

## LOW FREQUENCY AMPLIFIER

The TAA435 is a silicon monolithic integrated a.f. preamplifier and driver stage. Combined with a complementary output stage an output power of 4W can be achieved.

### QUICK REFERENCE DATA

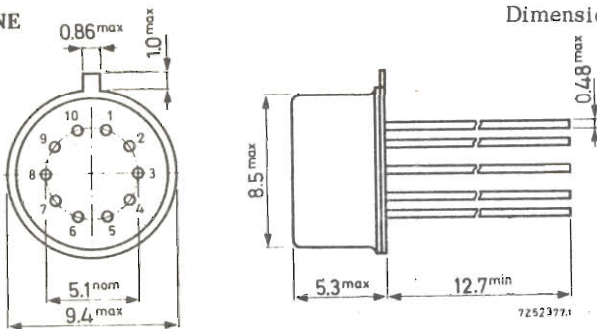
with AD161/AD162 output stage

Supply voltage	$V_B$	nom.	14	V
Ambient temperature	$T_{amb}$	nom.	25	°C
Voltage gain	$G_V$	typ.	80	dB
Output power at $d_{tot} < 10\%$	$P_O$	>	4	W
Noise figure at $f = 60$ Hz to 10 kHz	F	typ.	6	dB

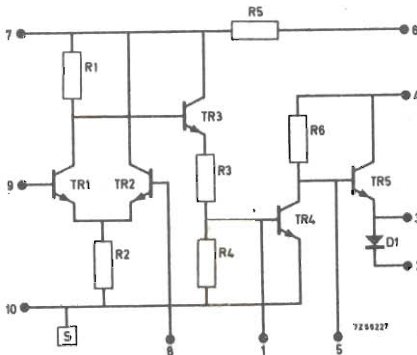
### PACKAGE OUTLINE

XA10 (TO-74;  
reduced height)

Dimensions in mm



### CIRCUIT DIAGRAM



# TAA435

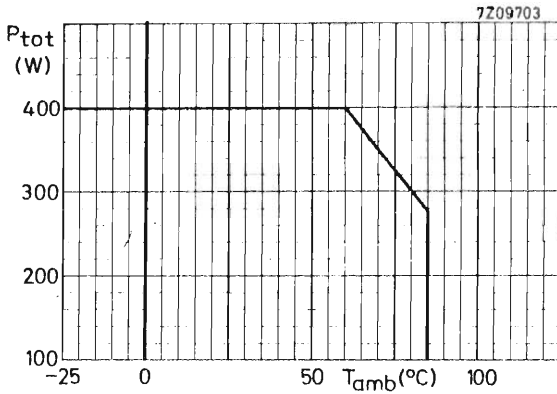
**RATINGS** Limiting values in accordance with the Absolute Maximum System (IEC 134)

## Voltages

Supply voltage	$V_B$	max.	18 V
Input voltage	$-V_9$	max.	5 V
Output voltage (peak value)	$V_{4M}$	max.	24 V
	$V_{3M}$	max.	20 V
<u>Supply current</u>	$I_4$	max.	70 mA

## Total power dissipation

Maximum allowable total power dissipation versus ambient temperature.



## Temperatures

Operating ambient temperature	$T_{amb}$	-25 to +85 $^{\circ}C$
Storage temperature	$T_{stg}$	-35 to +125 $^{\circ}C$

**CHARACTERISTICS** at  $V_B = 10$  to  $18$  V;  $T_{amb} = 25$  °C

Forward voltage at  $-I_2 = 30$  mA

$V_{3-2}$  typ. 0.8 V

Collector-emitter voltage at  $I_4 = 50$  mA

$V_{4-3} < 3.5$  V

**CHARACTERISTICS** at  $V_B = 14$  V;  $T_{amb} = 25$  °C (measured in circuit below)

Voltage gain at  $f = 1$  kHz; without feedback  
with feedback

$G_v$  typ. 80 dB  
 $G_v$  typ. 50 dB

Input impedance at  $f = 1$  kHz

$|Z_{9-10}| > 70$  k $\Omega$

Noise figure at  $f = 60$  Hz to 10 kHz

$F$  typ. 6 dB

Cut-off frequency (-3 dB)

$f_c > 10$  kHz

Output power at  $f = 1$  kHz

$d_{tot} = 10\%$

$P_o > 4$  W

Total distortion at  $f = 1$  kHz

$P_o = 1$  W

$d_{tot} < 1$  %

Test circuit:

