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 IC = -100mA
- Complimentary (PNP) Devices : BC846/BC847/BC848/BC849 Series
- Acqire 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

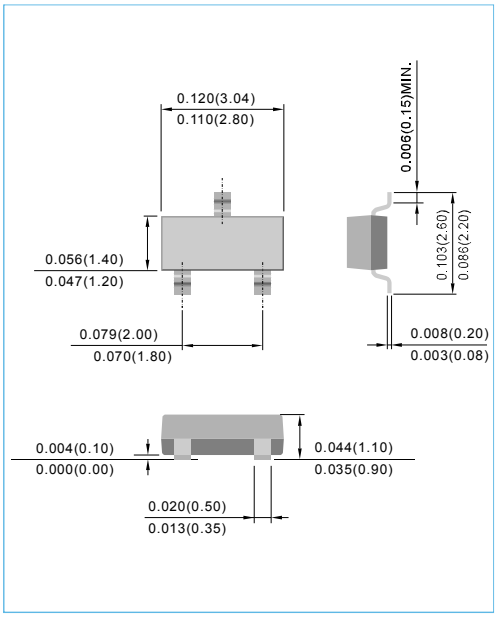
Terminals: Solderable per MIL-STD-750, Method 2026

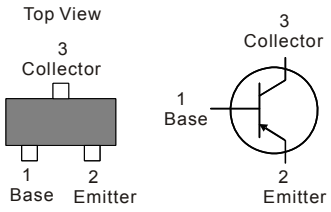
Approx. Weight: 0.008 gram

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)





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				°C/W
Operating Junction and Storage Temperature Range	T_J,T_{STG}	-50 to 150				°C

NOTES:

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

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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=-10μA, I_E=0	-80 -50 -30	-	-	V
Emitter - Base Breakdown Voltage	$V_{(BR)EBO}$	I_E=-1.0μA, 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°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=-10μA, 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=1MH	-	-	4.5	pF
Current-Gain-Bandwidth Product	F_T	I_C=-10mA, V_{CE}=-5.0V,f=100MHz	-	200	-	MHz

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ELECTRICAL CHARACTERISTICS CURVES

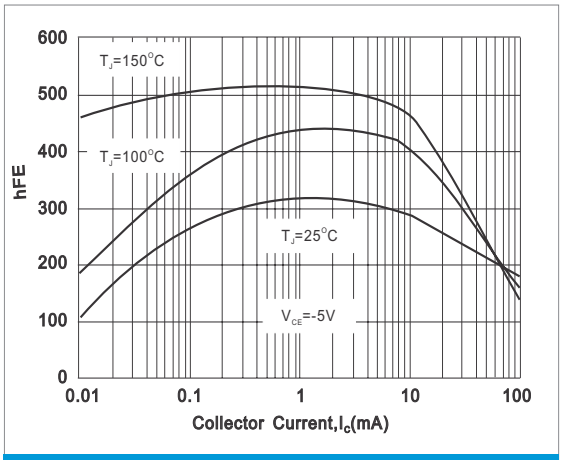

Fig.1- TYPICAL h_{FE} vs. Collector Current

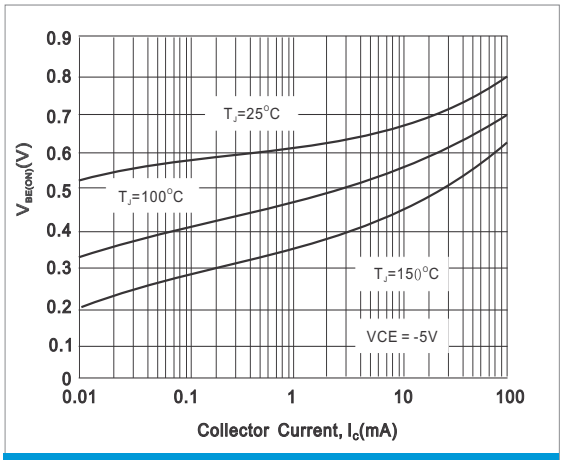

Fig.2- TYPICAL $V_{BE(ON)}$ vs. Collector Current

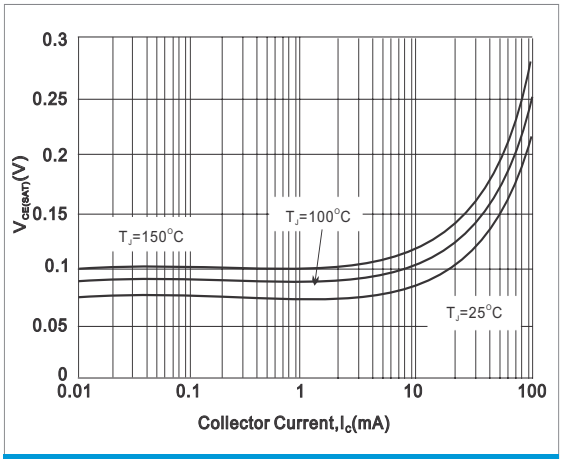

Fig.3- TYPICAL $V_{CE(SAT)}$ vs. Collector Current

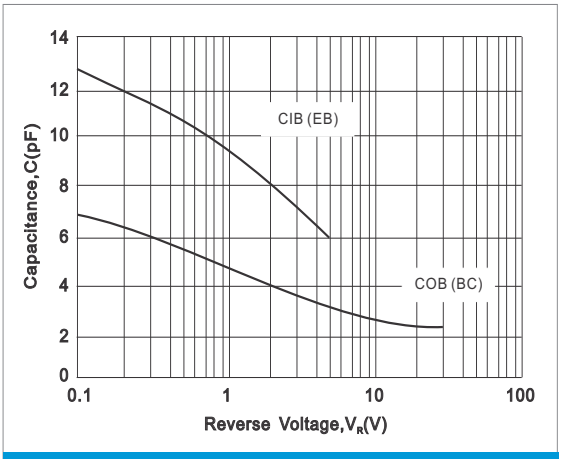

Fig.4- TYPICAL CAPACITANCES vs. REVERSE VOLTAGE

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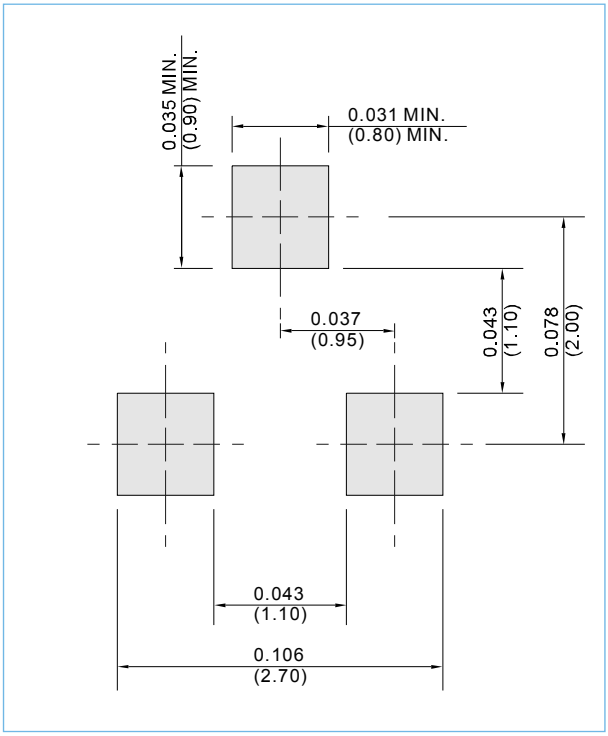
MOUNTING PAD LAYOUT

SOT-23 Unit: inch (mm)



ORDER INFORMATION

- Packing information

  T/R - 12K per 13" plastic Reel

  T/R - 3K per 7” plastic Reel

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Part No_packing code_Version

BC856-AU_R1_000A1
BC856-AU_R2_000A1

For example :

RB500V-40_R2_00001

- Part No.
- Serial number
- Version code means HF
- Packing size code means 13"
- Packing type means T/R

Packing Code XX				Version Code XXXXX		
Packing type	1st Code	Packing size code	2nd Code	HF or RoHS	1st Code	2nd~5th 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			

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