

**LR9283****CMOS IC****300mA LDO REGULATOR****DESCRIPTION**

The UTC **LR9283** is a typical LDO (linear regulator) with the features of high output voltage accuracy, low supply current, low ON-resistance. Internally, there're many functions of UTC **LR9283** which can be seen in the block figure. There are a voltage reference unit, an error amplifier, resistor-net for voltage setting, a current limit circuit, and a chip enable circuit in each UTC **LR9283**.

The output voltage of these ICs is fixed with high accuracy.

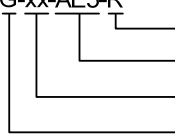
FEATURES

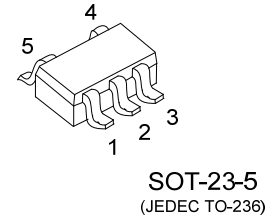
- * Supply current (TYP=1 μ A)
- * Output voltage accuracy ($\pm 1\%$)
- * Output voltage range (1.2V~5V)
- * Dropout voltage (TYP=200mV) ($I_{OUT}=100mA$, $V_{OUT}=1.8V$ Output type)
- * Line regulation (TYP=0.05%/V)
- * Built-in Current Limiter, OTP

ORDERING INFORMATION

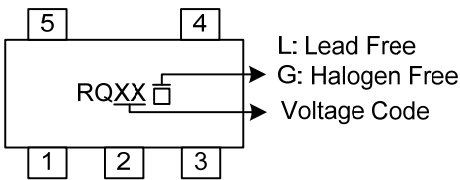
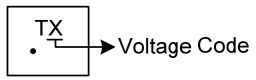
Ordering Number		Package	Packing
Lead Free	Halogen Free		
LR9283L-xx-AE5-R	LR9283G-xx-AE5-R	SOT-23-5	Tape Reel
LR9283L-xx-K04-1010X2-R	LR9283G-xx-K04-1010X2-R	X2DFN1010-4	Tape Reel

Note: xx: Output Voltage, refer to Marking Information.

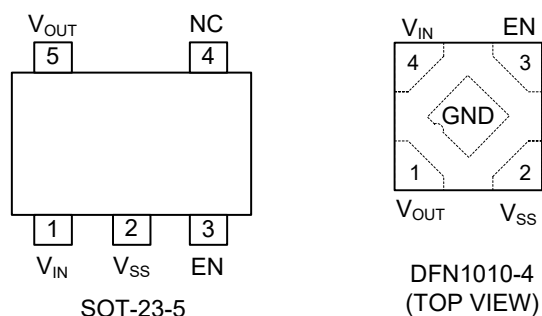
LR9283-XXG-xx-AE5-R	
	(1) R: Tape Reel (2) AE5: SOT-23-5, K04-1010X2: X2DFN1010-4 (3) xx: 08: 0.8V, 12: 1.2V... 40: 4.0V (4) G: Halogen Free and Lead Free, L: Lead Free



MARKING INFORMATION

PACKAGE	VOLTAGE CODE	MARKING
SOT-23-5	12: 1.2V 15: 1.5V 18: 1.8V 20: 2.0V 28: 2.8V 30: 3.0V 33: 3.3V 36: 3.6V 40: 4.0V	
X2DFN1010-4	Y: 0.8V B: 1.2V D: 1.8V G: 2.8V J: 3.0V K: 3.3V	

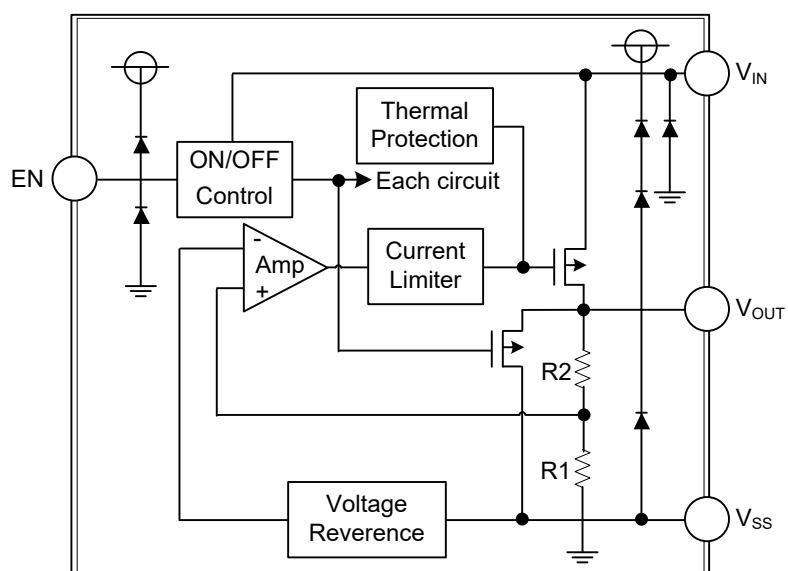
PIN CONFIGURATION



PIN DESCRIPTION

PIN NO.		PIN NAME	DESCRIPTION
SOT-23-5	DFN1010-4		
1	4	V _{IN}	Positive power supply input voltage.
2	2	V _{SS}	Ground
3	3	EN	Chip Enable
4	-	NC	No Connect
5	1	V _{OUT}	Regulated output voltage.
-	Exposed Pad	GND	Connect exposed pad to GND.

■ BLOCK DIAGRAM



■ **ABSOLUTE MAXIMUM RATING** ($T_A=25^{\circ}\text{C}$, unless otherwise specified)

PARAMETER		SYMBOL	RATINGS	UNIT
Input Voltage		V_{IN}	7	V
Output Current		I_{OUT}	300	mA
Power Dissipation	SOT-23-5	P_D	350	mW
	DFN1010-4		60	mW
Operating Temperature		T_{OPT}	-40 ~ +125	$^{\circ}\text{C}$
Storage Temperature		T_{STG}	-40 ~ +150	$^{\circ}\text{C}$

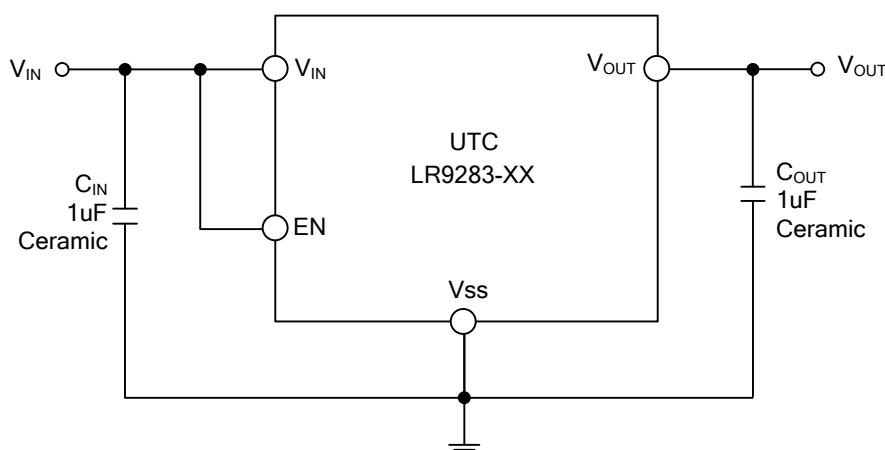
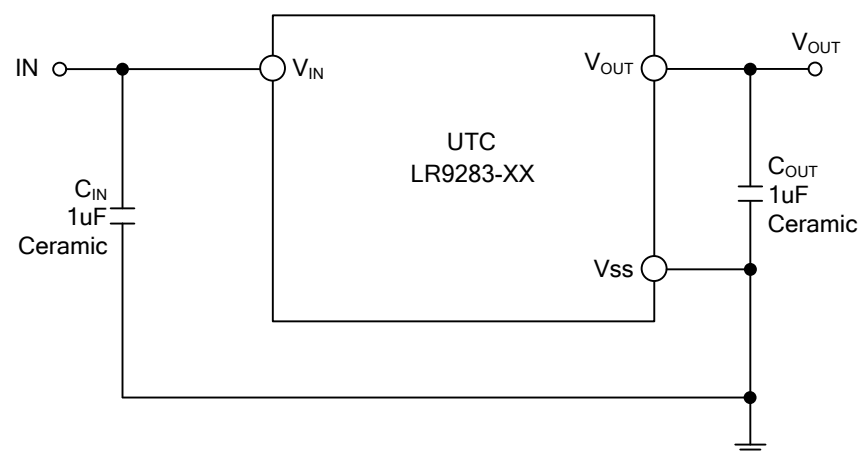
Note: Absolute maximum ratings are those values beyond which the device could be permanently damaged.
Absolute maximum ratings are stress ratings only and functional device operation is not implied.

■ **ELECTRICAL CHARACTERISTICS**

($V_{IN}=V_{OUT}+1\text{V}$, $C_{IN}=C_{OUT}=1\mu\text{F}$, $T_A=25^{\circ}\text{C}$, unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Input Voltage	V_{in}				6.5	V
DC Output Accuracy		$I_{OUT}=1\text{mA}$	-1		1	%
Dropout Voltage	V_{DIF}	$I_{OUT}=100\text{mA}$, $V_{OUT}=1.8\text{V}$		200		mV
Supply Current	I_{SS}	$I_{OUT}=0\text{mA}$		1.0	1.5	μA
Load Regulation	ΔV_{OUT}	$1\text{mA} \leq I_{OUT} \leq 100\text{mA}$		3		mV
Line Regulation	$\frac{\Delta V_{OUT}}{V_{OUT} \cdot \Delta V_{IN}}$	$I_{OUT}=10\text{mA}$ $V_{OUT}+1\text{V} \leq V_{IN} \leq 6.5\text{V}$		0.05	0.35	%/V
Power Supply Rejection Ratio	PSRR	$V_{IN}=V_{OUT}+1$, $I_{OUT}=10\text{mA}$, $f=1\text{KHz}$		65		dB
Output Current Limit	I_{LIM}		300			mA
Short Current	I_{SC}	$V_{OUT}=0\text{V}$		15		mA
EN "High" Voltage	$V_{EN} \text{ "H"}$		1.5		V_{IN}	V
EN "Low" Voltage	$V_{EN} \text{ "L"}$				0.3	V
Thermal Shutdown Temperature	T_{SD}			150		$^{\circ}\text{C}$
Thermal Shutdown Hysteresis	ΔT_{SD}			20		$^{\circ}\text{C}$

■ TYPICAL APPLICATION CIRCUIT



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