UNISONIC TECHNOLOGIES CO., LTD

UR132

LINEAR INTEGRATED CIRCUIT

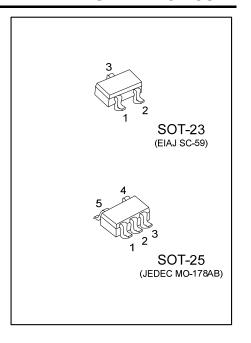
200mA LOW DROPOUT LINEAR **VOLTAGE REGULATOR**

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

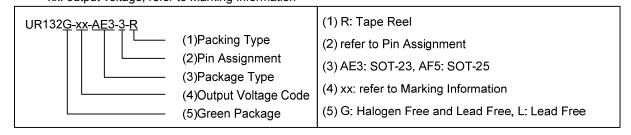
- * Guaranteed 200mA output current
- * Input voltage range up to 12V
- * Extremely tight load regulation
- * Fast transient response
- * Current-limiting and thermal-limiting
- * Three-terminal adjustable or fixed voltage.



ORDERING INFORMATION

	Order Number		Dookogo	Pin Assignment.				Dooking	
	Lead Free	Halogen Free	Package	1	2	3	4	5	Packing
Γ	UR132L-xx-AE3-3-R	UR132G-xx-AE3-3-R	SOT-23	G	0	-	-	-	Tape Reel
Γ	UR132L-xx-AE3-5-R	UR132G-xx-AE3-5-R	SOT-23	0	G	Ι	-	-	Tape Reel
Γ	UR132L-xx-AF5-C-R	UR132G-xx-AF5-C-R	SOT-25	ı	G	Ν	Ν	0	Tape Reel

Note: Pin assignment: G:GND O:V_{OUT} I:V_{IN} N: No Connection xx: output voltage, refer to Marking Information

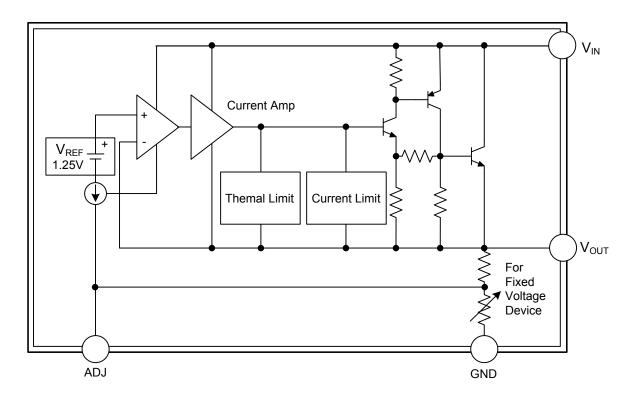


www.unisonic.com.tw 1 of 4

MARKING INFORMATION

PACKAGE	VOLTAGE CODE	Pin Assignment	MARKING			
SOT-23	12: 1.2V 15 : 1.5V 18: 1.8V	GOI	Voltage Code ← RXX□ L: Lead Free G: Halogen Free			
301-23	22: 2.2V 2E: 2.5V 26: 2.6V	OGI	Voltage Code ← RXX5☐ L: Lead Free G: Halogen Free			
SOT-25	27: 2.7V 28: 2.8V 30: 3.0V 33: 3.3V 50: 5.0V AD: ADJ	IGNNO	Voltage Code RXX L: Lead Free G: Halogen Free			

■ BLOCK DIAGRAM



ABSOLUTE MAXIMUM RATINGS

PARAMETER	SYMBOL	RATING	UNIT
Input Voltage	V_{IN}	-0.3 ~ 12	V
Power Dissipation	P _D	300	mW
Junction Temperature	TJ	+125	°C
Operation Temperature	T _{OPR}	-40 ~ +85	°C
Storage Temperature	T _{STG}	-40 ~ +150	°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, C_{IN}=1μF, C_{OUT}=10μF, unless otherwise specified)

FOR Vout < 3.3V (Vout ± 2%)

1 OK 4001 \ 3.54 \ \ 4001 \ \ 2.70 \ \							
PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT	
Output Voltage	V_{OUT}	I _L =2mA, V _{IN} -V _{OUT} =2V	V _{OUT} ×0.98	V_{OUT}	V _{OUT} ×1.02	V	
Output Voltage Temperature Coefficient	$T_{C}V_{O}$			50	150	ppm/°C	
Line Regulation	$\triangle V_{OUT}$	I_L =2mA, V_{IN} - V_{OUT} =2 V ~ V_{IN} =9 V			0.5	%V _{OUT}	
Load Regulation (Note 2)	$\triangle V_{OUT}$	I_L =2mA~200mA, V_{IN} - V_{OUT} =2 V		10	30	mV	
Current Limit (Note 3)	ΙL	V _{IN} -V _{OUT} =2V, V _{OUT} =0V	300			mA	
Dropout Voltage (Note 4,5)	V_D	_			1.5	V	
Standby current	I _{STN-BY}	I _L =0, V _{IN} =9V			3.0	mA	

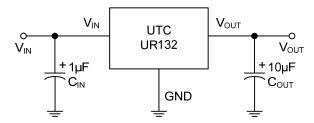
FOR ADJ and Vout≥3.3V (Vout±2%)

FOR ADJ and Vout 23.3V (Vout 1276)									
PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT			
Output Voltage	V _{OUT}	I _L =2mA, V _{IN} -V _{OUT} =2V	V _{OUT} ×0.98	V_{OUT}	V _{OUT} ×1.02	V			
ADJUSTABLE (R1=120 Ω ,R2=200 Ω ,V _{OUT} =3.3V)									
Reference Voltage	V_{REF}	$V_{IN}-V_{OUT}=2V$, $I_L=2mA$	1.238	1.250	1.262	V			
Output Voltage Temperature Coefficient	$T_{C}V_{O}$			50	150	ppm/°C			
Line Regulation	∆Vоит	I _L =2mA, V _{IN} -V _{OUT} =2V~V _{IN} =12V			0.5	%V _{OUT}			
Load Regulation (Note 2)	/\ Vour	I_L =2mA~200mA, V_{IN} - V_{OUT} =2 V		10	30	mV			
Current Limit (Note 3)	ΙL	V _{IN} -V _{OUT} =2V, V _{OUT} =0V	300			mA			
Dropout Voltage (Note 4,5)	V_D				1.3	V			
Standby current	I _{STN-BY}	I _L =0, V _{IN} =12V			5.0	mA			

Note: 1. Guaranteed by design.

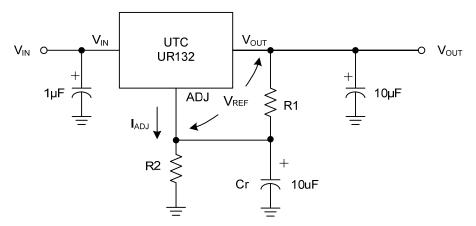
- 2. Regulation is measured at constant junction temperature, using pulsed on time.
- 3. Current limit is measured at constant junction temperature, using pulsed on time.
- 4. Dropout is measured at constant junction temperature, using pulsed on time, and the criterion is V_{OUT} inside target value±2%.
- 5. Dropout test is skipped at the condition of V_{IN} <3V.

■ TYPICAL APPLICATION CIRCUIT



The part may oscillate without the capacitor, a $10\mu F$ (or larger) capacitor is recommended between V_{OUT} and GND for stability. Any type of capacitor can be used, but not Aluminum electrolytic when operating below -20°C. The capacitance may be increased without limit. Besides, another $1\mu F$ capacitor (or larger) should be placed between V_{IN} to GND.

■ UR132 ADJUSTABLE



Cr:10 μ F to improve ripple rejection $V_{OUT}=V_{REF}(1+R2/R1)+I_{ADJ}xR2$

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