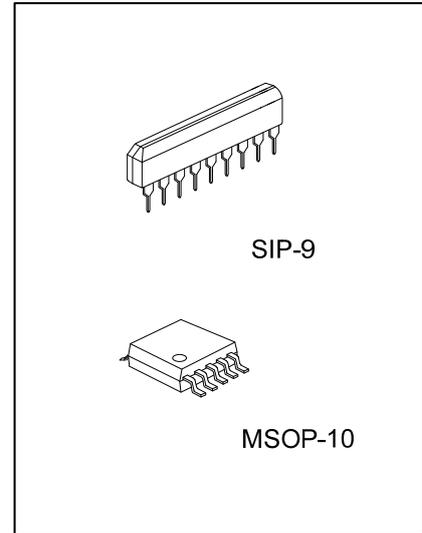




LA2284/A

LINEAR INTEGRATED CIRCUIT

5-DOT DUAL LED LEVEL METER DRIVER



DESCRIPTION

The **UTC LA2284/A** is a monolithic integrated circuit designed for 5-dot LED level meter drivers with a built-in rectifying amplifier. It is suitable for AC/DC level meters such as VU meters or signal meters.

FEATURES

- *High gain rectifying amplifier included ($G_v=26\text{dB}$)
- *Low radiation noise when LED turns on
- *Logarithmic indicator for 5-dot LED of bar type
- *Constant current output(15mA)
- *Wide operating supply voltage
- *Not necessary diode or transistor for ALC
- *Minimum number of external parts required

ORDERING INFORMATION

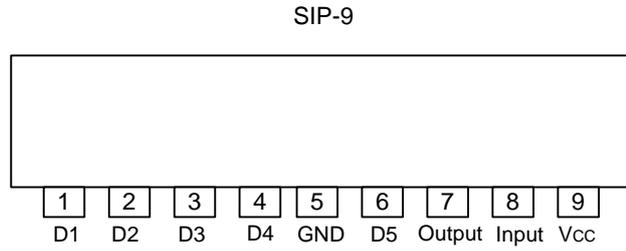
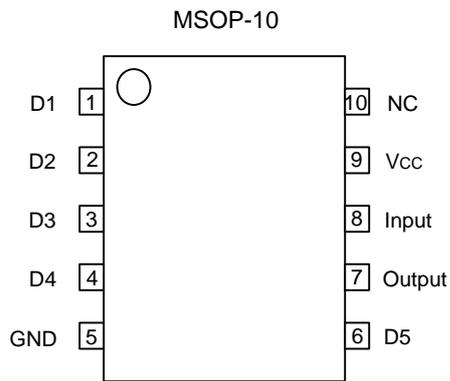
Order Number		Package	Packing
Lead Free	Halogen Free		
LA2284L-G09-T	LA2284G-G09-T	SIP-9	Tube
LA2284L-SM2-T	LA2284G-SM2-T	MSOP-10	Tube
LA2284L-SM2-R	LA2284G-SM2-R	MSOP-10	Tape Reel
LA2284AL-G09-T	LA2284AG-G09-T	SIP-9	Tube
LA2284AL-SM2-T	LA2284AG-SM2-T	MSOP-10	Tube
LA2284AL-SM2-R	LA2284AG-SM2-R	MSOP-10	Tape Reel

<p>LA2284AG-G09-T</p> <ul style="list-style-type: none"> (1) Packing Type (2) Package Type (3) Green Package (4) Supply Voltage 	<ul style="list-style-type: none"> (1) R: Tape Reel, T: Tube (2) G09: SIP-9, SM2: MSOP-10 (3) G: Halogen Free and Lead Free (4) refer to ELECTRICAL CHARACTERISTICS
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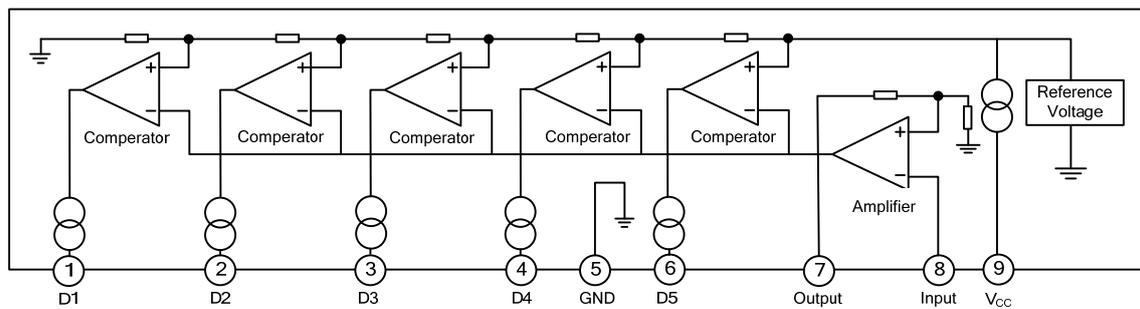
MARKING

Package	MARKING	
	LA2284	LA2284A
SIP-9	<p>UTC □□□□ → Data Code LA2284 □ → L: Lead Free □ → G: Halogen Free □□ → Lot Code</p> <p>1 2 3 4 5 6 7 8 9</p>	<p>UTC □□□□ → Data Code LA2284A □ → L: Lead Free □ → G: Halogen Free □□ → Lot Code</p> <p>1 2 3 4 5 6 7 8 9</p>
MSOP-10	<p>UTC □□□□ → Data Code LA2284 □ → L: Lead Free □ → G: Halogen Free □□ → Lot Code</p>	<p>UTC □□□□ → Data Code LA2284A □ → L: Lead Free □ → G: Halogen Free □□ → Lot Code</p>

■ PIN CONFIGURATION



■ BLOCK DIAGRAM



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

PARAMETER		SYMBOL	RATINGS	UNIT
Supply Voltage		V_{CC}	18	V
Amplifier input Voltage		V8	$-0.5 \sim V_{CC}$	V
Pin 7 Voltage		V7	6	V
D terminal Output Voltage		V_D	18	V
Power Dissipation	SIP-9	P_D	1.1	W
	MSOP-10		0.6	W
Operating Temperature		T_{OPR}	$-20 \sim +80$	$^\circ\text{C}$
Storage Temperature		T_{STG}	$-40 \sim +125$	$^\circ\text{C}$

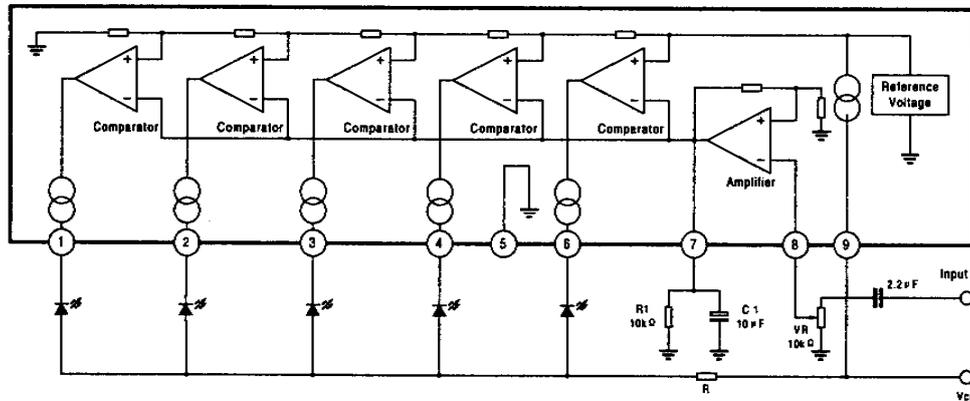
Notes: Absolute maximum ratings are those values beyond which the device could be permanently damaged.

Absolute maximum ratings are stress ratings only and functional device operation is not implied.

■ ELECTRICAL CHARACTERISTICS ($T_A=25^\circ\text{C}$, $V_{CC}=6\text{V}$, $f=1\text{kHz}$, unless otherwise specified)

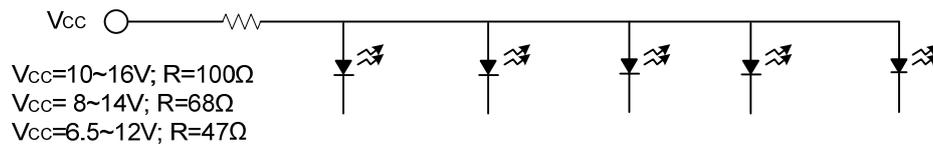
PARAMETER		SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Supply Voltage	LA2284	V_{CC}		3.5	6.0	16	V
	LA2284A			3.0	6.0	16	V
Supply Current		I_{CC}	$V_{IN}=0$		5	8	mA
Sensitivity		V_{IN}	In V_{C3} Level	46	56	66	mV
Comparator ON Level 1		V_{C1}		-11.5	-10.0	-8.5	dB
Comparator ON Level 2		V_{C2}		-6	-5	-4	dB
Comparator ON Level 3		V_{C3}			0		dB
Comparator ON Level 4		V_{C4}		2.5	3.0	3.5	dB
Comparator ON Level 5		V_{C5}		5	6	7	dB
LED Output Current		$I_{O(LED)}$		16.5		22	mA
Amp Gain		G_V	$V_{IN}=0.1\text{V}$	24	26	28	dB
Input Bias Current		$I_{I(BIAS)}$		-1.0	-0.3		μA

■ TEST CIRCUIT



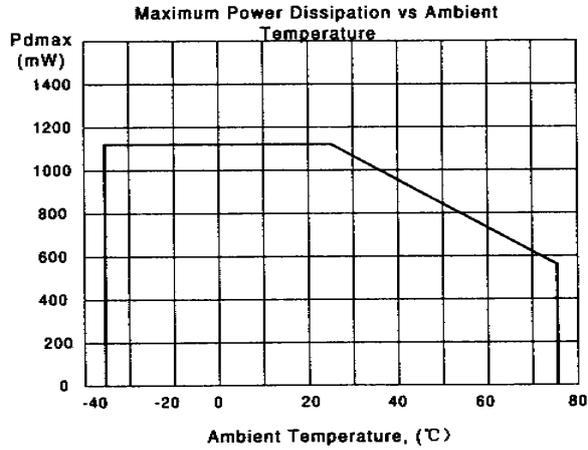
■ APPLICATION INFORMATION

By changing the time constant $C1$ and, the response, attack and release time, may be varied. In the above application conditions, power dissipation may be operated at higher levels than the absolute maximum ratings. The wattage of R is to be determined by the total LED current and R value recommended by the R table.





■ TYPICAL CHARACTERISTIC



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.