

T-74-09-01

CATV AMPLIFIER MODULES

Hybrid amplifier modules for CATV systems operating at frequencies up to 300 MHz.

BGY54: 17 dB input amplifier module;

BGY55: 17 dB output amplifier module.

Features:

- excellent linearity;
- extremely low noise;
- optimal reliability ensured by TiPtAu metallized crystals, silicon nitride passivation and rugged construction.

QUICK REFERENCE DATA

		BGY54	BGY55
Frequency range	f	40 to 300	40 to 300 MHz
Source impedance and load impedance	$Z_S = Z_L$	= 75	75 Ω
Power gain at f = 50 MHz	G_p	17,0 \pm 0,4	17,0 \pm 0,4 dB
Slope cable equivalent f = 40 MHz to 300 MHz	SL	0 to 1,0	0 to 1,0 dB
Flatness of frequency response f = 40 MHz to 300 MHz	FL	max. \pm 0,1	\pm 0,1 dB
Return losses at input and output f = 40 MHz to 300 MHz	S11-22	min. 20	20 dB
Output voltage at $d_{im} = -60$ dB (DIN 45004, par. 6.3: 3-tone)	V_o	min. 61	63,5 dBmV
2nd order distortion $V_o = 50$ dBmV	d_2	max. -71	-73 dB
Composite triple beat 32 channels $V_o = 46$ dBmV	CTB	max. -65	-67 dB
Output capability $X_{mod} = -57$ dB; 32 channels flat	V_o	min. 47,5	50 dBmV
Noise figure f = 40 MHz to 300 MHz	F	max. 6	6,5 dB
D.C. supply voltage	$+V_B$	= 24	24 V*
Total d.c. current consumption at $V_B = +24$ V	I_{tot}	typ. 160	200 mA
Operating mounting base temperature	T_{mb}	-20 to +90	-20 to +90 $^{\circ}$ C

MECHANICAL DATA

SOT-115 (see Fig. 1).

* The modules normally operate at $V_B = 24$ V, but are able to withstand supply transients up to 30 V.

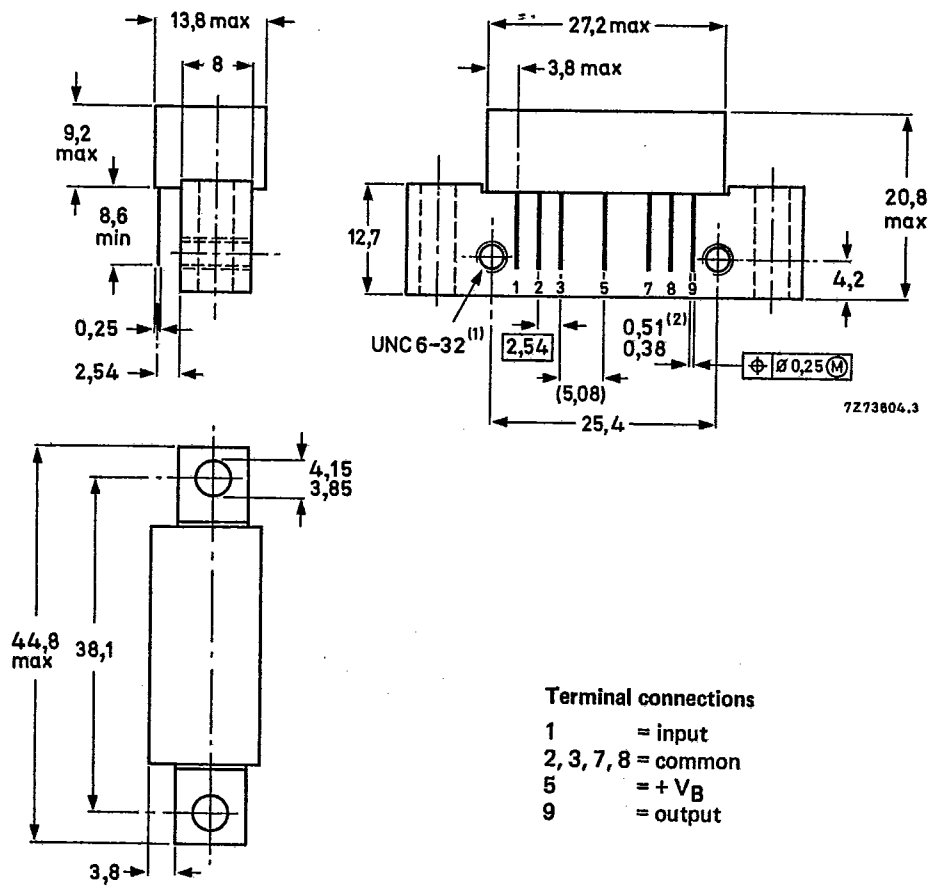
BGY54
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MECHANICAL DATA

Dimensions in mm

Fig. 1 SOT-115.



Terminal connections

- 1 = input
- 2, 3, 7, 8 = common
- 5 = + V_B
- 9 = output

(1) Screw 6-32UNC-2A available upon request (see "Accessories").

(2) Tin-plated leads. Gold-plated leads available upon request.

See 'Mounting and Soldering Recommendations'.

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RATINGS

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

R.F. input voltage	V_i	max.	65 dBmV
Storage temperature	T_{stg}		-40 to +100 °C
Operating mounting base temperature	T_{mb}		-20 to +90 °C

CHARACTERISTICS

Supply voltage $V_B = +24 V$; $T_{amb} = 25 °C$

		BGY54	BGY55
Power gain at $f = 50 \text{ MHz}$	G_p	$17,0 \pm 0,4$	$17,0 \pm 0,4 \text{ dB}$
Slope cable equivalent $f = 40 \text{ MHz to } 300 \text{ MHz}$	SL	0 to 1,0	0 to 1,0 dB
Flatness of frequency response $f = 40 \text{ MHz to } 300 \text{ MHz}$	FL	max. $\pm 0,1$	$\pm 0,1 \text{ dB}$
Return losses at input and output $Z_S = Z_L = 75 \Omega$; $f = 40 \text{ MHz to } 300 \text{ MHz}$	$S_{11,22} \text{ min.}$	20	20 dB
Output voltage at $d_{im} = -60 \text{ dB}$ (DIN 45004, 6.3: 3-tone) $V_p = V_o$; $f_p = 287,25 \text{ MHz}$ $V_q = V_o - 6 \text{ dB}$; $f_q = 294,25 \text{ MHz}$ $V_r = V_o - 6 \text{ dB}$; $f_r = 296,25 \text{ MHz}$ Measured at $f(p+q-r) = 285,25 \text{ MHz}$	V_o	min. 61	63,5 dBmV
2nd order distortion $V_o = 50 \text{ dBmV}$; $f_p = 55,25 \text{ MHz}$ $V_o = 50 \text{ dBmV}$; $f_q = 211,25 \text{ MHz}$ Measured at $f(p+q) = 266,5 \text{ MHz}$	d_2	max. -71	-73 dB
Composite triple beat 32 channels $V_o = 46 \text{ dBmV}$; channel W	CTB	max. -65	-67 dB
Output capability on channel W $X_{mod} = -57 \text{ dB}$; 32 channels flat	V_o	min. 47,5	50 dBmV
Noise figure $f = 40 \text{ MHz to } 300 \text{ MHz}$	F	max. 6	6,5 dB
Total d.c. current consumption	I_{tot}	typ. 160 max. 180	200 mA 220 mA