Data Sheet

Central™ 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 ($T_A = 25^oC$)

	SYMBOL	2N6430 2N6432	2N6431 2N6433	UNITS
Collector-Base Voltage	V_{CBO}	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 ($T_C = 25^oC$)	P_D	1.8		W
Operating and Storage Junction Temperature	T_J, T_{stg}	-65 to +200		^oC
Thermal Resistance	Θ_{JA}	0.35		$^oC/mW$
Thermal Resistance	Θ_{JC}	97.2		$^oC/W$

ELECTRICAL CHARACTERISTICS ($T_A = 25^oC$ unless otherwise noted)

SYMBOL	TEST CONDITIONS	2N6430 2N6431 MIN	2N6430 2N6431 MAX	2N6432 2N6433 MIN	2N6432 2N6433 MAX	UNITS
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_{CBO}	$I_C = 0.1mA$ (2N6430, 2N6432)	200		200		V
BV_{CBO}	$I_C = 0.1mA$ (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 ($T_A = 25^oC$ unless otherwise noted)

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

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