

General Description

The MAX809 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.

Since the delay circuit is built-in, peripherals are. unnecessary and high density mounting is possible.

Features

- Low power consumption
- Low temperature coefficient
- Built-in delay circuit: 200ms
- High input voltage (up to 6V)
- Output voltage accuracy: tolerance ±2%
- SOT-23 package

Pin Assignment



SOT-23

PIN NO.	PIN NAME	FUNCTION	
1	GND	GND pin	
2	VCC	Supply Voltage	
3	Reset	Reset pin	

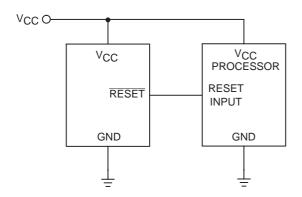
Applications

- Computers
- Embedded Systems
- Power on reset circuits
- Battery Powered Equipment
- Critical uP Power Supply Monitoring

Selection Table

Part No	Detectable	Delay Time	Tolerance	Package	
	Voltage				
MAX809L	4.63V		±2%	SOT-23	
MAX809M	4.38V		±2%		
MAX809J	4.00V	200ms	±2%		
MAX809T	3.08V	2001118	±2%		
MAX809S	2.93V		±2%		
MAX809R	2.63V		±2%		

Application Circuits



Absolute Maximum Ratings

Input Voltage-0.3V to VCC+0.3V Storage Temperature-40°C to 125°C Operating Temperature-40°C to 85°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	Max.	Unit	
θ ЈА	Thermal Resistance (Junction to Ambient) (Assume no ambient airflow, no heat sink)	260	°C /W	
P _D	Power Dissipation	0.23	W	

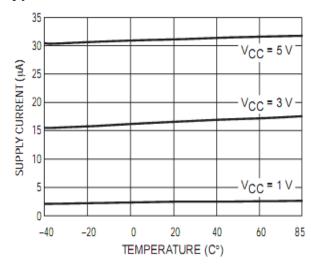
Note: P_D is measured at Ta= 25 $^{\circ}$ C



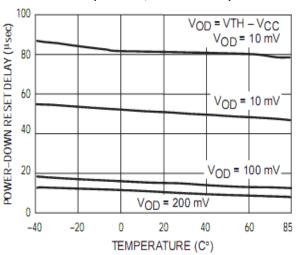
Electrical Characteristics

Symbol	Parameter	Test Conditions Min.		Тур.	Max.	Unit	
Vcc	Input Voltage (Vcc) Range	25℃ 1.2			5.5	V	
Iss	Supply Current	MAX809L/M/J:VCC < 5.5V MAX809R/S/T:VCC < 3.6V			60 50	μА	
		MAX809L:TA=25℃	4.56	4.63	4.70		
		MAX809MTA=25℃	4.31	4.38	4.45		
\	Reset	MAX809J:TA=25℃	3.93	4.00	4.06	.,	
V_{DET}	Threshold	MAX809T:TA=25℃	3.04	3.08	3.11	V	
		MAX809S:TA=25℃	2.89	2.93	2.96		
		MAX809R:TA=25℃	2.59	2.63	2.66		
	Reset Threshold Stability			30		Ppm/ ℃	
	V _{CC} to Reset Delay	Vcc= Vтн to Vтн -100mV		20		us	
Vol	RESET Output Voltage Low	MAX809L/M/J:VCC=VTH min,ISINK=1.2mA MAX809R/S/T:VCC=VTH min,ISINK=3.2mA VCC > 1.0V, ISINK=50uA		0.4 0.3 0.3	V		
V _{OH}	RESET Output Voltage High	MAX809L/M/J:VCC=VTH min,ISINK=0.5mA MAX809R/S/T:VCC=VTH min,ISINK=0.8mA	0.8 VCC VCC-1.5			V	

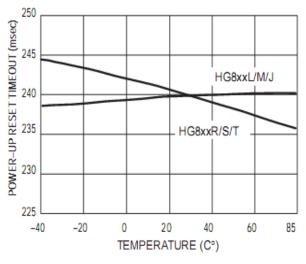
Typical Characteristics



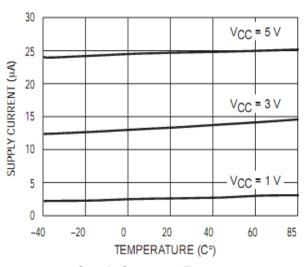
Supply Current vs Temperature (No Load, MAX809R/S/T)



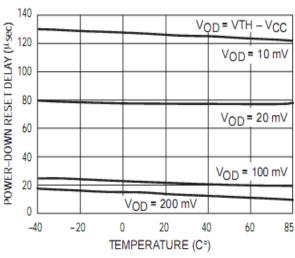
Power–Down Reset Delay vs Temperature and Overdrive (MAX809R/S/T)



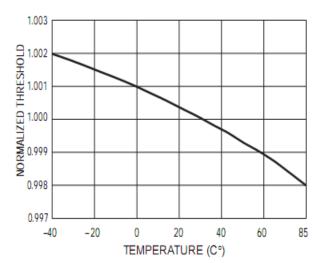
Power–Up Reset Timeout vs Temperature



Supply Current vs Temperature (No Load,MAX809L/M/J/)

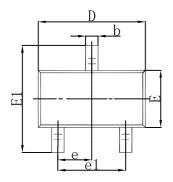


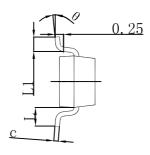
Power–Down Reset Delay vs Temperature and Overdrive (MAX809L/M/J)

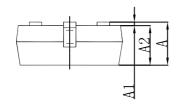


Normalized Reset Threshold vs Temperature

SOT-23 Package Outline Dimensions

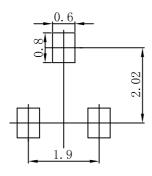






Cumbal	Dimensions In Millimeters		Dimensions In Inches		
Symbol	Min	Max	Min	Max	
Α	0.900	1.150	0.035	0.045	
A1	0.000	0.100	0.000	0.004	
A2	0.900	1.050	0.035	0.041	
b	0.300	0.500	0.012	0.020	
С	0.080	0.150	0.003	0.006	
D	2.800	3.000	0.110	0.118	
E	1.200	1.400	0.047	0.055	
E1	2.250	2.550	0.089	0.100	
е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

SOT-23 Suggested Pad Layout



- Note:
 1.Controlling dimension:in millimeters.
- 2.General tolerance:± 0.05mm.
 3.The pad layout is for reference purposes only.



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