

KA2287B

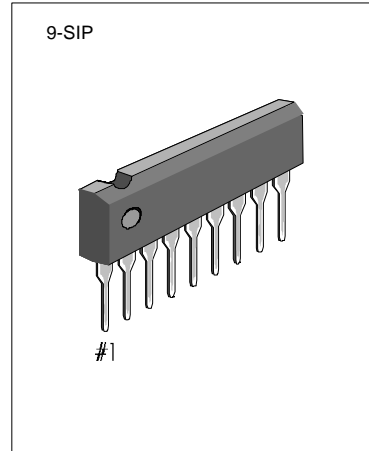
5 DOT LED LINEAR LEVEL METER

INTRODUCTION

The KA2287B are 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.
- Linear indicator for 5-dot LED of bar type.
(0.33, 0.67, 1, 1.33, 1.67)
- Constant current output.
KA2287B: $I_O = 15\text{mA Typ.}$
- Wide operating supply voltage range: $V_{CC} = 3.5\text{V} \sim 16\text{V}$
- Minimum number of external parts required.



ORDERING INFORMATION

Device	Package	Operating Temperature	ID
KA2287B	9-SIP	-20°C ~ +80°C	7 mA
			15mA

BLOCK DIAGRAM

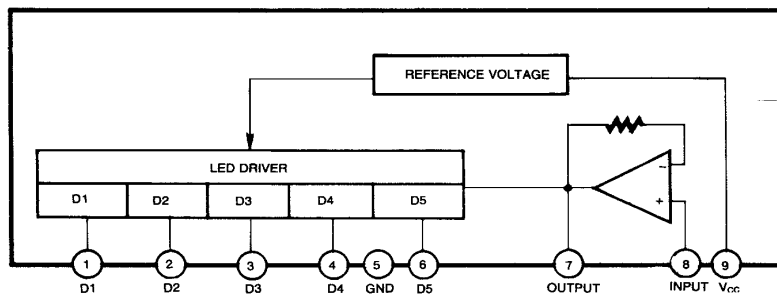


Fig. 1

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ABSOLUTE MAXIMUM RATINGS (Ta =25)

Characteristic	Symbol	Value	Unit
Supply Voltage	V _{CC}	18	V
Amp Input Voltage	V _{I(8-5)}	-0.5 ~ 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 ~ +80	°C
Storage Temperature	T _{STG}	-40 ~ +125	°C

-11mW/°C = C is decreased at higher temperature than T_a = 25°C

ELECTRICAL CHARACTERISTICS

(Ta =25;É, V_{CC} = 6V, f =1KHz, unless otherwise specified)

Characteristic	Symbol	Test Conditions	Min	Typ	Max	Unit
Quiescent Circuit Current	I _{CCQ}	V _I = 0V		6	8.5	mA
D Output Current	I _O	V _I = 0.15V	11	15	18.5	mA
Input Bias Current	I _{BIAS}		-1		0	µA
Amp Gain	G _V	V _I = 0.1V	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	

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

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TEST CIRCUIT

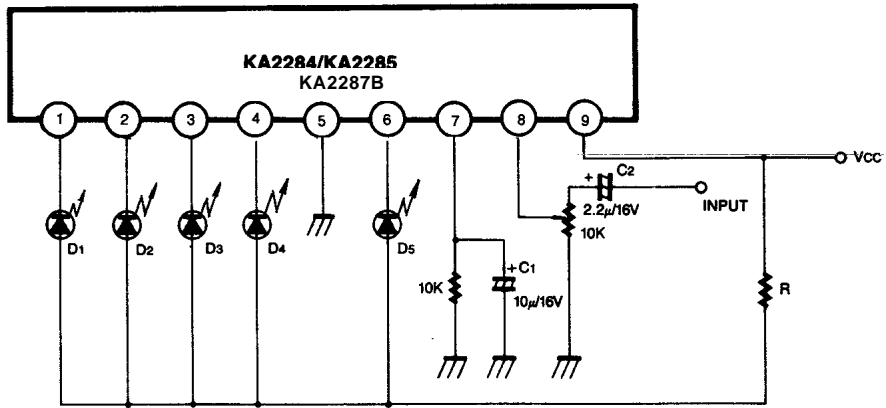


Fig. 2

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

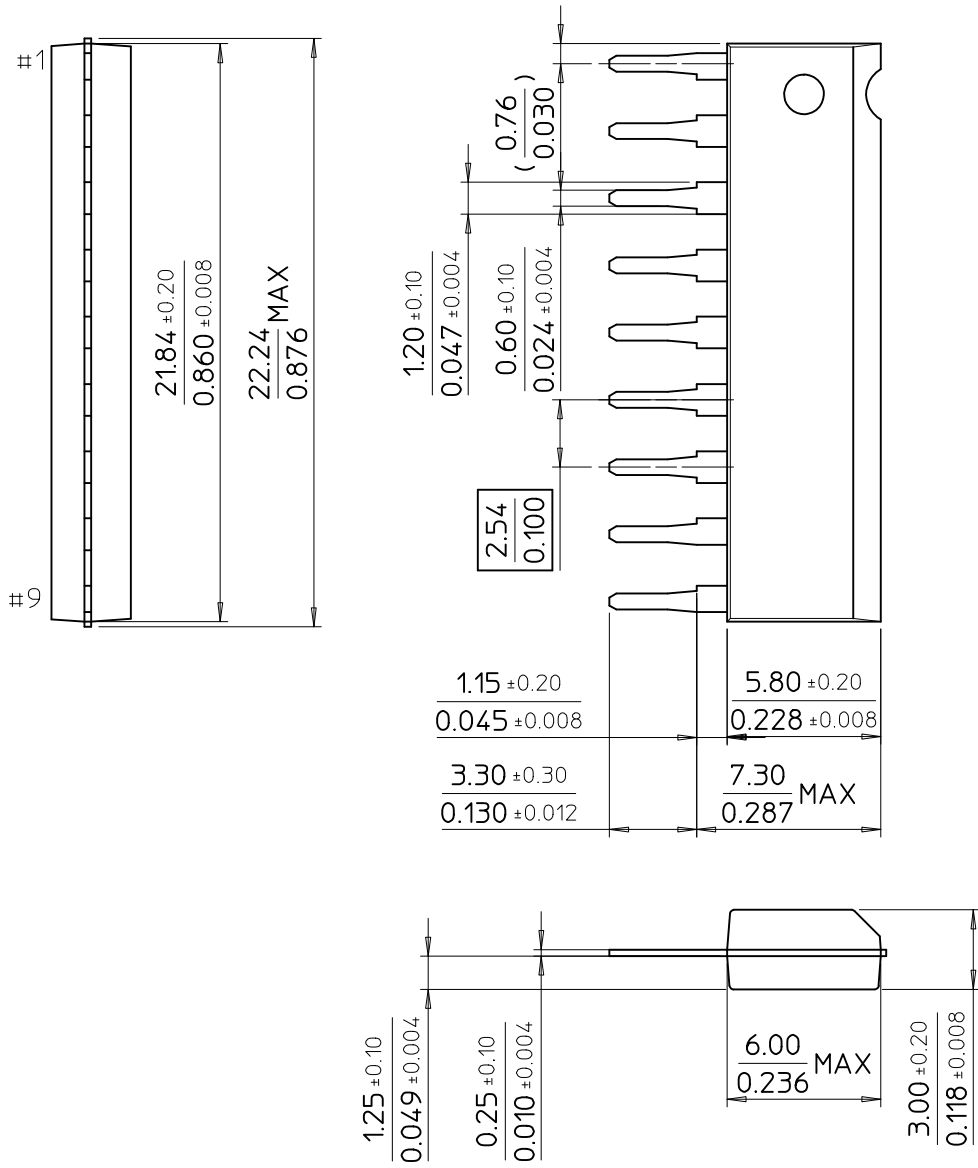
The recommended value of R at T_a (max) = 60°C

V _{CC} (V)	8 ~ 12	10 ~ 14	12 ~ 16
R(Ω)	47	68	91

By changing the time constant C₁ and, C₂ 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.

9-SIP

Dimensions in Milimeters/Inches



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