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2N5108

NPN SILICON HIGH FREQUENCY TRANSISTOR

DESCRIPTION:

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

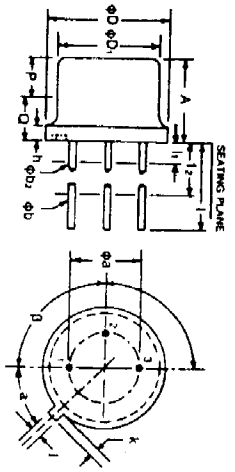
FEATURES:

- 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 °C
T_J	-65 to +200 °C
T_{STG}	-65 to +200 °C
θ_{JC}	50 °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
φb₂	0.016	0.019	0.406	0.483
φD	0.350	0.370	8.89	9.40
φD₁	0.315	0.335	8.00	8.51
h	0.009	0.125	0.229	3.18
I	0.028	0.034	0.711	0.864
k	0.029	0.040	0.737	1.02
l	0.500		12.70	
l₁		0.050		1.27
l₂	0.250		6.35	
P	0.100		2.54	
Q				
α	45° NOMINAL			
β	90° NOMINAL			

1 = Emitter 2 = Base
3 = Collector

CHARACTERISTICS T_A = 25 °C

SYMBOL	TEST CONDITIONS	MINIMUM	TYPICAL	MAXIMUM	UNITS
BV_{CER}	I_C = 5.0 mA R_{BE} = 10Ω	55			V
BV_{EBO}	I_E = 100 μA	3.0			V
I_{CES}	V_{CE} = 50 V			1.0	μA
	V_{CE} = 15 V T_C = +150 °C			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}	V_{CC} = 28 V P_{OUT} = 1.0 W f = 200 MHz	5.0			dB
η_C		35			%