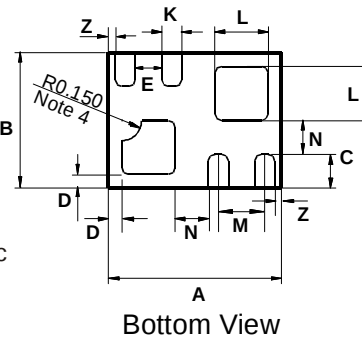
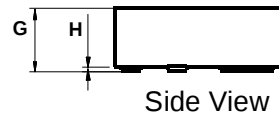
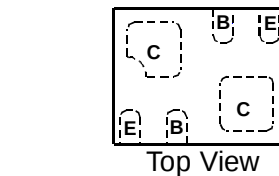
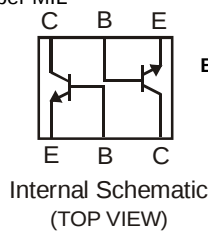


Features

- Epitaxial Planar Die Construction
- Ideally Suited for Automated Assembly Processes
- **Lead Free By Design/RoHS Compliant (Note 1)**
- "Green" Device (Note 2)
- **Ultra Low Profile Package**

Mechanical Data

- Case: DFN1310H4-6
- Case Material: Molded Plastic, "Green" Molding Compound. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020C
- Terminals: Finish — NiPdAu annealed over Copper leadframe (Lead Free Plating). Solderable per MIL-STD-202, Method 208
- Marking Code Information: See Page 4
- Ordering Information: See Page 4
- Weight: 0.0015g (approximate)



DFN1310H4-6			
Dim	Min	Max	Typ
A	1.25	1.38	1.30
B	0.95	1.08	1.00
C	0.20	0.30	0.25
D*	-	-	0.10
E**	-	-	0.20
G	-	0.40	-
H	0	0.05	0.02
K*	0.10	0.20	0.15
L*	0.30	0.50	0.40
M**	-	-	0.35
N*	-	-	0.25
Z**	-	-	0.05
All Dimensions in mm			

* Dimensions D, K, L, N Repeat 4X
 ** Dimensions E, M, Z Repeat 2X

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}	6.0	V
Collector Current	I _C	100	mA
Power Dissipation (Note 3)	P _d	350	mW
Thermal Resistance, Junction to Ambient (Note 3)	R _{θJA}	357	°C/W
Operating and Storage Temperature Range	T _j , T _{STG}	-65 to +150	°C

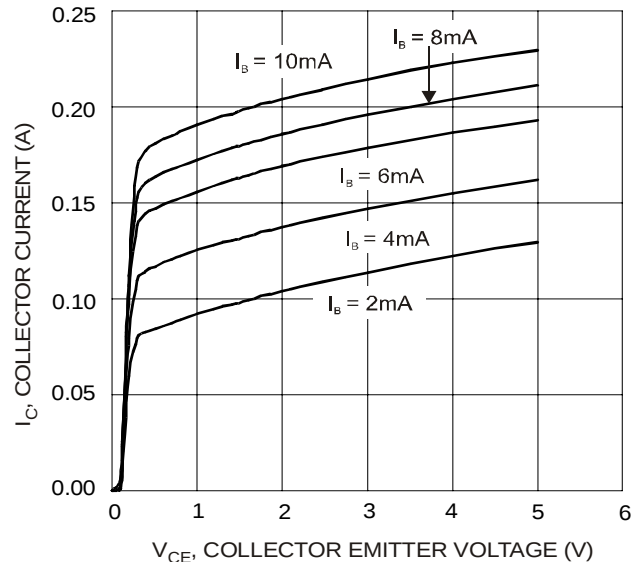
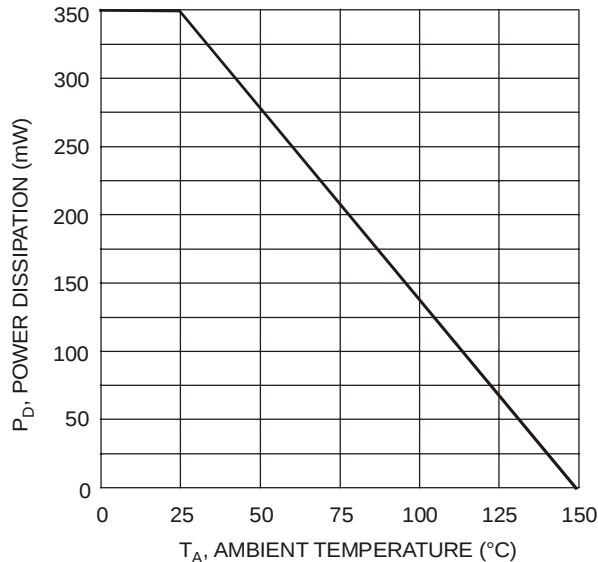
Notes:

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 4.
4. Radius pad feature is intended for device manufacturing control and should not be considered as a polarity indicator, or to suggest orientation of the devices in the carrier tape.

Electrical Characteristics @T_A = 25°C unless otherwise specified

Characteristic	Symbol	Min	Typ	Max	Unit	Test Condition
Collector-Base Breakdown Voltage (Note 5)	V _{(BR)CBO}	50	—	—	V	I _C = 10μA, I _B = 0
Collector-Emitter Breakdown Voltage (Note 5)	V _{(BR)CEO}	45	—	—	V	I _C = 10mA, I _B = 0
Emitter-Base Breakdown Voltage (Note 5)	V _{(BR)EBO}	6	—	—	V	I _E = 1μA, I _C = 0
DC Current Gain (Note 5)	h _{FE}	420	650	800	—	V _{CE} = 5.0V, I _C = 2.0mA
Collector-Emitter Saturation Voltage (Note 5)	V _{CE(SAT)}	—	55 130	250 600	mV	I _C = 10mA, I _B = 0.5mA I _C = 100mA, I _B = 5.0mA
Base-Emitter Saturation Voltage (Note 5)	V _{BE(SAT)}	—	700 900	—	mV	I _C = 10mA, I _B = 0.5mA I _C = 100mA, I _B = 5.0mA
Base-Emitter Voltage (Note 5)	V _{BE(ON)}	580 —	660	700 770	mV	V _{CE} = 5.0V, I _C = 2.0mA V _{CE} = 5.0V, I _C = 10mA
Collector-Cutoff Current (Note 5)	I _{CES}	—	—	15	nA	V _{CE} = 50V
	I _{CBO}	—	—	15	nA	V _{CB} = 30V
	I _{CBO}	—	—	5.0	μA	V _{CE} = 30V, T _A = 150°C
Gain Bandwidth Product	f _T	100	—	—	MHz	V _{CE} = 5.0V, I _C = 10mA, f = 100MHz
Collector-Base Capacitance	C _{CBO}	—	2.0	—	pF	V _{CB} = 10V, f = 1MHz

Notes: 3. Device mounted on FR-5 PCB pad layout as shown on page 4.
5. Short duration test pulse used to minimize self-heating effect.



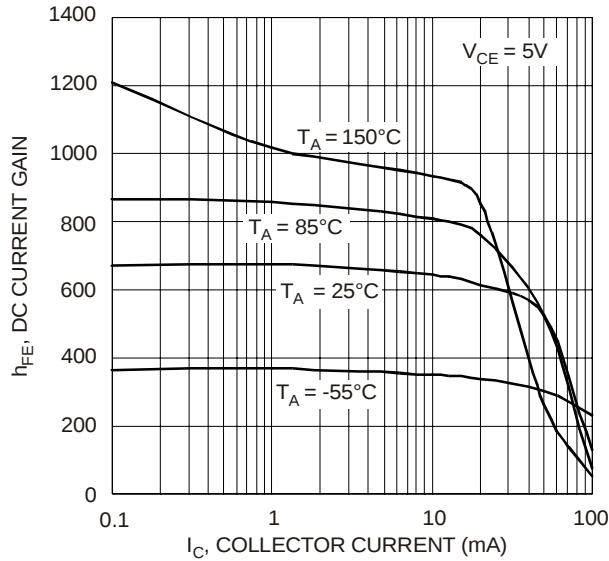


Fig. 3, Typical DC Current Gain vs. Collector Current

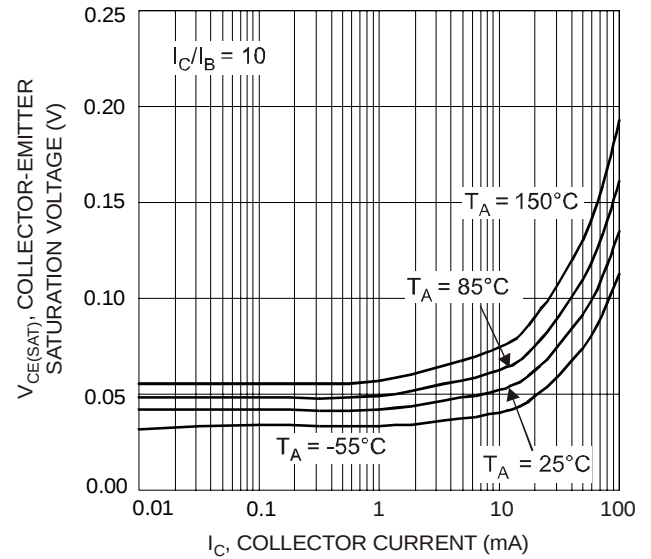


Fig. 4, Typical Collector Emitter Saturation Voltage vs. Collector Current

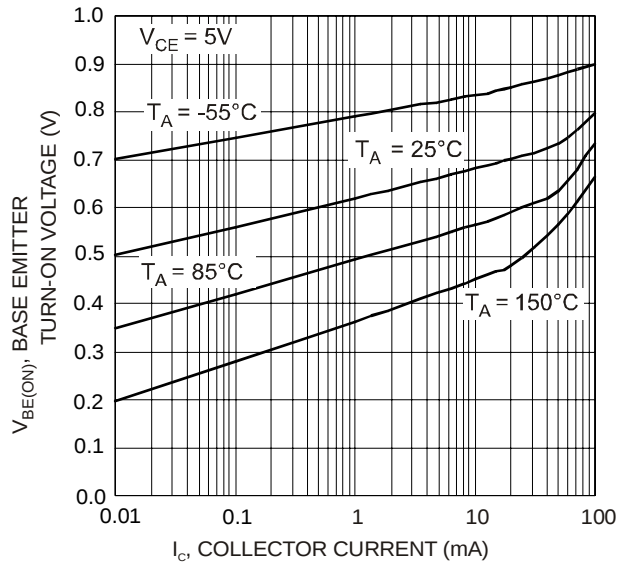


Fig. 5, Typical Base Emitter Turn-On Voltage vs. Collector Current

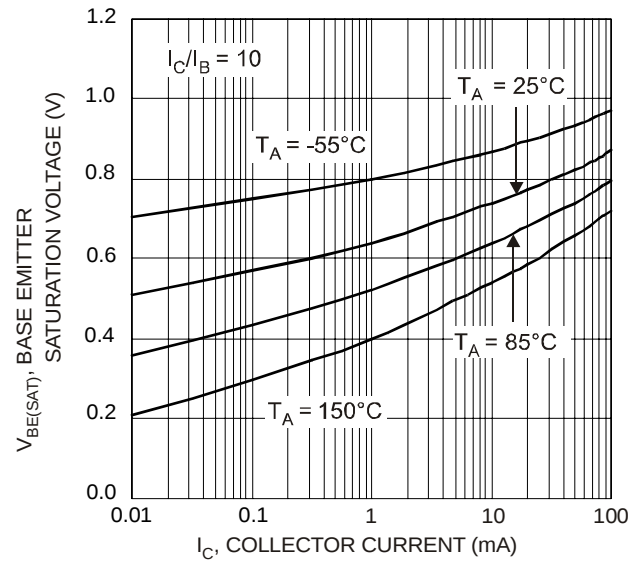


Fig. 6, Typical Base Emitter Saturation Voltage vs. Collector Current

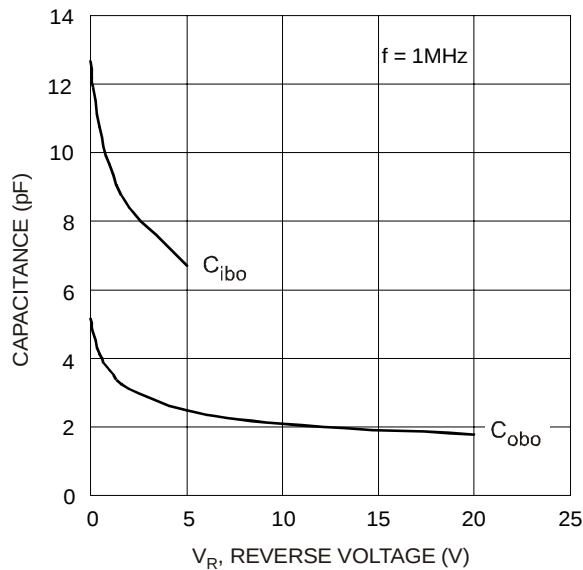


Fig. 7, Typical Capacitance Characteristics

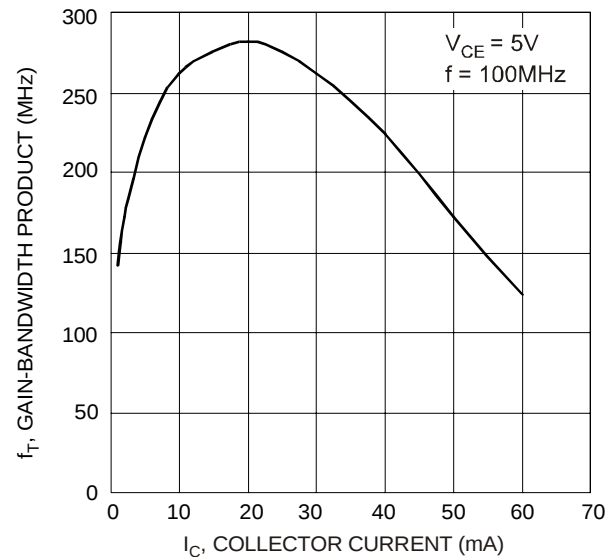


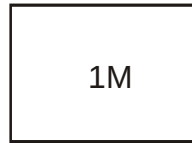
Fig. 8, Typical Gain-Bandwidth Product vs. Collector Current

Ordering Information (Note 6)

Device	Package	Shipping
BC847CDLP-7	DFN1310H4-6	3000/Tape & Reel

Notes: 6. For packaging details, please go to our website at <http://www.diodes.com/ap02007.pdf>.

Marking Information (Note 7)

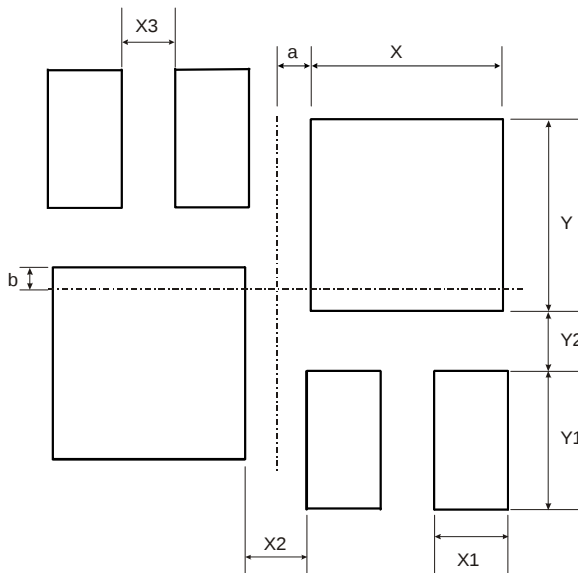


1M = Product Type Marking Code

(TOP VIEW)

Note: 7. Package is non-polarized. Parts may be on reel in orientation illustrated, 180° rotated or mixed (both ways).

Suggested Pad Layout



DFN1310H4-6	
Dim	Value
X	0.52
Y	0.52
X1	0.20
Y1	0.375
X2	0.17
Y2	0.16
X3	0.15
a	0.09
b	0.06
All Dimensions in mm	

IMPORTANT NOTICE

Diodes Incorporated and its subsidiaries reserve the right to make modifications, enhancements, improvements, corrections or other changes without further notice to any product herein. Diodes Incorporated 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 Diodes Incorporated and all the companies whose products are represented on our website, harmless against all damages.

LIFE SUPPORT

Diodes Incorporated products are not authorized for use as critical components in life support devices or systems without the expressed written approval of the President of Diodes Incorporated.