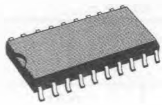
LOW DROP DUAL POWER OPERATIONAL AMPLIFIER

ADVANCE DATA

- OUTPUT CURRENT TO 1A
- 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



SO-20
(12 + 4 + 4)

ORDER CODE : L2726

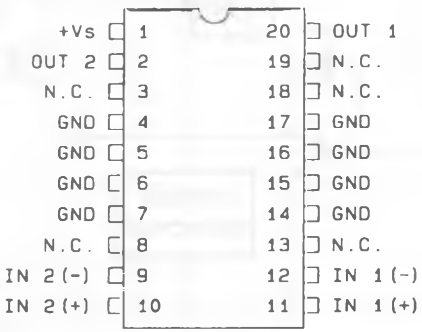
DESCRIPTION

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.

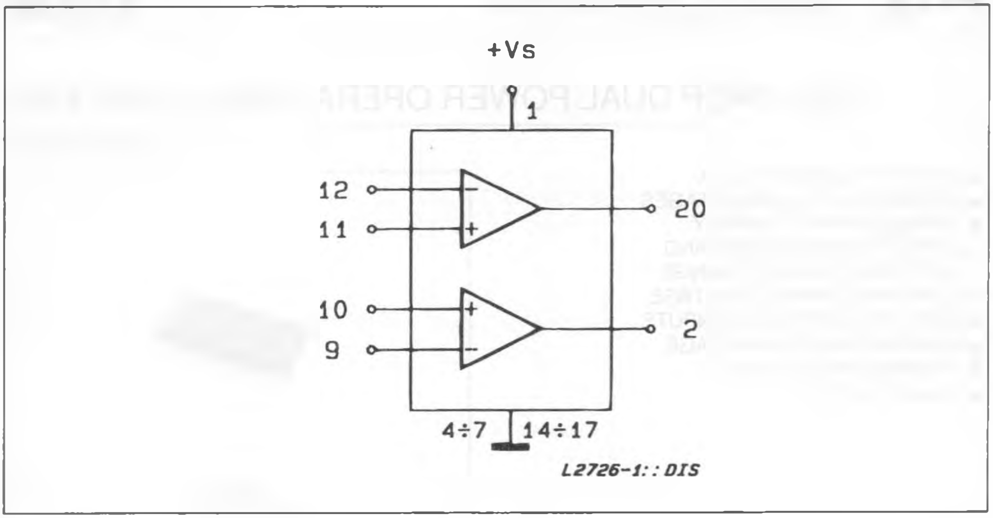
The high gain and high output power capability provide superior performance whatever an operational amplifier/power booster combination is required.

PIN CONNECTION (top view)

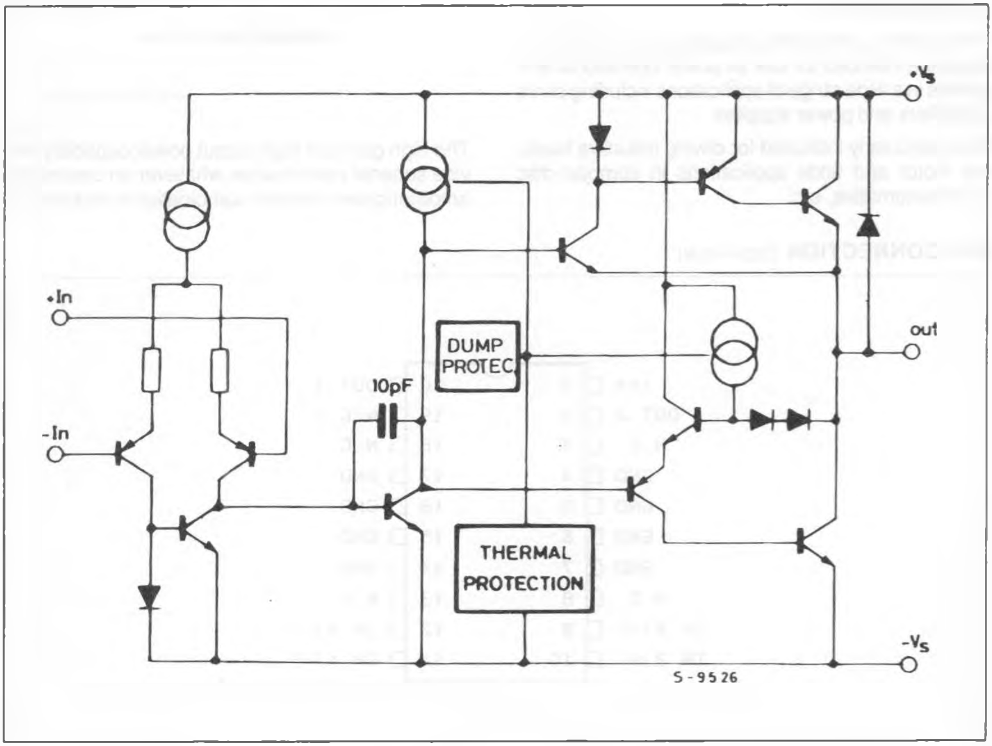


L2726-2: DIS

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°C T_{case} = 75°C	1 5	W W
T_{stg}, T_j	Storage and Junction Temperature	– 40 to 150	°C

THERMAL DATA

$R_{th\ j\text{-}case}$	Thermal Resistance Junction-case	Max	15.0	°C/W
$R_{th\ j\text{-}amb}$	Thermal Resistance Junction-ambient (*)	Max	65	°C/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		10	15	mA
			V_s = 8V		9	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		70	80		dB
		f = 1KHz			60		dB
e_N	Input Noise Voltage	B = 22Hz to 22KHz			10		µV
I_N	Input Noise Current	B = 22Hz to 22KHz			200		pA
CMR	Common Mode Rejection	f = 1KHz		66	84		dB
SVR	Supply Voltage Rejection	f = 100Hz R_G = 10KΩ V_R = 0.5V	V_s = 24V V_s = ± 12V V_s = ± 6V	60	70 75 80		dB dB dB
$V_{DROP(HIGH)}$		V_s = ± 2.5V to ± 12V	I_p = 100mA		0.7		V
			I_p = 500mA		1.0	1.5	V
$V_{DROP(LOW)}$		V_s = ± 2.5V to ± 12V	I_p = 100mA		0.3		V
			I_p = 500mA		0.5	1.0	V
C_s	Channel Separation	f = 1KHz R_L = 10Ω G_v = 30dB	V_s = 24V		60		dB
			V_s = 6V		60		dB
T_{sd}	Thermal Shutdown Junction Temperature				145		°C

Figure 1 : Quiescent Current vs. Supply Voltage.

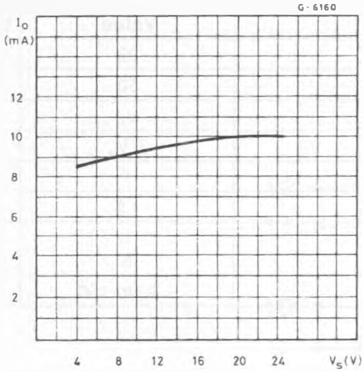


Figure 2 : Open Loop Gain vs. Frequency.

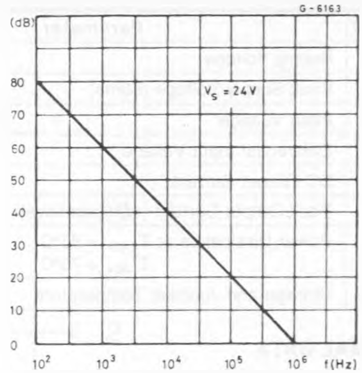


Figure 3 : Common Mode Rejection vs. Frequency.

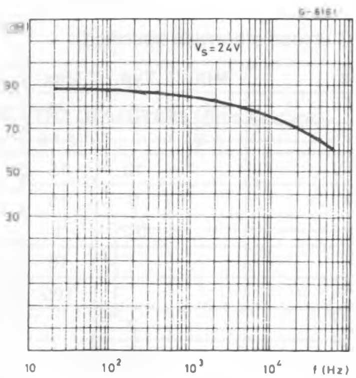


Figure 4 : Output Swing vs. Load Current ($V_S = \pm 5V$).

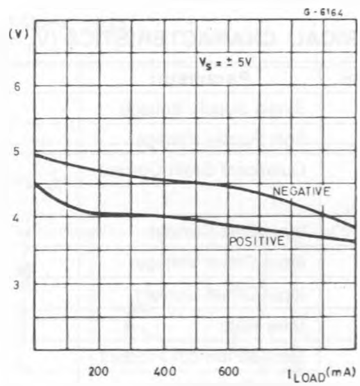


Figure 5 : Output Swing vs. Load Current ($V_S = \pm 12$ V).

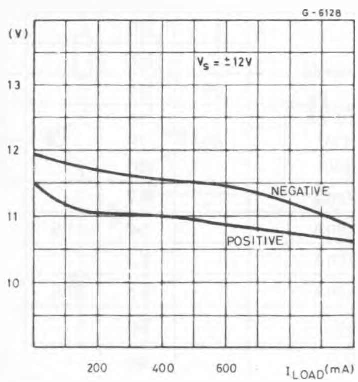
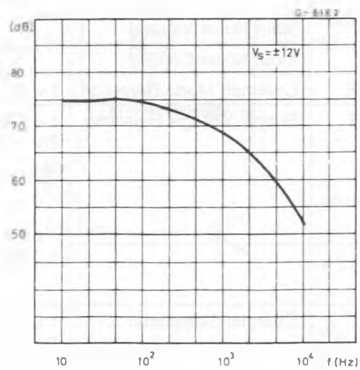


Figure 6 : Supply Voltage Rejection vs. Frequency.



SGS-THOMSON MICROELECTRONICS

Figure 7 : Channel Separation vs. Frequency.