

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
θ_{JC}	35 °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 & 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}	$I_C = 100 \mu\text{A}$			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