

### Features

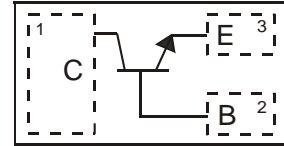
- Complementary PNP Type Available (2DA1774QLP)
- Ultra-Small Leadless Surface Mount Package
- Lead Free By Design/RoHS Compliant (Note 1)**
- "Green" Device (Note 2)**
- Qualified to AEC-Q101 Standards for High Reliability**

### Mechanical Data

- Case: DFN1006-3
- 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: 0.0009 grams



BOTTOM VIEW



TOP VIEW  
(Internal Schematic)

DFN1006-3

### Maximum Ratings @T<sub>A</sub> = 25°C unless otherwise specified

Characteristic	Symbol	Value	Unit
Collector-Base Voltage	V <sub>CBO</sub>	50	V
Collector-Emitter Voltage	V <sub>CEO</sub>	50	V
Emitter-Base Voltage	V <sub>EBO</sub>	5.0	V
Collector Current - Continuous	I <sub>C</sub>	100	mA
Peak Collector Current	I <sub>CM</sub>	200	mA

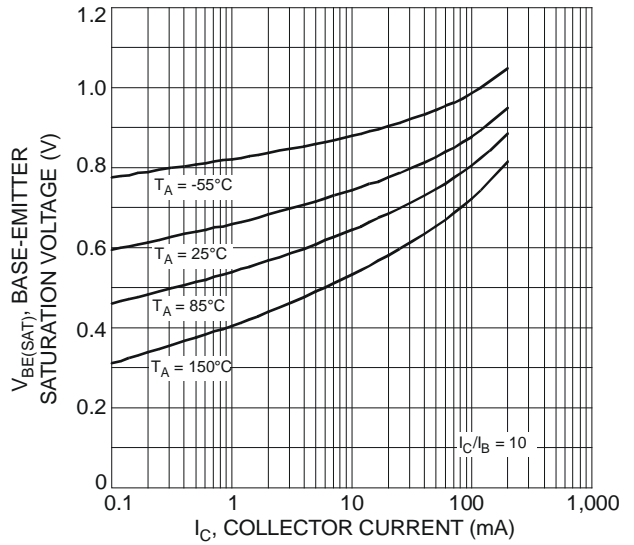
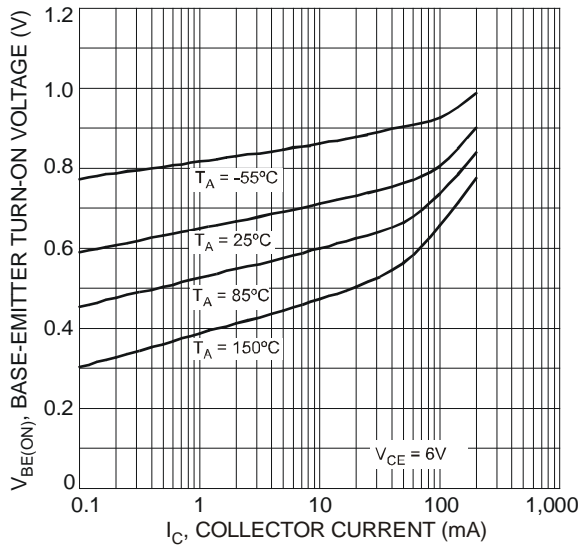
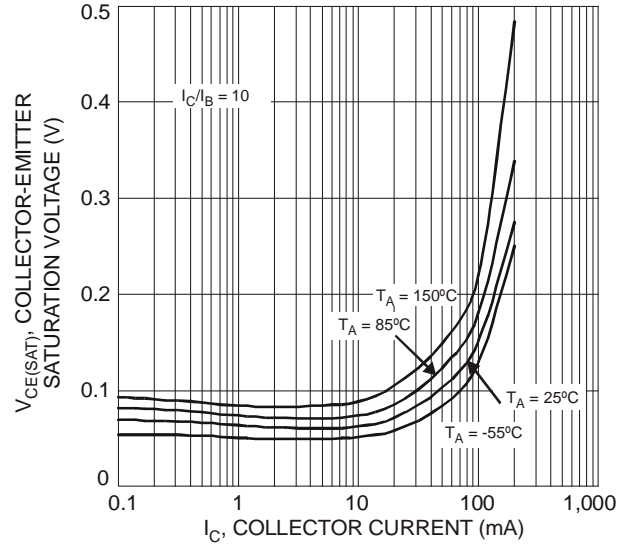
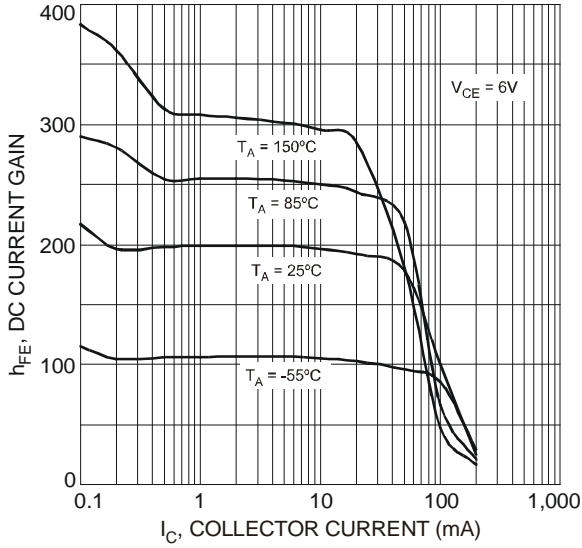
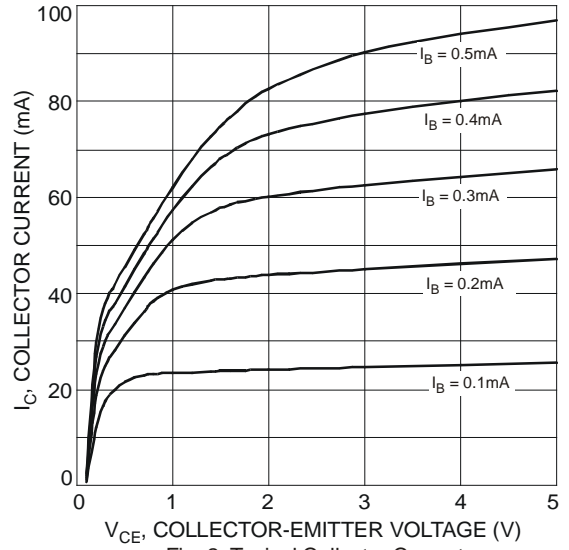
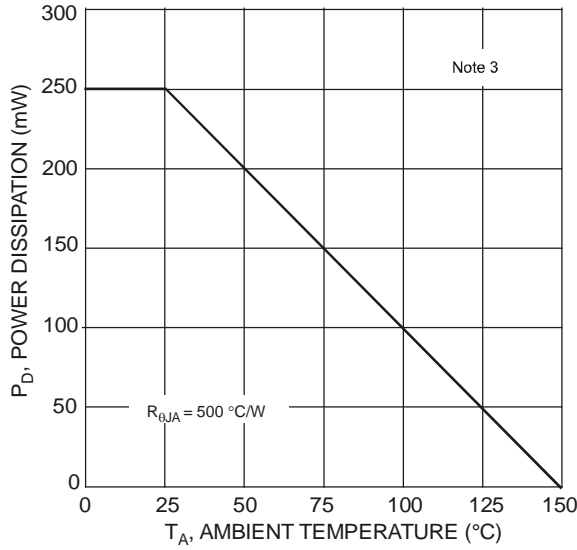
### Thermal Characteristics

Characteristic	Symbol	Value	Unit
Power Dissipation @T <sub>A</sub> = 25°C (Note 3)	P <sub>D</sub>	250	mW
Thermal Resistance, Junction to Ambient @T <sub>A</sub> = 25°C (Note 3)	R <sub>θJA</sub>	500	°C/W
Operating and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	-55 to +150	°C

### Electrical Characteristics @T<sub>A</sub> = 25°C unless otherwise specified

Characteristic	Symbol	Min	Max	Unit	Test Condition
<b>OFF CHARACTERISTICS (Note 4)</b>					
Collector-Base Breakdown Voltage	V <sub>(BR)CBO</sub>	50	—	V	I <sub>C</sub> = 50μA, I <sub>E</sub> = 0
Collector-Emitter Breakdown Voltage	V <sub>(BR)CEO</sub>	50	—	V	I <sub>C</sub> = 1.0mA, I <sub>B</sub> = 0
Emitter-Base Breakdown Voltage	V <sub>(BR)EBO</sub>	5.0	—	V	I <sub>E</sub> = 50μA, I <sub>C</sub> = 0
Collector Cutoff Current	I <sub>CBO</sub>	—	100	nA	V <sub>CB</sub> = 30V
			5	μA	V <sub>CB</sub> = 30V, T <sub>A</sub> = 150°C
Emitter Cutoff Current	I <sub>EBO</sub>	—	100	nA	V <sub>EB</sub> = 4.0V
<b>ON CHARACTERISTICS (Note 4)</b>					
DC Current Gain	h <sub>FE</sub>	120	270	—	V <sub>CE</sub> = 6.0V, I <sub>C</sub> = 1.0mA
Collector-Emitter Saturation Voltage	V <sub>CE(SAT)</sub>	—	0.2	V	I <sub>C</sub> = 50mA, I <sub>B</sub> = 5.0mA
<b>SMALL SIGNAL CHARACTERISTICS</b>					
Output Capacitance	C <sub>obo</sub>	—	3.5	pF	V <sub>CB</sub> = 12V, f = 1.0MHz, I <sub>E</sub> = 0
Current Gain-Bandwidth Product	f <sub>T</sub>	100	—	MHz	V <sub>CE</sub> = 12V, I <sub>C</sub> = 2.0mA, f = 100MHz

- Notes:
- No purposefully added lead.
  - Diodes Inc.'s "Green" policy can be found on our website at [http://www.diodes.com/products/lead\\_free/index.php](http://www.diodes.com/products/lead_free/index.php).
  - Part mounted on FR-4 PCB with recommended pad layout, which can be found on our website at <http://www.diodes.com/datasheets/ap02001.pdf>.
  - Short duration pulse test used to minimize self-heating effect.



## Ordering Information (Note 5)

Device	Packaging	Shipping
2DC4617QLP-7	DFN1006-3	3000/Tape & Reel

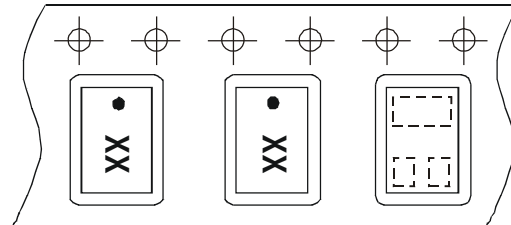
Notes: 5. For packaging details, go to our website at <http://www.diodes.com/datasheets/ap02007.pdf>.

## Marking Information



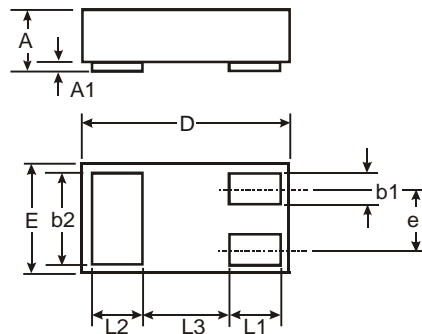
8D = Product Type Marking Code  
Dot Denotes Collector Side

DFN1006-3 Taping orientation



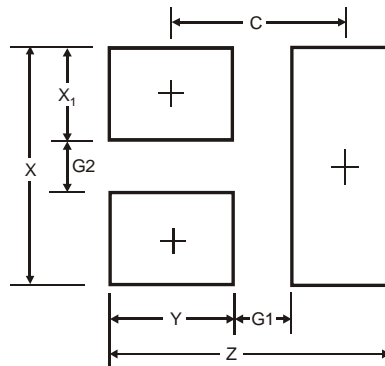
Direction of feed

## Package Outline Dimensions



DFN1006-3			
Dim	Min	Max	Typ
A	0.47	0.53	0.50
A1	0	0.05	0.03
b1	0.10	0.20	0.15
b2	0.45	0.55	0.50
D	0.95	1.075	1.00
E	0.55	0.675	0.60
e	—	—	0.35
L1	0.20	0.30	0.25
L2	0.20	0.30	0.25
L3	—	—	0.40
All Dimensions in mm			

## Suggested Pad Layout



Dimensions	Value (in mm)
Z	1.1
G1	0.3
G2	0.2
X	0.7
X1	0.25
Y	0.4
C	0.7

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