

# UTCUR132 LINEAR INTEGRATED CIRCUIT

## 200mA LOW DROPOUT LINEAR VOLTAGE REGULATOR

### DESCRIPTION

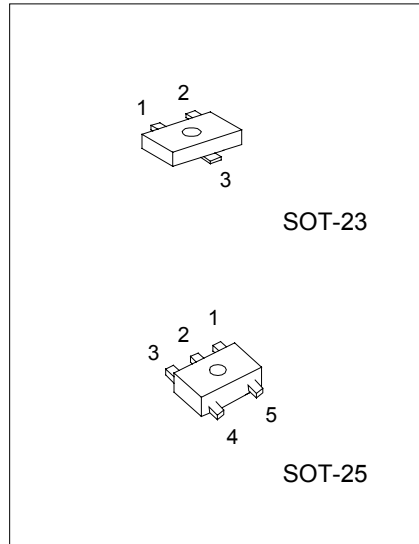
The UTC UR132 is a 200mA fixed output voltage low dropout linear regulator. Wide range of available output voltage fits most of applications. Built-in output current-limiting most thermal-limiting provide maximal protection against any fault conditions.

### FEATURES

- \*Guaranteed 200mA output current
- \*Input voltage range up to 12V
- \*Extremely tight load regulation
- \*Fast transient response
- \*Current-limiting and Thermal-limiting
- \*Three-terminal adjustable or fixed voltage.

### APPLICATIONS

- \*Voltage regulator for LAN Card, CD-ROM, and DVD
- \*Wireless communication systems

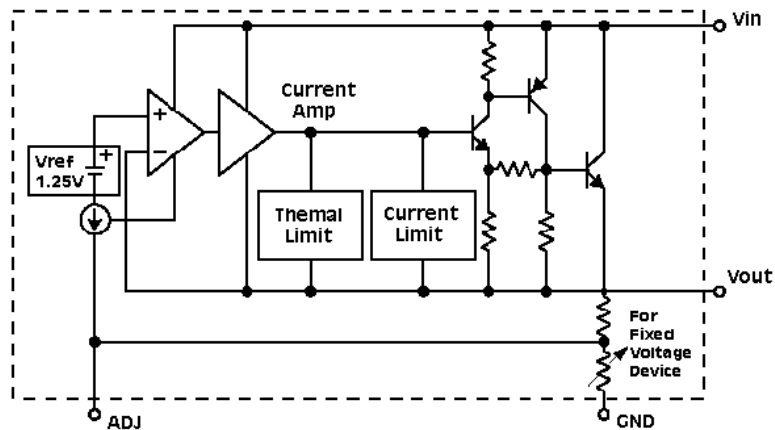


SOT-23 : 1:  $V_{OUT}$  2: GND 3:  $V_{IN}$   
 SOT-25 : 1:  $V_{IN}$  2: GND 3: NC 4: NC 5:  $V_{OUT}$

### PIN DESCRIPTION

NAME	FUNCTION
VOUT	Output
GND	Ground/Adjustable
VIN	Positive Power Input

### Function Block Diagram



# UTC UR132 LINEAR INTEGRATED CIRCUIT

## ABSOLUTE MAXIMUM RATINGS

PARAMETER	MIN.	TYP.	MAX.	UNIT
Input Voltage $V_{in}$	-0.3		12	V
Operating Junction Temperature Range	-40		125	°C
Storage Temperature Range	-65		150	°C
Power Dissipation			0.3	W

UTC UR132-  $V_o < 3.3V$  ( $V_o \pm 2\%$ )

ELECTRICAL CHARACTERISTICS ( $T_a=25^\circ C$ ,  $C_{IN}=1\mu F$ ,  $C_{OUT}=10\mu F$ , unless otherwise specified)

PARAMETER	TEST CONDITIONS	MIN	TYP.	MAX	UNITS
Output Voltage	$I_L=2mA$ , $V_{IN}-V_{OUT}=2V$	$V_o \times 0.98$	$V_o$	$V_o \times 1.02$	V
Output Voltage Temperature Coefficient			50	150	PPM/°C
Line Regulation	$I_L=2mA$ , $V_{IN}-V_{out}=2V \sim V_{in}=9V$			0.5	% $V_{OUT}$
Load Regulation (note 2)	$I_L=2mA \sim 200mA$ , $V_{IN}-V_{out}=2V$		10	30	mV
Current Limit (note 3)	$V_{IN}-v_{out}=2V$ , $V_{OUT}=0V$	300			mA
Dropout Voltage (note 4,5)				1.5	V
Standby current	$I_L=0$ , $V_{IN}=9V$			3.0	mA

UTC UR132- ADJ /  $V_o \geq 3.3V$  ( $V_o \pm 2\%$ )

ELECTRICAL CHARACTERISTICS ( $T_a=25^\circ C$ ,  $C_{IN}=1\mu F$ ,  $C_{OUT}=10\mu F$ , unless otherwise specified)

PARAMETER	TEST CONDITIONS	MIN	TYP.	MAX	UNITS
Output Voltage	$I_L=2mA$ , $V_{IN}-V_{OUT}=2V$	$V_o \times 0.98$	$V_o$	$V_o \times 1.02$	V
Adjustable ( $R1=120\Omega$ , $R2=200\Omega$ , $V_{out}=3.3V$ )					
Reference Voltage	$V_{IN}-V_o=2V$ , $I_L=2mA$	1.238	1.250	1.262	V
Output Voltage Temperature Coefficient			50	150	PPM/°C
Line Regulation	$I_L=2mA$ , $V_{IN}-V_{out}=2V \sim V_{in}=12V$			0.5	% $V_{OUT}$
Load Regulation (note 2)	$I_L=2mA \sim 200mA$ , $V_{IN}-V_{out}=2V$		10	30	mV
Current Limit (note 3)	$V_{IN}-V_{out}=2V$ , $V_{OUT}=0V$	300			mA
Dropout Voltage (note 4,5)				1.3	V
Standby current	$I_L=0$ , $V_{IN}=12V$			5.0	mA

Note 1: Guaranteed by design.

Note 2: Regulation is measured at constant junction temperature, using pulsed ON time.

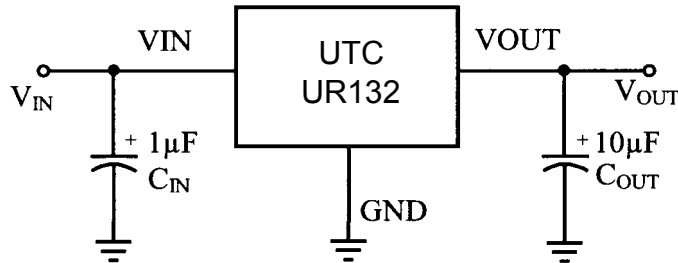
Note 3: Current Limit is measured at constant junction temperature, using pulsed ON time.

Note 4: Dropout is measured at constant junction temperature, using pulsed ON time, and the criterion is  $V_{OUT}$  inside target value  $\pm 2\%$ .

Note 5: Dropout test is skipped at the condition of  $V_{IN} < 3V$ .

# UTC UR132 LINEAR INTEGRATED CIRCUIT

## TYPICAL APPLICATION CIRCUIT

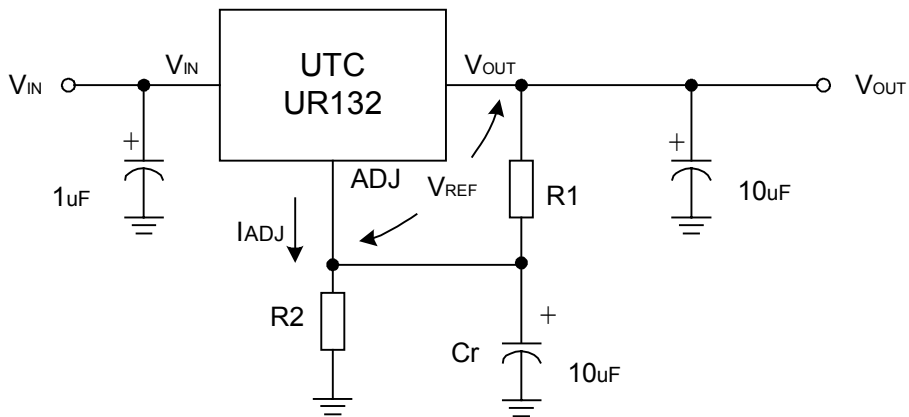


### APPLICATION INFORMATION

A 10µF (or larger) capacitor is recommended between VOUT and GND for stability. The part may oscillate without the capacitor. Any type of capacitor can be used, but not Aluminum electrolytics when operating below -25°C. The capacitance may be increased without limit.

A 1µF capacitor (or larger) should be placed between VIN to GND.

### UR132 ADJUSTABLE



Cr: 10µF to improve ripple rejection

$$V_{OUT} = V_{REF}(1 + R2/R1) + I_{ADJ} * R2$$

# UTCUR132      LINEAR INTEGRATED CIRCUIT

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. The information presented in this document does not form part of any quotation or contract, is believed to be accurate and reliable and may be changed without notice.

This datasheet has been downloaded from:

[www.DatasheetCatalog.com](http://www.DatasheetCatalog.com)

Datasheets for electronic components.