

# NPN SILICON HIGH FREQUENCY TRANSISTOR

## DESCRIPTION:

The TP2314A is a High Frequency Transistor Designed for Large Signal Power Amplifier Applications, With Emitter Grounded to Case.

## MAXIMUM RATINGS

<b>I</b>	400 mA
<b>V</b>	16 V
<b>P<sub>DISS</sub></b>	5.0 W @ T <sub>C</sub> = 25 °C
<b>T<sub>J</sub></b>	-65 °C to +200 °C
<b>T<sub>STG</sub></b>	-65 °C to +200 °C
<b>q<sub>JC</sub></b>	35 °C/W

**PACKAGE STYLE TO-39 (CE)**

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 <sub>2</sub>	0.016	0.019	0.406	0.483
φD	0.350	0.370	8.89	9.40
φD <sub>1</sub>	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 <sub>1</sub>		0.050		1.27
l <sub>2</sub>	0.250		6.35	
P	0.100		2.54	
Q				
a	45° NOMINAL			
β	90° NOMINAL			

1 = COLLECTOR      2 = BASE  
3 = EMITTER

## CHARACTERISTICS T<sub>C</sub> = 25 °C

SYMBOL	TEST CONDITIONS	MINIMUM	TYPICAL	MAXIMUM	UNITS
<b>BV<sub>CEO</sub></b>	I <sub>C</sub> = 50 mA	16			V
<b>BV<sub>CES</sub></b>	I <sub>C</sub> = 50 mA	36			V
<b>BV<sub>CBO</sub></b>	I <sub>C</sub> = 50 mA	36			V
<b>I<sub>CBO</sub></b>	V <sub>CB</sub> = 15 V			1.0	mA
<b>BV<sub>EBO</sub></b>	I <sub>E</sub> = 1.0 mA	4.0			V
<b>h<sub>FE</sub></b>	V <sub>CE</sub> = 5.0 V      I <sub>C</sub> = 50 mA	20		200	---
<b>C<sub>ob</sub></b>	V <sub>CB</sub> = 12.5 V      f = 1.0 MHz			15	pF
<b>G<sub>PE</sub></b> <b>h</b>	V <sub>CC</sub> = 6.0 V      P <sub>out</sub> = 1.0 W      f = 175 MHz	6.0	50		dB %