

BC857CW-TP Datasheet

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DiGi Electronics Part Number

BC857CW-TP-DG

Manufacturer

[Micro Commercial Co](#)

Manufacturer Product Number

BC857CW-TP

Description

Interface

Detailed Description

Bipolar (BJT) Transistor PNP 45 V 100 mA 100MHz 1
50 mW Surface Mount SOT-323

<https://www.DiGi-Electronics.com>



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Purchase and inquiry

Manufacturer Product Number:

BC857CW-TP

Series:

-

Transistor Type:

PNP

Voltage - Collector Emitter Breakdown (Max):

45 V

Current - Collector Cutoff (Max):

15nA (ICBO)

Power - Max:

150 mW

Operating Temperature:

-65°C ~ 150°C (TJ)

Package / Case:

SC-70, SOT-323

Base Product Number:

BC857

Manufacturer:

Micro Commercial Co

Product Status:

Active

Current - Collector (Ic) (Max):

100 mA

Vce Saturation (Max) @ Ib, Ic:

650mV @ 5mA, 100mA

DC Current Gain (hFE) (Min) @ Ic, Vce:

420 @ 2mA, 5V

Frequency - Transition:

100MHz

Mounting Type:

Surface Mount

Supplier Device Package:

SOT-323

Environmental & Export classification

REACH Status:

REACH Unaffected

HTSUS:

8541.21.0075

ECCN:

EAR99

Features

- Halogen Free. "Green" Device (Note 1)
- Moisture Sensitivity Level 1
- Epoxy Meets UL 94 V-0 Flammability Rating
- Lead Free Finish/RoHS Compliant ("P" Suffix Designates RoHS Compliant. See Ordering Information)

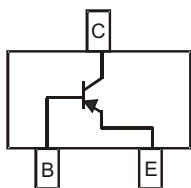
Maximum Ratings @ 25°C Unless Otherwise Specified

- Operating Junction Temperature Range: -65°C to +150°C
- Storage Temperature Range: -65°C to +150°C
- Maximum Thermal Resistance: 625°C/W Junction to Ambient

Parameter	Symbol	Rating	Unit
Collector-Base Voltage	V_{CBO}	-80	V
BC856AW, BC856BW		-50	
BC857AW, BC857BW, BC857CW		-30	
BC858AW, BC858BW, BC858CW			
Collector-Emitter Voltage	V_{CEO}	-65	V
BC856AW, BC856BW		-45	
BC857AW, BC857BW, BC857CW		-30	
BC858AW, BC858BW, BC858CW			
Emitter-Base Voltage	V_{EBO}	-5	V
Collector Current	I_C	-100	mA
Power Dissipation	P_D	200	mW

Note: 1. Halogen free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.

Internal Structure

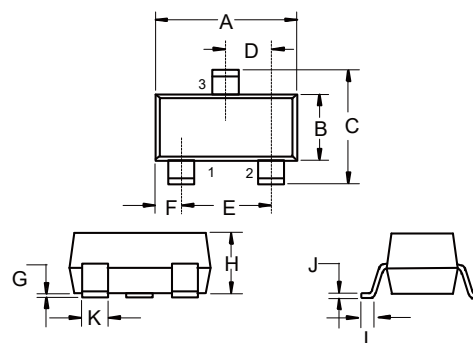


Marking:

BC856AW:3A; BC856BW:3B
 BC857AW:3E; BC857BW:3F; BC857CW:3G
 BC858AW:3J; BC858BW:3K; BC858CW:3L

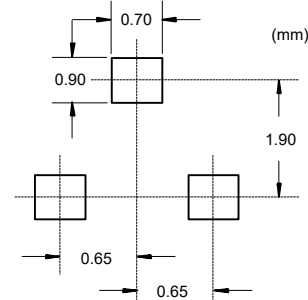
PNP General Purpose Transistors

SOT-323



DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.071	0.087	1.80	2.20	
B	0.045	0.053	1.15	1.35	
C	0.083	0.096	2.10	2.45	
D	0.026		0.65		TYP.
E	0.047	0.055	1.20	1.40	
F	0.012	0.016	0.30	0.40	
G	0.000	0.004	0.00	0.10	
H	0.035	0.044	0.90	1.10	
J	0.002	0.010	0.05	0.25	
K	0.006	0.016	0.15	0.40	
L	0.010	0.018	0.26	0.46	

Suggested Solder Pad Layout



Electrical Characteristics @ 25°C Unless Otherwise Specified

Parameter	Symbol	Min	Typ	Max	Units	Conditions
Collector-Base Breakdown Voltage BC856AW,BC856BW BC857AW,BC857BW,BC857CW BC858AW,BC858BW,BC858CW	$V_{(BR)CBO}$	-80 -50 -30			V	$I_C=-10\mu A, I_E=0$
Collector-Emitter Breakdown Voltage BC856AW,BC856BW BC857AW,BC857BW,BC857CW BC858AW,BC858BW,BC858CW	$V_{(BR)CEO}$	-65 -45 -30			V	$I_C=-10mA, I_B=0$
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	-5			V	$I_E=-1\mu A, I_C=0$
Collector-Base Cutoff Current	I_{CBO}			-15	nA	$V_{CB}=-30V, I_E=0$
DC Current Gain BC856AW,BC857AW,BC858AW BC856BW,BC857BW,BC858BW BC857CW,BC858CW	h_{FE}	125 220 420		250 475 800		$V_{CE}=-5V, I_C=-2mA$
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$			-0.65	V	$I_C=-100mA, I_B=-5mA$
Base-Emitter Saturation Voltage	$V_{BE(sat)}$			-1.10	V	$I_C=-100mA, I_B=-5mA$
Transition Frequency	f_T	100			MHz	$V_{CE}=-5V, I_C=-10mA, f=100MHz$
Collector-Base Capacitance	C_{CBO}			4.5	pF	$V_{CB}=-10V, f=1MHz$
Noise Figure	NF			10	dB	$V_{CE}=-5V, I_C=-200\mu A$ $R_S=2K\Omega, f=1KHz$

Curve Characteristics

Fig. 1 - Static Characteristics

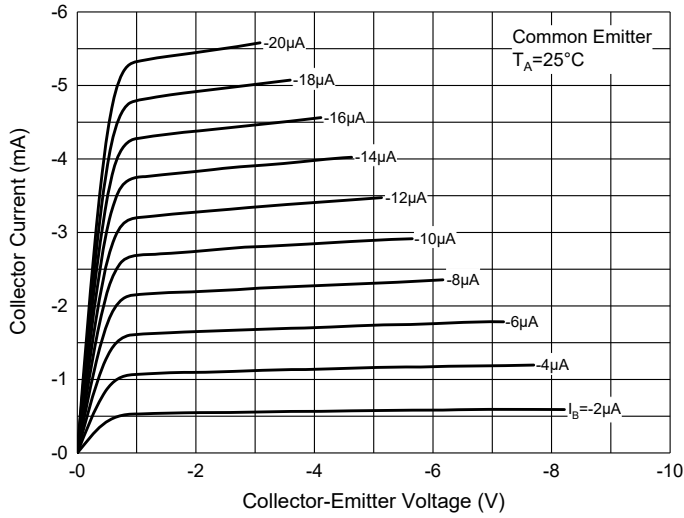


Fig. 2 - DC Current Gain Characteristics

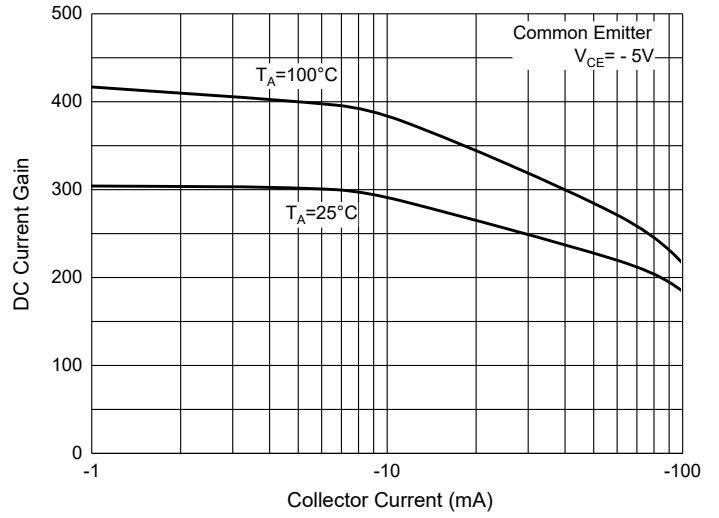


Fig. 3 - Collector-Emitter Saturation Voltage Characteristics

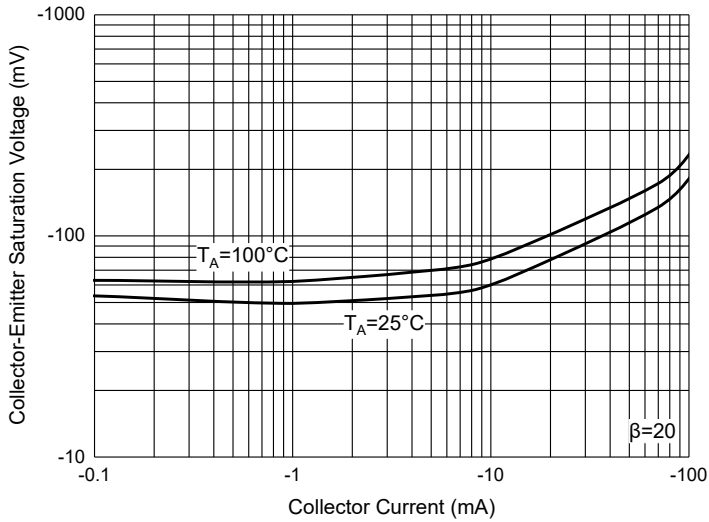


Fig. 4 - Base-Emitter Saturation Voltage Characteristics

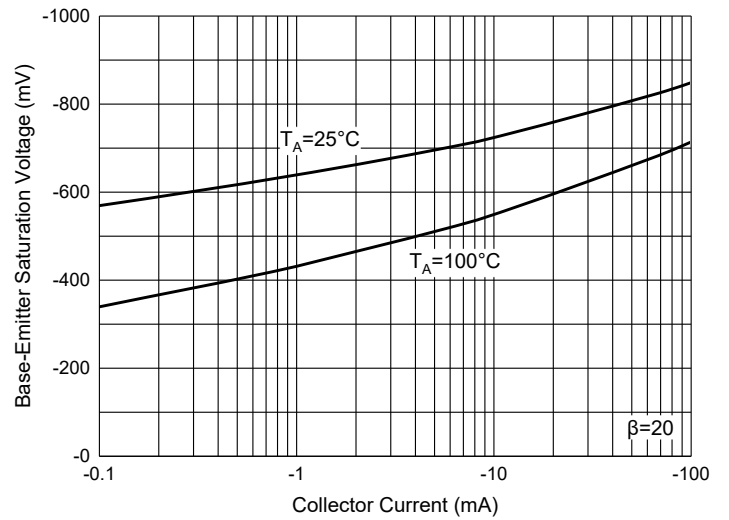
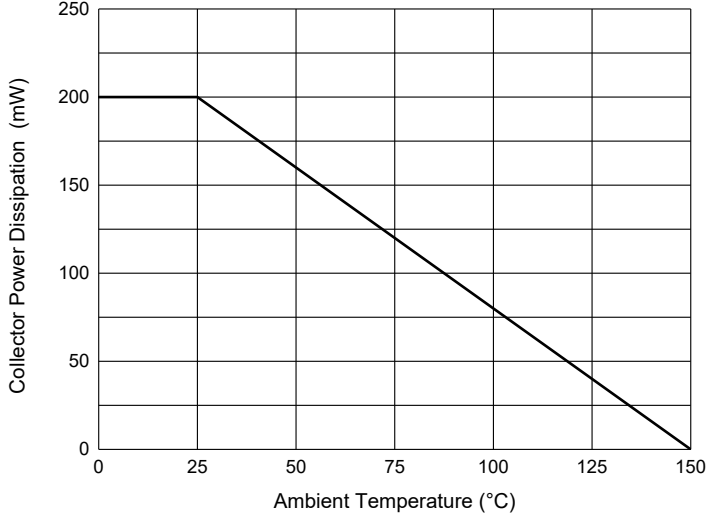


Fig. 5 - Collector Power Derating Curve





Ordering Information

Device	Packing
Part Number-TP	Tape&Reel: 3Kpcs/Reel

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