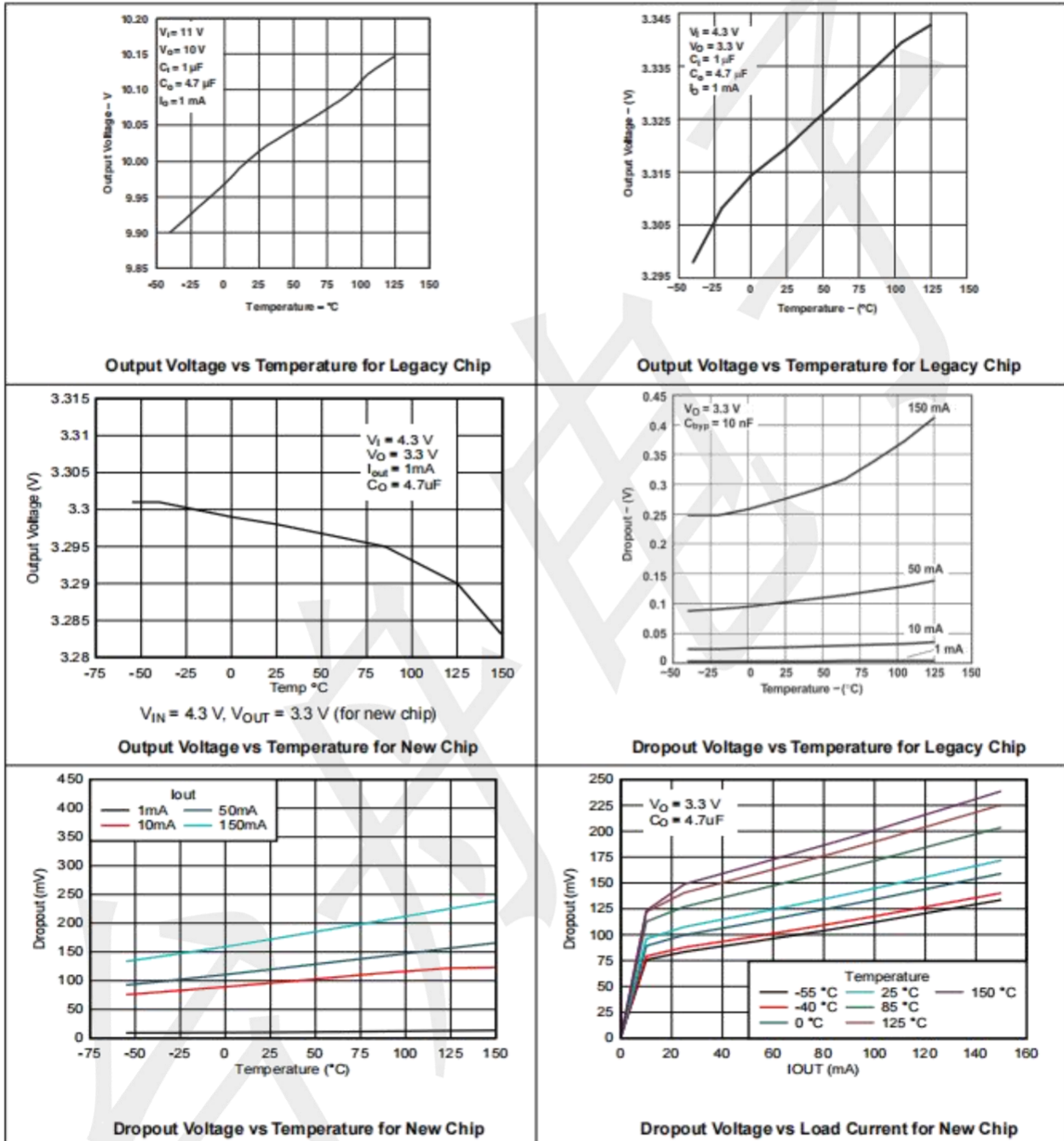
(VIN=7V, TA=25°C, unless otherwise specified)

PARAMETER	SYMBOL	TEST Conditions	MIN	TYP	MAX	UNIT
Supply Voltage	VIN		2	--	20	V
Output current	IOUT		0	--	150	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	--	2	--	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≤20V	--	0.3	--	%
Load Regulation	ΔLOAD	10mA≤ IOUT ≤ 100mA	--	0.3	--	
Output Current Limit	ILIM	VOUT=0.9× VOUT(NOM)	150	200	250	mA
Power Supply Rejection Ratio	PSRR	VOUT = 5V, IOUT = 30mA, VIN = 20V, 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 _{DTOT}	T _C =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.

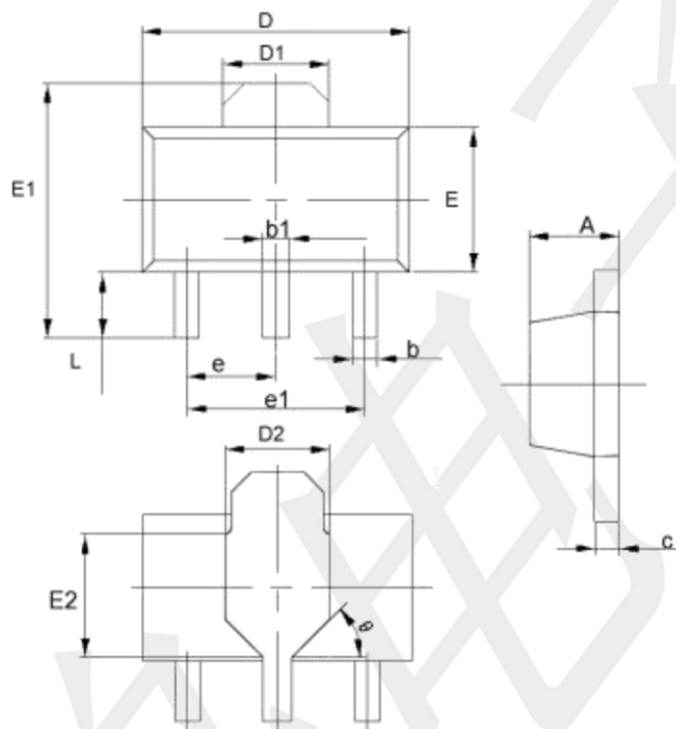
Typical Operating Characteristics (25 °C, unless otherwise noted)

Unless otherwise specified: $T_A = 25^\circ\text{C}$, $V_{IN} = V_O(\text{NOM}) + 1\text{ V}$, $C_{OUT} = 4.7\mu\text{F}$, $C_{IN} = 1\mu\text{F}$ all voltage options.



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°	