

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: -55°C to +150°C
- Storage Temperature Range: -55°C to +150°C
- Maximum Thermal Resistance: 833°C/W Junction to Ambient

Parameter	Symbol	Rating	Unit
Collector-Base Voltage BC856A-BC856B BC857A-BC857C BC858A-BC858C	V_{CBO}	-80 -50 -30	V
Collector-Emitter Voltage BC856A-BC856B BC857A-BC857C BC858A-BC858C	V_{CEO}	-65 -45 -30	V
Emitter-Base Voltage	V_{EBO}	-5	V
Collector Current	I_C	-100	mA
Collector Power Dissipation	P_C	150	mW

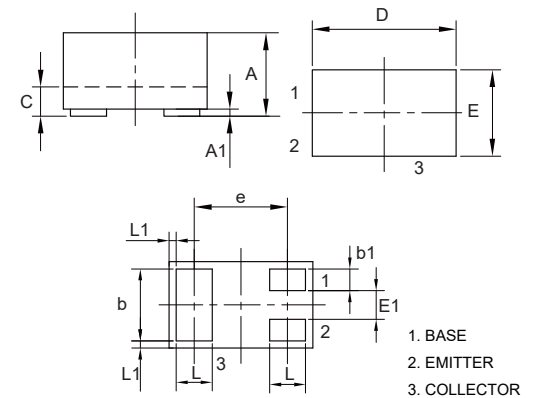
Note: 1. Halogen free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.

Marking:

BC856A:3A; BC856B:3B;
BC857A:3E; BC857B:3F; BC857C:3G;
BC858A:3J; BC858B:3K; BC858C:3L;

**PNP
Plastic-Encapsulate
Transistors**

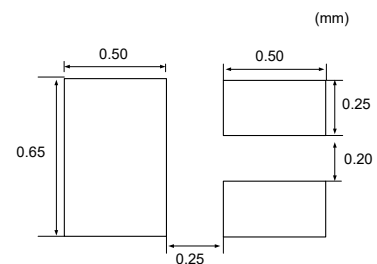
DFN1006-3



DIMENSIONS

DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.018	0.022	0.45	0.55	
A1	0.000	0.002	0.00	0.05	
b	0.018	0.022	0.45	0.55	
b1	0.004	0.008	0.10	0.20	
c	0.005	0.007	0.12	0.18	
D	0.037	0.042	0.95	1.075	
E	0.022	0.026	0.55	0.675	
E1	0.006	0.010	0.15	0.25	
e	0.026		0.65		TYP.
L	0.008	0.012	0.20	0.30	
L1	0.0002		0.05		TYP.

Suggested Solder Pad Layout



Electrical Characteristics @ $T_A=25^\circ\text{C}$ Unless Otherwise Specified

Parameter	Symbol	Min	Typ	Max	Units	Conditions
Collector-Base Breakdown Voltage BC856A-BC856B BC857A-BC857C BC858A-BC858C	$V_{(BR)CBO}$	-80 -50 -30			V	$I_C=-10\mu\text{A}, I_E=0$
Collector-Emitter Breakdown Voltage BC856A-BC856B BC857A-BC857C BC848A-BC848C	$V_{(BR)CEO}$	-65 -45 -30			V	$I_C=-10\text{mA}, I_B=0$
Emitter-Base Breakdown Voltage BC856A-BC856B BC857A-BC857C BC858A-BC858C	$V_{(BR)EBO}$	-5 -5 -5			V	$I_E=-1\mu\text{A}, I_C=0$
Collector Cut-off Current	I_{CBO}			-15	nA	$V_{CB}=-30\text{V}, I_E=0$
Emitter Cutoff Current	I_{EBO}			-100	nA	$V_{EB}=-5\text{V}, I_C=0$
Emitter Cutoff Current	I_{CEO}			-1	mA	$V_{CE}=-30\text{V}, I_B=0$
DC Current Gain BC856A/BC857A/BC858A BC856B/BC857B/BC858B BC857C/BC858C	h_{FE}	110 200 420		220 450 800		$V_{CE}=-5\text{V}, I_C=-2\text{mA}$
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$			-0.3 -0.65	V	$I_C=-10\text{mA}, I_B=-0.5\text{mA}$ $I_C=-100\text{mA}, I_B=-5\text{mA}$
Base-Emitter Saturation Voltage	$V_{BE(sat)}$		-0.7 -0.85		V	$I_C=-10\text{mA}, I_B=-0.5\text{mA}$ $I_C=-100\text{mA}, I_B=-5\text{mA}$
Base-Emitter On Voltage	$V_{BE(on)}$	-0.6	-0.65	-0.75 -0.82	V	$V_{CE}=-5\text{V}, I_C=-2\text{mA}$ $V_{CE}=-5\text{V}, I_C=-10\text{mA}$
Transition Frequency	f_T	100			MHz	$V_{CE}=-5\text{V}, I_C=-10\text{mA}, f=100\text{MHz}$

Curve Characteristics

Fig. 1 - Static Characteristics

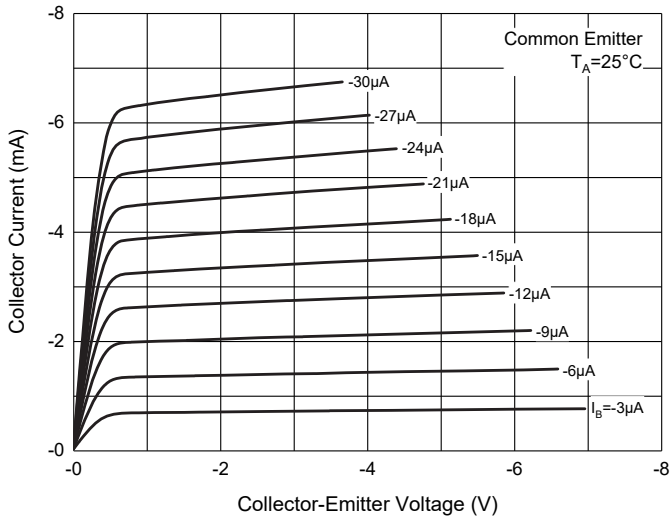


Fig. 2 - DC Current Gain Characteristics

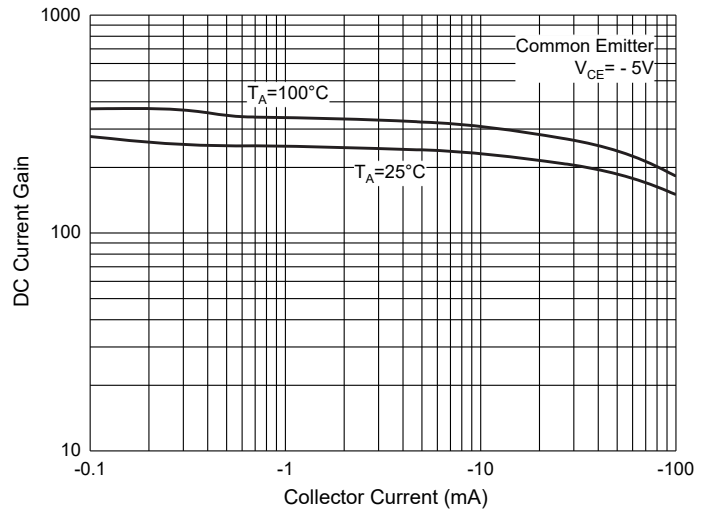


Fig. 3 - Collector-Emitter Saturation Voltage Characteristics

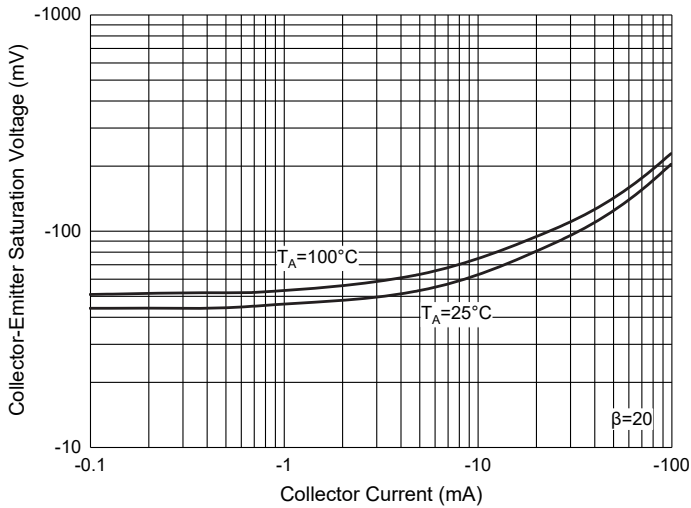


Fig. 4 - Base-Emitter Saturation Voltage Characteristics

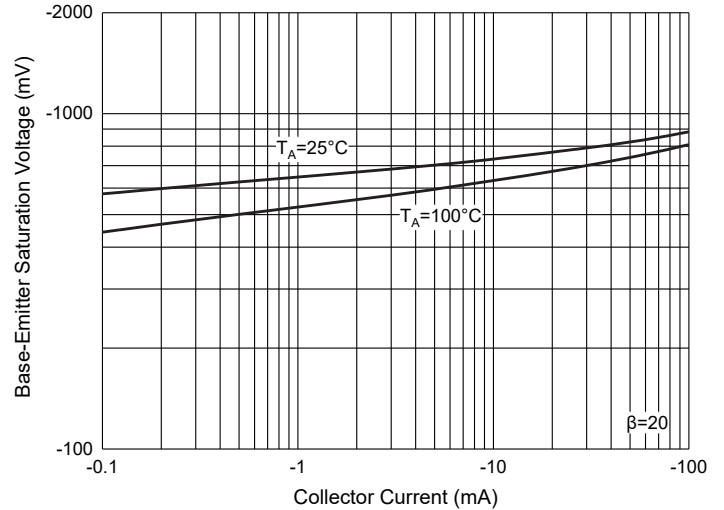


Fig. 5 - Base-Emitter Voltage Characteristics

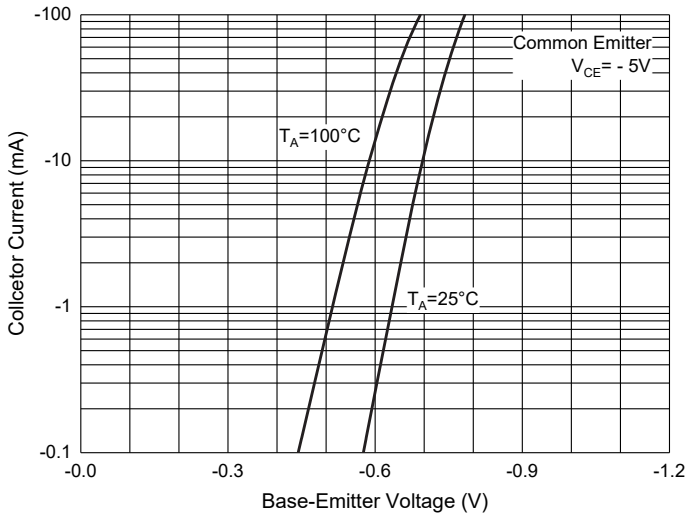
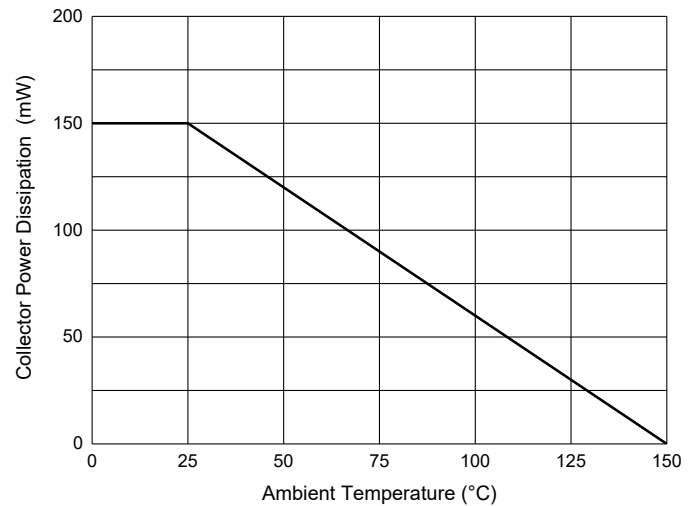


Fig. 6 - Collector Power Derating Curve



Ordering Information

Device	Packing
Part Number-TP	Tape&Reel: 10Kpcs/Reel

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