



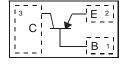
BC857BLP4

PNP SMALL SIGNAL SURFACE MOUNT TRANSISTOR

Features

- Epitaxial Die Construction
- Ultra-Small Leadless Surface Mount Package
- Ultra-low Profile (0.40mm max)
- Complementary NPN Type Available (BC847BLP4)
- Lead Free By Design/RoHS Compliant (Note 1)
- "Green" Device (Note 2)

3 POTTOM VIEW



TOP VIEW (Internal Schematic)

(internal S

DFN1006H4-3

Mechanical Data

- Case: DFN1006H4-3
- Case Material: Molded Plastic, "Green" Molding Compound. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020D
- Terminal Connections Indicator: Collector Dot
- Terminals: Finish NiPdAu over Copper leadframe. Solderable per MIL-STD-202, Method 208
- Ordering Information: See Page 3
- Marking Information: See Page 3
- Weight: 0.0008 grams

Maximum Ratings @T_A = 25°C unless otherwise specified

Characteristic	Symbol	Value	Unit
Collector-Base Voltage	V_{CBO}	-50	V
Collector-Emitter Voltage	V_{CEO}	-45	V
Emitter-Base Voltage	V_{EBO}	-5.0	V
Collector Current	Ι _C	-100	mA

Thermal Characteristics

Characteristic	Symbol	Value	Unit
Power Dissipation (Note 3) @T _A = 25°C	P_{D}	250	mW
Thermal Resistance, Junction to Ambient Air (Note 3) @T _A = 25°C	$R_{ hetaJA}$	500	°C/W
Operating and Storage Temperature Range	T _J , T _{STG}	-55 to +150	°C

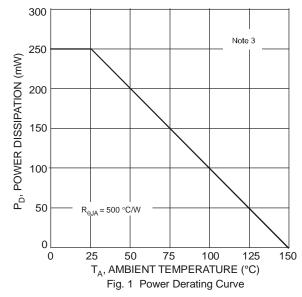
Electrical Characteristics @TA = 25°C unless otherwise specified

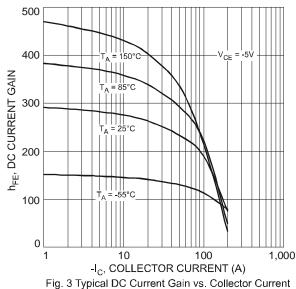
Characteristic (Note 4)	Symbol	Min	Тур	Max	Unit	Test Condition
Collector-Base Breakdown Voltage	V _{(BR)CBO}	-50	_	_	V	$I_C = 10\mu A, I_B = 0$
Collector-Emitter Breakdown Voltage	V _{(BR)CEO}	-45	_	_	V	$I_C = 10mA, I_B = 0$
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	-5	_		V	$I_E = 1\mu A, I_C = 0$
DC Current Gain	h _{FE}	220	300	475	_	$V_{CE} = -5.0V$, $I_{C} = -2.0mA$
Collector-Emitter Saturation Voltage	V _{CE(SAT)}	_	-90 -250	-300 -650	mV	$I_C = -10 \text{mA}, I_B = -0.5 \text{mA}$ $I_C = -100 \text{mA}, I_B = -5.0 \text{mA}$
Base-Emitter Saturation Voltage	V _{BE(SAT)}	_	-700 -850		mV	$I_C = -10 \text{mA}, I_B = -0.5 \text{mA}$ $I_C = -100 \text{mA}, I_B = -5.0 \text{mA}$
Base-Emitter Voltage	V _{BE(ON)}	-600 —	-670 -710	-750 -820	mV	$V_{CE} = -5.0V$, $I_{C} = -2.0mA$ $V_{CE} = -5.0V$, $I_{C} = -10mA$
Collector-Cutoff Current	I _{CBO}	_	_	-15 -4.0	nΑ μΑ	V _{CB} = -30V V _{CB} = -30V, T _A = 150°C
Gain Bandwidth Product	f⊤	100	_		MHz	$V_{CE} = -5.0V, I_{C} = -10mA,$ f = 100MHz
Collector-Base Capacitance	C _{CBO}		3.0		pF	$V_{CB} = -10V, f = 1.0MHz$

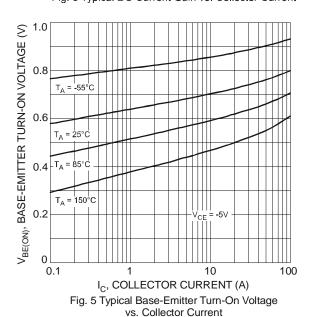
Notes:

- 1. No purposefully added lead.
- 2. Diodes Inc's "Green" policy can be found on our website at http://www.diodes.com/products/lead_free/index.php
- 3. Device mounted on FR-4 PCB, pad layout as shown on page 3, or Diodes Inc. suggested pad layout document AP02001 on our website at http://www.diodes.com/datasheets/ap02001.pdf.
- Short duration pulse test used to minimize self-heating effect.









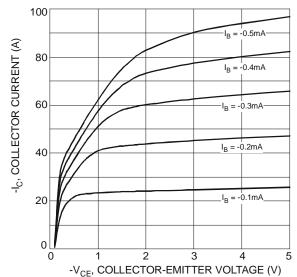
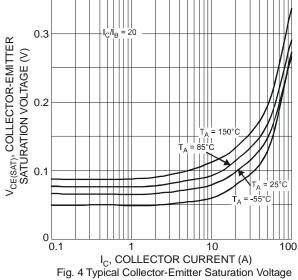


Fig. 2 Typical Collector Current vs. Collector-Emitter Voltage



vs. Collector Current

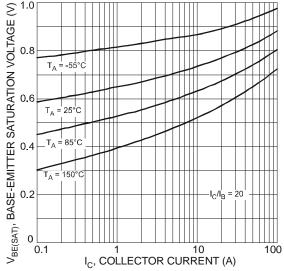


Fig. 6 Typical Base-Emitter Saturation Voltage vs. Collector Current



Ordering Information (Note 5)

Device	Packaging	Shipping
BC857BLP4-7	DFN1006H4-3	3000/Tape & Reel

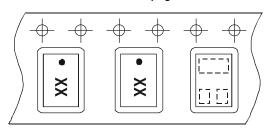
Notes: 5. For packaging details, go to our website at http://www.diodes.com/datasheets/ap02007.pdf.

Marking Information



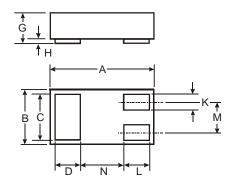
F2 = Product Type Marking Code Dot Denotes Collector, Terminal 3

DFN1006H4-3 Taping orientation



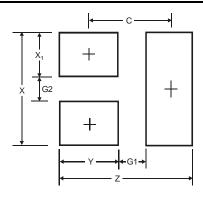
Direction of feed

Mechanical Details



DFN1006H4-3					
Dim	Min	Max	Тур		
Α	0.95	1.075	1.00		
В	0.55	0.675	0.60		
ပ	0.45	0.55	0.50		
D	0.20	0.30	0.25		
O		0.40	_		
H	0	0.05	0.02		
K	0.10	0.20	0.15		
Г	0.20	0.30	0.25		
M			0.35		
N	_	_	0.40		
All Dimensions in mm					

Suggested Pad Layout



Dimensions	Value (in mm)
Z	1.1
G1	0.3
G2	0.2
Х	0.7
X1	0.25
Υ	0.4
С	0.7

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