

# Central<sup>TM</sup> Semiconductor Corp.

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Manufacturers of World Class Discrete Semiconductors

2N2906, A  
2N2907, A

PNP SILICON TRANSISTOR

JEDEC TO-18 CASE

## DESCRIPTION

The CENTRAL SEMICONDUCTOR 2N2906, A, 2N2907, A types are Silicon PNP Epitaxial Planar Transistors designed for small signal general purpose and switching applications.

## MAXIMUM RATINGS (T<sub>A</sub>=25°C)

	SYMBOL	2N2906 2N2907	2N2906A 2N2907A	UNITS
Collector-Base Voltage	V <sub>CBO</sub>	60	60	V
Collector-Emitter Voltage	V <sub>CEO</sub>	40	60	V
Emitter-Base Voltage	V <sub>EBO</sub>	5.0	5.0	V
Collector Current	I <sub>C</sub>	600		mA
Power Dissipation	P <sub>T</sub>	0.4		W
Power Dissipation (T <sub>C</sub> =25°C)	P <sub>T</sub>	1.8		W
Operating and Storage Junction Temperature	T <sub>J</sub> , T <sub>stg</sub>	-65 to +200		°C
Thermal Resistance	θ <sub>JA</sub>	438		°C/W
Thermal Resistance	θ <sub>JC</sub>	97		°C/W

## ELECTRICAL CHARACTERISTICS (T<sub>A</sub>=25°C unless otherwise noted)

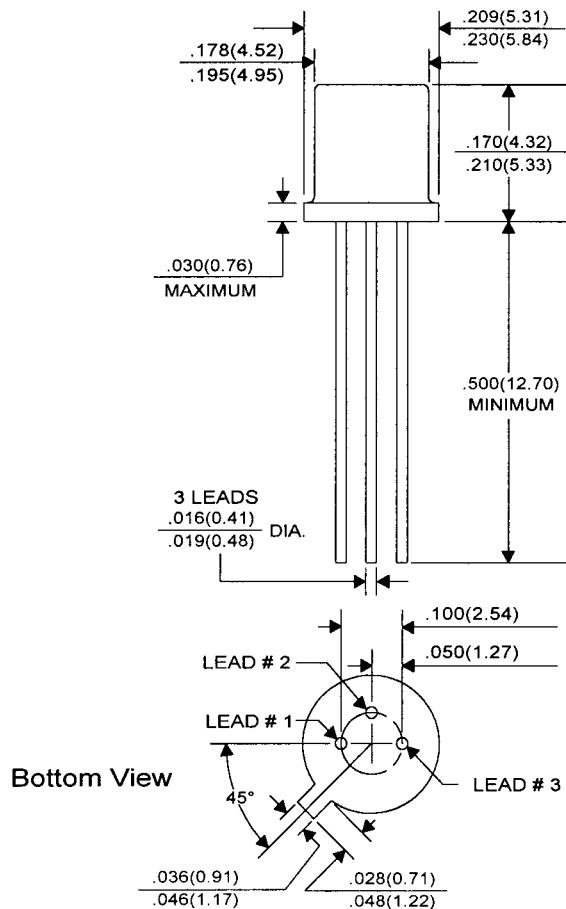
SYMBOL	TEST CONDITIONS	2N2906 2N2907		2N2906A 2N2907A		UNITS
		MIN	MAX	MIN	MAX	
I <sub>CBO</sub>	V <sub>CB</sub> =50V		20		10	nA
I <sub>CBO</sub>	V <sub>CB</sub> =50V, T <sub>A</sub> =150°C		20		10	μA
I <sub>CEV</sub>	V <sub>CE</sub> =30V, V <sub>EB</sub> =0.5		50		50	nA
BV <sub>CBO</sub>	I <sub>C</sub> =10μA	60		60		V
BV <sub>CEO</sub>	I <sub>C</sub> =10mA	40		60		V
BV <sub>EBO</sub>	I <sub>E</sub> =10μA	5.0		5.0		V
V <sub>CE(SAT)</sub>	I <sub>C</sub> =150mA, I <sub>B</sub> =15mA		0.4		0.4	V
V <sub>CE(SAT)</sub>	I <sub>C</sub> =500mA, I <sub>B</sub> =50mA		1.6		1.6	V
V <sub>BE(SAT)</sub>	I <sub>C</sub> =150mA, I <sub>B</sub> =15mA		1.3		1.3	V
V <sub>BE(SAT)</sub>	I <sub>C</sub> =500mA, I <sub>B</sub> =50mA		2.6		2.6	V
f <sub>T</sub>	V <sub>CE</sub> =20V, I <sub>C</sub> =50mA, f=100MHz	200		200		MHz
C <sub>ob</sub>	V <sub>CB</sub> =10V, I <sub>E</sub> =0, f=1.0MHz		8.0		8.0	pF
C <sub>ib</sub>	V <sub>BE</sub> =2.0V, I <sub>C</sub> =0, f=1.0MHz		30		30	pF
t <sub>on</sub>	V <sub>CC</sub> =30V, I <sub>C</sub> =150mA, I <sub>B1</sub> =15mA		45		45	ns
t <sub>off</sub>	V <sub>CC</sub> =6.0V, I <sub>C</sub> =150mA, I <sub>B1</sub> =I <sub>B2</sub> =15mA		100		100	ns

(Continued on Reverse Side)

ELECTRICAL CHARACTERISTICS (Continued)

SYMBOL	TEST CONDITIONS	2N2906 2N2906A		2N2907 2N2907A	
		MIN	MAX	MIN	MAX
$h_{FE}$	$V_{CE}=10V, I_C=100\mu A$ (2N2906, 2N2907 Only)	20		35	
$h_{FE}$	$V_{CE}=10V, I_C=100\mu A$ (2N2906A, 2N2907A Only)	40		75	
$h_{FE}$	$V_{CE}=10V, I_C=1.0mA$ (2N2906, 2N2907 Only)	25		50	
$h_{FE}$	$V_{CE}=10V, I_C=1.0mA$ (2N2906A, 2N2907A Only)	40		100	
$h_{FE}$	$V_{CE}=10V, I_C=10mA$ (2N2906, 2N2907 Only)	35		75	
$h_{FE}$	$V_{CE}=10V, I_C=10mA$ (2N2906A, 2N2907A Only)	40		100	
$h_{FE}$	$V_{CE}=10V, I_C=150mA$	40	120	100	300
$h_{FE}$	$V_{CE}=10V, I_C=500mA$ (2N2906, 2N2907 Only)	20		30	
$h_{FE}$	$V_{CE}=10V, I_C=500mA$ (2N2906A, 2N2907A Only)	40		50	

**JEDEC TO-18 CASE - MECHANICAL OUTLINE**



All Dimensions in Inches (mm).

Lead Code: 1) Emitter  
2) Base  
3) Collector

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