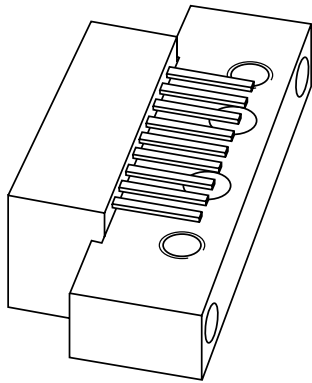


DATA SHEET



BGE885

**860 MHz, 17 dB gain push-pull
amplifier**

Product specification
Supersedes data of 1999 Mar 30

2001 Oct 31

860 MHz, 17 dB gain push-pull amplifier

BGE885

FEATURES

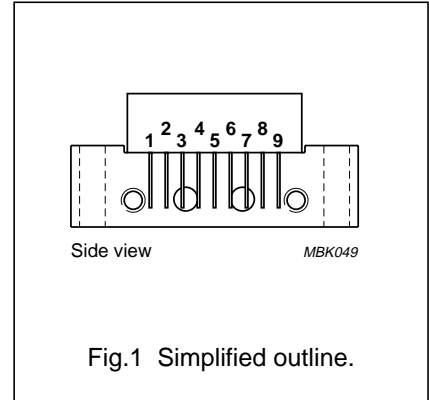
- Excellent linearity
- Extremely low noise
- Rugged construction
- TiPtAu metallized crystals ensure optimal reliability.

DESCRIPTION

Hybrid amplifier module for use in CATV systems operating over a frequency range of 40 to 860 MHz with a voltage supply of 24 V (DC).

PINNING - SOT115D

PIN	DESCRIPTION
1	input; note 1
2	common
3	common
4	12 V, 60 mA supply terminal
5	common
6	common
7	common
8	+V _B
9	output; note 1



Note

1. Pins 1 and 9 carry DC voltages.

QUICK REFERENCE DATA

SYMBOL	PARAMETER	CONDITIONS	MIN.	MAX.	UNIT
G _p	power gain	f = 50 MHz	16.5	17.5	dB
I _{tot}	total current consumption (DC)	V _B = 24 V	–	240	mA

LIMITING VALUES

In accordance with the Absolute Maximum Rating System (IEC 60134).

SYMBOL	PARAMETER	MIN.	MAX.	UNIT
V _B	DC supply voltage	–	28	V
V _i	RF input voltage	–	65	dBmV
T _{stg}	storage temperature	–40	+100	°C
T _{mb}	operating mounting base temperature	–20	+100	°C

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CHARACTERISTICSBandwidth 40 to 860 MHz; $V_B = 24\text{ V}$; $T_{mb} = 30\text{ °C}$; $Z_S = Z_L = 75\ \Omega$

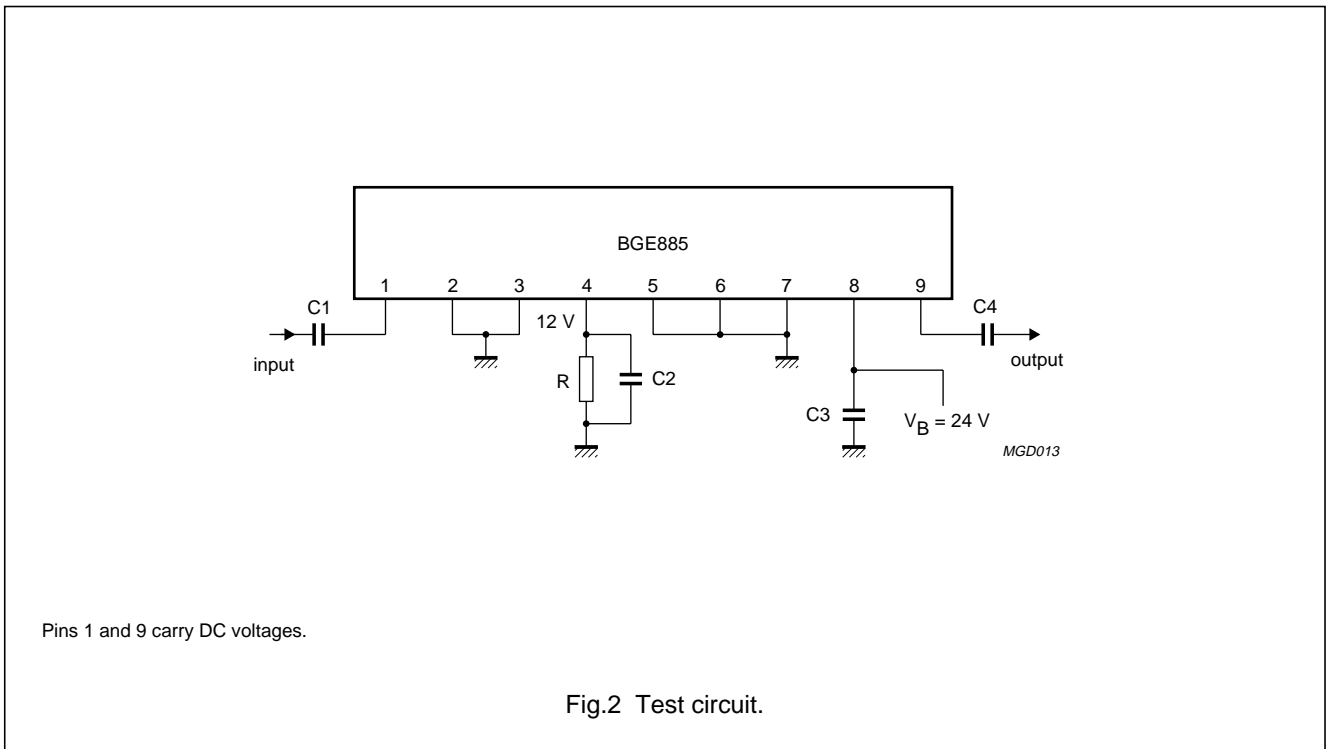
SYMBOL	PARAMETER	CONDITIONS	MIN.	MAX.	UNIT
G_p	power gain	$f = 50\text{ MHz}$	16.5	17.5	dB
SL	slope cable equivalent	$f = 40\text{ to }860\text{ MHz}$	0.2	1.2	dB
FL	flatness of frequency response	$f = 40\text{ to }860\text{ MHz}$	–	± 0.5	dB
S_{11}	input return losses	$f = 40\text{ to }450\text{ MHz}$	14	–	dB
		$f = 450\text{ to }860\text{ MHz}$	10	–	dB
S_{22}	output return losses	$f = 40\text{ to }450\text{ MHz}$	14	–	dB
		$f = 450\text{ to }860\text{ MHz}$	10	–	dB
d_2	second order distortion	note 1	–	–53	dB
V_o	output voltage	$d_{im} = -60\text{ dB}$; note 2	59	–	dBmV
F	noise figure	$f = 350\text{ MHz}$	–	7.5	dB
		$f = 860\text{ MHz}$	–	8	dB
I_{tot}	total current consumption (DC)	note 3	–	240	mA

Notes

- $f_p = 349.25\text{ MHz}$; $V_p = 59\text{ dBmV}$;
 $f_q = 403.25\text{ MHz}$; $V_q = 59\text{ dBmV}$;
measured at $f_p + f_q = 752.5\text{ MHz}$.
- Measured according to DIN45004B:
 $f_p = 851.25\text{ MHz}$; $V_p = V_o = 59\text{ dBmV}$;
 $f_q = 858.25\text{ MHz}$; $V_q = V_o - 6\text{ dB}$;
 $f_r = 860.25\text{ MHz}$; $V_r = V_o - 6\text{ dB}$;
measured at $f_p + f_q - f_r = 849.25\text{ MHz}$.
- The module normally operates at $V_B = 24\text{ V}$, but is able to withstand supply transients up to 30 V.

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List of components (see Fig.2)

COMPONENT	DESCRIPTION	VALUE
C1, C3, C4	ceramic multilayer capacitor	1 nF
C2	ceramic multilayer capacitor	1 nF (max.)
R	resistor	200 Ω, 1 W

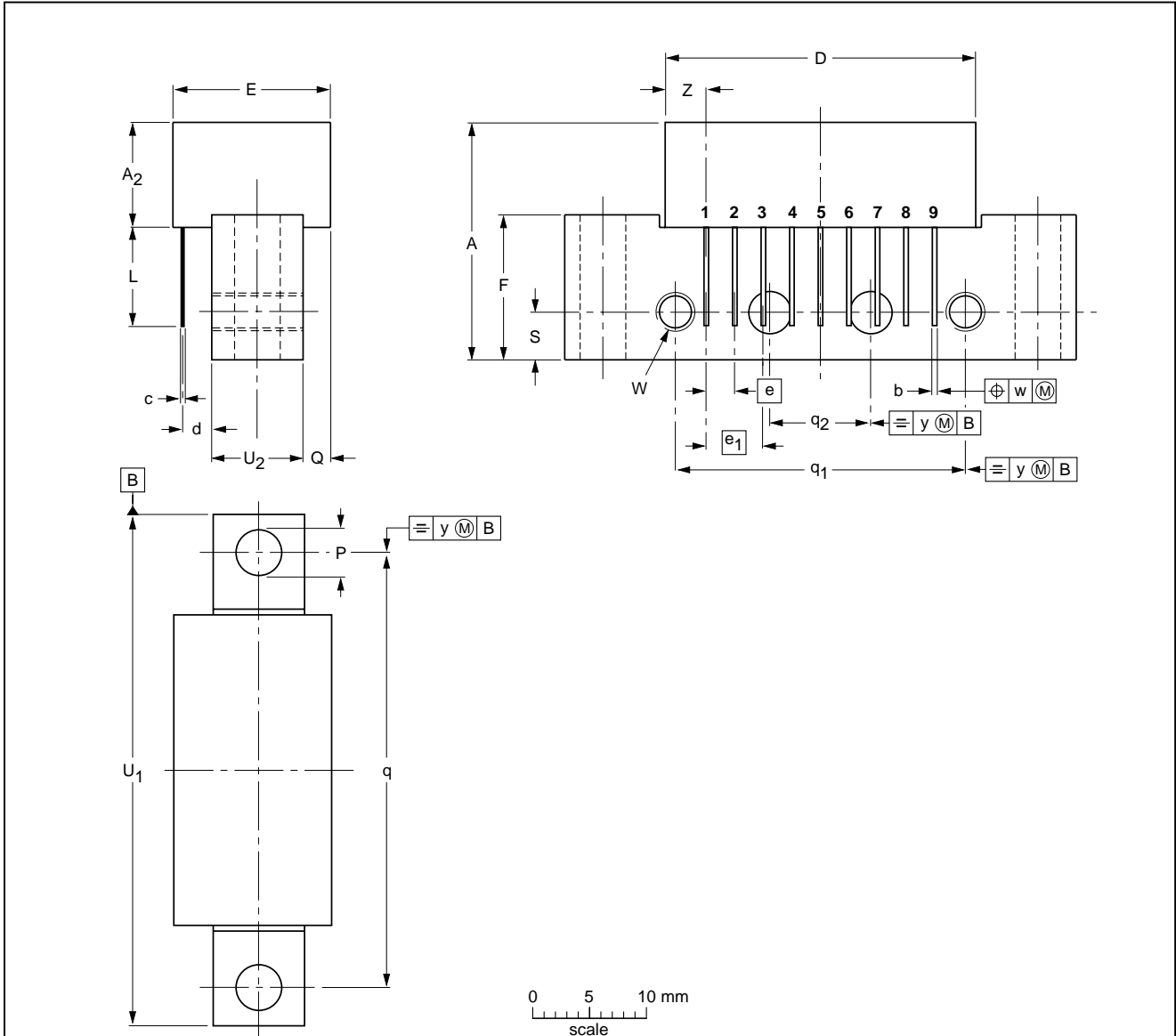
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PACKAGE OUTLINE

Rectangular single-ended package; aluminium flange; 2 vertical mounting holes; 2 x 6-32 UNC and 2 extra horizontal mounting holes; 9 gold-plated in-line leads

SOT115D



DIMENSIONS (mm are the original dimensions)

UNIT	A max.	A ₂ max.	b	c	D max.	d max.	E max.	e	e ₁	F	L min.	∅ P	Q max.	q	q ₁	q ₂	S	U ₁ max.	U ₂	W	w	y	Z max.
mm	20.8	9.1	0.51 0.38	0.25	27.2	2.54	13.75	2.54	5.08	12.7	8.8	4.15 3.85	2.4	38.1	25.4	10.2	4.2	44.75	8	6-32 UNC	0.25	0.1	3.8

OUTLINE VERSION	REFERENCES			EUROPEAN PROJECTION	ISSUE DATE
	IEC	JEDEC	EIAJ		
SOT115D					97-04-10

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DATA SHEET STATUS ⁽¹⁾	PRODUCT STATUS ⁽²⁾	DEFINITIONS
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