

# NPN SILICON HIGH FREQUENCY TRANSISTOR

## DESCRIPTION:

The **2SC1252** is a High Frequency Transistor, Designed for Wide Band Amplifier Applications up to 500 MHz.

## FEATURES INCLUDE:

- High Gain **-17 dB Typ.** @ 200 MHz
- Low **NF - 3.0 dB Typ.** @ 200 MHz
- Hermetic **TO-39** Package

## MAXIMUM RATINGS

$I_C$	400 mA
$V_{CB}$	45 V
$V_{CE}$	25 V
$P_{DISS}$	5 W @ $T_C = 25^\circ C$
$T_J$	-65 to +200 °C
$T_{STG}$	-65 to +200 °C
$\theta_{JC}$	35 °C/W

PACKAGE STYLE TO-39				
SYMBOL	DIMENSIONS			
	INCHES		MILLIMETERS	
	MIN.	MAX.	MIN.	MAX.
$\phi a$	0.190	0.210	4.83	5.33
A	0.240	0.260	6.10	6.60
$\phi b$	0.016	0.021	0.406	0.533
$\phi b_2$	0.016	0.019	0.406	0.483
$\phi D$	0.350	0.370	8.89	9.40
$\phi D_1$	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			
$\beta$	90° NOMINAL			

  

1 = Emitter    2 = Base  
3 & 4 = Collector (Case)

## CHARACTERISTICS $T_C = 25^\circ C$

SYMBOL	TEST CONDITIONS			MINIMUM	TYPICAL	MAXIMUM	UNITS
$BV_{CEO}$	$I_C = 5.0 \text{ mA}$			25			V
$BV_{CBO}$	$I_C = 100 \mu A$			45			V
$I_{CBO}$	$V_{CE} = 30 \text{ V}$					100	nA
$I_{EBO}$	$V_{EB} = 2.0 \text{ V}$					500	nA
$h_{FE}$	$V_{CE} = 10 \text{ V}$	$I_C = 50 \text{ mA}$		20		200	---
$f_t$	$V_{CE} = 15 \text{ V}$	$I_C = 15 \text{ mA}$	$f = 200 \text{ MHz}$	1200			MHz
	$V_{CE} = 15 \text{ V}$	$I_C = 70 \text{ mA}$		1400			
$C_{OB}$	$V_{CB} = 15 \text{ V}$	$f = 1.0 \text{ MHz}$				3.0	pF
$G_{PE}$	$V_{CE} = 15 \text{ V}$	$I_C = 50 \text{ mA}$	$f = 200 \text{ MHz}$	15	17		dB
NF	$V_{CE} = 15 \text{ V}$	$I_C = 30 \text{ mA}$	$f = 200 \text{ MHz}$		3.0	4.0	dB