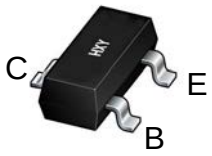
BC847BT-7-F

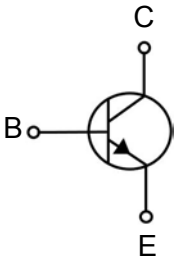
NPN Plastic-Encapsulate Transistors

Feartures

- Ideally suited for automatic insertion
- For Switching and AF Amplifier Applications



SOT-523



Package Marking and Ordering Information

Product ID	Pack	Marking	Qty(PCS)
BC847BT-7-F	SOT-523	1F	3000

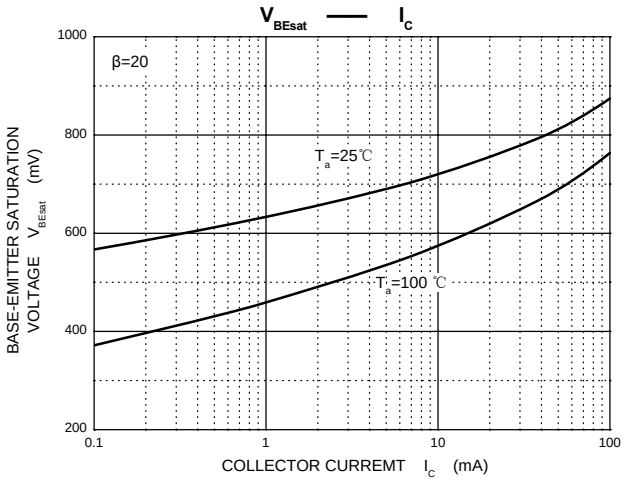
Maximum Ratings (Ta=25°C unless otherwise noted)

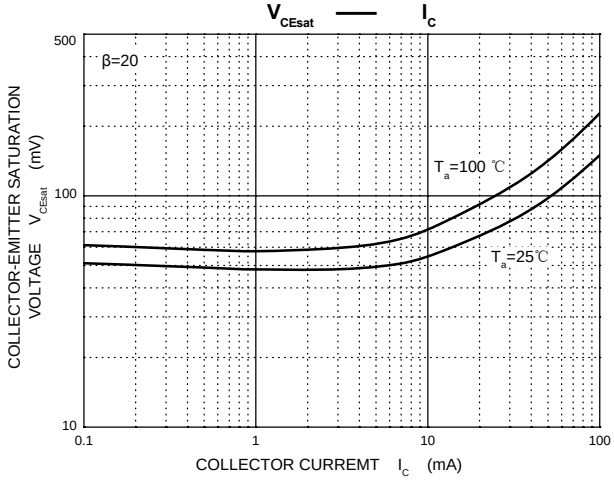
Parameter	Symbol	Limit	Unit
Collector-Base Voltage	V_{CBO}	50	V
Collector-Emitter Voltage	V_{CEO}	45	V
Emitter-Base Voltage	V_{EBO}	6	V
Collector Current	I_C	0.1	A
Collector Power Dissipation	P_C	150	mW
Junction Temperature	T_j	150	°C
Storage Temperature	T_{stg}	-55～+150	°C

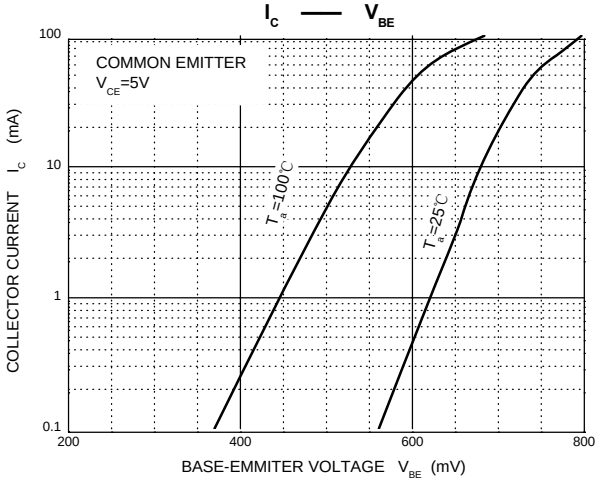
Electrical Characteristics (Ta=25°C unless otherwise specified)

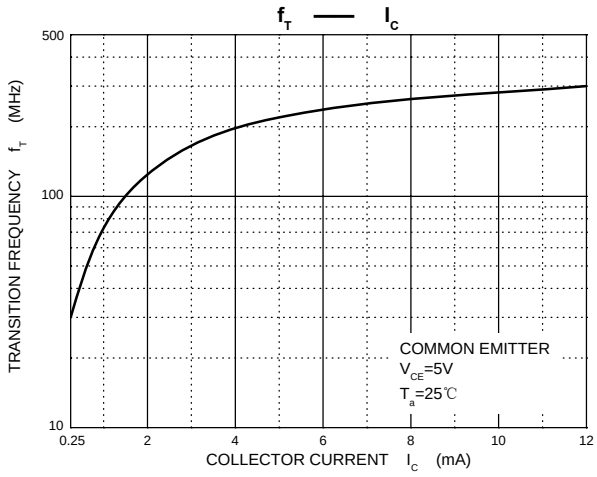
Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	I_C=10μA,I_E=0	50			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	I_C=10mA,I_B=0	45			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	I_E=1μA,I_C=0	6			V
Collector Cutoff Current	I_{CBO}	V_{CB}=30V			15	nA
DC current gain	h_{FE}	V_{CE}= 5V,I_C=2mA	200		450	
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C=10mA,I_B=0.5mA I_C=100mA,I_B=5mA			0.25 0.6	V
Base-emitter saturation voltage	$V_{BE(sat)}$	I_C=10mA,I_B=0.5mA I_C=100mA,I_B=5mA		0.7 0.9		V
Base-emitter voltage	$V_{BE(on)}$	V_{CE}= 5V,I_C= 2mA V_{CE}= 5V,I_C= 10mA	580	660	700 770	mV
Transition frequency	f_T	V_{CE}= 5 V,I_C= 10mA f=100MHz	100			MHz
Collector output capacitance	C_{ob}	V_{CB}=10V,f=1MHz			4.5	pF
Noise figure	NF	V_{CE}=5V,f=1kHz, R_S=2kΩ,BW=200Hz			10	dB

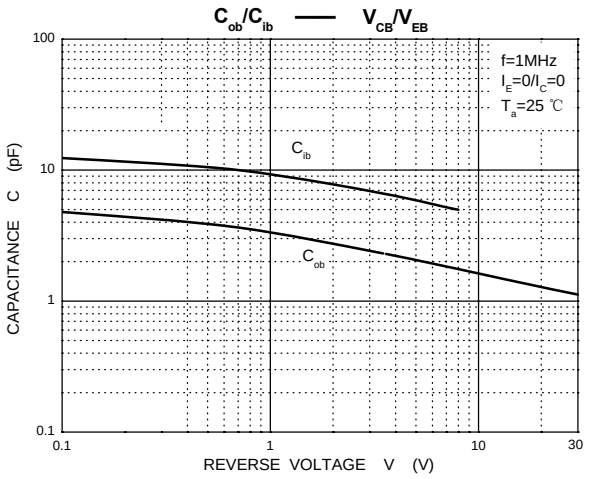
Typical Characteristics

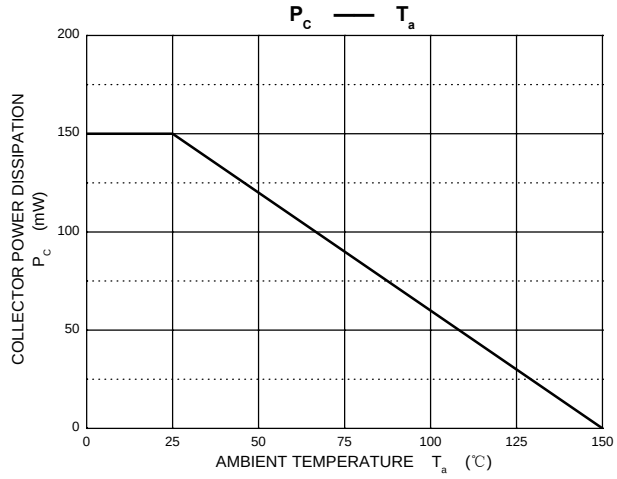




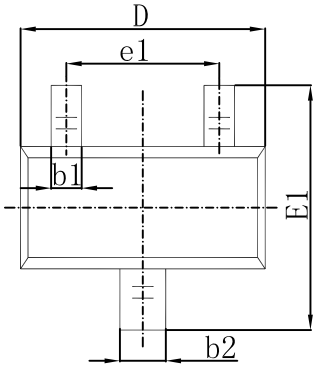


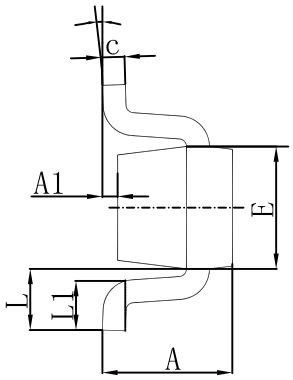


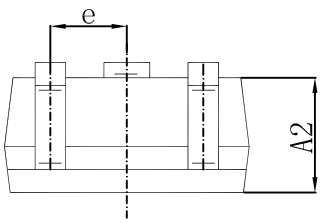




SOT-523 Package Information

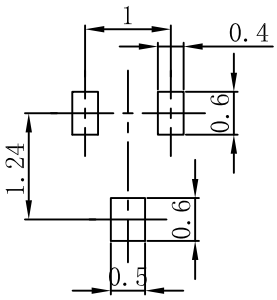






Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	0.700	0.900	0.028	0.035
A1	0.000	0.100	0.000	0.004
A2	0.700	0.800	0.028	0.031
b1	0.150	0.250	0.006	0.010
b2	0.250	0.350	0.010	0.014
c	0.100	0.200	0.004	0.008
D	1.500	1.700	0.059	0.067
E	0.700	0.900	0.028	0.035
E1	1.450	1.750	0.057	0.069
e	0.500 TYP.		0.020 TYP.	
e1	0.900	1.100	0.035	0.043
L	0.400 REF.		0.016 REF.	
L1	0.260	0.460	0.010	0.018
θ	0°	8°	0°	8°

SOT-523 Suggested Pad Layout



Note:
1.Controlling dimension:in millimeters.
2.General tolerance:±0.05mm.
3.The pad layout is for reference purposes only.

Attention

■ Any and all HUA XUAN YANG ELECTRONICS products described or contained herein do not have specifications that can handle applications that require extremely high levels of reliability, such as life-support systems, aircraft's control systems, or other applications whose failure can be reasonably expected to result in serious physical and/or material damage. Consult with your HUA XUAN YANG ELECTRONICS representative nearest you before using any HUA XUAN YANG ELECTRONICS products described or contained herein in such applications.

■ HUA XUAN YANG ELECTRONICS assumes no responsibility for equipment failures that result from using products at values that exceed, even momentarily, rated values (such as maximum ratings, operating condition ranges, or other parameters) listed in products specifications of any and all HUA XUAN YANG ELECTRONICS products described or contained herein.

■ Specifications of any and all HUA XUAN YANG ELECTRONICS products described or contained herein stipulate the performance, characteristics, and functions of the described products in the independent state, and are not guarantees of the performance, characteristics, and functions of the described products as mounted in the customer's products or equipment. To verify symptoms and states that cannot be evaluated in an independent device, the customer should always evaluate and test devices mounted in the customer's products or equipment.

■ HUA XUAN YANG ELECTRONICS CO.,LTD. strives to supply high-quality high-reliability products. However, any and all semiconductor products fail with some probability. It is possible that these probabilistic failures could
give rise to accidents or events that could endanger human lives, that could give rise to smoke or fire, or that could cause damage to other property. When designing equipment, adopt safety measures so that these kinds of accidents or events cannot occur. Such measures include but are not limited to protective circuits and error prevention circuits for safe design, redundant design, and structural design.

■ In the event that any or all HUA XUAN YANG ELECTRONICS products(including technical data, services) described or contained herein are controlled under any of applicable local export control laws and regulations, such products must not be exported without obtaining the export license from the authorities concerned in accordance with the above law.

■ No part of this publication may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopying and recording, or any information storage or retrieval system, or otherwise, without the prior written permission of HUA XUAN YANG ELECTRONICS CO.,LTD.

■ Information (including circuit diagrams and circuit parameters) herein is for example only ; it is not guaranteed for volume production. HUA XUAN YANG ELECTRONICS believes information herein is accurate and reliable, but no guarantees are made or implied regarding its use or any infringements of intellectual property rights or other rights of third parties.

■ Any and all information described or contained herein are subject to change without notice due to product/technology improvement, etc. When designing equipment, refer to the "Delivery Specification" for the HUA XUAN YANG ELECTRONICS product that you intend to use.

Unikeyic Electronics

Global Electronic Components Distributor

Click to view pricing, inventory, delivery, and lifecycle information:

HXY MOSFET:

TPD1E0B04DPYR S3D08065E SS5150 DSC06065 E4D10120A PTVSHC3D5VU MSC040SMA120B4 S4D15120H TLV74318PDBVR-HXY 1SMB5930BT3G C4D08120E-TR CH440G HBAS40-05LT1G IRLML2244TRPBF-HXY SG3525-HXY C3M0040120D BD237STU C6D06065Q-TR ISL28133FHZ-T7 Si2323DS-T1-E3-HXY TPS7A0533PDBZR-HXY 1SMB5934B AOD403-HXY IDL10G65C5XUMA2 ISL28233FUZ-T7 SGM3798YG/TR 2N7002-HXY DMPH6250SQ-13 MJD127G MUR1040FCT