

LM386

LINEAR INTEGRATED CIRCUIT

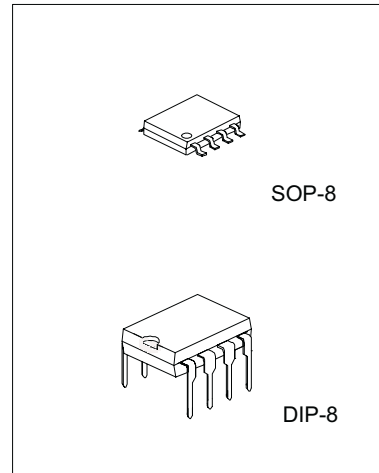
LOW VOLTAGE AUDIO POWER AMPLIFIER

DESCRIPTION

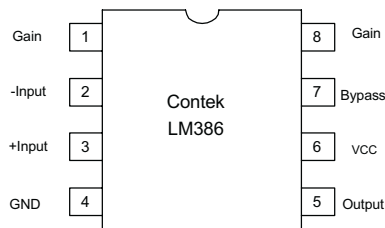
The Contek LM386 is a power amplifier, designed for use in low voltage consumer applications. The gain is internally set to 20 keep the external part count low, but the additional of external resistor and capacitor between pin 1 and pin 8 will increase the gain to any value up to 200.

FEATURES

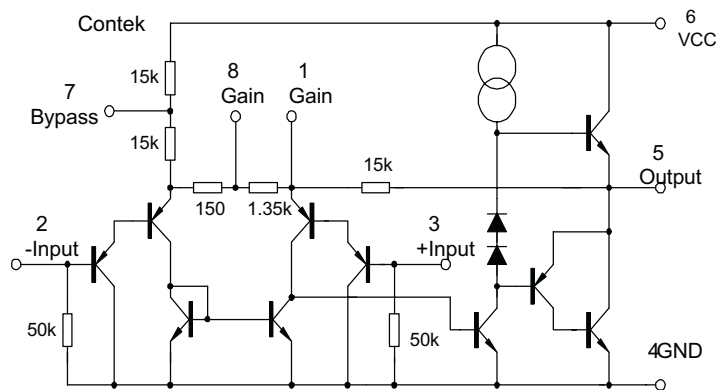
- *Minimum external parts
- *Wide supply voltage range: 4V~12V
- *Voltage gains:20~200
- *Ground referenced input
- *Low distortion



PIN CONFIGURATIONS



BLOCK DIAGRAM



Contek Microelectronics Co.,Ltd.

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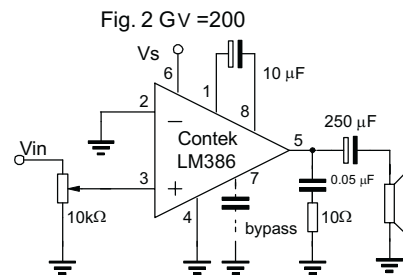
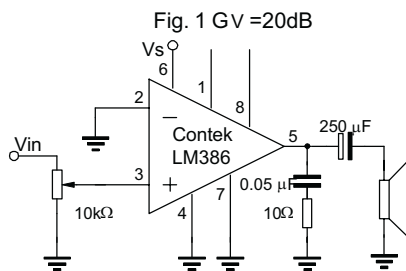
ABSOLUTE MAXIMUM RATINGS (Ta=25 C)

| PARAMETER | SYMBOL | VALUE | UNIT |
|-----------------------|--------|-------------|------|
| Supply Voltage | Vcc | 15 | V |
| Power Dissipation | Pd | 1250 600 | mW |
| Input Voltage | Vi | -0.4V~+0.4V | V |
| Operating Temperature | Topr | 0 to 70 | C |
| Storage Temperature | Tstg | -40 to 150 | C |

ELECTRICAL CHARACTERISTICS (Ta=25 C, all voltage referenced to GND unless otherwise specified)

| PARAMETER | SYMBOL | TEST CONDITIONS | MIN | TYP | MAX | UNIT |
|---------------------------|--------|-------------------------------|-----|-----|-----|------|
| Quiescent circuit current | ICCQ | Vi=0 | | 4 | 8 | mA |
| Output Power | Po | Vcc=6V, THD=10% | 250 | 325 | | mW |
| | | Vcc=9V, THD=10% | 500 | 700 | | mW |
| Voltage Gain | GV | Pin1 and pin 8 open | | 26 | | dB |
| | | 10µF from pin 1 and pin 8 | | 46 | | dB |
| Bandwidth | BW | Pin1 and pin 8 open | | 300 | | kHz |
| | | 10µF from pin 1 and pin 8 | | 60 | | kHz |
| Total harmonic distortion | THD | Po=125mW, pin1 and pin 8 open | | 0.2 | | % |
| Input Resistance | Ri | | | 50 | | kΩ |
| Input Bias current | IBIAS | Pin1 and pin 8 open | | 250 | | nA |

APPLICATION CIRCUIT



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