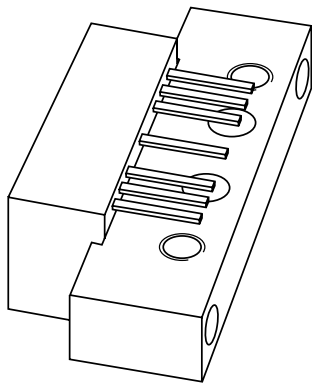


DATA SHEET



BGY66B

120 MHz, 25 dB gain reverse
amplifier

Product specification
Supersedes data of 1997 Apr 14

2001 Oct 18

120 MHz, 25 dB gain reverse amplifier

BGY66B

FEATURES

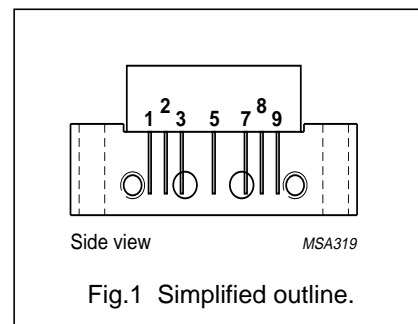
- Excellent linearity
- Extremely low noise
- Silicon nitride passivation
- Rugged construction
- Gold metallization ensures excellent reliability.

APPLICATIONS

- Intended as a reverse amplifier for use in two-way systems.

PINNING - SOT115J

PIN	DESCRIPTION
1	input
2	common
3	common
5	+V _B
7	common
8	common
9	output



DESCRIPTION

Hybrid high dynamic range amplifier module designed for applications in CATV systems with a bandwidth of 5 to 120 MHz operating with a voltage supply of 24 V (DC).

QUICK REFERENCE DATA

SYMBOL	PARAMETER	CONDITIONS	MIN.	MAX.	UNIT
G _p	power gain	f = 10 MHz	24.5	25.5	dB
I _{tot}	total current consumption (DC)	V _B = 24 V	115	135	mA

LIMITING VALUES

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

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

120 MHz, 25 dB gain reverse amplifier

BGY66B

CHARACTERISTICS

Table 1 Bandwidth 5 to 120 MHz; $V_B = 24$ V; $T_{mb} = 30$ °C; $Z_S = Z_L = 75$ Ω

SYMBOL	PARAMETER	CONDITIONS	MIN.	MAX.	UNIT
G_p	power gain	$f = 10$ MHz	24.5	25.5	dB
SL	slope cable equivalent		-0.2	+0.5	dB
FL	flatness of frequency response		-	± 0.2	dB
S_{11}	input return losses		20	-	dB
S_{22}	output return losses		20	-	dB
CTB	composite triple beat	14 channels flat; $V_o = 48$ dBmV; measured at 67.25 MHz	-	-66	dB
X_{mod}	cross modulation	14 channels flat; $V_o = 48$ dBmV; measured at 67.25 MHz	-	-54	dB
d_2	second order distortion	note 1	-	-70	dB
V_o	output voltage	$d_{im} = -60$ dB; note 2	60	-	dBmV
F	noise figure	$f = 120$ MHz	-	5	dB
I_{tot}	total current consumption (DC)	note 3	115	135	mA

Notes

- $f_p = 55.25$ MHz; $V_p = 48$ dBmV;
 $f_q = 61.25$ MHz; $V_q = 48$ dBmV;
measured at $f_p + f_q = 116.5$ MHz.
- Measured according to DIN45004B:
 $f_p = 111.25$ MHz; $V_p = V_o$;
 $f_q = 118.25$ MHz; $V_q = V_o - 6$ dB;
 $f_r = 120.25$ MHz; $V_r = V_o - 6$ dB;
measured at $f_p + f_q - f_r = 109.25$ MHz.
- The module normally operates at $V_B = 24$ V, but is able to withstand supply transients up to 30 V.

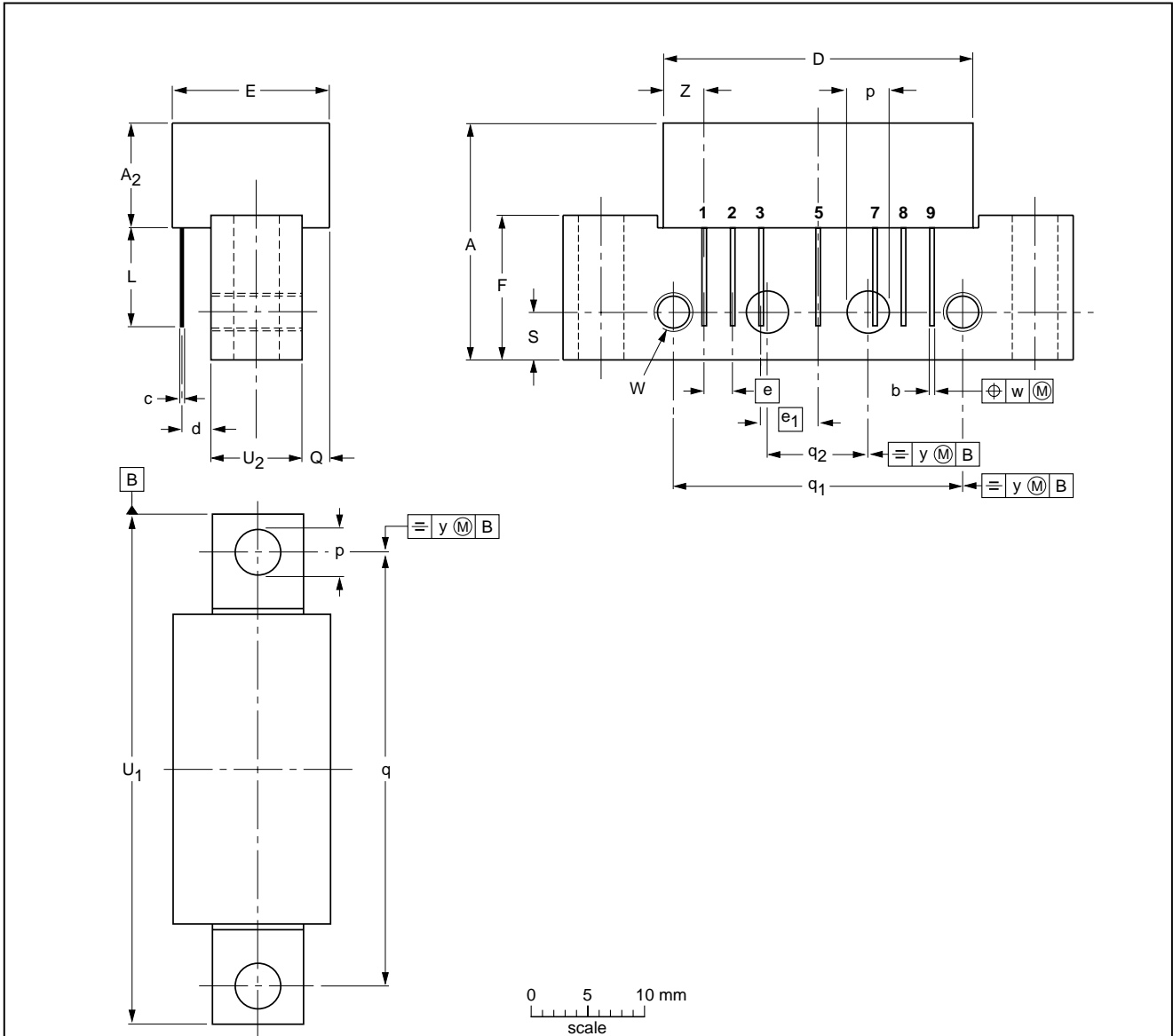
120 MHz, 25 dB gain reverse amplifier

BGY66B

PACKAGE OUTLINE

Rectangular single-ended package; aluminium flange; 2 vertical mounting holes; 2 x 6-32 UNC and 2 extra horizontal mounting holes; 7 gold-plated in-line leads

SOT115J



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			
SOT115J						99-02-06

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BGY66B

DATA SHEET STATUS

DATA SHEET STATUS ⁽¹⁾	PRODUCT STATUS ⁽²⁾	DEFINITIONS
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120 MHz, 25 dB gain reverse amplifier

BGY66B

NOTES

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NOTES

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