

## Descriptions

This is Silicon PNP transistor in a DFN1006-3L Plastic Package.

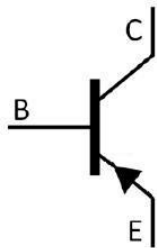
## Features

- High DC Current Gain
- Low Collector to Emitter Saturation Voltage, HF product.

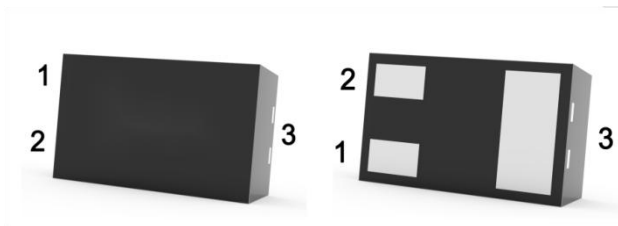
## Applications

General purpose amplifier and switching.

## Equivalent Circuit



## Pinning



PIN 1: Base      PIN 2: Emitter      PIN 3: Collector

## hFE Classifications & Marking

h <sub>FE</sub> Range	100~300
Marking	·H2A

## Absolute Maximum Ratings(Ta=25°C)

Parameter	Symbol	Rating	Unit
Collector to Base Voltage	V <sub>CBO</sub>	-40	V
Collector to Emitter Voltage	V <sub>CEO</sub>	-40	V
Emitter to Base Voltage	V <sub>EBO</sub>	-5.0	V
Collector Current	I <sub>C</sub>	-200	mA
*Collector Power Dissipation	P <sub>C</sub>	100	mW
Junction Temperature	T <sub>j</sub>	150	°C
Storage Temperature Range	T <sub>stg</sub>	-55~150	°C
Thermal Resistance, Junction to Ambient	R <sub>thJA</sub>	310	°C/W
Thermal Resistance, Junction to Lead	R <sub>thJL</sub>	120	°C/W

## Electrical Characteristics(Ta=25°C)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector to Base Breakdown Voltage	V <sub>CBO</sub>	I <sub>C</sub> =-10μA I <sub>E</sub> =0	-40			V
Collector to Emitter Breakdown Voltage	V <sub>CEO</sub>	I <sub>C</sub> =-1.0mA I <sub>B</sub> =0	-40			V
Emitter to Base Breakdown Voltage	V <sub>EBO</sub>	I <sub>E</sub> =-10μA I <sub>C</sub> =0	-5.0			V
Collector Cut-Off Current	I <sub>CBO</sub>	V <sub>CB</sub> =-30V I <sub>E</sub> =0			-0.05	μA
Emitter Cut-Off Current	I <sub>EBO</sub>	V <sub>EB</sub> =-3.0V I <sub>C</sub> =0			-0.05	μA
DC Current Gain	h <sub>FE(1)</sub>	V <sub>CE</sub> =-1.0V I <sub>C</sub> =-10mA	100		300	
	h <sub>FE(2)</sub>	V <sub>CE</sub> =-1.0V I <sub>C</sub> =-100mA	30			
	h <sub>FE(3)</sub>	V <sub>CE</sub> =-1.0V I <sub>C</sub> =-50mA	60			
	h <sub>FE(4)</sub>	V <sub>CE</sub> =-1.0V I <sub>C</sub> =-1.0mA	80			
	h <sub>FE(5)</sub>	V <sub>CE</sub> =-1.0V I <sub>C</sub> =-0.1mA	60			
Collector-Emitter Saturation voltage	V <sub>CE(sat) (1)</sub>	I <sub>C</sub> =-10mA I <sub>B</sub> =-1.0mA			-0.25	V
	V <sub>CE(sat) (2)</sub>	I <sub>C</sub> =-50mA I <sub>B</sub> =-5.0mA			-0.4	V
Base-Emitter Saturation Voltage	V <sub>BE(sat) (1)</sub>	I <sub>C</sub> =-10mA I <sub>B</sub> =-1.0mA	-0.65		-0.85	V
	V <sub>BE(sat) (2)</sub>	I <sub>C</sub> =-50mA I <sub>B</sub> =-5.0mA			-0.95	V
Transition Frequency	f <sub>T</sub>	V <sub>CE</sub> =-20V f=100MHz I <sub>C</sub> =-10mA	250			MHz
Output Capacitance	C <sub>ob</sub>	V <sub>CB</sub> =-5.0V f=1.0MHz			4.5	pF
Storage Time	t <sub>stg</sub>	V <sub>CC</sub> =-3.0V I <sub>C</sub> =-10mA I <sub>B1</sub> =-I <sub>B2</sub> =-1.0mA			225	ns
Fall Time	t <sub>f</sub>	V <sub>CC</sub> =-3.0V I <sub>C</sub> =-10mA I <sub>B1</sub> =-I <sub>B2</sub> =-1.0mA			75	ns
Delay Time	t <sub>d</sub>	V <sub>CC</sub> =-3.0V I <sub>C</sub> =-10mA V <sub>BE</sub> =-0.5V I <sub>B1</sub> =-1.0mA			35	ns
Rise Time	t <sub>r</sub>	V <sub>CC</sub> =-3.0V I <sub>C</sub> =-10mA V <sub>BE</sub> =-0.5V I <sub>B1</sub> =-1.0mA			35	ns
Input Capacitance	C <sub>ib</sub>	V <sub>EB</sub> =-0.5V f=1.0MHz			10	pF

Electrical Characteristics(Ta=25°C)

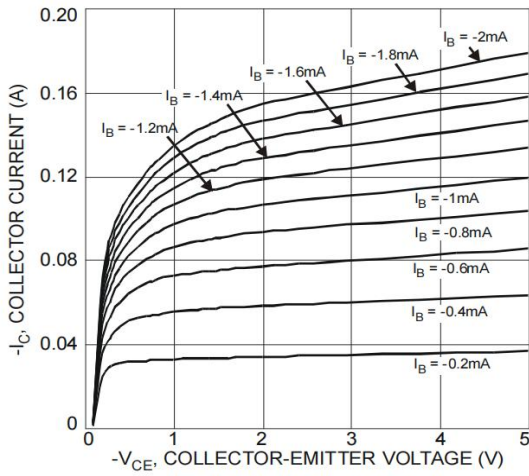


Fig. 1 Typical Collector Current vs. Collector-Emitter Voltage

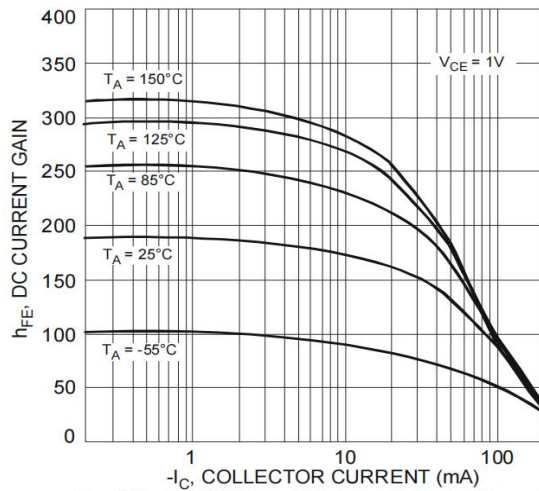


Fig. 2 Typical DC Current Gain vs. Collector Current

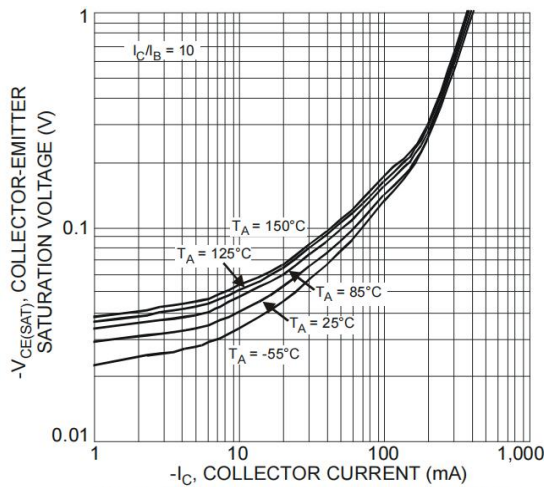


Fig. 3 Typical Collector-Emitter Saturation Voltage vs. Collector Current

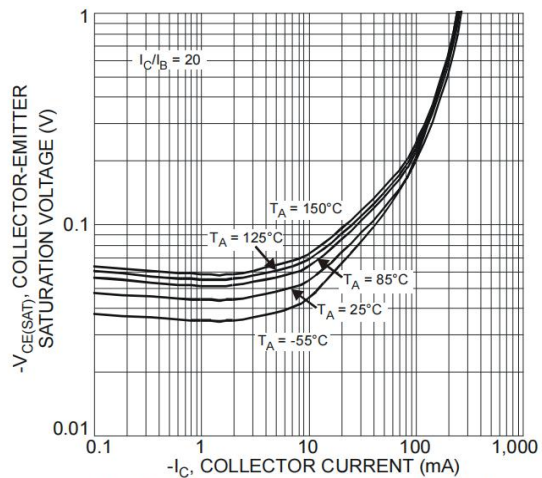


Fig. 4 Typical Collector-Emitter Saturation Voltage vs. Collector Current

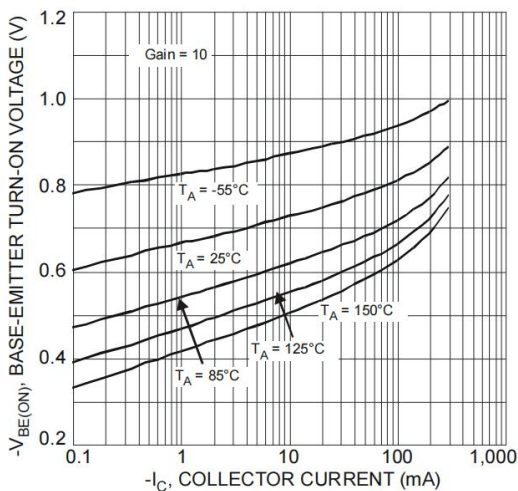


Fig. 5 Typical Base-Emitter Saturation Voltage vs. Collector Current

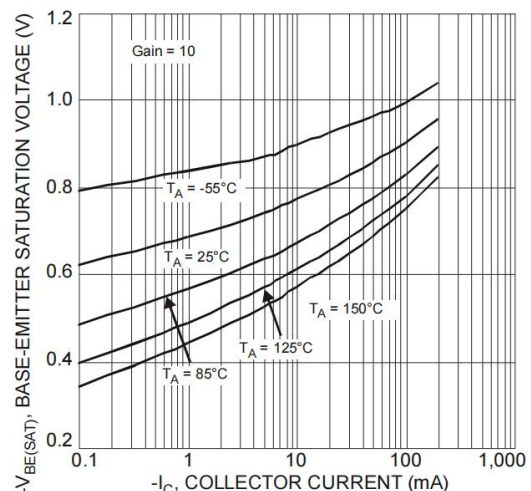
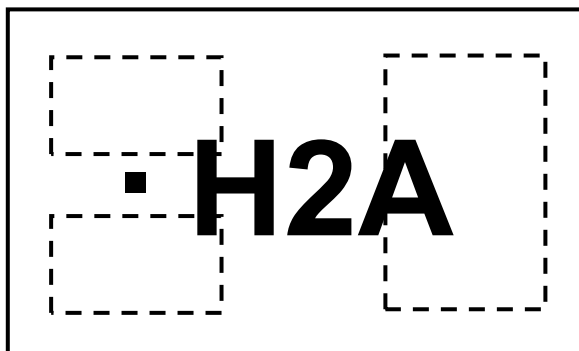


Fig. 6 Typical Base-Emitter Saturation Voltage vs. Collector Current

## Package Dimensions



Note:

- ∴ Identify
- H: Company Code
- 2A: Product Type Code

## Packaging SPEC

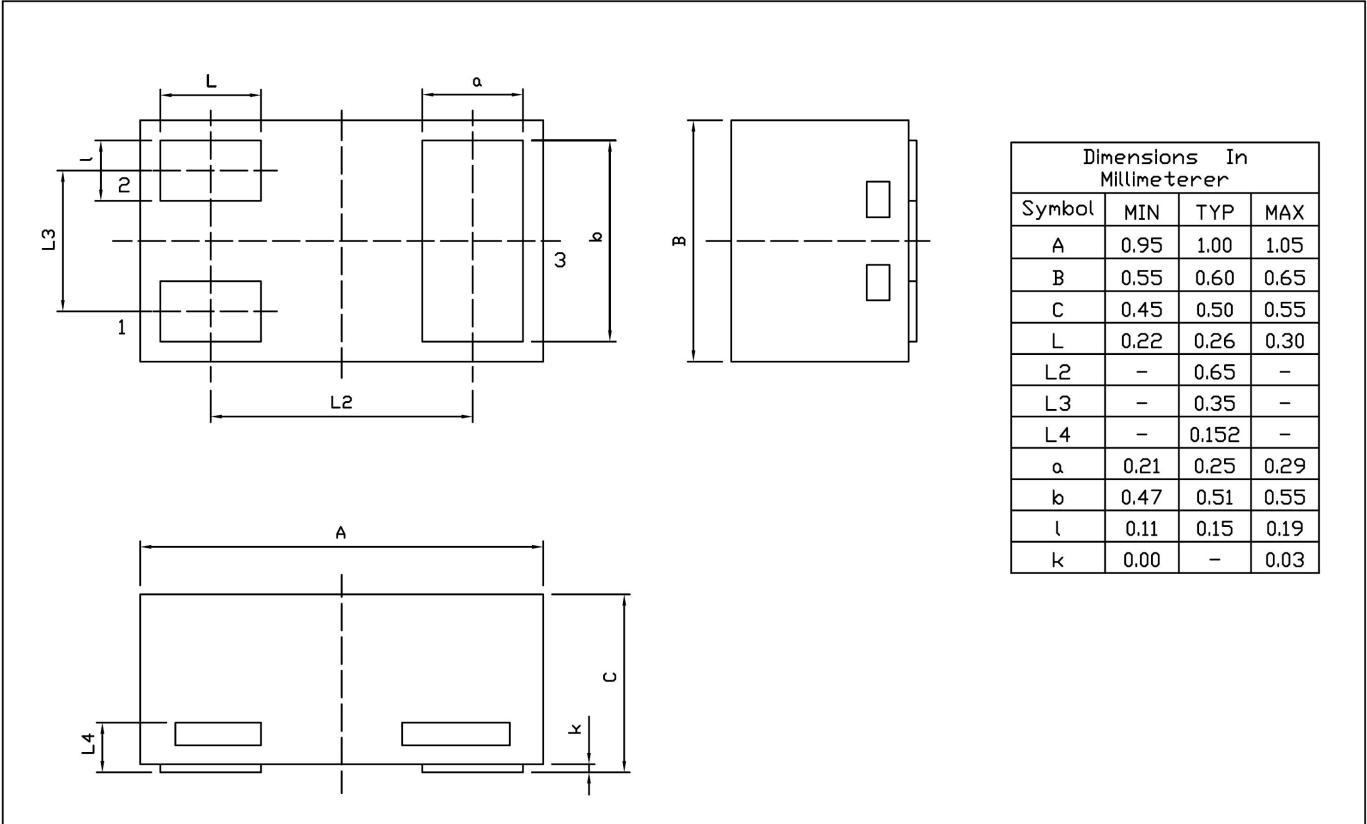
REEL

Package Type	Units					Dimension (unit: mm <sup>3</sup> )		
	Units/Reel	Reels/Inner Box	Units/Inner Box	Inner Boxes/Outer Box	Units/Outer Box	Reel	Inner Box	Outer Box
DFN1006-3L	10,000	10	100,000	4	400,000	7" × 8	210 × 205 × 205	445 × 230 × 435

**Package Dimensions**

DFN1006-3L

Unit:mm



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