

CentralTM Semiconductor Corp.

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Manufacturers of World Class Discrete Semiconductors

2N4208
2N4209

PNP SILICON TRANSISTOR

JEDEC TO-18 CASE

DESCRIPTION

The CENTRAL SEMICONDUCTOR 2N4208, 2N4209 types are PNP Saturated Switching Transistors designed for high speed switching applications.

MAXIMUM RATINGS (T_A=25°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°C)	P _D	1.2		W
Operating and Storage Junction Temperature	T _J , T _{stg}	-65 to +200		°C
Thermal Resistance	Θ _{JA}	350		°C/W
Thermal Resistance	Θ _{JC}	146		°C/W

ELECTRICAL CHARACTERISTICS (T_A=25°C unless otherwise noted)

SYMBOL	TEST CONDITIONS	2N4208		2N4209		UNITS
		MIN	MAX	MIN	MAX	
I _{CES}	V _{CE} =6.0V		10			nA
I _{CES}	V _{CE} =6.0V, T _A =125°C		5.0			μA
I _{CES}	V _{CE} =8.0V				10	nA
I _{CES}	V _{CE} =8.0V, T _A =125°C				5.0	μA
BV _{CBO}	I _C =100μA	12		15		V
BV _{CES}	I _C =100μA	12		15		V
BV _{CEO}	I _C =3.0mA	12		15		V
BV _{EBO}	I _E =100μA	4.5		4.5		V
V _{CE(SAT)}	I _C =1.0mA, I _B =100μA		0.13		0.15	V
V _{CE(SAT)}	I _C =10mA, I _B =1.0mA		0.15		0.18	V
V _{CE(SAT)}	I _C =50mA, I _B =5.0mA		0.50		0.60	V
V _{BE(SAT)}	I _C =1.0mA, I _B =100μA		0.80		0.80	V
V _{BE(SAT)}	I _C =10mA, I _B =1.0mA	0.78	0.95	0.78	0.95	V
V _{BE(SAT)}	I _C =50mA, I _B =5.0mA		1.5		1.5	V
h _{FE}	V _{CE} =0.5V, I _C =1.0mA	15		35		
h _{FE}	V _{CE} =0.3V, I _C =10mA	30	120	50	120	
h _{FE}	V _{CE} =0.3V, I _C =10mA, T _A =-55°C	12		20		
h _{FE}	V _{CE} =1.0V, I _C =50mA	30		40		

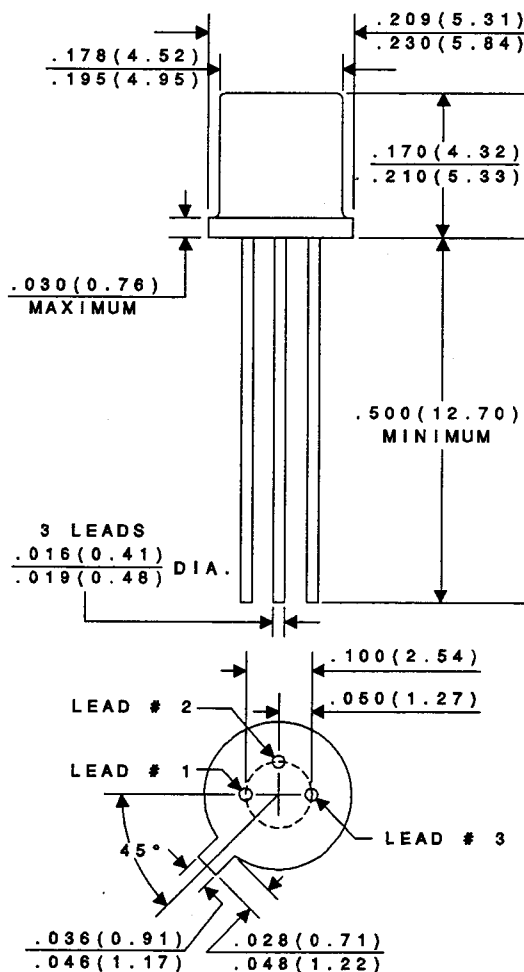
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ELECTRICAL CHARACTERISTICS (Continued)

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
τ_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).

Lead Code:

- 1) Emitter
- 2) Base
- 3) Collector

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