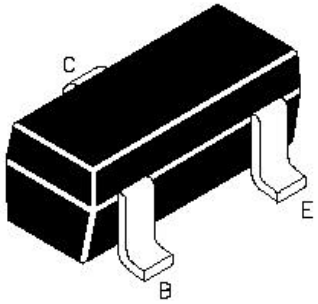
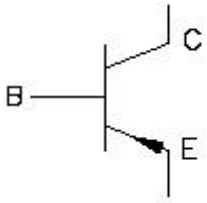
PNP SILICON PLANAR EPITAXIAL TRANSISTORS

BC856W , 857W, 858W

SOT-323
Formed SMD Package



PNP



Marking

BC856W =3D	**BC857AW =3E**
BC856AW =3A	**BC857BW =3F**
BC856BW =3B	**BC857CW =3G**
BC857W =3H	**BC858W =3M**

General Purpose Switching and Amplification.

ABSOLUTE MAXIMUM RATINGS (T_a=25ºC 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}=25ºC	*P_{tot}	200			mW
Storage Temperature	T_{stg}	- 65 to +150			ºC
Junction Temperature	T_j	150			ºC
Operating Ambient Temperature	T_{amb}	- 65 to +150			ºC

THERMAL RESISTANCE

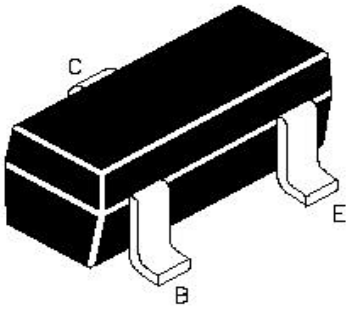
From junction to ambient	*$R_{th\ (j-a)}$	625	K/W

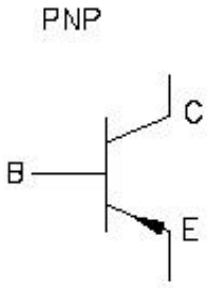
***Sot-323 standard mounting condition**

ELECTRICAL CHARACTERISTICS (T_{amb}=25ºC unless specified otherwise)

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

SOT-323
Formed SMD Package





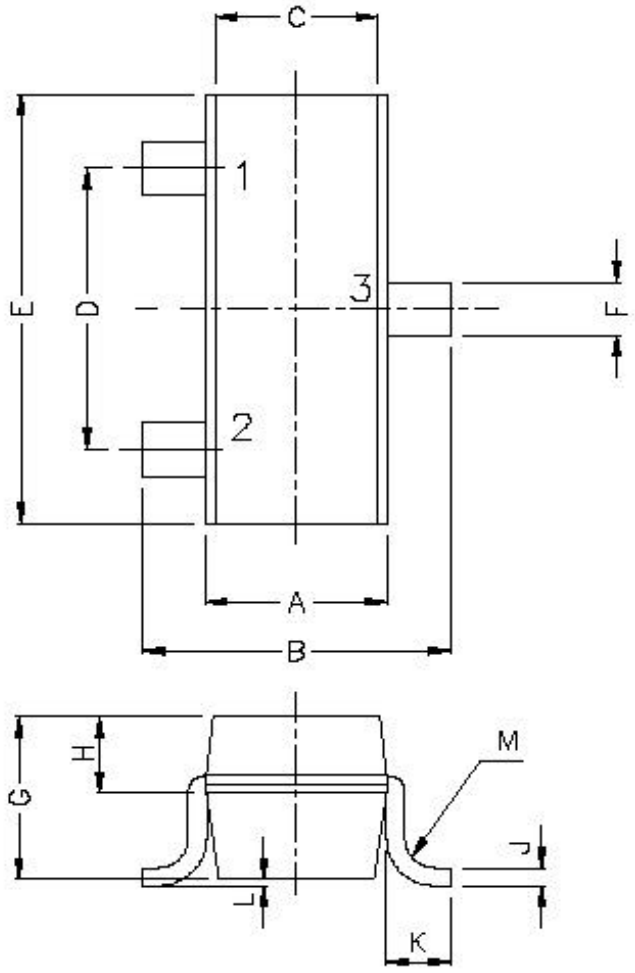
ELECTRICAL CHARACTERISTICS (T_{amb}=25ºC unless specified otherwise)

DESCRIPTION	SYMBOL	TEST CONDITION	MIN	TYP	MAX	UNITS
DC Current Gain	h_{FE}	I_C=2mA, V_{CE}=5V				
		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=10mA, I_B=0.5mA			0.30	V
		*I_C=100mA, I_B=5mA			0.60	V
Base Emitter Saturation Voltage	$V_{BE(Sat)}$	I_C=10mA, I_B=0.5mA		0.70		V
		*I_C=100mA, I_B=5mA		0.85		V
Base Emitter On Voltage	$V_{BE\ (on)}$	I_C=2mA, V_{CE}=5V	0.60		0.75	V
		I_C=10mA, V_{CE}=5V			0.82	V
Collector Capacitance	C_c	I_E=ie=0, V_{CB}=10V, f=1MHz			3.0	pF
Emitter Capacitance	C_e	I_C=ic=0, V_{EB}=0.5V, f=1MHz			12	pF
Transition Frequency	f_T	I_C=10mA, V_{CE}=5V, f=100MHz	100			MHz
Noise Figure	NF	I_C=0.2mA, V_{CE}=5V			10	dB
		R_s=2kΩ, f=1KHz, B=200Hz				

****Pulse test t_p=300µs, δ < 0.02**

BC856W_BC858W Rev170210E

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

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BC856W_BC858W Rev170210E