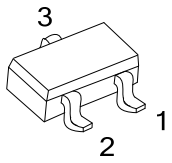
UTC812

CMOS IC

MICROPROCESSOR RESET IC



SOT-23-3

■ DESCRIPTION

The UTC **UTC812** is a microprocessor (μP) reset circuit designed to monitor the power supplies in μP and digital systems.

The UTC **UTC812** has push-pull output and active-low $\overline{\text{RESET}}$ output.

This device provides customers with perfect system reliability and low cost which are achieved by to no external component requirement and adjustments when used with +5V, +3.3V, +3.0V-powered circuits.

This circuit performs a single function: it asserts a reset signal whenever the V_{CC} supply voltage declines below a preset threshold, keeping it asserted for at least 140ms after V_{CC} has risen above the reset threshold. Reset thresholds suitable for operation with a variety of supply voltages are available.

The reset comparator can be used to ignore fast transients on V_{CC}, and outputs are guaranteed to be in the correct logic state for V_{CC} down to 1V.

In applications**,** the **UTC812** is suitable for computers, controllers, intelligent instruments, critical microprocessors, microcomputer power monitoring, portable, or battery-powered equipments and automotive device.

■ FEATURES

* Supply Current: 10μA
* Precision Monitoring of +5V, +3.3V, +3.0V Powered Circuits
* With the Two Configurations In The Following:
  Push-Pull $\overline{\text{RESET}}$ Output
* Power-On Reset Pulse Width: 140ms (MIN.)
* Outputs Guaranteed To Be In The Correct Logic State for V_{CC} Down to 1V.
* Required No External Components
* Power Supply Transient Immunity

■ ORDERING INFORMATION

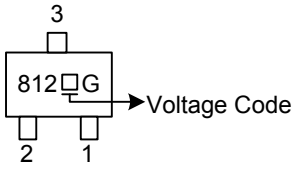
Ordering Number	Package	Packing
UTC812G-X-AE2-R	SOT-23-3	Tape Reel

UTC812G-X-AE2-R
- (1)Packing Type
- (2)Package Type
- (3)Output Voltage Code
- (4)Halogen Free

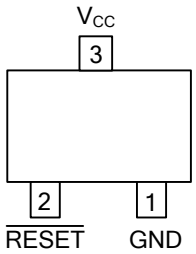
(1) R: Tape Reel
(2) AE2: SOT-23-3
(3) Refer to Marking Information
(4) G: Halogen Free

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■ MARKING INFORMATION

PACKAGE	VOLTAGE CODE	MARKING
SOT-23-3	C : 3.08 V	

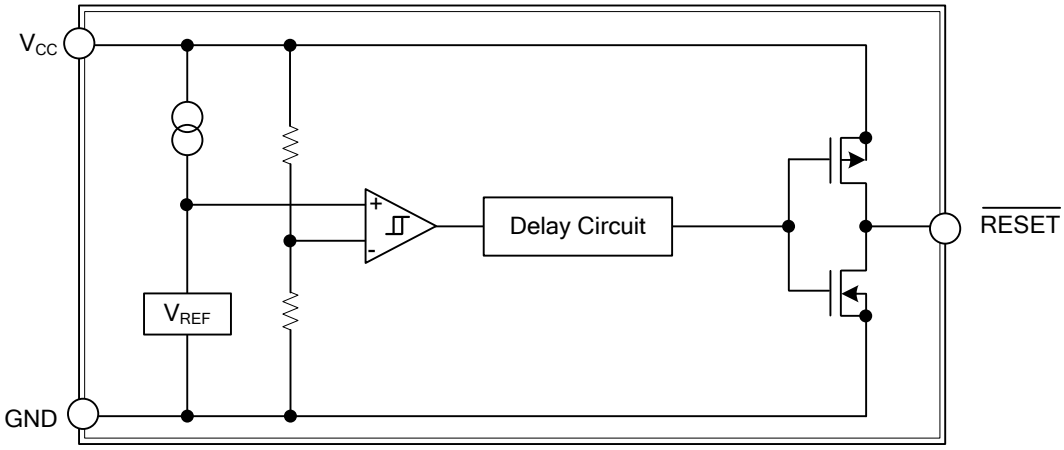
■ PIN CONFIGURATION



■ PIN DESCRIPTION

PIN NO.	PIN NAME	DESCRIPTION
1	GND	IC Ground Pin
2	$\overline{\text{RESET}}$	$\overline{\text{RESET}}$ goes low if Vcc falls below the reset threshold and remains asserted for one reset timeout period after Vcc exceeds the reset threshold.
3	V_{CC}	Power Supply Input

■ BLOCK DIAGRAM



■ ABSOLUTE MAXIMUM RATING

PARAMETER	SYMBOL	RATINGS	UNIT
Terminal Voltage (with respect to GND)	V_{CC}	-0.3~6.0	V
RESET, $\overline{\text{RESET}}$ (push-pull)		-0.3~(V_{CC}+0.3)	V
Input Current	V_{CC}	20	mA
Output Current, RESET, $\overline{\text{RESET}}$		20	mA
Junction Temperature	T_J	150	°C
Operating Temperature	T_{OPR}	-40~105	°C
Storage Temperature	T_{STG}	-65~150	°C

Notes: Absolute maximum ratings are those values beyond which the device could be permanently damaged. Absolute maximum ratings are stress ratings only and functional device operation is not implied.

■ THERMAL DATA

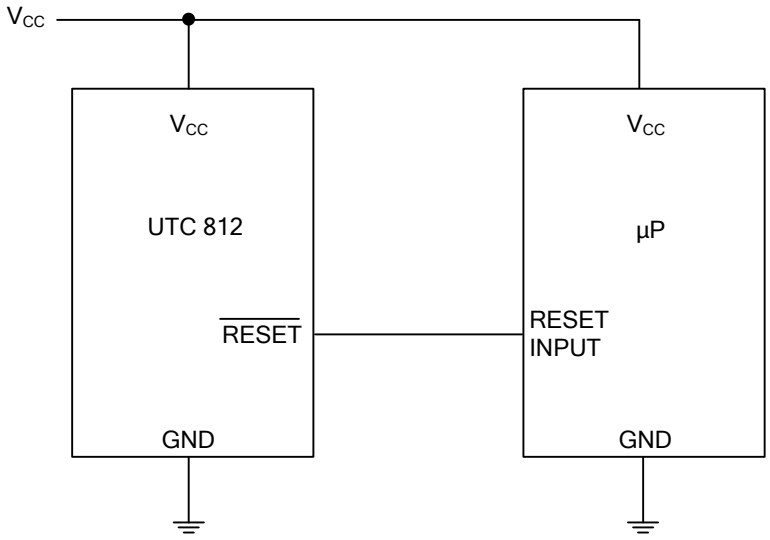
PARAMETER	SYMBOL	RATINGS	UNIT
Junction to Ambient	θ_{JA}	420	°C/W

■ ELECTRICAL CHARACTERISTICS (Note 1) (T_A = 25℃, V_{CC}= 3.3V, unless otherwise specified.)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
V_{CC} Range			1.0		5.5	V
Supply Current	I_{CC}	V_{CC}<3.6V		10	23	μA
Reset Threshold	V_{TH}		3.03	3.08	3.12	V
Reset Threshold Tempco				40		ppm/°C
V_{CC} to Reset Delay (Note 2)		V_{CC}= V_{TH} to (V_{TH}– 100mV)		7		μs
Reset Active Timeout Period		V_{CC}= V_{TH} max	150		550	ms
$\overline{\text{RESET}}$ Output Current High (push-pull active low)	I_{OH}	V_{CC}= 3.3V, $V_{\overline{\text{RESET}}}$ = 2.8V	3			mA

Notes: 1. Production testing done at T_A = +25°C; limits over temperature guaranteed by design

■ TYPICAL APPLICATION CIRCUIT



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