

2N4208  
2N4209

PNP SILICON TRANSISTOR

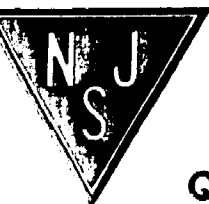
JEDEC TO-18 CASE

MAXIMUM RATINGS ( $T_A=25^\circ\text{C}$ )

	SYMBOL	2N4208	2N4209	UNITS
Collector-Base Voltage	$V_{CBO}$	12	15	V
Collector-Emitter Voltage	$V_{CEO}$	12	15	V
Emitter-Base Voltage	$V_{EBO}$	4.5		V
Collector Current	$I_C$	200		mA
Power Dissipation	$P_D$	0.5		W
Power Dissipation ( $T_C=25^\circ\text{C}$ )	$P_D$	1.2		W
Operating and Storage Junction Temperature	$T_J, T_{stg}$	-65 to +200		$^\circ\text{C}$
Thermal Resistance	$\Theta_{JA}$	350		$^\circ\text{C/W}$
Thermal Resistance	$\Theta_{JC}$	146		$^\circ\text{C/W}$

ELECTRICAL CHARACTERISTICS ( $T_A=25^\circ\text{C}$  unless otherwise noted)

SYMBOL	TEST CONDITIONS	2N4208		2N4209		UNITS
		MIN	MAX	MIN	MAX	
$I_{CES}$	$V_{CE}=6.0\text{V}$		10			nA
$I_{CES}$	$V_{CE}=6.0\text{V}, T_A=125^\circ\text{C}$		5.0			$\mu\text{A}$
$I_{CES}$	$V_{CE}=8.0\text{V}$			10		nA
$I_{CES}$	$V_{CE}=8.0\text{V}, T_A=125^\circ\text{C}$			5.0		$\mu\text{A}$
$BV_{CBO}$	$I_C=100\mu\text{A}$	12		15		V
$BV_{CES}$	$I_C=100\mu\text{A}$	12		15		V
$BV_{CEO}$	$I_C=3.0\text{mA}$	12		15		V
$BV_{EBO}$	$I_E=100\mu\text{A}$	4.5		4.5		V
$V_{CE(SAT)}$	$I_C=1.0\text{mA}, I_B=100\mu\text{A}$		0.13		0.15	V
$V_{CE(SAT)}$	$I_C=10\text{mA}, I_B=1.0\text{mA}$		0.15		0.18	V
$V_{CE(SAT)}$	$I_C=50\text{mA}, I_B=5.0\text{mA}$		0.50		0.60	V
$V_{BE(SAT)}$	$I_C=1.0\text{mA}, I_B=100\mu\text{A}$		0.80		0.80	V
$V_{BE(SAT)}$	$I_C=10\text{mA}, I_B=1.0\text{mA}$	0.78	0.95	0.78	0.95	V
$V_{BE(SAT)}$	$I_C=50\text{mA}, I_B=5.0\text{mA}$		1.5		1.5	V
$h_{FE}$	$V_{CE}=0.5\text{V}, I_C=1.0\text{mA}$	15		35		
$h_{FE}$	$V_{CE}=0.3\text{V}, I_C=10\text{mA}$	30	120	50	120	
$h_{FE}$	$V_{CE}=0.3\text{V}, I_C=10\text{mA}, T_A=-55^\circ\text{C}$	12		20		
$h_{FE}$	$V_{CE}=1.0\text{V}, I_C=50\text{mA}$	30		40		



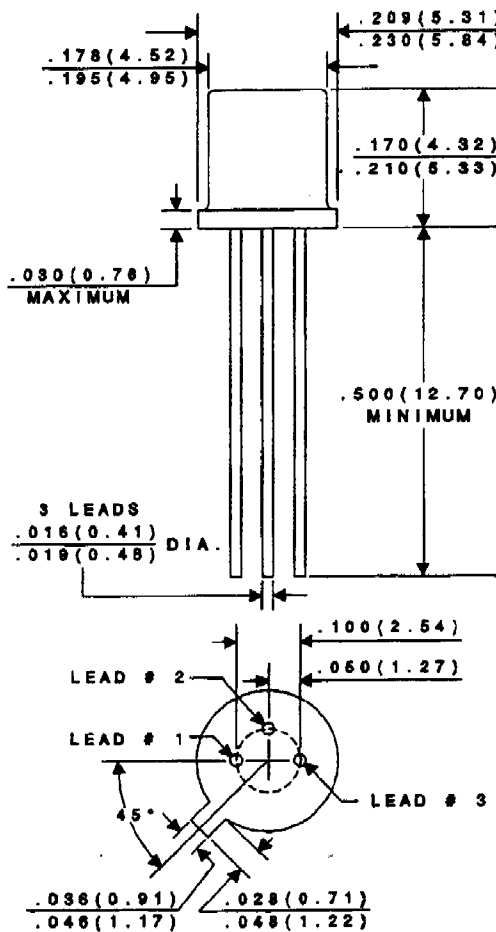
NJ Semi-Conductors reserves the right to change test conditions, parameters limits and package dimensions without notice information furnished by NJ Semi-Conductors is believed to be both accurate and reliable at the time of going to press. However NJ Semi-Conductors assumes no responsibility for any errors or omissions discovered in its use. NJ Semi-Conductors encourages customers to verify that datasheets are current before placing orders.

Quality Semi-Conductors

ELECTRICAL CHARACTERISTICS (Continued)

SYMBOL	TEST CONDITIONS	2N4208		2N4209		UNITS
		MIN	MAX	MIN	MAX	
$f_T$	$V_{CE}=10V, I_C=10mA, f=100MHz$	700		850		MHz
$C_{ob}$	$V_{CB}=5.0V, I_E=0$		3.0		3.0	pF
$C_{ib}$	$V_{BE}=0.5V, I_C=0$		3.5		3.5	pF
$t_{on}$	$V_{CC}=1.5V, I_C=10mA, I_{B1}=1.0mA$		15		15	ns
$t_{off}$	$V_{CC}=1.5V, I_C=10mA, I_{B1}=I_{B2}=1.0mA$		20		20	ns
$\tau_s$	$V_{CC}=3.0V, I_C=10mA, I_{B1}=I_{B2}=10mA$		20		20	ns

JEDEC TO-18 CASE - MECHANICAL OUTLINE



All Dimensions in Inches (mm).

This datasheet has been downloaded from:

[www.DatasheetCatalog.com](http://www.DatasheetCatalog.com)

Datasheets for electronic components.