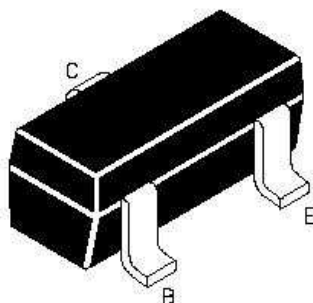


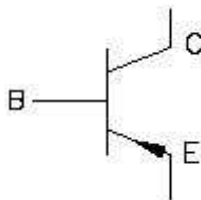
PNP SILICON PLANAR EPITAXIAL TRANSISTORS

BC856W , 857W, 858W

SOT-323
Formed SMD Package



PNP



Marking

BC856W =3D

BC856AW =3A

BC856BW =3B

BC857W =3H

BC857AW =3E

BC857BW =3F

BC857CW =3G

BC858W =3M

General Purpose Switching and Amplification.

ABSOLUTE MAXIMUM RATINGS ($T_a=25^\circ\text{C}$ unless specified otherwise)

DESCRIPTION	SYMBOL	BC856W	BC857W	BC858W	UNITS
Collector Base Voltage	V_{CBO}	80	50	30	V
Collector Emitter Voltage	V_{CEO}	65	45	30	V
Emitter Base Voltage	V_{EBO}	5	5	5	V
Collector Current (DC)	I_C	100			mA
Peak Collector Current	I_{CM}	200			mA
Peak Base Current	I_{BM}	200			mA
Power Dissipation upto $T_{amb}=25^\circ\text{C}$	$*P_{tot}$	200			mW
Storage Temperature	T_{stg}	- 65 to +150			$^\circ\text{C}$
Junction Temperature	T_j	150			$^\circ\text{C}$
Operating Ambient Temperature	T_{amb}	- 65 to +150			$^\circ\text{C}$

THERMAL RESISTANCE

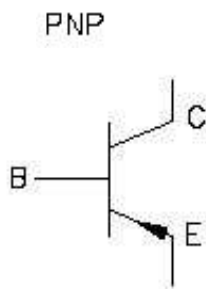
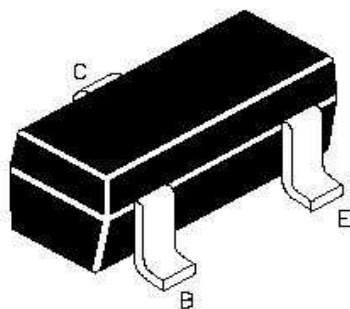
From junction to ambient	$*R_{th(j-a)}$	625	K/W
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*Sot-323 standard mounting condition

ELECTRICAL CHARACTERISTICS ($T_{amb}=25^\circ\text{C}$ unless specified otherwise)

DESCRIPTION	SYMBOL	TEST CONDITION	MIN	TYP	MAX	UNITS
Collector Cut Off Current	I_{CBO}	$V_{CB}=30\text{V}, I_E=0$			15	nA
		$V_{CB}=30\text{V}, I_E=0, T_j=150^\circ\text{C}$			4	μA
Emitter Cut Off Current	I_{EBO}	$V_{EB}=5\text{V}, I_C=0$			100	nA

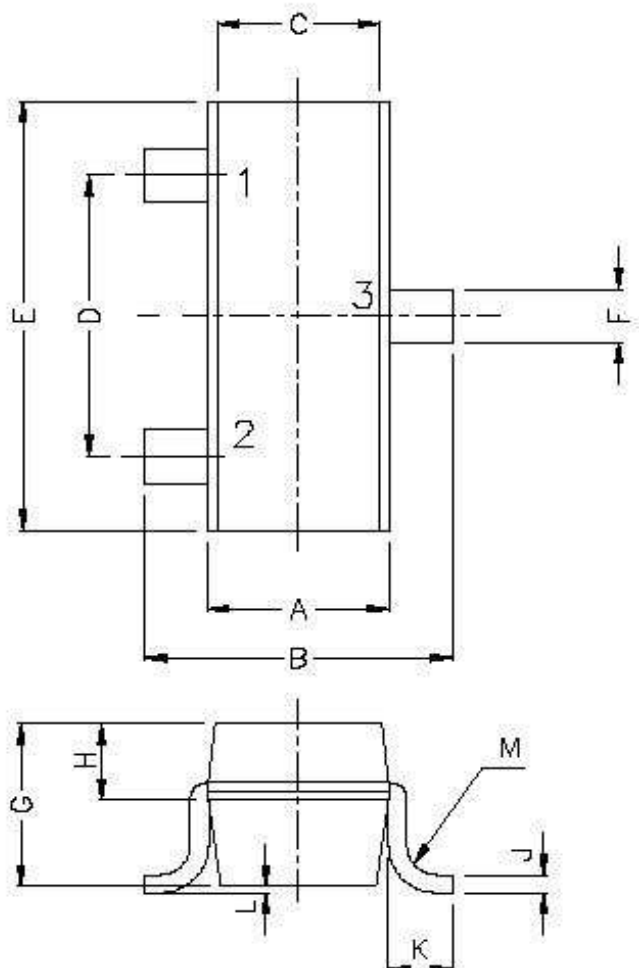
BC856W_BC858W Rev170210E

ELECTRICAL CHARACTERISTICS ($T_{amb}=25^{\circ}\text{C}$ unless specified otherwise)

DESCRIPTION	SYMBOL	TEST CONDITION	MIN	TYP	MAX	UNITS
DC Current Gain	h_{FE}	$I_C=2\text{mA}$, $V_{CE}=5\text{V}$ BC856W	125		475	
		BC857W,BC858W	125		800	
		BC856AW,BC857AW	125		250	
		BC856BW,BC857BW	220		475	
		BC857CW	420		800	
Collector Emitter Saturation Voltage	$V_{CE(Sat)}$	$I_C=10\text{mA}$, $I_B=0.5\text{mA}$			0.30	V
		* $I_C=100\text{mA}$, $I_B=5\text{mA}$			0.60	V
Base Emitter Saturation Voltage	$V_{BE(Sat)}$	$I_C=10\text{mA}$, $I_B=0.5\text{mA}$		0.70		V
		* $I_C=100\text{mA}$, $I_B=5\text{mA}$		0.85		V
Base Emitter On Voltage	$V_{BE(on)}$	$I_C=2\text{mA}$, $V_{CE}=5\text{V}$	0.60		0.75	V
		$I_C=10\text{mA}$, $V_{CE}=5\text{V}$			0.82	V
Collector Capacitance	C_c	$I_E=I_C=0$, $V_{CB}=10\text{V}$, $f=1\text{MHz}$			3.0	pF
Emitter Capacitance	C_e	$I_C=I_E=0$, $V_{EB}=0.5\text{V}$, $f=1\text{MHz}$			12	pF
Transition Frequency	f_T	$I_C=10\text{mA}$, $V_{CE}=5\text{V}$, $f=100\text{MHz}$	100			MHz
Noise Figure	NF	$I_C=0.2\text{mA}$, $V_{CE}=5\text{V}$ $R_s=2\text{k}\Omega$, $f=1\text{KHz}$, $B=200\text{Hz}$			10	dB

**Pulse test $t_p=300\mu\text{s}$, $\delta < 0.02$

PACKAGE SOT-323



DIM	MIN	MAX
A	1.25	1.35
B	2.02	2.18
C	1.20	1.30
D	1.25	1.35
E	2.10	2.20
F	0.27	0.33
G	0.95	1.00
H	0.35	4.00
J	0.09	0.15
K	0.25	0.33
L	0.00	0.10
M	R 0.15	R 0.20

DIMENSIONS ARE IN mm

PIN CONFIGURATION

1. BASE
2. EMITTER
3. COLLECTOR

PACKING :- 3K/REEL

Component Disposal Instructions

- 1. CDIL Semiconductor Devices are RoHS compliant, customers are requested to please dispose as per prevailing Environmental Legislation of their Country.**
- 2. In Europe, please dispose as per EU Directive 2002/ 96/ EC on Waste Electrical and Electronic Equipment (WEEE).**

Disclaimer

The product information and the selection guides facilitate selection of the CDIL's Semiconductor Device(s) best suited for application in your product(s) as per your requirement. It is recommended that you completely review our Data Sheet(s) so as to confirm that the Device(s) meet functionality parameters for your application. The information furnished in the Data Sheet and on the CDIL Web Site/CD is believed to be accurate and reliable. CDIL however, does not assume responsibility for inaccuracies or incomplete information. Furthermore, CDIL does not assume liability whatsoever, arising out of the application or use of any CDIL product; neither does it convey any license under its patent rights nor rights of others. These products are not designed for use in life saving/support appliances or systems. CDIL customers selling these products (either as individual Semiconductor Devices or incorporated in their end products), in any life saving/support appliances or systems or applications do so at their own risk and CDIL will not be responsible for any damages resulting from such sale(s).

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