

NPN SILICON HIGH FREQUENCY TRANSISTOR

DESCRIPTION:

The **2N5108** is a Designed for General Purpose Class C Amplifier Applications Up to 1 GHz.

FEATURES:

- $G_{PE} = 6.0$ dB Typ. at 1.0 GHz
- $F_T = 1,500$ MHz Typ. at 15 V/ 50 mA
- Hermetic **TO-39** Package

MAXIMUM RATINGS

I_C	400 mA
V_{CB}	55 V
V_{CE}	30 V
P_{DISS}	3.5 W @ $T_C = 25^\circ C$
T_J	-65 to +200 $^\circ C$
T_{STG}	-65 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 $T_A = 25^\circ C$

SYMBOL	TEST CONDITIONS			MINIMUM	TYPICAL	MAXIMUM	UNITS
BV_{CER}	$I_C = 5.0$ mA	$R_{BE} = 10\Omega$		55			V
BV_{EBO}	$I_E = 100$ μA			3.0			V
I_{CES}	$V_{CE} = 50$ V		$T_C = +150^\circ C$			1.0	μA
	$V_{CE} = 15$ V					10.0	mA
I_{CEO}	$V_{CE} = 15$ V					20	μA
f_t	$V_{CE} = 15$ V	$I_C = 50$ mA	$f = 200$ MHz	1200			MHz
C_{OB}	$V_{CB} = 30$ V		$f = 1.0$ MHz			3.0	pF
G_{PE} η_C	$V_{CC} = 28$ V	$P_{OUT} = 1.0$ W	$f = 200$ MHz	5.0			dB
				35			%