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 ± 0,4	17,0 ± 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. ± 0,1	± 0,1	dB
Return losses at input and output f = 40 MHz to 300 MHz	S_{11-22}	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	°C

MECHANICAL DATA

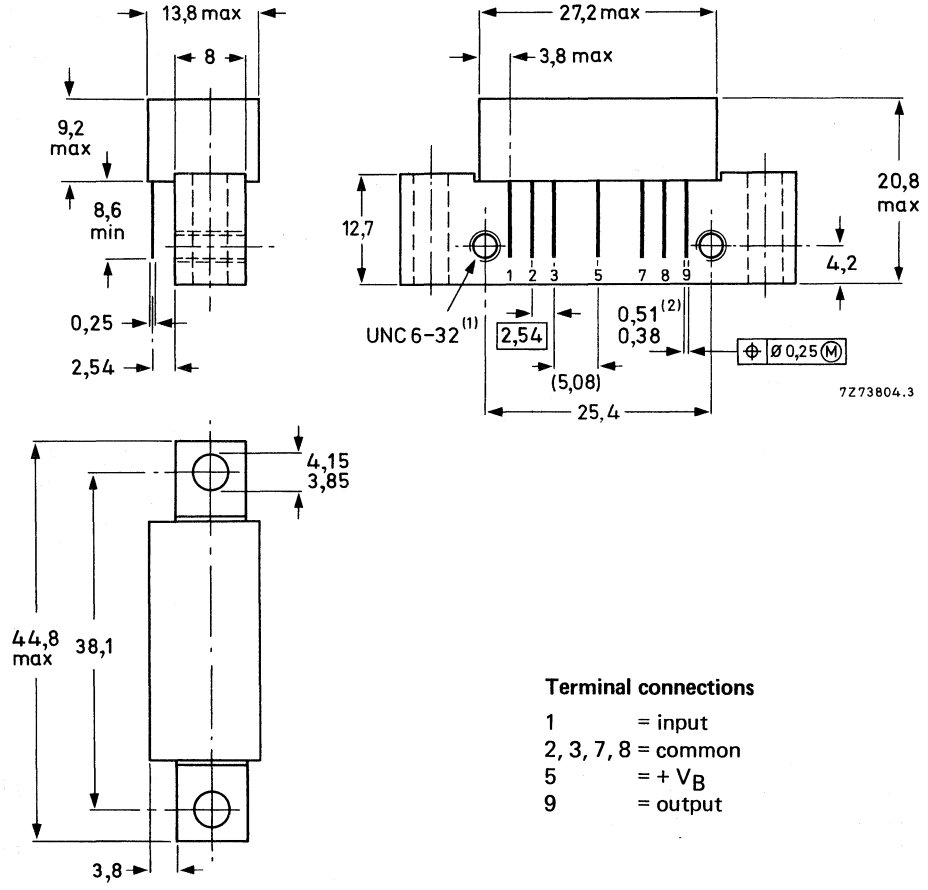
SOT-115 (see Fig. 1).

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

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'.

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 MHz	G_p		17,0 ± 0,4	17,0 ± 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.	± 0,1	± 0,1	dB
Return losses at input and output $Z_S = Z_L$ = 75 Ω; f = 40 MHz to 300 MHz	S_{11-22}	min.	20	20	dB
Output voltage at d_{im} = −60 dB (DIN 45004, 6.3: 3-tone) $V_p = V_o$; f_p = 287,25 MHz $V_q = V_o$−6 dB; f_q = 294,25 MHz $V_r = V_o$−6 dB; f_r = 296,25 MHz Measured at $f_{(p+q-r)}$ = 285,25 MHz	V_o	min.	61	63,5	dBmV
2nd order distortion V_o = 50 dBmV; f_p = 55,25 MHz V_o = 50 dBmV; f_q = 211,25 MHz Measured at $f_{(p+q)}$ = 266,5 MHz	d_2	max.	−71	−73	dB
Composite triple beat 32 channels V_o = 46 dBmV; channel W	CTB	max.	−65	−67	dB
Output capability on channel W 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
Total d.c. current consumption	I_{tot}	typ. max.	160 180	200 220	mA mA