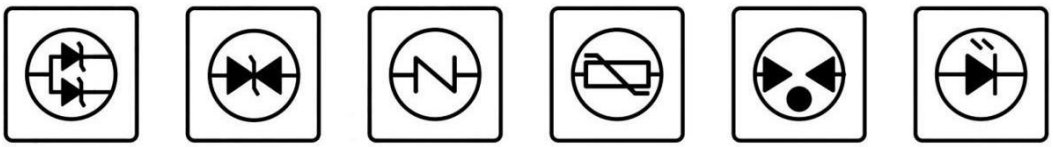
MSKSEMI 美森科
SEMICONDUCTOR



XC6206PXXXMR-MS

Product specification

General Description

XC6206PXXXMR-MS 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 XC6206PXXXMR-MS consists of a current limiter circuit, adriver 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 3.6V. XC6206PXXXMR-MS series are available in SOT-23 packages.

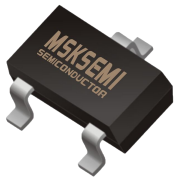
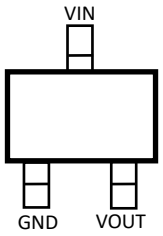
Features

- Low power consumption
- Low voltage drop
- Low temperature coefficient
- Low Quiescent Current: 8uA at 6V
- Output voltage accuracy: tolerance ±2.5%

Applications

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

Pin Description AND MARKING

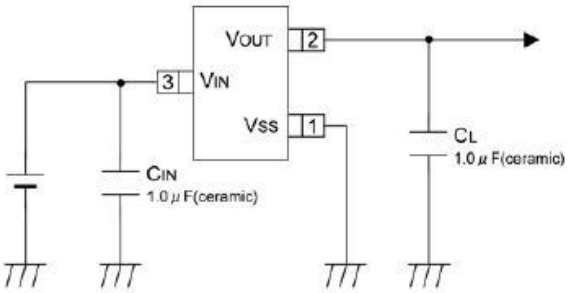
SOT-23	Pin Description
	

XC6206P122MR-MS	XC6206P152MR-MS	XC6206P182MR-MS	XC6206P212MR-MS	XC6206P252MR-MS
65BP	65E9	65K5	65N5	65T5
XC6206P272MR-MS	**XC6206P282MR-MS**	**XC6206P302MR-MS**	**XC6206P332MR-MS**	
65V5	65X5	65Z5	662K	

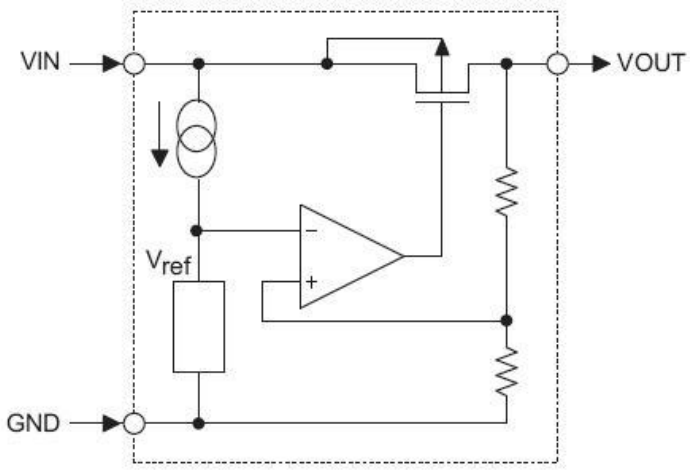
Package/Order Information

ORDERING NUMBER	utput voltage	Package	Packing Option
XC6206P122MR-MS	1.2V	SOT-23	3000
XC6206P152MR-MS	1.5V		
XC6206P182MR-MS	1.8V		
XC6206P212MR-MS	2.1V		
XC6206P252MR-MS	2.5V		
XC6206P272MR-MS	2.7V		
XC6206P282MR-MS	2.8V		
XC6206P302MR-MS	3.0V		
XC6206P332MR-MS	3.3V		

Typical Application



BlockDiagram



Absolute Maximum Ratings

Parameter	Symbol	Ratings	Units
Input Voltage	V_{IN}	6.5	V
Output Current	I_{OUT}	250*	mA
Output Voltage	V_{OUT}	V_{SS}-0.3~V_{IN}+0.3	V
Power Dissipation	P_d	0.20	W
Operating Temperature Range	T_{opr}	-20~+85	℃
Storage Temperature Range	T_{stg}	-55~+125	℃

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

Electrical Characteristics

XC6206PXXXMR-MS for any output voltage （Ta=25℃）

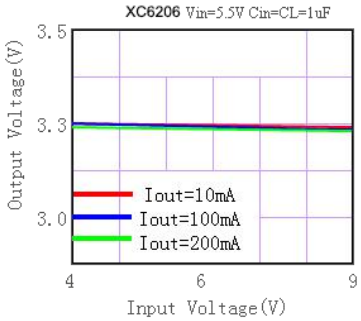
Parameter	Symbol	Conditions	Min.	Typ.	Max.	Unit
Output Voltage	Vout	Vin=Vout+1V 1.0mA≤Iout≤30mA	Vout×0.98	--	Vout× 1.02	V
Output Current*1	Iout	Vin-Vout=1V	--	250	--	mA
Low dropout*2	V_{drop}	Refer to the next table				
Line Regulation	△Vout1/(Vin·Vout)	1.6V≤Vin≤8V Iout=40mA	--	0.05	0.2	%/V
Load Regulation	△Vout /ΔIout	Vin= Vout+1V 1.0mA≤Iout≤80mA	--	12	30	mV
Output voltage Temperature Coefficiency	△Vout/(Ta·Vout)	Iout=30mA 0℃≤Ta≤70℃	--	±100	--	Ppm/℃
Supply Current	Iss	--	--	3	5	uA
Input Voltage	Vin	--	--	5	6.5	V
PSRR	PSRR	F=1KHz Vin=Vout+1V	--	50	--	dB
Output Noise	EN	BW=10Hz～100KHz	--	30	--	uVrms

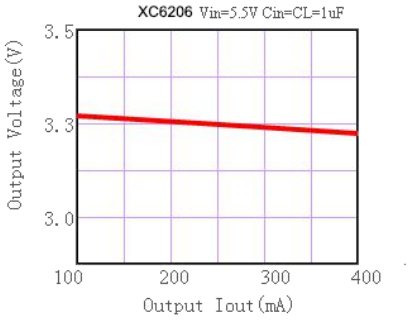
Electrical Characteristics by Output Voltage：

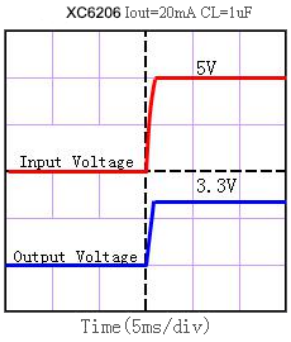
Output Voltage Vout(V)	Dropout Voltage Vdif（V）		
	Conditions	Typ.	Max.
Vout≤1.5V	Iout=100 mA	0.35	0.57
1.8 ≤ Vout ≤ 2		0.28	0.42
2.8 ≤ Vout ≤ 5.0		0.19	0.35

Typical Performance Characteristics

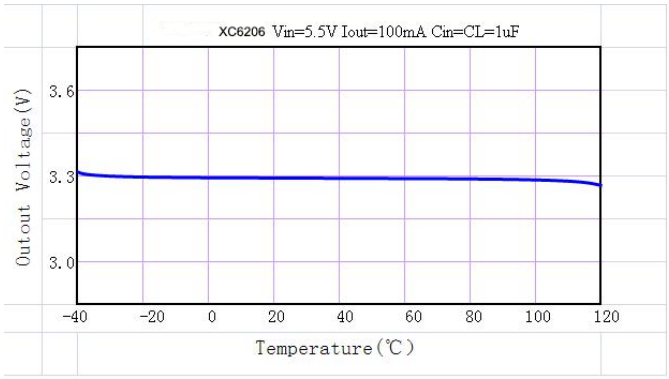
(1) Output Voltage vs Input voltage and Output Voltage vs.Output Current and Input Transient Response



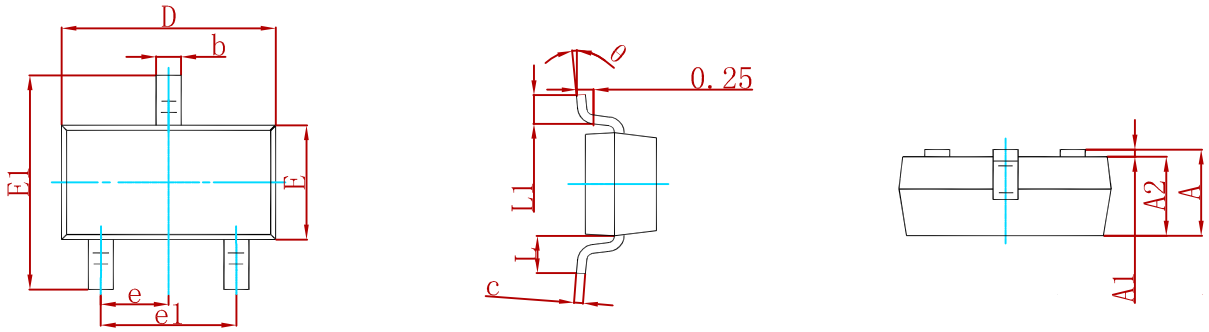




(2) Output Voltage vs. Ambient Temperature

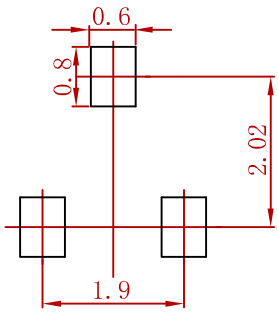


PACKAGE MECHANICAL DATA



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°

Suggested Pad Layout



Note:
1.Controlling dimension:in millimeters.
2.General tolerance:±0.05mm.
3.The pad layout is for reference purposes only.

Attention

■ Any and all MSKSEMI Semiconductor products described or contained herein do not have specifications that can handle applications that require extremely high levels of reliability, such as life-support systems, aircraft's control systems, or other applications whose failure can be reasonably expected to result in serious physical and/or material damage. Consult with your MSKSEMI Semiconductor representative nearest you before using any MSKSEMI Semiconductor products described or contained herein in such applications.

■ MSKSEMI Semiconductor assumes no responsibility for equipment failures that result from using products at values that exceed, even momentarily, rated values (such as maximum ratings, operating condition ranges, or other parameters) listed in products specificationsof any andall MSKSEMI Semiconductor products described orcontained herein.

■ Specifications of any and all MSKSEMI Semiconductor products described or contained herein stipulate the performance, characteristics, and functions of the described products in the independent state, and are not guarantees of the performance, characteristics, and functions of the described products as mounted in the customer’s products or equipment. To verify symptoms and states that cannot be evaluated in an independent device, the customer should always evaluate and test devices mounted in the customer’sproducts orequipment.

■ MSKSEMI Semiconductor. strives to supply high-quality high-reliability products. However, any and all semiconductor products fail with someprobability. It is possiblethat these probabilistic failures could give rise to accidents or events that could endanger human lives, that could give rise to smoke or fire, or that could cause damage to other property. When designing equipment, adopt safety measures so that these kinds of accidents or events cannot occur. Such measures include but are not limited to protective circuits anderror prevention circuitsfor safedesign, redundant design, and structural design.

■ In the event that any or all MSKSEMI Semiconductor products(including technical data, services) described or contained herein are controlled under any of applicable local export control laws and regulations, such products must not be exported without obtaining the export license from theauthorities concerned in accordance with the above law.

■ No part of this publication may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopying and recording, or any information storage or retrieval system, or otherwise, without the prior written permission of MSKSEMI Semiconductor.

■ Information (including circuit diagrams and circuit parameters) herein is for example only ; it is not guaranteed for volume production. MSKSEMI Semiconductor believes information herein is accurate and reliable, but no guarantees are made or implied regarding its use or any infringementsof intellectual property rights or other rightsof third parties.

■ Any and all information described or contained herein are subject to change without notice due to product/technology improvement, etc. Whendesigning equipment, referto the "Delivery Specification" for the MSKSEMI Semiconductor productthat you intend to use.