

NPN SILICON HIGH FREQUENCY TRANSISTOR

DESCRIPTION:

The **2N3866A** is a High Frequency Transistor Designed for Amplifier and Oscillator Applications.

MAXIMUM RATINGS

I_C	400 mA
V_{CE}	30 V
P_{DISS}	5.0 W @ $T_C = 25^\circ C$
T_J	$-65^\circ C$ to $+200^\circ C$
T_{STG}	$-65^\circ C$ to $+200^\circ C$
θ_{JC}	$35^\circ C/W$

PACKAGE STYLE TO-39				
SYMBOL	DIMENSIONS			
	INCHES		MILLIMETERS	
	MIN.	MAX.	MIN.	MAX.
ϕa	0.190	0.210	4.83	5.33
A	0.240	0.260	6.10	6.60
ϕb	0.016	0.021	0.406	0.533
ϕb_2	0.016	0.019	0.406	0.483
ϕD	0.350	0.370	8.89	9.40
ϕD_1	0.315	0.335	8.00	8.51
h	0.009	0.125	0.229	3.18
j	0.028	0.034	0.711	0.864
k	0.029	0.040	0.737	1.02
l	0.500		12.70	
l_1		0.050		1.27
l_2	0.250		6.35	
P	0.100		2.54	
Q				
a	45° NOMINAL			
β	90° NOMINAL			

1 = Emitter 2 = Base
3 = Collector

CHARACTERISTICS $T_C = 25^\circ C$

SYMBOL	TEST CONDITIONS			MINIMUM	TYPICAL	MAXIMUM	UNITS
BV _{CEO}	I _C = 5.0 mA			30			V
BV _{CER}	I _C = 5.0 mA	R _{BE} = 10 Ω		55			V
BV _{EBO}	I _C = 100 μA			3.5			V
I _{CEX}	V _{CE} = 55 V	V _{BE} = -1.5 V				100	μA
	V _{CE} = 30 V	V _{BE} = -1.5 V T _C = 200 °C				500	
I _{CEO}	V _{CE} = 28 V					20	μA
I _{EBO}	V _{EB} = 3.5 V					100	μA
h _{FE}	V _{CE} = 5.0 V	I _C = 50 mA		25		200	---
		I _C = 360 mA		5.0			
V _{CE(SAT)}	I _C = 100 mA	I _B = 20 mA				1.0	V
f _t	V _{CE} = 15 V	I _C = 50 mA	f = 200 MHz	800			MHz
C _{OB}	V _{CB} = 28 V		f = 1.0 MHz			3.0	pF
G _{PE} η _c	V _{CC} = 28 V	P _{out} = 1.0 W	f = 400 MHz	10			dB
				45			%