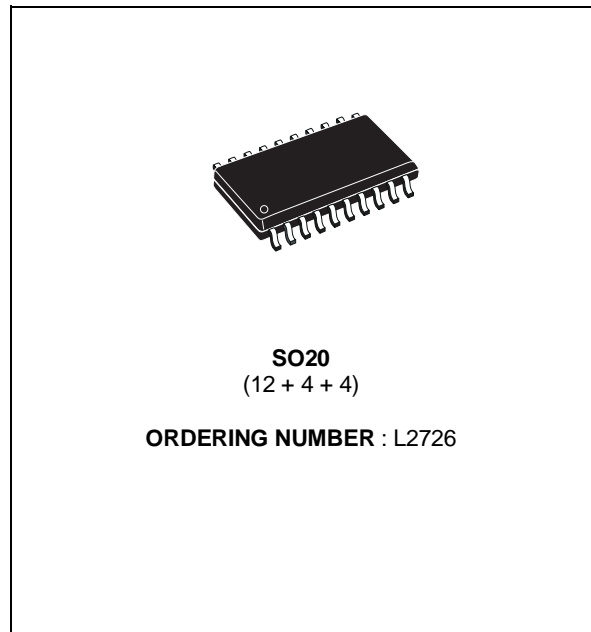


LOW DROP DUAL POWER OPERATIONAL AMPLIFIER

- OUTPUT CURRENT TO 1 A
- OPERATES AT LOW VOLTAGES
- SINGLE OR SPLIT SUPPLY
- LARGE COMMON-MODE AND DIFFERENTIAL MODE RANGE
- LOW INPUT OFFSET VOLTAGE
- GROUND COMPATIBLE INPUTS
- LOW SATURATION VOLTAGE
- THERMAL SHUTDOWN
- CLAMP DIODE



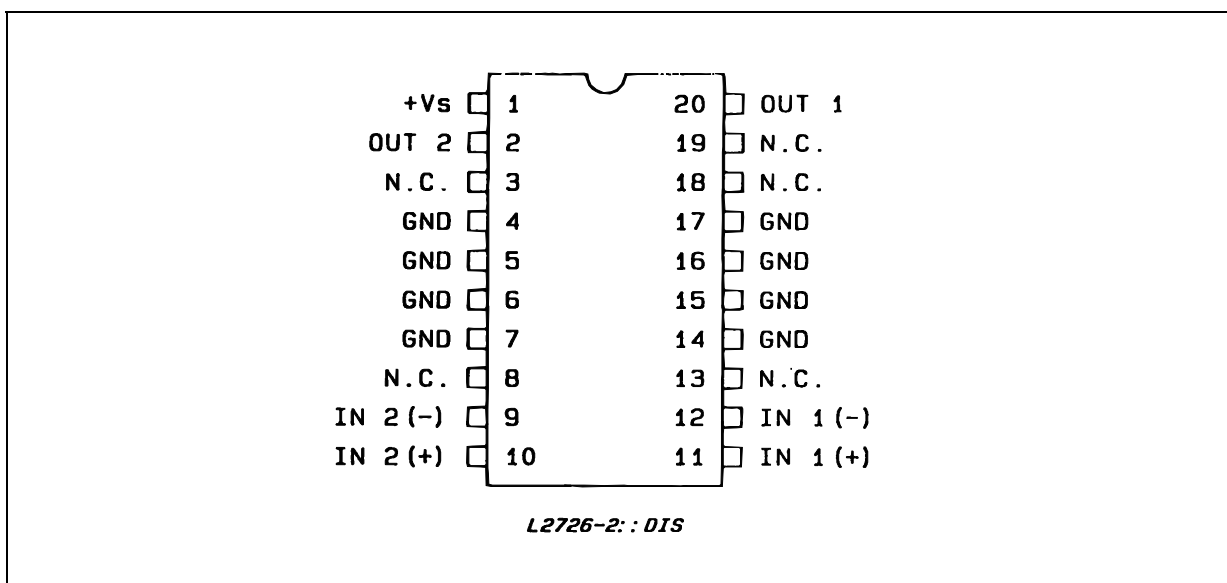
DESCRIPTION

The L2726 is a monolithic integrated circuit in SO-20 package intended for use as power operational amplifiers in a wide range of applications including servo amplifiers and power supplies.

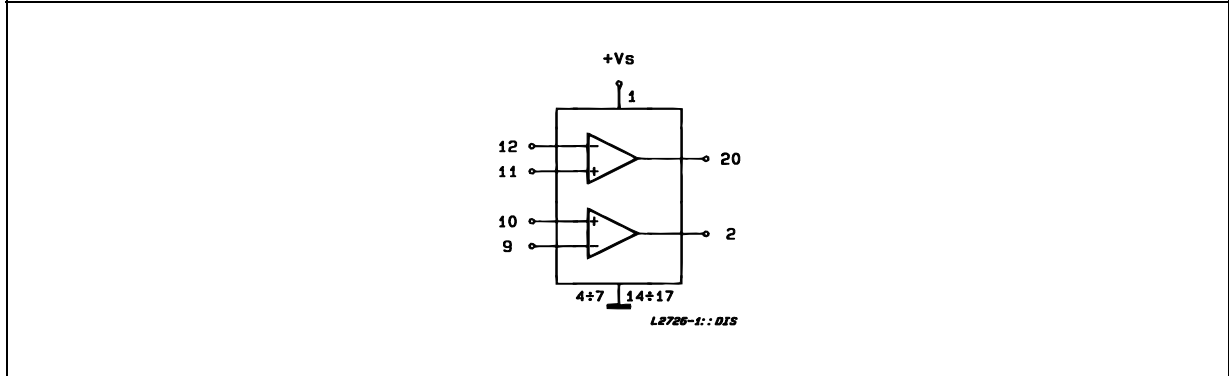
It is particularly indicated for driving inductive loads, as motor and finds applications in compact-disc VCR automotive, etc.

The high gain and high output power capability provide superior performance whatever an operational amplifier/power booster combination is required.

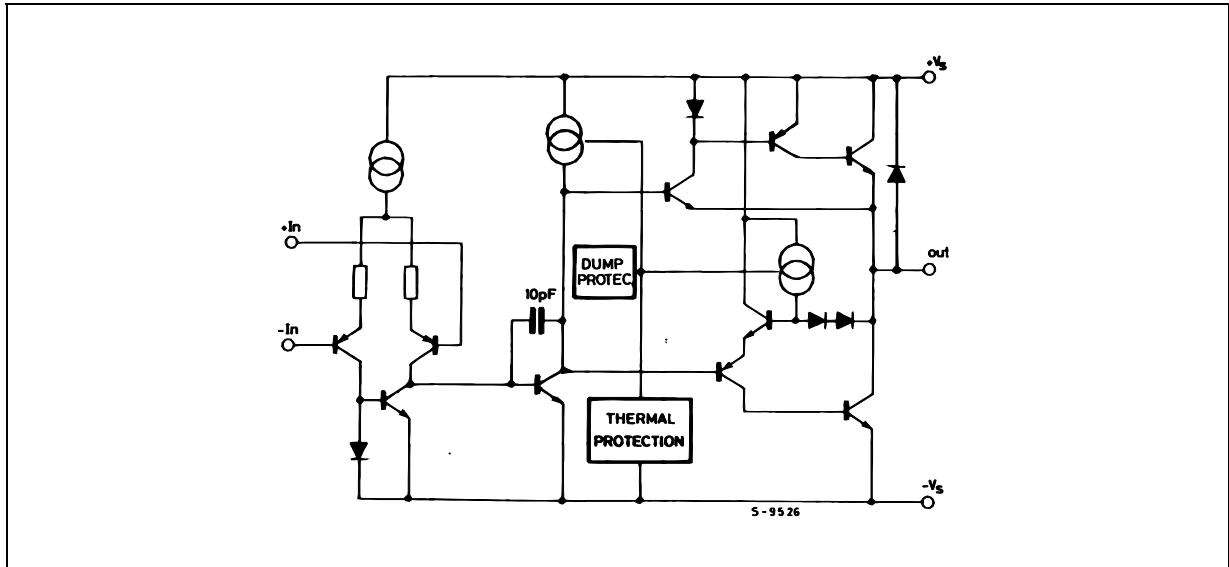
PIN CONNECTION (top view)



BLOCK DIAGRAM



SCHEMATIC DIAGRAM (one section)



ABSOLUTE MAXIMUM RATINGS

| Symbol | Parameter | Value | Unit | |
|----------------|--------------------------------------|---|-------------|---|
| V_s | Supply Voltage | 28 | V | |
| V_s | Peak Supply Voltage (50ms) | 50 | V | |
| V_i | Input Voltage | V_s | | |
| V_i | Differential Input Voltage | $\pm V_s$ | | |
| I_O | DC Output Current | 1 | A | |
| I_p | Peak Output Current (non repetitive) | 1.5 | A | |
| P_{tot} | Power Dissipation at | $T_{amb} = 85^{\circ}C$ $T_{case} = 75^{\circ}C$ | 1 5 | W |
| T_{op} | Operating Temperature | - 40 to 85 | $^{\circ}C$ | |
| T_{stg}, T_j | Storage and Junction Temperature | - 40 to 150 | $^{\circ}C$ | |

THERMAL DATA

| | | | | |
|------------------|---|------|------|---------------|
| $R_{th\ j-case}$ | Thermal Resistance Junction-case | Max. | 15.0 | $^{\circ}C/W$ |
| $R_{th\ j-amb}$ | Thermal Resistance Junction-ambient (*) | Max. | 65 | $^{\circ}C/W$ |

(*) With 4 sq. cm copper area heatsink.

ELECTRICAL CHARACTERISTICS

$V_s = 24V$, $T_{amb} = 25^{\circ}C$ unless otherwise specified

| Symbol | Parameter | Test Conditions | Min. | Typ. | Max. | Unit |
|------------------|---------------------------------------|--|---------|----------------|----------|----------------|
| V_s | Single Supply Voltage | | 4 | | 28 | V |
| V_s | Split Supply Voltage | | ± 2 | | ± 14 | V |
| I_s | Quiescent Drain Current | $V_o = \frac{V_s}{2}$ $V_s = 24V$ $V_s = 24V$ | | 10 9 | 15 15 | mA |
| I_b | Input Bias Current | | | 0.2 | 1 | μA |
| V_{os} | Input Offset Voltage | | | | 10 | mV |
| I_{os} | Input Offset Current | | | | 100 | nA |
| SR | Slew Rate | | | 2 | | V/ μs |
| B | Gain-bandwidth Product | | | 1.2 | | MHz |
| R_i | Input Resistance | | 500 | | | k Ω |
| G_v | O. L. Voltage Gain | $f = 100Hz$ $f = 1kHz$ | 70 | 80 60 | | dB |
| e_N | Input Noise Voltage | B = 22Hz to 22kHz | | 10 | | μV |
| I_N | Input Noise Voltage | | | 200 | | pA |
| CMR | Common Mode Rejection | $f = 1kHz$ | 66 | 84 | | dB |
| SVR | Supply Voltage Rejection | $f = 100Hz$ $R_G = 10k\Omega$ $V_R = 0.5V$ $V_s = 24V$ $V_s = \pm 12V$ $V_s = \pm 6V$ | 60 | 70 75 80 | | dB dB dB |
| $V_{DROP(HIGH)}$ | | $V_s = \pm 2.5V$ to $\pm 12V$ $I_p = 100mA$ $I_p = 500mA$ | | 0.7 1 | 1.5 | V |
| $V_{DROP(LOW)}$ | | $V_s = \pm 2.5V$ to $\pm 12V$ $I_p = 100mA$ $I_p = 500mA$ | | 0.3 0.5 | 1 | V |
| C_s | Channel Separation | $f = 1KHz$ $R_L = 10\Omega$ $G_v = 30dB$ $V_s = 24V$ $V_s = 6V$ | | 60 60 | | dB |
| T_{sd} | Thermal Shutdown Junction Temperature | | 150 | | | $^{\circ}C$ |

Figure 1 : Quiescent Current vs. Supply Voltage

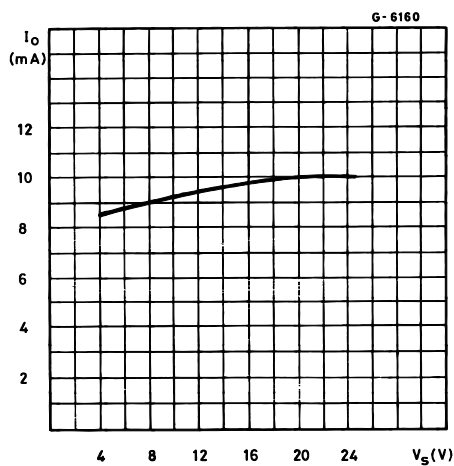


Figure 2 : Open Loop Gain vs. Frequency

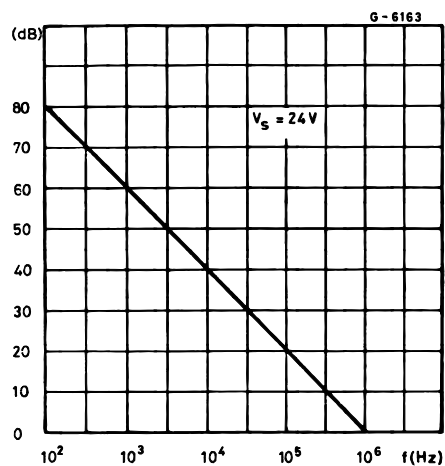


Figure 3 : Common Mode Rejection Frequency

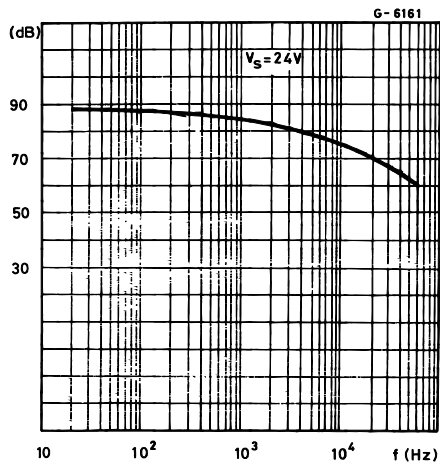


Figure 4 : Output Swing vs. Load Current ($V_S = \pm 5V$)

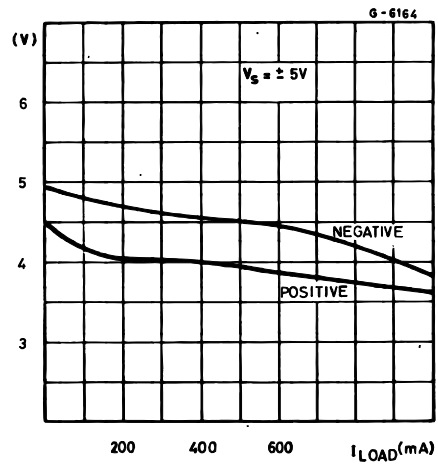


Figure 5 : Output Swing vs. Load Current ($V_S = \pm 12V$)

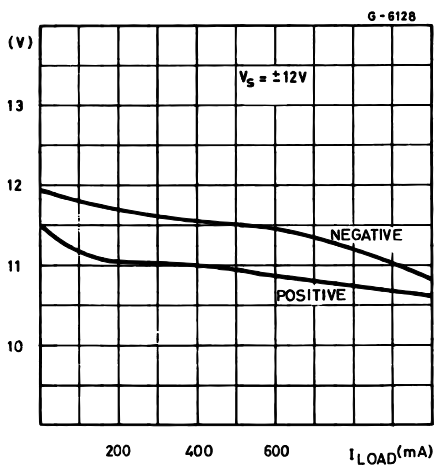


Figure 6 : Supply Voltage Rejection vs. Frequency

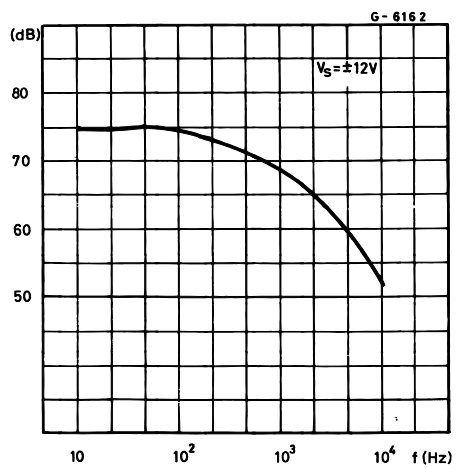
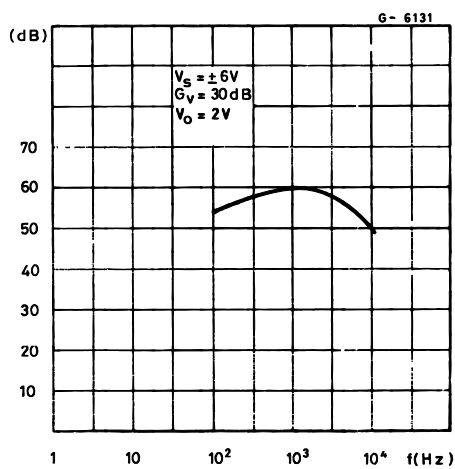
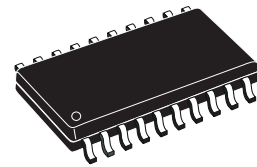


Figure 7 : Channel Separation vs. Frequency.

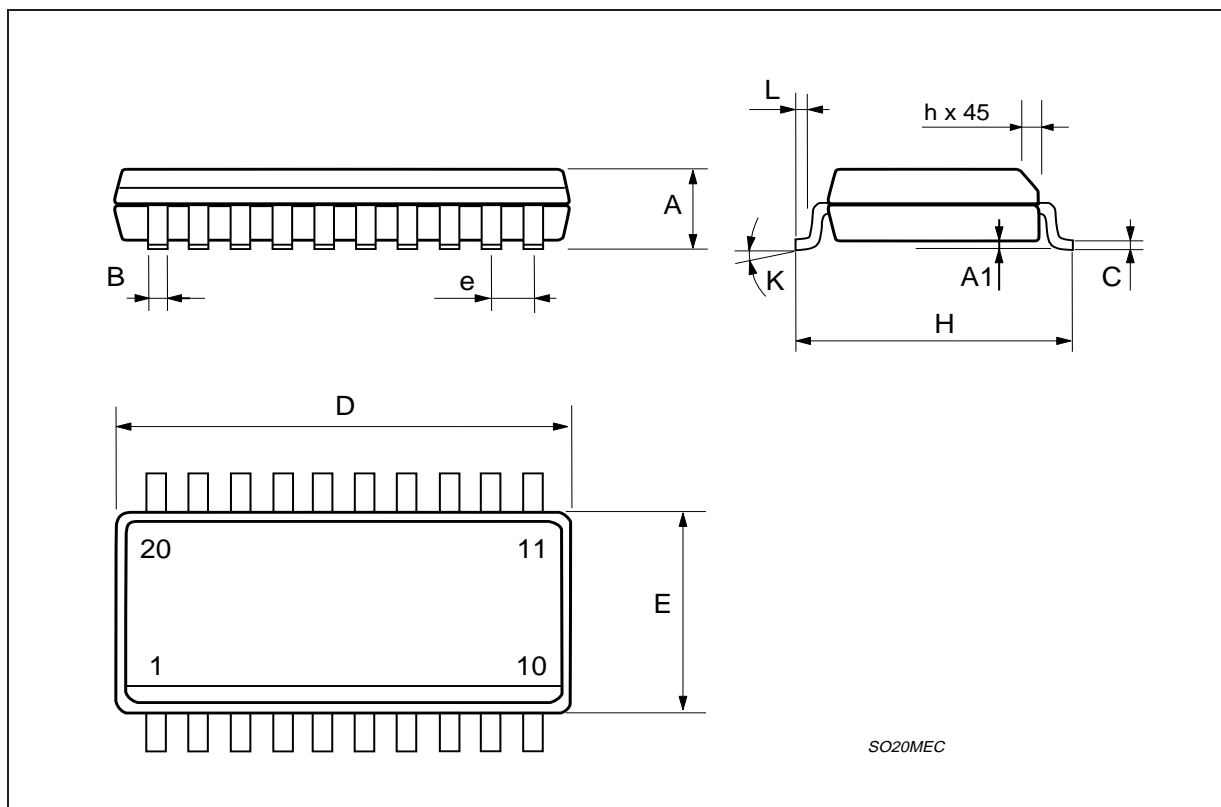


| DIM. | mm | | | inch | | |
|------|--------------------|------|-------|-------|-------|-------|
| | MIN. | TYP. | MAX. | MIN. | TYP. | MAX. |
| A | 2.35 | | 2.65 | 0.093 | | 0.104 |
| A1 | 0.1 | | 0.3 | 0.004 | | 0.012 |
| B | 0.33 | | 0.51 | 0.013 | | 0.020 |
| C | 0.23 | | 0.32 | 0.009 | | 0.013 |
| D | 12.6 | | 13 | 0.496 | | 0.512 |
| E | 7.4 | | 7.6 | 0.291 | | 0.299 |
| e | | 1.27 | | | 0.050 | |
| H | 10 | | 10.65 | 0.394 | | 0.419 |
| h | 0.25 | | 0.75 | 0.010 | | 0.030 |
| L | 0.4 | | 1.27 | 0.016 | | 0.050 |
| K | 0° (min.)8° (max.) | | | | | |

OUTLINE AND MECHANICAL DATA



SO20



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