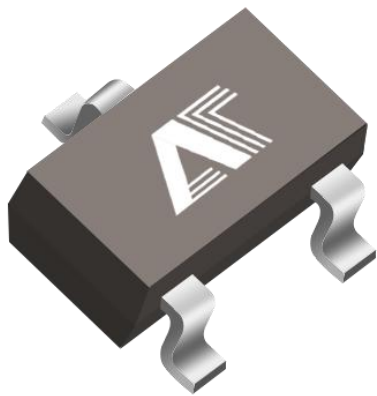




Low-voltage reset detector

MAX809

Product Data Sheet

AOTE DCC
RELEASE

◆ Summary :

The MAX809 series is a three-port low-voltage reset detection monitor designed with digital system circuit technology, capable of providing a reset monitoring signal to the host processor. This series of reset detection monitors can monitor fixed voltages ranging from 1.0V to 5.0V, featuring simple application and no need for external components.

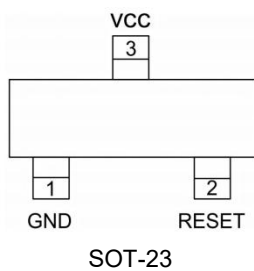
◆ Product features

- Encapsulation: SOT - 23
- Low power consumption: 2uA (typical value)
- Wide working voltage range: 1V~6.0V
- Capable of transient anti-interference with VCC
- No need for external components
- Built in reset delay time 500ms (typical value)
- High precision reset voltage value: $\pm 2.5\%$

◆ Applications

- Battery powered equipment
- Power outage detector
- Computer, microcomputer processor
- Non volatile RAM signal storage protector
- Critical MP power monitoring
- Embedded system

◆ Packaging form and pin definition

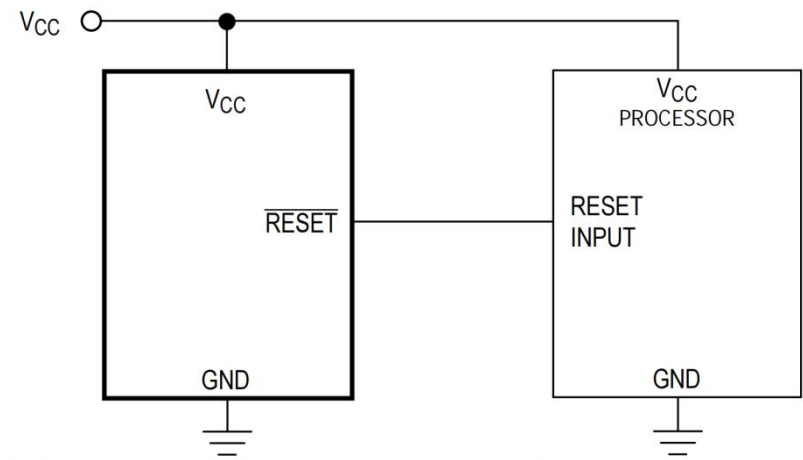


Pin number	Pin definition	Functional Description
SOT23		
1	GND	Chip grounding terminal
3	VCC	Chip input terminal
2	RESET	Reset output terminal

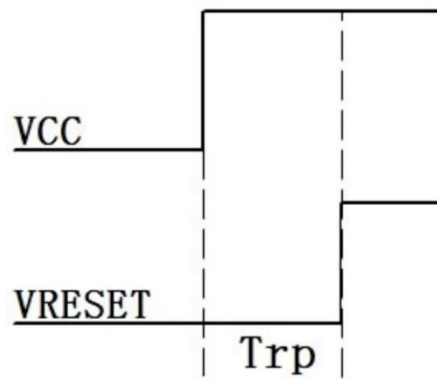
◆ Model Selection

Name	model	Maximum input voltage (V)	Reset voltage (V)	tolerance	package form
MAX809X	MAX809R	6.0	2.63	$\pm 2.5\%$	SOT23
	MAX809S	6.0	2.93	$\pm 2.5\%$	
	MAX809T	6.0	3.08	$\pm 2.5\%$	

◆ Application Circuit



◆ Power on reset time



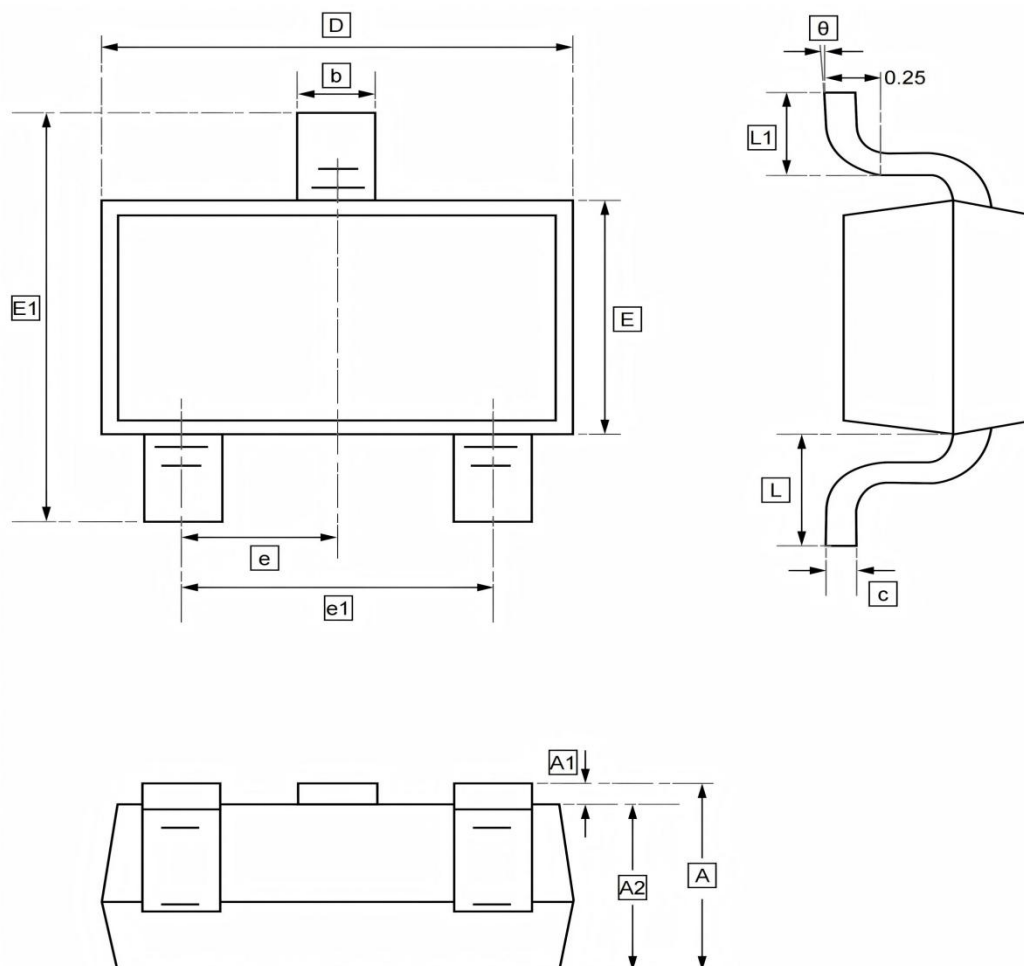
◆ Limit parameter

Project	Symbol	Explanation	Limit value	Unit
Voltage	VCC	input voltage	6.5	V
	VRESET	Reset output voltage	-0.3~VCC+0.3	V
Power consumption	PD	SOT23	200	mW
Temperature	TW	Working temperature range	-20~70	°C
	TC	Storage temperature range	-50~125	
	Th	welding temperature	260, 10s	°C

◆ Electrical properties $T_a=25^{\circ}\text{C}$

Symbol	Parameter	Test conditions	Min	Typ	Max	Unit
V_{CC}	Operating Voltage	-	1.0	-	6.0	V
I_{CC}	Quiescent current	$V_{CC}=5.5\text{V}$, No Load	-	2	5	μA
V_{th}	Detect voltage	$V_{th}=2.63\text{V}$	$0.975V_{th}$	V_{th}	$1.025V_{th}$	V
T_{rd}	Falling edge time	$V_{CC}=V_{th}$ to $V_{th}-100\text{mV}$	-	150	-	ns
T_{rp}	Reset time	$V_{CC}=0$ to 3.5V , No Load	100	500	900	ms
V_{OL}	Output low voltage	$V_{CC}=V_{thmin}$, $I_{SINK}=1.2\text{mA}$	-	-	0.5	V
V_{OH}	Output high voltage	$V_{CC}>V_{thmax}$, $I_{SOURCE}=500\mu\text{A}$	$0.8V_{CC}$	-	-	V
$\frac{\Delta V_{th}}{(V_{th} \cdot \Delta T_a)}$	temperature coefficient	$20^{\circ}\text{C} \leq T_a \leq 60^{\circ}\text{C}$	-	± 200	-	ppm/ $^{\circ}\text{C}$

◆ Encapsulation information

SOT23


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
E	1.500	1.700	0.059	0.067
E1	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°

◆ Attention

- AOTE implements dynamic technical updates. Specifications are subject to change. Refer to the official website for the latest version.
- Users must strictly adhere to specified conditions. Failures caused by misuse (overload, high temperature, incompatible circuits) are excluded from warranty.
- Contact technical support for customized validation in critical applications (medical devices, industrial control).
- This document is valid until December 31, 2026 Updates will be notified on the official website.
- For further clarification on technical specifications or application solutions, please contact us through official channels: