COMCHIP
SMD Diodes Specialist

BC846AW-G Thru. BC848CW-G (NPN)

RoHS Device

Features

-Power dissipation

PCM: 0.15W (@TA=25 °C)

-Collector current

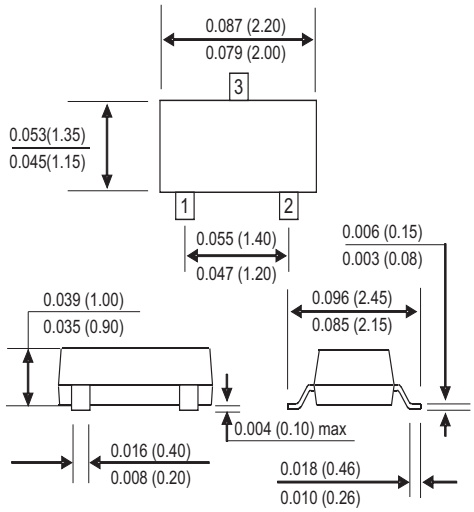
ICM: 0.1A

-Collector-base voltage

VCBO: BC846W=80V
BC847W=50V
BC848W=30V

-Operating and storage junction temperature range: TJ, TSTG= -55 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.

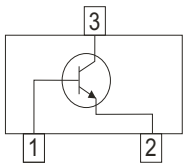
-Approx. weight: 0.008 grams

Circuit diagram

-1.BASE

-2.EMITTER

-3.COLLECTOR



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

Parameter		Symbol	Value	Units
Collector-Base Voltage	BC846W-G BC847W-G BC848W-G	VCBO	80 50 30	V
Collector-Emitter Voltage	BC846W-G BC847W-G BC848W-G	VCEO	65 45 30	V
Emitter-Base Voltage	BC846W-G / BC847W-G BC848W-G	VEBO	6 5	V
Collector Current -Continuous		IC	0.1	A
Collector Power Dissipation		PC	150	mW
Junction Temperature		TJ	150	°C
Storage Temperature Range		TSTG	-55 to +150	°C

Electrical Characteristics

(BC846AW-G Thru. BC848CW-G, @T_A= 25°C unless otherwise specified)

Parameter		Symbol	Test Conditions	MIN	TYP	MAX	Units
Collector-Base Breakdown Voltage	BC846W-G BC847W-G BC848W-G	V_{CBO}	I_C =10μA , I_E=0	80 50 30			V
Collector-Emitter Breakdown Voltage	BC846W-G BC846W-G BC848W-G	V_{CEO}	I_C =10mA , I_B=0	65 45 30			V
Emitter-Base Break Voltage	BC846W-G, BC847W-G BC848W-G	V_{EBO}	I_E =10μA , I_C=0	6 5			V
Collector Cutoff Current		I_{CBO}	V_{CB}=30V			15	nA
DC Current Gain	BC846AW,847AW,848AW BC846BW,847BW,848BW BC847CW,848CW	h_{FE}	V_{CE} =5V , I_C=10μA		90 150 270		
	BC846AW,847AW,848AW BC846BW,847BW,848BW BC847CW,848CW		V_{CE} =5V , I_C=2mA	110 200 420		220 450 800	
Collector-Emitter Saturation Voltage		$V_{CE(sat)}$	I_C =10mA , I_B=0.5mA I_C =100mA , I_B=0.5mA			0.25 0.60	V
Base-Emitter Saturation Voltage		$V_{BE(sat)}$	I_C =10mA , I_B=0.5mA I_C =100mA , I_B=5mA		0.7 0.9		V
Base-Emitter Voltage		$V_{BE(on)}$	V_{CE} =5V , I_C=2mA V_{CE} =5V , I_C=10mA	580	660	700 770	mV
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
Noise Figure	BC846AW,847AW,848AW BC846BW,847BW,848BW BC847CW,848CW	NF	V_{CE} =5V , I_C=0.2mA f =1KHz , R_S=2KΩ BW=200Hz			10 4	dB

Electrical Characteristic Curves (BC846AW-G Thru. BC848CW-G)

Fig.1 Normalized DC Current Gain

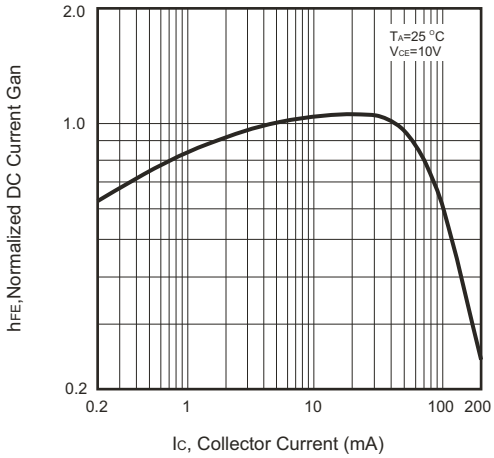


Fig.2 Saturation and On voltage

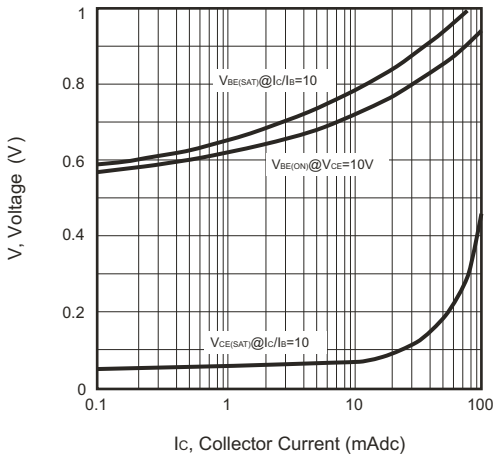


Fig.3 Collector Saturation Region

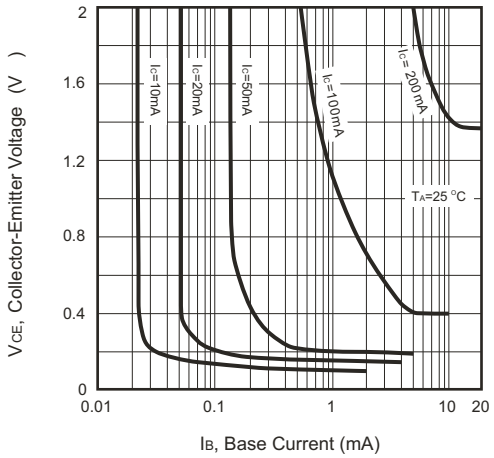


Fig.4 Base-Emitter Temperature Coefficient

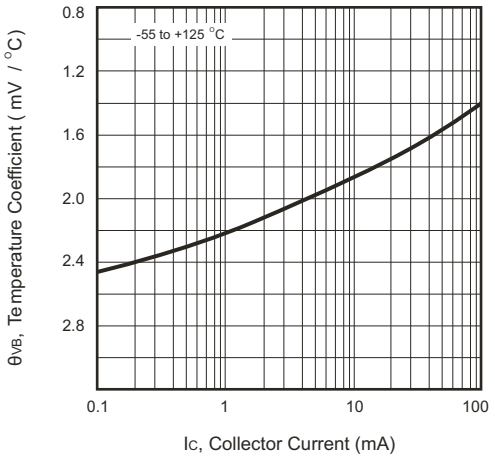


Fig.5 Capacitance

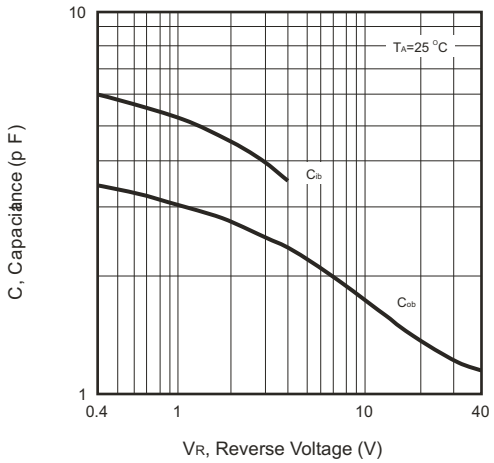
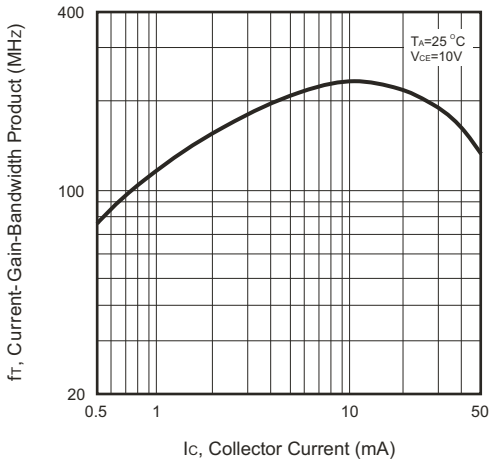
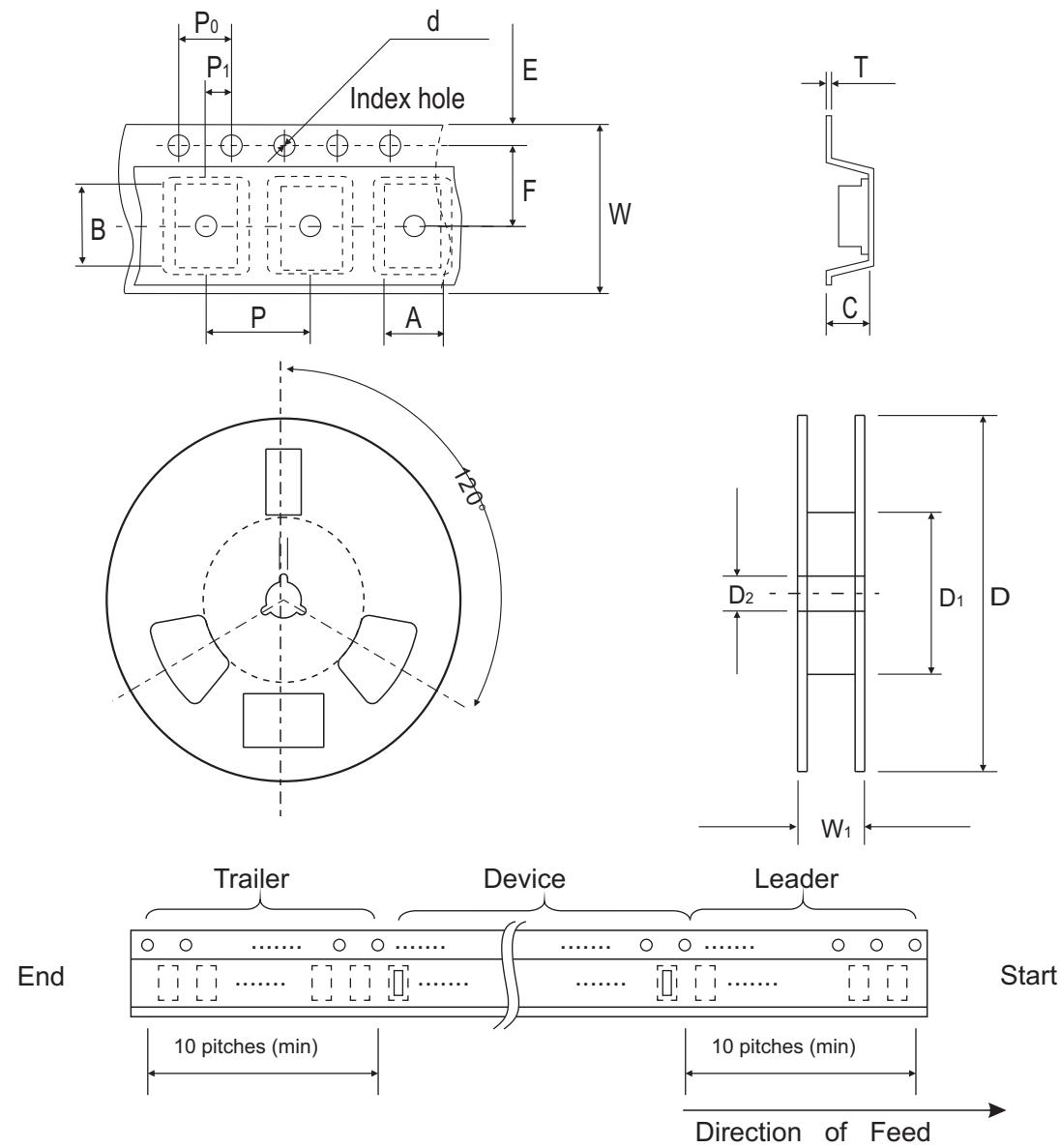


Fig.6 Current Gain Bandwidth Product



Reel Taping Specification

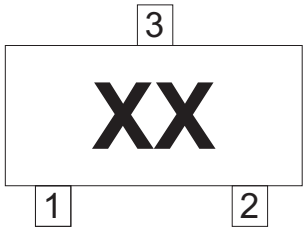


	SYMBOL	A	B	C	d	D	D_1	D_2
SOT-323	(mm)	2.25 ± 0.10	2.55 ± 0.10	1.19 ± 0.10	1.55 + 0.10	178 ± 1.00	54.40 ± 0.40	13.0 ± 0.20
	(inch)	0.089 ± 0.004	0.100 ± 0.004	0.047 ± 0.004	0.061 + 0.004	7.008 ± 0.039	2.142 ± 0.016	0.512 ± 0.008

	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

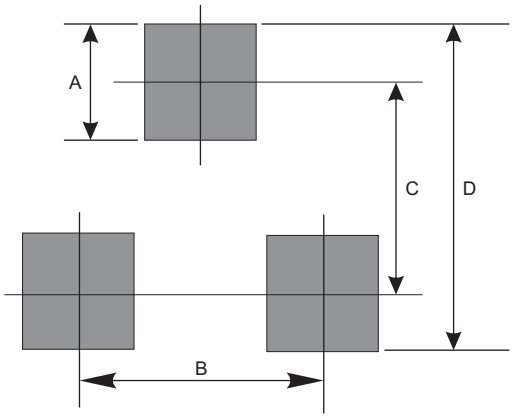
Part Number	Marking Code
BC846AW-G	1A
BC847AW-G	1E
BC848AW-G	1J
BC846BW-G	1B
BC847BW-G	1F
BC848BW-G	1K
BC847CW-G	1G
BC848CW-G	1L



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

X-ON Electronics

Largest Supplier of Electrical and Electronic Components

Click to view similar products for Bipolar Transistors - BJT ***category:***

Click to view products by Comchip ***manufacturer:***

Other Similar products are found below :

619691C MCH4017-TL-H BC546/116 BC557/116 BSW67A NTE158 NTE187A NTE195A NTE2302 NTE2330 NTE63 C4460 2SA1419T-TD-H 2SA1721-O(TE85L,F) 2SA2126-E 2SB1204S-TL-E 2SD2150T100R SP000011176 FMMTA92QTA 2N2369ADCSM 2N5769 2SC2412KT146S 2SC5490A-TL-H 2SD1816S-TL-E 2SD1816T-TL-E CMXT2207 TR CPH6501-TL-E MCH4021-TL-E US6T6TR NJL0281DG 732314D CMXT3906 TR CPH3121-TL-E CPH6021-TL-H 873787E IMZ2AT108 UMX21NTR MCH6102-TL-E NJL0302DG 2N3583 2SA1434-TB-E 2SC3143-4-TB-E 2SD1621S-TD-E NTE103 30A02MH-TL-E NSV40301MZ4T1G NTE101 NTE13 NTE15 NTE16001