

CentralTM Semiconductor Corp.

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Manufacturers of World Class Discrete Semiconductors

2N6430 2N6431 NPN
2N6432 2N6433 PNP

COMPLEMENTARY SILICON TRANSISTOR

JEDEC TO-18 CASE

DESCRIPTION

The CENTRAL SEMICONDUCTOR 2N6430 series types are hermetically sealed complementary small signal transistors manufactured by the epitaxial planar process designed for high voltage amplifier applications.

MAXIMUM RATINGS (T_A = 25°C)

	SYMBOL	2N6430	2N6431	UNITS
		2N6432	2N6433	
Collector-Base Voltage	V _{CB0}	200	300	V
Collector-Emitter Voltage	V _{CEO}	200	300	V
Emitter-Base Voltage (NPN Types)	V _{EBO}	6.0	6.0	V
Emitter-Base Voltage (PNP Types)	V _{EBO}	5.0	5.0	V
Collector Current	I _C		100	mA
Power Dissipation	P _D		500	mW
Power Dissipation (T _C = 25°C)	P _D		1.8	W
Operating and Storage				
Junction Temperature	T _J , T _{stg}	-65 to +200		°C
Thermal Resistance	θ _{JA}	0.35		°C/mW
Thermal Resistance	θ _{JC}	97.2		°C/W

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

SYMBOL	TEST CONDITIONS	2N6430 2N6431		2N6432 2N6433		UNITS
		MIN	MAX	MIN	MAX	
I _{CBO}	V _{CB} = 160V (2N6430, 2N6432)		0.1		0.25	μA
I _{CBO}	V _{CB} = 200V (2N6431, 2N6433)		0.1		0.25	μA
I _{EBO}	V _{EB} = 4.0V		0.1		-	μA
I _{EBO}	V _{BE} = 3.0V		-		0.1	μA
BV _{CB0}	I _C = 0.1mA (2N6430, 2N6432)	200		200		V
BV _{CB0}	I _C = 0.1mA (2N6431, 2N6433)	300		300		V
BV _{CEO}	I _C = 1.0mA (2N6430, 2N6432)	200		200		V
BV _{CEO}	I _C = 1.0mA (2N6431, 2N6433)	300		300		V
BV _{EBO}	I _E = 0.1mA	6.0		5.0		V
V _{CE(SAT)}	I _C = 20mA, I _B = 2.0mA		0.5		0.5	V
V _{BE(SAT)}	I _C = 20mA, I _B = 2.0mA		0.9		0.9	V
h _{FE}	V _{CE} = 10V, I _C = 1.0mA	25		25		
h _{FE}	V _{CE} = 10V, I _C = 10mA	40		40		
h _{FE}	V _{CE} = 10V, I _C = 30mA	50	200	30	150	

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

<u>SYMBOL</u>	<u>TEST CONDITIONS</u>	<u>2N6430</u> <u>2N6431</u>		<u>2N6432</u> <u>2N6433</u>		<u>UNITS</u>
		<u>MIN</u>	<u>MAX</u>	<u>MIN</u>	<u>MAX</u>	
f_T	$V_{CE} = 20\text{V}, I_C = 10\text{mA}, f = 100\text{MHz}$	50	200	-	-	MHz
f_T	$V_{CE} = 20\text{V}, I_C = 10\text{mA}, f = 20\text{MHz}$	-	-	50	-	MHz
C_{ob}	$V_{CB} = 20\text{V}, I_E = 0, f = 1.0\text{MHz}$	-	4.0	-	6.0	pF

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