

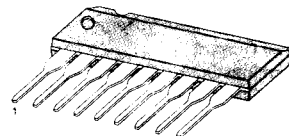
5-DOT LED LINEAR LEVEL METER DRIVER

The KA2287 are a monolithic integrated circuit designed for 5-dot LED level meter drivers with a built-in rectifying a 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.
- Linear indicator for 5-dot LED of bar type.
(0.33, 0.67, 1, 1.33, 1.67)
- Constant current output.
KA2287: $I_o = 15\text{mA}$ Typ.
- Wide operating supply voltage range: $V_{CC} = 3.5\text{V} \sim 16\text{V}$
- Minimum number of external parts required.

9 SIP



ORDERING INFORMATION

Device	Package	Operating Temperature	I_o
KA2287	9 SIP	$-20^\circ\text{C} \sim +80^\circ\text{C}$	7 mA
			15 mA

BLOCK DIAGRAM

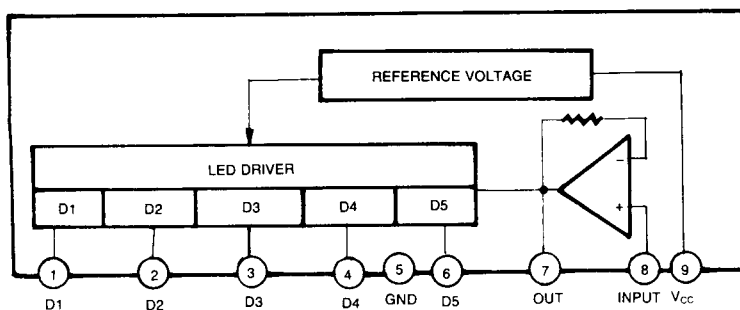


Fig. 1

ABSOLUTE MAXIMUM RATINGS ($T_a = 25^\circ\text{C}$)

Characteristic	Symbol	Value	Unit
Supply Voltage	V_{CC}	18	V
Amp Input Voltage	V_i (8-5)	$-0.5 \sim V_{CC}$	V
Pin 7 Voltage	$V_{7.5}$	6	V
D Terminal Output Voltage	V_D	18	V
Circuit Current	I_{CC}	12	mA
D Terminal Output Current	I_D	20	mA
Power Dissipation	P_D	1100	mW
Operating Temperature	T_{OPR}	$-20 \sim +80$	$^\circ\text{C}$
Storage Temperature	T_{STG}	$-40 \sim +125$	$^\circ\text{C}$

–11mW/ $^\circ\text{C}$ is decreased at higher temperature than $T_a = 25^\circ\text{C}$.

ELECTRICAL CHARACTERISTICS

($T_a = 25^\circ\text{C}$, $V_{CC} = 6\text{V}$, $f = 1\text{KHz}$, unless otherwise specified)

Characteristic		Symbol	Test Conditions	Min	Typ	Max	Unit
Quiescent Circuit Current		I_{CCQ}	$V_i = 0\text{V}$		6	8.5	mA
D Output Current		I_D	$V_i = 0.15\text{V}$	11	15	18.5	mA
Input Bias Current		I_{BIAS}		–1		0	μA
Amp Gain		G_V	$V_i = 0.1\text{V}$	24	26	28	dB
Comparator On Level	$V_{CL(ON)}$	$V_{CL(ON)1}$		0.28	0.33	0.40	V_3
		$V_{CL(ON)2}$		0.59	0.67	0.75	
		$V_{CL(ON)3}$			1		
		$V_{CL(ON)4}$		1.25	1.33	1.42	
		$V_{CL(ON)5}$		1.48	1.67	1.87	

* Definition of 1; Pin 3 voltage when $V_{CL(ON)3}$ turn on. (65mV)

TEST CIRCUIT

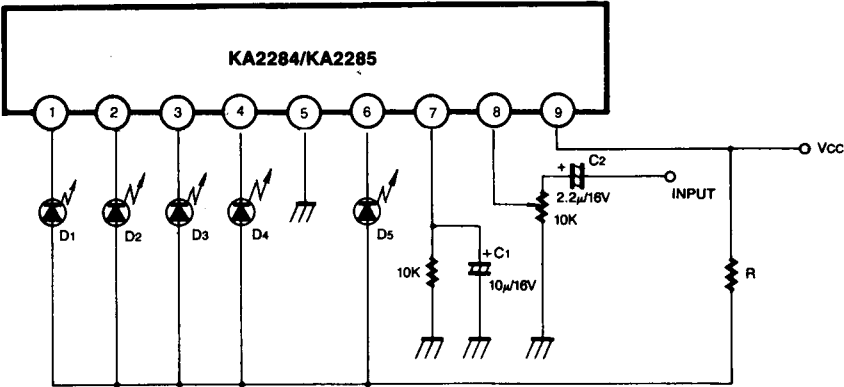


Fig. 2

C2: AC in, 2.2µ is used.
DC in, 2.2µ is shorted

The recommended value of R at $T_a \text{ (max)} = 60^\circ\text{C}$.

$V_{CC} \text{ (V)}$	8 ~ 12	10 ~ 14	12 ~ 16
$R \text{ (}\Omega\text{)}$	47	68	91

By changing the time constant C_1 and C_2 , 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.