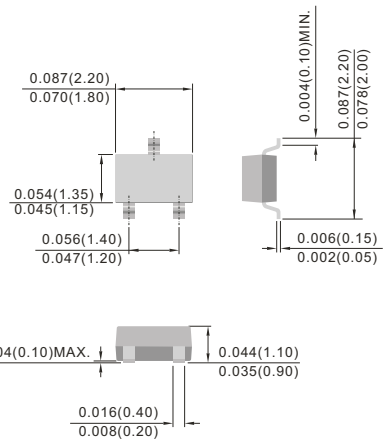
BC856AW ~ BC859CW

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 = 100mA
- 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

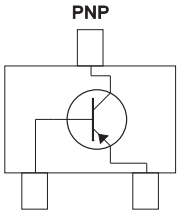


Fig.35

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	BC856W BC857W BC858W, BC859W	V_{CEO}	-65 -45 -30	V
Collector - Base Voltage	BC856W BC857W BC858W, BC859W	V_{CBO}	-80 -50 -30	V
Emitter - Base Voltage	BC856W BC857W BC858W, BC859W	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	$^{O}C/W$

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

ELECTRICAL CHARACTERISTICS (T_J=25^{O}C, unless otherwise noted)

PARAMETER		Symbol	MIN.	TYP.	MAX.	Units
Collector - Emitter Breakdown Voltage (I_C=-10mA, I_B=0)	BC856AW,BW BC857AW/BW/CW, BC858AW/BW/CW,BC859BW/CW	$V_{(BR)}CEO$	-65 -45 -30	-	-	V
Collector - Base Breakdown Voltage (I_C=-10μA, 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=-1uA, 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^{O}C T_J=150^{O}C	I_{CBO}	-	-	-15 -4.0	nA μA
DC Current Gain (I_C=-10μA, 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=1MH_Z)	C_{CB}	-	-	4.5	pF
Current-Gain-Bandwidth Product (I_C=-10mA, V_{CE}=-5.0V,f=100MH_Z)		F.	-	200	-	MH_Z

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ELECTRICAL CHARACTERISTICS CURVE

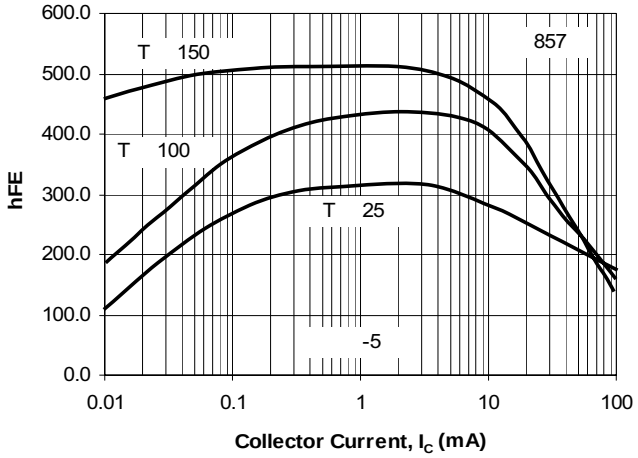

Fig. 1. Typical h_{FE} vs. Collector Current

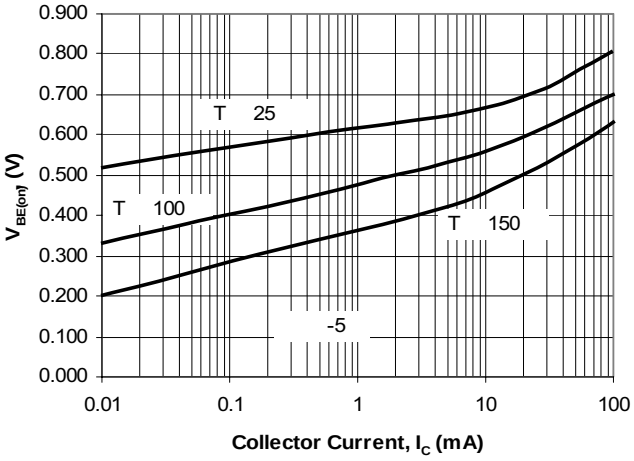

Fig. 2. Typical $V_{BE(ON)}$ vs. Collector Current

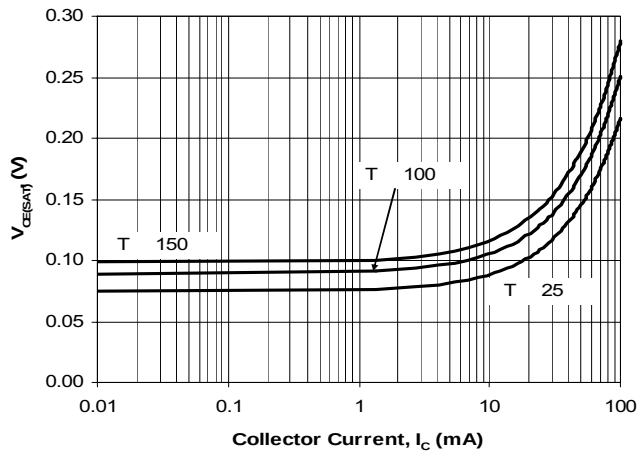

Fig. 3. Typical $V_{CE(SAT)}$ vs. Collector Current

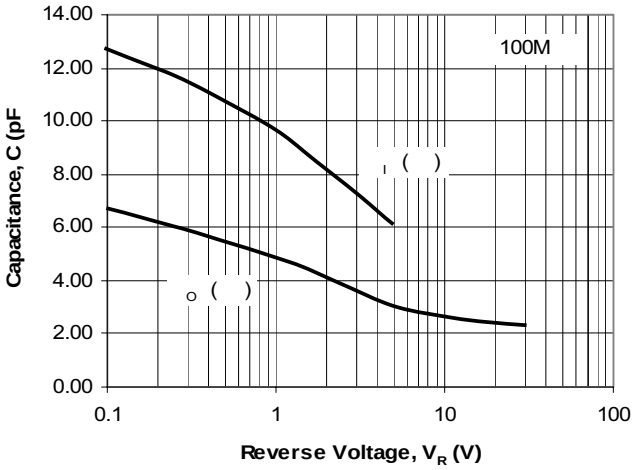

Fig. 5. Typical Capacitances vs. Reverse Voltage

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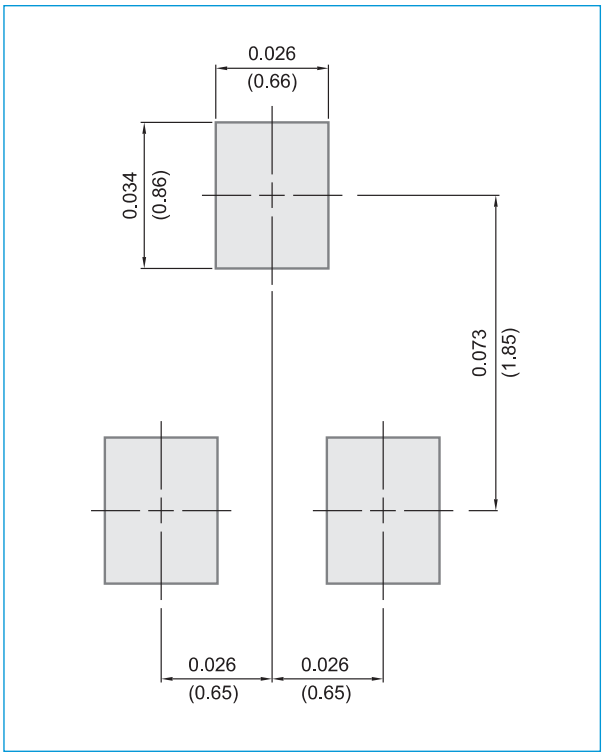
MOUNTING PAD LAYOUT

SOT-323 Unit: inch (mm)



ORDER INFORMATION

- Packing information

  T/R - 12K per 13" plastic Reel

  T/R - 3K per 7" plastic Reel

LEGAL STATEMENT