

# MSKSEMI 美森科

SEMICONDUCTOR



ESD



TVS



TSS



MOV



GDT



PLED

## MC78LXXACDR2G-MS

### 产品手册

## 产品简介

MC78LXXACDR2G-MS 是一款采用双极性工艺制造的高压输入稳压器，最高输入电压可达 30V，输出电压范围为 5V~15V。具有内部过热、过载、短路保护功能等特点，广泛应用于各类消费电子电器行业。

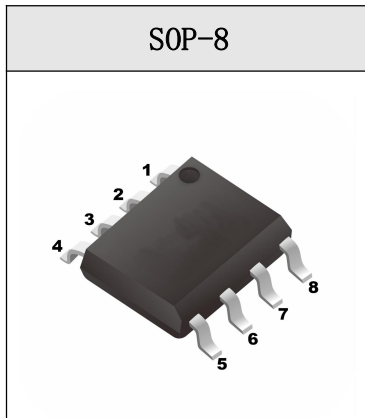
## 产品特点

- 高的输入电压:最高可达 30V
- 内部短路电流限制
- 输出电流可达: 100mA
- 内部热过载保护
- 无外部组件
- 封装形式: SOP-8

## 产品用途

- 电池充电器设备
- 各种通信设备
- 电子控制领域
- 音频视频设备
- 安防监控设备
- LED 照明

## 封装形式和管脚功能定义



管脚定义		功能说明
1	VOUT	输出端
2	GND	接地端
3	GND	接地端
4	NC	空脚
5	NC	空脚
6	GND	接地端
7	GND	接地端
8	VIN	输入端

## 型号选择

名称	型号	最高输入电压 (V)	输出电压 (V)	容差	封装形式
MC78LXXACDR2G-MS	MC78L05ACDR2G-MS	30	5.0	±4%	SOP-8
	MC78L06ACDR2G-MS	30	6.0	±4%	
	MC78L08ACDR2G-MS	30	8.0	±4%	
	MC78L09ACDR2G-MS	30	9.0	±4%	

## 极限参数

项目	符号	参数	极限值	单位
电压	V <sub>IN</sub>	最大输入电压	32	V
功耗	PD	最大功耗	internally limited	mW
温度	T <sub>w</sub>	工作温度	-25~85	°C
	T <sub>J</sub>	工作结温	125	°C
	T <sub>c</sub>	存储温度	-65~150	°C

**注：**极限参数是指无论在任何条件下都不能超过的极限值。如果超过此极限值，将有可能造成产品劣化等物理性损伤；同时 在接近极限参数下，不能保证芯片可以正常工作。

## 电学特性

MC78L05ACDR2G-MS (C<sub>IN</sub>=0.33 μF, C<sub>OUT</sub>=0.1 μF, V<sub>IN</sub>=10V, I<sub>OUT</sub>=40mA, T=25°C, 特殊规定除外)

符号	参数	测试条件	最小值	典型值	最大值	单位
V <sub>OUT</sub>	输出电压	V <sub>IN</sub> =10V, I <sub>OUT</sub> =40mA	4.8	5	5.2	V
I <sub>PK</sub>	输出电流	V <sub>IN</sub> =10V	-	100	-	mA
ΔV <sub>OUT</sub>	负载稳定度	V <sub>IN</sub> =10V, 1mA ≤ I <sub>OUT</sub> ≤ 40mA	-	10	50	mV
		V <sub>IN</sub> =10V, 1mA ≤ I <sub>OUT</sub> ≤ 100mA	-	15	75	mV
ΔV <sub>OUT</sub>	输入稳定度	8.5V ≤ V <sub>IN</sub> ≤ 20V, I <sub>OUT</sub> =40mA	-	20	80	mV
I <sub>Q</sub>	静态电流	V <sub>IN</sub> =10V, I <sub>OUT</sub> =40mA	-	3	5	mA
ΔI <sub>Q</sub>	静态电流变化	8.5V ≤ V <sub>IN</sub> ≤ 36V, I <sub>OUT</sub> =0mA	-	0.2	1	mA
		V <sub>IN</sub> =10V, 1mA ≤ I <sub>OUT</sub> ≤ 40mA	-	0.02	0.1	mA
PSRR	纹波抑制率	f=120Hz, V <sub>IN</sub> =8.5V to 16V	-	49	-	dB
V <sub>IN(MIN)</sub>	最小输入电压		-	8	8.5	V
ΔV <sub>OUT</sub> / ΔTa	温度系数	V <sub>IN</sub> =10V, I <sub>OUT</sub> =5mA, 0°C ≤ Ta ≤ 70°C	-	±0.5	-	mV/°C

**电学特性**

 MC78L06ACDR2G-MS ( $C_{IN}=0.33\mu F$ ,  $C_{OUT}=0.1\mu F$ ,  $V_{IN}=10V$ ,  $I_{OUT}=40mA$ ,  $T=25^{\circ}C$ , 特殊规定除外)

符号	参数	测试条件	最小值	典型值	最大值	单位
$V_{OUT}$	输出电压	$V_{IN}=10V, I_{OUT}=40mA$	5.76	6	6.24	V
$I_{PK}$	输出电流	$V_{IN}=10V$	-	100	-	mA
$\Delta V_{OUT}$	负载稳定度	$V_{IN}=10V, 1mA \leq I_{OUT} \leq 40mA$	-	15	60	mV
		$V_{IN}=10V, 1mA \leq I_{OUT} \leq 100mA$	-	16	80	mV
$\Delta V_{OUT}$	输入稳定度	$8.5V \leq V_{IN} \leq 20V, I_{OUT}=40mA$	-	20	80	mV
$I_Q$	静态电流	$V_{IN}=10V, I_{OUT}=40mA$	-	3	5	mA
$\Delta I_Q$	静态电流变化	$8.5V \leq V_{IN} \leq 36V, I_{OUT}=0mA$	-	0.2	1	mA
		$V_{IN}=10V, 1mA \leq I_{OUT} \leq 40mA$	-	0.02	0.1	mA
PSRR	纹波抑制率	$f=120Hz, V_{in}=8.5V$ to 16V	-	49	-	dB
$V_{IN(MIN)}$	最小输入电压		-	8	8.5	V
$\Delta V_{OUT} / \Delta T_a$	温度系数	$V_{IN}=10V, I_{OUT}=5mA, 0^{\circ}C \leq T_a \leq 70^{\circ}C$	-	$\pm 0.5$	-	mV/ $^{\circ}C$

**电学特性**

 MC78L08ACDR2G-MS ( $C_{IN}=0.33\mu F$ ,  $C_{OUT}=0.1\mu F$ ,  $V_{IN}=10V$ ,  $I_{OUT}=40mA$ ,  $T=25^{\circ}C$ , 特殊规定除外)

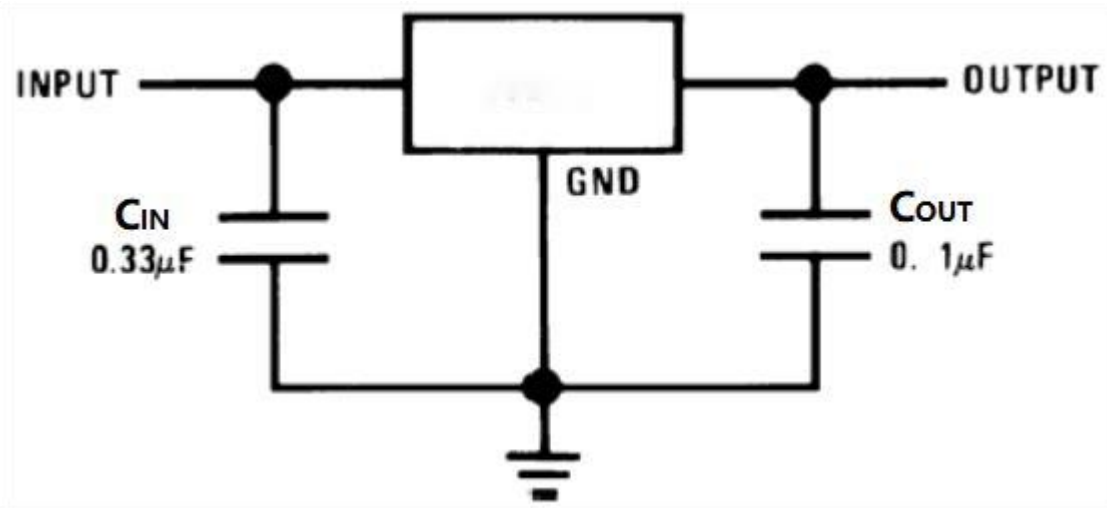
符号	参数	测试条件	最小值	典型值	最大值	单位
$V_{OUT}$	输出电压	$V_{IN}=10V, I_{OUT}=40mA$	7.68	8	8.32	V
$I_{PK}$	输出电流	$V_{IN}=10V$	-	150	-	mA
$\Delta V_{OUT}$	负载稳定度	$V_{IN}=10V, 1mA \leq I_{OUT} \leq 40mA$	-	20	65	mV
		$V_{IN}=10V, 1mA \leq I_{OUT} \leq 100mA$	-	18	85	mV
$\Delta V_{OUT}$	输入稳定度	$8.5V \leq V_{IN} \leq 20V, I_{OUT}=40mA$	-	20	90	mV
$I_Q$	静态电流	$V_{IN}=10V, I_{OUT}=40mA$	-	3	5	mA
$\Delta I_Q$	静态电流变化	$8.5V \leq V_{IN} \leq 36V, I_{OUT}=0mA$	-	0.2	1	mA
		$V_{IN}=10V, 1mA \leq I_{OUT} \leq 40mA$	-	0.02	0.1	mA
PSRR	纹波抑制率	$f=120Hz, V_{in}=8.5V$ to 16V	-	49	-	dB
$V_{IN(MIN)}$	最小输入电压		-	8	8.5	V
$\Delta V_{OUT} / \Delta T_a$	温度系数	$V_{IN}=10V, I_{OUT}=5mA, 0^{\circ}C \leq T_a \leq 70^{\circ}C$	-	$\pm 0.5$	-	mV/ $^{\circ}C$

电学特性

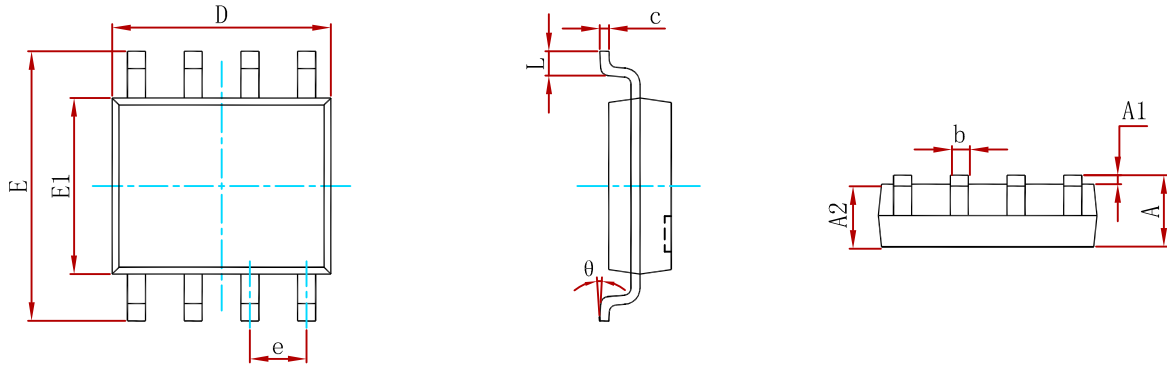
MC78L09ACDR2G-MS ( $C_{IN}=0.33\mu F$ ,  $C_{OUT}=0.1\mu F$ ,  $V_{IN}=10V$ ,  $I_{OUT}=40mA$ ,  $T=25^{\circ}C$ , 特殊规定除外)

符号	参数	测试条件	最小值	典型值	最大值	单位
$V_{OUT}$	输出电压	$V_{IN}=10V, I_{OUT}=40mA$	8.64	9	9.36	V
$I_{PK}$	输出电流	$V_{IN}=10V$	-	100	-	mA
$\Delta V_{OUT}$	负载稳定度	$V_{IN}=10V, 1mA \leq I_{OUT} \leq 40mA$	-	20	70	mV
		$V_{IN}=10V, 1mA \leq I_{OUT} \leq 100mA$	-	25	75	mV
$\Delta V_{OUT}$	输入稳定度	$8.5V \leq V_{IN} \leq 20V, I_{OUT}=40mA$	-	20	80	mV
$I_Q$	静态电流	$V_{IN}=10V, I_{OUT}=40mA$	-	3	5	mA
$\Delta I_Q$	静态电流变化	$8.5V \leq V_{IN} \leq 36V, I_{OUT}=0mA$	-	0.2	1	mA
		$V_{IN}=10V, 1mA \leq I_{OUT} \leq 40mA$	-	0.02	0.1	mA
PSRR	纹波抑制率	$f=120Hz, V_{in}=8.5V \text{ to } 16V$	-	49	-	dB
$V_{IN(MIN)}$	最小输入电压		-	8	8.5	V
$\Delta V_{OUT} / \Delta T_a$	温度系数	$V_{IN}=10V, I_{OUT}=5mA, 0^{\circ}C \leq T_a \leq 70^{\circ}C$	-	$\pm 0.5$	-	mV/ $^{\circ}C$

应用电路

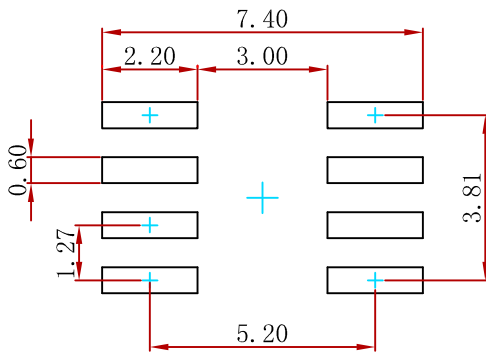


封装信息



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	1.350	1.750	0.053	0.069
A1	0.100	0.250	0.004	0.010
A2	1.350	1.550	0.053	0.061
b	0.330	0.510	0.013	0.020
c	0.170	0.250	0.007	0.010
D	4.800	5.000	0.189	0.197
e	1.270 (BSC)		0.050 (BSC)	
E	5.800	6.200	0.228	0.244
E1	3.800	4.000	0.150	0.157
L	0.400	1.270	0.016	0.050
θ	0°	8°	0°	8°

焊盘布局



Note:  
 1. Controlling dimension: in millimeters.  
 2. General tolerance:  $\pm 0.05\text{mm}$ .  
 3. The pad layout is for reference purposes only.

订购信息

订单型号	封装形式	包装/数量
MC78LXXACDR2G-MS	SOP-8	盘装/2500pcs

## 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 specifications of any and all MSKSEMI Semiconductor products described or contained 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's products or equipment.
- MSKSEMI Semiconductor strives to supply high-quality high-reliability products. However, any and all semiconductor products fail with some probability. It is possible that 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 and error prevention circuits for safe design, 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 the authorities 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 infringements of intellectual property rights or other rights of third parties.
- Any and all information described or contained herein are subject to change without notice due to product/technology improvement, etc. When designing equipment, refer to the "Delivery Specification" for the MSKSEMI Semiconductor product that you intend to use.

单击下面可查看定价，库存，交付和生命周期等信息

[>>MSKSEMI\(美森科\)](#)