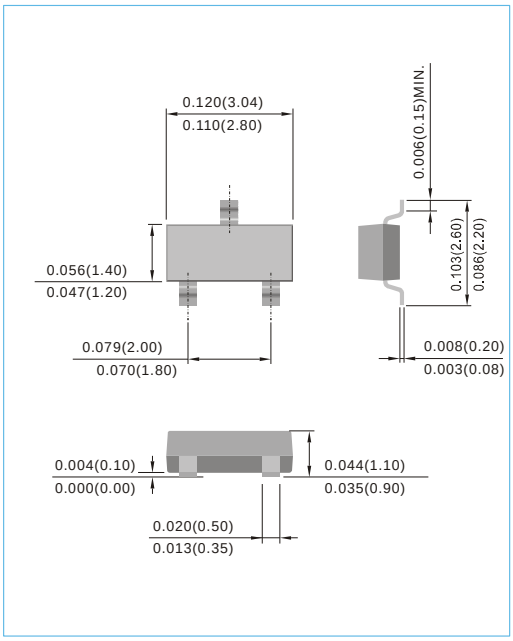
BC856-AU SERIES

PNP GENERAL PURPOSE TRANSISTORS

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

SOT-23 Unit : inch(mm)



FEATURES

- General Purpose Amplifier Applications
- Collector Current IC = -100mA
- 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

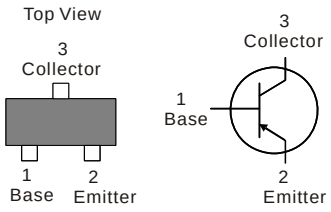
Case: SOT-23

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				°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.

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=-10μA, I_E=0	-80 -50 -30	-	-	V
Emitter - Base Breakdown Voltage		$V_{(BR)EBO}$	I_E=-1μA, 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°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=-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=-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

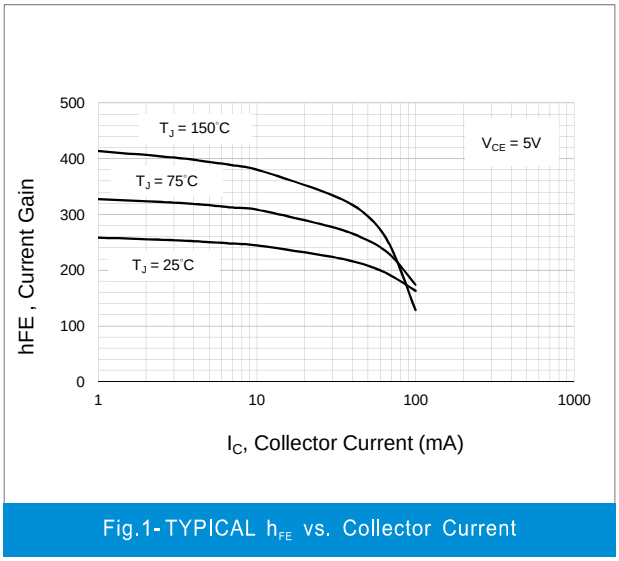


Fig.1- TYPICAL h_{FE} vs. Collector Current

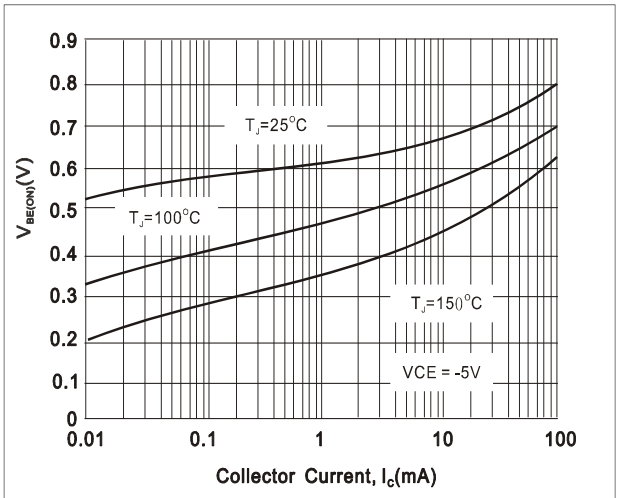


Fig.2- TYPICAL $V_{BE(ON)}$ vs. Collector Current

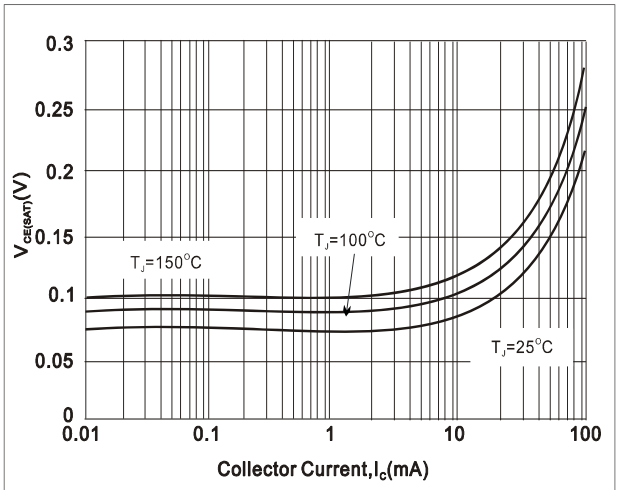


Fig.3- TYPICAL $V_{CE(SAT)}$ vs. Collector Current

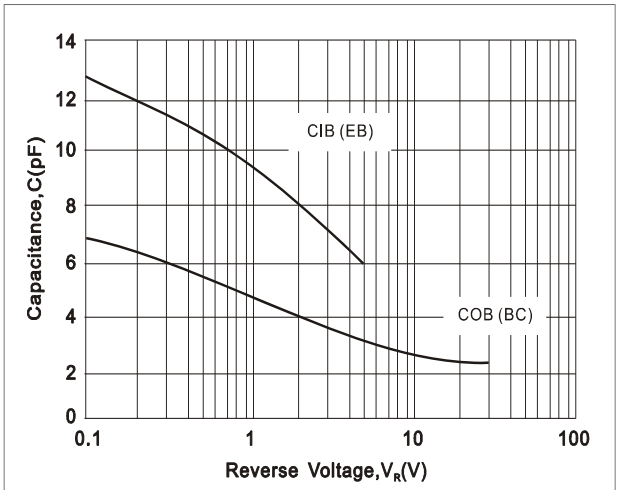


Fig.4- TYPICAL CAPACITANCES vs. REVERSE VOLTAGE

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)