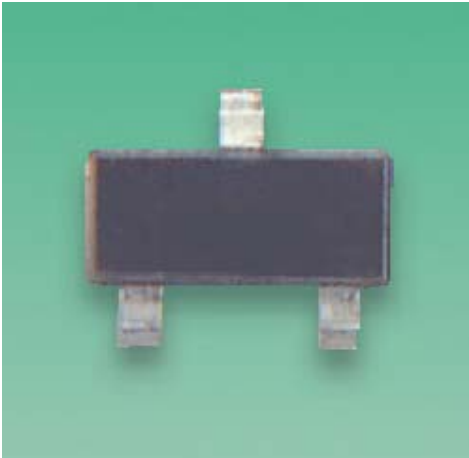


BC847C

General Purpose SMD NPN Transistors



SOT-23

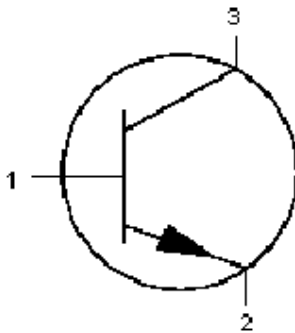


Features:

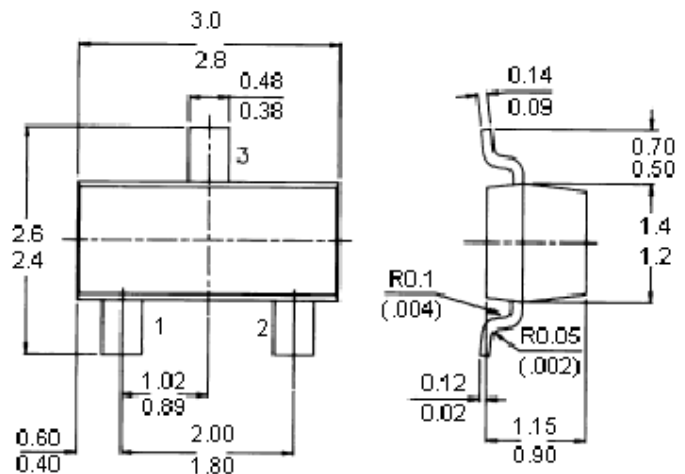
- Silicon planar epitaxial transistors.
- General purpose NPN transistors.

Pin Configuration:

1. Base
2. Emitter
3. Collector



Package Outline Details



Dimensions : Millimetres

Absolute Maximum Ratings

	Symbol		BC847C	Units
Collector-Emitter Voltage ($V_{BE} = 0$)	V_{CES}	Maximum	50	V
Collector-Emitter Voltage (Open Base)	V_{CEO}		45	
Collector Current (Peak Value)	I_{CM}		200	mA
Total Power Dissipation up to $T_{amb} = 25^{\circ}C$	P_{tot}		250	mW
Junction Temperature	T_j		150	$^{\circ}C$



BC847C

General Purpose SMD NPN Transistors



Absolute Maximum Ratings

	Symbol		BC847C	Units
Small-Signal Current Gain $I_C = 2\text{mA}; V_{CE} = 5\text{V}; f = 1\text{kHz}$	h_{fe}	Minimum	125	-
Transition Frequency at $f = 100\text{MHz}$ $I_C = 10\text{mA}; V_{CE} = 5\text{V}$	f_T		>100	MHz
Noise Figure at $R_S = 2\text{k}\Omega$ $I_C = 200\text{mA}; V_{CE} = 5\text{V}$ $f = 1\text{kHz}; B = 200\text{Hz}$	F	Typical	2	dB

Ratings (at $T_A = 25^\circ\text{C}$ unless otherwise specified)

	Symbol		BC847C	Units
Collector-Base Voltage (Open Emitter)	V_{CBO}	Maximum	50	V
Collector-Emitter Voltage ($V_{BE} = 0$)	V_{CES}			
Collector-Emitter Voltage (Open Base)	V_{CEO}			
Emitter-Base Voltage (Open Collector)	V_{EBO}		6	
Collector Current (DC)	I_C	Maximum	100	mA
Collector Current (Peak Value)	I_{CM}		200	
Emitter Current (Peak Value)	$-I_{EM}$			
Base Current (Peak Value)	I_{BM}			
Total Power Dissipation upto $T_{amb}: 25^\circ\text{C}$	P_{tot}		250	mW
Storage Temperature	T_{stg}	-	-55 to +150	$^\circ\text{C}$
Junction Temperature	T_j	Maximum	150	
Thermal Resistance				
From junction to ambient	$R_{th(j-a)}$	=	500	K/W
Characteristics ($T_j = 25^\circ\text{C}$ unless otherwise specified)				
Collector Cut off Current $I_E = 0; V_{CB} = 30\text{V}$ $I_E = 0; V_{CB} = 30\text{V}; T_j = 150^\circ\text{C}$	I_{CBO}	<	15 5	nA μA
Base-Emitter Voltage $I_C = 2\text{mA}; V_{CE} = 5\text{V}$	V_{BE}	Typical	660	mV
$I_C = 10\text{mA}; V_{CE} = 5\text{V}$	V_{BE}	<	580 to 700 770	
Saturation Voltage $I_C = 10\text{mA}; I_B = 0.5\text{mA}$ $I_C = 100\text{mA}; I_B = 5\text{mA}$	$V_{CE(sat)}$ $V_{BE(sat)}$ $V_{CE(sat)}$ $V_{BE(sat)}$	Typical < Typical Typical < Typical	90 250 700 200 600 900	



BC847C

General Purpose SMD NPN Transistors



Ratings (at $T_A = 25^\circ\text{C}$ unless otherwise specified)

	Symbol		BC847C	Unit
Collector Capacitance at $f = 1\text{MHz}$ $I_E = I_C = 0; V_{CB} = 10\text{V}$	C_C	Typical	2.5	pF
Transition Frequency at $f = 100\text{MHz}$ $I_C = 10\text{mA}; V_{CE} = 5\text{V}$	f_T	>	100	MHz
Noise Figure at $R_S = 2\text{KW}$ $I_C = 200\mu\text{A}; V_{CE} = 5\text{V};$ $f = 1\text{kHz}; B = 200\text{Hz}$	F	Typical Maximum	2 10	dB
DC Current Gain $I_C = 10\text{mA}; V_{CE} = 5\text{V}$ $I_C = 2\text{mA}; V_{CE} = 5\text{V}$	h_{FE}	Typical > Typical <	270 420 520 800	-
Small Signal Current Gain at $f = 1\text{kHz}$ $I_C = 2\text{mA}; V_{CE} = 5\text{V}$	h_{fe}	Minimum Maximum	125 900	-

Specifications

V_{CEO} (V)	I_C (mA) Maximum	F (dB) Maximum	P_{tot} (mW)	Device Marking	Part Number
45	100	10	250	IG	BC847C



BC847C

General Purpose SMD NPN Transistors



Notes:

International Sales Offices:



AUSTRALIA - Farnell
Tel No: ++61 1300 361 005
Fax No: ++61 1300 361 225



FINLAND - Farnell
Tel No: ++358 9 560 7780
Fax No: ++358 9 345 5411



ITALY - Farnell
Tel No: ++39 02 93 995 200
Fax No: ++39 02 93 995 300



SPAIN - Farnell
Tel No: 901 20 20 80
Fax No: 901 20 20 90



AUSTRIA - Farnell
Tel No: ++43 662 2180 680
Fax No: ++43 662 2180 670



FRANCE - Farnell
Tel No: ++33 474 68 99 99
Fax No: ++33 474 68 99 90



MALAYSIA - Farnell-Newark
Tel No: ++60 3 7873 8000
Fax No: ++60 3 7873 7000



SWEDEN - Farnell
Tel No: ++46 8 730 50 00
Fax No: ++46 8 83 52 62



BELGIUM - Farnell
Tel No: ++32 3 475 2810
Fax No: ++32 3 227 3648



GERMANY - Farnell
Tel No: ++49 89 61 39 39 39
Fax No: ++49 89 613 59 01



NETHERLANDS - Farnell
Tel No: ++31 30 241 7373
Fax No: ++31 30 241 7333



SWITZERLAND - Farnell
Tel No: ++44 204 64 64
Fax No: ++44 204 64 54



BRAZIL - Farnell-Newark
Tel No: ++55 11 4066 9400
Fax No: ++55 11 4066 9410



HONG KONG - Farnell-Newark
Tel No: ++852 2268 9888
Fax No: ++852 2268 9899



NEW ZEALAND - Farnell
Tel No: 0800 90 80 80
Fax No: 0800 90 80 81



UK - Farnell
Tel No: ++44 8701 200 200
Fax No: ++44 8701 200 201



CHINA - Farnell-Newark
Tel No: ++86 10 6238 5152
Fax No: ++86 10 6238 5022



HUNGARY - Farnell
Tel No: ++44 870 1200 208
Fax No: ++44 870 1200 209



NORWAY - Farnell
Tel No: 800 146 70
Fax No: 800 146 76



UK - CPC
++44 8701 202 530
++44 8701 202 531



CZECH REPUBLIC - Farnell
Tel No: ++44 870 1200 208
Fax No: ++44 870 1200 209



INDIA - Farnell
Tel No: ++44 870 1200 208
Fax No: ++44 870 1200 209



PORTUGAL - Farnell
Tel No: ++34 93 475 8804
Fax No: ++34 93 474 5288



USA - Newark
Tel No: 800 463 9275



DENMARK - Farnell
Tel No: ++45 44 53 66 44
Fax No: ++45 44 53 66 06



IRELAND - Farnell
Tel No: ++353 1 830 9277
Fax No: ++353 1 830 9016



RUSSIA - Farnell
Tel No: ++44 870 1200 208
Fax No: ++44 870 1200 209



EXPORT - Farnell
Tel No: ++44 8701 200 208
Fax No: ++44 8701 200 209

For enquiries from all other markets



ESTONIA - Farnell
Tel No: ++358 9 560 7780
Fax No: ++358 9 345 5411



ISRAEL - Farnell
Tel No: ++180 937 0015
Fax No: ++180 937 0014



SINGAPORE - Farnell-Newark
Tel No: ++65 6788 0200
Fax No: ++65 6788 0300

<http://www.farnell.com>
<http://www.newark.com>
<http://www.cpc.co.uk>

Disclaimer This data sheet and its contents (the "Information") belong to the Premier Farnell Group (the "Group") or are licensed to it. No licence is granted for the use of it other than for information purposes in connection with the products to which it relates. No licence of any intellectual property rights is granted. The Information is subject to change without notice and replaces all data sheets previously supplied. The Information supplied is believed to be accurate but the Group assumes no responsibility for its accuracy or completeness, any error in or omission from it or for any use made of it. Users of this data sheet should check for themselves the Information and the suitability of the products for their purpose and not make any assumptions based on information included or omitted. Liability for loss or damage resulting from any reliance on the Information or use of it (including liability resulting from negligence or where the Group was aware of the possibility of such loss or damage arising) is excluded. This will not operate to limit or restrict the Group's liability for death or personal injury resulting from its negligence. SPC Multicomp is the registered trademark of the Group. © Premier Farnell plc 2008.

