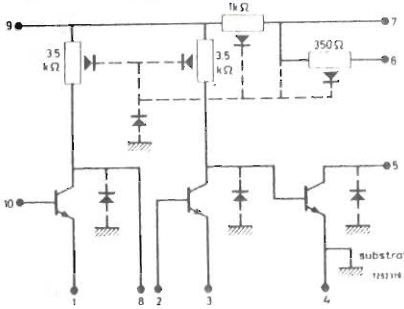
GENERAL PURPOSE AMPLIFIER

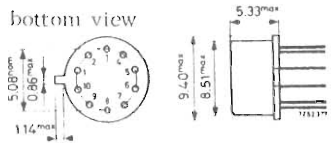
CIRCUIT DIAGRAM



PACKAGE

Dimensions in mm

TO-74 (reduced height)



Note:

The diodes drawn with dotted lines are the parasitic diodes formed by the P-N junction of the resistor-diffusions in the N-isle and of the N-isle to the P-substrate respectively. Taking account of the parasitic diodes one can prevent any unwanted effects due to their becoming conducting under certain conditions of d.c. potentials or signal voltages.

QUICK REFERENCE DATA				
Supply voltage	V_B	nom.	+6.0	V
Small signal current gain of first transistor I_8 = 1 mA; V_{8-1} = 1 V	h_{fe}	typ.	80	
Transducer gain	G_{tr}	typ.	80	dB
Noise figure (30 to 15000 Hz)	F	typ.	6	dB
Frequency response (−3 dB)		typ.	600	kHz
Package		TO-74 (reduced height)		

The TAA293 is a general purpose integrated amplifier which can be applied in various audio and i.f. applications. Its configuration furthermore allows the use of the TAA293 in multivibrators, pulse amplifiers, trigger circuits, etc. 7Z3 1718

RATINGS (Limiting values) [1])

Voltages

V_{9-1}	max.	7.0	V
V_{8-1}	max.	7.0	V
V_{8-10}	max.	7.0	V
V_{9-3}	max.	7.0	V
V_{9-4}	max.	7.0	V
V_{8-4}	max.	7.0	V
V_{7-4}	max.	7.0	V
V_{6-4}	max.	7.0	V
V_{5-4}	max.	7.0	V
V_{1-10}	max.	6.0	V
V_{3-2}	max.	6.0	V

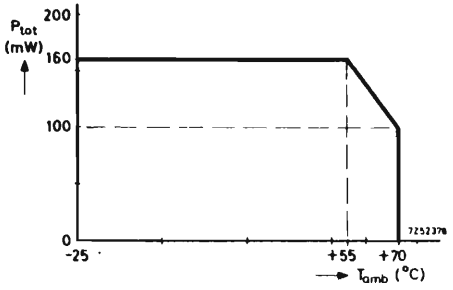
Currents

I_5	max.	40	mA
$-I_4$	max.	40	mA
$-I_1$	max.	20	mA
I_8	max.	20	mA
$-I_3$	max.	10	mA
I_{10}	max.	10	mA
I_2	max.	10	mA

Power dissipation

Total power dissipation

up to T_{amb} = 55 °C	P_d	max. 160	mW
up to T_{amb} = 70 °C	P_d	max. 100	mW



Temperatures

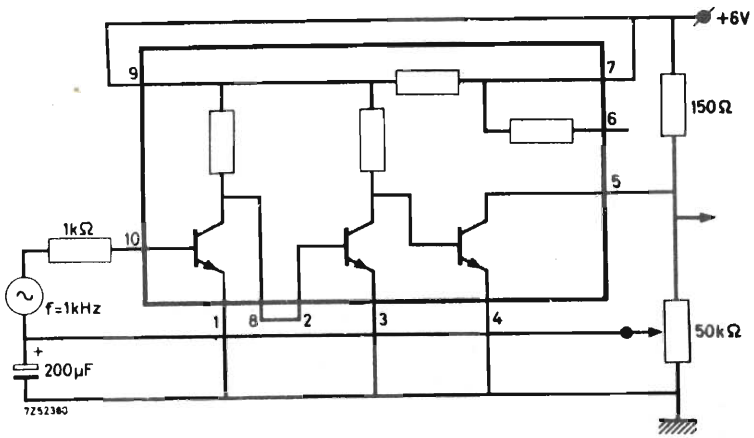
Storage temperature	T_{stg}	-25 to +100	°C
Operating ambient temperature	T_{amb}	max. 70	°C

1) Limiting values according to the Absolute Maximum System as defined in IEC publication 134. 7Z3 1622

CHARACTERISTICS at T_{amb} = 25 °C

Small signal current gain				
of first transistor I_8 = 1 mA; V_{8-1} = 1 V	h_{fe}	>	30	
		typ.	80	
Saturation voltage				
of last transistor at I_5 = 24 mA	$V_{5-4\ sat}$	<	2	V
Noise figure				
$-I_1$ = 100 μA; R_S = 2 kΩ B = 30 Hz to 15000 Hz	F	typ.	6	dB
		<	10	dB
Transducer gain	G_{tr}	typ.	80	dB
Output power at d_{tot} = 10%	P_o	>	10	mW

Test circuit for measuring the transducer gain and the output power



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