



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

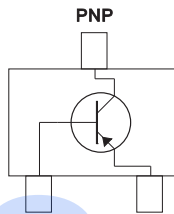
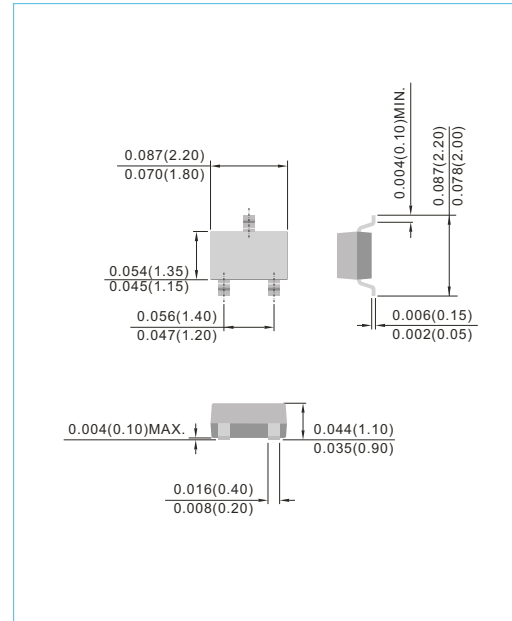


Fig.35



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



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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 ($I_C=-10mA$, $I_E=0$)	$V_{(BR)CEO}$	-65 -45 -30	-	-	V
Collector - Base Breakdown Voltage ($I_C=-10\mu A$, $I_E=0$)	$V_{(BR)CBO}$	-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 ($V_{CB}=-30V$, $I_E=0$)	I_{CBO}	-	-	-15 -4.0	nA μA
DC Current Gain ($I_C=-10\mu A$, $V_{CE}=-5V$)	h_{FE}	-	90 150 270	-	-
DC Current Gain ($I_C=-2.0mA$, $V_{CE}=-5V$)	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



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ELECTRICAL CHARACTERISTICS CURVE

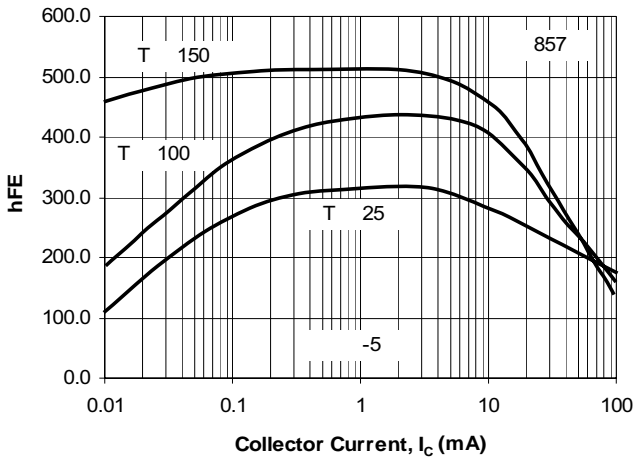


Fig. 1. Typical h_{FE} vs. Collector Current

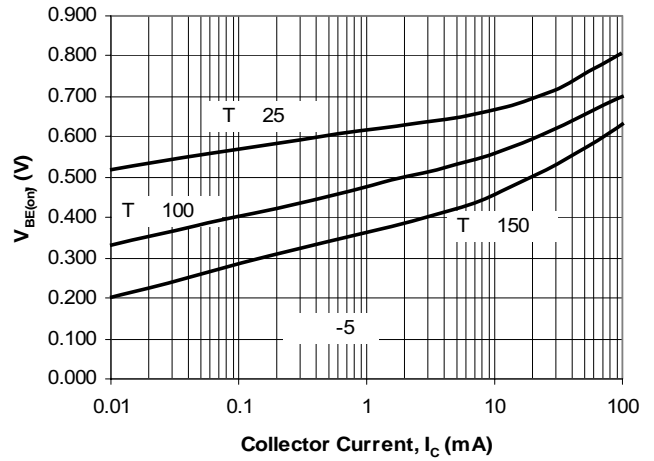


Fig. 2. Typical $V_{BE(ON)}$ vs. Collector Current

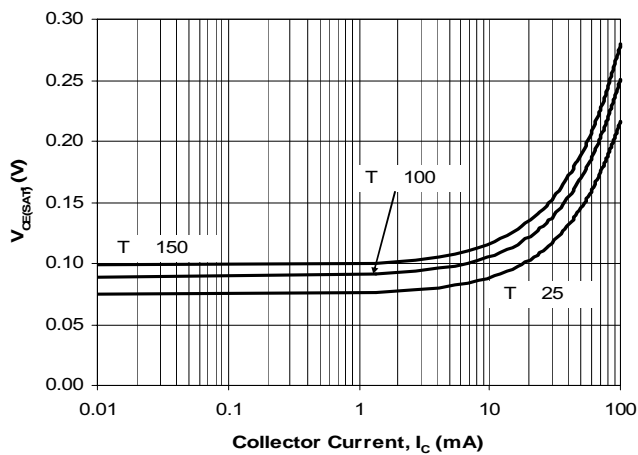


Fig. 3. Typical $V_{CE(SAT)}$ vs. Collector Current

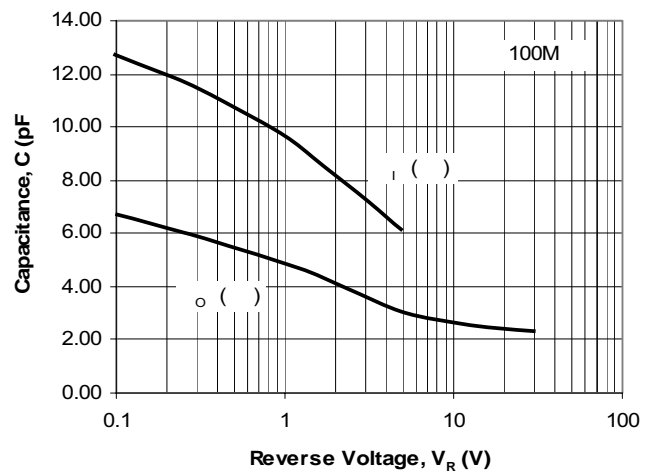
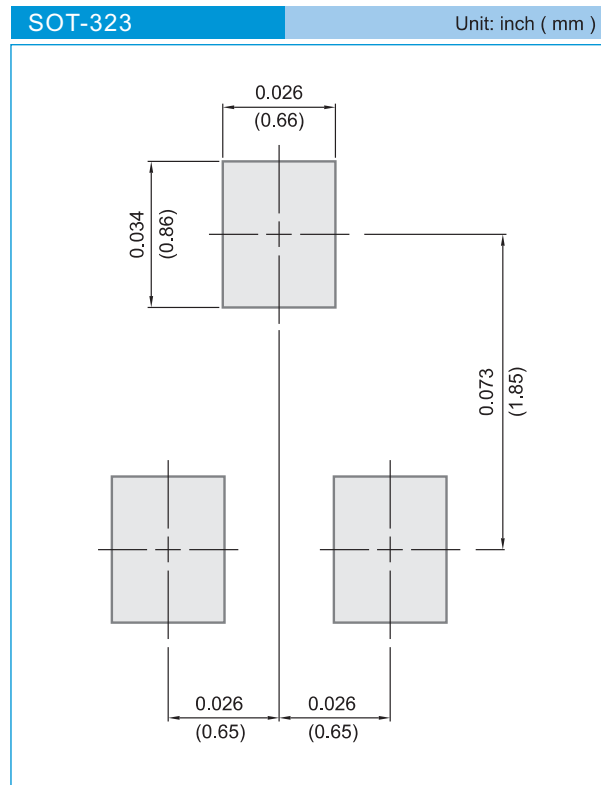


Fig. 5. Typical Capacitances vs. Reverse Voltage



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

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