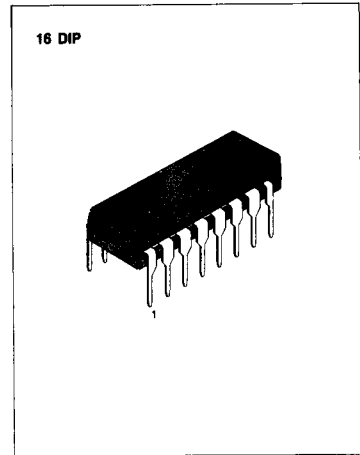


5-DOT DUAL LED LEVEL METER DRIVER

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 |

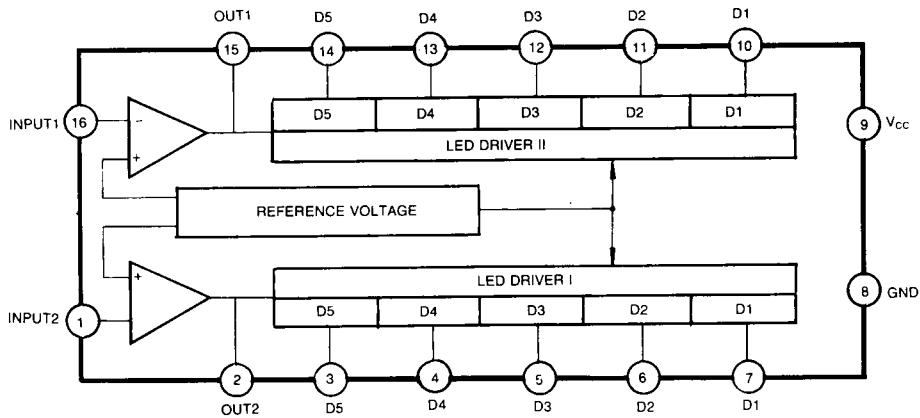


Fig. 1

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 | μA |
| 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 | ΔV_{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

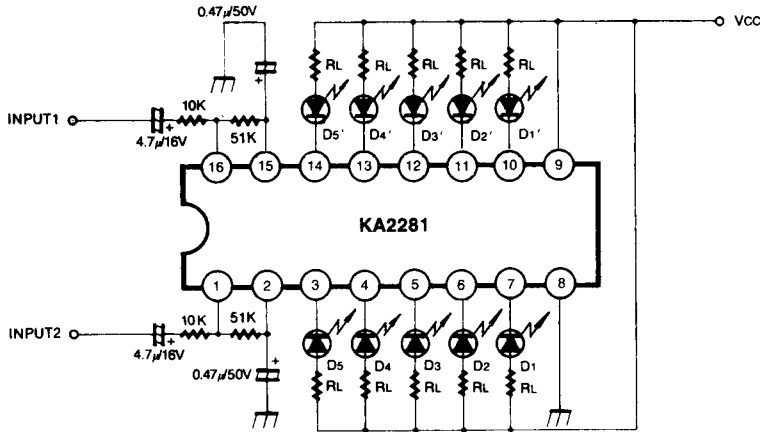


Fig. 2

2. 10-dot mono application

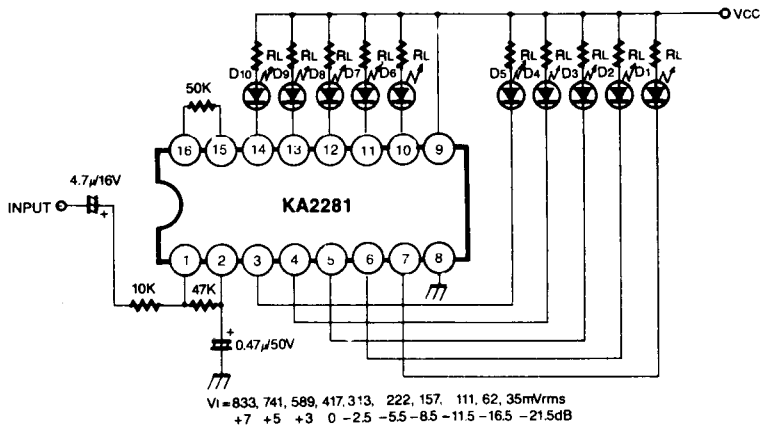


Fig. 3