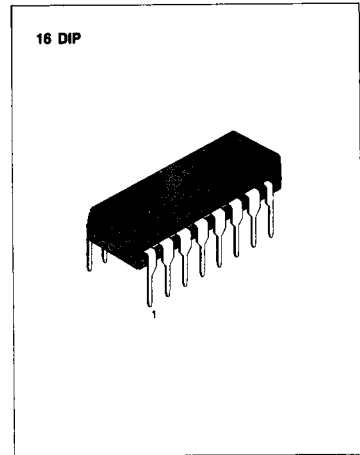


**5-DOT DUAL LED LEVEL METER DRIVER**

The KA2281 is a monolithic integrated circuit consisting of a 2-channel LED level meter driver which was designed for use in stereo radio cassette tape recorders and home stereos.

**FEATURES**

- Comparator AC level (-16, -11, -6, -3, 0dB)×2.
- Capable of driving red/green/yeollow LEDs.
- Externally adjustable gain of input amplifier.
- Wide operating supply voltage range:  $V_{CC} = 5V \sim 14V$
- 10-dot dual output combined with the KA2283.
- Applicable to 10-dot mono output.
- High input impedance.
- A minimum number of external parts required.



3

**BLOCK DIAGRAM**

**ORDERING INFORMATION**

Device	Package	Operating Temperature
KA2281	16 DIP	-20 ~ +70°C

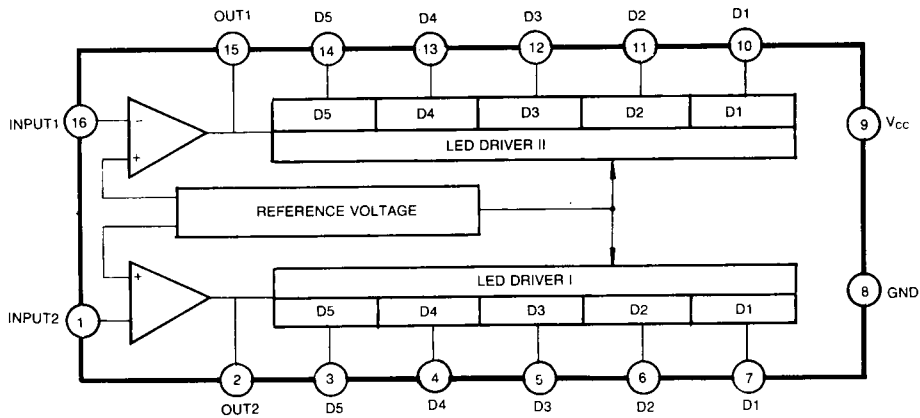


Fig. 1

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

Characteristic	Symbol	Value	Unit
Supply Voltage	$V_{CC}$	16	V
D Terminal Output Current	$I_D$	30	mA
Power Dissipation	$P_D$	600	mW
Operating Temperature	$T_{OPR}$	-20 ~ +70	$^\circ\text{C}$
Storage Temperature	$T_{STG}$	-40 ~ +125	$^\circ\text{C}$

## ELECTRICAL CHARACTERISTICS

( $T_a = 25^\circ\text{C}$ ,  $V_{CC} = 12\text{V}$ ,  $f = 1\text{KHz}$ , unless otherwise specified)

Characteristic	Symbol	Test Conditions	Min	Typ	Max	Unit
Quiescent Circuit Current	$I_{CCQ}$	$V_I = 0$		4		mA
D Terminal ON Voltage	$V_{ON}$	$I_O = 20\text{mA}$		1.5		V
D Terminal Leakage Current	$I_{O(LKG)}$	$V_I = 0$			50	$\mu\text{A}$
Voltage Gain (Closed Loop)	$G_V$			13.4		dB
Comparator ON Level	$V_{CL(ON)1}$	$G_V = 13.4\text{dB}$	-1	0	1	dB
	$V_{CL(ON)2}$		-4	-3	-2	
	$V_{CL(ON)3}$		-7.5	-6	-4.5	
	$V_{CL(ON)4}$		-13	-11	-9	
	$V_{CL(ON)5}$		-19	-16	-13	
LED ON Level Difference	$\Delta V_{CL}$	$V_{CL(ON)1.5} - V_{CL(ON)1.5}$ $A_V = 13.4\text{dB}$	-1	0	1	dB
Input Impedance of Amp	$Z_i$			200		$\text{K}\Omega$

\* Definition of 0dB: when the value of Input voltage is 218mVrms

TYPICAL APPLICATIONS

1. 5-dot dual application

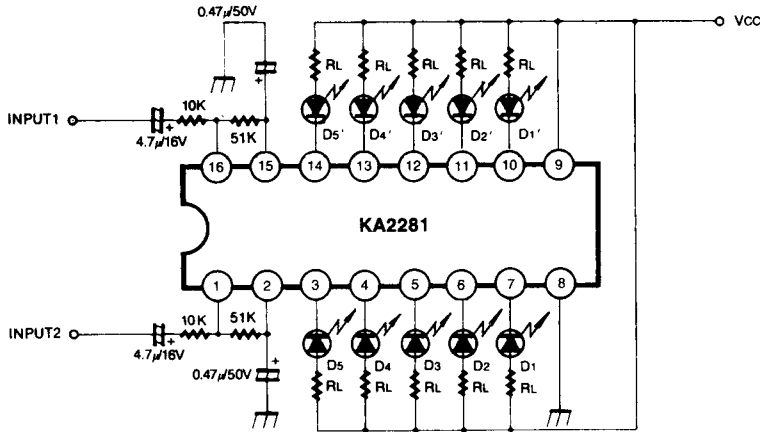


Fig. 2

2. 10-dot mono application

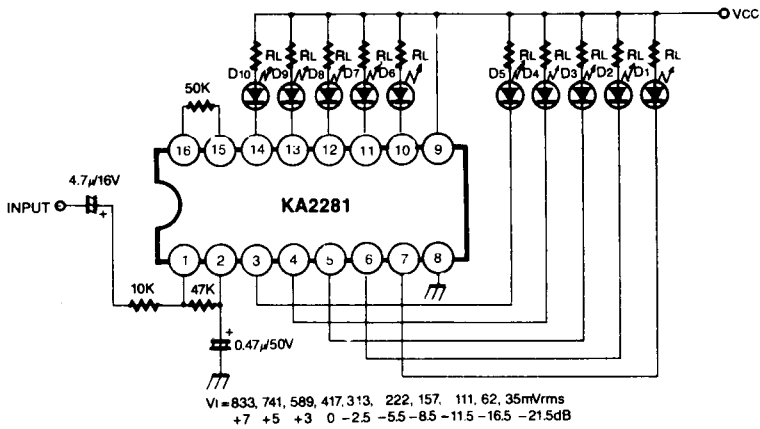


Fig. 3