



BC856AW ~ BC859CW

PNP GENERAL PURPOSE TRANSISTORS

VOLTAGE 30/45/65 Volts **CURRENT** 200 mWatts

SOT-323 Unit : inch(mm)

FEATURES

- General purpose amplifier applications
- PNP epitaxial silicon, planar design
- Collector current $I_C = 100\text{mA}$
- Complimentary (NPN) Devices: BC846W/BC847W/BC848W/BC849W Series
- In compliance with EU RoHS 2002/95/EC directives

MECHANICAL DATA

- Case: SOT-323, Plastic
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 0.0001 ounce, 0.005 gram

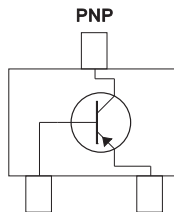
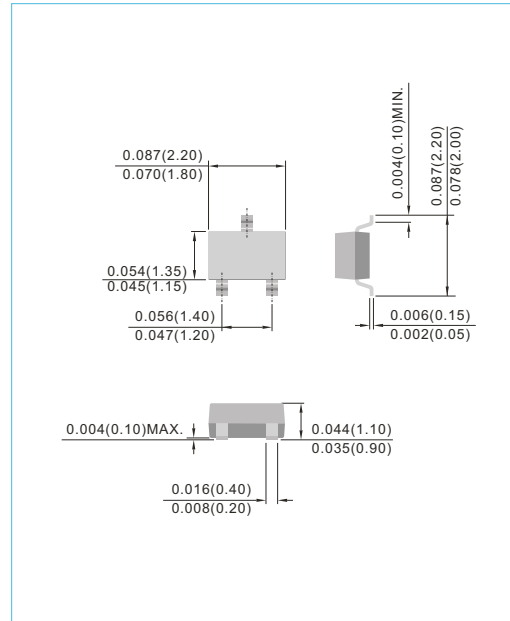


Fig.35



Device Marking:			
BC856AW=56A	BC857AW=57A	BC858AW=58A	
BC856BW=56B	BC857BW=57B	BC858BW=58B	BC859BW=59B
	BC857CW=57C	BC858CW=58C	BC859CW=59C

ABSOLUTE MAXIMUM RATINGS

PARAMETER	Symbol	Value	Units
Collector - Emitter Voltage	V_{CEO}	-65 -45 -30	V
Collector - Base Voltage	V_{CBO}	-80 -50 -30	V
Emitter - Base Voltage	V_{EBO}	6.0 6.0 -5.0	V
Collector Current - Continuous	I_C	-100	mA
Max Power Dissipation (Note 1)	P_{TOT}	200	mW
Storage Temperature Range	T_{STG}	-55 to 150	°C
Junction Temperature Range	T_J	-55 to 150	°C



BC856AW ~ BC859CW

THERMAL CHARACTERISTICS

PARAMETER	SYMBOL	Value	UNIT
Thermal Resistance	$R_{\theta JA}$ $R_{\theta JC}$	400 100	$^{\circ}C/W$

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

ELECTRICAL CHARACTERISTICS ($T_J=25^{\circ}C$, unless otherwise noted)

PARAMETER	Symbol	MIN.	TYP.	MAX.	Units
Collector - Emitter Breakdown Voltage ($I_C=-10mA$, $I_E=0$)	BC856AW,BW BC857AW/BW/CW, BC858AW/BW/CW,BC859BW/CW $V_{(BR)CEO}$	-65 -45 -30	-	-	V
Collector - Base Breakdown Voltage ($I_C=-10\mu A$, $I_E=0$)	BC856AW,BW BC857AW/BW/CW, BC858AW/BW/CW,BC859BW/CW $V_{(BR)CBO}$	-80 -50 -30	-	-	V
Emitter-Base Breakdown Voltage ($I_E=-1\mu A$, $I_C=0$)	$V_{(BR)EBO}$	-5.0	-	-	V
Emitter-Base Cutoff Current ($V_{EB}=-5V$)	I_{EBO}	-	-	-100	nA
Collector-Base Cutoff Current ($V_{CB}=-30V$, $I_E=0$)	$T_J=25^{\circ}C$ $T_J=150^{\circ}C$ I_{CBO}	-	-	-15 -4.0	nA μA
DC Current Gain ($I_C=-10\mu A$, $V_{CE}=-5V$)	BC856~BC858 Suffix "AW" BC856~BC859 Suffix "BW" BC857~BC859 Suffix "CW" h_{FE}	-	90 150 270	-	-
DC Current Gain ($I_C=-2.0mA$, $V_{CE}=-5V$)	BC856~BC858 Suffix "AW" BC856~BC859 Suffix "BW" BC857~BC859 Suffix "CW" h_{FE}	110 200 420	180 290 520	220 450 800	-
Collector - Emitter Saturation Voltage ($I_C=-10mA$, $I_B=-0.5mA$) ($I_C=-100mA$, $I_B=-5.0mA$)	$V_{CE(SAT)}$	- -	- -	-0.3 -0.65	V
Base - Emitter Saturation Voltage ($I_C=-10mA$, $I_B=-0.5mA$) ($I_C=-100mA$, $I_B=-5.0mA$)	$V_{BE(SAT)}$	- -	-0.7 -0.9	- -	V
Base - Emitter Voltage ($I_C=-2mA$, $V_{CE}=-5.0V$) ($I_C=-10mA$, $V_{CE}=-5.0V$)	$V_{BE(ON)}$	-0.60 -	- -	-0.75 -0.82	V
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.	-	200	-	MHz



BC856AW ~ BC859CW

ELECTRICAL CHARACTERISTICS CURVE

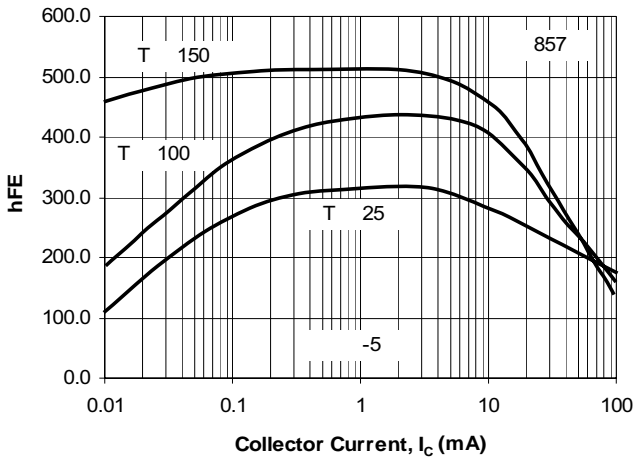


Fig. 1. Typical h_{FE} vs. Collector Current

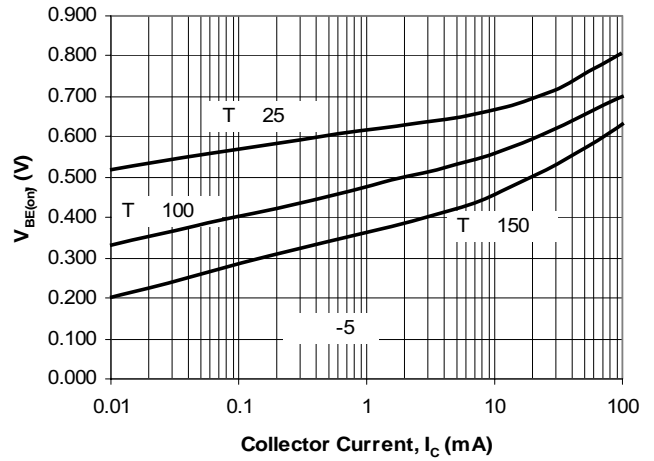


Fig. 2. Typical $V_{BE(ON)}$ vs. Collector Current

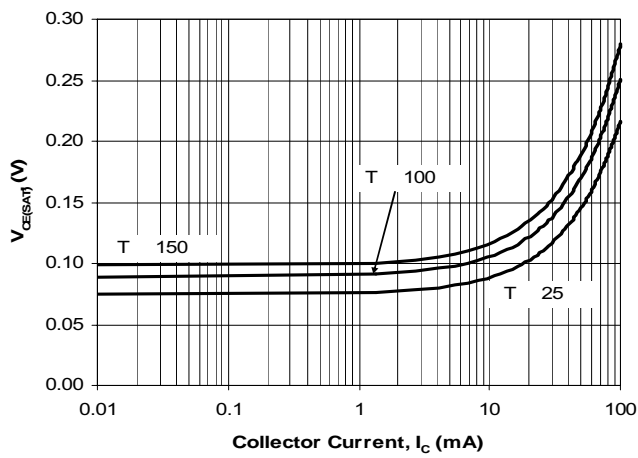


Fig. 3. Typical $V_{CE(SAT)}$ vs. Collector Current

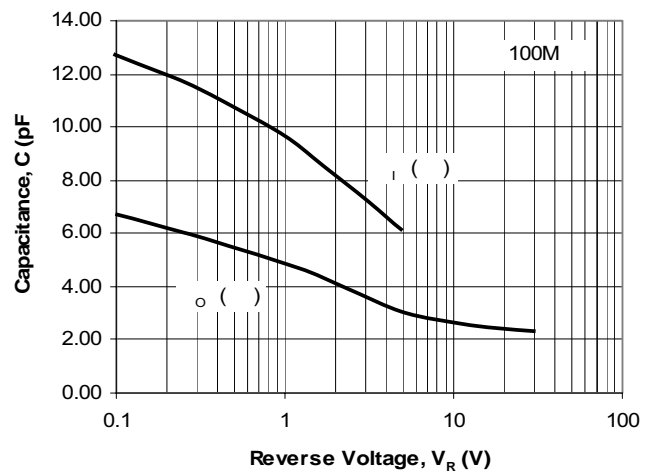
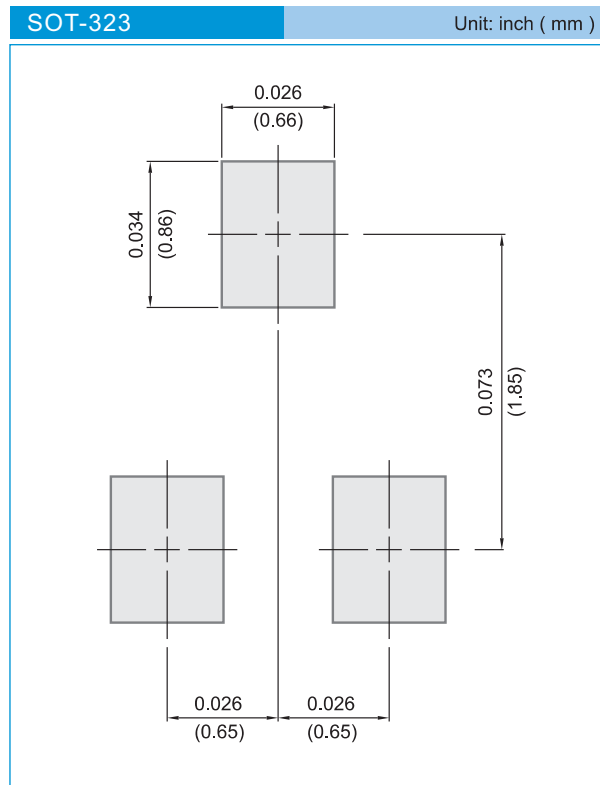


Fig. 5. Typical Capacitances vs. Reverse Voltage



BC856AW ~ BC859CW

MOUNTING PAD LAYOUT



ORDER INFORMATION

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

LEGAL STATEMENT

Copyright PanJit International, Inc 2010

The information presented in this document is believed to be accurate and reliable. The specifications and information herein are subject to change without notice. Pan Jit makes no warranty, representation or guarantee regarding the suitability of its products for any particular purpose. Pan Jit products are not authorized for use in life support devices or systems. Pan Jit does not convey any license under its patent rights or rights of others.