PANJIT SEMI CONDUCTOR

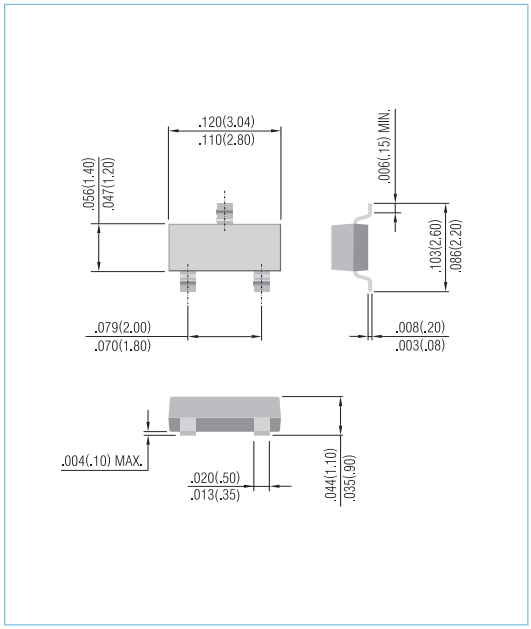
DATA SHEET

BC856 SERIES

PNP GENERAL PURPOSE TRANSISTORS

VOLTAGE 65/45/30 Volts **POWER** 225 mW

SOT-23 Unit: inch (mm)



FEATURES

General Purpose Amplifier Applications

NPN Epitaxial Silicon, Planar Design

Collector Current IC = -100mA

Complimentary (PNP) Devices : BC846/BC847/BC848/BC849 Series

In compliance with EU RoHS 2002/95/EC directives

MECHANICAL DATA

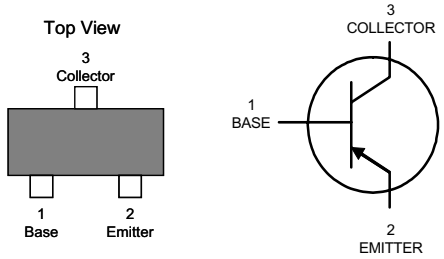
Case: SOT-23

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

Approx Weight: 0.008 grams

Device Marking :

BC856A=56A	BC857A=57A	BC858A=58A	
BC856B=56B	BC857B=57B	BC858B=58B	BC859B=59B
	BC857C=57C	BC858C=58C	BC859C=59C



ABSOLUTE MAXIMUM RATINGS

PARAMETER	SYMBOL	BC856	BC857	BC858	BC859	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 (Note 1)	P_{TOT}	225				mW
Operating Junction and Storage Temperature Range	T_J,T_{STG}	-50 TO +150				°C

BC856 SERIES

THERMAL CHARACTERISTICS

PARAMETER	SYMBOL	Value	UNIT
Thermal Resistance , Junction to Ambient	$R_{\Theta JA}$	556	^{O}C /W

Note 1: Transistor mounted on FR-5 board 1.0 x 0.75 x 0.062 in. Minimum pad layout.

ELECTRICAL CHARACTERISTICS (T_J=25 C, unless otherwise noted)

PARAMETER		SYMBOL	MIN.	TYP.	MAX.	UNIT
Collector - Emitter Breakdown Voltage	BC856A,B		-65	-	-	
(I_C=-10mA, I_B=0)	BC857A,B,C	$V_{(BR)CEO}$	-45	-	-	V
	BC858A,B,C, BC859B,C		-30	-	-	
Collector - Base Breakdown Voltage	BC856A,B		-80	-	-	
(I_C=-10μA, I_E=0)	BC857A,B,C	$V_{(BR)CBO}$	-50	-	-	V
	BC858A,B,C, BC859B,C		-30	-	-	
Emitter - Base Breakdown Voltage (I_E=-1μA, I_C=0)		$V_{(BR)EBO}$	-5.0	-	-	V
Emitter-Base Cutoff Current (V_{EB}=-5V)		I_{EBO}	-	-	-100	nA
Collector-Base Cutoff Current (V_{CB}=-30V, I_E=0)		I_{CBO}	-	-	-15	nA
	T_J=150 ^{O}C		-	-	-4.0	uA
DC Current Gain	BC856A, BC857A, BC858A		-	90	-	
(I_C=-10μA, V_{CE}=-5V)	BC856B, BC857B, BC858B, BC859B		-	150	-	
	BC857C, BC858C, BC859C		-	270	-	
		h_{FE}				-
(I_C=-2.0mA, V_{CE}=-5V)	BC856A, BC857A, BC858A		110	180	220	
	BC856B, BC857B, BC858B, BC859B		200	290	450	
	BC857C, BC858C, BC859C		420	520	800	
Collector – Emitter Saturation Voltage (I_C=-10mA, I_B=-0.5mA)		$V_{CE(SAT)}$	-	-	-0.3	V
(I_C=-100mA, I_B=-5.0mA)			-	-	-0.65	
Base – Emitter Saturation Voltage (I_C=-10mA, I_B=-0.5mA)		$V_{BE(SAT)}$	-	-0.7	-	V
(I_C=-100mA, I_B=-5.0mA)			-	-0.9	-	
Base – Emitter On Voltage (I_C=-2.0mA, V_{CE}=-5.0V)		$V_{BE(ON)}$	-0.60	-	-0.75	V
(I_C=-10mA, V_{CE}=-5.0V)			-	-	-0.82	
Collector - Base Capacitance (V_{CB}=-10V, I_E=0, f=1MHz)		C_{CB}	-	-	4.5	pF
Current-Gain - Bandwidth Product (I_C=-10mA, V_{CE}=-5.0V, f=100MHz)		F_T	-	200	-	MHz

BC856 SERIES

ELECTRICAL CHARACTERISTICS CURVES

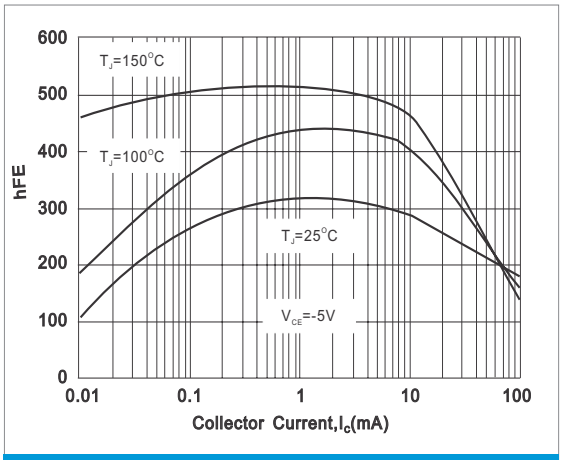


Fig.1- TYPICAL h_{FE} vs. Collector Current

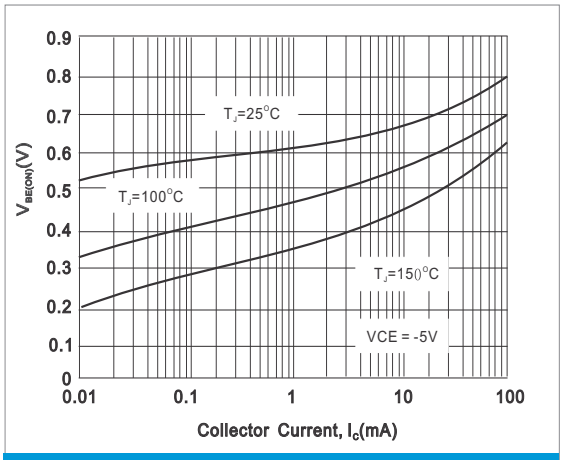


Fig.2- TYPICAL $V_{BE(ON)}$ vs. Collector Current

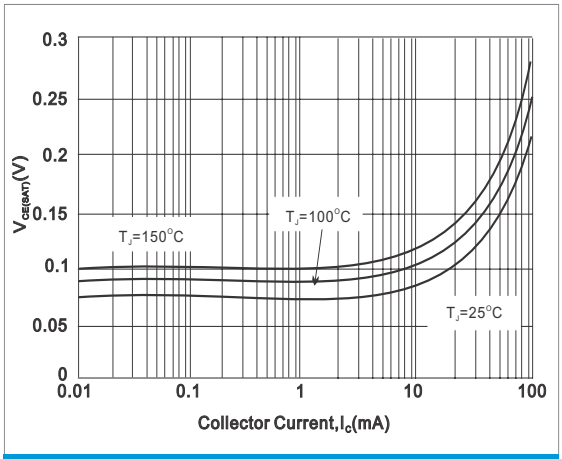


Fig.3- TYPICAL $V_{CE(SAT)}$ vs. Collector Current

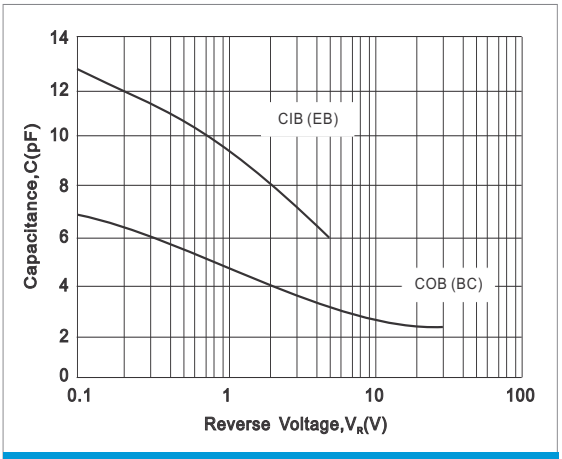
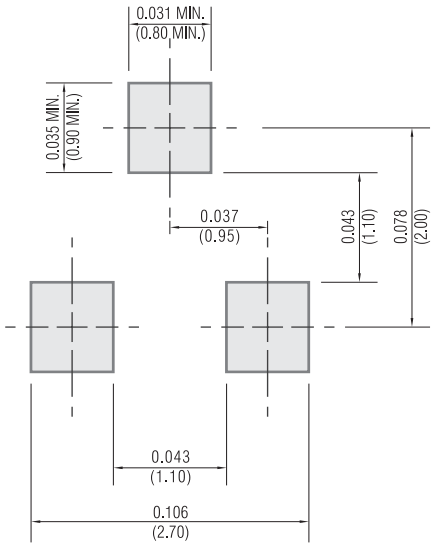


Fig.4- TYPICAL CAPACITANCES vs. REVERSE VOLTAGE

BC856 SERIES

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

LEGAL STATEMENT