

CentralTM Semiconductor Corp.

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Manufacturers of World Class Discrete Semiconductors

2N930
2N930A

NPN SILICON TRANSISTOR

JEDEC TO-18 CASE

DESCRIPTION:

The CENTRAL SEMICONDUCTOR 2N930, 2N930A types are Silicon NPN Planar Epitaxial Transistors designed for small signal general purpose and amplifier applications.

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

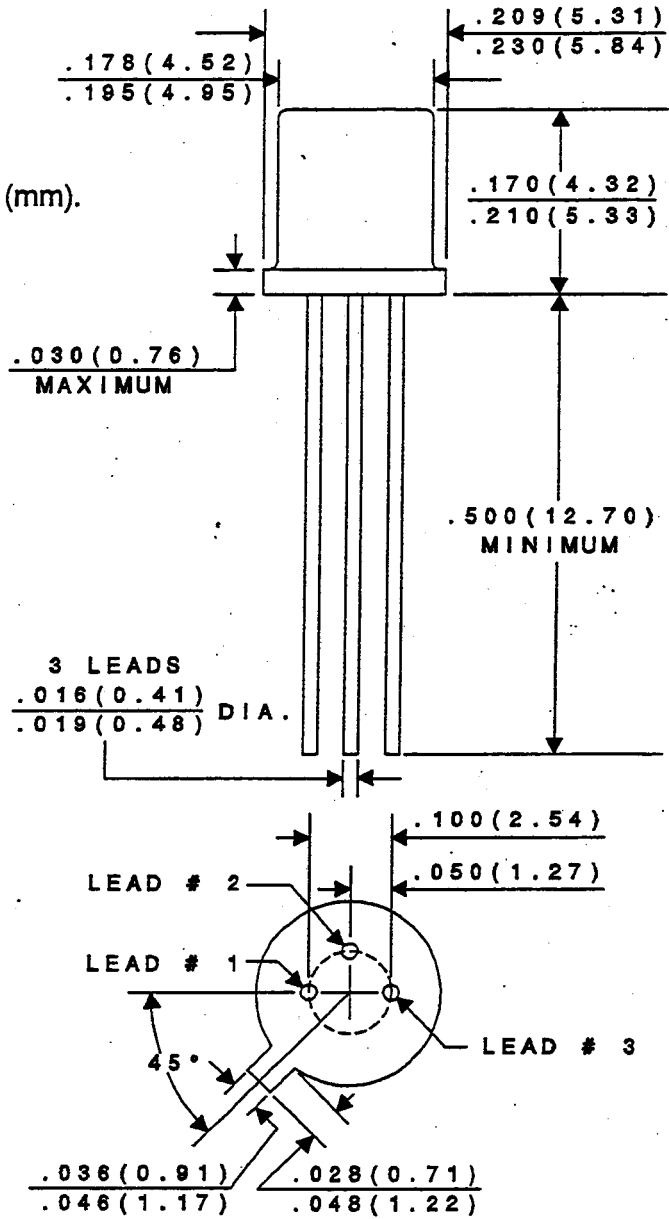
	SYMBOL	2N930	2N930A	UNITS
Collector-Base Voltage	V_{CB0}	45	60	V
Collector-Emitter Voltage	V_{CEO}	45	45	V
Emitter-Base Voltage	V_{EBO}	5.0	6.0	V
Collector Current	I_C	30		mA
Power Dissipation	P_D	500		mW
Power Dissipation ($T_C=25^\circ\text{C}$)	P_D	1.2		W
Operating and Storage Junction Temperature	T_J, T_{stg}	-65 to +200		$^\circ\text{C}$
Thermal Resistance	θ_{JA}	350		$^\circ\text{C/W}$
Thermal Resistance	θ_{JC}	146		$^\circ\text{C/W}$

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

SYMBOL	TEST CONDITIONS	2N930		2N930A		UNITS
		MIN	MAX	MIN	MAX	
I_{CBO}	$V_{CB}=45\text{V}$		10		2.0	nA
I_{CES}	$V_{CE}=45\text{V}$		10		2.0	nA
I_{CES}	$V_{CE}=45\text{V}, T_A=170^\circ\text{C}$		10		2.0	μA
I_{CEO}	$V_{CE}=5.0\text{V}$		2.0		2.0	nA
I_{EBO}	$V_{EB}=5.0\text{V}$		10		2.0	nA
BV_{CBO}	$I_C=10\mu\text{A}$	45		60		V
BV_{CEO}	$I_C=10\text{mA}$	45		45		V
BV_{EBO}	$I_E=10\mu\text{A}$	5.0		6.0		V
$V_{CE(SAT)}$	$I_C=10\text{mA}, I_B=0.5\text{mA}$		1.0		0.5	V
$V_{BE(SAT)}$	$I_C=10\text{mA}, I_B=0.5\text{mA}$	0.6	1.0	0.7	0.9	V
h_{FE}	$V_{CE}=5.0\text{V}, I_C=1.0\mu\text{A}$			60		
h_{FE}	$V_{CE}=5.0\text{V}, I_C=10\mu\text{A}$	100	300	100	300	
h_{FE}	$V_{CE}=5.0\text{V}, I_C=10\mu\text{A}, T_A=-55^\circ\text{C}$	20		30		
h_{FE}	$V_{CE}=5.0\text{V}, I_C=500\mu\text{A}$	150				
h_{FE}	$V_{CE}=5.0\text{V}, I_C=10\text{mA}$		600		600	
f_T	$V_{CE}=5.0\text{V}, I_C=500\mu\text{A}, f=30\text{MHz}$	30		45		MHz
C_{ob}	$V_{CB}=5.0\text{V}, I_E=0, f=1.0\text{MHz}$		8.0		6.0	pF
NF	$V_{CE}=5.0\text{V}, I_C=10\mu\text{A}, R_S=10\text{k}\Omega, f=1.0\text{kHz}$		3.0		3.0	dB

JEDEC TO-18 CASE - MECHANICAL OUTLINE

All Dimensions in Inches (mm).



LEAD CODE:

- 1) EMITTER
- 2) BASE
- 3) COLLECTOR

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