

**isc Silicon NPN Power Transistor**
**2N5108**
**DESCRIPTION**

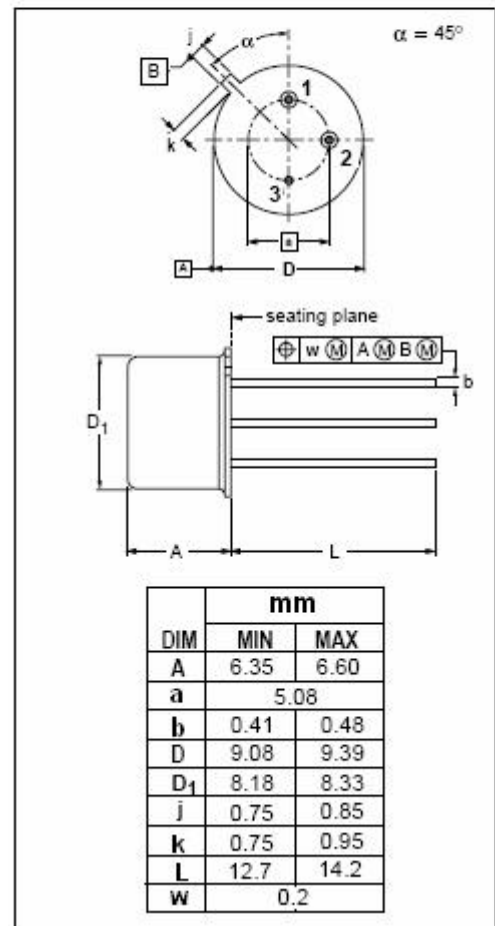
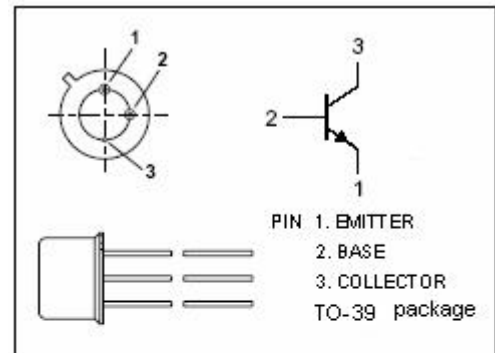
- High Current-Gain Bandwidth Product  
:  $f_T = 1200\text{MHz (Min) @ } V_{CE} = 10\text{V, } I_E = 50\text{mA}$
- Low Saturation Voltage
- Good Linearity of  $h_{FE}$
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

**APPLICATIONS**

- Designed for general purpose Class C amplifier applications up to 1 GHz

**ABSOLUTE MAXIMUM RATINGS ( $T_a = 25^\circ\text{C}$ )**

SYMBOL	PARAMETER	VALUE	UNIT
$V_{CBO}$	Collector-Base Voltage	55	V
$V_{CEO}$	Collector-Emitter Voltage	35	V
$V_{EBO}$	Emitter-Base Voltage	4	V
$I_C$	Collector Current	0.4	A
$P_C$	Collector Power Dissipation @ $T_c = 25^\circ\text{C}$	3.5	W
	Collector Power Dissipation @ $T_a = 25^\circ\text{C}$	1.0	
$T_j$	Junction Temperature	175	$^\circ\text{C}$
$T_{stg}$	Storage Temperature Range	-55~175	$^\circ\text{C}$



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## ELECTRICAL CHARACTERISTICS

T<sub>C</sub>=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V <sub>CE(sat)</sub>	Collector-Emitter Saturation Voltage	I <sub>C</sub> = 100mA; I <sub>B</sub> = 10mA			0.5	V
I <sub>CBO</sub>	Collector Cutoff Current	V <sub>CB</sub> = 40V; I <sub>E</sub> = 0			0.1	mA
I <sub>EBO</sub>	Emitter Cutoff Current	V <sub>EB</sub> = 3V; I <sub>C</sub> = 0			0.1	mA
h <sub>FE</sub>	DC Current Gain	I <sub>C</sub> = 10mA; V <sub>CE</sub> = 10V	40		150	
f <sub>T</sub>	Current-Gain—Bandwidth Product	I <sub>C</sub> = 50mA; V <sub>CE</sub> = 10V; f= 200MHz	1200			MHz
C <sub>OB</sub>	Output Capacitance	I <sub>E</sub> = 0; V <sub>CB</sub> = 28V; f <sub>test</sub> = 1.0MHz			3.3	pF

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