

**Features**

- AEC-Q101 Qualified
- 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)

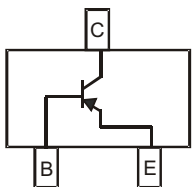
**Maximum Ratings @ 25°C Unless Otherwise Specified**

- Operating Junction Temperature Range: -65°C to +150°C
- Storage Temperature Range: -65°C to +150°C
- Maximum Thermal Resistance: 833°C/W Junction to Ambient

Parameter	Symbol	Rating	Unit
Collector-Base Voltage BC856AWHE3,BC856BWHE3 BC857AWHE3,BC857BWHE3,BC857CWHE3 BC858AWHE3,BC858BWHE3,BC858CWHE3	$V_{CBO}$	-80 -50 -30	V
Collector-Emitter Voltage BC856AWHE3,BC856BWHE3 BC857AWHE3,BC857BWHE3,BC857CWHE3 BC858AWHE3,BC858BWHE3,BC858CWHE3	$V_{CEO}$	-65 -45 -30	V
Emitter-Base Voltage	$V_{EBO}$	-5	V
Collector Current	$I_C$	-100	mA
Power Dissipation	$P_D$	150	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**

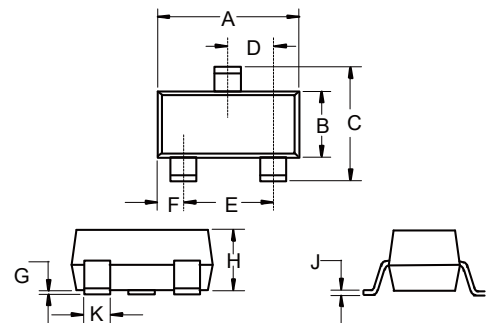


**Marking:**

BC856AWHE3:3A; BC856BWHE3:3B  
BC857AWHE3:3E; BC857BWHE3:3F; BC857CWHE3:3G  
BC858AWHE3:3J; BC858BWHE3:3K; BC858CWHE3:3L

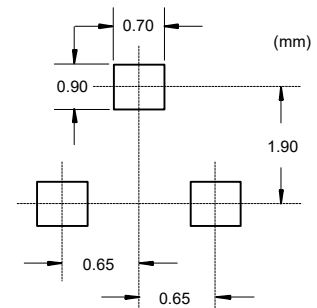
**PNP  
General Purpose  
Transistors**

**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	

**Suggested Solder Pad Layout**



## Electrical Characteristics @ 25°C Unless Otherwise Specified

Parameter	Symbol	Min	Typ	Max	Units	Conditions
Collector-Base Breakdown Voltage BC856AWHE3,BC856BWHE3 BC857AWHE3,BC857BWHE3,BC857CWHE3 BC858AWHE3,BC858BWHE3,BC858CWHE3	$V_{(BR)CBO}$	-80 -50 -30			V	$I_C=-10\mu A, I_E=0$
Collector-Emitter Breakdown Voltage BC856AWHE3,BC856BWHE3 BC857AWHE3,BC857BWHE3,BC857CWHE3 BC858AWHE3,BC858BWHE3,BC858CWHE3	$V_{(BR)CEO}$	-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	$I_{CBO}$			-100	nA	$V_{CB}=-30V, I_E=0$
DC Current Gain BC856AWHE3,BC857AWHE3,BC858AWHE3 BC856BWHE3,BC857BWHE3,BC858BWHE3 BC857CWHE3,BC858CWHE3	$h_{FE}$	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

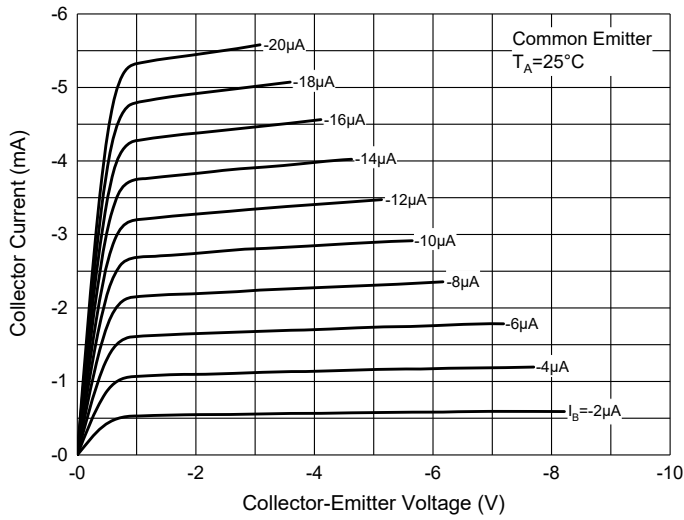


Fig. 2 - DC Current Gain Characteristics

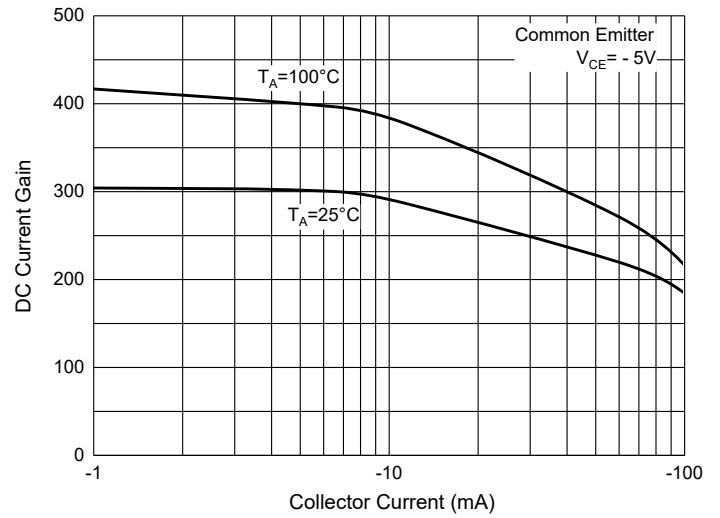


Fig. 3 - Collector-Emitter Saturation Voltage Characteristics

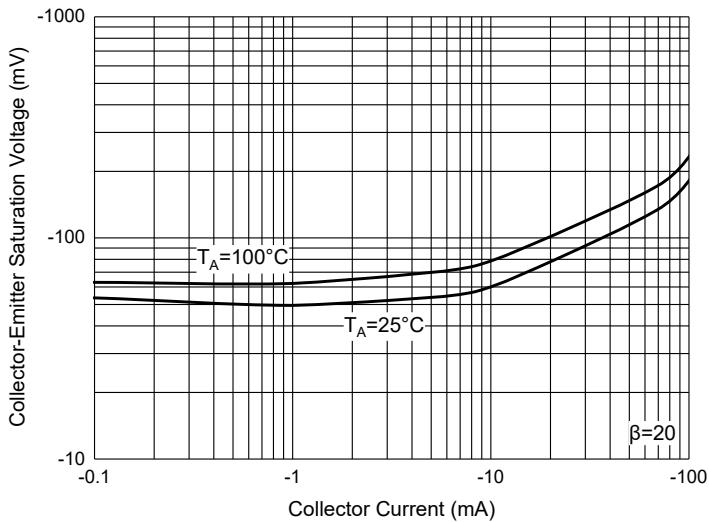


Fig. 4 - Base-Emitter Saturation Voltage Characteristics

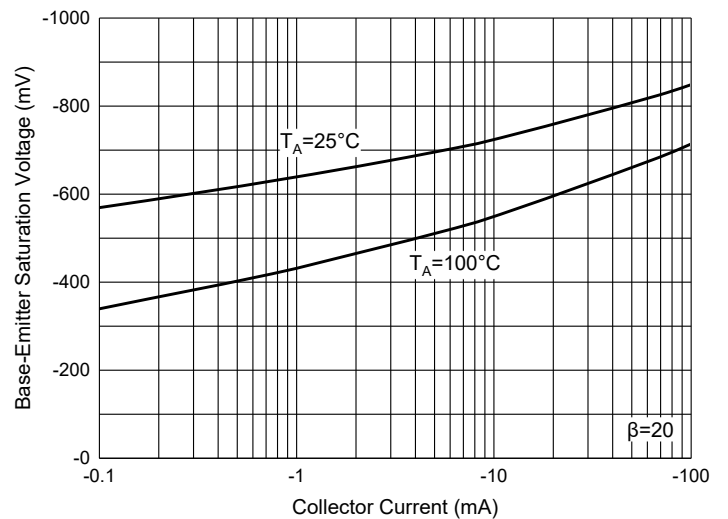
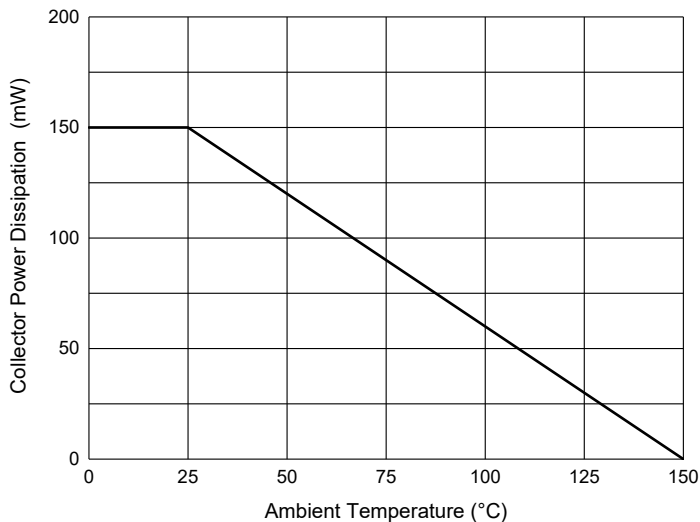


Fig. 5 - Collector Power Derating Curve



## Ordering Information

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

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