

MSKSEMI

SEMICONDUCTOR



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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

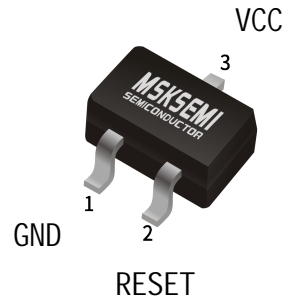
- 低功耗: 2uA (典型值)
- 宽工作电压范围: 1V~6.0V
- 具有 VCC 瞬态抗干扰
- 无需外部元件
- 内置复位延时时间 500ms (典型值)
- 高精度复位电压值: $\pm 2.5\%$
- 输入电压高于检测电压时, $\overline{V_{RESET}}$ 输出为低电平
- 小体积封装: SOT-23-3

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

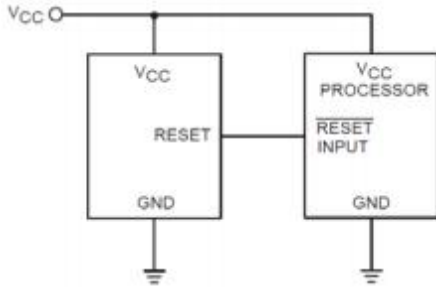
管脚序号	管脚定义	功能说明
SOT23		
1	GND	芯片接地端
3	VCC	芯片输入端
2	\overline{RESET}	芯片输出端



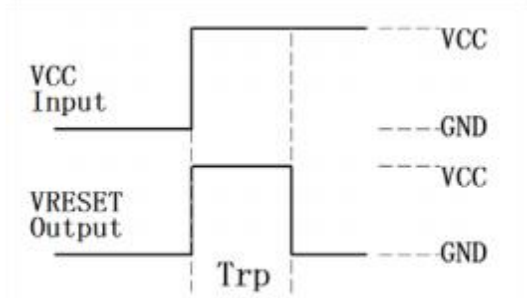
型号选择

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

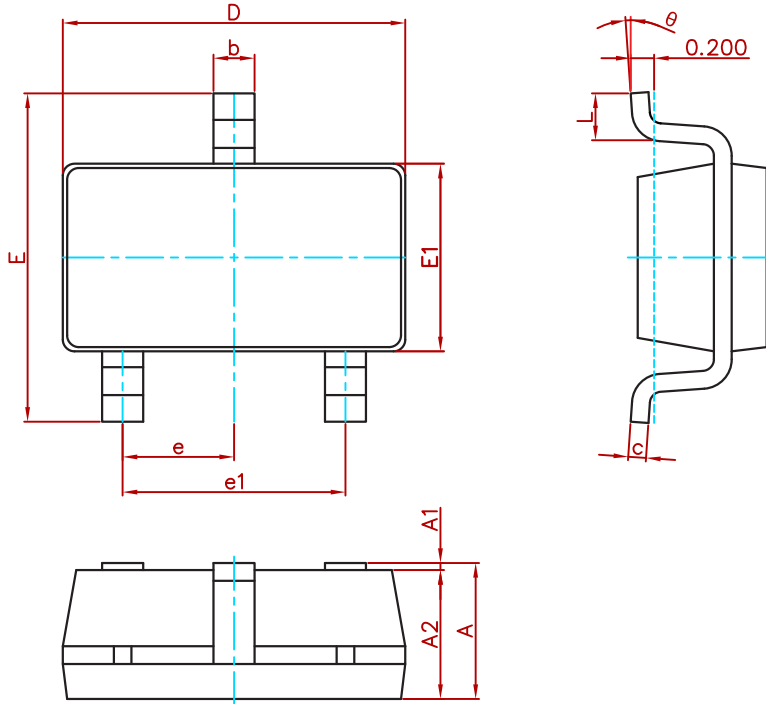
注：极限参数是指无论在任何条件下都不能超过的极限值。万一超过此极限值，将有可能造成产品劣化等物理性损伤；同时在接近极限参数下，不能保证芯片可以正常工作。

电学特性

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

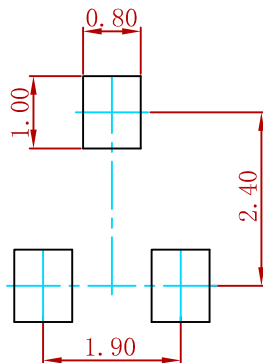
符号	参数	测试条件	最小	典型	最大	单位	
V_{CC}	工作电压	-	1.0	-	6.0	V	
I_{CC}	静态电流	$V_{CC}=5.5\text{V}, \text{No Load}$	-	2	5	μA	
V_{th}	检测电压	V_{th}	$V_{th}*97.5\%$	V_{th}	$V_{th}*102.5\%$	V	
T_{rd}	复位上升沿时间	$V_{CC}=V_{th} \text{ to } (V_{th}-100\text{mV})$	-	90	-	ns	
T_{rp}	上电复位时间	MAX10Z/R/S/T, $V_{CC}=0 \text{ to } 3.5\text{V}$	$V_{RESET} = \text{H}$ 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: ± 0.05 mm.
 3. The pad layout is for reference purposes only.

REEL SPECIFICATION

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

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