



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832

Email & Skype: info@chipsmall.com Web: www.chipsmall.com

Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China





BC857B

SMALL SIGNAL PNP TRANSISTOR

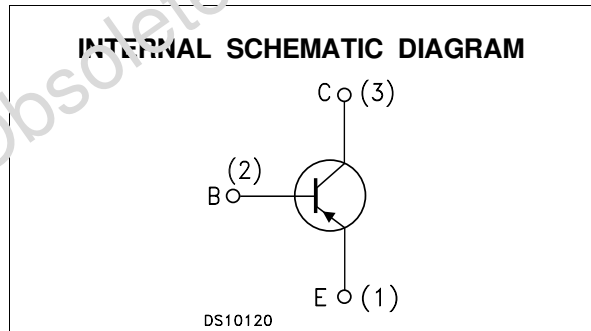
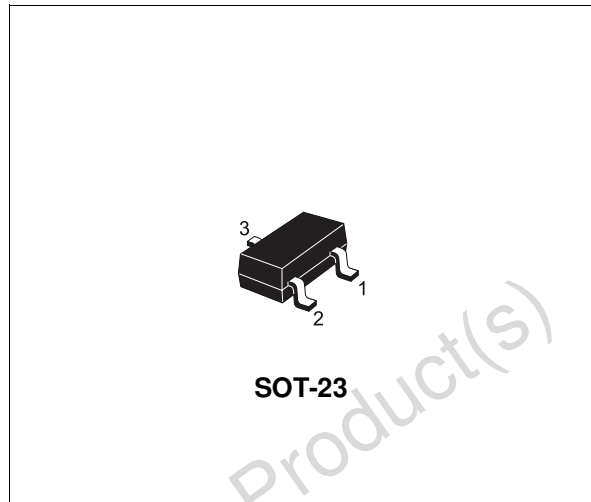
PRELIMINARY DATA

Type	Marking
BC857B	3F

- SILICON EPITAXIAL PLANAR PNP TRANSISTOR
- MINIATURE SOT-23 PLASTIC PACKAGE FOR SURFACE MOUNTING CIRCUITS
- TAPE AND REEL PACKING
- THE NPN COMPLEMENTARY TYPE IS BC847B

APPLICATIONS

- WELL SUITABLE FOR PORTABLE EQUIPMENT
- SMALL LOAD SWITCH TRANSISTOR WITH HIGH GAIN AND LOW SATURATION VOLTAGE



ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage ($I_E = 0$)	-50	V
V_{CEO}	Collector-Emitter Voltage ($I_B = 0$)	-45	V
V_{EBO}	Emitter-Base Voltage ($I_C = 0$)	-5	V
I_C	Collector Current	-100	mA
I_{CM}	Collector Peak Current	-200	mA
P_{tot}	Total Dissipation at $T_C = 25\text{ }^\circ\text{C}$	250	mW
T_{stg}	Storage Temperature	-65 to 150	$^\circ\text{C}$
T_j	Max. Operating Junction Temperature	150	$^\circ\text{C}$

BC857B

THERMAL DATA

$R_{thj-amb}$ •	Thermal Resistance Junction-Ambient	Max	500	°C/W
-----------------	-------------------------------------	-----	-----	------

• Device mounted on a PCB area of 1 cm².

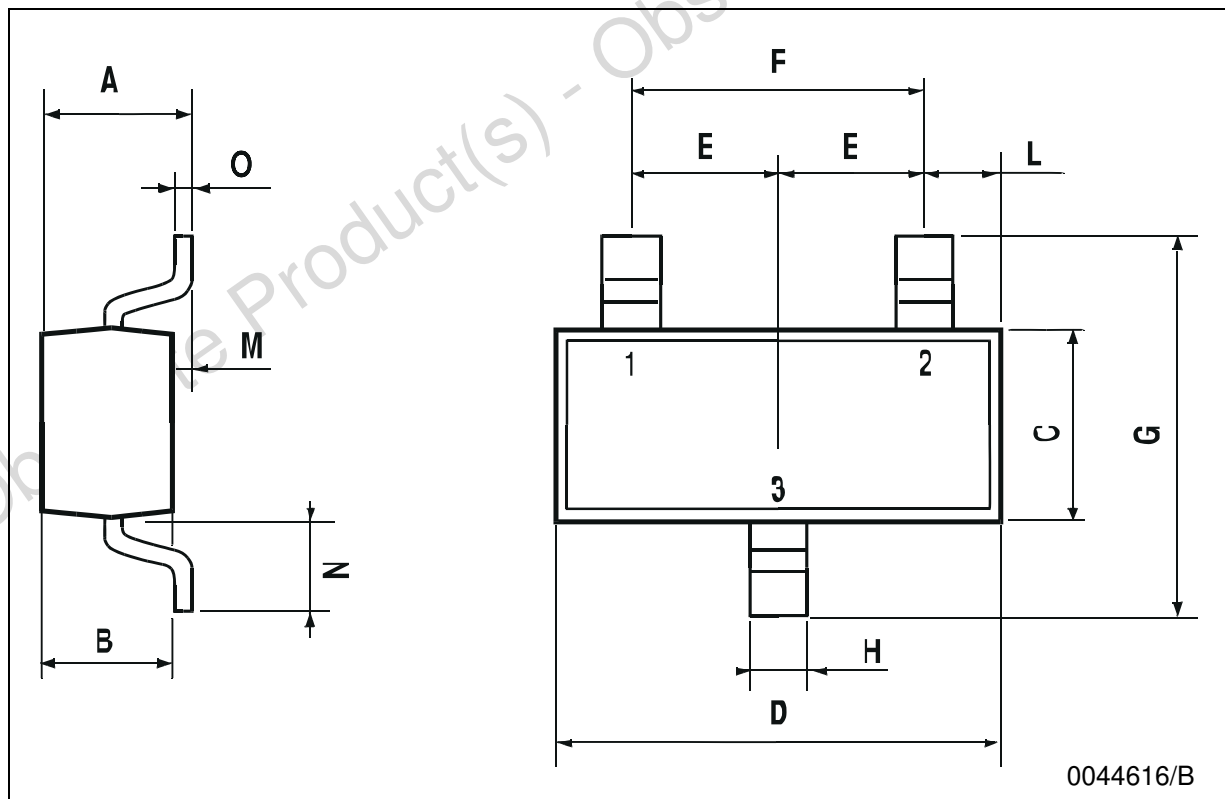
ELECTRICAL CHARACTERISTICS (T_{case} = 25 °C unless otherwise specified)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
I _{CBO}	Collector Cut-off Current (I _E = 0)	V _{CB} = -30 V V _{CB} = -30 V T _C = 150 °C		-1	-15 -5	nA μA
I _{EBO}	Emitter Cut-off Current (I _C = 0)	V _{EB} = -5 V			-100	nA
V _{(BR)CBO}	Collector-Base Breakdown Voltage (I _E = 0)	I _C = -10 μA	-50			V
V _{(BR)CEO*}	Collector-Emitter Breakdown Voltage (I _B = 0)	I _C = -2 mA	-45			V
V _{(BR)EBO}	Emitter-Base Breakdown Voltage (I _C = 0)	I _E = -10 μA	-5			V
V _{CE(sat)*}	Collector-Emitter Saturation Voltage	I _C = -10 mA I _B = -0.5 mA I _C = -100 mA I _B = -5 mA		-0.07 -0.25	-0.3 -0.65	V V
V _{BE(sat)*}	Base-Emitter Saturation Voltage	I _C = -10 mA I _B = -0.5 mA I _C = -100 mA I _B = -5 mA		-0.7 -0.85		V V
V _{BE(on)*}	Base-Emitter On Voltage	I _C = -2 mA V _{CE} = -5 V I _C = -10 mA V _{CE} = -5 V	-0.6	-0.65	-0.75 -0.82	V V
h _{FE}	DC Current Gain	I _C = -2 mA V _{CE} = -5 V	220		475	
f _T	Transition Frequency	I _C = -10 mA V _{CE} = -5 V f = 100MHz	100			MHz
C _{CBO}	Collector-Base Capacitance	I _E = 0 V _{CB} = -10 V f = 1 MHz		4.5		pF
NF	Noise Figure	V _{CE} = -5 V I _C = -0.2 mA f = 1KHz Δf = 200 Hz R _G = 2 KΩ		2	10	dB

* Pulsed: Pulse duration = 300 μs, duty cycle ≤ 2 %

SOT-23 MECHANICAL DATA

DIM.	mm			mils		
	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
A	0.85		1.1	33.4		43.3
B	0.65		0.95	25.6		37.4
C	1.20		1.4	47.2		55.1
D	2.80		3	110.2		118
E	0.95		1.05	37.4		41.3
F	1.9		2.05	74.8		80.7
G	2.1		2.5	82.6		98.4
H	0.38		0.48	14.9		18.8
L	0.3		0.6	11.8		23.6
M	0		0.1	0		3.9
N	0.3		0.65	11.8		25.6
O	0.09		0.17	3.5		6.7



Obsolete Product(s) - Obsolete Product(s)

Information furnished is believed to be accurate and reliable. However, STMicroelectronics assumes no responsibility for the consequences of use of such information nor for any infringement of patents or other rights of third parties which may result from its use. No license is granted by implication or otherwise under any patent or patent rights of STMicroelectronics. Specification mentioned in this publication are subject to change without notice. This publication supersedes and replaces all information previously supplied. STMicroelectronics products are not authorized for use as critical components in life support devices or systems without express written approval of STMicroelectronics.

The ST logo is a trademark of STMicroelectronics

© 2002 STMicroelectronics – Printed in Italy – All Rights Reserved

STMicroelectronics GROUP OF COMPANIES

Australia - Brazil - Canada - China - Finland - France - Germany - Hong Kong - India - Israel - Italy - Japan - Malaysia - Malta - Morocco - Singapore - Spain - Sweden - Switzerland - United Kingdom - United States.

<http://www.st.com>