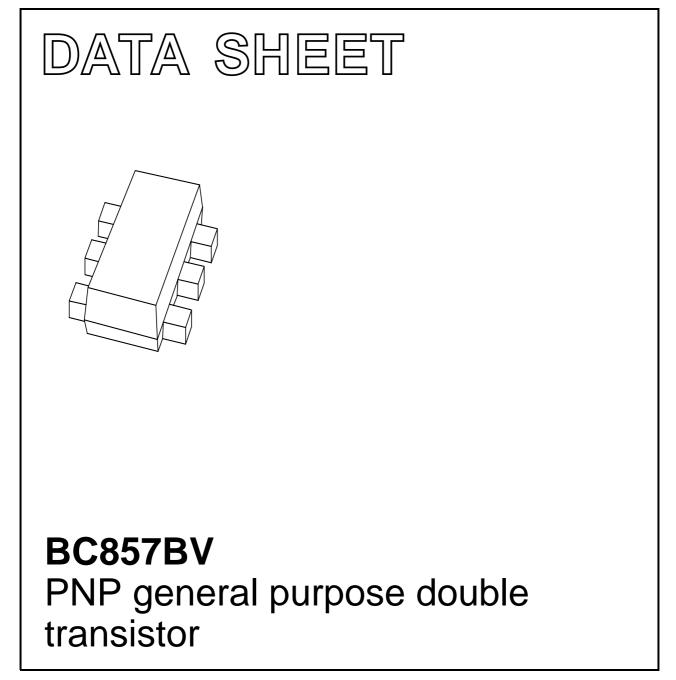
DISCRETE SEMICONDUCTORS



Product data sheet Supersedes data of 2001 Aug 10 2001 Nov 07



FEATURES

- 300 mW total power dissipation
- Very small 1.6 mm \times 1.2 mm \times 0.55 mm ultra thin package
- Excellent coplanarity due to straight leads
- · 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

PNP double transistor in a SOT666 plastic package. NPN complement: BC847BV.

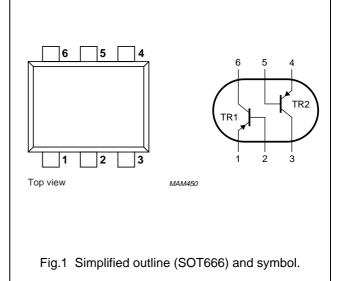
MARKING

TYPE NUMBER	MARKING CODE		
BC857BV	3F		

PINNING

2

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



Product data sheet

BC857BV

BC857BV

LIMITING VALUES

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

SYMBOL	PARAMETER	CONDITIONS	MIN.	MAX.	UNIT
Per transi	stor				•
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	$T_{amb} \le 25 \ ^{\circ}C; note 1$	-	200	mW
T _{stg}	storage temperature		-65	+150	°C
Tj	junction temperature		-	150	°C
T _{amb}	operating ambient temperature		-65	+150	°C
Per device	9	·	·		
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.

BC857BV

CHARACTERISTICS

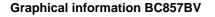
 T_{amb} = 25 °C; unless otherwise specified.

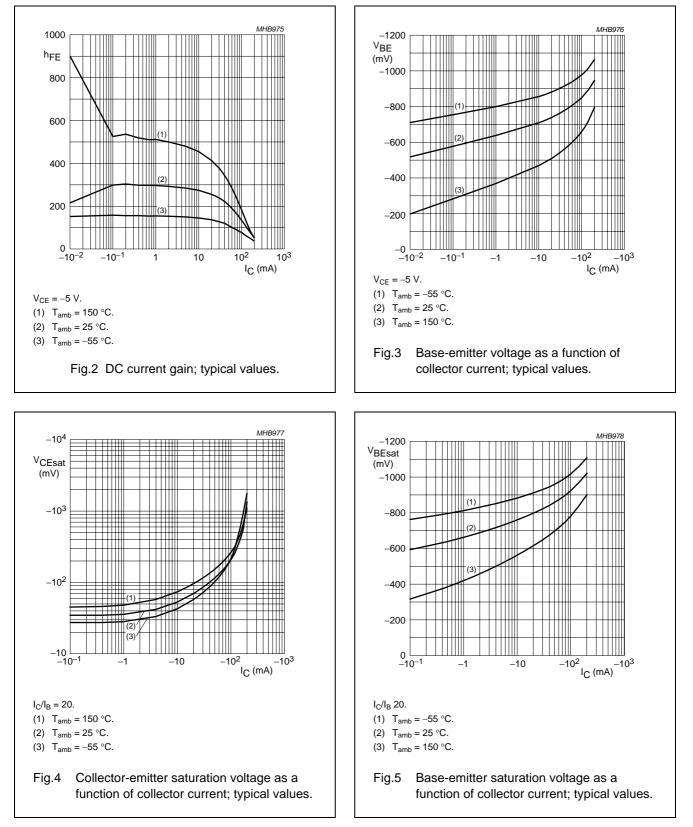
SYMBOL	PARAMETER	CONDITIONS	MIN.	TYP.	MAX.	UNIT
Per transis	Per transistor					
I _{CBO}	collector-base cut-off current	I _E = 0; V _{CB} = -30 V	_	_	-15	nA
		$I_E = 0; V_{CB} = -30 \text{ V}; T_j = 150 \text{ °C}$	-	-	-5	μΑ
I _{EBO}	emitter-base cut-off current	$I_{C} = 0; V_{EB} = -5 V$	-	-	-100	nA
h _{FE}	DC current gain	$I_{C} = -2 \text{ mA}; V_{CE} = -5 \text{ V}$	200	-	450	
V _{BE}	base-emitter voltage	$I_{C} = -2 \text{ mA}; V_{CE} = -5 \text{ V}$	-600	-655	-750	mV
V _{CEsat}	collector-emitter saturation	$I_{\rm C} = -10$ mA; $I_{\rm B} = -0.5$ mA	-	-	-100	mV
	voltage	$I_{C} = -100 \text{ mA}; I_{B} = -5. \text{ mA}; \text{ note } 1$	-	-	-400	mV
V _{BEsat}	base-emitter saturation voltage	$I_{\rm C} = -10$ mA; $I_{\rm B} = -0.5$ mA	_	-755	_	mV
C _c	collector capacitance	$I_E = i_e = 0; V_{CB} = -10 V; f = 1 MHz$	_	_	2.2	pF
C _e	emitter capacitance	$I_{C} = i_{c} = 0; V_{EB} = -500 \text{ mV};$ f = 1 MHz	-	10	-	pF
f _T	transition frequency	$I_{C} = -10 \text{ mA}; V_{CE} = -5 \text{ V};$ f = 100 MHz	100	-	-	MHz

Note

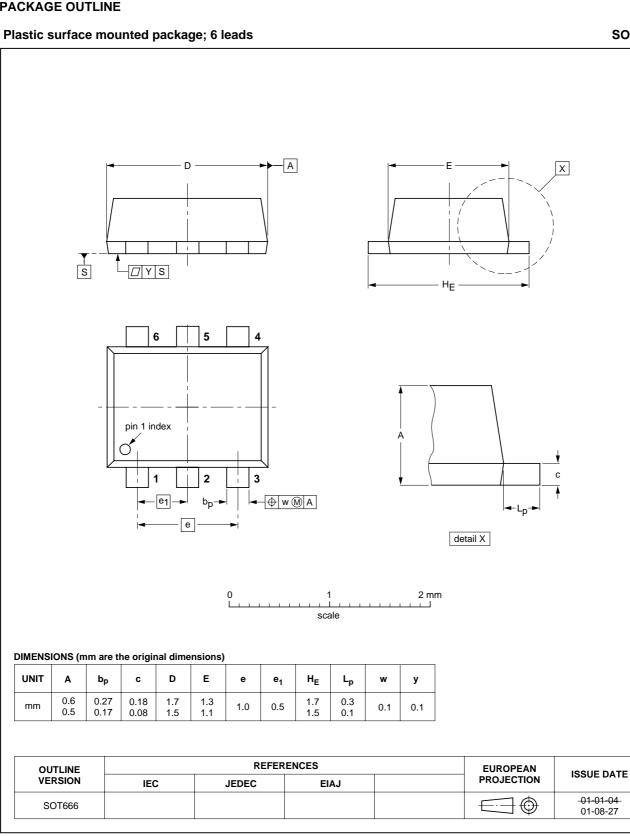
1. Pulse test: $t_p \leq 300~\mu s;~\delta \leq 0.02.$

BC857BV





PACKAGE OUTLINE



SOT666

BC857BV

Product data sheet

BC857BV

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.

Notes

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