

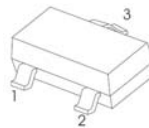
Features

- Low power consumption
- Low voltage drop
- Low temperature coefficient
- Low Quiescent Current: 3uA at 6V
- Output voltage accuracy: tolerance $\pm 2\%$

Applications

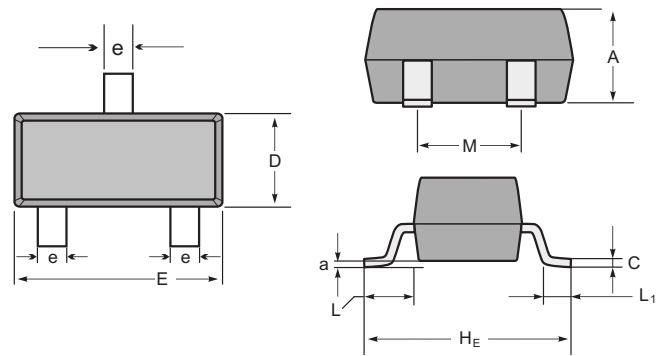
- Battery-powered equipment
- Reference voltage sources
- Cameras, video cameras
- Portable AV systems
- Mobile phones
- Portable games

SOT-23



1. GATE
2. SOURCE
3. DRAIN

SOT-23



SOT-23 mechanical data

UNIT		A	C	D	E	H _E	e	M	L	L ₁	a
mm	max	1.1	0.15	1.4	3.0	2.6	0.5	1.95	0.55 (ref)	0.36 (ref)	0.0
	min	0.9	0.08	1.2	2.8	2.2	0.3	1.7			0.15
mil	max	43	6	55	118	102	20	77	22 (ref)	14 (ref)	0.0
	min	35	3	47	110	87	12	67			6

General Description

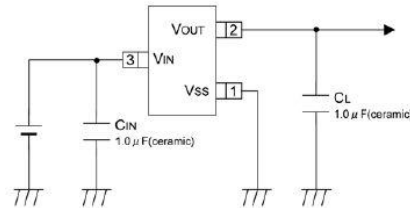
XC6206series are a highly precise, lower consumption, 3 terminal, positive voltage regulators manufactured using CMOS and laser trimming technologies. The series provides large currents with a significantly small dropout voltage .

The XC6206consists of a current limiter circuit, a driver transistor, a precision reference voltage and an error correction circuit. The series is

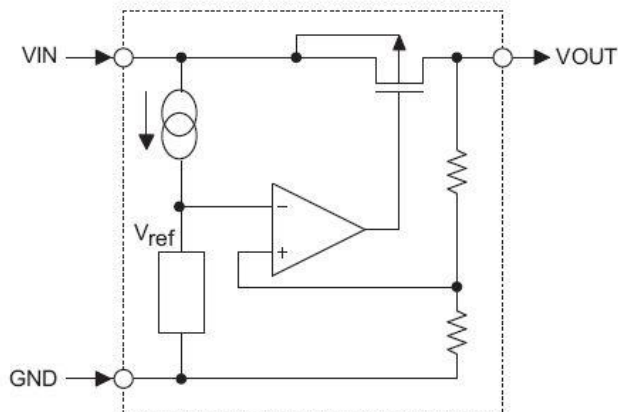
compatible with low ESR ceramic capacitors. The current limiter's foldback circuit operates as a short circuit protection as well as the output current limiter for the output pin. Output voltages are internally by laser trimming technologies. It is selectable in 0.1V increments within a range of 1.2V to 5.0V. XC6206series are available in SOT-23 packages.

XC6206

Typical Application



Block Diagram



Absolute Maximum Ratings

Parameter	Symbol	Ratings	Units	
Input Voltage	V_{IN}	8	V	
Output Current	I_{OUT}	300*	mA	
Output Voltage	V_{OUT}	$V_{SS}-0.3 \sim V_{IN}+0.3$	V	
Power Dissipation	SOT-23	P_d	0.20	W
Operating Temperature Range	T_{opr}	-40~+85	°C	
Storage Temperature Range	T_{stg}	-55~+125	°C	

* $I_{OUT} = P_d / (V_{IN} - V_{OUT})$

XC6206

Electrical Characteristics

XC6206 for any output voltage

(Ta=25°C)

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Unit
Output Voltage	Vout	Vin=Vout+1V 1.0mA≤Iout≤30mA	Vout×0.98	--	Vout×1.02	V
Output Current*1	Iout	Vin-Vout=1V	--	300	--	mA
Low dropout*2	Vdrop	Refer to the next table				
Line Regulation	$\Delta V_{out1}/(V_{in}-V_{out})$	1.6V≤Vin≤8V Iout=40mA	--	0.05	0.2	%/V
Load Regulation	$\Delta V_{out} / \Delta I_{out}$	Vin=Vout+1V 1.0mA≤Iout≤80mA	--	12	30	mV
Output voltage Temperature Coefficiency	$\Delta V_{out}/(T_a-V_{out})$	Iout=30mA 0°C≤Ta≤70°C	--	±100	--	Ppm/°C
Supply Current	Iss	--	--	3	5	uA
Input Voltage	Vin	--	1.8	--	6	V
PSRR	PSRR	F=1KHz Vin=Vout+1V	--	50	--	dB
Output Noise	EN	BW=10Hz~100KHz	--	30	--	uVrms

Electrical Characteristics by Output Voltage:

Output Voltage Vout(V)	Dropout Voltage Vdif (V)		
	Conditions	Typ.	Max.
Vout≤1.5V	Iout=100 mA	0.35	0.57
1.8 ≤ Vout ≤ 2		0.28	0.42
2.8 ≤ Vout ≤ 5.0		0.19	0.35

RATING AND CHARACTERISTIC CURVES (XC6206)

