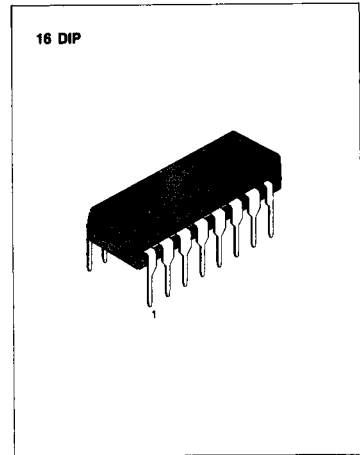


**5-DOT DUAL LED LEVEL METER DRIVER**

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           |

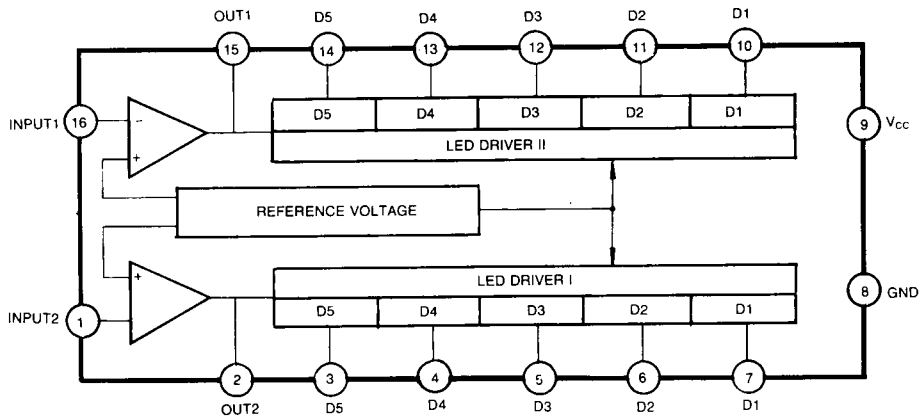


Fig. 1

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    | $\Delta V_{CL}$ | $V_{CL(ON)1.5} - V_{CL(ON)1.5}$<br>$A_V = 13.4\text{dB}$ | -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

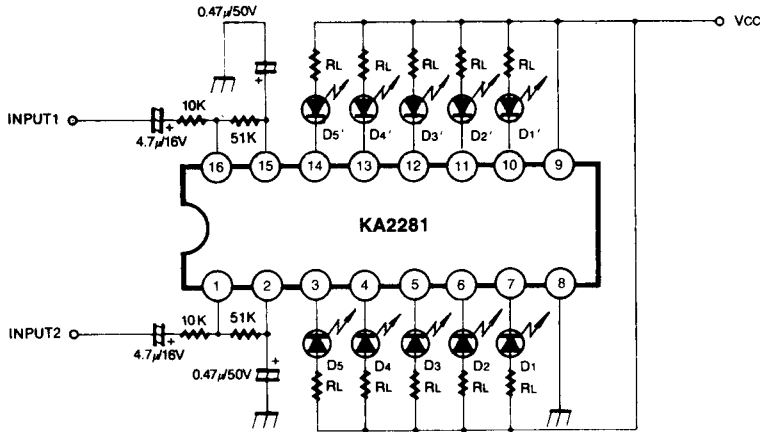


Fig. 2

2. 10-dot mono application

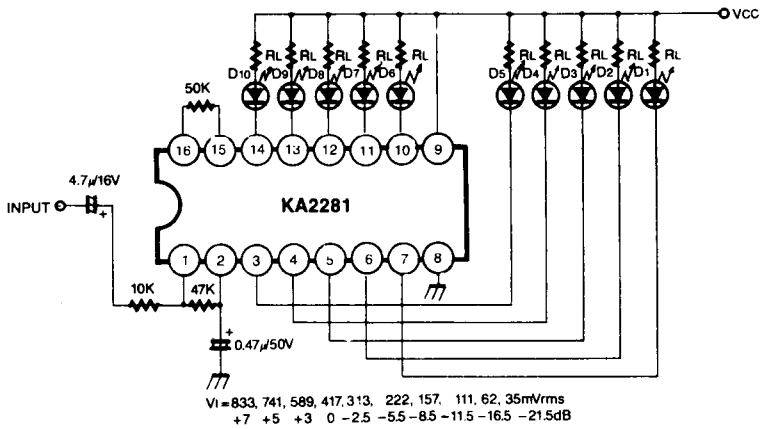


Fig. 3