



BC856-AU,BC857-AU,BC858-AU,BC859-AU SERIES

PNP GENERAL PURPOSE TRANSISTORS

VOLTAGE	30/45/65 Volts	POWER	330 mWatts
----------------	-----------------------	--------------	-------------------

FEATURES

- General Purpose Amplifier Applications
- Collector Current $I_C = -100\text{mA}$
- Complimentary (PNP) Devices : BC846/BC847/BC848/BC849 Series
- Acquire quality system certificate : TS16949
- AEC-Q101 qualified
- Lead free in compliance with EU RoHS 2011/65/EU directive
- Green molding compound as per IEC61249 Std. . (Halogen Free)

MECHANICAL DATA

Case: SOT-23

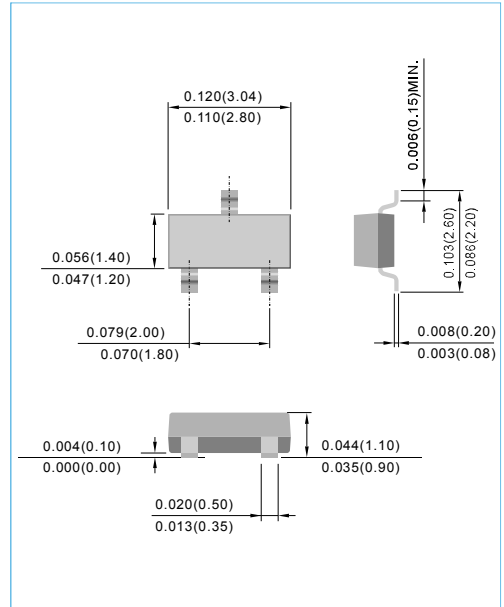
Terminals: Solderable per MIL-STD-750, Method 2026

Approx. Weight: 0.008 gram

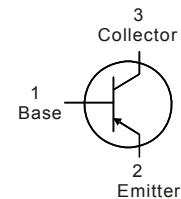
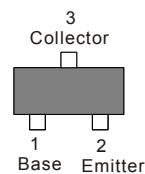
Marking:

Device Marking:			
BC856A-AU=56A	BC857A-AU=57A	BC858A-AU=58A	
BC856B-AU=56B	BC857B-AU=57B	BC858B-AU=58B	BC859B-AU=59B
	BC857C-AU=57C	BC858C-AU=58C	BC859C-AU=59C

SOT-23 Unit : inch(mm)



Top View



ABSOLUTE RATINGS

PARAMETER	Symbol	BC856-AU	BC857-AU	BC858-AU	BC859-AU	Units
Collector - Emitter Voltage	V_{CEO}	-65	-45	-30		V
Collector - Base Voltage	V_{CBO}	-80	-50	-30		V
Emitter - Base Voltage	V_{EBO}		-5			V
Collector Current - Continuous	I_C		-100			mA
Max Power Dissipation(Note1)	P_{TOT}		330			mW
Typical Thermal Resistance, Junction to Ambient	$R_{\theta JA}$		375			$^{\circ}\text{C/W}$
Operating Junction and Storage Temperature Range	T_J, T_{STG}		-50 to 150			$^{\circ}\text{C}$

NOTES:

1. Transistor mounted on FR-4 board 8 cm^2 .



BC856-AU, BC857-AU, BC858-AU, BC859-AU SERIES

ELECTRICAL CHARACTERISTICS

PARAMETER	Symbol	Test Condition	MIN.	TYP.	MAX.	Units
Collector - Emitter Breakdown Voltage BC856A-AU/B-AU BC857A-AU/B-AU/C-AU BC858A-AU/B-AU/C-AU, BC859B-AU/C-AU	$V_{(BR)CEO}$	$I_C = -10mA, I_B = 0$	-65 -45 -30	-	-	V
Collector - Base Breakdown Voltage BC856A-AU/B-AU BC857A-AU/B-AU/C-AU BC858A-AU/B-AU/C-AU, BC859B-AU/C-AU	$V_{(BR)CBO}$	$I_C = -10\mu A, I_E = 0$	-80 -50 -30	-	-	V
Emitter - Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E = -1.0\mu A, I_C = 0$	-5.0	-	-	V
Emitter-Base Cutoff Current	I_{EBO}	$V_{EB} = -5V$	-	-	-100	nA
Collector-Base Cutoff Current	I_{CBO}	$V_{CB} = -30V, I_E = 0$ $V_{CB} = -30V, I_E = 0, T_J = 150^\circ C$	-	-	-15 -4.0	nA μA
DC Current Gain BC856A-AU, BC857A-AU, BC858A-AU BC856B-AU, BC857B-AU, BC858B-AU, BC859B-AU BC857C-AU, BC858C-AU, BC859C-AU	h_{FE}	$I_C = -10\mu A, V_{CE} = -5V$	-	90 150 270	-	-
DC Current Gain BC856A-AU, BC857A-AU, BC858A-AU BC856B-AU, BC857B-AU, BC858B-AU, BC859B-AU BC857C-AU, BC858C-AU, BC859C-AU	h_{FE}	$I_C = -2.0mA, V_{CE} = -5V$	110 220 420	180 290 520	220 475 800	-
Collector - Emitter Saturation Voltage	$V_{CE(SAT)}$	$I_C = -10mA, I_B = -0.5mA$ $I_C = -100mA, I_B = -5.0mA$	-	-	-0.3 -0.65	V
Base - Emitter Saturation Voltage	$V_{BE(SAT)}$	$I_C = -10mA, I_B = -0.5mA$ $I_C = -100mA, I_B = -5.0mA$	-	-0.7 -0.9	-	V
Base - Emitter On Voltage	$V_{BE(ON)}$	$I_C = -2mA, V_{CE} = -5.0V$ $I_C = -10mA, V_{CE} = -5.0V$	-0.60 -	- -	-0.75 -0.82	V
Collector - Base Capacitance	C_{CB}	$V_{CB} = -10V, I_E = 0, f = 1MHz$	-	-	4.5	pF
Current-Gain-Bandwidth Product	F_T	$I_C = -10mA, V_{CE} = -5.0V, f = 100MHz$	-	200	-	MHz



BC856!5I ,BC857!5I ,BC858!5I ,BC859!5I SERIES

ELECTRICAL CHARACTERISTICS CURVES

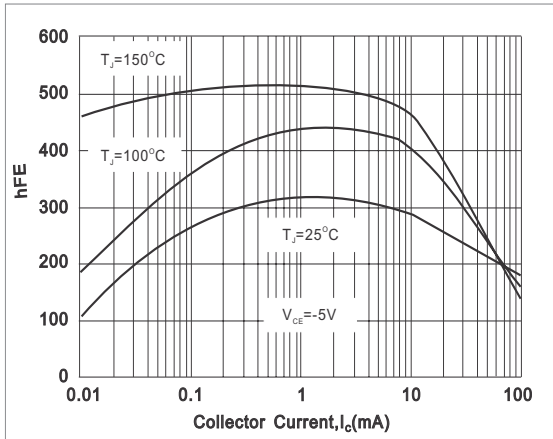


Fig.1-TYPICAL h_{FE} vs. Collector Current

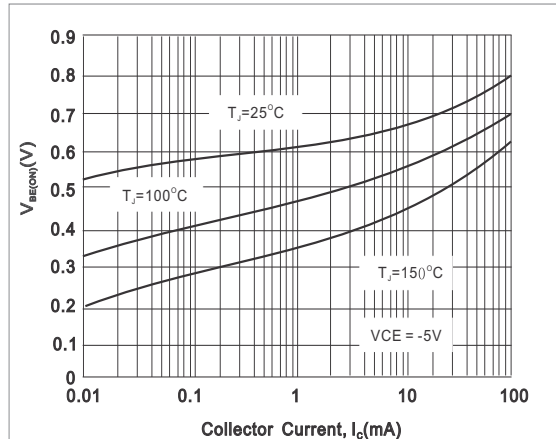


Fig.2-TYPICAL $V_{BE(on)}$ vs. Collector Current

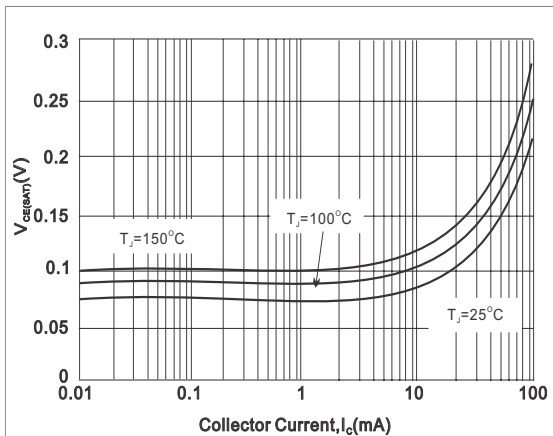


Fig.3-TYPICAL $V_{CE(sat)}$ vs. Collector Current

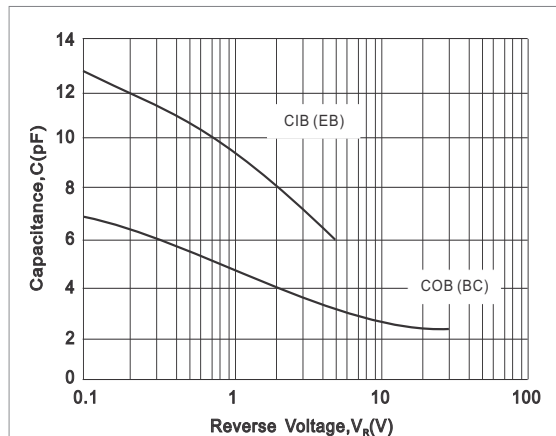
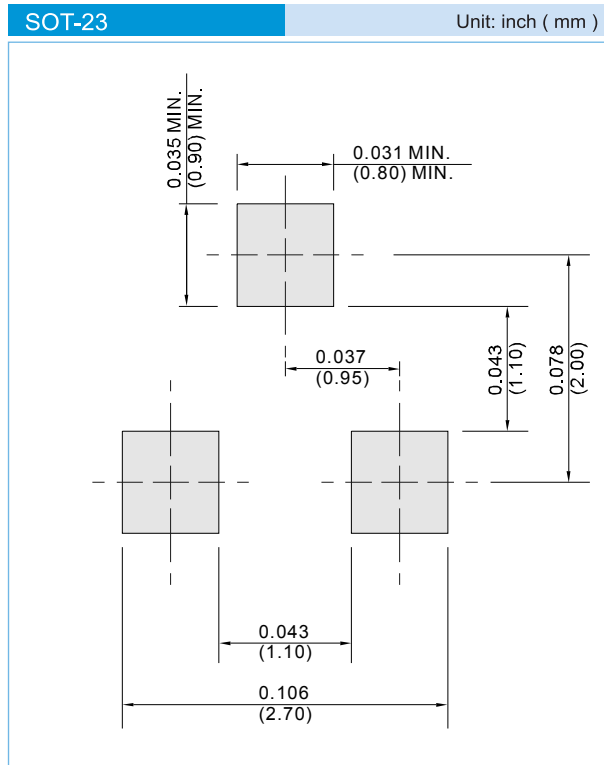


Fig.4-TYPICAL CAPACITANCES vs. REVERSE VOLTAGE



BC856!5I ,BC857!5I ,BC858!5I ,BC859!5I SERIES

MOUNTING PAD LAYOUT



ORDER INFORMATION

- Packing information
 - T/R - 12K per 13" plastic Reel
 - T/R - 3K per 7" plastic Reel



BC856!5I ,BC857!5I ,BC858!5I ,BC859!5I SERIES

Part No_packing code_Version

BC856-AU_R1_000A1

BC856-AU_R2_000A1

For example :

RB500V-40_R2_00001



Packing Code XX				Version Code XXXXX		
Packing type	1 st Code	Packing size code	2 nd Code	HF or RoHS	1 st Code	2 nd ~5 th Code
Tape and Ammunition Box (T/B)	A	N/A	0	HF	0	serial number
Tape and Reel (T/R)	R	7"	1	RoHS	1	serial number
Bulk Packing (B/P)	B	13"	2			
Tube Packing (T/P)	T	26mm	X			
Tape and Reel (Right Oriented) (TRR)	S	52mm	Y			
Tape and Reel (Left Oriented) (TRL)	L	PANASERT T/B CATHODE UP (PBCU)	U			
FORMING	F	PANASERT T/B CATHODE DOWN (PBCD)	D			



BC856-AU,BC857-AU,BC858-AU,BC859-AU SERIES

Disclaimer

- Reproducing and modifying information of the document is prohibited without permission from Panjit International Inc..
- Panjit International Inc. reserves the rights to make changes of the content herein the document anytime without notification. Please refer to our website for the latest document.
- Panjit International Inc. disclaims any and all liability arising out of the application or use of any product including damages incidentally and consequentially occurred.
- Panjit International Inc. does not assume any and all implied warranties, including warranties of fitness for particular purpose, non-infringement and merchantability.
- Applications shown on the herein document are examples of standard use and operation. Customers are responsible in comprehending the suitable use in particular applications. Panjit International Inc. makes no representation or warranty that such applications will be suitable for the specified use without further testing or modification.
- The products shown herein are not designed and authorized for equipments requiring high level of reliability or relating to human life and for any applications concerning life-saving or life-sustaining, such as medical instruments, transportation equipment, aerospace machinery et cetera. Customers using or selling these products for use in such applications do so at their own risk and agree to fully indemnify Panjit International Inc. for any damages resulting from such improper use or sale.
- Since Panjit uses lot number as the tracking base, please provide the lot number for tracking when complaining.