

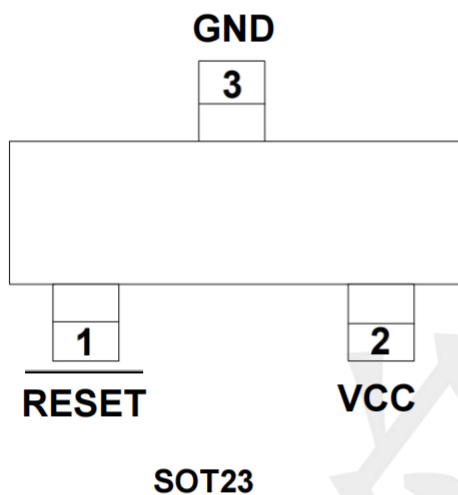
Features

- Typical Quiescent Current of 3 μ A
- No External Components
- V_{CC} Transient Immunity
- Correct Logic Output Guaranteed to V_{CC}=1.0V
- Push-Pull Low Active Reset Output
- Packages SOT23

Applications

- Computers
- Embedded Systems
- Battery-Powered Equipments
- Intelligent Instruments
- CPU and Logic Circuit Reset
- Power Fail Detectors
- Automotive

Pin Definition



Ordering Information

TPMCP102T-450E/TT

RESET VOLTAGE:

475=4.63V
450=4.38V
315=3.08V
300=2.93V
270=2.63V

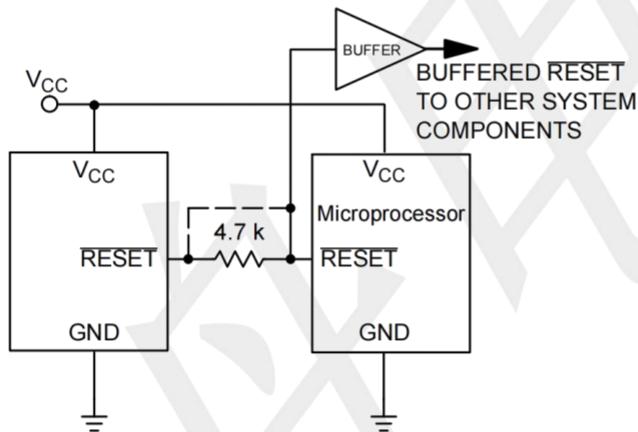
PIN CONFIGURATION

PIN	NAME	FUNCTION
1	<u>RESET</u>	<u>RESET</u> output remains low while VCC is below the reset voltage threshold, and for a reset timeout period after VCC rises above reset threshold
2	VCC	Supply Voltage .
3	GND	Ground

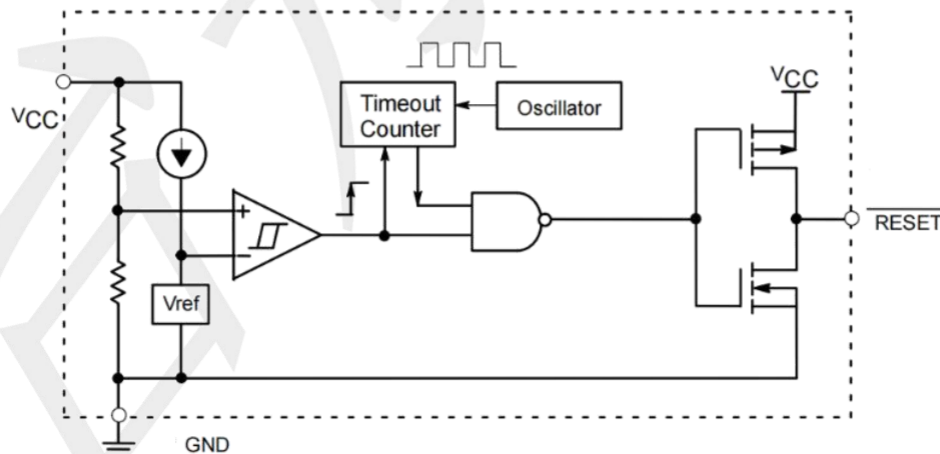
Absolute Maximum Ratings (Note 1)

Symbol	Parameter	Value	UNIT
VCC	Any pin with respect to ground	-0.3 to +6.0	V
ICC	Input Current, VCC	20	mA
IO	Output Current, RESET	20	mA
	Rate of Rise, VCC	100	V/ μ s
PD	Continuous Power Dissipation	250	mW
TA	Operating Temperature Range	-40 to +85	°C
TSTG	Storage Temperature Range	-65 to +105	°C
R θ JC	Thermal Resistance from Junction to Case	110	°C/W
R θ JA	Thermal Resistance from Junction to Ambient	250	°C/W

TYPICAL APPLICATION CIRCUIT



FUNCTIONAL BLOCK DIAGRAM



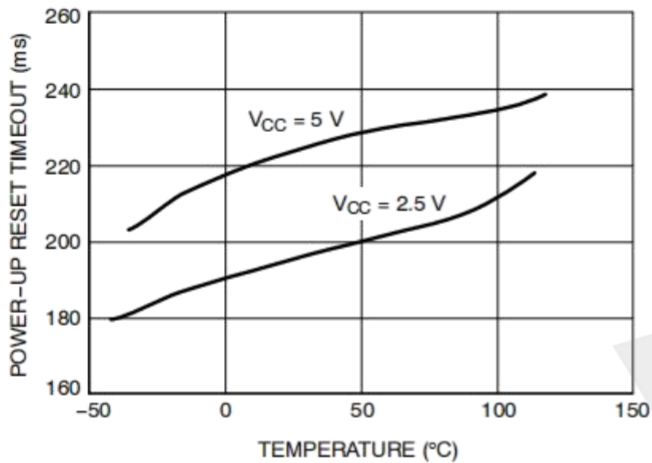
Series Complementary Active-Low Output

Electrical Characteristics

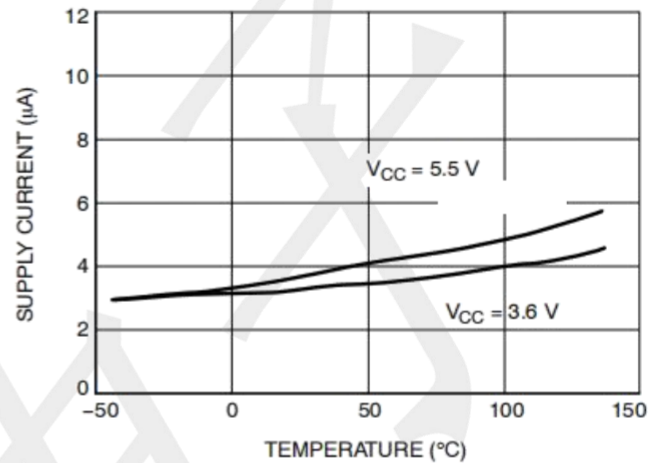
Symbol	Parameter	Conditions		Min	Typ	Max	Unit
	V _{CC} Range	T _A =0°C to +70°C		1.0		5.5	V
I _{CC}	Supply Current	V _{CC} <5.5V,			3	5	μA
		V _{CC} <3.6V,			3	5	
V _{TH}	Reset Threshold	475	T _A =+25°C	4.49	4.63	4.72	V
			T _A =-40°C to +85°C	4.44		4.76	
		450	T _A =+25°C	4.29	4.38	4.51	
			T _A =-40°C to +85°C	4.25		4.55	
		315	T _A =+25°C	3.02	3.08	3.18	
			T _A =-40°C to +85°C	2.99		3.21	
		300	T _A =+25°C	2.83	2.93	2.97	
			T _A =-40°C to +85°C	2.80		3.00	
		270	T _A =+25°C	2.54	2.63	2.67	
			T _A =-40°C to +85°C	2.51		2.69	
Reset Threshold Tempco				--	30	--	ppm/°C
V _{CC} to Reset Delay		V _{CC} =V _{TH} to (V _{TH} -100mV)		--	10	--	μs
Reset Active Timeout Period		T _A =-40°C to +85°C		140	240	360	ms

Note 1: Production testing done at $T_A=+25^{\circ}\text{C}$; limits over temperature guaranteed by design only.

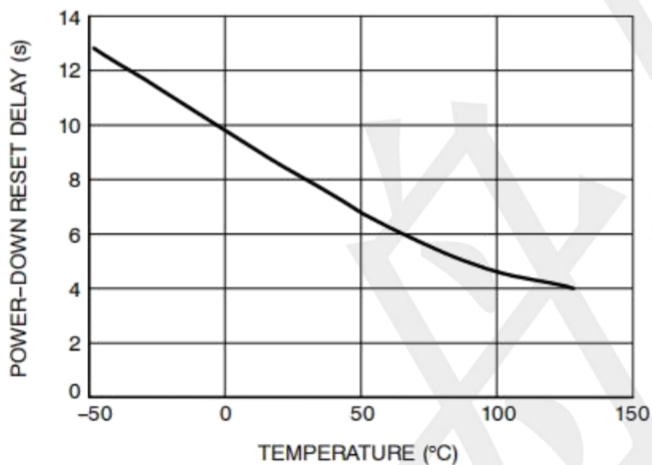
Typical Operating Characteristics



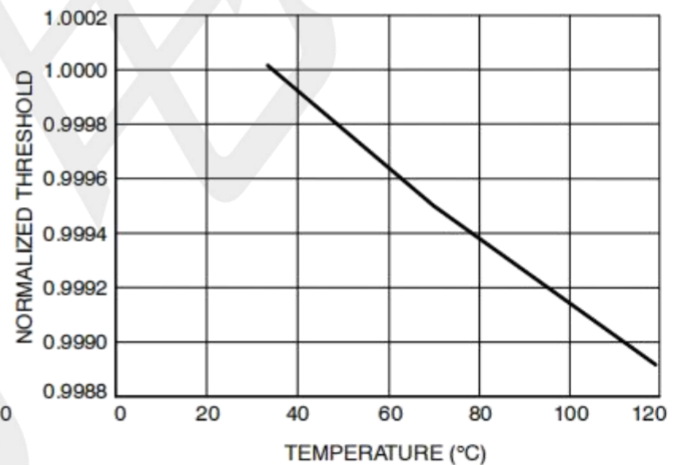
Power-Up Reset Timeout vs. Temperature



Supply Current vs. Temperature (No Load,)



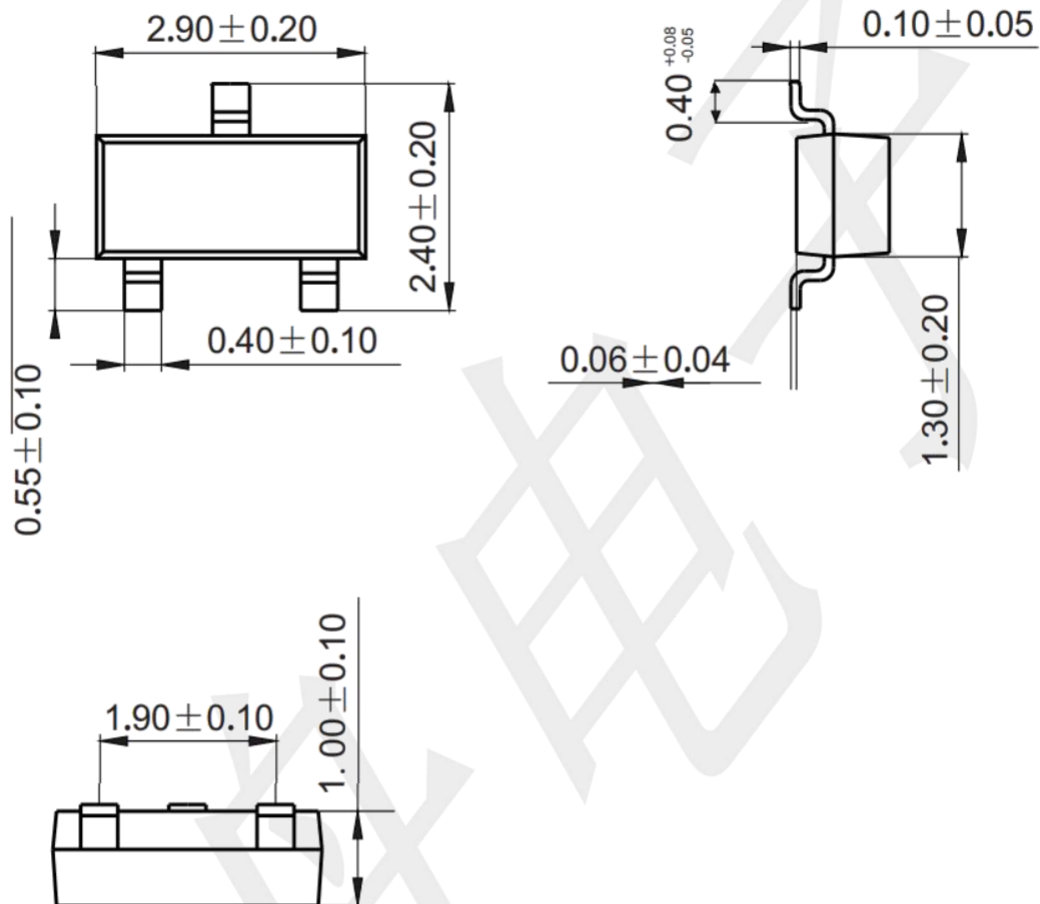
Power-Down Reset Delay vs. Temperature



Normalized Reset Threshold vs. Temperature

Package Outline Dimensions (unit: mm)

SOT23



Mounting Pad Layout (unit: mm)

