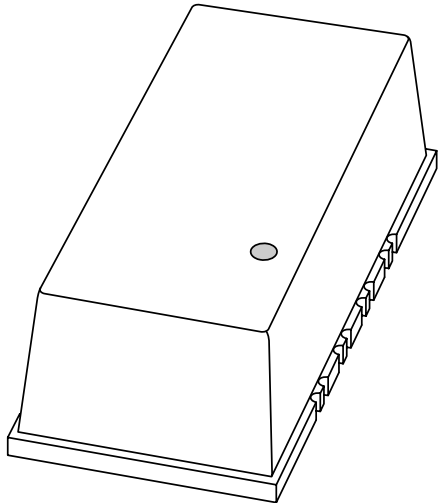


# DATA SHEET



## **BGS67A** 65 MHz, 25.5 dB gain reverse amplifier

Product specification  
Supersedes data of 2002 Jun 06

2002 Sep 06

# 65 MHz, 25.5 dB gain reverse amplifier

# BGS67A

## FEATURES

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

## APPLICATIONS

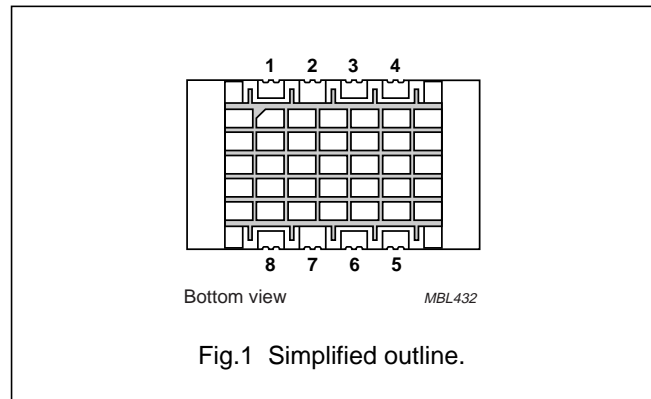
- Reverse amplifier in two-way CATV systems in the 5 to 65 MHz frequency range.

## DESCRIPTION

The BGS67A is a hybrid high dynamic range amplifier module in a leadless SOT567A package, operating at a supply voltage of 12 V.

## PINNING - SOT567A

PIN	DESCRIPTION
1	input
2	common
3	provision
4	+V <sub>B</sub>
5	output
6	provision
7	common
8	+V <sub>B</sub>



## QUICK REFERENCE DATA

SYMBOL	PARAMETER	CONDITIONS	MIN.	MAX.	UNIT
G <sub>p</sub>	power gain	f = 10 MHz	25	26	dB
I <sub>tot</sub>	total current consumption (DC)	V <sub>B</sub> = 12 V	75	95	mA

## LIMITING VALUES

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

SYMBOL	PARAMETER	MIN.	MAX.	UNIT
V <sub>i</sub>	RF input voltage	–	55	dBmV
T <sub>stg</sub>	storage temperature	–40	+100	°C
T <sub>mb</sub>	operating mounting base temperature	–20	+100	°C

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**CHARACTERISTICS**Bandwidth 5 to 65 MHz;  $V_B = 12\text{ V}$ ;  $T_{mb} = 30\text{ °C}$ ;  $Z_S = Z_L = 75\ \Omega$ .

SYMBOL	PARAMETER	CONDITIONS	MIN.	MAX.	UNIT
$G_p$	power gain	$f = 10\text{ MHz}$	25	26	dB
SL	slope straight line	$f = 5\text{ to }65\text{ MHz}$	-0.1	+0.6	dB
FL	flatness of frequency response	$f = 5\text{ to }65\text{ MHz}$	-	$\pm 0.2$	dB
$S_{11}$	input return losses	$f = 5\text{ to }65\text{ MHz}$	20	-	dB
$S_{22}$	output return losses	$f = 5\text{ to }65\text{ MHz}$	20	-	dB
CTB	composite triple beat	4 channels flat; $V_o = 50\text{ dBmV}$ ; measured at 25 MHz	-	-64	dB
$X_{mod}$	cross modulation	4 channels flat; $V_o = 50\text{ dBmV}$ ; measured at 25 MHz	-	-54	dB
$d_2$	second order distortion	note 1	-	-70	dB
NF	noise figure	$f = 65\text{ MHz}$	-	3.5	dB
$I_{tot}$	total current consumption	note 2	75	95	mA

**Notes**

- $f_p = 19\text{ MHz}$ ;  $V_p = 50\text{ dBmV}$ ;  $f_q = 31\text{ MHz}$ ;  $V_q = 50\text{ dBmV}$ ; measured at  $f_p + f_q = 50\text{ MHz}$ .
- The module normally operates at  $V_B = 12\text{ V}$ , but is able to withstand supply transients up to 30 V.

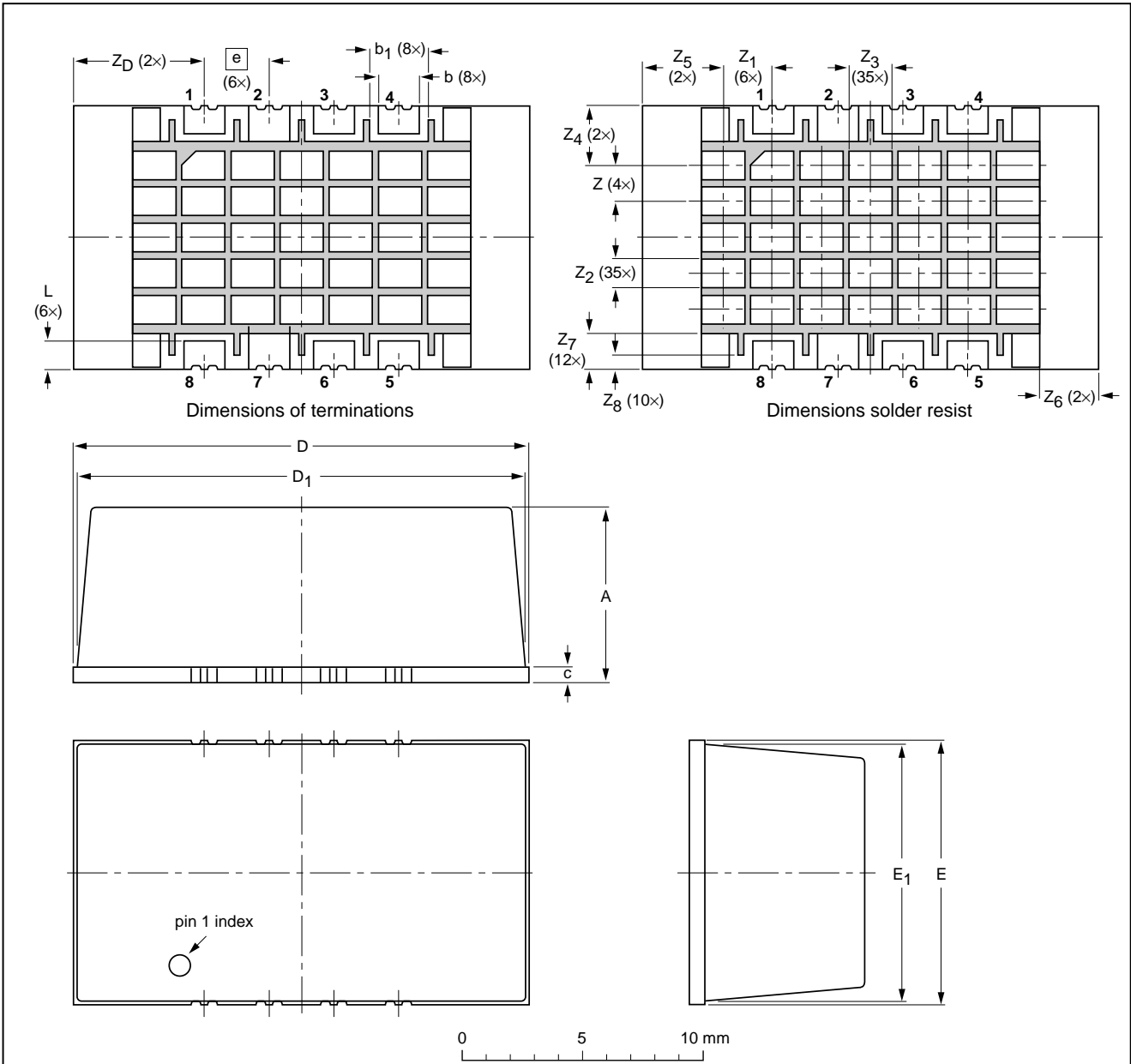
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PACKAGE OUTLINE

Leadless surface mounted package; plastic cap; 8 terminations

SOT567A



DIMENSIONS (mm are the original dimensions)

UNIT	A	b	b <sub>1</sub>	c	D	D <sub>1</sub>	E	E <sub>1</sub>	e	L	Z	Z <sub>1</sub>	Z <sub>2</sub>	Z <sub>3</sub>	Z <sub>4</sub>	Z <sub>5</sub>	Z <sub>6</sub>	Z <sub>7</sub>	Z <sub>8</sub>	Z <sub>D</sub>
mm	7.6	1.8	2.55	0.71	19.3	18.85	11.3	10.85	2.7	1.3	1.6	2.15	1.3	1.9	2.6	3.45	2.55	1.6	0.7	5.55
	7.1	1.6	2.35	0.57	18.7	18.55	10.7	10.55		1.1	1.4	1.95	1.1	1.7	2.4	3.25	2.35	1.4	0.5	5.35

OUTLINE VERSION	REFERENCES				EUROPEAN PROJECTION	ISSUE DATE
	IEC	JEDEC	JEITA			
SOT567A						02-02-28 02-06-06

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## DATA SHEET STATUS

DATA SHEET STATUS <sup>(1)</sup>	PRODUCT STATUS <sup>(2)</sup>	DEFINITIONS
Objective data	Development	This data sheet contains data from the objective specification for product development. Philips Semiconductors reserves the right to change the specification in any manner without notice.
Preliminary data	Qualification	This data sheet contains data from the preliminary specification. Supplementary data will be published at a later date. Philips Semiconductors reserves the right to change the specification without notice, in order to improve the design and supply the best possible product.
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This product is supplied in anti-static packing to prevent damage caused by electrostatic discharge during transport and handling. For further information, refer to Philips specs.: SNW-EQ-608, SNW-FQ-302A and SNW-FQ-302B.

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**NOTES**

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**NOTES**

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