General Description

HX6206Pxx2MR series 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 HX6206Pxx2MR consists 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 limiters fold back 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 3.6V HX6206Pxx2MR series are available in SOT-23 package.

Features

- Low Power Consumption
- Low Voltage Drop
- Low Temperature Coefficient
- Low Quiescent Current:1uA at 6V
- Output voltage accuracy:tolerance ±2%

Application

- Battery-powered Equipments
- Reference Voltage Sources
- Cameras,video cameras
- Portable AV systems
- Mobile phones
- Portable games

Pin Configuration And Descriptions

SOT-23 (Top View)

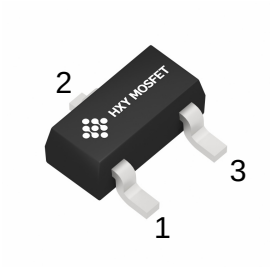


Table1:HX6206Pxx2MR series (SOT-23 PKG)

PIN NO.	PIN NAME	FUNCTION
1	GND	GND pin
2	VIN	Input voltage pin
3	VOUT	Output voltage pin

Order Information

Orderable Device	Package	Output Voltage	Packing Option
HX6206Pxx2MR	SOT-23-3L	1.2V-3.6V	3000/Reel

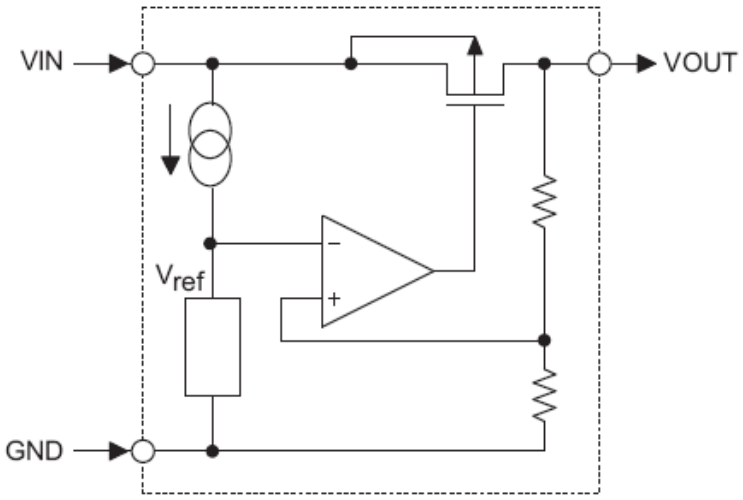
xx:From 12-36

Absolute Maximum Ratings

Description	Symbol	Value Range	Unit
Input Voltage	V_{IN}	8	V
Storage Temperature Range	T_{STG}	-55～+125	°C
Operating Free-air Temperature Range	T_A	-40～+85	°C
Power Dissipation	P_d	0.2	W
Output Current	I_{OUT}	300	mA
Output Voltage	V_{OUT}	V_{SS} -0.3~V_{IN} +0.3	V

Note:Stresses greater than those listed under " Absolute Maximum Ratingsmay" cause permanent damage to the device. These are stress ratings only, and functional operation of the device at these or any other conditions beyond those indicated under " Recommended Operating Conditionsis" not implied. Exposure to " Absolute Maximum Ratings" for extended periods may affect device reliability.

Block Diagram



DC Characteristics (unless otherwise noted T_A= 25°C)

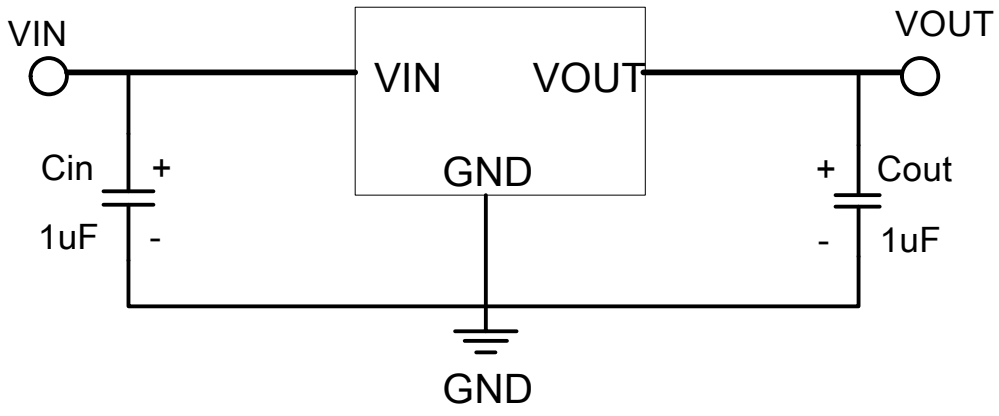
Parameter	Symbol	Conditions	Min.	Typ.	Max.	Unit
Output Voltage	Vout	Vin=Vout+1V 1.0mA≤Iout≤30mA	Vout×0.98	--	Vout×1.02	V
Output Current*1	Iout	Vin-Vout=1V	--	300	--	mA
Low dropout*2	Vdrop	Refer to the next table				
Line Regulation	△Vout1/ △ (Vin·Vout)	1.6V≤Vin≤6.5V Iout=40mA	--	0.05	0.2	%/V
Load Regulation	△Vout /ΔIout	Vin= Vout+1V 1.0mA≤Iout≤80mA	--	12	30	mV
Output voltage Temperature Coefficiency	△Vout/(Ta·Vout)	Iout=30mA 0℃≤Ta≤70℃	--	±75	--	Ppm/℃
Supply Current	Iss	--	--	1	1.5	uA
Input Voltage	Vin	--	--	6	8	V

Electrical Characteristics by Output Voltage：

Output Voltage Vout(V)	Dropout Voltage Vdif（V）		
	Conditions	Typ.	Max.
Vout≤1.5V	Iout=100 mA	0.39	0.66
Vout=1.6V		0.35	0.57
Vout=1.7V		0.32	0.50
1.8 ≤ Vout ≤ 2		0.30	0.45
2.1 ≤ Vout ≤ 2.7		0.28	0.42
2.8 ≤ Vout ≤ 3.6		0.25	0.35

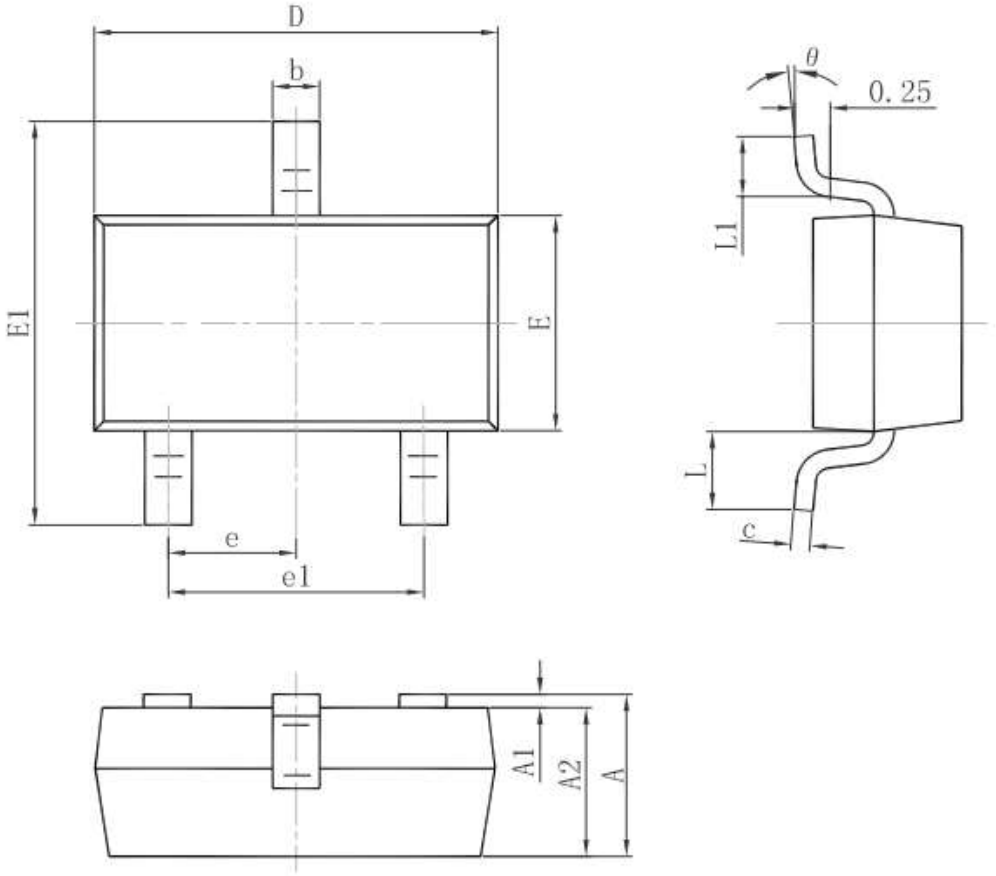
Application Circuit

Basic Circuits



Package Outline Dimensions

SOT-23



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	0.900	1.150	0.035	0.045
A1	0.000	0.100	0.000	0.004
A2	0.900	1.050	0.035	0.041
b	0.300	0.500	0.012	0.020
c	0.080	0.150	0.003	0.006
D	2.800	3.000	0.110	0.118
E	1.200	1.400	0.047	0.055
E1	2.250	2.550	0.089	0.100
e	0.950 TYP.		0.037 TYP.	
e1	1.800	2.000	0.071	0.079
L	0.550 REF.		0.022 REF.	
L1	0.300	0.500	0.012	0.020
θ	0°	8°	0°	8°

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