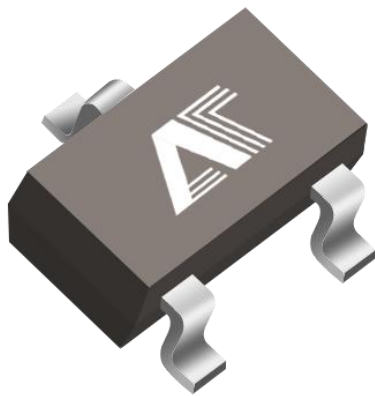




Low-voltage reset detector

MAX811

Product Data Sheet

AOTE DCC
RELEASE

◆ Summary :

The MAX811 series is a microprocessor reset chip with voltage detection function, which has an enable control terminal for monitoring the power supply voltage of microcontrollers or other logic systems.

It can provide a reset signal to the system during power on/off and power-saving situations, or when the power supply voltage is lower than the preset detection voltage V_{th} . At the same time, when the power is turned on or the power supply voltage returns to a level higher than the preset detection voltage V_{th} , or when the MR voltage is enabled to change from low level to high level, the $\neg V_{RESET}$ output will delay for T_p time before changing to high level.

When the input voltage of the MAX811 series chip is lower than the detection voltage V_n , the $\neg V_{RESET}$ output is at a low level; When the enable control terminal $\neg MR$ voltage is low, $\neg V_{RESET}$ output is also low. The application is simple and does not require external components.

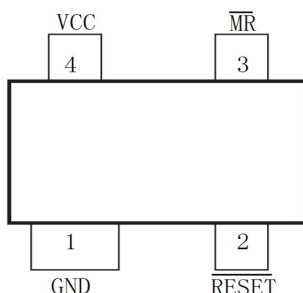
◆ Product features

- Small volume packaging: SOT143
- Low power consumption: 2uA (typical value) @ $V_{MR}=V$
- 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: $\pm 2.5\%$
- Equipped with enable control terminal MR, low level effective

◆ 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

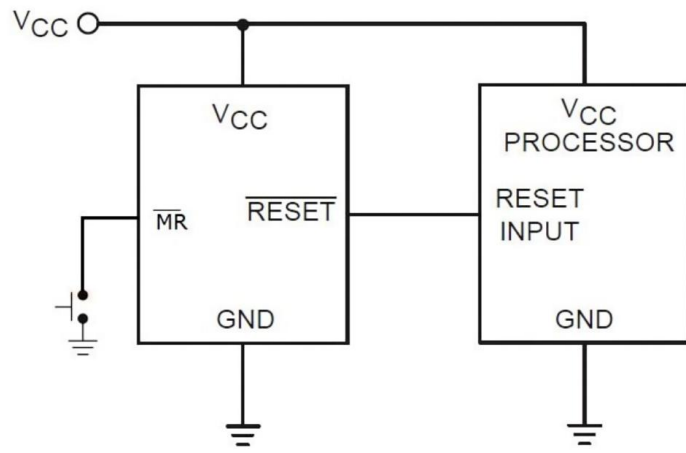


Pin number	Pin definition	Functional Description
SOT143		
1	GND	Negative terminal of power supply
2	$\neg$ RESET	Reset output terminal
3	$\neg$ MR	Enable control end
4	VCC	Positive pole of power supply

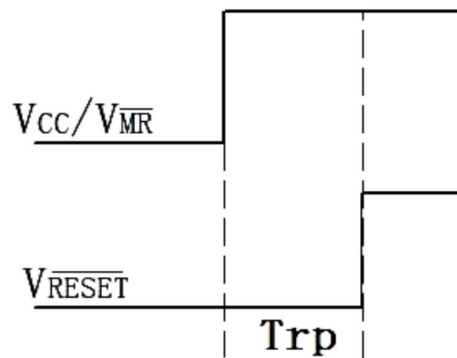
◆ Model Selection

Name	model	Maximum input voltage (V)	Reset voltage (V)	tolerance	package form
MAX811	MAX811R	6.0	2.63	$\pm 2.5\%$	SOT143
	MAX811S	6.0	2.93	$\pm 2.5\%$	
	MAX811T	6.0	3.08	$\pm 2.5\%$	

◆ **Application Circuit**



◆ **Power on reset time**



◆ **Limit parameter**

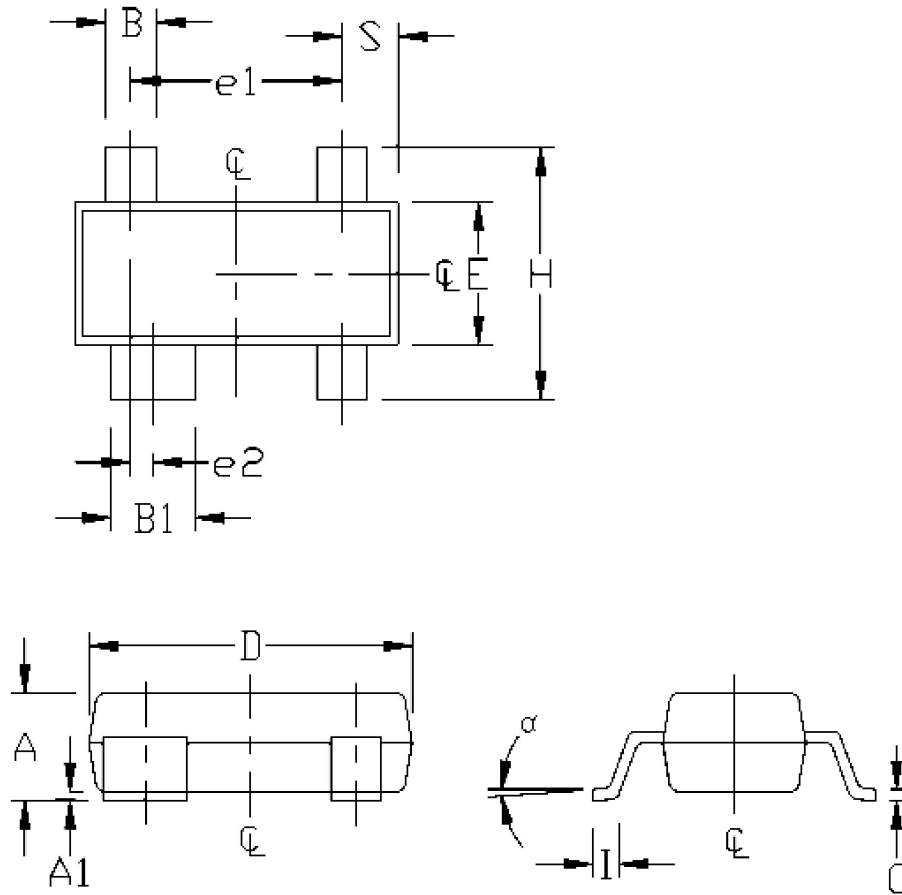
Project	Symbol	Explanation	Limit value	Unit
Voltage	VCC	Input voltage	6.5	V
	VRESET	Reset output voltage	-0.3~VCC+0.3	V
Power consumption	PD	SOT143	200	mW
temperature	T _A	Working temperature range	-20~70	°C
	T _S	Storage temperature range	-50~125	
	T _W	welding temperature	260, 10s	°C

◆ 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
V_{th}	Input detection voltage	$V_{CC}=V_{th}$ for $V_{RESET}=H \rightarrow L$, No Load		$0.975 \cdot V_{th}$	V_{th}	$1.025 \cdot V_{th}$	V
I_{CCH}	Quiescent current	$V_{CC}=6V, V_{MR}=V_{CC}$, No Load		1	-	5	μA
I_{CCL}	standby current	$V_{CC}=6V, V_{MR}=GND$, No Load		1	-	32	μA
I_{MR}	Enable pulling current	$V_{CC}=6V, V_{MR}=GND$, No Load		1	-	25	μA
T_{rd}	Reset falling edge time	$V_{CC}=V_{th}$ to $V_{th}-100\text{mV}$		-	150	-	ns
T_{rp}	Output reset time	MAX811R/S/T: $V_{CC}=V_{ME}=0$ to $3.5V$ or $V_{MR}=0$ to $3.5V, V_{CC}=3.5V$	No Load	85	500	900	ms
V_{OL}	Output low voltage	$V_{CC}=V_{thmin}$, $I_{SINK}=3.2\text{mA}$		-	-	0.5	V
V_{OH}	Output high voltage	$V_{CC}>V_{thmax}$, $I_{SOURCE}=500\mu\text{A}$		$0.8V_{CC}$	-	-	V
V_{MRH}	Input high level	$V_{CC}=6V, V_{RESET}=V_{CC}$, No Load		$0.7 \cdot V_{CC}$	-	V_{CC}	V
V_{MRL}	Input low level	$V_{CC}=6V, V_{RESET}=GND$, No Load		0	-	$0.2 \cdot V_{CC}$	V
t_{MR}	Minimum pulse width of enable level			10	-	-	V
$\frac{\Delta V_{th}}{V_{th}} \cdot \frac{1}{\Delta T_a}$	temperature coefficient	$-20^{\circ}\text{C} \leq T_a \leq 60^{\circ}\text{C}$		-	± 200	-	ppm/ $^{\circ}\text{C}$

◆ Encapsulation information

SOT143



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	0.031	0.047	0.787	1.194
A1	0.001	0.005	0.025	0.127
B	0.014	0.022	0.356	0.559
B1	0.030	0.038	0.762	0.965
C	0.0034	0.006	0.086	0.152
D	0.105	0.120	2.667	3.048
E	0.047	0.055	1.194	1.397
e1	0.071	0.079	1.803	2.007
e2	0.008 (BSC)		0.200 (BSC)	
H	0.082	0.098	2.083	2.489
I	0.004	0.012	0.012	0.305
S	0.018	0.024	0.450	0.600
α	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: