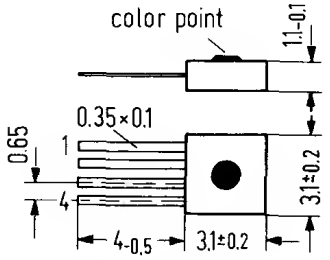
Three-Stage AF-Amplifier TAA 131

The integrated circuit TAA 131 is especially well suited for small battery-operated sets.

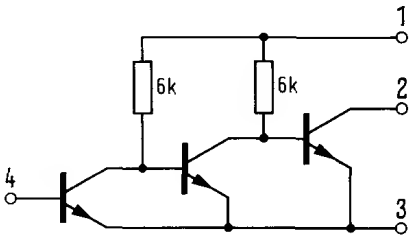
Type	Ordering code
TAA 131	Q61901-A131

Package outlines



Plastic coating (U 38)
Weight approx. .2 g
Dimensions in mm

Circuit diagram



Absolute maximum ratings

Supply voltage	V_{cc}	5	V
Output collector current	I_2	12	mA
Junction temperature	T_j	150	°C
Storage temperature	T_s	−40 to +125	°C
Thermal resistance (air-system)	R_{thSamb}	≤ 600	K/W

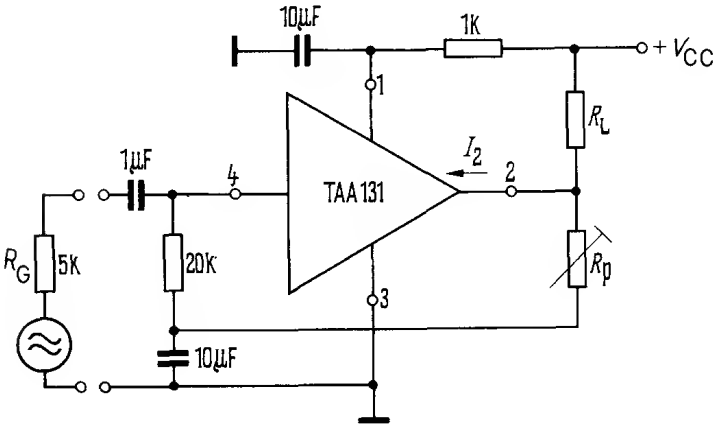
Range of operation

Supply voltage	V_{cc}	1.3 to 5	V
Ambient temperature in operation	T_{amb}	−20 to +70	°C

Electrical characteristics T_{amb} = 25 °C
(Referring to the test circuit)

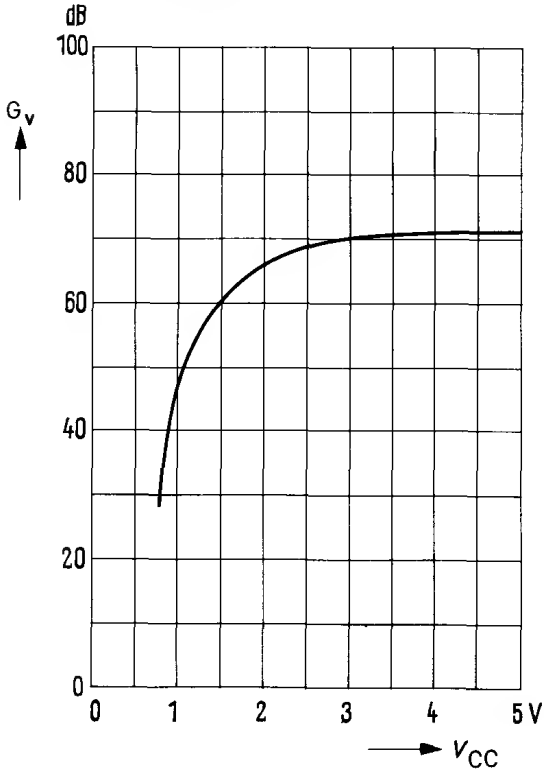
		min	typ	max	
Pot.-resistance	R_p	40	400	1000	kΩ
Supply current (V_{cc} = 1.3 V)	I_{cc}			1.2	mA
Voltage gain (f = 1 kHz)	G_V	50	57		dB
Harmonic distortion ($V_{q\ eff}$ = .1 V, f = 1 kHz)	k			10	%
Lower cutoff frequency (–3 db)	f_l			40	Hz
Upper cutoff frequency (–3 db)	f_u	20			kHz
Noise voltage (referred to the input, DIN 45405, R_G = 5 kΩ)	V_n			5	μV

Test circuit

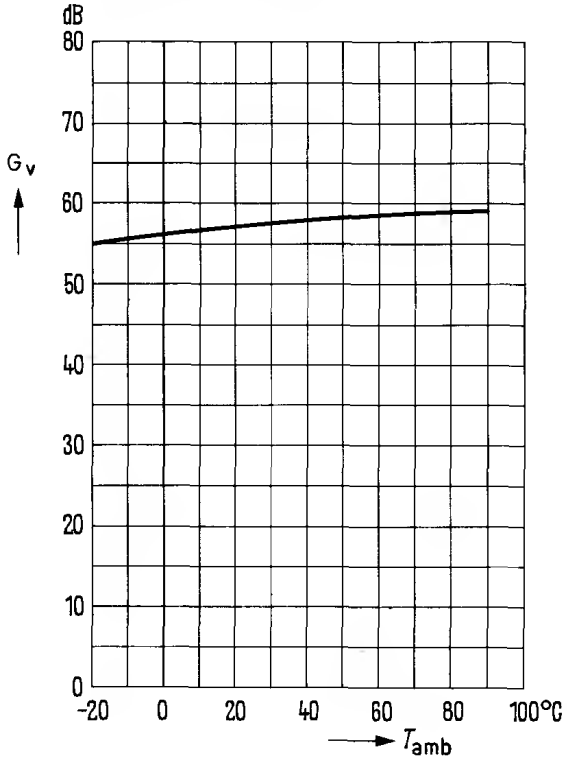


V_{cc} = 1.3 V
R_L = 500 Ω
Using R_p adjuste I_2 to .75 mA

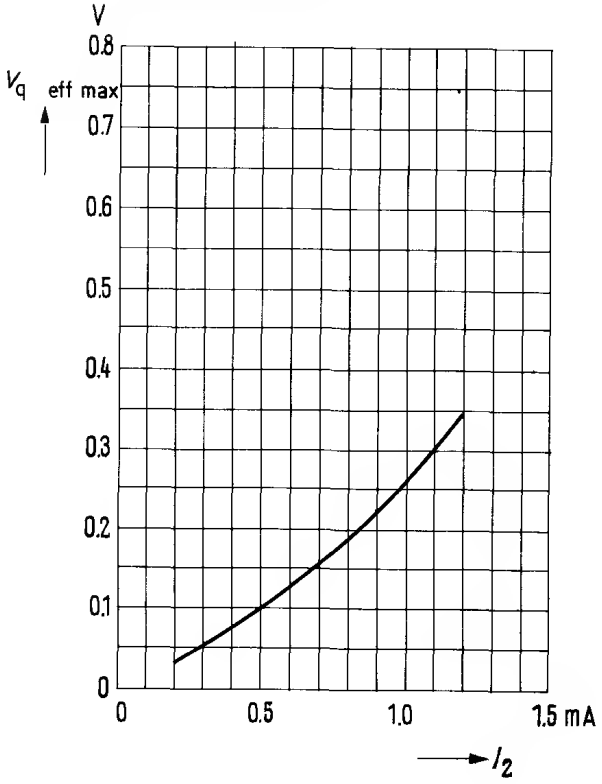
Voltage gain v. supply voltage
f = 1 kHz, R_L = 500 Ω
Quiescent point set to
I_2 = .75 mA/V_{cc} = 1.3 V



Voltage gain v. amb. temperature
V_{cc} = 1.3 V, R_L = 500 Ω, f = 1 kHz
Quiescent point set to I_2 = .75 mA
at T_{amb} = 25 °C, using R_p



Output voltage v. current I_2
V_{cc} = 1.3 V, R_L = 500 Ω,
f = 1 kHz, k = 10%



Voltage gain v. current I_2
V_{cc} = 1.3 V, R_L = 500 Ω,
f = 1 kHz