

LINEAR MONOLITHIC INTEGRATED CIRCUITS

Miscellaneous Type

| Type No. | Function | Maximum Ratings (Ta=25°C) | Electrical Characteristics (Ta=25°C) | | | | | | | | |
|---|---|---|--|----------------------|---|----------------------|--------|------|------|------|---|
| | | | Item | Symbol | Condition | min. | typ. | max. | Unit | | |
| AN6811 | 3, 4, 8, 12, 16 Frequency Divider | V _{CC} =15V I _{CC} (I ₁₄)=30mA P _D =350mW T _{opr} =-20~+75°C T _{stg} =-65~+150°C | "L" Level Output Voltage | V _{OL} | V _{CC} =15V, I _{OL} =6mA V _{IT} =0, V _{IS} =15V | | | 0.4 | V | | |
| | | | | | V _{CC} =9V, I _{OL} =5mA V _{IT} =0, V _{IS} =9V | | | 0.4 | V | | |
| | | | "H" Level Output Voltage | V _{OH} | V _{CC} =15V, I _{OH} =-1mA V _{IT} =0, V _{IS} =15V | 13 | | | V | | |
| | | | | | V _{CC} =9V, I _{OH} =-1mA V _{IT} =0, V _{IS} =9V | 7 | | | V | | |
| | | | "L" Level Input Voltage (TKS) | V _{IL} | | 0 | | 0.5 | V | | |
| | | | "H" Level Input Voltage (TKS) | V _{IH} | V _{CC} ≥ V _{IT} , V _{IK} , V _{IS} | 4 | | 15 | V | | |
| | | | "L" Level Input Current | -I _{IL} | V _{CC} =15V, V _I =0 | | | 1.5 | mA | | |
| | | | "H" Level Input Current | I _{IH} | V _{CC} =15V, V _I =15V | | | 100 | μA | | |
| Total Circuit Current | I _{tot} | V _{CC} =15V, V _{IT} =0 | | | 30 | mA | | | | | |
| AN6875 AN6876 | 5-Dot LED Driver Circuits | V _{CC} =-0.5~18V I _{CC} =18mA P _D =550mW T _{opr} =-20~+75°C T _{stg} =-55~+150°C | LED ON Input Voltage | LED1 | V _{ON1} | V _{CC} =16V | AN6875 | | | 1.12 | V |
| | | | | LED2 | V _{ON2} | | | | | 1.86 | V |
| | | | | LED3 | V _{ON3} | | | | | 3.10 | V |
| | | | | LED4 | V _{ON4} | | | | | 5.18 | V |
| | | | | LED5 | V _{ON5} | | | | | 8.66 | V |
| | | | LED OFF Input Voltage | LED1 | V _{OFF1} | | | 0.80 | V | | |
| | | | | LED2 | V _{OFF2} | | | 1.49 | V | | |
| | | | | LED3 | V _{OFF3} | | | 2.54 | V | | |
| | | | | LED4 | V _{OFF4} | | | 4.28 | V | | |
| | | | | LED5 | V _{OFF5} | | | 7.23 | V | | |
| | | | LED ON Input Voltage | LED1 | V _{ON1} | V _{CC} =16V | AN6876 | | 1.8 | 2.02 | V |
| | | | | LED2 | V _{ON2} | | | | 2.4 | 2.69 | V |
| | | | | LED3 | V _{ON3} | | | | 3 | 3.36 | V |
| | | | | LED4 | V _{ON4} | | | | 3.6 | 4.03 | V |
| | | | | LED5 | V _{ON5} | | | | 4.1 | 4.59 | V |
| | | | LED OFF Input Voltage | LED1 | V _{OFF1} | | | 1.58 | 1.8 | V | |
| | | | | LED2 | V _{OFF2} | | | 2.11 | 2.4 | V | |
| | | | | LED3 | V _{OFF3} | | | 2.64 | 3 | V | |
| | | | | LED4 | V _{OFF4} | | | 3.17 | 3.6 | V | |
| | | | | LED5 | V _{OFF5} | | | 3.61 | 4.1 | V | |
| Load Current | (Pin 6) | I ₆ | V _{CC} =16V I ₇ =4.25mA | V _O =1.2V | 13 | 16 | | mA | | | |
| | (Pin 1-4) | I ₁₋₄ | | V _O =2.5V | 13 | 16 | | mA | | | |
| | (Pin 1-4,6) | I _{1-4, 6} | | V _O =16V | | 16 | 19 | mA | | | |
| Input Current | I ₈ | V _{CC} =16V | AN6875 V ₈₋₅ =8.7V | | | 50 | μA | | | | |
| | | | AN6876 V ₈₋₅ =8.5V | | | | | | | | |
| Supply Current | I ₉ | V _{CC} =16V, V ₈₋₅ =16V | | | | 5 | mA | | | | |
| Output Leak Current | I _{1-4, 6} | V _{CC} =16V, V _O =16V | | | | 18 | mA | | | | |
| Operating Voltage Range | V _{CC} (opr) | | | | 12 | | 16 | V | | | |
| AN6875 : Logarithmic Response AN6876 : Linear Response | | | | | | | | | | | |

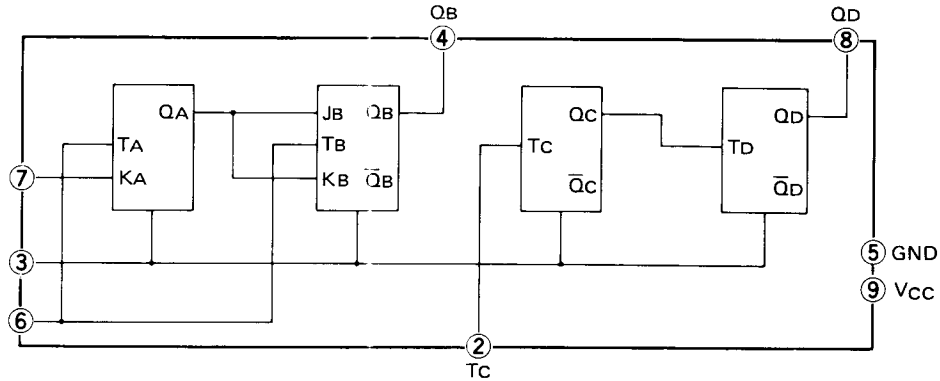
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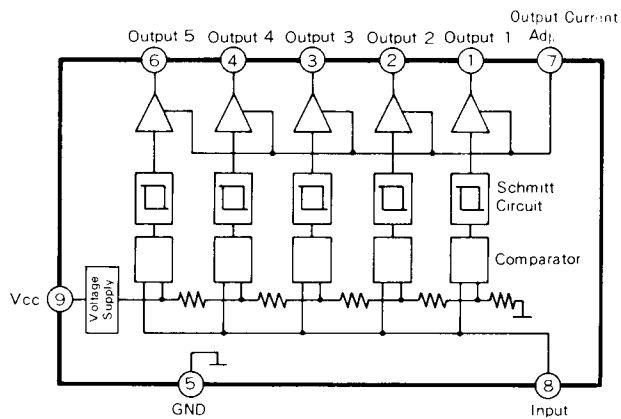
Block Diagram

Application Circuit

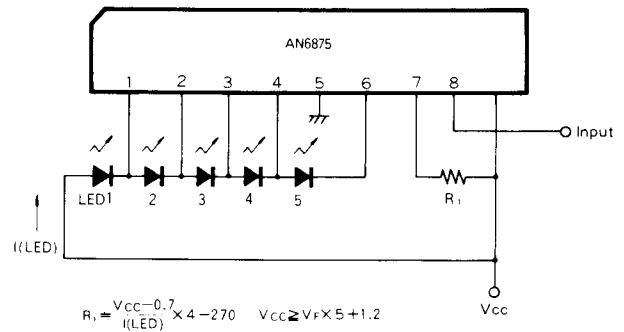
AN6811 (Package I-7,9-Lead Plastic SIL)



AN6875 (Package I-7,9-Lead Plastic SIL)



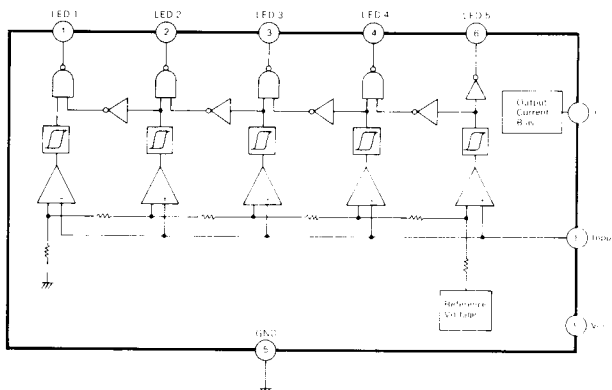
1. Bar Graph Display



$R_1 = \frac{V_{CC} - 0.7}{I(\text{LED})} \times 4 - 270$ $V_{CC} \geq V_f \times 5 + 1.2$

Note: If voltage at pin ⑥ is high with 5 LEDs turning on, insert a resistor in the anode side of LED 1 for reducing the P.D.

AN6876 (Package I-7,9-Lead Plastic SIL)



2. Dot Display

