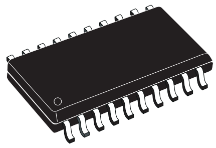
L2726

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



SO20
(12 + 4 + 4)

ORDERING NUMBER : L2726

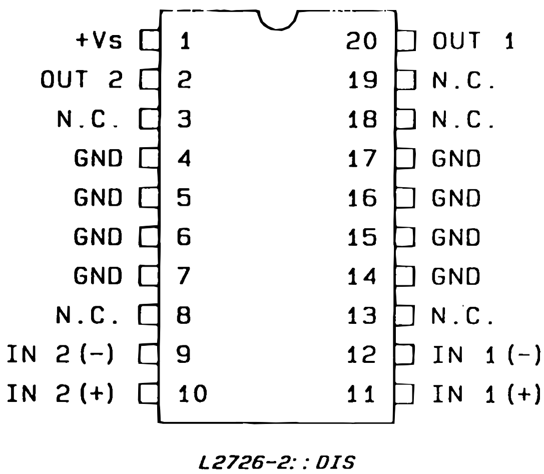
DESCRIPTION

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.

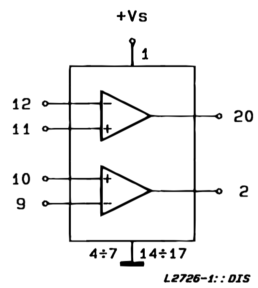
It is particularly indicated for driving inductive loads, as motor and finds applications in compact-disc VCR automative, etc.

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

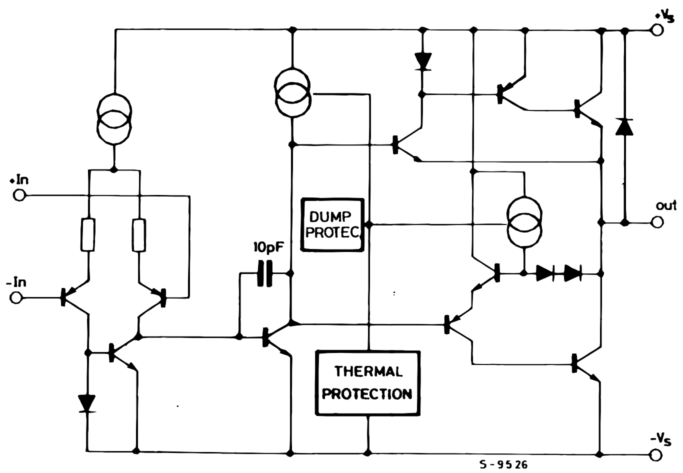
PIN CONNECTION (top view)



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	$T_{amb} = 85^oC$ $T_{case} = 75^oC$	1 5	W
T_{op}	Operating Temperature		– 40 to 85	^oC
T_{stg}, T_j	Storage and Junction Temperature		– 40 to 150	^oC

THERMAL DATA

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

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

ELECTRICAL CHARACTERISTICS
V_S = 24V, T_{amb} = 25°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			kΩ
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	B = 22Hz to 22kHz		200		pA
CMR	Common Mode Rejection	f = 1kHz	66	84		dB
SVR	Supply Voltage Rejection	f = 100Hz V_S = 24V R_G = 10kΩ V_S = ±12V V_R = 0.5V V_S = ±6V	60	70 75 80		dB dB dB
$V_{DROP(HIGH)}$		V_S = ±2.5V to ±12V I_p = 100mA I_p = 500mA		0.7 1	 1.5	V
$V_{DROP(LOW)}$		V_S = ±2.5V to ±12V I_p = 100mA I_p = 500mA		0.3 0.5	 1	V
C_S	Channel Separation	f = 1KHz V_S = 24V R_L = 10Ω V_S = 6V G_v = 30dB		60 60		dB
T_{sd}	Thermal Shutdown Junction Temperature		150			°C

Figure 1 : Quiescent Current vs. Supply Voltage

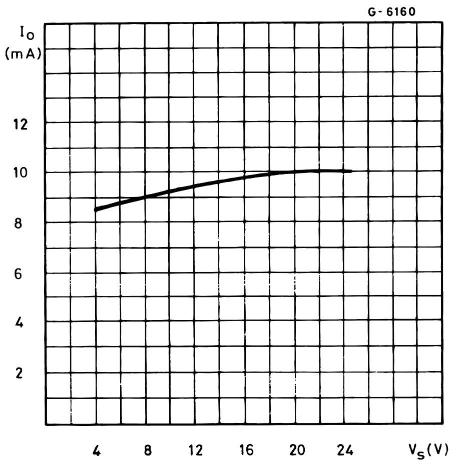


Figure 2 : Open Loop Gain vs. Frequency

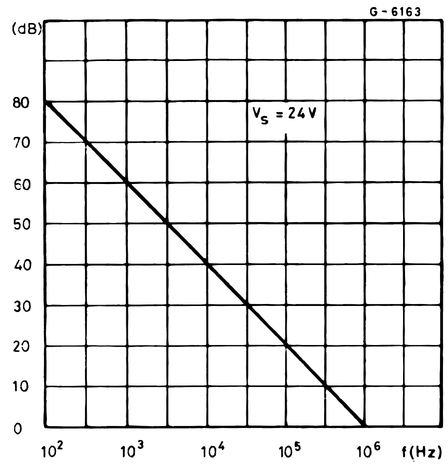


Figure 3 : Common Mode Rejection Frequency

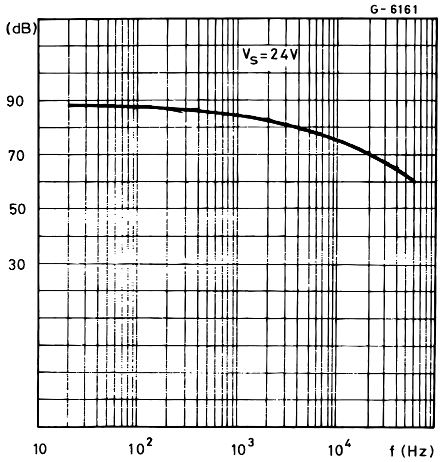


Figure 4 : Output Swing vs. Load Current ($V_S = \pm 5V$)

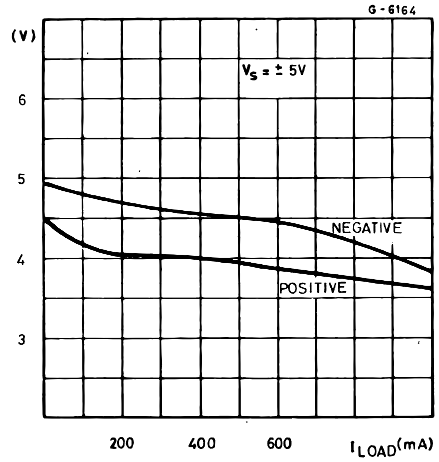


Figure 5 : Output Swing vs. Load Current ($V_S = \pm 12$ V)

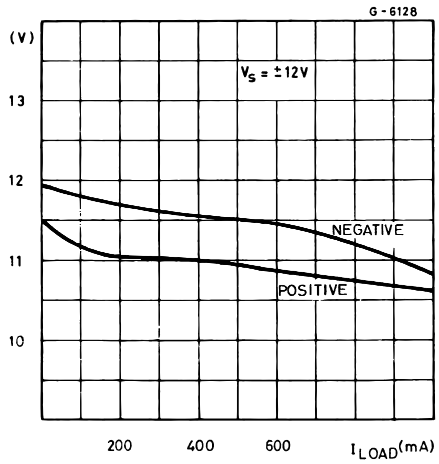


Figure 6 : Supply Voltage Rejection vs. Frequency

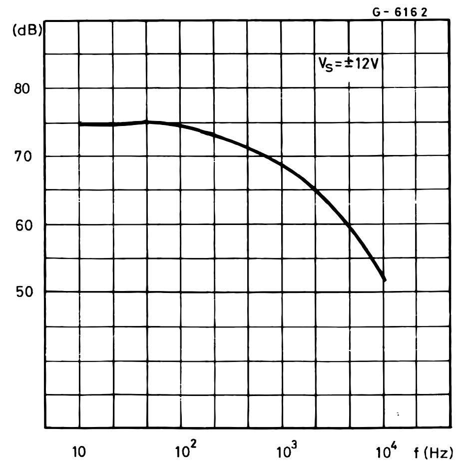
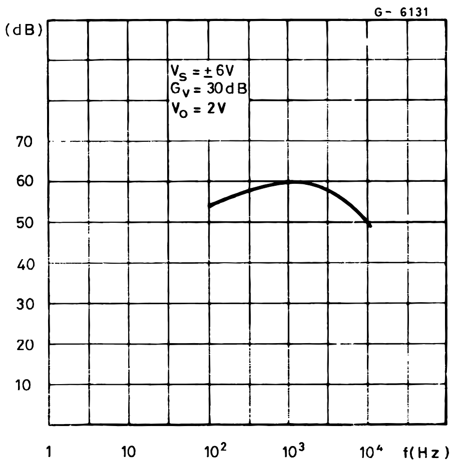
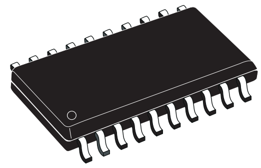


Figure 7 : Channel Separation vs. Frequency.



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