

Features

- Low power consumption
- Low temperature coefficient
- Built-in delay circuit: 200ms
- High input voltage (up to 8V)
- Output voltage accuracy: tolerance $\pm 2\%$
- SOT23 package

Applications

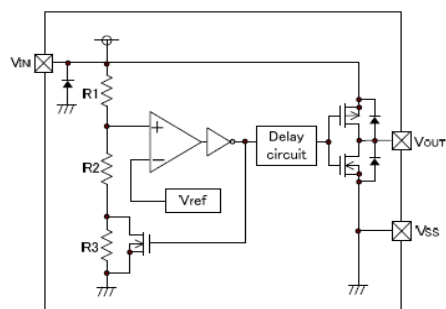
- Microprocessor reset circuitry
- Memory battery back-up circuits
- Power on reset circuits
- System battery life and charge voltage monitors
- Delay circuitry
- Power failure detection

General Description

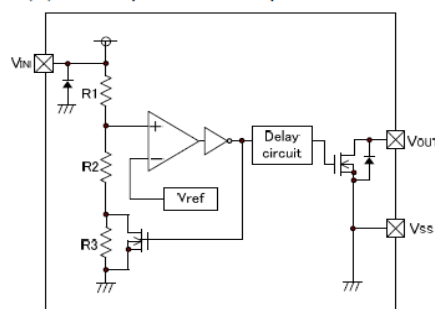
The MAX809R series are highly accurate, low power consumption voltage detectors, manufactured using CMOS and laser trimming technologies. A delay circuit is built-in to each detectors. Detect voltage is extremely accurate with minimal temperature drift. Both CMOS and N-ch open drain output configurations are available. Since the delay circuit is built-in, peripherals are unnecessary and high density mounting is possible.

Block Diagram

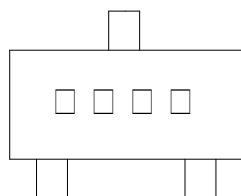
(1) CMOS output



(2) N-ch open drain output



Marking Rule



SOT23 (TOP VIEW)

Product Information

Product	Package	MOQ
MAX809R	SOT23	3000PCS

Pin Assignment

SOT23 (TOP VIEW)

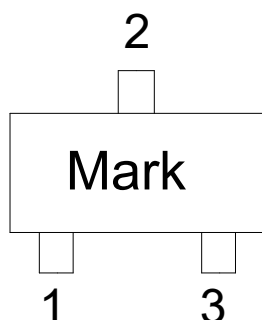


Table1 MAX809R (SOT23 PKG)

PIN NO.	PIN NAME	FUNCTION
1	GND	GND pin
2	VIN	Input voltage pin
3	Reset	Reset pin

Absolute Maximum Ratings

Input Voltage-0.3V to 8.0V

Storage Temperature-40°C to 125°C

Operating Temperature-30°C to 80°C

Note: These are stress ratings only. Stresses exceeding the range specified under “Absolute Maximum Ratings” may cause substantial damage to the device. Functional operation of this device at other conditions beyond those listed in the specification is not implied and prolonged exposure to extreme conditions may affect device reliability.

Thermal Information

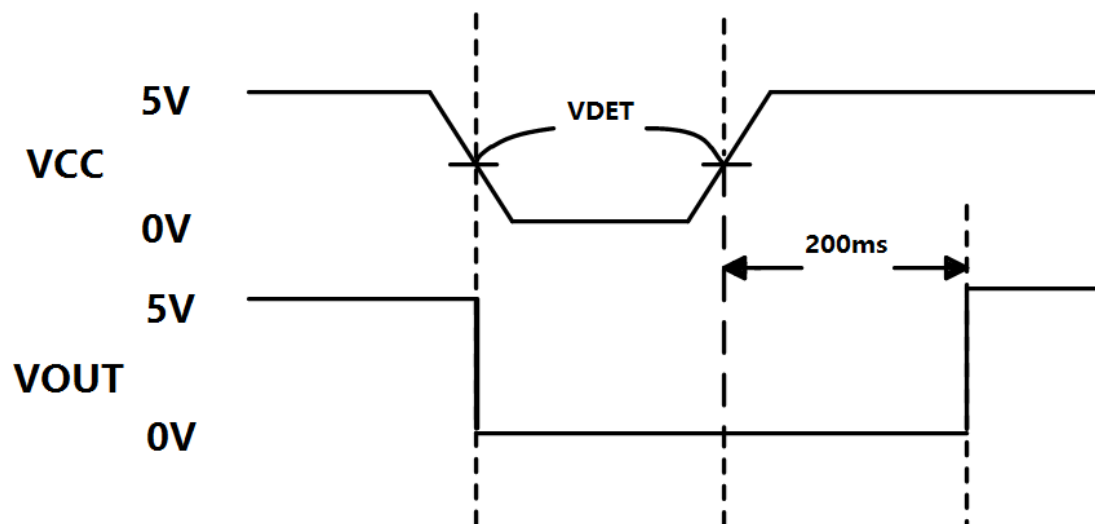
Symbol	Parameter	Package	Max.	Unit
θ_{JA}	Thermal Resistance (Junction to Ambient) (Assume no ambient airflow, no heat sink)	SOT23	250	°C/W
P_D	Power Dissipation	SOT23	0.20	W

Note: P_D is measured at $T_a = 25^\circ\text{C}$

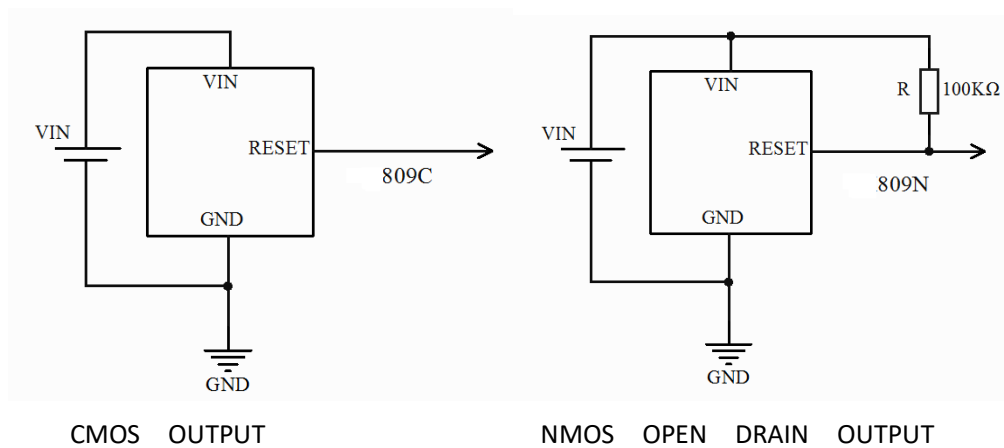
Electrical Characteristics

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
V_{CC}	Input Voltage (V_{CC}) Range	25°C	1.2		7.5	V
I_{SS}	Supply Current	$V_{IN}=6V$, $V_{det}=2.63V$	1	1.8	2.5	μA
V_{DET}	Reset Threshold	$T_A=25^{\circ}C$	4.56	4.63	4.70	V
		$T_A=25^{\circ}C$	4.31	4.38	4.45	
		$T_A=25^{\circ}C$	3.93	4.00	4.06	
		$T_A=25^{\circ}C$	3.04	3.08	3.11	
		$T_A=25^{\circ}C$	2.89	2.93	2.96	
		$T_A=25^{\circ}C$	2.59	2.63	2.66	
	Reset Threshold Stability			30		Ppm/ °C
	V_{CC} to Reset Delay	$V_{CC}=V_{TH}$ to $V_{TH}-100mV$		20		μs
V_{OL}	Reset Active Timeout Period		100	200	300	ms

Timing Chart

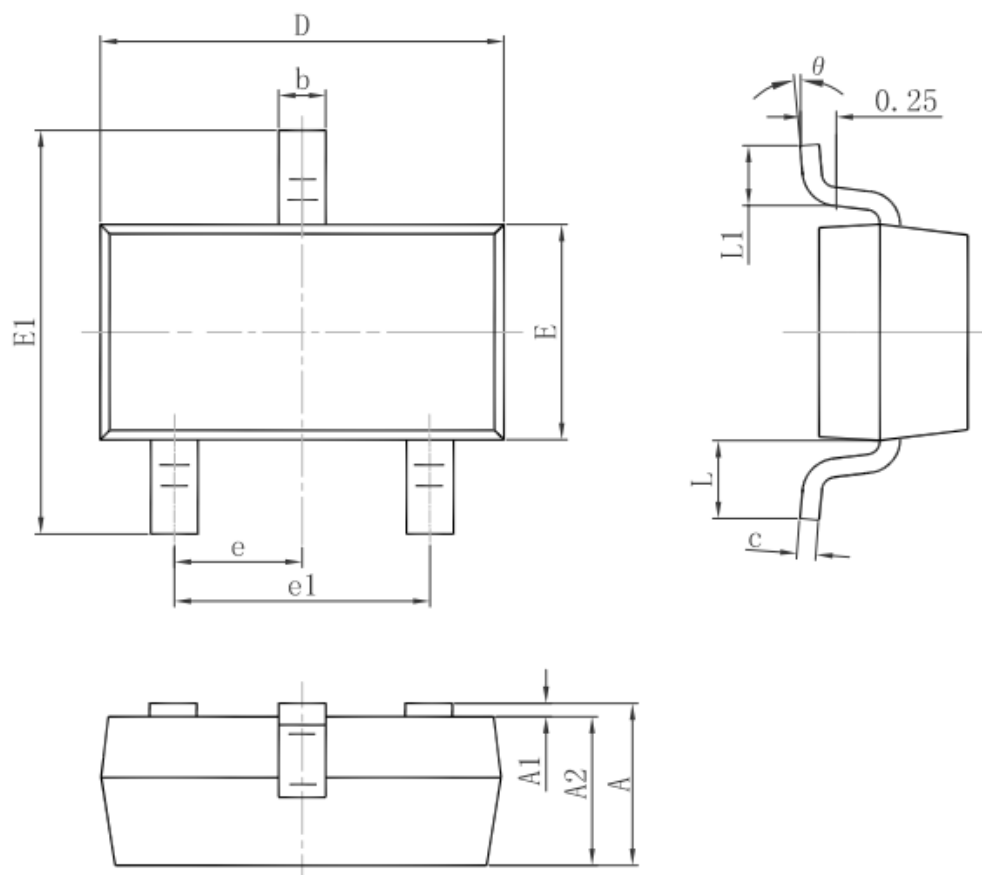


Application Circuits



Package Information

3-pin SOT23 Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	0.900	1.150	0.035	0.045
A1	0.000	0.100	0.000	0.004
A2	0.900	1.050	0.035	0.041
b	0.300	0.500	0.012	0.020
c	0.080	0.150	0.003	0.006
D	2.800	3.000	0.110	0.118
E	1.200	1.400	0.047	0.055
E1	2.250	2.550	0.089	0.100
e	0.950 TYP.		0.037 TYP.	
e1	1.800	2.000	0.071	0.079
L	0.550 REF.		0.022 REF.	
L1	0.300	0.500	0.012	0.020
θ	0°	8°	0°	8°