



BC856-AU SERIES

PNP GENERAL PURPOSE TRANSISTORS

VOLTAGE 30/45/65 Volt **POWER** 330 mWatt

SOT-23 Unit : inch(mm)

FEATURES

- General Purpose Amplifier Applications
- Collector Current $I_C = -100\text{mA}$
- 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

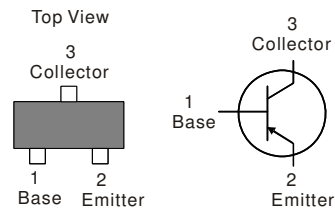
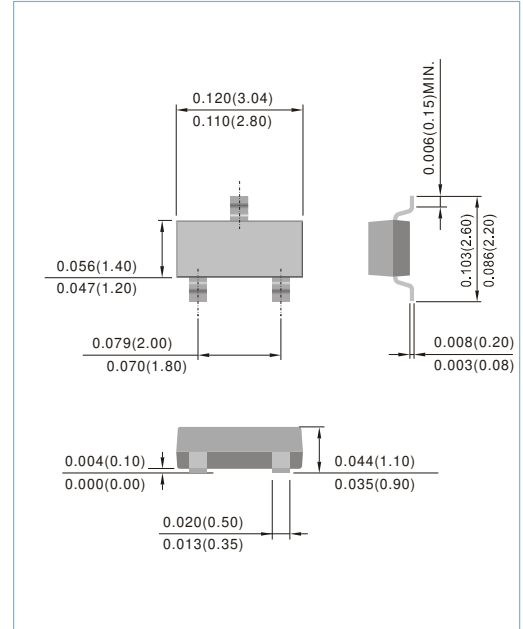
Case: SOT-23

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

Approx. Weight: 0.0003 ounces, 0.008 grams

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



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
Peak Collector Current	I_{CM}	-200				mA
Max Power Dissipation (Note1)	P_{TOT}	330				mW
Typical Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	375				$^{\circ}\text{C}/\text{W}$
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 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	$V_{(BR)EBO}$	$I_E = -1\mu A, I_C = 0$	-5	-	-	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	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}	$I_C = -2mA, V_{CE} = -5V$	110 220 420	180 290 520	220 475 800	-
Collector - Emitter Saturation Voltage	$V_{CE(SAT)}$	$I_C = -10mA, I_B = -0.5mA$ $I_C = -100mA, I_B = -5mA$	-	-	-0.3 -0.65	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 On Voltage	$V_{BE(ON)}$	$I_C = -2mA, V_{CE} = -5V$ $I_C = -10mA, V_{CE} = -5V$	-0.6 -	-	-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	$I_C = -10mA, V_{CE} = -5V, f = 100MHz$	-	200	-	MHz



BC856-AU SERIES

ELECTRICAL CHARACTERISTICS CURVES

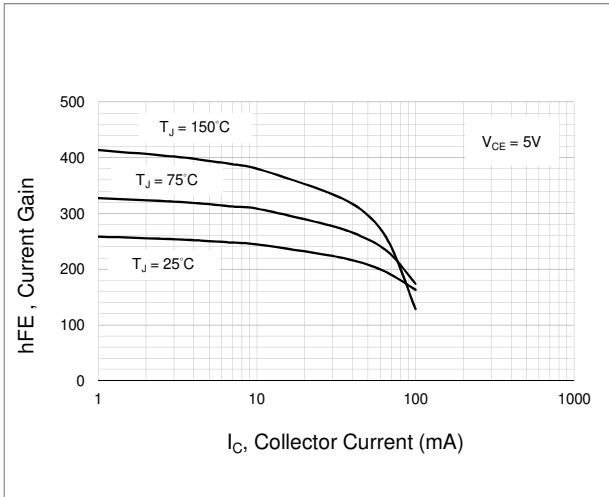


Fig.1- TYPICAL h_{FE} vs. Collector Current

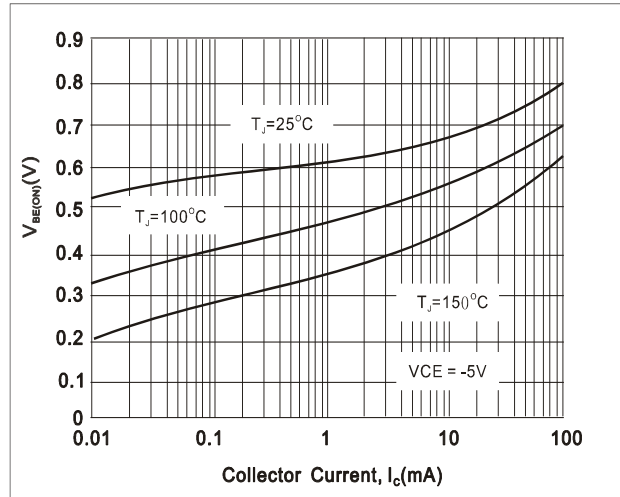


Fig.2- TYPICAL $V_{BE(ON)}$ vs. Collector Current

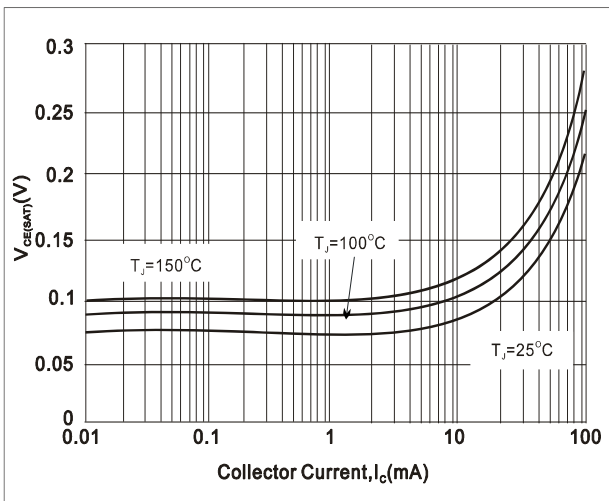


Fig.3- TYPICAL $V_{CE(SAT)}$ vs. Collector Current

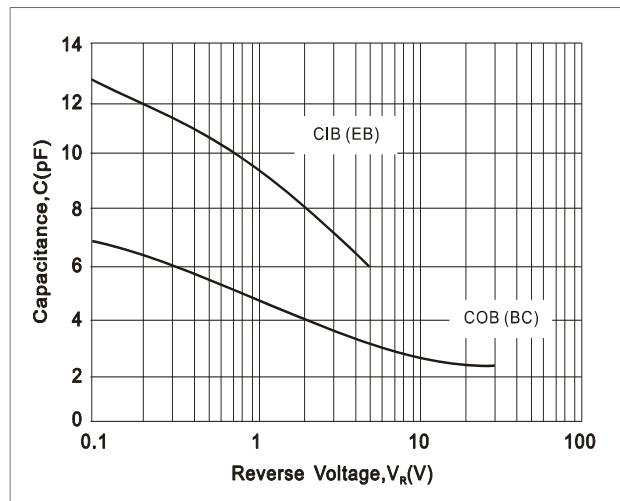


Fig.4- TYPICAL CAPACITANCES vs. REVERSE VOLTAGE



BC856-AU SERIES

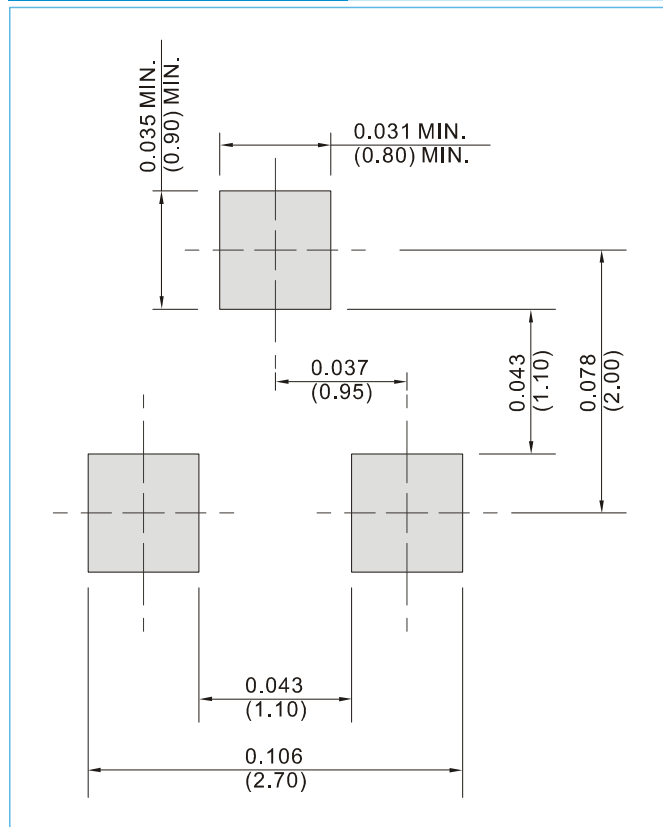
PART NO PACKING CODE VERSION

Part No Packing Code	Package Type	Packing Type	Marking	Version
BC856A-AU_R1_000A1	SOT-23	3K pcs / 7" reel	56A	Halogen free
BC856A-AU_R2_000A1	SOT-23	12K pcs / 13" reel	56A	Halogen free

MOUNTING PAD LAYOUT

SOT-23

Unit : inch(mm)





BC856-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 relating to human life and for any applications concerning life-saving or life-sustaining, such as medical instruments, 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.