Video output amplifier OM976/1

FEATURES

- DC coupled video amplifier for cathode drive, with a positive-going video input.
- Low internal thermal resistance
- A single fixed supply voltage and no components other than the series input resistor and capacitor.

DESCRIPTION

The OM976/1 is a hybrid integrated circuit with a buffered output stage. It is intended for use in colour or monochrome high-resolution video displays.

PINNING

PIN	DESCRIPTION
1	input
2	ground
3	ground
5	supply (+)
7	ground
6	ground
9	output

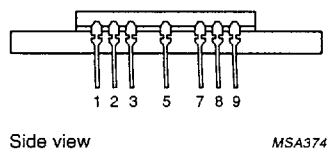


Fig.1 Simplified outline.

QUICK REFERENCE DATA

SYMBOL	PARAMETER	CONDITIONS	TYP.	UNIT
V_S	supply voltage		80	V
I_S	supply current		45	mA
V_I	input voltage signal (positive)	value; with a 250 Ω resistor in series		
	black level		0	V
	white level		2.5	V
$V_{O(p-p)}$	output voltage signal (peak-to-peak value)		40	V
V_O	DC offset range possibility	by varying the DC input level	30	V

CIRCUIT DIAGRAM

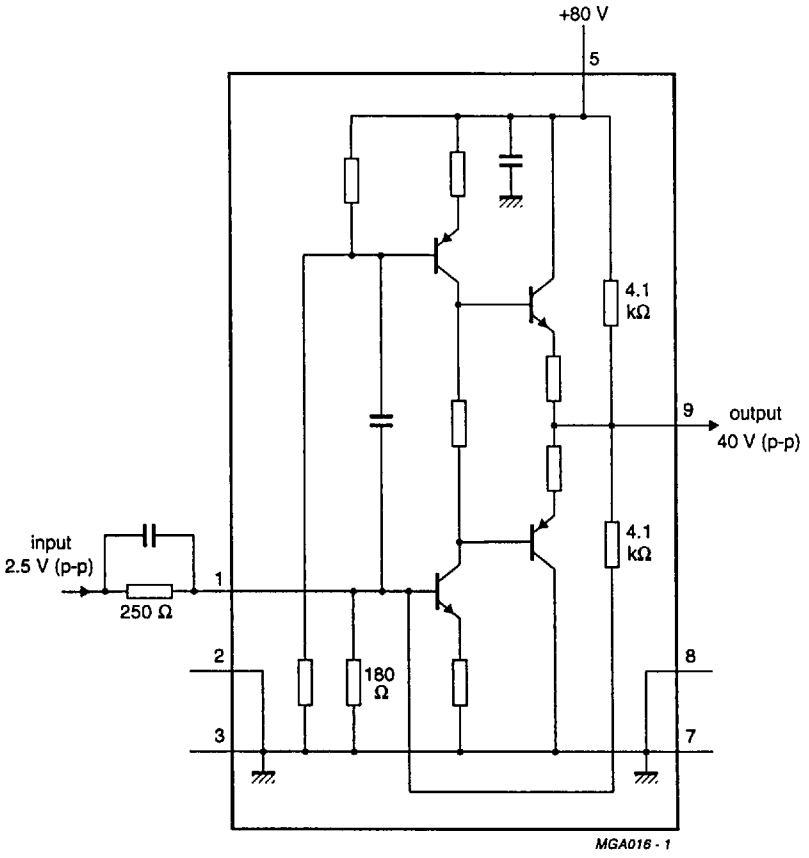


Fig.2 Simplified circuit diagram.

LIMITING VALUES

In accordance with the Absolute Maximum Rating System (IEC 134).

SYMBOL	PARAMETER	CONDITIONS	MIN.	MAX.	UNIT
V_S	supply voltage	pins 5 and 7	–	90	V
T_{stg}	storage temperature		–40	+125	°C
$T_{hs\ max}$	heatsink working temperature		–	80	°C
P_{tot}	total power dissipation	at $T_{hs\ max}$	–	8	W

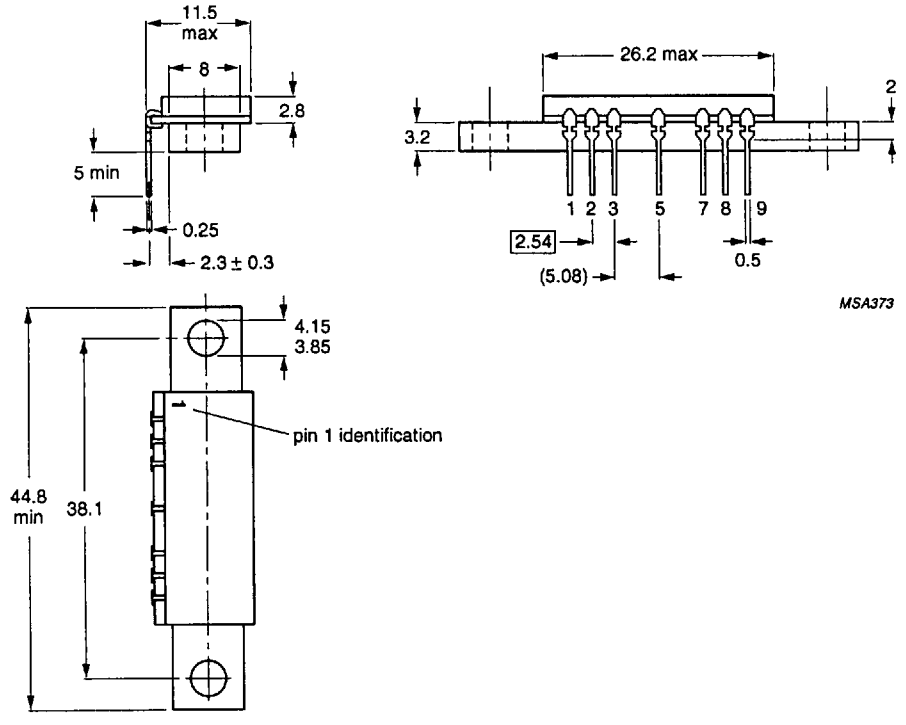
CHARACTERISTICS

SYMBOL	PARAMETER	CONDITIONS	MIN.	TYP.	MAX.	UNIT
V_S	supply voltage	pins 5 and 7	–	80	90	V
I_S	supply current	pin 5; input and output open	40	46	52	mA
V_I	open input DC voltage	pins 1 and 2; output open	1.15	1.5	1.85	V
V_O	open output DC voltage	pins 9 and 7; input open	36	40	44	V
V_O/I_I	output voltage as a function of input current		3.5	4	4.5	V/mA
V_O/V_I	output voltage as a function of input voltage	with a 250 Ω resistor in series	14	16	18	V/V
$V_{o(sat)min}$	minimum output saturation voltage		–	–	5	V
$V_{o(sat)max}$	maximum output saturation voltage		75	–	–	V
B	3 dB bandwidth	note (1)	–	135	–	MHz
Switching times						
t_r	rise time	note (1)	–	2.6	3.0	ns
t_f	fall time	note (1)	–	2.6	3.0	ns

Note to the characteristics

1. At optimum drive and compensation, with an output load capacitance of 8.5 pF.

PACKAGE OUTLINE



Dimensions in mm.
Lead frame pitch = 2.54 mm.

Fig.3 OM976/1 outline.

DEFINITIONS

Data sheet status	
Objective specification	This data sheet contains target or goal specifications for product development.
Preliminary specification	This data sheet contains preliminary data; supplementary data may be published later.
Product specification	This data sheet contains final product specifications.
Limiting values	
Limiting values given are in accordance with the Absolute Maximum Rating System (IEC 134). Stress above one or more of the limiting values may cause permanent damage to the device. These are stress ratings only and operation of the device at these or at any other conditions above those given in the Characteristics sections of the specification is not implied. Exposure to limiting values for extended periods may affect device reliability.	
Application information	
Where application information is given, it is advisory and does not form part of the specification.	

LIFE SUPPORT APPLICATIONS

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