



## UR76XX1

CMOS IC

### 36-V INPUT VOLTAGE 500MA ULTRA LOW IQ VOLTAGE REGULATOR

#### DESCRIPTION

The UTC **UR76XX1** Series are a low dropout regulator with wide input voltage range, high output voltage accuracy, ultra low quiescent current and low dropout. This regulator is based on a CMOS process, and it's input voltage could high enough more than 36V, thus they are very suitable for high voltage application.

#### FEATURES

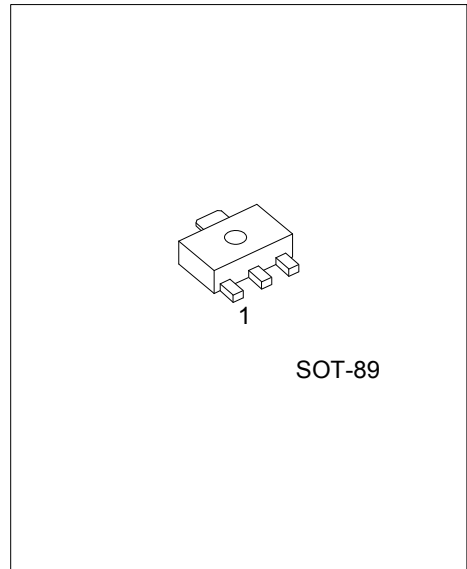
- \* High output voltage accuracy:  $\pm 2\%$
- \* Ultra low quiescent current: 1.0uA (Typ.)
- \* Low temperature-drift coefficient of  $V_{OUT}$ :  $\pm 100\text{ppm}/^\circ\text{C}$  (Typ.)
- \* Wide Input voltage range: 2.5~36V

#### ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
UR76XX1L-AB3-R	UR76XX1G-AB3-R	SOT-89	O	G	I	Tape Reel

Note: Pin assignment: G: Ground I:  $V_{IN}$  O:  $V_{OUT}$

<p>UR76XX1G-AB3-R</p> <ul style="list-style-type: none"> <li>(1) Packing Type</li> <li>(2) Package Type</li> <li>(4) Green Package</li> <li>(5) Output Voltage Code</li> </ul>	<ul style="list-style-type: none"> <li>(1) R: Tape Reel</li> <li>(2) AB3: SOT-89</li> <li>(4) G: Halogen Free and Lead Free, L: Lead Free</li> <li>(5) XX: Refer to Marking Information</li> </ul>
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SOT-89

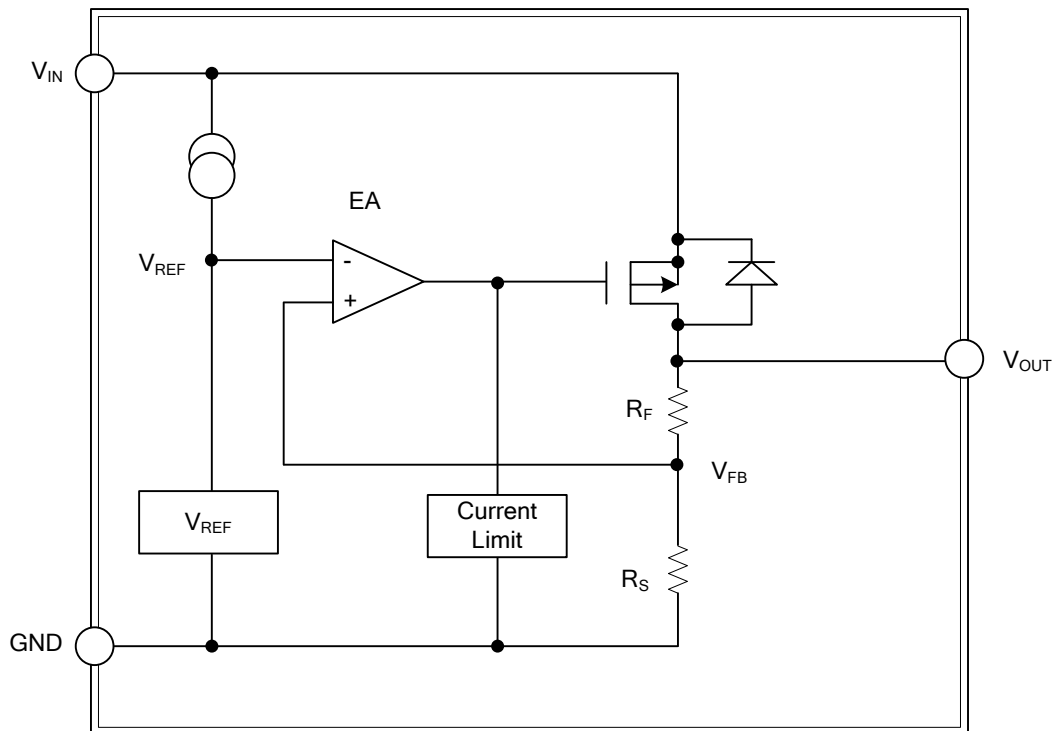
### MARKING INFORMATION

PACKAGE	VOLTAGE CODE		MARKING
SOT-89	15: 1.5V	40: 4.0V	<p>Date Code ← Voltage Code ←</p> <p>UR76XX1</p> <p>1 2 3</p> <p>L: Lead Free G: Halogen Free</p>
	18: 1.8V	44: 4.4V	
	21: 2.1V	50: 5.0V	
	23: 2.3V	60: 6.0V	
	25: 2.5V	70: 7.0V	
	27: 2.7V	80: 8.0V	
	30: 3.0V	90: 9.0V	
	33: 3.3V	10: 10V	
	36: 3.6V	12: 12V	

### PIN DESCRIPTION

PIN NO.	PIN NAME	DESCRIPTION
1	$V_{OUT}$	Regulated output voltage
2	GND	Ground
3	$V_{IN}$	Input voltage.

### BLOCK DIAGRAM



### ■ ABSOLUTE MAXIMUM RATING

PARAMETER	SYMBOL	RATINGS	UNIT
Input Voltage	$V_{IN}$	36	V
Output Voltage	$V_{OUT}$	12	V
Power Dissipation	$P_D$	500	mW
Junction Temperature	$T_J$	+125	°C
Operating Temperature Range	$T_{OPR}$	-40 ~ +85	°C
Storage Temperature Range	$T_{STG}$	-40 ~ +125	°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.

### ■ THERMAL DATA

PARAMETER	SYMBOL	RATINGS	UNIT
Junction to Ambient	$\theta_{JA}$	200	°C/W
Junction to Case	$\theta_{JC}$	50	°C/W

### ■ ELECTRICAL CHARACTERISTICS ( $T_A=25^\circ\text{C}$ , unless otherwise specified)

#### UTC UR76151

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Output Voltage	$V_{OUT}$	$V_{IN}=V_{OUT}+2V, I_{OUT}=10\text{mA}$	1.47	1.5	1.53	V
Output Current (Note 1)	$I_{OUT}$	$V_{IN}=V_{OUT}+2V$	500			mA
Dropout Voltage (Note 2)	$V_{DROP}$	$I_{OUT}=60\text{mA}$		100	150	mV
Line Regulation	$\frac{\Delta V_{OUT1}}{\Delta V_{IN} \cdot V_{OUT}}$	$V_{OUT}+2V \leq V_{IN} \leq 36V, I_{OUT}=1\text{mA}$		0.05	0.2	%/V
Load Regulation	$\Delta V_{OUT2}$	$V_{IN}=V_{OUT}+2V, 1.0\text{mA} \leq I_{OUT} \leq 100\text{mA}$		30	80	mV
Output Voltage Temperature Coefficient	$\frac{\Delta V_{OUT1}}{T_A \cdot V_{OUT}}$	$V_{IN}=V_{OUT}+2V, I_{OUT}=10\text{mA}, -40^\circ\text{C} \leq T_A \leq 85^\circ\text{C}$		±100		ppm/°C
Supply Current	$I_{SS1}$	$V_{IN}=V_{OUT}+2V$		1.0	3.0	µA

#### UTC UR76181

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Output Voltage	$V_{OUT}$	$V_{IN}=V_{OUT}+2V, I_{OUT}=10\text{mA}$	1.764	1.8	1.836	V
Output Current (Note 1)	$I_{OUT}$	$V_{IN}=V_{OUT}+2V$	500			mA
Dropout Voltage (Note 2)	$V_{DROP}$	$I_{OUT}=60\text{mA}$		100	150	mV
Line Regulation	$\frac{\Delta V_{OUT1}}{\Delta V_{IN} \cdot V_{OUT}}$	$V_{OUT}+2V \leq V_{IN} \leq 36V, I_{OUT}=1\text{mA}$		0.05	0.2	%/V
Load Regulation	$\Delta V_{OUT2}$	$V_{IN}=V_{OUT}+2V, 1.0\text{mA} \leq I_{OUT} \leq 100\text{mA}$		30	80	mV
Output Voltage Temperature Coefficient	$\frac{\Delta V_{OUT1}}{T_A \cdot V_{OUT}}$	$V_{IN}=V_{OUT}+2V, I_{OUT}=10\text{mA}, -40^\circ\text{C} \leq T_A \leq 85^\circ\text{C}$		±100		ppm/°C
Supply Current	$I_{SS1}$	$V_{IN}=V_{OUT}+2V$		1.0	3.0	µA

#### UTC UR76211

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Output Voltage	$V_{OUT}$	$V_{IN}=V_{OUT}+2V, I_{OUT}=10\text{mA}$	2.058	2.1	2.142	V
Output Current (Note 1)	$I_{OUT}$	$V_{IN}=V_{OUT}+2V$	500			mA
Dropout Voltage (Note 2)	$V_{DROP}$	$I_{OUT}=80\text{mA}$		120	150	mV
Line Regulation	$\frac{\Delta V_{OUT1}}{\Delta V_{IN} \cdot V_{OUT}}$	$V_{OUT}+2V \leq V_{IN} \leq 36V, I_{OUT}=1\text{mA}$		0.05	0.2	%/V
Load Regulation	$\Delta V_{OUT2}$	$V_{IN}=V_{OUT}+2V, 1.0\text{mA} \leq I_{OUT} \leq 100\text{mA}$		30	80	mV
Output Voltage Temperature Coefficient	$\frac{\Delta V_{OUT1}}{T_A \cdot V_{OUT}}$	$V_{IN}=V_{OUT}+2V, I_{OUT}=10\text{mA}, -40^\circ\text{C} \leq T_A \leq 85^\circ\text{C}$		±100		ppm/°C
Supply Current	$I_{SS1}$	$V_{IN}=V_{OUT}+2V$		1.0	3.0	µA

■ ELECTRICAL CHARACTERISTICS (Cont.)

UTC UR76231

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Output Voltage	$V_{OUT}$	$V_{IN}=V_{OUT}+2V, I_{OUT}=10mA$	2.254	2.3	2.346	V
Output Current (Note 1)	$I_{OUT}$	$V_{IN}=V_{OUT}+2V$	500			mA
Dropout Voltage (Note 2)	$V_{DROP}$	$I_{OUT}=80mA$		120	150	mV
Line Regulation	$\frac{\Delta V_{OUT1}}{\Delta V_{IN} \cdot V_{OUT}}$	$V_{OUT}+2V \leq V_{IN} \leq 36V, I_{OUT}=1mA$		0.05	0.2	%/V
Load Regulation	$\Delta V_{OUT2}$	$V_{IN}=V_{OUT}+2V, 1.0mA \leq I_{OUT} \leq 100mA$		30	80	mV
Output Voltage Temperature Coefficient	$\frac{\Delta V_{OUT1}}{T_A \cdot V_{OUT}}$	$V_{IN}=V_{OUT}+2V, I_{OUT}=10mA, -40^\circ C \leq T_A \leq 85^\circ C$		$\pm 100$		ppm/ $^\circ C$
Supply Current	$I_{SS1}$	$V_{IN}=V_{OUT}+2V$		1.0	3.0	$\mu A$

UTC UR76251

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Output Voltage	$V_{OUT}$	$V_{IN}=V_{OUT}+2V, I_{OUT}=10mA$	2.45	2.5	2.55	V
Output Current (Note 1)	$I_{OUT}$	$V_{IN}=V_{OUT}+2V$	500			mA
Dropout Voltage (Note 2)	$V_{DROP}$	$I_{OUT}=80mA$		120	150	mV
Line Regulation	$\frac{\Delta V_{OUT1}}{\Delta V_{IN} \cdot V_{OUT}}$	$V_{OUT}+2V \leq V_{IN} \leq 36V, I_{OUT}=1mA$		0.05	0.2	%/V
Load Regulation	$\Delta V_{OUT2}$	$V_{IN}=V_{OUT}+2V, 1.0mA \leq I_{OUT} \leq 100mA$		30	80	mV
Output Voltage Temperature Coefficient	$\frac{\Delta V_{OUT1}}{T_A \cdot V_{OUT}}$	$V_{IN}=V_{OUT}+2V, I_{OUT}=10mA, -40^\circ C \leq T_A \leq 85^\circ C$		$\pm 100$		ppm/ $^\circ C$
Supply Current	$I_{SS1}$	$V_{IN}=V_{OUT}+2V$		1.0	3.0	$\mu A$

UTC UR76271

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Output Voltage	$V_{OUT}$	$V_{IN}=V_{OUT}+2V, I_{OUT}=10mA$	2.646	2.7	2.754	V
Output Current (Note 1)	$I_{OUT}$	$V_{IN}=V_{OUT}+2V$	500			mA
Dropout Voltage (Note 2)	$V_{DROP}$	$I_{OUT}=80mA$		120	150	mV
Line Regulation	$\frac{\Delta V_{OUT1}}{\Delta V_{IN} \cdot V_{OUT}}$	$V_{OUT}+2V \leq V_{IN} \leq 36V, I_{OUT}=1mA$		0.05	0.2	%/V
Load Regulation	$\Delta V_{OUT2}$	$V_{IN}=V_{OUT}+2V, 1.0mA \leq I_{OUT} \leq 100mA$		30	80	mV
Output Voltage Temperature Coefficient	$\frac{\Delta V_{OUT1}}{T_A \cdot V_{OUT}}$	$V_{IN}=V_{OUT}+2V, I_{OUT}=10mA, -40^\circ C \leq T_A \leq 85^\circ C$		$\pm 100$		ppm/ $^\circ C$
Supply Current	$I_{SS1}$	$V_{IN}=V_{OUT}+2V$		1.0	3.0	$\mu A$

UTC UR76301

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Output Voltage	$V_{OUT}$	$V_{IN}=V_{OUT}+2V, I_{OUT}=10mA$	2.94	3.0	3.06	V
Output Current (Note 1)	$I_{OUT}$	$V_{IN}=V_{OUT}+2V$	500			mA
Dropout Voltage (Note 2)	$V_{DROP}$	$I_{OUT}=80mA$		120	150	mV
Line Regulation	$\frac{\Delta V_{OUT1}}{\Delta V_{IN} \cdot V_{OUT}}$	$V_{OUT}+2V \leq V_{IN} \leq 36V, I_{OUT}=1mA$		0.05	0.2	%/V
Load Regulation	$\Delta V_{OUT2}$	$V_{IN}=V_{OUT}+2V, 1.0mA \leq I_{OUT} \leq 100mA$		30	80	mV
Output Voltage Temperature Coefficient	$\frac{\Delta V_{OUT1}}{T_A \cdot V_{OUT}}$	$V_{IN}=V_{OUT}+2V, I_{OUT}=10mA, -40^\circ C \leq T_A \leq 85^\circ C$		$\pm 100$		ppm/ $^\circ C$
Supply Current	$I_{SS1}$	$V_{IN}=V_{OUT}+2V$		1.0	3.0	$\mu A$

## ■ ELECTRICAL CHARACTERISTICS (Cont.)

## UTC UR76331

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Output Voltage	$V_{OUT}$	$V_{IN}=V_{OUT}+2V, I_{OUT}=10mA$	3.234	3.3	3.366	V
Output Current (Note 1)	$I_{OUT}$	$V_{IN}=V_{OUT}+2V$	500			mA
Dropout Voltage (Note 2)	$V_{DROP}$	$I_{OUT}=100mA$		160	200	mV
Line Regulation	$\frac{\Delta V_{OUT1}}{\Delta V_{IN} \cdot V_{OUT}}$	$V_{OUT}+2V \leq V_{IN} \leq 36V, I_{OUT}=1mA$		0.05	0.2	%/V
Load Regulation	$\Delta V_{OUT2}$	$V_{IN}=V_{OUT}+2V, 1.0mA \leq I_{OUT} \leq 100mA$		30	80	mV
Output Voltage Temperature Coefficient	$\frac{\Delta V_{OUT1}}{T_A \cdot V_{OUT}}$	$V_{IN}=V_{OUT}+2V, I_{OUT}=10mA, -40^\circ C \leq T_A \leq 85^\circ C$		$\pm 100$		ppm/ $^\circ C$
Supply Current	$I_{SS1}$	$V_{IN}=V_{OUT}+2V$		1.0	3.0	$\mu A$

## UTC UR76361

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Output Voltage	$V_{OUT}$	$V_{IN}=V_{OUT}+2V, I_{OUT}=10mA$	3.528	3.6	3.672	V
Output Current (Note 1)	$I_{OUT}$	$V_{IN}=V_{OUT}+2V$	500			mA
Dropout Voltage (Note 2)	$V_{DROP}$	$I_{OUT}=100mA$		160	200	mV
Line Regulation	$\frac{\Delta V_{OUT1}}{\Delta V_{IN} \cdot V_{OUT}}$	$V_{OUT}+2V \leq V_{IN} \leq 36V, I_{OUT}=1mA$		0.05	0.2	%/V
Load Regulation	$\Delta V_{OUT2}$	$V_{IN}=V_{OUT}+2V, 1.0mA \leq I_{OUT} \leq 100mA$		30	80	mV
Output Voltage Temperature Coefficient	$\frac{\Delta V_{OUT1}}{T_A \cdot V_{OUT}}$	$V_{IN}=V_{OUT}+2V, I_{OUT}=10mA, -40^\circ C \leq T_A \leq 85^\circ C$		$\pm 100$		ppm/ $^\circ C$
Supply Current	$I_{SS1}$	$V_{IN}=V_{OUT}+2V$		1.0	3.0	$\mu A$

## UTC UR76401

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Output Voltage	$V_{OUT}$	$V_{IN}=V_{OUT}+2V, I_{OUT}=10mA$	3.92	4.0	4.08	V
Output Current (Note 1)	$I_{OUT}$	$V_{IN}=V_{OUT}+2V$	500			mA
Dropout Voltage (Note 2)	$V_{DROP}$	$I_{OUT}=100mA$		160	200	mV
Line Regulation	$\frac{\Delta V_{OUT1}}{\Delta V_{IN} \cdot V_{OUT}}$	$V_{OUT}+2V \leq V_{IN} \leq 36V, I_{OUT}=1mA$		0.05	0.2	%/V
Load Regulation	$\Delta V_{OUT2}$	$V_{IN}=V_{OUT}+2V, 1.0mA \leq I_{OUT} \leq 100mA$		30	80	mV
Output Voltage Temperature Coefficient	$\frac{\Delta V_{OUT1}}{T_A \cdot V_{OUT}}$	$V_{IN}=V_{OUT}+2V, I_{OUT}=10mA, -40^\circ C \leq T_A \leq 85^\circ C$		$\pm 100$		ppm/ $^\circ C$
Supply Current	$I_{SS1}$	$V_{IN}=V_{OUT}+2V$		1.0	3.0	$\mu A$

## UTC UR76441

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Output Voltage	$V_{OUT}$	$V_{IN}=V_{OUT}+2V, I_{OUT}=10mA$	4.312	4.4	4.488	V
Output Current (Note 1)	$I_{OUT}$	$V_{IN}=V_{OUT}+2V$	500			mA
Dropout Voltage (Note 2)	$V_{DROP}$	$I_{OUT}=100mA$		170	200	mV
Line Regulation	$\frac{\Delta V_{OUT1}}{\Delta V_{IN} \cdot V_{OUT}}$	$V_{OUT}+2V \leq V_{IN} \leq 36V, I_{OUT}=1mA$		0.05	0.2	%/V
Load Regulation	$\Delta V_{OUT2}$	$V_{IN}=V_{OUT}+2V, 1.0mA \leq I_{OUT} \leq 100mA$		30	80	mV
Output Voltage Temperature Coefficient	$\frac{\Delta V_{OUT1}}{T_A \cdot V_{OUT}}$	$V_{IN}=V_{OUT}+2V, I_{OUT}=10mA, -40^\circ C \leq T_A \leq 85^\circ C$		$\pm 100$		ppm/ $^\circ C$
Supply Current	$I_{SS1}$	$V_{IN}=V_{OUT}+2V$		1.0	3.0	$\mu A$

## ■ ELECTRICAL CHARACTERISTICS (Cont.)

## UTC UR76501

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Output Voltage	$V_{OUT}$	$V_{IN}=V_{OUT}+2V, I_{OUT}=10mA$	4.9	5.0	5.1	V
Output Current (Note 1)	$I_{OUT}$	$V_{IN}=V_{OUT}+2V$	500			mA
Dropout Voltage (Note 2)	$V_{DROP}$	$I_{OUT}=100mA$		170	200	mV
Line Regulation	$\frac{\Delta V_{OUT1}}{\Delta V_{IN} \cdot V_{OUT}}$	$V_{OUT}+2V \leq V_{IN} \leq 36V, I_{OUT}=1mA$		0.05	0.2	%/V
Load Regulation	$\Delta V_{OUT2}$	$V_{IN}=V_{OUT}+2V, 1.0mA \leq I_{OUT} \leq 100mA$		30	80	mV
Output Voltage Temperature Coefficient	$\frac{\Delta V_{OUT1}}{T_A \cdot V_{OUT}}$	$V_{IN}=V_{OUT}+2V, I_{OUT}=10mA, -40^\circ C \leq T_A \leq 85^\circ C$		$\pm 100$		ppm/ $^\circ C$
Supply Current	$I_{SS1}$	$V_{IN}=V_{OUT}+2V$		1.0	3.0	$\mu A$

## UTC UR76601

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Output Voltage	$V_{OUT}$	$V_{IN}=V_{OUT}+2V, I_{OUT}=10mA$	5.88	6.0	6.12	V
Output Current (Note 1)	$I_{OUT}$	$V_{IN}=V_{OUT}+2V$	500			mA
Dropout Voltage (Note 2)	$V_{DROP}$	$I_{OUT}=200mA$		200	240	mV
Line Regulation	$\frac{\Delta V_{OUT1}}{\Delta V_{IN} \cdot V_{OUT}}$	$V_{OUT}+2V \leq V_{IN} \leq 36V, I_{OUT}=1mA$		0.05	0.2	%/V
Load Regulation	$\Delta V_{OUT2}$	$V_{IN}=V_{OUT}+2V, 1.0mA \leq I_{OUT} \leq 100mA$		30	80	mV
Output Voltage Temperature Coefficient	$\frac{\Delta V_{OUT1}}{T_A \cdot V_{OUT}}$	$V_{IN}=V_{OUT}+2V, I_{OUT}=10mA, -40^\circ C \leq T_A \leq 85^\circ C$		$\pm 100$		ppm/ $^\circ C$
Supply Current	$I_{SS1}$	$V_{IN}=V_{OUT}+2V$		1.0	3.0	$\mu A$

## UTC UR76701

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Output Voltage	$V_{OUT}$	$V_{IN}=V_{OUT}+2V, I_{OUT}=10mA$	6.86	7.0	7.14	V
Output Current (Note 1)	$I_{OUT}$	$V_{IN}=V_{OUT}+2V$	500			mA
Dropout Voltage (Note 2)	$V_{DROP}$	$I_{OUT}=200mA$		200	240	mV
Line Regulation	$\frac{\Delta V_{OUT1}}{\Delta V_{IN} \cdot V_{OUT}}$	$V_{OUT}+2V \leq V_{IN} \leq 36V, I_{OUT}=1mA$		0.05	0.2	%/V
Load Regulation	$\Delta V_{OUT2}$	$V_{IN}=V_{OUT}+2V, 1.0mA \leq I_{OUT} \leq 100mA$		30	80	mV
Output Voltage Temperature Coefficient	$\frac{\Delta V_{OUT1}}{T_A \cdot V_{OUT}}$	$V_{IN}=V_{OUT}+2V, I_{OUT}=10mA, -40^\circ C \leq T_A \leq 85^\circ C$		$\pm 100$		ppm/ $^\circ C$
Supply Current	$I_{SS1}$	$V_{IN}=V_{OUT}+2V$		1.0	3.0	$\mu A$

## UTC UR76801

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Output Voltage	$V_{OUT}$	$V_{IN}=V_{OUT}+2V, I_{OUT}=10mA$	7.84	8.0	8.16	V
Output Current (Note 1)	$I_{OUT}$	$V_{IN}=V_{OUT}+2V$	500			mA
Dropout Voltage (Note 2)	$V_{DROP}$	$I_{OUT}=200mA$		200	240	mV
Line Regulation	$\frac{\Delta V_{OUT1}}{\Delta V_{IN} \cdot V_{OUT}}$	$V_{OUT}+2V \leq V_{IN} \leq 36V, I_{OUT}=1mA$		0.05	0.2	%/V
Load Regulation	$\Delta V_{OUT2}$	$V_{IN}=V_{OUT}+2V, 1.0mA \leq I_{OUT} \leq 100mA$		30	80	mV
Output Voltage Temperature Coefficient	$\frac{\Delta V_{OUT1}}{T_A \cdot V_{OUT}}$	$V_{IN}=V_{OUT}+2V, I_{OUT}=10mA, -40^\circ C \leq T_A \leq 85^\circ C$		$\pm 100$		ppm/ $^\circ C$
Supply Current	$I_{SS1}$	$V_{IN}=V_{OUT}+2V$		1.0	3.0	$\mu A$

■ ELECTRICAL CHARACTERISTICS (Cont.)

UTC UR76901

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Output Voltage	$V_{OUT}$	$V_{IN}=V_{OUT}+2V, I_{OUT}=10mA$	8.82	9.0	9.18	V
Output Current (Note 1)	$I_{OUT}$	$V_{IN}=V_{OUT}+2V$	500			mA
Dropout Voltage (Note 2)	$V_{DROP}$	$I_{OUT}=200mA$		200	240	mV
Line Regulation	$\frac{\Delta V_{OUT1}}{\Delta V_{IN} \cdot V_{OUT}}$	$V_{OUT}+2V \leq V_{IN} \leq 36V, I_{OUT}=1mA$		0.05	0.2	%/V
Load Regulation	$\Delta V_{OUT2}$	$V_{IN}=V_{OUT}+2V, 1.0mA \leq I_{OUT} \leq 100mA$		30	80	mV
Output Voltage Temperature Coefficient	$\frac{\Delta V_{OUT1}}{T_A \cdot V_{OUT}}$	$V_{IN}=V_{OUT}+2V, I_{OUT}=10mA, -40^\circ C \leq T_A \leq 85^\circ C$		$\pm 100$		ppm/ $^\circ C$
Supply Current	$I_{SS1}$	$V_{IN}=V_{OUT}+2V$		1.0	3.0	$\mu A$

UTC UR76101

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Output Voltage	$V_{OUT}$	$V_{IN}=V_{OUT}+2V, I_{OUT}=10mA$	9.8	10.0	10.2	V
Output Current (Note 1)	$I_{OUT}$	$V_{IN}=V_{OUT}+2V$	500			mA
Dropout Voltage (Note 2)	$V_{DROP}$	$I_{OUT}=200mA$		200	240	mV
Line Regulation	$\frac{\Delta V_{OUT1}}{\Delta V_{IN} \cdot V_{OUT}}$	$V_{OUT}+2V \leq V_{IN} \leq 36V, I_{OUT}=1mA$		0.05	0.2	%/V
Load Regulation	$\Delta V_{OUT2}$	$V_{IN}=V_{OUT}+2V, 1.0mA \leq I_{OUT} \leq 100mA$		30	80	mV
Output Voltage Temperature Coefficient	$\frac{\Delta V_{OUT1}}{T_A \cdot V_{OUT}}$	$V_{IN}=V_{OUT}+2V, I_{OUT}=10mA, -40^\circ C \leq T_A \leq 85^\circ C$		$\pm 100$		ppm/ $^\circ C$
Supply Current	$I_{SS1}$	$V_{IN}=V_{OUT}+2V$		1.0	3.0	$\mu A$

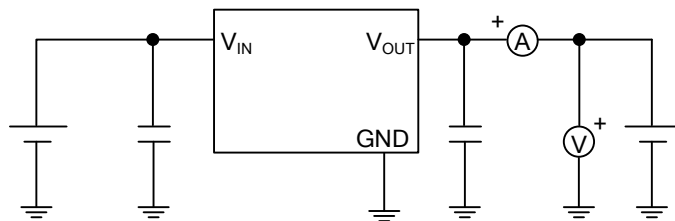
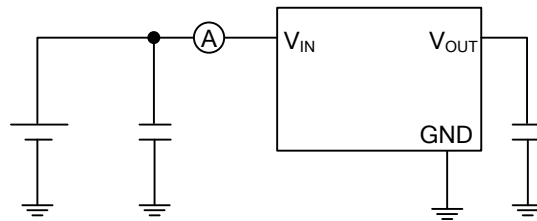
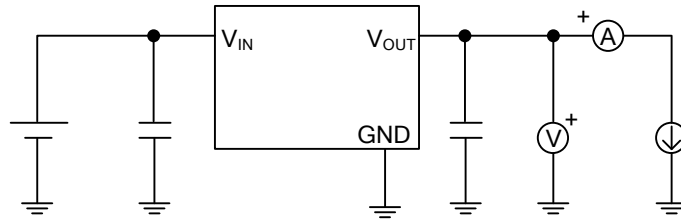
UTC UR76121

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Output Voltage	$V_{OUT}$	$V_{IN}=V_{OUT}+2V, I_{OUT}=10mA$	11.76	12.0	12.24	V
Output Current (Note 1)	$I_{OUT}$	$V_{IN}=V_{OUT}+2V$	500			mA
Dropout Voltage (Note 2)	$V_{DROP}$	$I_{OUT}=200mA$		200	240	mV
Line Regulation	$\frac{\Delta V_{OUT1}}{\Delta V_{IN} \cdot V_{OUT}}$	$V_{OUT}+2V \leq V_{IN} \leq 36V, I_{OUT}=1mA$		0.05	0.2	%/V
Load Regulation	$\Delta V_{OUT2}$	$V_{IN}=V_{OUT}+2V, 1.0mA \leq I_{OUT} \leq 100mA$		30	80	mV
Output Voltage Temperature Coefficient	$\frac{\Delta V_{OUT1}}{T_A \cdot V_{OUT}}$	$V_{IN}=V_{OUT}+2V, I_{OUT}=10mA, -40^\circ C \leq T_A \leq 85^\circ C$		$\pm 100$		ppm/ $^\circ C$
Supply Current	$I_{SS1}$	$V_{IN}=V_{OUT}+2V$		1.0	3.0	$\mu A$

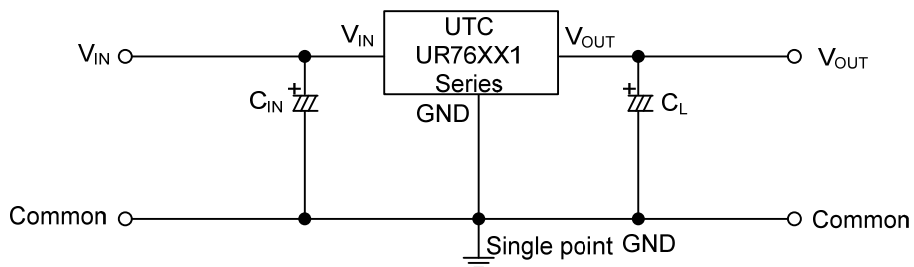
Notes: 1. Increase the output current slowly, record the current when  $V_{OUT}$  decrease 98% of  $V_{OUT}$ .

2.  $V_{drop}=V_{IN1}-(V_{OUT} \times 0.98)$ ,  $V_{OUT}: V_{IN}=V_{OUT}+2V, I_{OUT}=1mA$

■ TEST CIRCUIT



■ TYPICAL APPLICATION CIRCUIT



$C_{IN} > 1.0\mu F$   
 $C_L > 2.2\mu F$  (tantalum capacitor)



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