

NPN SILICON HIGH FREQUENCY TRANSISTOR

DESCRIPTION:

The **2N4428** is a High Frequency Transistor Designed for Amplifier and Oscillator Applications.

MAXIMUM RATINGS

I_C	425 mA
V_{CE}	30 V
P_{DISS}	3.5 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}	50 $^\circ C/W$

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}	$I_C = 20$ mA	35			V
BV_{CER}	$I_C = 20$ mA $R_{BE} = 10 \Omega$	55			V
BV_{EBO}	$I_C = 100 \mu A$	3.5			V
I_{CEX}	$V_{CE} = 55$ V $V_{BE} = -1.5$ V			1.0	mA
h_{FE}	$V_{CE} = 5.0$ V $I_C = 50$ mA $I_C = 400$ mA	20 5.0		200	---
f_t	$V_{CE} = 20$ V $I_C = 50$ mA $f = 200$ MHz	700	1000		MHz
C_{OB}	$V_{CB} = 28$ V $f = 1.0$ MHz		1.5	3.5	pF
P_{in} η	$V_{CC} = 28$ V $f = 200$ MHz $P_{out} = 750$ mW $R_s = 50 \Omega$	35		75	mW %