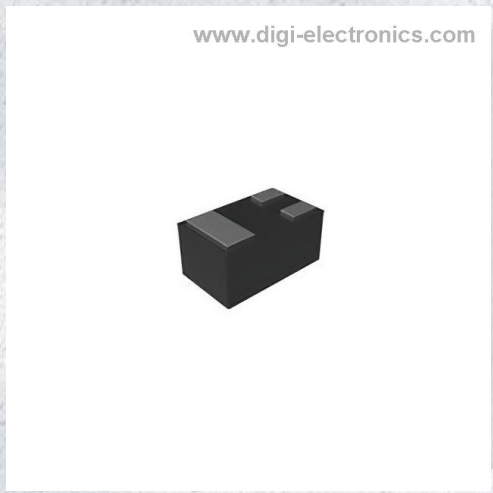
BC858CL3-TP Datasheet



https://www.DiGi-Electronics.com

DiGi Electronics Part Number	BC858CL3-TP-DG
Manufacturer	Micro Commercial Co
Manufacturer Product Number	BC858CL3-TP
Description	Interface
Detailed Description	Bipolar (BJT) Transistor PNP 30 V 100 mA 100MHz 150 mW Surface Mount DFN1006-3

Tel: +00 852-30501935

RFQ Email: Info@DiGi-Electronics.com

DiGi is a global authorized distributor of electronic components.

Purchase and inquiry

Manufacturer Product Number:	Manufacturer:
BC858CL3-TP	Micro Commercial Co
Series:	Product Status:
-	Active
Transistor Type:	Current - Collector (Ic) (Max):
PNP	100 mA
Voltage - Collector Emitter Breakdown (Max):	Vce Saturation (Max) @ Ib, Ic:
30 V	650mV @ 5mA, 100mA
Current - Collector Cutoff (Max):	DC Current Gain (hFE) (Min) @ Ic, Vce:
15nA	420 @ 2mA, 5V
Power - Max:	Frequency - Transition:
150 mW	100MHz
Operating Temperature:	Mounting Type:
-55°C ~ 150°C (TJ)	Surface Mount
Package / Case:	Supplier Device Package:
SC-101, SOT-883	DFN1006-3
Base Product Number:	
BC858	

Environmental & Export classification

REACH Status:	ECCN:
REACH Unaffected	EAR99
HTSUS:	
8541.21.0075	

Micro Commercial Components

BC856AL3 THRU BC858CL3

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)

PNP Plastic-Encapsulate Transistors

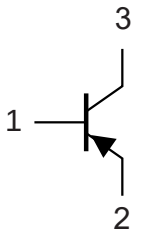
Maximum Ratings @ 25°C Unless Otherwise Specified

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

Parameter	Symbol	Rating	Unit
Collector-Base Voltage BC856AL3-BC856BL3 BC857AL3-BC857CL3 BC858AL3-BC858CL3	V_{CBO}	 -80 -50 -30	V
Collector-Emitter Voltage BC856AL3-BC856BL3 BC857AL3-BC857CL3 BC858AL3-BC858CL3	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

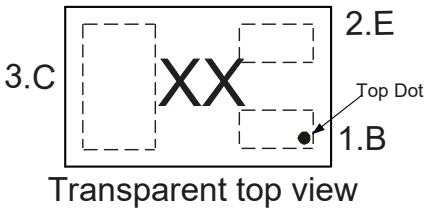
Note: 1. Halogen free "Green” products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds

Internal Structure



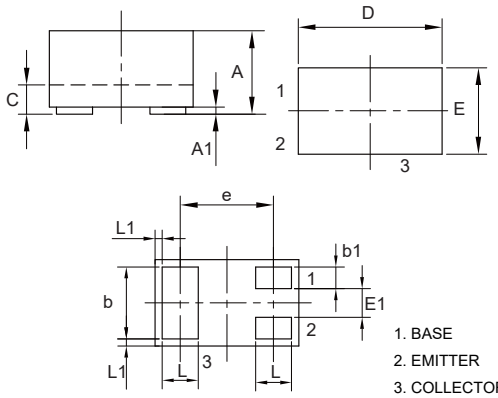
1.BASE
2.EMITTER
3.COLLECTOR

Marking Code



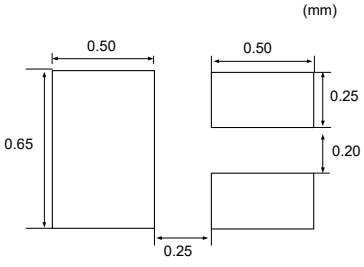
Part NO.	BC856AL3	BC856BL3	BC857AL3	BC857BL3	BC857CL3	BC858AL3	BC858BL3	BC858CL3
Marking code	3A	3B	3E	3F	3G	3J	3K	3L

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°C Unless Otherwise Specified

Parameter	Symbol	Min	Typ	Max	Units	Conditions
Collector-Base Breakdown Voltage						
BC856AL3-BC856BL3	$V_{(BR)CBO}$	-80			V	I_C=-10μA, I_E=0
BC857AL3-BC857CL3		-50				
BC858AL3-BC858CL3		-30				
Collector-Emitter Breakdown Voltage						
BC856AL3-BC856BL3	$V_{(BR)CEO}$	-65			V	I_C=-10mA, I_B=0
BC857AL3-BC857CL3		-45				
BC848AL3-BC848CL3		-30				
Emitter-Base Breakdown Voltage						
BC856AL3-BC856BL3	$V_{(BR)EBO}$	-5			V	I_E=-1μA, I_C=0
BC857AL3-BC857CL3		-5				
BC858AL3-BC858CL3		-5				
Collector Cut-off Current	I_{CBO}			-15	nA	V_{CB}=-30V, I_E=0
Emitter Cutoff Current	I_{EBO}			-100	nA	V_{EB}=-5V, I_C=0
Emitter Cutoff Current	I_{CEO}			-1	mA	V_{CE}=-30V, I_B=0
DC Current Gain						
BC856AL3/BC857AL3/BC858AL3	h_{FE}	110		220		V_{CE}=-5V, I_C=-2mA
BC856BL3/BC857BL3/BC858BL3		200		450		
BC857CL3/BC858CL3		420		800		
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$			-0.3	V	I_C=-10mA, I_B=-0.5mA
				-0.65		I_C=-100mA, I_B=-5mA
Base-Emitter Saturation Voltage	$V_{BE(sat)}$		-0.7		V	I_C=-10mA, I_B=-0.5mA
			-0.85			I_C=-100mA, I_B=-5mA
Base-Emitter On Voltage	$V_{BE(on)}$	-0.6	-0.65	-0.75	V	V_{CE}=-5V, I_C=-2mA
				-0.82		V_{CE}=-5V, I_C=-10mA
Transition Frequency	f_T	100			MHz	V_{CE}=-5V, I_C=-10mA, f=100MHz

Curve Characteristics

Fig. 1 - Static Characteristics

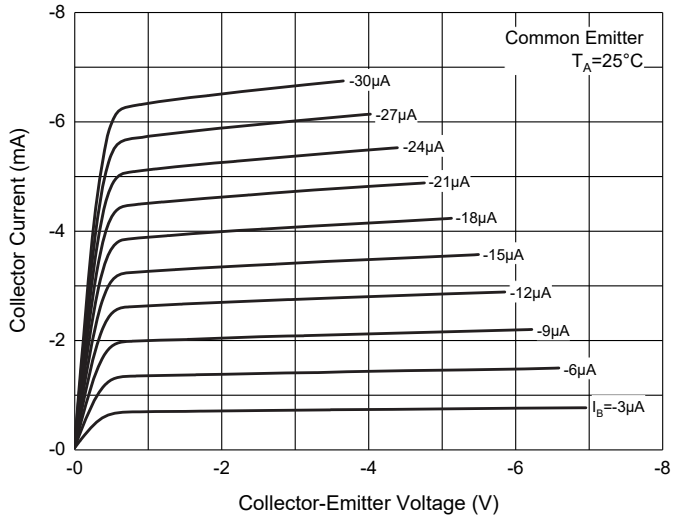


Fig. 2 - DC Current Gain Characteristics

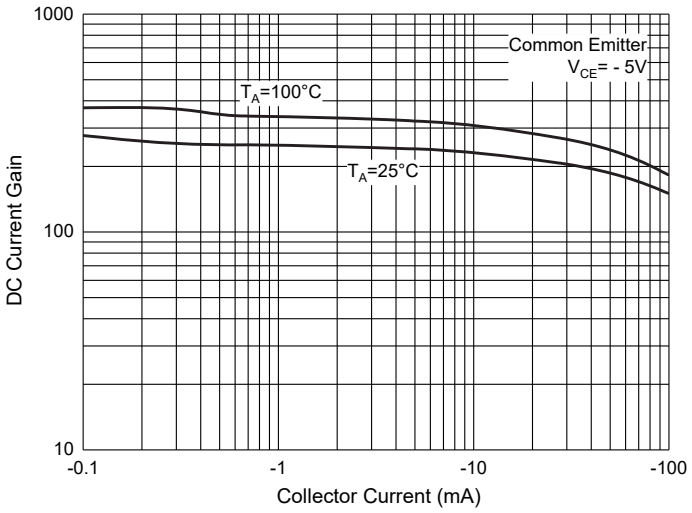


Fig. 3 - Collector-Emitter Saturation Voltage Characteristics

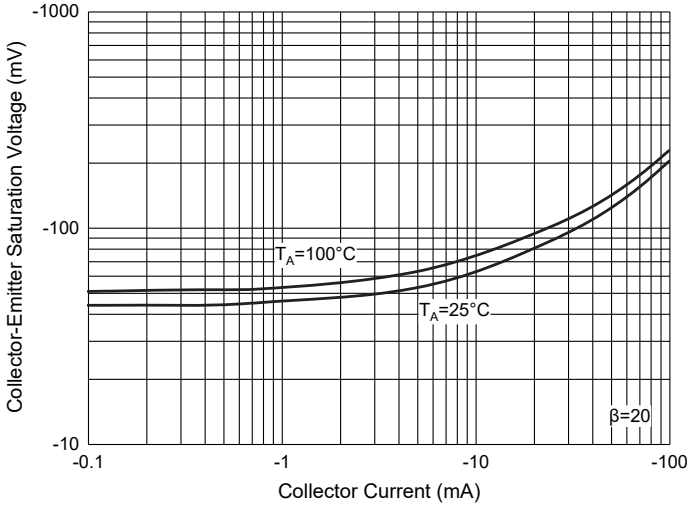


Fig. 4 - Base-Emitter Saturation Voltage Characteristics

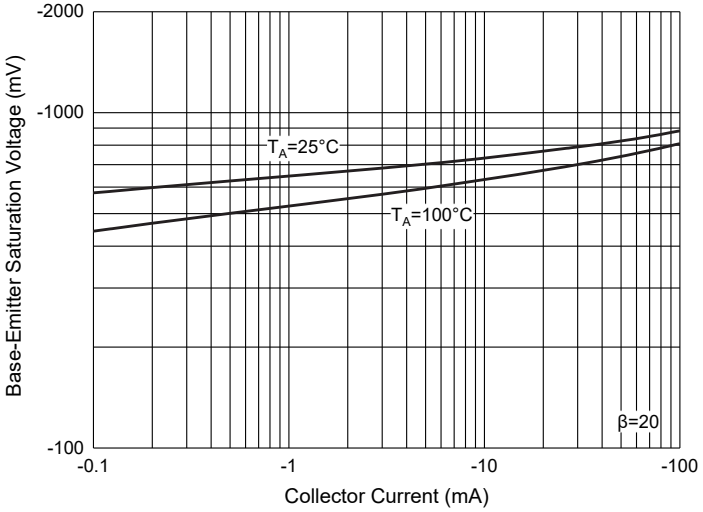


Fig. 5 - Base-Emitter Voltage Characteristics

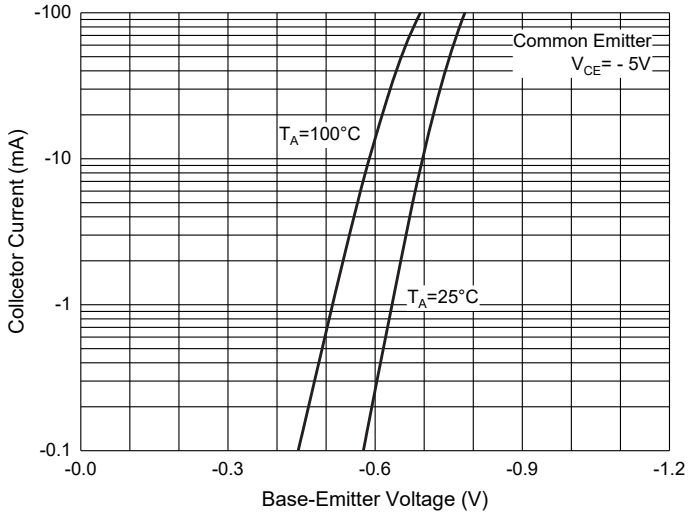
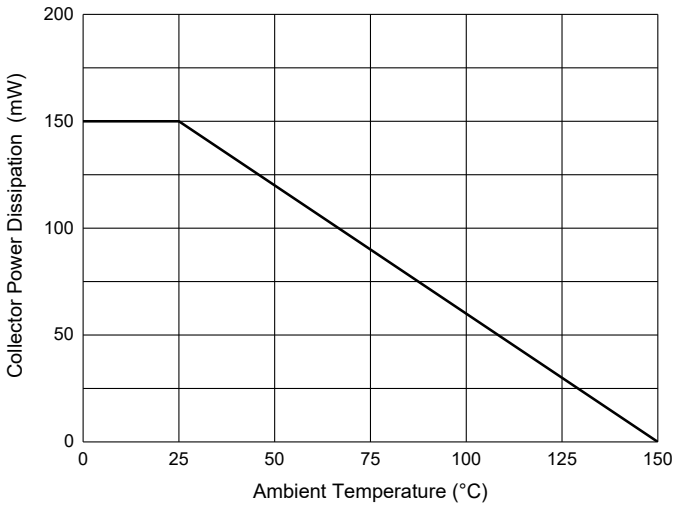


Fig. 6 - Collector Power Derating Curve



Ordering Information

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

*****IMPORTANT NOTICE*****

Micro Commercial Components Corp. reserves the right to make changes without further notice to any product herein to make corrections, modifications , enhancements , improvements , or other changes . ***Micro Commercial Components Corp*** . does not assume any liability arising out of the application or use of any product described herein; neither does it convey any license under its patent rights ,nor the rights of others . The user of products in such applications shall assume all risks of such use and will agree to hold ***Micro Commercial Components Corp*** . and all the companies whose products are represented on our website, harmless against all damages. ***Micro Commercial Components Corp***. products are sold subject to the general terms and conditions of commercial sale, as published at
https://www.mccsemi.com/Home/TermsAndConditions.

*****LIFE SUPPORT*****

MCC's products are not authorized for use as critical components in life support devices or systems without the express written approval of Micro Commercial Components Corporation.

*****CUSTOMER AWARENESS*****

Counterfeiting of semiconductor parts is a growing problem in the industry. Micro Commercial Components (MCC) is taking strong measures to protect ourselves and our customers from the proliferation of counterfeit parts. MCC strongly encourages customers to purchase MCC parts either directly from MCC or from Authorized MCC Distributors who are listed by country on our web page cited below. Products customers buy either from MCC directly or from Authorized MCC Distributors are genuine parts, have full traceability, meet MCC's quality standards for handling and storage. **MCC will not provide any warranty coverage or other assistance for parts bought from Unauthorized Sources**. MCC is committed to combat this global problem and encourage our customers to do their part in stopping this practice by buying direct or from authorized distributors.

OUR CERTIFICATE

DiGi provide top-quality products and perfect service for customer worldwide through standardization, technological innovation and continuous improvement. DiGi through third-party certification, we striciy control the quality of products and services. Welcome your RFQ to Email: Info@DiGi-Electronics.com

Tel: +00 852-30501935

RFQ Email: Info@DiGi-Electronics.com

DiGi is a global authorized distributor of electronic components.