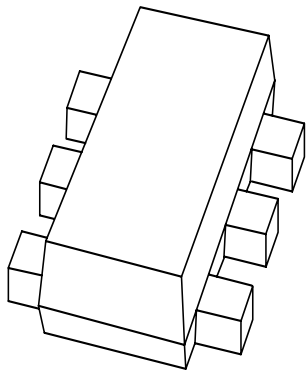


DATA SHEET



BC847BV

NPN general purpose double
transistor

NPN general purpose double transistor

BC847BV

FEATURES

- 300 mW total power dissipation
- Very small 1.6 mm × 1.2 mm × 0.55 mm ultra thin package
- Excellent coplanarity due to straight leads
- Low collector capacitance
- Improved thermal behaviour due to flat leads
- Reduces number of components as replacement of two SC-75/SC-89 packaged BISS transistors
- Reduces required board space
- Reduces pick and place costs.

APPLICATIONS

- General purpose switching and amplification.

DESCRIPTION

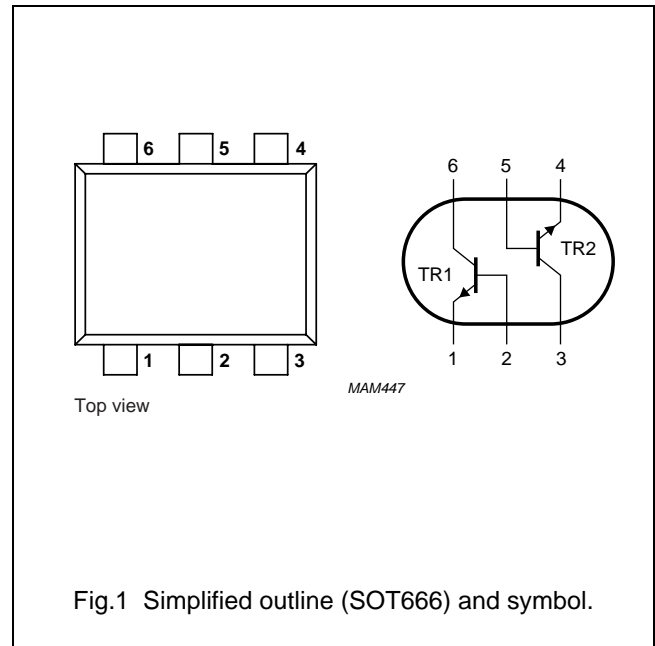
NPN double transistor in a SOT666 plastic package.
PNP complement: BC857BV.

MARKING

TYPE NUMBER	MARKING CODE
BC847BV	1F

PINNING

PIN	DESCRIPTION
1, 4	emitter TR1; TR2
2, 5	base TR1; TR2
6, 3	collector TR1; TR2



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LIMITING VALUES

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

SYMBOL	PARAMETER	CONDITIONS	MIN.	MAX.	UNIT
Per transistor					
V _{CBO}	collector-base voltage	open emitter	–	50	V
V _{CEO}	collector-emitter voltage	open base	–	45	V
V _{EBO}	emitter-base voltage	open collector	–	5	V
I _C	collector current (DC)		–	100	mA
I _{CM}	peak collector current		–	200	mA
I _{BM}	peak base current		–	200	mA
P _{tot}	total power dissipation	T _{amb} ≤ 25 °C; note 1	–	200	mW
T _{stg}	storage temperature		–65	+150	°C
T _j	junction temperature		–	150	°C
T _{amb}	operating ambient temperature		–65	+150	°C
Per device					
P _{tot}	total power dissipation	T _{amb} ≤ 25 °C; note 1	–	300	mW

Note

1. Transistor mounted on an FR4 printed-circuit board.

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
R _{th j-a}	thermal resistance from junction to ambient	notes 1 and 2	416	K/W

Notes

1. Transistor mounted on an FR4 printed-circuit board.
2. The only recommended soldering method is reflow soldering.

NPN general purpose double transistor

BC847BV

CHARACTERISTICS

T_{amb} = 25 °C; unless otherwise specified.

SYMBOL	PARAMETER	CONDITIONS	MIN.	TYP.	MAX.	UNIT
Per transistor						
I _{CBO}	collector-base cut-off current	I _E = 0; V _{CB} = 30 V	–	–	15	nA
		I _E = 0; V _{CB} = 30 V; T _j = 150 °C	–	–	5	μA
I _{EBO}	emitter-base cut-off current	I _C = 0; V _{EB} = 5 V	–	–	100	nA
h _{FE}	DC current gain	I _C = 2 mA; V _{CE} = 5 V	200	–	450	
V _{BE}	base-emitter voltage	I _C = 2 mA; V _{CE} = 5 V	580	655	700	mV
V _{CEsat}	collector-emitter saturation voltage	I _C = 10 mA; I _B = 0.5 mA	–	–	100	mV
		I _C = 100 mA; I _B = 5 mA; note 1	–	–	300	mV
V _{BEsat}	base-emitter saturation voltage	I _C = 10 mA; I _B = 0.5 mA	–	755	–	mV
C _c	collector capacitance	I _E = I _e = 0; V _{CB} = 10 V; f = 1 MHz	–	–	1.5	pF
C _e	emitter capacitance	I _C = I _c = 0; V _{EB} = 500 mV; f = 1 MHz	–	11	–	pF
f _T	transition frequency	I _C = 10 mA; V _{CE} = 5 V; f = 100 MHz	100	–	–	MHz

Note

1. Pulse test: t_p ≤ 300 μs; δ ≤ 0.02.

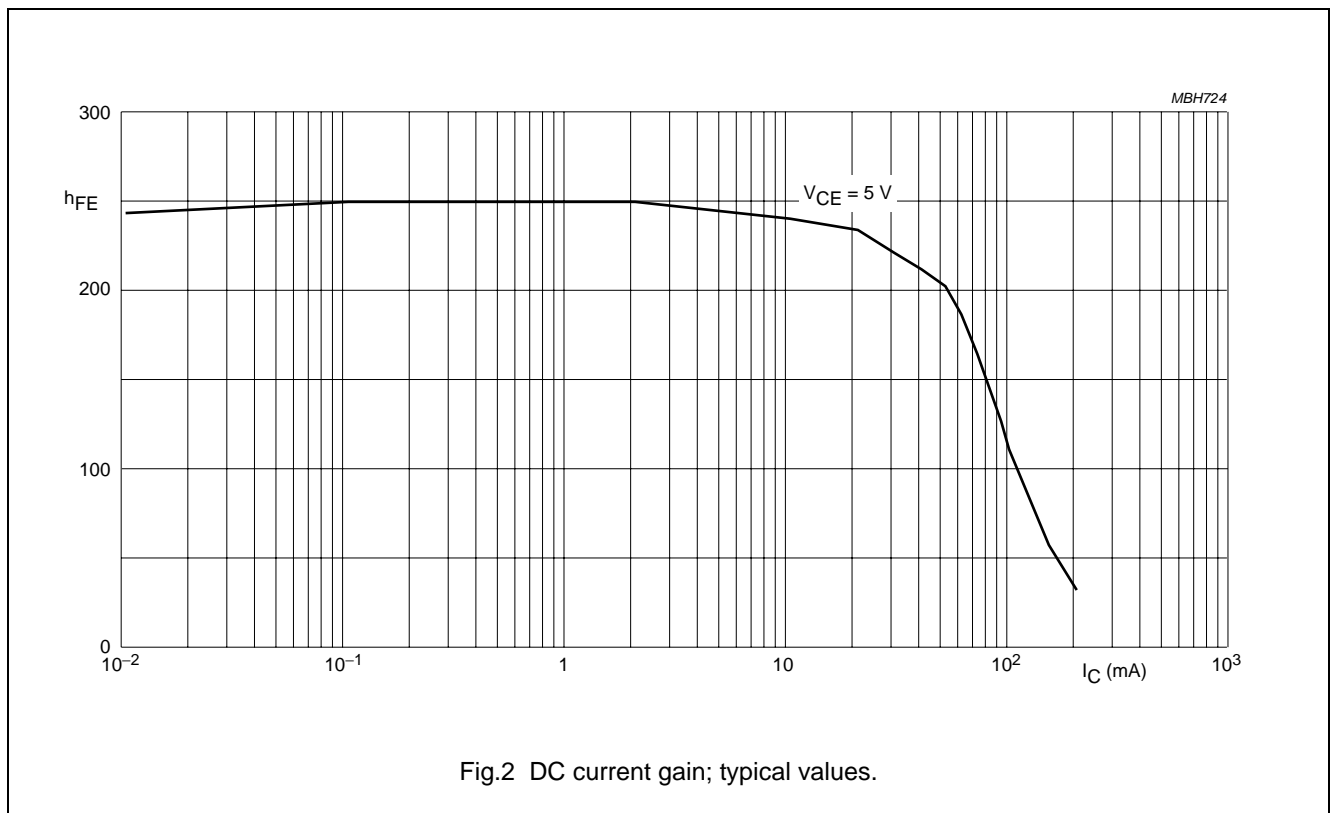
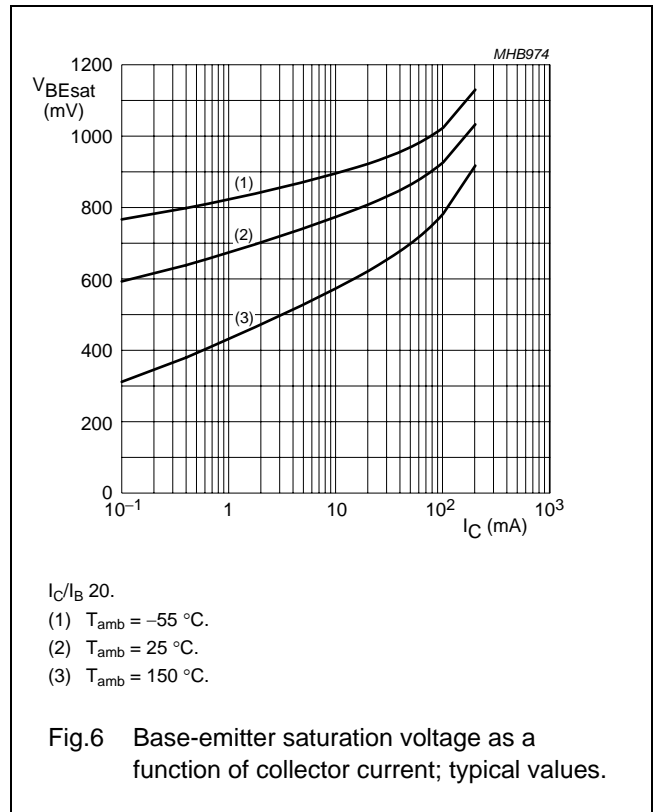
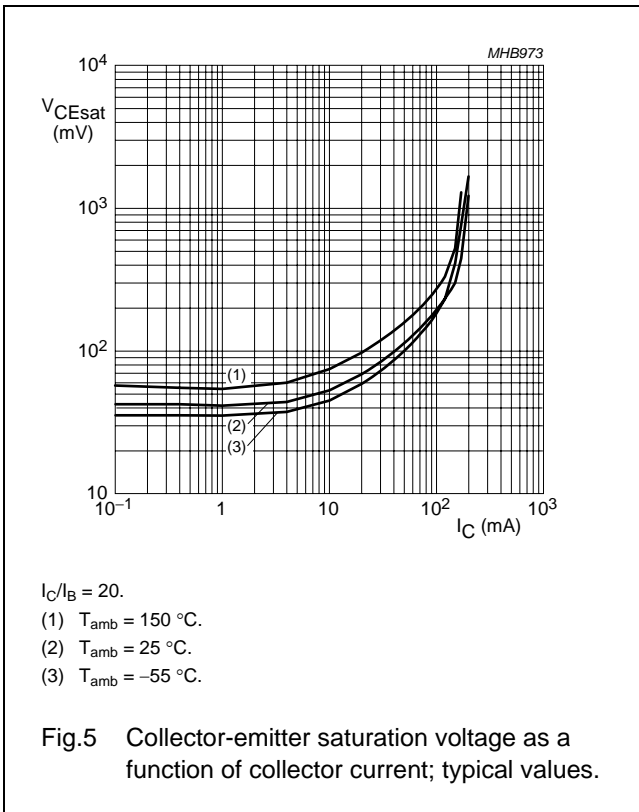
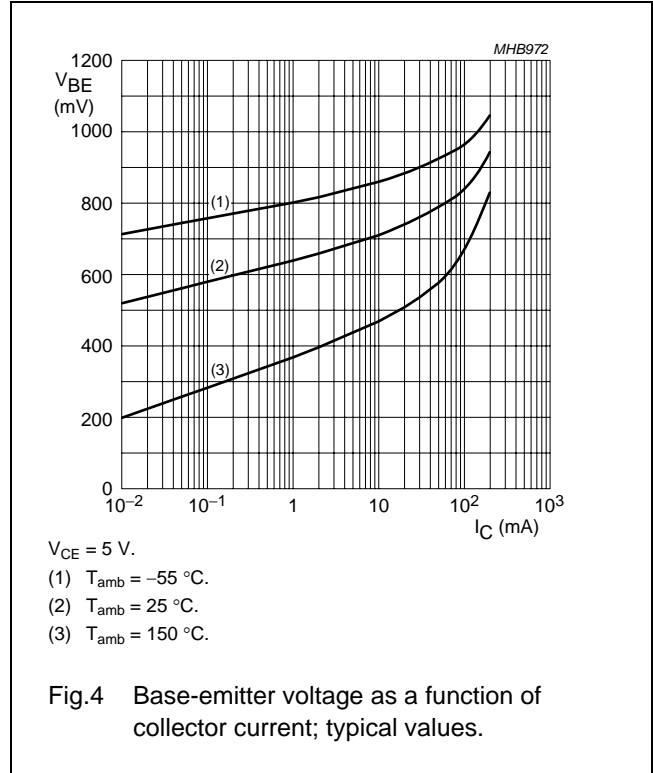
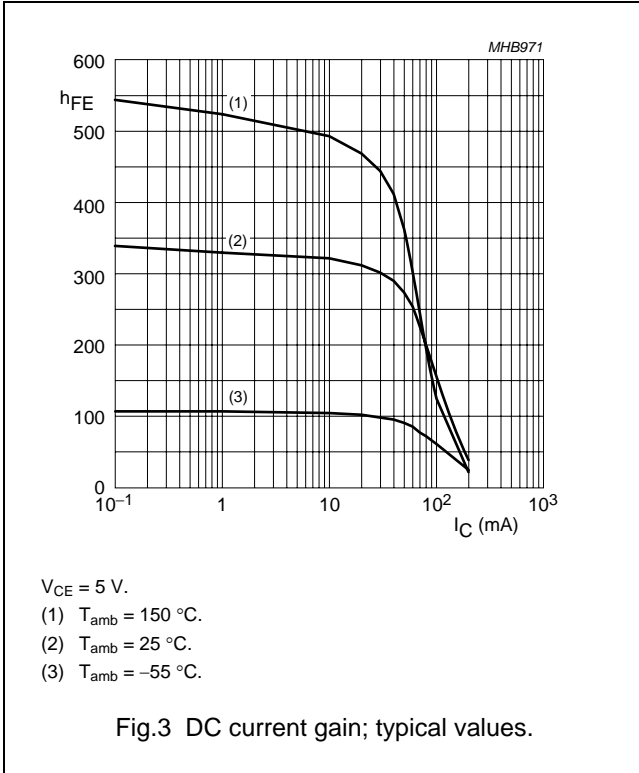


Fig.2 DC current gain; typical values.

NPN general purpose double transistor

BC847BV

Graphical information BC847BV



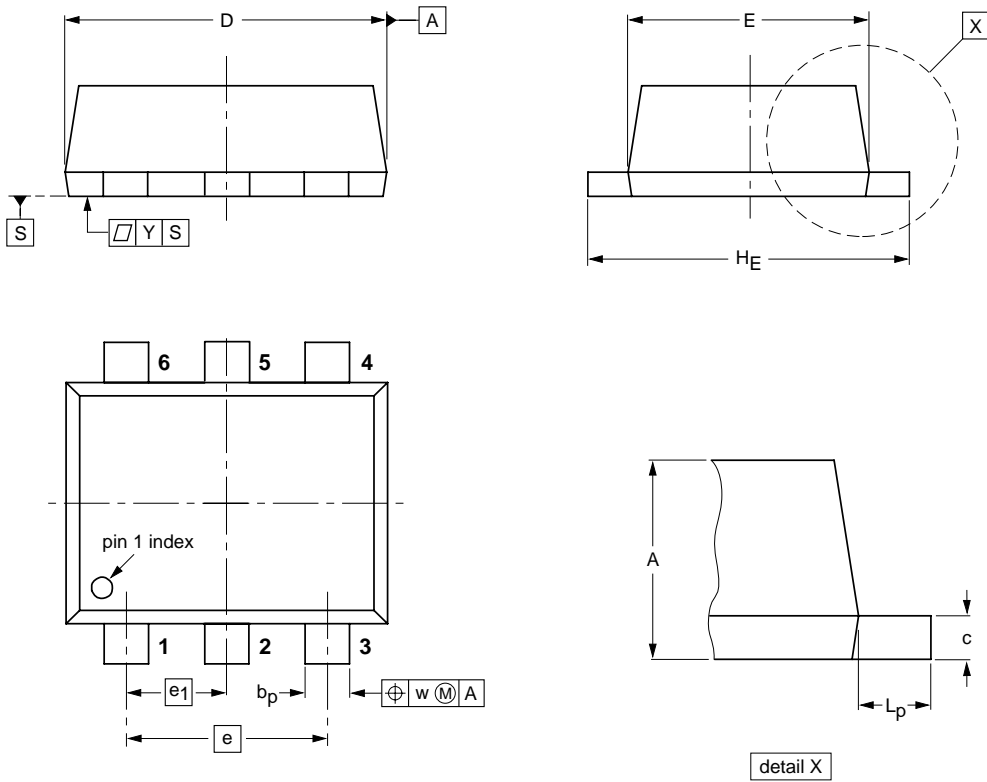
NPN general purpose double transistor

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PACKAGE OUTLINE

Plastic surface mounted package; 6 leads

SOT666



DIMENSIONS (mm are the original dimensions)

UNIT	A	b_p	c	D	E	e	e_1	H_E	L_p	w	y
mm	0.6 0.5	0.27 0.17	0.18 0.08	1.7 1.5	1.3 1.1	1.0	0.5	1.7 1.5	0.3 0.1	0.1	0.1

OUTLINE VERSION	REFERENCES			EUROPEAN PROJECTION	ISSUE DATE
	IEC	JEDEC	EIAJ		
SOT666					01-01-04 01-08-27

NPN general purpose double transistor

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DATA SHEET STATUS

DOCUMENT STATUS ⁽¹⁾	PRODUCT STATUS ⁽²⁾	DEFINITION
Objective data sheet	Development	This document contains data from the objective specification for product development.
Preliminary data sheet	Qualification	This document contains data from the preliminary specification.
Product data sheet	Production	This document contains the product specification.

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Printed in The Netherlands

613514/01/pp8

Date of release: 2001 Sep 10

Document order number: 9397 750 08589

