

# 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 $^\circ C$
$\theta_{JC}$	50 $^\circ C/W$

### 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 = 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
$BV_{EBO}$	$I_E = 100$ $\mu A$			3.0			V
$I_{CES}$	$V_{CE} = 50$ V		$T_C = +150^\circ C$			1.0	$\mu A$
	$V_{CE} = 15$ V					10.0	mA
$I_{CEO}$	$V_{CE} = 15$ V					20	$\mu A$
$f_t$	$V_{CE} = 15$ V	$I_C = 50$ mA	$f = 200$ MHz	1200			MHz
$C_{OB}$	$V_{CB} = 30$ V		$f = 1.0$ MHz			3.0	pF
$G_{PE}$ $\eta_C$	$V_{CC} = 28$ V	$P_{OUT} = 1.0$ W	$f = 200$ MHz	5.0			dB
				35			%

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