COMCHIP
SMD Diodes Specialist

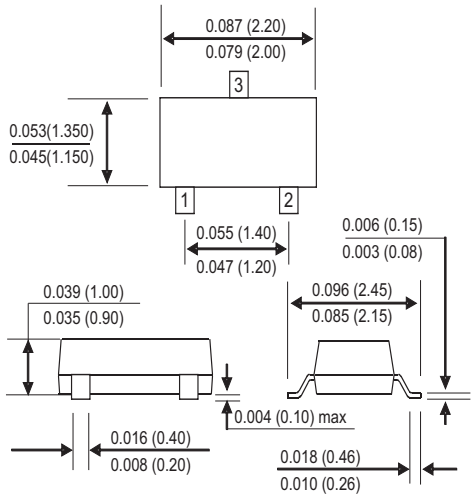
BC856AW-G Thru. BC858CW-G (PNP)

RoHS Device

Features

-Ideally suited for automatic insertion
-For Switching and AF Amplifier Applications
-Power dissipation
PCM: 0.15W (@TA=25 °C)
-Collector current
ICM: -0.1A
-Collector-base voltage
VCBO: BC856W= -80V
BC857W= -50V
BC858W= -30V
-Operating and storage junction temperature range: TJ, TSTG= -65 to +150 °C

SOT-323



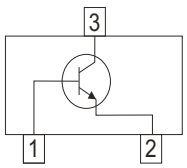
Dimensions in inches and (millimeter)

Mechanical data

-Case: SOT-323, molded plastic.
-Terminals: solderable per MIL-STD-750, method 2026.

Circuit diagram

-1.BASE
-2.EMITTER
-3.COLLECTOR



Maximum Ratings (at Ta=25 °C unless otherwise noted)

Parameter		Symbol	Value	Units
Collector-Base Voltage	BC856W-G BC857W-G BC858W-G	VCBO	-80 -50 -30	V
Collector-Emitter Voltage	BC856W-G BC857W-G BC858W-G	VCEO	-65 -45 -30	V
Emitter-Base Voltage		VEBO	-5	V
Collector Current -Continuous		IC	-0.1	A
Collector Power Dissipation		PC	150	mW
Junction Temperature		TJ	150	°C
Storage Temperature Range		TSTG	-65 to +150	°C

Electrical Characteristics

(BC856AW-G Thru. BC858CW-G, @T_A= 25°C unless otherwise specified)

Parameter		Symbol	Test Conditions	MIN	MAX	Units
Collector-Base Breakdown Voltage	BC856W-G BC857W-G BC858W-G	V_{CBO}	I_C = -10μA , I_E=0	-80 -50 -30		V
Collector-Emitter Breakdown Voltage	BC856W-G BC856W-G BC858W-G	V_{CEO}	I_C = -10mA , I_B=0	-65 -45 -30		V
Emitter-Base Break Voltage	BC846W-G, BC857W-G BC858W-G	V_{EBO}	I_E = -1μA , I_C=0	-5		V
Collector Cutoff Current		I_{CBO}	V_{CB}= -30V , I_E=0		-15	nA
DC Current Gain	BC856AW,857AW,858AW BC856BW,857BW,858BW BC857CW,858CW	h_{FE}	V_{CE} = -5V , I_C= -2mA	125 220 420	250 475 800	V
Collector-Emitter Saturation Voltage		$V_{CE(sat)}$	I_C =-100mA , I_B=-5mA		-0.65	V
Base-Emitter Saturation Voltage		$V_{BE(sat)}$	I_C =-100mA , I_B=-5mA		-1.1	
Transition Frequency		f_T	V_{CE}=-5V , I_C=-10mA f=100MHz	100		MHz
Collector Output Capacitance		C_{ob}	V_{CB} =-10V , f=1MHz		4.5	pF

Electrical Characteristic Curves (BC856AW-G Thru. BC858CW-G)

Fig.1 DC current gain as a function fo collector current ;typical values.

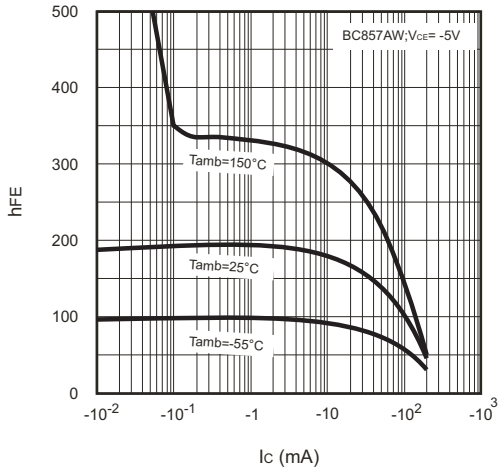


Fig.2 Base-Emitter Voltage as a function of collector current;typical values

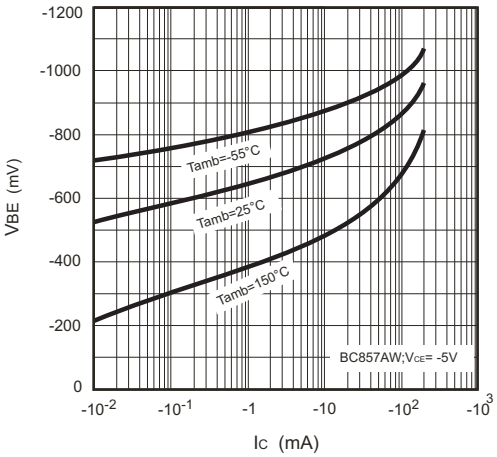


Fig.3 Collector-emitter saturation voltage as a function of collector current; typical values.

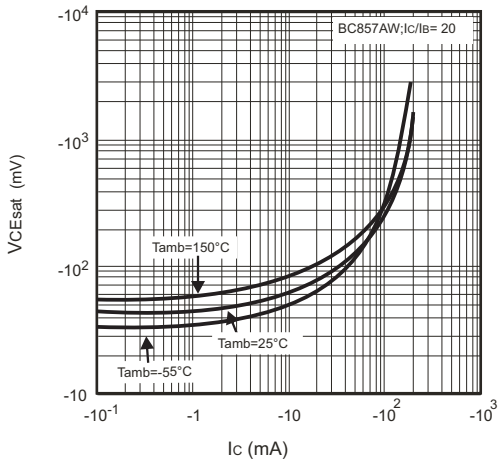


Fig.4 Base-emitter saturation voltage as a function of collector current; typical values

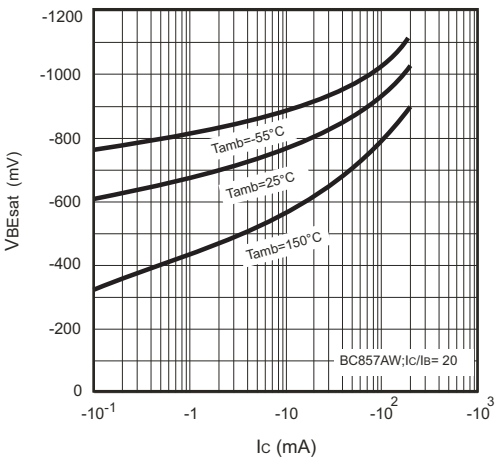


Fig.5 DC current gain as a function fo collector current ;typical values.

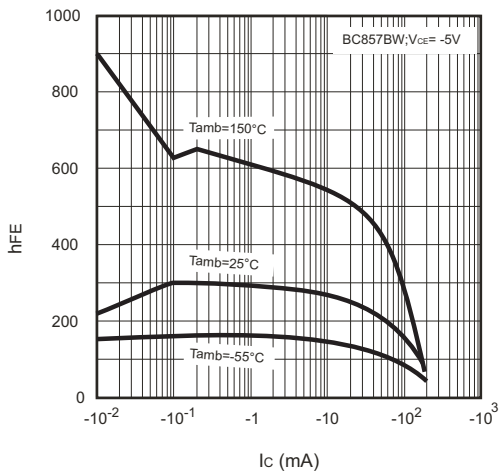
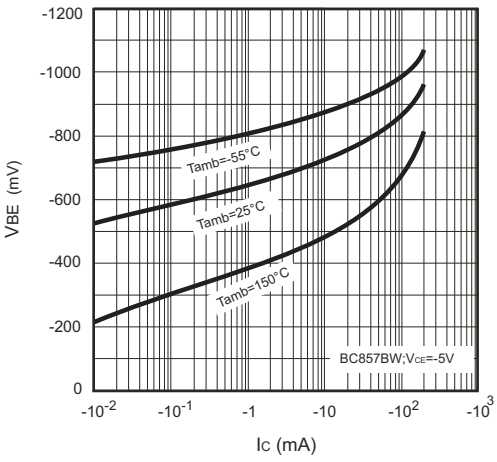


Fig.6 Base-emitter voltage as a function of collector current;typical values.



Electrical Characteristic Curves (BC856AW-G Thru. BC858CW-G)

Fig.7 Collector-ernitter saturation voltage as a function of collector current typical values.

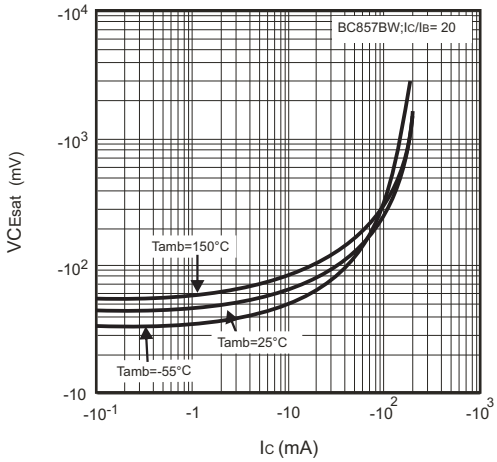


Fig.8 Base-Emitter Saturation Voltage as a function of collector current;typical values

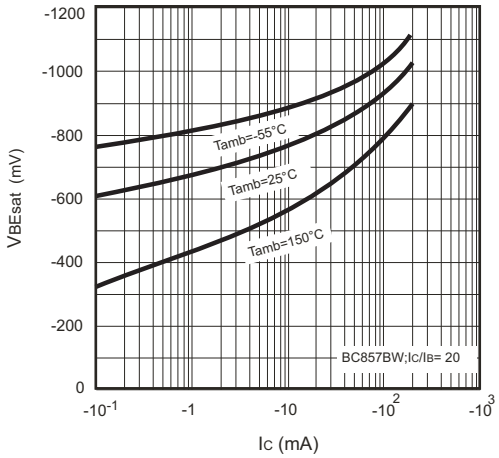


Fig.9 DC current gain as a function fo collector current ;typical values.

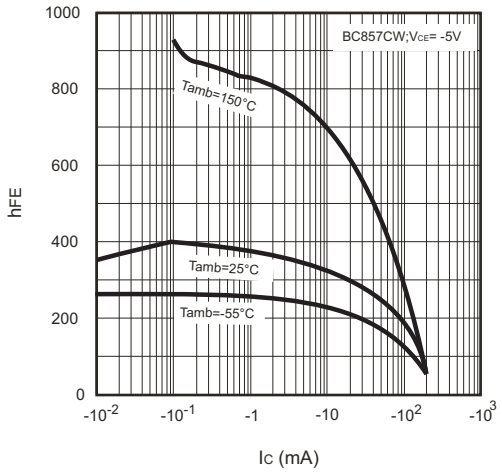


Fig.10 Base-Emitter Voltage as a function of collector current;typical values

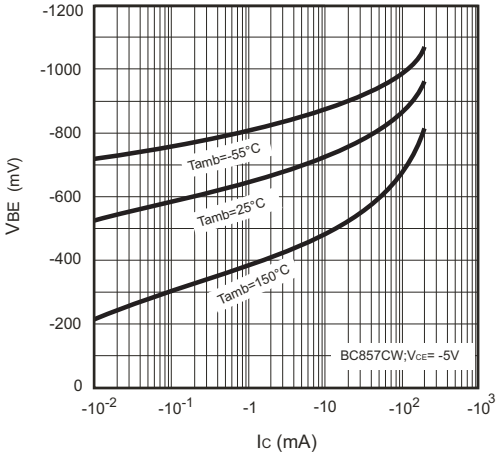


Fig.11 Collector-ernitter saturation voltage as a function of collector current; typical values.

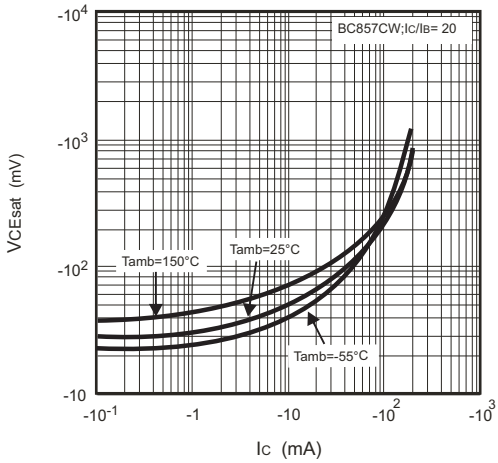
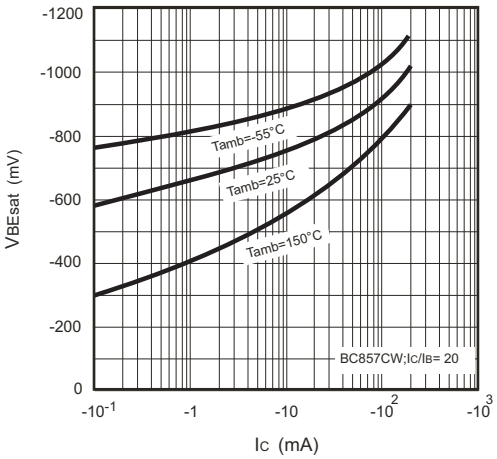
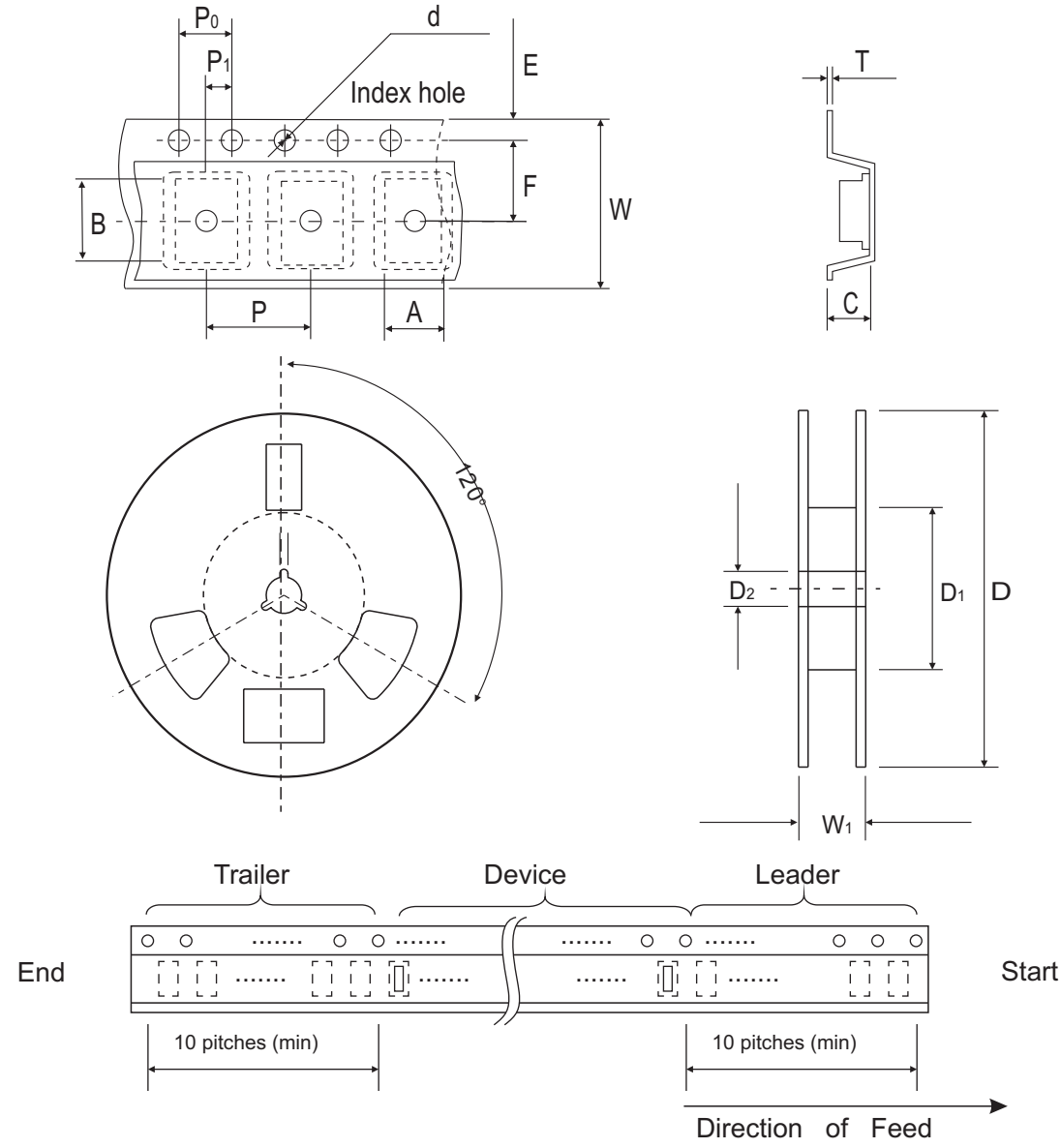


Fig.12 Base-Emitter Saturation Voltage as a function of collector current;typical values



Reel Taping Specification

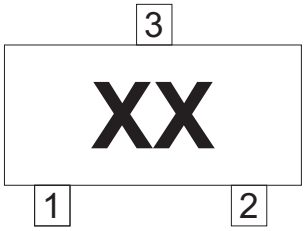


	SYMBOL	A	B	C	d	D	D_1	D_2
SOT-323	(mm)	2.25 ± 0.10	2.55 ± 0.10	1.19 ± 0.10	1.55 + 0.10	178 ± 1.00	54.40 ± 0.40	13.0 ± 0.20
	(inch)	0.089 ± 0.004	0.100 ± 0.004	0.047 ± 0.004	0.061 + 0.004	7.008 ± 0.039	2.142 ± 0.016	0.512 ± 0.008

	SYMBOL	E	F	P	P_0	P_1	W	W_1
SOT-323	(mm)	1.75 ± 0.10	3.50 ± 0.05	4.00 ± 0.10	4.00 ± 0.10	2.00 ± 0.10	8.00 + 0.30 / - 0.10	9.50 ± 1.00
	(inch)	0.069 ± 0.004	0.138± 0.002	0.158 ± 0.004	0.158 ± 0.004	0.079 ± 0.004	0.315 + 0.012 / - 0.004	0.374 ± 0.039

Marking Code

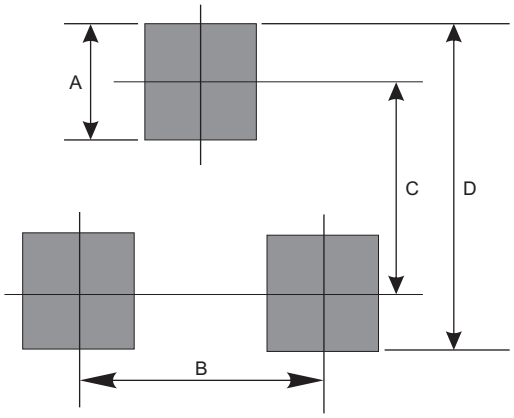
Part Number	Marking Code
BC856AW-G	3A
BC857AW-G	3E
BC858AW-G	3J
BC856BW-G	3B
BC857BW-G	3F
BC858BW-G	3K
BC857CW-G	3G
BC858CW-G	3L



xx = Product type marking code

Suggested PAD Layout

SIZE	SOT-323	
	(mm)	(inch)
A	0.80	0.031
B	1.30	0.051
C	1.94	0.076
D	2.74	0.108



Standard Package

Case Type	Qty per Reel	Reel Size
	(Pcs)	(inch)
SOT-323	3000	7