



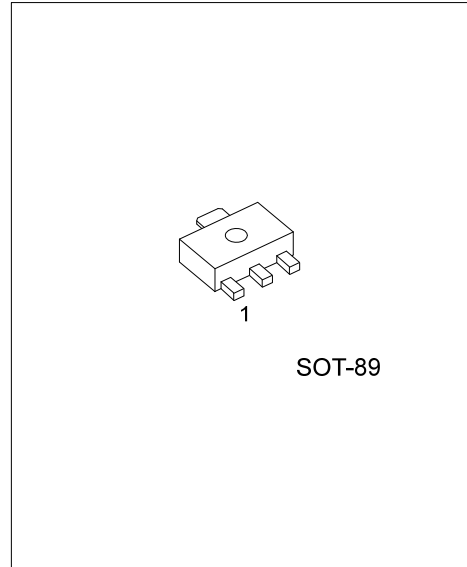
80NXX

CMOS IC

TINYPOWER VOLTAGE DETECTOR

DESCRIPTION

The UTC **80NXX** series devices are a set of three terminal low power voltage detectors implemented in CMOS technology. Each voltage detector in the series detects a particular fixed voltage ranging from 2.2V to 5.0V. The voltage detectors consist of a high-precision and low power consumption standard voltage source as well as a comparator, hysteresis circuit, and an output driver. CMOS technology ensures low power consumption. Although designed primarily as fixed voltage detectors, these devices can be used with external components to detect user specified threshold voltages.



FEATURES

- * Low power consumption
- * Low temperature coefficient
- * High input voltage range (up to 30V)
- * Output voltage accuracy: tolerance $\pm 3\%$
- * Built-in hysteresis characteristic

ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
80NXXL-AB3-R	80NXXG-AB3-R	SOT-89	O	I	G	Tape Reel

Notes: 1.xx: Output Voltage.

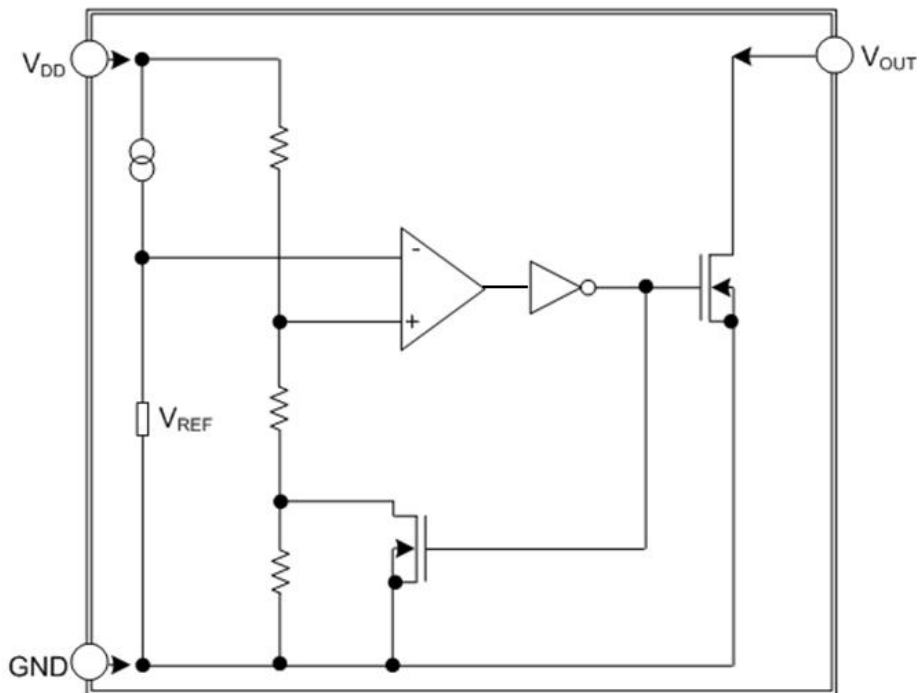
2. Pin Assignment: O: Output I: Input G: GND.

<p>80NXXG-AB3-R</p>	<p>(1) Packing Type</p> <p>(2) Package Type</p> <p>(3) Green Package</p> <p>(4) Output Voltage Code</p>	<p>(1) R: Tape Reel</p> <p>(2) AB3: SOT-89</p> <p>(3) G: Halogen Free and Lead Free, L: Lead Free</p> <p>(4) xx: 27: 2.7V</p>
---------------------	---	---

MARKING INFORMATION

PACKAGE	VOLTAGE CODE	MARKING
SOT-89	27: 2.7V	

BLOCK DIAGRAM



■ ABSOLUTE MAXIMUM RATING (T_A=25°C, unless otherwise specified)

PARAMETER	SYMBOL	RATINGS	UNIT
Supply Voltage	V _{DD}	V _{SS} -0.3V ~ V _{SS} +33V	V
Output Voltage	V _{OUT}	V _{SS} -0.3V ~ V _{DD} +0.3V	V
Output Current	I _{OUT}	50	mA
Power Dissipation	PD	200	mW
Storage Temperature		-60 ~ 150	°C
Operating Temperature		-40°C ~ 85°C	°C

Note: 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.

■ ELECTRICAL CHARACTERISTICS (T_A=25°C, unless otherwise specified)

80N22

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Detection Voltage	V _{DET}		2.134	2.200	2.266	V
Hysteresis Width	V _{HYS}		0.02V _{DET}	0.05V _{DET}	0.1V _{DET}	V
Operating Current	I _{DD}	V _{DD} =3.2V, No load		3	6	uA
Operating Voltage	V _{DD}		1.5		30	V
Output Sink Current	I _{OL}	V _{DD} =2.0V, V _{OUT} =0.2V	0.5	1		mA
Temperature Coefficient	$\frac{\Delta V_{DET}}{\Delta T_A}$	-40°C < T _A < 85°C		±1.1		mV/°C

80N24

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Detection Voltage	V _{DET}		2.328	2.400	2.472	V
Hysteresis Width	V _{HYS}		0.02V _{DET}	0.05V _{DET}	0.1V _{DET}	V
Operating Current	I _{DD}	V _{DD} =3.4V, No load		3	6	uA
Operating Voltage	V _{DD}		1.5		30	V
Output Sink Current	I _{OL}	V _{DD} =2.0V, V _{OUT} =0.2V	0.5	1		mA
Temperature Coefficient	$\frac{\Delta V_{DET}}{\Delta T_A}$	-40°C < T _A < 85°C		±0.9		mV/°C

80N27

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Detection Voltage	V _{DET}		2.619	2.700	2.781	V
Hysteresis Width	V _{HYS}		0.02V _{DET}	0.05V _{DET}	0.1V _{DET}	V
Operating Current	I _{DD}	V _{DD} =3.7V, No load		3	6	uA
Operating Voltage	V _{DD}		1.5		30	V
Output Sink Current	I _{OL}	V _{DD} =2.5V, V _{OUT} =0.2V	0.5	1		mA
Temperature Coefficient	$\frac{\Delta V_{DET}}{\Delta T_A}$	-40°C < T _A < 85°C		±1		mV/°C

80N33

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Detection Voltage	V _{DET}		3.201	3.300	3.399	V
Hysteresis Width	V _{HYS}		0.02V _{DET}	0.05V _{DET}	0.1V _{DET}	V
Operating Current	I _{DD}	V _{DD} =4.3V, No load		3	6	uA
Operating Voltage	V _{DD}		2.1		30	V
Output Sink Current	I _{OL}	V _{DD} =2.5V, V _{OUT} =0.2V	1.2	2.5		mA
Temperature Coefficient	$\frac{\Delta V_{DET}}{\Delta T_A}$	-40°C < T _A < 85°C		±0.9		mV/°C

■ ELECTRICAL CHARACTERISTICS (Cont.)

80N39

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Detection Voltage	V_{DET}		3.783	3.900	4.017	V
Hysteresis Width	V_{HYS}		$0.02V_{DET}$	$0.05V_{DET}$	$0.1V_{DET}$	V
Operating Current	I_{DD}	$V_{DD}=4.9V$, No load		3	6	μA
Operating Voltage	V_{DD}		1.5		30	V
Output Sink Current	I_{OL}	$V_{DD}=2.5V$, $V_{OUT}=0.2V$	1.2	2.5		mA
Temperature Coefficient	$\frac{\Delta V_{DET}}{\Delta T_A}$	$-40^{\circ}C < T_A < 85^{\circ}C$		± 0.9		mV/ $^{\circ}C$

80N44

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Detection Voltage	V_{DET}		4.268	4.400	4.532	V
Hysteresis Width	V_{HYS}		$0.02V_{DET}$	$0.05V_{DET}$	$0.1V_{DET}$	V
Operating Current	I_{DD}	$V_{DD}=5.4V$, No load		3	6	μA
Operating Voltage	V_{DD}		1.5		30	V
Output Sink Current	I_{OL}	$V_{DD}=3.6V$, $V_{OUT}=0.2V$	3	6		mA
Temperature Coefficient	$\frac{\Delta V_{DET}}{\Delta T_A}$	$-40^{\circ}C < T_A < 85^{\circ}C$		± 0.9		mV/ $^{\circ}C$

80N50

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Detection Voltage	V_{DET}		4.850	5.000	5.150	V
Hysteresis Width	V_{HYS}		$0.02V_{DET}$	$0.05V_{DET}$	$0.1V_{DET}$	V
Operating Current	I_{DD}	$V_{DD}=6.0V$, No load		3	6	μA
Operating Voltage	V_{DD}		2.1		30	V
Output Sink Current	I_{OL}	$V_{DD}=3.6V$, $V_{OUT}=0.2V$	3	6		mA
Temperature Coefficient	$\frac{\Delta V_{DET}}{\Delta T_A}$	$-40^{\circ}C < T_A < 85^{\circ}C$		± 0.9		mV/ $^{\circ}C$

UTC assumes no responsibility for equipment failures that result from using products at values that exceed, even momentarily, rated values (such as maximum ratings, operating condition ranges, or other parameters) listed in products specifications of any and all UTC products described or contained herein. UTC products are not designed for use in life support appliances, devices or systems where malfunction of these products can be reasonably expected to result in personal injury. Reproduction in whole or in part is prohibited without the prior written consent of the copyright owner. UTC reserves the right to make changes to information published in this document, including without limitation specifications and product descriptions, at any time and without notice. This document supersedes and replaces all information supplied prior to the publication hereof.