

# MSKSEMI

SEMICONDUCTOR



ESD



TVS



TSS



MOV



GDT



PLED

Product data sheet

## 产品简介

MAX810系列是一款具有电压检测功能的微处理器复位芯片,用于监控微控制器或其他逻辑系统的电源电压。它可以在上电掉电和节电情况下,向微控制器提供复位信号。当电源电压低于预设的检测电压时,器件会发出复位信号,直到电源电压又恢复到高于检测电压为止。

MAX810系列芯片当输入电压低于检测电压时,  $\overline{V_{RESET}}$  输出为高电平,应用简单,无需外部器件。

## 产品特点

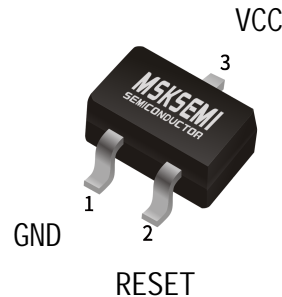
- 低功耗: 2uA (典型值)
- 宽工作电压范围: 1V~6.0V
- 具有 VCC 瞬态抗干扰
- 无需外部元件
- 内置复位延时时间 500ms (典型值)
- 高精度复位电压值:  $\pm 2.5\%$
- 输入电压高于检测电压时,  $\overline{V_{RESET}}$  输出为低电平
- 小体积封装: SOT-23-3

## 产品用途

- 电池供电设备
- 无线通讯系统
- 电脑、微机处理器
- PAD和手持设备
- 嵌入式系统

## 封装形式和管脚定义功能

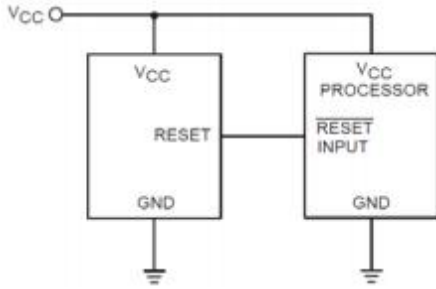
管脚序号	管脚定义	功能说明
SOT23		
1	GND	芯片接地端
3	VCC	芯片输入端
2	$\overline{RESET}$	芯片输出端



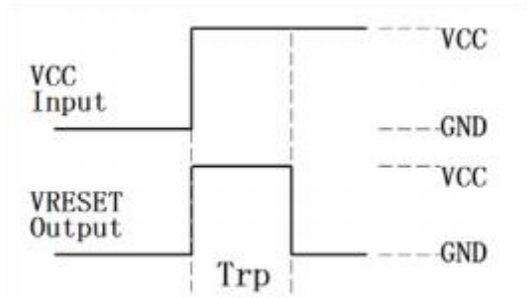
## 型号选择

名称	型号	最高输入电压(V)	复位电压(Vth)V	容差	封装形式
MAX810* *=VTH	MAX810L	6.0	4.63	$\pm 2.5\%$	SOT-23-3
	MAX810M	6.0	4.38	$\pm 2.5\%$	
	MAX810T	6.0	3.08	$\pm 2.5\%$	
	MAX810S	6.0	2.93	$\pm 2.5\%$	
	MAX810R	6.0	2.63	$\pm 2.5\%$	
	MAX810Z	6.0	2.32	$\pm 2.5\%$	

## 应用电路



## 上电复位时间



## 极限参数

项目	符号	说明	极限值	单位
电压	$V_{CC}$	输入电压	6.5	V
	$V_{RESET}$	复位输出电压	$-0.3 \sim V_{CC}+0.3$	V
功耗	PD	SOT23	200	mW
温度	$T_w$	工作温度范围	-20—60	°C
	$T_c$	存储温度范围	-50—125	
	$T_h$	焊接温度	260, 10s	°C

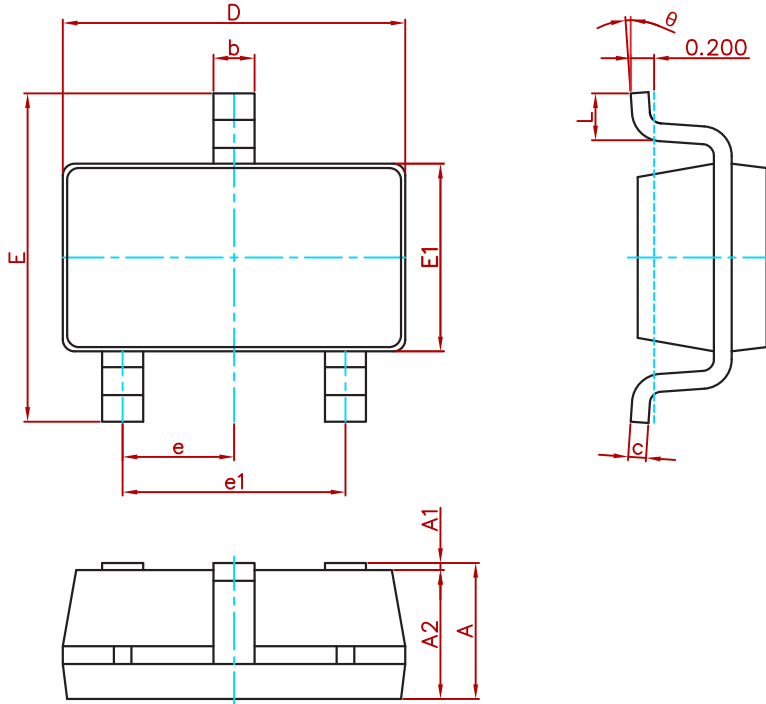
注：极限参数是指无论在任何条件下都不能超过的极限值。万一超过此极限值，将有可能造成产品劣化等物理性损伤；同时在接近极限参数下，不能保证芯片可以正常工作。

## 电学特性

MAX810 \*  $T_a=25^\circ\text{C}$

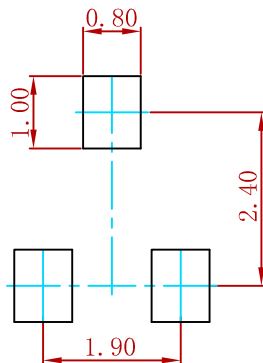
符号	参数	测试条件	最小	典型	最大	单位	
$V_{CC}$	工作电压	-	1.0	-	6.0	V	
$I_{CC}$	静态电流	$V_{CC}=5.5\text{V}, \text{No Load}$	-	2	5	$\mu\text{A}$	
$V_{th}$	检测电压	$V_{th}$	$V_{th}*97.5\%$	$V_{th}$	$V_{th}*102.5\%$	V	
$T_{rd}$	复位上升沿时间	$V_{CC}=V_{th} \text{ to } (V_{th}-100\text{mV})$	-	90	-	ns	
$T_{rp}$	上电复位时间	MAX10Z/R/S/T, $V_{CC}=0 \text{ to } 3.5\text{V}$	$V_{RESET} = \text{H}$ to L, No Load	85	500	900	ms
		MAX10M/L, $V_{CC}=0 \text{ to } 5.0\text{V}$					
$V_{OL}$	复位输出低电压	$V_{CC} = V_{thmax}, I_{SINK}=1.2\text{mA}$	-	-	0.3	V	
$V_{OH}$	复位输出高电压	$1.8\text{V} < V_{CC} < V_{thmin},$ $I_{SOURCE}=150\mu\text{A}$	$0.8V_{CC}$	-	-	V	
$\frac{\Delta V_{th}}{(V_{th}*\Delta T_a)}$	温度系数	$-20^\circ\text{C} \leq T_a \leq 60^\circ\text{C}$	-	$\pm 200$	-	ppm/°C	

**PACKAGE MECHANICAL DATA**



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	1.050	1.250	0.041	0.049
A1	0.000	0.100	0.000	0.004
A2	1.050	1.150	0.041	0.045
b	0.300	0.500	0.012	0.020
c	0.100	0.200	0.004	0.008
D	2.820	3.020	0.111	0.119
E1	1.500	1.700	0.059	0.067
E	2.650	2.950	0.104	0.116
e	0.950(BSC)		0.037(BSC)	
e1	1.800	2.000	0.071	0.079
L	0.300	0.600	0.012	0.024
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.

**REEL SPECIFICATION**

P/N	PKG	QTY
MAX810	SOT-23-3	3000

## 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 infringement 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.

## X-ON Electronics

Largest Supplier of Electrical and Electronic Components

*Click to view similar products for [Supervisory Circuits](#) category:*

*Click to view products by [MSKSEMI](#) manufacturer:*

Other Similar products are found below :

[CAT1161LI-25-G](#) [CAT853STBI-T3](#) [DS1232L](#) [NCV302HSN45T1G](#) [STM6710FWB7F](#) [S-1000N28-I4T1U](#) [S-1000N23-I4T1U](#) [S-1000N19-I4T1U](#) [PT7M6133NLTA3EX](#) [PT7M6127NLTA3EX](#) [ISL88011IH526Z-TK](#) [ISL88013IH529Z-TK](#) [ISL88705IP846Z](#) [ISL88706IP831Z](#) [ISL88708IB844Z](#) [ISL88708IP831Z](#) [TCM811MERCCTR](#) [X40420S14-A](#) [X40421S14-C](#) [X40430S14-A](#) [X40430S14I-A](#) [X40430S14I-B](#) [X40431S14-A](#) [X40431S14-B](#) [X40431S14-C](#) [X40431S14I-A](#) [X40431S14I-B](#) [X40431S14I-C](#) [X4043P-2.7](#) [X4043PI-2.7](#) [X4043S8-2.7T1](#) [X4043S8IZ-2.7](#) [X4043S8IZT1](#) [X4043S8T1](#) [X4045P](#) [X4045PI](#) [X4045PI-2.7](#) [X4045S8-2.7T1](#) [X4045S8IZ](#) [X4045S8T1](#) [X4163P](#) [X4163P-2.7](#) [X4163PI](#) [X4163PI-2.7](#) [X4163S8](#) [X4165P](#) [X4165P-2.7](#) [X4165PI](#) [X4165PI-2.7](#) [X4165S8I-2.7](#)