



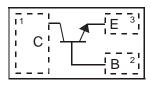
NPN SMALL SIGNAL SURFACE MOUNT TRANSISTOR

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 _A = 25°C unless otherwise specified				
Characteristic	Symbol	Value	Unit	
Collector-Base Voltage	V _{CBO}	50	V	
Collector-Emitter Voltage	V _{CEO}	50	V	
Emitter-Base Voltage	V _{EBO}	5.0	V	
Collector Current - Continuous	Ic	100	mA	
Peak Collector Current	I _{CM}	200	mA	

Thermal Characteristics

Characteristic	Symbol	Value	Unit
Power Dissipation $@T_A = 25^{\circ}C$ (Note 3)	PD	250	mW
Thermal Resistance, Junction to Ambient @T _A = 25°C (Note 3)	$R_{\theta JA}$	500	°C/W
Operating and Storage Temperature Range	TJ, T _{STG}	-55 to +150	°C

Electrical Characteristics @T_A = 25°C unless otherwise specified

Characteristic	Symbol	Min	Max	Unit	Test Condition
OFF CHARACTERISTICS (Note 4)	· · · · ·				-
Collector-Base Breakdown Voltage	V _{(BR)CBO}	50	_	V	$I_{\rm C} = 50 \mu A, I_{\rm E} = 0$
Collector-Emitter Breakdown Voltage	V _{(BR)CEO}	50	_	V	$I_{\rm C} = 1.0 {\rm mA}, I_{\rm B} = 0$
Emitter-Base Breakdown Voltage	V _{(BR)EBO}	5.0	_	V	$I_{E} = 50 \mu A, I_{C} = 0$
Collector Cutoff Current	lana	—	100	nA	$V_{CB} = 30V$
	ICBO		5	μA	$V_{CB} = 30V, T_A = 150^{\circ}C$
Emitter Cutoff Current	I _{EBO}	_	100	nA	$V_{EB} = 4.0V$
ON CHARACTERISTICS (Note 4)					
DC Current Gain	h _{FE}	120	270	—	$V_{CE} = 6.0V, I_{C} = 1.0mA$
Collector-Emitter Saturation Voltage	V _{CE(SAT)}	_	0.2	V	$I_{C} = 50 \text{mA}, I_{B} = 5.0 \text{mA}$
SMALL SIGNAL CHARACTERISTICS					
Output Capacitance	Cobo		3.5	pF	V _{CB} = 12V, f = 1.0MHz, I _E = 0
Current Gain-Bandwidth Product	f _T	100		MHz	$V_{CE} = 12V, I_C = 2.0mA, f = 100MHz$

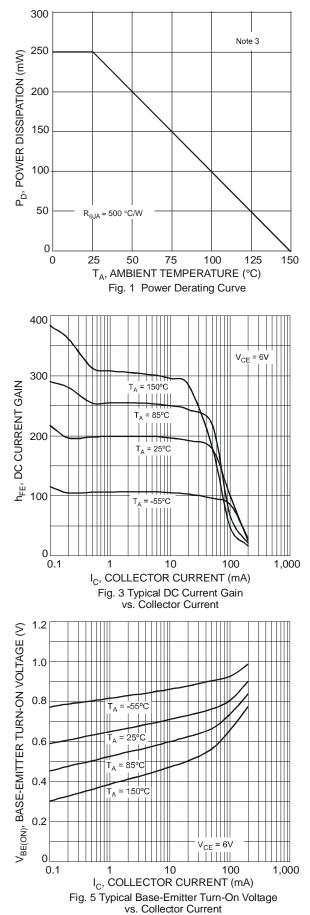
1. No purposefully added lead. Notes:

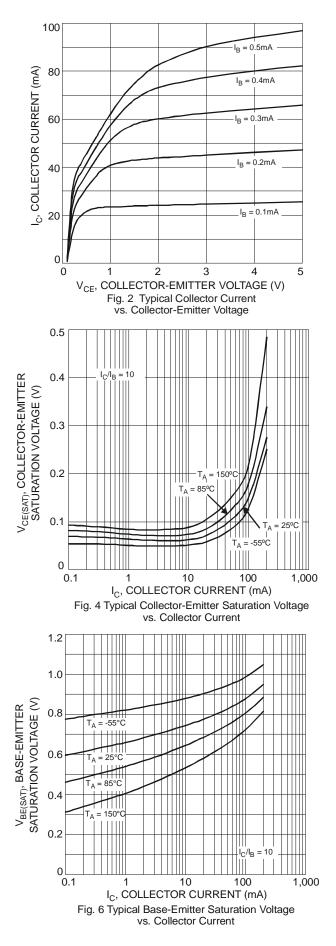
2. Diodes Inc.'s "Green" policy can be found on our website at http://www.diodes.com/products/lead_free/index.php.

3. 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.

4. Short duration pulse test used to minimize self-heating effect.









Ordering Information (Note 5)

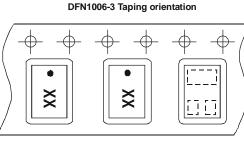
Device	Packaging	Shipping
2DC4617QLP-7	DFN1006-3	3000/Tape & Reel

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

Marking Information

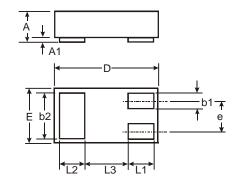


8D = Product Type Marking Code Dot Denotes Collector Side



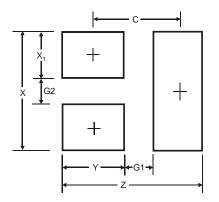
Direction of feed

Package Outline Dimensions



DFN1006-3				
Dim	Min	Max	Тур	
Α	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	
Е	0.55	0.675	0.60	
е			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	
Х	0.7	
X1	0.25	
Y	0.4	
C	0.7	

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