

2N6430 2N6431 NPN
2N6432 2N6433 PNP

**COMPLEMENTARY
SILICON TRANSISTORS**



TO-18 CASE



www.centrasemi.com

DESCRIPTION:

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

MARKING: FULL PART NUMBER

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

Collector-Base Voltage
Collector-Emitter Voltage
Emitter-Base Voltage (NPN)
Emitter-Base Voltage (PNP)
Continuous Collector Current
Power Dissipation ($T_C=25^{\circ}\text{C}$)
Power Dissipation
Operating and Storage Junction Temperature
Thermal Resistance
Thermal Resistance

SYMBOL	2N6430	2N6431	UNITS
	2N6432	2N6433	
V_{CBO}	200	300	V
V_{CEO}	200	300	V
V_{EBO}		6.0	V
V_{EBO}		5.0	V
I_C		100	mA
P_D		1.8	W
P_D		500	mW
T_J, T_{stg}	-65 to +200		$^{\circ}\text{C}$
Θ_{JA}		0.35	$^{\circ}\text{C}/\text{mW}$
Θ_{JC}		97.2	$^{\circ}\text{C}/\text{W}$

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

		2N6430		2N6432		
		2N6431		2N6433		
SYMBOL	TEST CONDITIONS	MIN	MAX	MIN	MAX	UNITS
I _{CBO}	V _{CB} =160V (2N6430, 2N6432)	-	100	-	250	nA
I _{CBO}	V _{CB} =200V (2N6431, 2N6433)	-	100	-	250	nA
I _{EBO}	V _{EB} =4.0V	-	100	-	-	nA
I _{EBO}	V _{EB} =3.0V	-	-	-	100	nA
BV _{CBO}	I _C =100μA (2N6430, 2N6432)	200	-	200	-	V
BV _{CBO}	I _C =100μA (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 =100μA	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	

R1 (26-July 2013)

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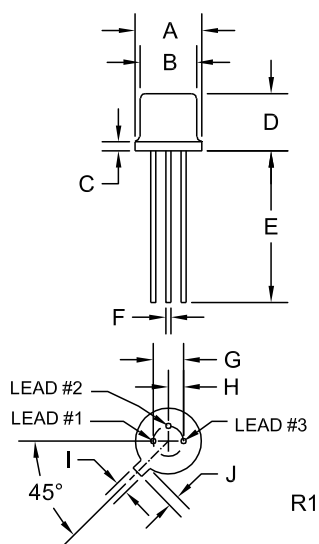
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ELECTRICAL CHARACTERISTICS - Continued: ($T_A=25^{\circ}\text{C}$ unless otherwise noted)

SYMBOL	TEST CONDITIONS	2N6430 2N6431		2N6432 2N6433		UNITS
		MIN	MAX	MIN	MAX	
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

TO-18 CASE - MECHANICAL OUTLINE



SYMBOL	DIMENSIONS			
	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A (DIA)	0.209	0.230	5.31	5.84
B (DIA)	0.178	0.195	4.52	4.95
C	-	0.030	-	0.76
D	0.170	0.210	4.32	5.33
E	0.500	-	12.70	-
F (DIA)	0.016	0.019	0.41	0.48
G (DIA)	0.100		2.54	
H	0.050		1.27	
I	0.036	0.046	0.91	1.17
J	0.028	0.048	0.71	1.22

TO-18 (REV: R1)

LEAD CODE:

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

MARKING:

FULL PART NUMBER

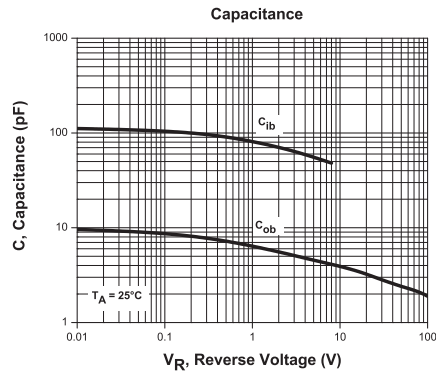
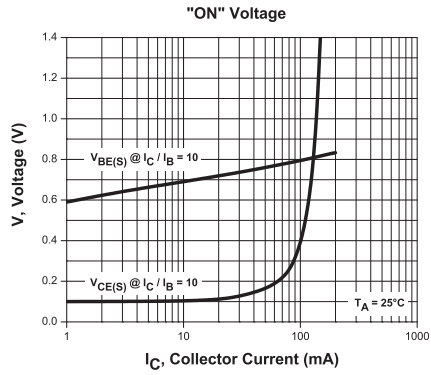
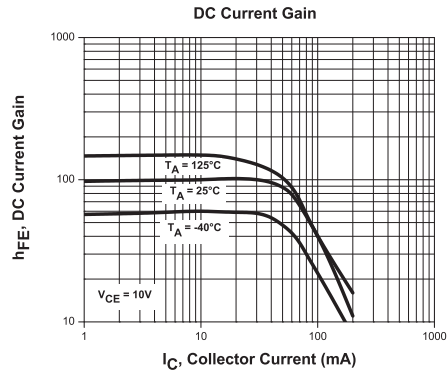
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NPN TYPICAL ELECTRICAL CHARACTERISTICS



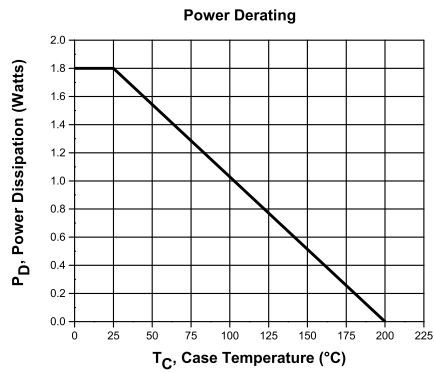
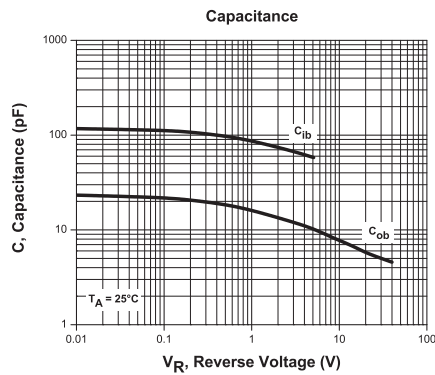
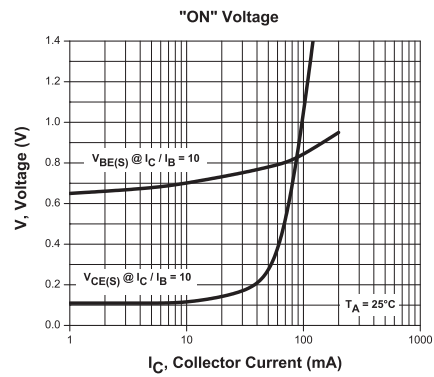
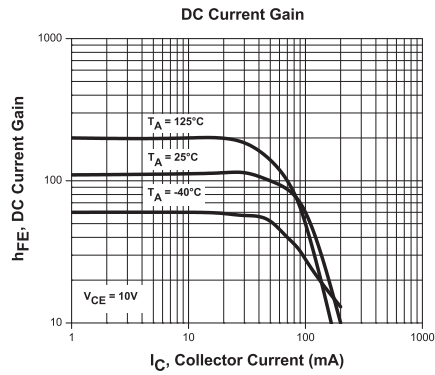
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PNP TYPICAL ELECTRICAL CHARACTERISTICS



R1 (26-July 2013)

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- Inventory bonding
- Consolidated shipping options
- Custom bar coding for shipments
- Custom product packing

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Central's applications engineering team is ready to discuss your design challenges. Just ask.

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- Special wafer diffusions
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- Application notes
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