

BF869; BF871

NPN high-voltage transistors

Product specification
Supersedes data of 1996Dec09

1999 Apr12

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FEATURES

- Low feedback capacitance.

APPLICATIONS

For use in class-B video output stages in colour television receivers.

DESCRIPTION

NPN transistors in a TO-202 plastic package.
PNP complement: BF872.

PINNING

PIN	DESCRIPTION
1	emitter
2	collector, connected to mounting base
3	base

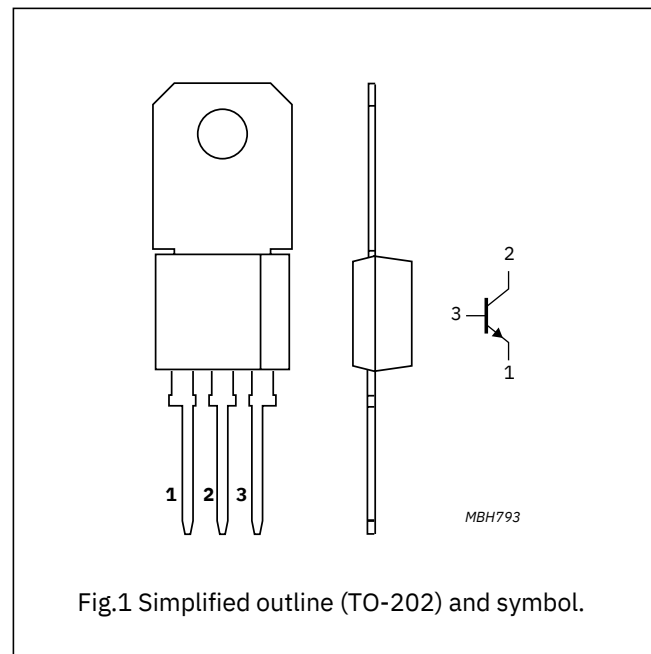


Fig.1 Simplified outline (TO-202) and symbol.

LIMITING VALUES

In accordance with the Absolute Maximum Rating System (IEC134).

	SYMBOL	PARAMETER CONDITIONS	MIN.	MAX.	UNIT
VCBO	collector-base voltage	open emitter	-	25	V
BF869			-	0	V
BF871			-	0	V
VCEO	collector-emitter voltage	open base	-	30	V
BF869			-	250	V
BF871			-	300	V
VEBO	emitter-base voltage	open collector	-	5	V
IC	collector current (DC)		-	50	mA
ICM	peak collector current	peak value	-	100	mA
IBM	peak base current		-	50	mA
P _{tot}	total power dissipation	T _{amb} 25°C	-	1.6	W
T _{mb}	25°C		-	5	W
T _{stg}	storage temperature		-65	+150	°C
T _j	junction temperature		-	150	°C
T _{amb}	operating ambient temperature		-65	+150	°C

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THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	VALUE	UNIT
$R_{th\ j-a}$	thermal resistance from junction to ambient	78	K/W
$R_{th\ j-mb}$	thermal resistance from junction to mounting base	25	K/W

CHARACTERISTICST_j=25°C unless otherwise specified.

	SYMBOL	PARAMETER	CONDITIONS	MIN.	MAX.	UNIT
I _{CBO}	collector cut-off current		I _E = 0; V _{CB} = 200V	-	10	nA
			I _E = 0; V _{CB} = 200V; T _j = 150°C		10	μA
I _{EBO}	emitter cut-off current		I _C = 0; V _{EB} = 5V	-	50	nA
h _{FE}	DC current gain		I _C = 25mA; V _{CE} = 20V	50	-	
V _{CEsat}	collector-emitter saturation voltage		I _C = 30mA; I _B = 5mA	-	60	mV
C _e	voltage feedback capacitance		I _C = i _c = 0; V _{CE} = 30V; f = 1MHz	-	0.2	pF
f _T	transition frequency		I _C = 10mA; V _{CE} = 10V; f = 100MHz	60		MHz

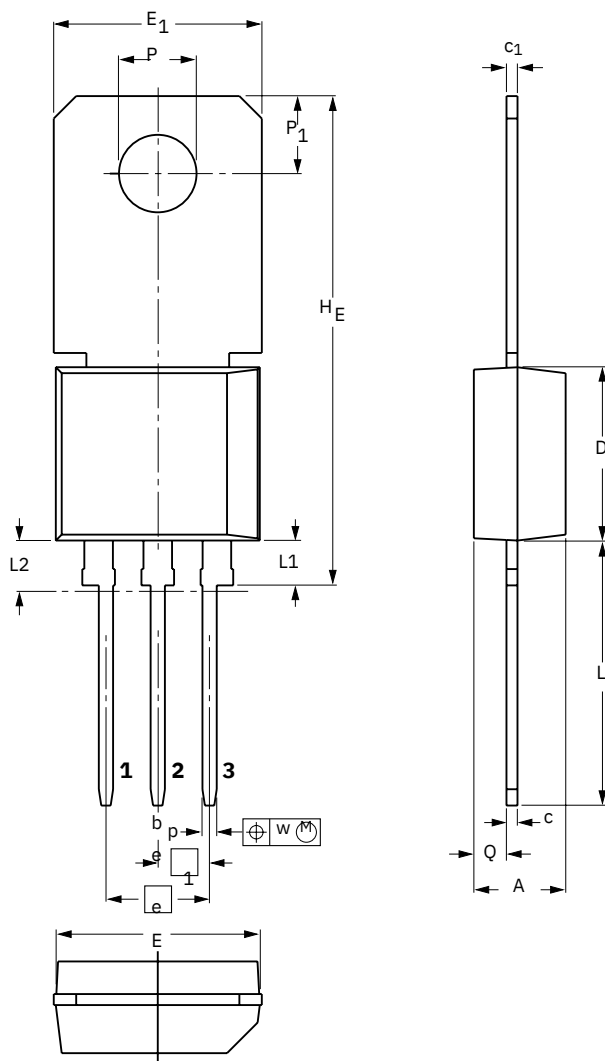
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PACKAGE OUTLINE

Plastic single-ended leaded (through hole) package; with cooling fin, mountable to heatsink, 1 mounting hole; 3 leads (in-line)

SOT128B



0 5

10 mm

scale

DIMENSIONS (mm are the original dimensions)

UNIT A b		pcc1DEE1ee1										H E	L	L1	L2(1) max	P	P1	Q	w									
mm	4.6	0.8	0.65	0.56	8.6	10.1	10.4					4.4	0.6	0.5	0.46	8.4	9.9	10.0	5.08	2.54	24.2	13.3	2.	2.5	3.	3.9	1.	0.25
																					23.8	12.2	4	8	3.7	7		

Note

1. Plastic flash allowed within this zone

OUTLINE REFERENCES

VERSION	EUROPEAN PROJECTION	ISSUE DATE
JEDEC EIAJ SOT128BTO-202		97-02-28

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DEFINITIONS**Data sheet status**

Objective specification	This data sheet contains target or goal specifications for product development.
Preliminary specification	This data sheet contains preliminary data; supplementary data may be published later.
Product specification	This data sheet contains final product specifications.

Limiting values

Limiting values given are in accordance with the Absolute Maximum Rating System (IEC 134). Stress above one or more of the limiting values may cause permanent damage to the device. These are stress ratings only and operation of the device at these or at any other conditions above those given in the Characteristics sections of the specification is not implied. Exposure to limiting values for extended periods may affect device reliability.

Application information

Where application information is given, it is advisory and does not form part of the specification.

LIFE SUPPORT APPLICATIONS

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NOTES

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NOTES

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Printed in The Netherlands

115002/00/03/pp8

Date of release: 1999Apr12

Document order number: 939775005573

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