



TELEFUNKEN electronic
Creative Technologies

BF 869 S · BF 871 S

T-33-05

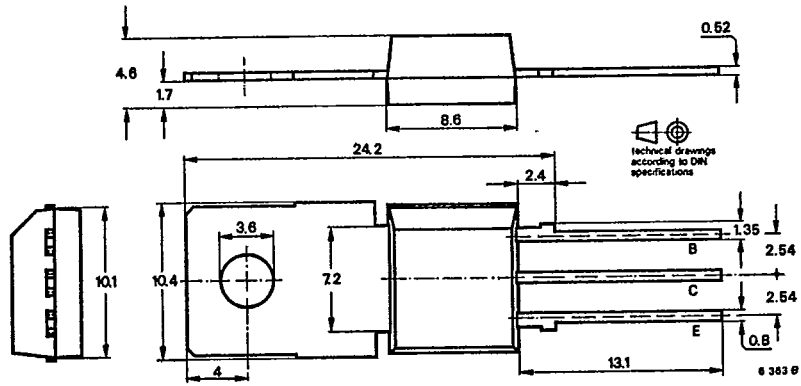
Silicon NPN Epitaxial Planar RF Transistors

Applications: Video-B-class power stages in TV-receivers

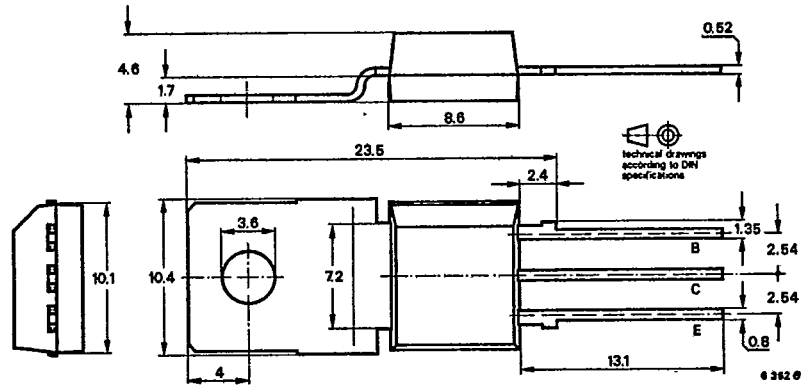
Features:

- High reverse voltage
- BF 869 S complementary to BF 870 S
- BF 871 S complementary to BF 872 S
- No h_{FE} -drift dependent of temperature

Dimensions in mm



BF 869 S · BF 871 S



BF 869 SA · BF 871 SA

Collector connected with metallic surface

Standard plastic case

34 A 3 DIN 41 869

JEDEC TO 202

Weight max. 1.8 g

T1.2/1022.0888 E

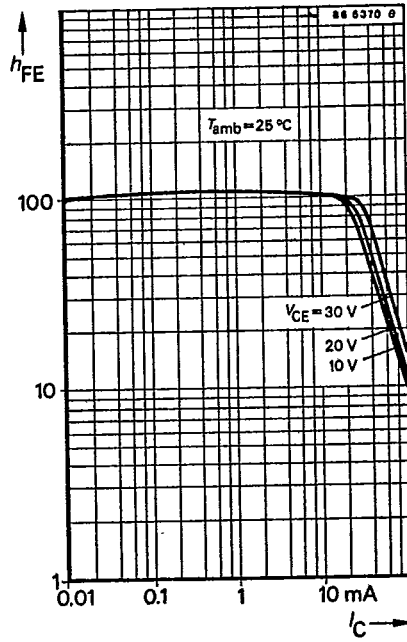
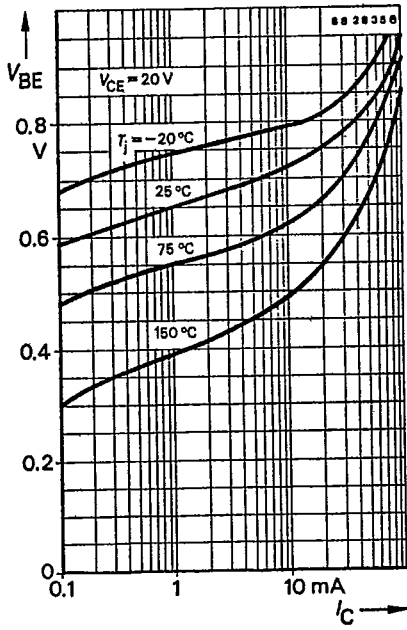
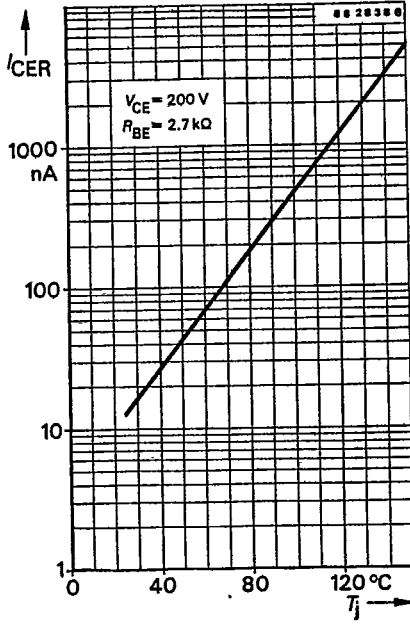
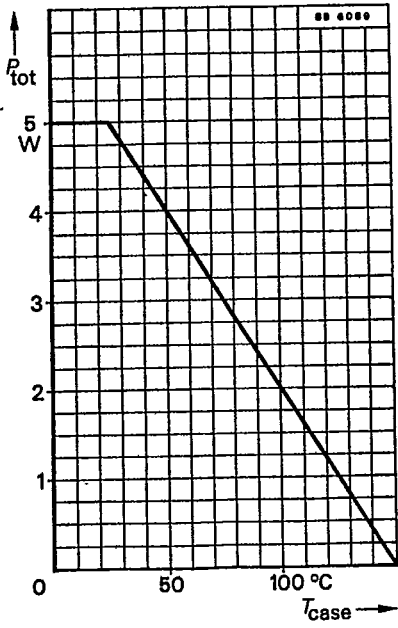
Absolute maximum ratings		BF 869 S	BF 871 S	
Collector-base voltage	V_{CBO}	250	300	V
Collector-emitter voltage	V_{CEO}	250	300	V
$R_{BE} \leq 2.7 \text{ k}\Omega$	V_{CER}	250	300	V
Emitter-base voltage	V_{EBO}	5		V
Collector current	I_C	50		mA
Collector peak current	I_{CM}	100		mA
Total power dissipation $T_{case} \leq 25 \text{ }^\circ\text{C}$	P_{tot}	5		W
Junction temperature	T_j	150		$^\circ\text{C}$
Storage temperature range	T_{stg}	-65 ... +150		$^\circ\text{C}$

Maximum thermal resistances				
Junction ambient	R_{thJA}	85		K/W
Junction case	R_{thJC}	25		K/W

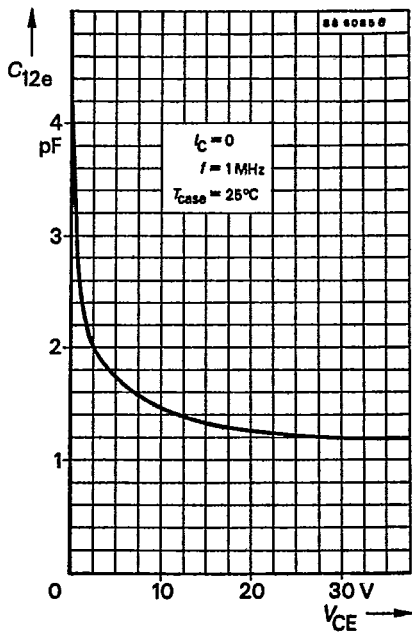
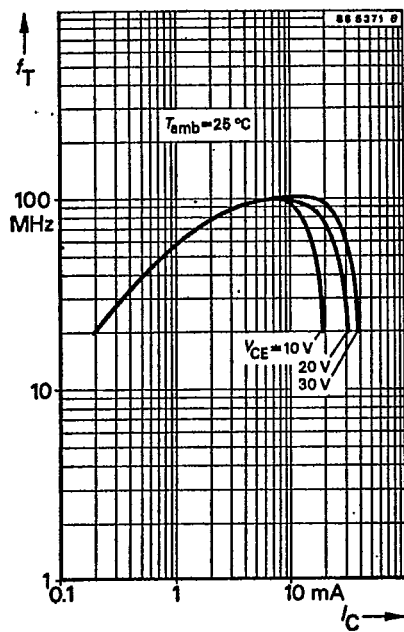
Characteristics		Min.	Typ.	Max.	
$T_{amb} = 25 \text{ }^\circ\text{C}$, unless otherwise specified					
Collector cut-off current					
$V_{CB} = 200 \text{ V}$	BF 869 S			50	nA
$V_{CE} = 250 \text{ V}, R_{BE} = 2.7 \text{ k}\Omega$	BF 871 S			50	nA
$V_{CE} = 200 \text{ V}, R_{BE} = 2.7 \text{ k}\Omega, T_j = 150 \text{ }^\circ\text{C}$				10	μA
Emitter cut-off current					
$V_{EB} = 5 \text{ V}$				10	μA
Collector-emitter breakdown voltage					
$I_C = 1 \text{ mA}$	BF 869 S	$V_{(BR)CEO}$	250		V
$I_C = 1 \text{ }\mu\text{A}, R_{BE} = 2.7 \text{ k}\Omega$	BF 871 S	$V_{(BR)CER}$	300		V
DC forward current transfer ratio					
$V_{CE} = 20 \text{ V}, I_C = 25 \text{ mA}$		h_{FE}	50		
Gain bandwidth product					
$V_{CE} = 10 \text{ V}, I_C = 10 \text{ mA}$		f_T	60	90	MHz
Feedback capacitance					
$V_{CE} = 30 \text{ V}, I_C = 0, f = 1 \text{ MHz}$		C_{12e}	1.2	1.8	pF
Collector saturation RF voltage					
$I_C = 25 \text{ mA}, T_j = 150 \text{ }^\circ\text{C}$		$V_{CEsatHF}$	20		V

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T-91-20

A E G CORP

● Family of curves

Besides the static (d. c.) and dynamic (a. c.) characteristics, family of curves are given for specified operating conditions. They show the typical interdependence of individual characteristics. Partly are given the scattering limits. They signify that at least 95% of the delivery lies inside these tolerances.

6.6. Additional informations

Preliminary specifications

This heading indicates that some information on the device concerned may be subject to slight changes.

Not for new developments

This heading indicates that the device concerned should not be used in equipment under development, it is, however, available for present production.

7. Taping and reeling

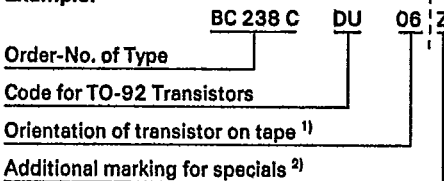
7.1. Taping of TO-92 transistors

Standard reeling: Taped on reel, reeled together with a paper film.

7.1.1. Order Numbers

Add the taping-code to the order number.

Example:



¹⁾ 06 = View on flat side of transistor, view on gummed tape

05 = View on round side of transistor, view on gummed tape

²⁾ Additional marking "O":

Taping without paper film

Additional marking "Z":

Zigzag folded tape in special box. Marking for orientation of transistor not necessary, because box can be opened on top or bottom.

Example for order No.: BC 237 C DU Z

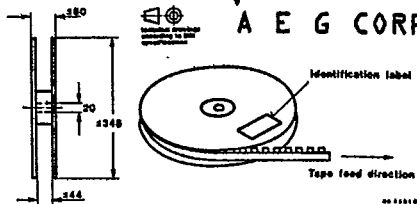


Fig. 7.1. Dimensions of reel in mm

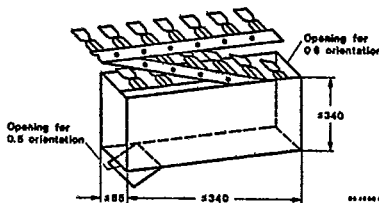


Fig. 7.2. Dimension of box for Zigzag folding in mm

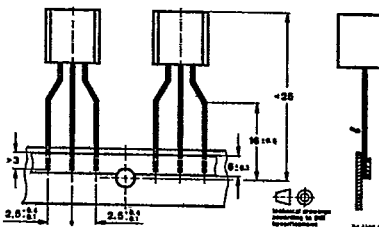


Fig. 7.3. Dimensions of tape in mm

7.1.2 Quantity of devices

1 000 devices per reel

2 000 devices per folded tape in special box.

7.2 Taped transistors in SOT 23 and SOT 143 case

a) Standard taping

Designation is attached with code GS 08 in case of standard taping. Example for normal version transistors as standard taped: BF 569-GS08.

Example for R-version transistors as standard taped: BF 569 R-GS 08.

In case of standard taping, the transistor orientation on the tape is shown in Fig. 7.4 and Fig. 7.5.

