

BC856A-BC858C

PNP SURFACE MOUNT SMALL SIGNAL TRANSISTOR IN SOT23

Features

- Ideally Suited for Automatic Insertion
- Complementary PNP Types Available
- For switching and AF Amplifier
- RoHS compliant package

Mechanical Data

- Case: SOT-23 Molded plastic
- Epoxy: UL94V-O rate flame retardant

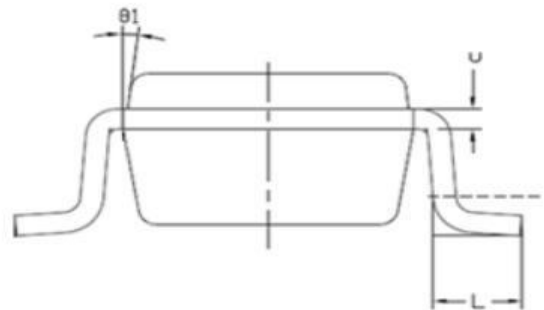
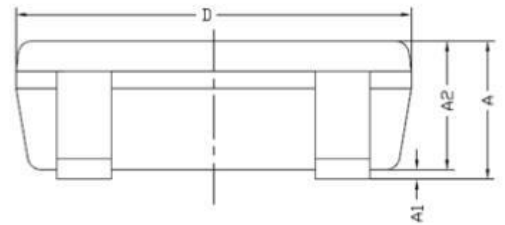
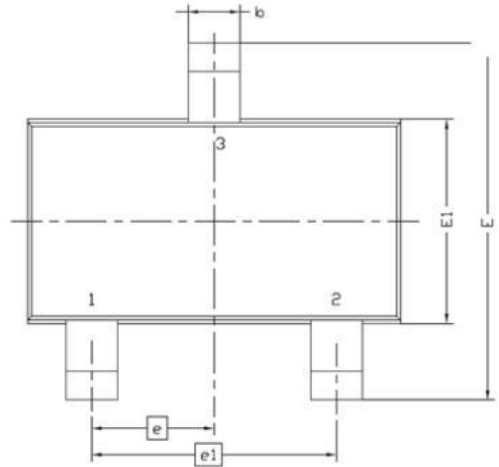
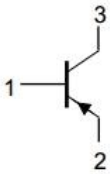
Packing & Order Information

3,000/Reel



RoHS
COMPLIANT

Graphic symbol



Symbol	MILLIMETERS	
	MIN	MAX
A	0.8	1.2
A1	0	0.1
A2	0.7	1.1
b	0.3	0.5
c	0.1	0.2
D	2.7	3.1
E	2.6	3
E1	1.4	1.8
e	0.95 BSC	
e1	1.9 BSC	
L	0.3	0.6
θ1	7° NOM	

BC856A-BC858C

PNP SURFACE MOUNT SMALL
SIGNAL TRANSISTOR IN SOT23

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

Symbol	Parameter	BC856A,B	BC857A,B	BC858A,B,C	Unit
VCEO	Collector-Emitter Voltage	-65	-45	-30	Vdc
VCBO	Collector-Base Voltage	-80	-50	-30	Vdc
VEBO	Emitter-Base Voltage	-5	-5	-5	Vdc
Ic	Collector Current Continuous	-100	-100	-100	mAdc

THERMAL CHARACTERISTICS

Symbol	Parameter	Max	Unit
PD(Ta=25°C)	Total Device Dissipation	225	mW
	FR-5 Board(1), TA=25° Derate above 25°	1.8	mW/°C
PD(Ta=25°C)	Total Device Dissipation	300	mW
	Alumina Substrate, TA=25° Derate above 25°	2.4	mW/°C
RθJA	Thermal Resistance Junction to Ambient	80	V
TJ ,Tstg	Junction and Storage Temperature	55 to +150	°C

Electrical characteristics (Tc=25°C unless otherwise noted)

OFF CHARACTERISTICS

Symbol	Parameter		MIN	TYP	MAX	UNIT
V(BR)CEO	Collector-Emitter Breakdown Voltage (Ic=-10mAdc, IB=0)	BC856A,B	-65			V
		BC857A,B	-45			V
		BC858A,B,C	-30			V
V(BR)CBO	Collector-Base Breakdown Voltage (Ic=-10μAdc, IE=0)	BC856A,B	-80			V
		BC857A,B	-50			V
		BC858A,B,C	-30			V
V(BR)EBO	Emitter-Base Breakdown Voltage (IE=-10μAdc, Ic=0)	BC856A,B	-5			V
		BC857A,B	-5			V
		BC858A,B,C	-5			V
IBO	Collector Cutoff Current V					V
	(VCB=-30v)				-15	nA
	(VcB=-30Vdc, TA=150°C)				-4	uA

BC856A-BC858C

PNP SURFACE MOUNT SMALL
SIGNAL TRANSISTOR IN SOT23

ON CHARACTERISTICS

Symbol	Parameter		MIN	TYP	MAX	UNIT
VCE(sat)	Collector-Emitter Saturation Voltage					V
	(Ic=-10mA, IB=-0.5mA)				-0.3	V
	(Ic=-100mA, IB=-5.0mA)				-0.65	V
HFE	DC Current Gain	BC846A,B		90		
	(Ic=-10uA, VCE=-5.0Vdc)	BC847A,B		150		
		BC848A,B,C		270		
	(Ic=-2.0mA, VCE=-5.0Vdc)	BC846A,B	125	180	250	
		BC847A,B	220	290	475	
		BC848A,B,C	420	520	800	
VBE(sat)	Base-Emitter Saturation Voltage					V
	(Ic=-10mA, IB=-0.5mA)			-0.7		V
	(Ic=-100mA, IB=-5.0mA)			-0.9		V
VBE(on)	Base-Emitter Voltage					V
	(Ic=-2.0mA, VCE=-5.0Vdc)		-0.6		-0.75	mV
	(Ic=-10mA, VCE=-5.0Vdc)				-0.82	mV

ON CHARACTERISTICS

Symbol	Parameter		MIN	TYP	MAX	UNIT
fT	Current-Gain-Bandwidth Product (Ic=-10mA, VCE=-5.0Vdc, f=100MHz)		100			MHz
Cobo	Output Capacitance (VCB=-10Vdc, IE=0, f=1.0MHz)				4.5	pF
NF	Noise Figure (VCE=-5.0Vdc, IC=-200uA, Rs=2.0kΩ, f=1.0KHz, BW=200Hz)				10	dB

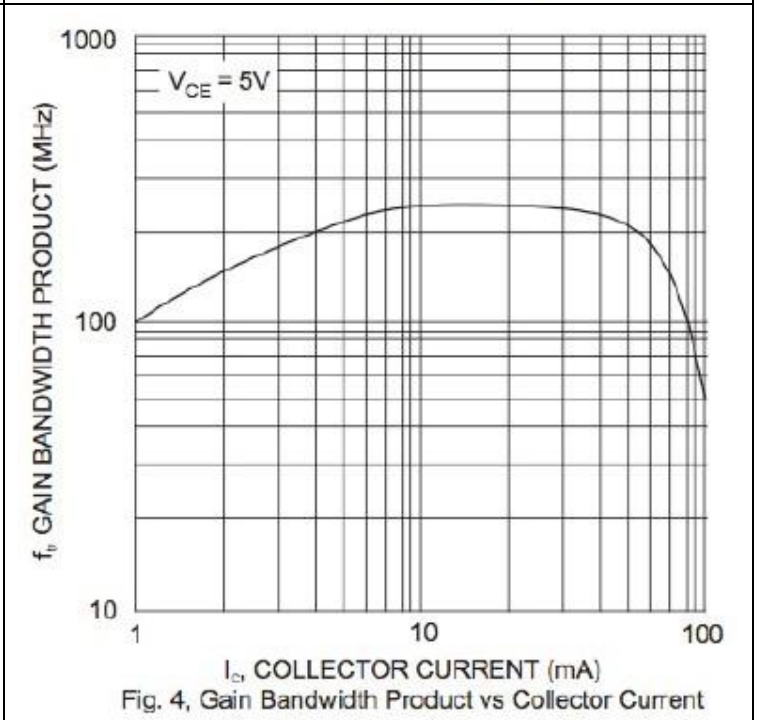
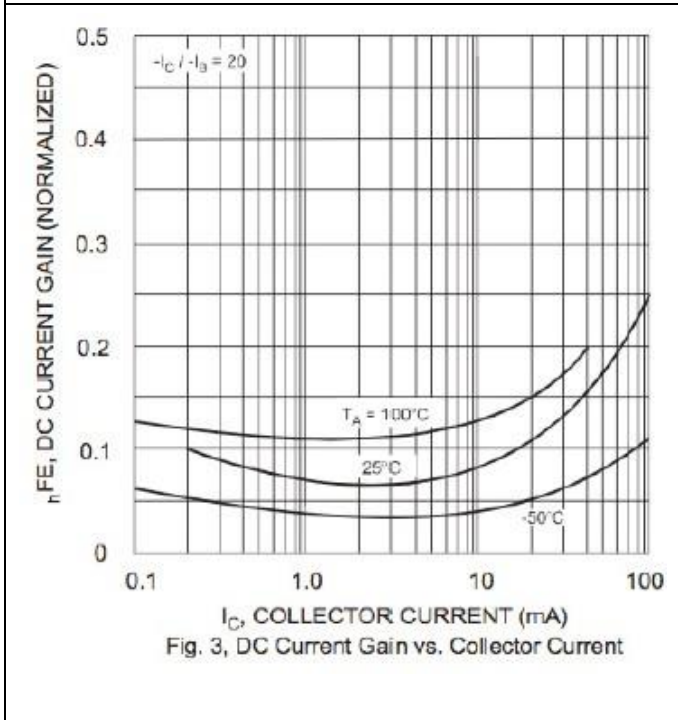
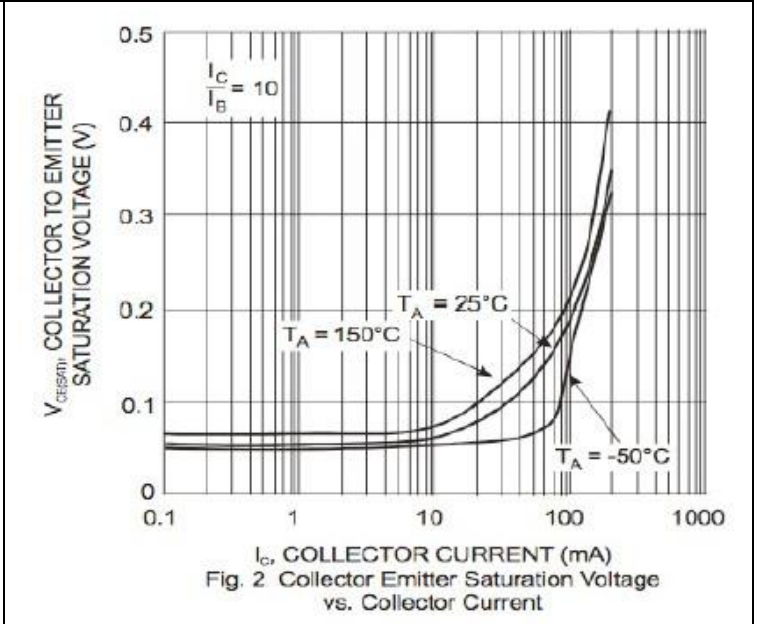
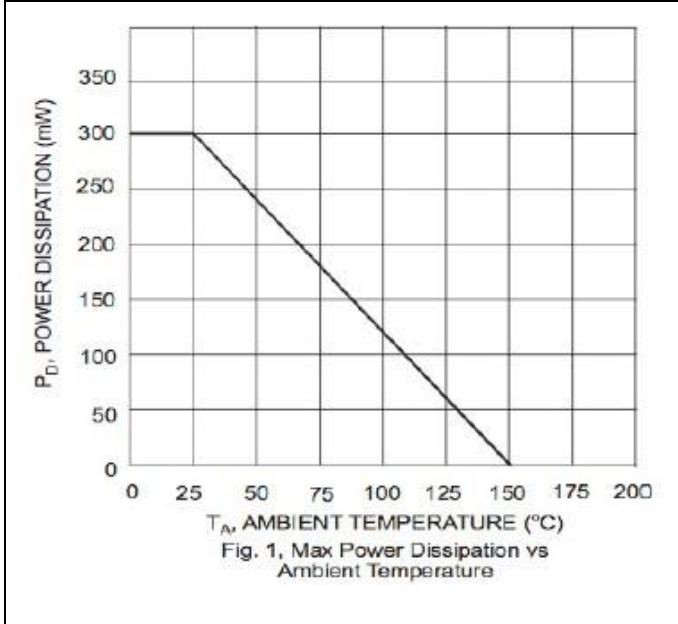
DEVICE MARK

BC856A	3A
BC856B	3B
BC857A	3E
BC857B	3F
BC858A	3J
BC858B	3K
BC858C	3L

BC856A-BC858C

PNP SURFACE MOUNT SMALL SIGNAL TRANSISTOR IN SOT23

■ RATINGS AND CHARACTERISTIC CURVES



BC856A-BC858C

PNP SURFACE MOUNT SMALL
SIGNAL TRANSISTOR IN SOT23

Disclaimer

ALL PRODUCT, PRODUCT SPECIFICATIONS AND DATA ARE SUBJECT TO CHANGE WITHOUT NOTICE TO IMPROVE RELIABILITY, FUNCTION OR DESIGN OR OTHERWISE. Bruckewell Technology Inc., its affiliates, agents, and employees, and all persons acting on its or their behalf (collectively, "Bruckewell"), disclaim any and all liability for any errors, inaccuracies or incompleteness contained in any datasheet or in any other disclosure relating to any product. Bruckewell makes no warranty, representation or guarantee regarding the suitability of the products for any particular purpose or the continuing production of any product. To the maximum extent permitted by applicable law, Bruckewell disclaims

- (i) Any and all liability arising out of the application or use of any product.
- (ii) Any and all liability, including without limitation special, consequential or incidental damages.
- (iii) Any and all implied warranties, including warranties of fitness for particular purpose, non-infringement and merchantability.

Statements regarding the suitability of products for certain types of applications are based on Bruckewell's knowledge of typical requirements that are often placed on Bruckewell products in generic applications.

Such statements are not binding statements about the suitability of products for a particular application. It is the customer's responsibility to validate that a particular product with the properties described in the product specification is suitable for use in a particular application. Parameters provided in datasheets and/or specifications may vary in different applications and performance may vary over time.

Product specifications do not expand or otherwise modify Bruckewell's terms and conditions of purchase, including but not limited to the warranty expressed therein.